
Data Catalogue

National Water Resources
Database (NWRD)



Water Resources Planning Organization

Preface

The Water Resources Planning Organization (WARPO) under the ministry of water resources is responsible for macro level water resources planning and management in Bangladesh. One of the important responsibilities of WARPO is to update and maintain the National Water Resources Database (NWRD) setup during development of National Water Management Plan. Subsequently Integrated Coastal Resources Database has been developed during preparation of Integrated Coastal Zone Management Plan which is kept as sub-set database under NWRD. Both the databases are strategically important at national and regional level development activities in Bangladesh. These databases are being used in national and regional level planning, study and research initiated by the public and private agencies. WARPO has the intention to disseminate and make available to the wider user group for the benefit of the country for efficient natural resources planning and management.

The NWRD is organized into data groups like Base Data, Surface water, Groundwater, Soil and Agriculture, Fisheries, Forest, Socio-economic, Meteorological, Documents and Reports, Environment and Images. Similarly, ICRD a subset of NWRD has category of data into Natural Resources and Environment, Human beings and Social Conditions, Infrastructure and Services, Economics and Finance, Administration and Institutions, Funds and Interventions etc. At present, the total no. of data layers in both NWRD and ICRD are about 1000.

WARPO has taken an initiative to prepare a data catalogue for reviewing and quick understanding of each data layers in an organized way. These data layers are arranged by groups and name with brief description. A sample, attribute information, bundle Information has also been included in this data catalogue. This data catalogue will be very helpful for beneficiaries and stakeholders.

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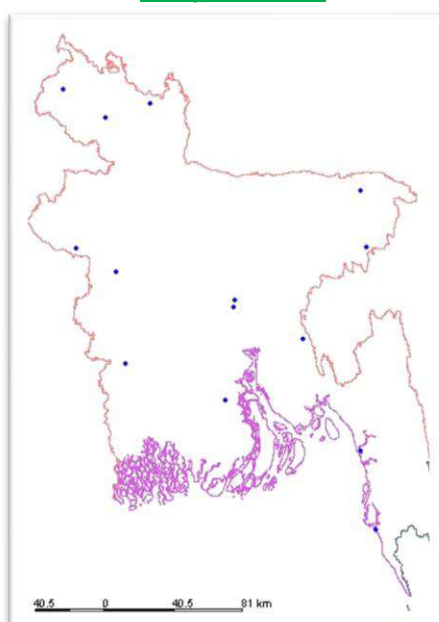
Base Data

Name of Data layer: **Location of Aerodromes**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the location of aerodromes of Bangladesh with other attributes information.
Quality	The point locations and the attribute information are in full agreement with the published source.
Completeness	This data layer covers all the airports of Bangladesh.
History of the dataset	Bangladesh Civil Aviation Authority published this information.
Purpose of production	To present the location of aerodromes with other information this data layer has been included in NWRD.
Process description	NWRD has generated the point locations with available coordinate values. Attribute information have also been incorporated according to the source data.

Sample of Data



Attribute Table

portcode	name	type	longdd	latdd	longbtm	latbtm	temp	run_len	run_w	struc	location	ifr_vfr	adelev
2	M.A.Hannan International Airport	International	91.825	22.256	688034.313	462107.563	32°c (Apr)	3048 m	46 m	Bituminous Concrete	Chittagong	IFR/VFR	3.65854
3	Barisal Airport	National	90.305	22.799	531298.813	521059.344	29°c	1524 m	30 m	Bituminous Concrete	Barisal	IFR/VFR	3.04878
4	Cox's Bazar Airport	National	91.983	21.433	705469.125	371212.406	34.1°c	2042 m	38 m	Bituminous Concrete	Cox's Bazar	IFR/VFR	3.65854
8	Osmany Airport	National	91.864	24.98	688103.248	763796.728	35.4°c	2591 m	46 m	Bituminous Concrete	Sylhet	IFR/VFR	15.2439
10	Comilla Stol Port	National	91.186	23.433	621180.125	591775.75	36.9°c	656 m	30 m	Flexible Bituminous Concr	Comilla	IFR/VFR	7.62195

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Portcode	Identification number	
Name	Name of the aerodrams	
Type	Type of aerodram (International or National)	
Ifr\vfr	Type of Traffic Permitted	
Longdd	Longitude in Degree Decimal	Degree Decimal
Latdd	Latitude in Degree Decimal	Degree Decimal

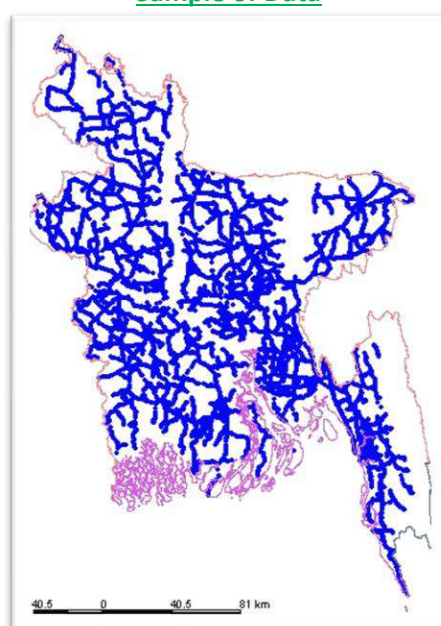
FIELD_NAME	FIELD_DESC	UNIT
Longbtm	Longitude converted to BTM projection system	meter
Latbtm	Latitude converted to BTM projection system	meter
Ad_elev	Aerodrom elevation	meter
Temp	Reference temperature	Celcius
Run_len	Runway length	meter
Run_w	Runway width	meter
Runtype	Runway surface type	
Location	Location of Airport	

Name of Data layer: **Location of Bridges and Culverts**

Metadata

Data Type	Spatial
Abstract	A spatial data layer containing the locations of bridge, culvert, etc by Roads and Highway Department (RHD).
Quality	Quality of this data layer depends on the data collection process of the source organization.
Completeness	The data layer covers all location of bridges and culverts of Bangladesh identified by RHD.
History of the dataset	Roads and Highway Department (RHD). generated this data layer
Purpose of production	This data layer is essential for road development planning and management.
Process description	The data layer has been collected into digital format and stored it in an organized form.

Sample of Data



Attribute Table

id	easting	northing	compid	roadid	roadno	lrpname	lrpno	surveydate	lrpshortde	lrplongdes	isreferenc	referenced	offsetfrom	distancefr	roadchaina
585	570018.694	643567.155	1656	11	N2	Culvert	LRP033a	9/22/2004	Culvert	Box Culvert	0	LRP033	653	0	32.969
588	570441.233	644473.423	1659	11	N2	Culvert	LRP034b	9/22/2004	Culvert	Box Culvert	0	LRP034	678	0	33.996
590	570910.497	645066.145	1661	11	N2	Culvert	LRP035a	9/22/2004	Culvert	Box Culvert	0	LRP034	1417	0	34.735
591	571197.095	645427.395	1662	11	N2	Culvert	LRP035b	9/22/2004	Culvert	3-Vent Culvert	0	LRP034	1887	0	35.205
592	571205.522	645439.749	1663	11	N2	Culvert	LRP035c	9/22/2004	Culvert	3-Vent Culvert	0	LRP034	1902	0	35.22
594	571427.505	645714.567	1665	11	N2	Culvert	LRP036a	9/22/2004	Culvert	Box Culvert	0	LRP034	2247	0	35.565
596	571992.182	646440.134	1667	11	N2	Bridge	LRP037a	9/22/2004	Bridge Start	Bridge Start	0	LRP034	3170	0	36.488
597	572011.842	646464.833	1668	11	N2	Bridge	LRP037b	9/22/2004	Bridge End	Bridge End	0	LRP034	3198	0	36.516

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Id	Unique Identification Number of the Bridge-Culvert	
Easting	Projected Coordinate System - Longitude (Easting)	Meter
Northing	Projected Coordinate System -Latitude (Northing)	Meter
Roadid	Road type Identification Number	
Roadno	Road type	
Lrpname	Name of Structure	
Lrpno	Location Reference Point number	

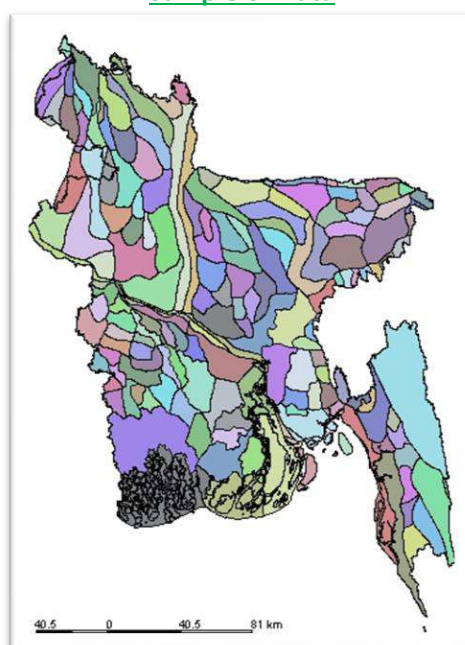
FIELD_NAME	FIELD_DESC	UNIT
Surveydate	Date of Survey	Dd/mm/yy
Lrpshortde	Short description of Location Reference Point	
Lrplongdes	Long description of Location Reference Point	
Referenced	Reference id	
Offsetfrom	Off set from reference	meter
Distancefr	Distance from reference	meter
Roadchaina	Chainage of Road	km

Name of Data layer: **Catchments of MPO**

Metadata

Data Type	Spatial
Abstract	A spatial data layer containing the catchments boundaries identified and delineated by Master Plan Organization (MPO).
Quality	As the source was in a scale of 1: 500,000,so it is recommended that this boundary should be used in the same scale or smaller than this.
Completeness	The data layer covers whole Bangladesh.
History of the dataset	Original source of this data layer is a published map titled 'MPO Zila, Upazila, Thana, Catchment and Regional Boundary Map' at 1:500,000 scale prepared by Master Plan Organization (MPO) in 1983.
Purpose of production	To present the catchments boundaries and to use these boundaries for hydrological planning and design purposes at national or regional level.
Process description	NWRD has captured this data layer from the cited source with input RMS error 0.003 inch and output error below 10 meter and other attribute information are incorporated according to the source map.

Sample of Data



Attribute Table

area	mpocatid	region	catno	planno	mpoarea
138900000	20	NW	NW20	NW10	151
1210900000	2	NW	NW02	NW07	1118
54586848	20	NW	NW20		151
19645126	2	NW	NW02		1118
717290000	13	NW	NW13	NW02	710
441650000	21	NW	NW21		768
1692400000	12	NW	NW12	NW03	1607
12072374	15	NW	NW15		326
722830000	21	NW	NW21	NW10	768
321750000	15	NW	NW15	NW10	326

Bundle Information (Data Field Description and Unit)

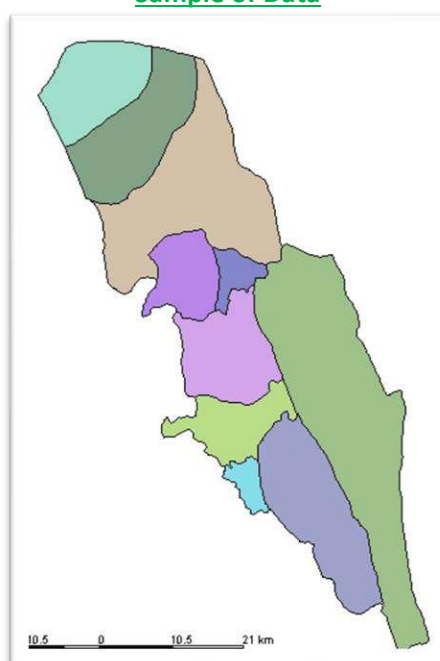
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Sqm
Mpocatid	Catchment Id according to MPO (NWP-1)	
Region	Hydrological regions of Bangladesh (MPO)	
Catno	Catchment number according to MPO (NWP-1)	
Planno	Planning area number according to MPO during the National Water Management Plan Phase-1 study.	
Mpoarea	Area claculated by MPO in square kilometer	Sqkm

Name of Data layer: **Catchments of NAM (EH)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of the NAM catchment boundary of Eastern Hill region delineated by Surface Water Modelling Canter.
Quality	The boundary has been generated precisely for regional hydrologic modelling.
Completeness	The boundary encompasses Eastern Hill region.
History of the dataset	NAM catchments were delineated under the projects SWSMP1 (Surface Water Simulation Modelling Programme 1) and SWSMP2 on the basis of MPO catchments. Later SWMC redefined the NAM catchments.
Purpose of production	The catchment boundary data layer was generated with a view to use it for hydrological modelling and other kind of hydrological analysis and design purpose at national or regional level.
Process description	NWRD has collected the data layer from Surface Water Modelling Center (SWMC) and organized it in a suitable form.

Sample of Data



Attribute Table

area	catname
665067648	CAM10
863768000	CAM09
1576822912	CAM08
427778624	CAM07
2325634560	CAM04
153262384	CAM06
694001216	CAM05
462681568	CAM03

Bundle Information (Data Field Description and Unit)

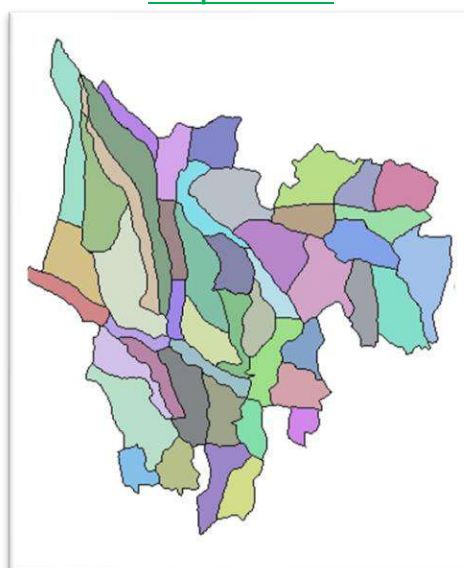
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square meter
Catname	Name of the catchment defined by SWSMP	

Name of Data layer: **Catchments of NAM (GM)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of the NAM catchment boundary of General model area delineated by Surface Water Modelling Center.
Quality	The boundary has been generated precisely for regional hydrological modelling.
Completeness	The boundary encompasses general model area.
History of the dataset	NAM catchments were delineated under the projects SWSMP1(Surface Water Simulation Modeling Program 1) and SWSMP2 on the basis of MPO catchments. Later SWMC redefined the NAM catchments.
Purpose of production	The catchment boundary has been generated with a view to use it for hydrological modelling and other kind of NAM catchment wise hydrological analysis and design at national or regional level.
Process description	NWRD has collected the data layer from Surface Water Modelling Center (SWMC) and organized it in a suitable form.

Sample of Data



Attribute Table

area	catname
3786354000	GM NW-6
5235880000	GM NW-5
3086320000	GM NW-3
1278719000	GM NW-1
3721110000	GM NW-2
2242990000	GM NE-13
2115403000	GM CJAM-1
3291141000	GM NE-1
1588095000	GM NE-11
1982378000	GM NC-1

Bundle Information (Data Field Description and Unit)

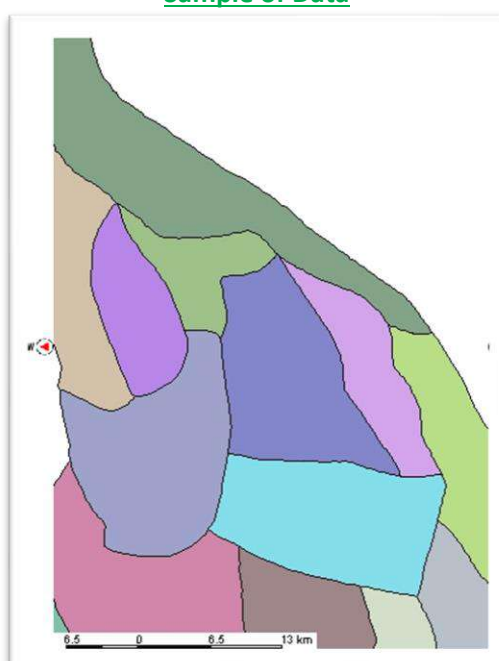
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square meter
Catname	Name of the catchment defined by SWSMP	

Name of Data layer: **Catchments of NAM (NC)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of the NAM catchment boundary of North-central region delineated by Surface Water Modelling Canter.
Quality	The boundary has been generated precisely for regional hydrologic modelling.
Completeness	The boundary encompasses North Central region.
History of the dataset	NAM catchments were delineated under the projects SWSMP1(Surface Water Simulation Modelling Programme 1) and SWSMP2 on the basis of MPO catchments. Later SWMC redefined the NAM catchments.
Purpose of production	The catchment boundary has been generated with a view to use it for hydrological modelling and other kind of NAM catchment wise hydrological analysis and design purpose at national or regional level.
Process description	NWRD has collected the data layer from Surface Water Modelling Center (SWMC) and organized it in a suitable form.

Sample of Data



Attribute Table

area	catname
597144256	NC19
1041225152	NC01
800919872	NC02
373185440	NC03
282326464	NC4A
767906624	NC04
375083616	NC05
1374177920	NC08
845298752	NC06
814662464	NC07

Bundle Information (Data Field Description and Unit)

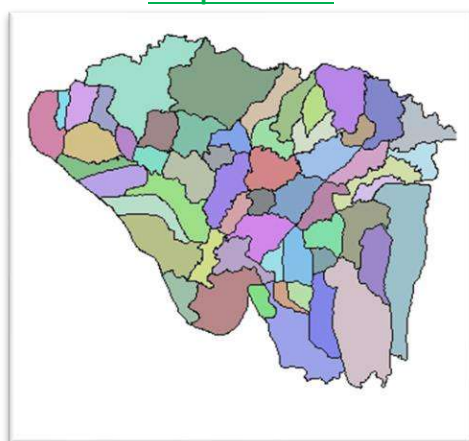
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square meter
Catname	Name of the catchment defined by SWSMP	

Name of Data layer: **Catchments of NAM (NE)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of the NAM catchment boundary of North Eastern region delineated by Surface Water Modelling Canter.
Quality	The boundary was generated precisely for regional hydrologic modelling.
Completeness	The boundary encompasses North East region.
History of the dataset	NAM catchments were delineated under the projects SWSMP1(Surface Water Simulation Modelling Programme 1) and SWSMP2 on the basis of MPO catchments. Later SWMC redefined the NAM catchments.
Purpose of production	The catchment boundary has been generated with a view to use it for hydrological modelling and other kind of NAM catchment wise hydrological analysis and design purpose at national or regional level.
Process description	NWRD has collected the data layer from Surface Water Modelling Center (SWMC) and organized it in a suitable form.

Sample of Data



Attribute Table

area	catname
2323904256	NE20
2441882880	NE48
609700864	NE11
1028235072	NE1
537629760	NE06
878589888	NE02
461040864	NE19A
351402912	NE1A

Bundle Information (Data Field Description and Unit)

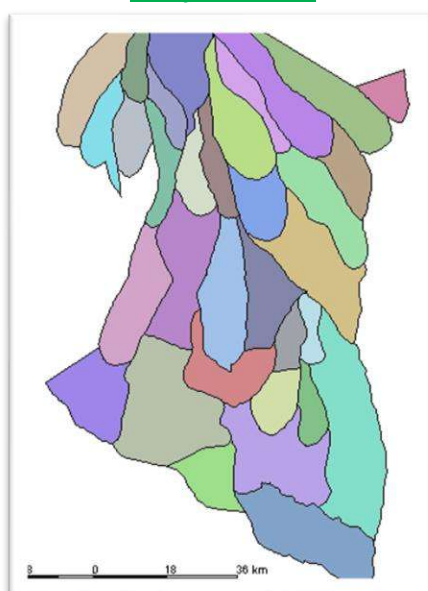
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square meter
Catname	Name of the catchment defined by SWSMP	

Name of Data layer: **Catchments of NAM (NW)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of the NAM catchment boundary of North Western region delineated by Surface Water Modelling Canter.
Quality	The boundary has been generated precisely for regional hydrologic modelling.
Completeness	The boundary encompasses North West region.
History of the dataset	NAM catchments were delineated under the projects SWSMP1(Surface Water Simulation Modelling Programme 1) and SWSMP2 on the basis of MPO catchments. Later SWMC redefined the NAM catchments.
Purpose of production	The catchment boundary data layer has been generated with a view to use it for hydrological modelling and other kind of NAM catchment wise hydrological analysis and designing purpose at national or regional level.
Process description	NWRD has collected the data layer from Surface Water Modelling Center (SWMC) and organized it in a suitable form.

Sample of Data



Attribute Table

area	catname
269070400	
431532448	NW06
1094956544	NW19
1359784960	NW31
1378097024	NW30
1110633216	NW24
7.935	
535151072	NW32

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square meter
Catname	Name of the catchment defined by SWSMP	

Name of Data layer: **Catchments of NAM (SE)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of the NAM catchment boundary of South Eastern region delineated by Surface Water Modelling Canter.
Quality	The boundary has been generated precisely for regional hydrological modelling.
Completeness	This catchment area covers South East region.
History of the dataset	NAM catchments were delineated under the projects SWSMP1(Surface Water Simulation Modelling Programme 1) and SWSMP2 on the basis of MPO catchments. Later SWMC redefined the NAM catchments.
Purpose of production	The catchment boundary data layer has been generated with a view to use it for hydrological modelling and other kind of NAM catchment wise hydrological analysis and designing purpose at national or regional level.
Process description	NWRD has collected the data layer from Surface Water Modelling Center (SWMC) and organized it in a suitable form.

Sample of Data



Attribute Table

area	catname
259986480	SE20
286368832	SE21
503545472	
364310272	SE22
407713536	SE23
177800176	
23229954	
328414976	SE24

Bundle Information (Data Field Description and Unit)

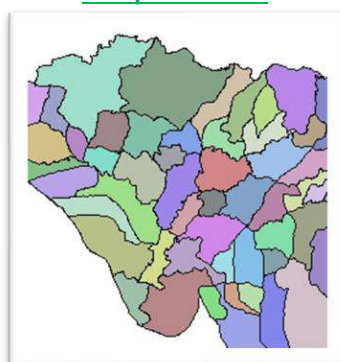
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square meter
Catname	Name of the catchment defined by SWSMP	

Name of Data layer: **Catchments of NAM (SW)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of the NAM catchment boundary of South Western Hill region delineated by Surface Water Modelling Canter.
Quality	The boundary has been generated precisely for regional hydrologic modelling.
Completeness	The boundary encompasses South West region.
History of the dataset	NAM catchments were delineated under the projects SWSMP1(Surface Water Simulation Modelling Programme 1) and SWSMP2 on the basis of MPO catchments. Later SWMC redefined the NAM catchments.
Purpose of production	The catchment boundary data layer has been generated with a view to use it for hydrological modelling and other kind of NAM catchment wise hydrological analysis and designing purpose at national or regional level.
Process description	NWRD has collected the data layer from Surface Water Modelling Center (SWMC) and organized it in a suitable form.

Sample of Data



Attribute Table

area	catname
269070400	
431532448	NW06
1094956544	NW19
1359784960	NW31
1378097024	NW30
1110633216	NW24
7.935	
535151072	NW32

Bundle Information (Data Field Description and Unit)

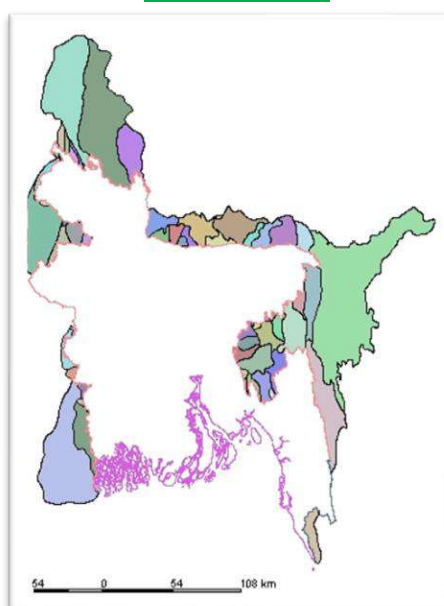
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square meter
Catname	Name of the catchment defined by SWSMP	

Name of Data layer: **Transboundary Catchment**

Metadata

Data Type	Spatial
Abstract	This spatial data layer contains the transboundary catchment identified by National Water Management Plan (NWMP).
Quality	As the source was in 1: 500,000 scale it is recommended that this boundary should be used in same scale or smaller than this.
Completeness	The data layer covers transboundary catchments defined by NWMP.
History of the dataset	Source of this data layer was a hard copy map titled 'MPO Zila, Upazila, Thana, Catchment and Regional Boundary Map' at 1:500,000 scale published by Master Plan Organization (MPO) in 1983 and a Tactical Pilotage Chart, published by National Ocean Service, UK.
Purpose of production	To present and delineate the transboundary catchment boundaries and to use this boundary for transboundary catchment wise hydrological computation at national or regional level for hydrological planning and design purpose.
Process description	NWRD captured the portion of Bangladesh of this data layer from the cited MPO source map with input RMS error 0.003 inch and output error below 10 meter and the rest of the data set was captured from the other source where the catchment boundary was delineated by NWMP. Associated attribute information was also incorporated according to the source map.

Sample of Data



Attribute Table

area	region	catid	catno	planno	location
8260706304	NW	12	NW12	NW03	Out of BD
10437380096	NW	13	NW13	NW02	Out of BD
386867040	NW	2	NW02-1	NW07	Out of BD
2628530944	NW	14	NW14	NW01	Out of BD
216881776	NW	2	NW02-2	NW07	Out of BD
166348256	NW	2	NW02-3	NW07	Out of BD
192498144	NW	2	NW02-4	NW07	Out of BD
54585564	NW	20	NW20	NW10	Out of BD
19644568	NW	2	NW02	NW07	Out of BD
441649824	NW	21	NW21	NW10	Out of BD

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square meter
Region	The catchment is divided into 5 regions by MPO and NWMP.	
Catid	Catchment ID according to MPO during the NWMP Phase-1 study.	
Catno	Catchment number (Hydrological Region + Catchment ID) according to MPO during the NWMP Phase-1 study.	
Planno	Planning area number according to MPO during the NWMP Phase-1 study	
Location	Whether the catchment is outside or inside of Bangladesh	

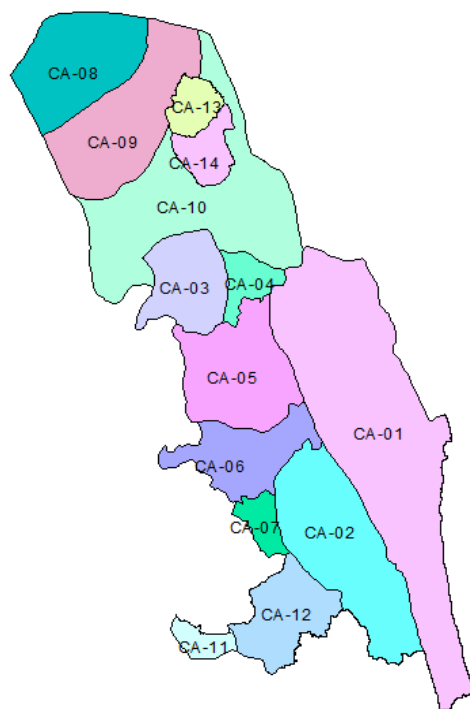
Name of Data layer:

Eastern Hills River Catchments of WARPO

Metadata

Data Type	Geospatial
Abstract	A Geospatial data layer of Eastern Hills Hydrological region river catchments boundary delineated by Water Resources Planning Organization (WARPO).
Quality	The river catchments boundary has been generated precisely for regional hydrological modelling.
Completeness	The river catchments boundary encompasses Eastern Hills Hydrological region.
History of the dataset	WARPO generated this data under the project 'Assessment of State of Water Resources' conducted by WARPO in 2016.
Purpose of production	The river catchments boundary data layer was generated with a view to use it for hydrological modelling and other kind of hydrological analysis and design purposes at national and regional level.
Process description	NWRD has collected the data layer from Technical Report (Volume 4.4) : "Review of Catchment Delineation, Calibration and Water Balance" prepared by Water Resources Planning Organization (WARPO) under the project on 'Assessment of State of Water Resources' and organized it in a suitable form.

Sample of Data



Attribute Table

<i>Shape</i>	<i>Area</i>	<i>Perimeter</i>	<i>Name</i>	<i>Region</i>	<i>Nwmp_name</i>	<i>Area_sqkm</i>
Polygon	2237286144.0	286992.156	CA-01	EHR	CA - 01	2240.03
Polygon	973733888.00	155202.625	CA-02	EHR	CA - 02	973.38
Polygon	427778560.00	90722.273	CA-03	EHR	CA - 03	427.78
Polygon	153262416.00	65750.570	CA-04	EHR	CA - 04	153.26
Polygon	694002880.00	123479.008	CA-05	EHR	CA - 05	694.00
Polygon	462681088.00	128987.109	CA-06	EHR	CA - 06	462.68
Polygon	118775368.00	54838.125	CA-07	EHR	CA - 07	118.78

Bundle Information (Data Field Description and Unit)

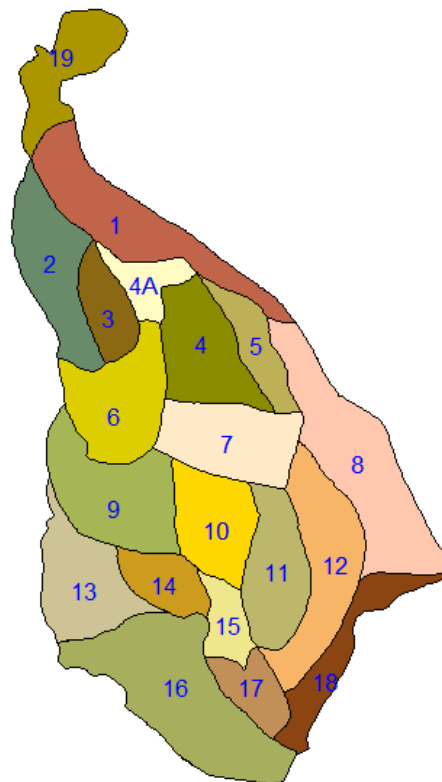
FIELD_NAME	FIELD_DESC	UNIT
<i>Shape</i>	Forms of the geographic object	
<i>Area</i>	Area of each catchment	Square meter
<i>Perimeter</i>	Perimeter of each catchment	meter
<i>Region</i>	Name of the hydrological region; EHR: Eastern Hills Region	
<i>Area_sqkm</i>	Area of each catchment	Square Kilometer
<i>Name</i>	Name of the river catchment defined by WARPO under project on 'Assessment of State of Water Resources'	
<i>Nwmp_name</i>	Name of the river catchment defined by WARPO in National Water Management Plan	

Name of Data layer: **NC River Catchments of WARPO**

Metadata

Data Type	Geospatial
Abstract	A Geospatial data layer of North-Central (NC) hydrological region river catchments boundary delineated by Water Resources Planning Organization (WARPO).
Quality	The river catchments boundary has been generated precisely for regional hydrologic modelling.
Completeness	The river catchments boundary encompasses North-Central hydrological region.
History of the dataset	WARPO generated this data under the project 'Assessment of State of Water Resources' conducted by WARPO in 2016.
Purpose of production	The river catchments boundary data layer was generated with a view to use it for hydrological modelling and other kind of hydrological analysis and design purpose at national or regional level.
Process description	NWRD has collected the data layer from Technical Reports (Volume 4.4): Review of Catchment Delineation, Calibration and Water Balance prepared by Water Resources Planning Organization (WARPO) under the project 'Assessment of State of Water Resources' and organized it in a suitable form.

Sample of Data



Attribute Table

<i>Shape</i>	<i>Name</i>	<i>Shape_leng</i>	<i>Shape_area</i>
PolygonZ	1	208514.43997499999	1040.95021424000
PolygonZ	10	106989.32098000000	660.69491558900
PolygonZ	11	119316.74304200000	712.90200162800
PolygonZ	12	176470.58770599999	967.65712077700
PolygonZ	13	145904.26414799999	781.38729823400
PolygonZ	14	79536.70747420000	369.22455813600
PolygonZ	15	81680.96583500000	275.49682795200
PolygonZ	16	197088.30449600000	1565.99560832000
PolygonZ	17	84400.89618990000	338.55599094100
PolygonZ	18	170202.00882300001	515.28426490000
PolygonZ	19	133740.10201300000	596.98723190700
PolygonZ	2	149736.20073099999	800.70810532800
PolygonZ	3	84082.71257960000	373.08666981100
PolygonZ	4	125453.88242900000	767.70311373500

Bundle Information (Data Field Description and Unit)

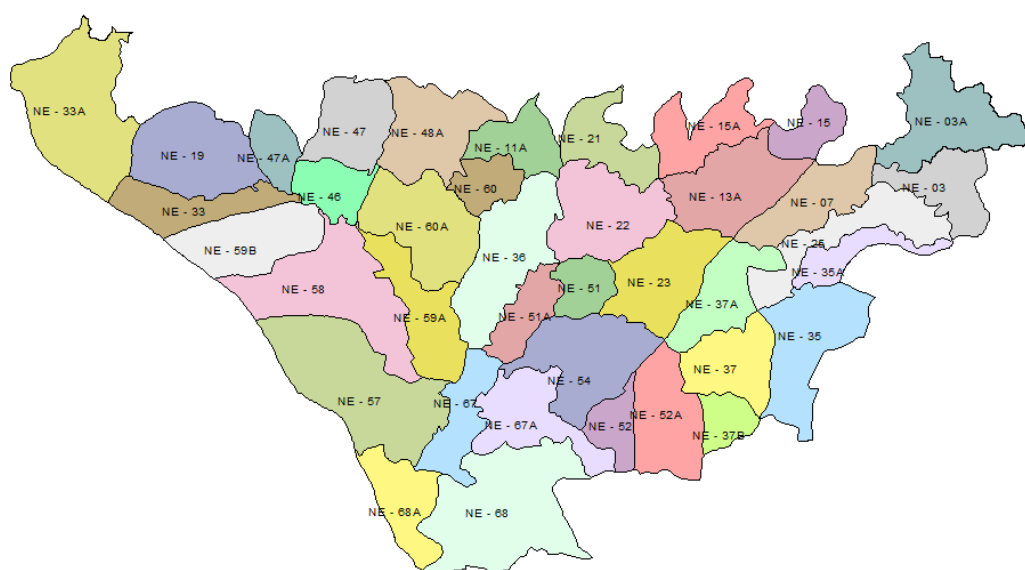
FIELD_NAME	FIELD_DESC	UNIT
<i>Shape</i>	Forms of the geographic object	
<i>Name</i>	Name of the river catchment defined by WARPO under project on 'Assessment of State of Water Resources'	
<i>Shape_area</i>	Area of each catchment	Square kilometer
<i>Shape_leng</i>	Length of each catchment	Meter

Name of Data layer: **NE River Catchments of WARPO**

Metadata

Data Type	Geospatial
Abstract	A Geospatial data layer of North-Eastern (NE) hydrological region river catchments boundary delineated by Water Resources Planning Organization (WARPO).
Quality	The river catchments boundary has been generated precisely for regional hydrologic modelling.
Completeness	The river catchments boundary encompasses North-Eastern hydrological region.
History of the dataset	WARPO generated this data under the project 'Assessment of State of Water Resources' conducted by WARPO in 2016.
Purpose of production	The river catchments boundary data layer was generated with a view to use it for hydrological modelling and other kind of hydrological analysis and design purpose at national or regional level.
Process description	NWRD has collected the data layer from Technical Reports (Volume 4.4) Review of Catchment Delineation, Calibration and Water Balance prepared by Water Resources Planning Organization (WARPO) under the project on 'Assessment of State of Water Resources' and organized it in a suitable form.

Sample of Data



Attribute Table

Shape	Id	Region	Name	Nwmp_name	Area_sqkm
Polygon	58	NE	NE - 03	NE - 03	436.04
Polygon	59	NE	NE - 03A	NE - 03A	727.06
Polygon	60	NE	NE - 07	NE - 07	504.70
Polygon	61	NE	NE - 11A	NE - 11A	343.30
Polygon	62	NE	NE - 13A	NE - 13A	695.87
Polygon	63	NE	NE - 15	NE - 15	261.37
Polygon	64	NE	NE - 15A	NE - 15A	447.34
Polygon	65	NE	NE - 19	NE - 19	749.04
Polygon	66	NE	NE - 21	NE - 21	405.64
Polygon	67	NE	NE - 22	NE - 22	720.19
Polygon	68	NE	NE - 23	NE - 23	650.58
Polygon	69	NE	NE - 25	NE - 25	573.76
Polygon	70	NE	NE - 33	NE - 33	434.41
Polygon	71	NE	NE - 33A	NE - 33A	1086.72
Polygon	72	NE	NE - 35	NE - 35	740.31
Polygon	73	NE	NE - 35A	NE - 35A	267.89
Polygon	74	NE	NE - 36	NE - 36	789.38
Polygon	75	NE	NE - 37	NE - 37	491.94
Polygon	76	NE	NE - 37A	NE - 37A	470.80
Polygon	77	NE	NE - 37B	NE - 37B	203.36
Polygon	78	NE	NE - 46	NE - 46	294.72
Polygon	79	NE	NE - 47	NE - 47	501.01

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Shape	Forms of the geographic object	
Id	Serial no of catchment area	
Region	Name of the hydrological region; NE: North-Eastern	
Area_sqkm	Area of each catchment	Square kilometer
Nwmp_name	Name of the river catchment defined by WARPO in National Water Management Plan	

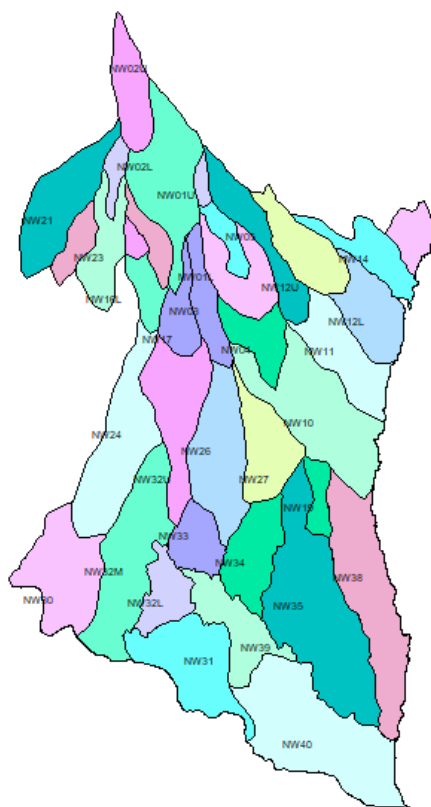
Name of Data layer:

NW River Catchments of WARPO

Metadata

Data Type	Geospatial
Abstract	A Geospatial data layer of North-Western (NW) hydrological region river catchments boundary delineated by Water Resources Planning Organization (WARPO).
Quality	The river catchments boundary has been generated precisely for regional hydrologic modelling.
Completeness	The river catchments boundary encompasses North-Western hydrological region.
History of the dataset	WARPO generated this data under the project on 'Assessment of State of Water Resources ' conducted by WARPO in 2016.
Purpose of production	The river catchments boundary data layer was generated with a view to use it for hydrological modelling and other kind of hydrological analysis and design purpose at national or regional level.
Process description	NWRD has collected the data layer from Technical Reports (Volume 4.4) Review of Catchment Delineation, Calibration and Water Balance prepared by Water Resources Planning Organization (WARPO) under the project on 'Assessment of State of Water Resources 'and organized it in a suitable form.

Sample of Data



Attribute Table

Shape	Objectid	Name	Area_sqkm	Area_km2_n
PolygonZ	1	NW01L	749.50100	749.500
PolygonZ	2	NW01M	263.70012	263.700
PolygonZ	3	NW01U	110.83169	110.800
PolygonZ	4	NW02L	1408.98510	1409.000
PolygonZ	5	NW02U	667.71551	667.700
PolygonZ	6	NW03	503.18828	503.200
PolygonZ	7	NW04	556.21421	556.200
PolygonZ	8	NW05	794.63832	794.600
PolygonZ	9	NW07	313.52714	313.500
PolygonZ	13	NW12U	789.84765	789.800
PolygonZ	16	NW15	204.42897	204.400
PolygonZ	17	NW16L	326.94439	326.900
PolygonZ	18	NW16U	110.34934	110.300
PolygonZ	19	NW17	454.48175	454.500
PolygonZ	20	NW19	277.84853	277.800
PolygonZ	21	NW21	1138.83954	1139.000
PolygonZ	22	NW22	318.13640	318.100
PolygonZ	23	NW23	668.62715	668.600

Bundle Information (Data Field Description and Unit)

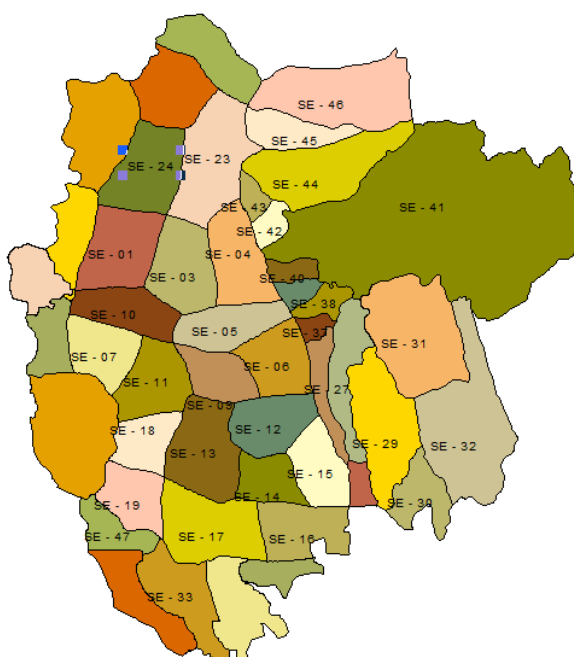
FIELD_NAME	FIELD_DESC	UNIT
Shape	Forms of the geographic object	
Object Id	Serial no of catchment area	
Name	Name of the river catchment defined by WARPO under project on 'Assessment of State of Water Resources'	
Area_sqkm	Area of each catchment	Square kilometer
NW	North- Western	

Name of Data layer: **SE River Catchments of WARPO**

Metadata

Data Type	Geospatial
Abstract	A Geospatial data layer of South-Eastern (SE) hydrological region river catchments boundary delineated by Water Resources Planning Organization (WARPO).
Quality	The river catchments boundary has been generated precisely for regional hydrologic modelling.
Completeness	The river catchments boundary encompasses South-Eastern hydrological region.
History of the dataset	WARPO generated this data under the project on 'Assessment of State of Water Resources ' conducted by WARPO in 2016.
Purpose of production	The river catchments boundary data layer was generated with a view to use it for hydrological modelling and other kind of hydrological analysis and design purpose at national or regional level.
Process description	NWRD has collected the data layer from Technical Reports (Volume 4.4) Review of Catchment Delineation, Calibration and Water Balance prepared by Water Resources Planning Organization (WARPO) under the project on 'Assessment of State of Water Resources 'and organized it in a suitable form.

Sample of Data



Attribute Table

<i>Shape</i>	<i>Name</i>	<i>Area_sqkm</i>	<i>Catchment</i>
Polygon	SE - 01	325.81	SE - 01
Polygon	SE - 02	196.49	SE - 02
Polygon	SE - 03	307.59	SE - 03
Polygon	SE - 04	294.26	SE - 04
Polygon	SE - 05	241.81	SE - 05
Polygon	SE - 06	245.01	SE - 06
Polygon	SE - 07	230.02	SE - 07
Polygon	SE - 08	156.49	SE - 08
Polygon	SE - 09	188.35	SE - 09
Polygon	SE - 10	235.16	SE - 10
Polygon	SE - 11	267.12	SE - 11
Polygon	SE - 12	252.74	SE - 12
Polygon	SE - 13	356.06	SE - 13
Polygon	SE - 14	165.28	SE - 14
Polygon	SE - 15	225.83	SE - 15
Polygon	SE - 16	263.48	SE - 16
Polygon	SE - 17	383.31	SE - 17
Polygon	SE - 18	182.56	SE - 18

Bundle Information (Data Field Description and Unit)

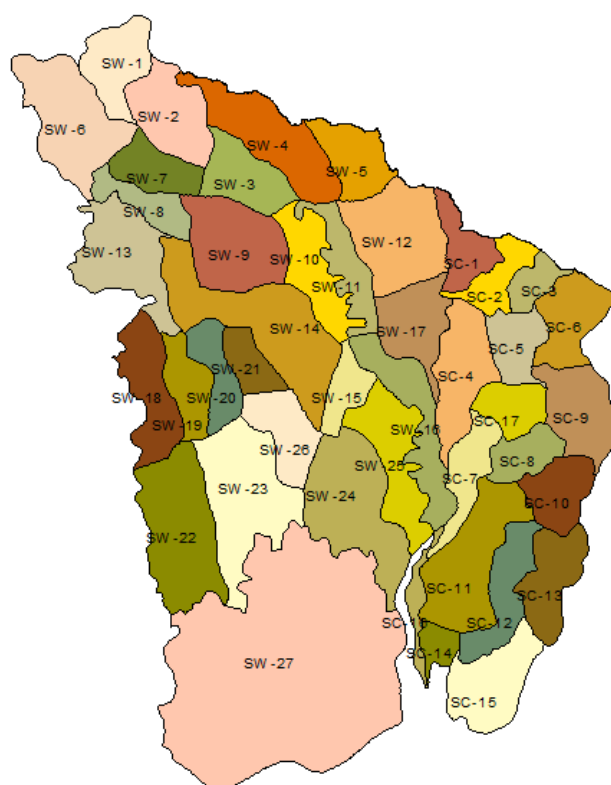
FIELD_NAME	FIELD_DESC	UNIT
<i>Shape</i>	Forms of the geographic object	
<i>Name</i>	Name of the river catchment defined by WARPO under project on 'Assessment of State of Water Resources'	
<i>Area_sqkm</i>	Area of each catchment	Square kilometer
<i>Catchment</i>	Name of the river catchment defined by WARPO under project on 'Assessment of State of Water Resources'	
SE	South-Eastern	

Name of Data layer: **SW and SC River Catchments of WARPO**

Metadata

Data Type	Geospatial
Abstract	A Geospatial data layer of South-Western (SW) and South-Central (SC) hydrological regions river catchments boundary delineated by Water Resources Planning Organization (WARPO).
Quality	The river catchments boundary has been generated precisely for regional hydrologic modelling.
Completeness	The river catchments boundary encompasses South-Western and South-Central hydrological region.
History of the dataset	WARPO generated this data under the project on 'Assessment of State of Water Resources ' conducted by WARPO in 2016.
Purpose of production	The river catchments boundary data layer was generated with a view to use it for hydrological modelling and other kind of hydrological analysis and design purpose at national or regional level.
Process description	NWRD has collected the data layer from Technical Reports (Volume 4.4) Review of Catchment Delineation, Calibration and Water Balance prepared by Water Resources Planning Organization (WARPO) under the project on 'Assessment of State of Water Resources 'and organized it in a suitable form.

Sample of Data



Attribute Table

Shape	Name	Cat_name	Cat_area
Polygon	SC-1	SC-01	413.60846191500
Polygon	SC-10	SC-10	503.77268318700
Polygon	SC-11	SC-11	1123.80111572000
Polygon	SC-12	SC-12	600.99338065900
Polygon	SC-13	SC-13	626.27426682200
Polygon	SC-14	SC-14	186.00073571000
Polygon	SC-15	SC-15	772.78447671500
Polygon	SC-16	SC-16	180.78491943600
Polygon	SC-17	SC-17	384.58502043000
Polygon	SC-2	SC-02	368.89369188200
Polygon	SC-3	SC-03	250.54152666200
Polygon	SC-4	SC-04	784.68655270900
Polygon	SC-5	SC-05	438.04979982800
Polygon	SC-6	SC-06	622.76643548900
Polygon	SC-7	SC-07	469.52911178100
Polygon	SC-8	SC-08	367.59167087700
Polygon	SC-9	SC-09	719.05604133200
Polygon	SW-1	SW-01	600.29548063700
Polygon	SW-10	SW-10	646.81712663500
Polygon	SW-11	SW-11	494.63873974600
Polygon	SW-12	SW-12	1087.59808899000
Polygon	SW-13	SW-13	977.53877926700
Polygon	SW-14	SW-14	1515.46866345000
Polygon	SW-15	SW-15	322.42415250500

Bundle Information (Data Field Description and Unit)

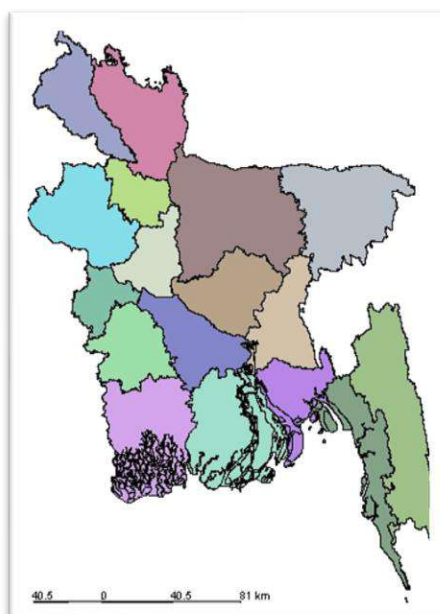
FIELD_NAME	FIELD_DESC	UNIT
Shape	Forms of the geographic object	
Name	Name of the river catchment defined by WARPO under project on 'Assessment of State of Water Resources'	
Cat_area	Area of each catchment	Square kilometer
Cat_name	Name of the river catchment defined by WARPO under the project on 'Assessment of State of Water Resources'	
SC	South-Central	
SW	South-Western	

Name of Data layer: **District Boundaries 1961**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of 17 district boundaries of Bangladesh along with the attribute information derived from Population census book 1961 published by Bangladesh Bureau of Statistics (BBS).
Quality	Scale of the source data was 1:63360. Therefore, it is recommended that in any kind of analysis the data layer should not be used exceeding above mentioned scale.
Completeness	Covers all districts according to BBS census 1961.
History of the dataset	The source of this dataset is Police Station Maps published by Directorate of Land Record and Survey (DLRS), which were compiled between 1905-1945. The Some maps are still being update and new upazillas are created. Scales of these maps were 1"=1mile excluding Chittagong Hill Tracts. Reserve Forest maps published by Survey of Bangladesh were used for Sundarbans region. Attribute information were attached according to the Geomaster database 1981 collected from Bangladesh Bureau of Statistics (BBS).
Purpose of production	This data layer of district boundaries is essential for any data analysis and thematic map preparation. It can linked with BBS statistical information or any other statistical database through geocode. It is also national, regional and local level planning, analysis and management purposes.
Process description	The distict boundaries have been captured by Police Station Maps published by Directorate of Land Record and Survey (DLRS) with input RMS error 0.002 - 0.005 inch and output 3 - 20 meter. For Sundarban area, union boundaries have been delineated with the help of river course and small atlas of BBS over Reserve Forest maps published by Survey of Bangladesh. Geocoding in the maps has been done according to the Geomaster database 2001 collected from BBS. Other attribute information has been attached according to the Geomaster database 1961. The source map was in Cassinii projection system projection system. It's transformed into Bangladesh Transverse Mercator (BTM) projection system. International boundary captured from Toposheets (1:50,000) published by SoB.

Sample of Data



Attribute Table

area	distcode	distname	landtype
663526.188	6	Bakerganj	Water
67686168	15	Chittagong	Land
67686168	15	Chittagong	Water
6729382400	19	Comilla	Land
6729382400	19	Comilla	Water
9291224	75	Noakhali	Land
9291224	75	Noakhali	Water
13673848832	99	Chittagong Hill Tracts	Land

Bundle Information (Data Field Description and Unit)

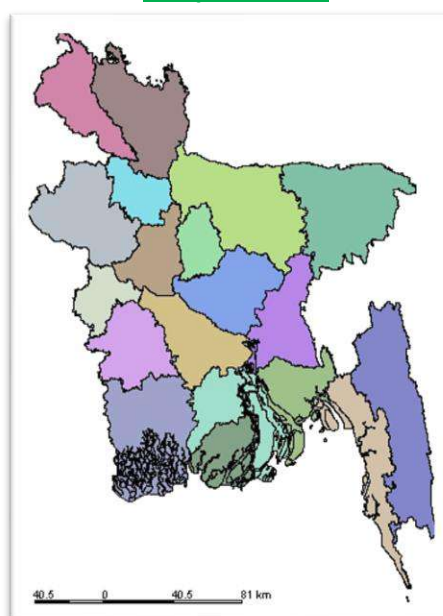
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square Meter
Distcode	Distcode given according to BBS geomaster database of 1961	
Distname	Name of the districts according to the BBS geomaster database	
Landtype	Classification of administrative unit by land and water	

Name of Data layer: **District Boundaries 1974**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of 19 district boundaries of Bangladesh along with the attribute information derived from Population census book 1974 published by Bangladesh Bureau of Statistics (BBS).
Quality	Scale of the source data was 1:63360. Therefore, it is recommended that in any kind of analysis the data layer should not be used exceeding above mentioned scale.
Completeness	This data layer covers all district boundaries according to Geomaster database 1974.
History of the dataset	The source of this dataset is Police Station Maps published by Directorate of Land Record and Survey (DLRS), which were compiled between 1905-1945. The Some maps are still being update and new upazillas are created. Scales of these maps were 1"=1mile excluding Chittagong Hill Tracts. Reserve Forest maps published by Survey of Bangladesh were used for Sundarbans region. Attribute information were attached according to the Geomaster database 1974 collected from Bangladesh Bureau of Statistics (BBS).
Purpose of production	This data layer of district boundaries is essential for any data analysis and thematic map preparation. It can linked with BBS statistical information or any other statistical database through geocode. It is also national, regional and local level planning, analysis and management purposes.
Process description	The distict boundaries have been captured by Police Station Maps published by Directorate of Land Record and Survey (DLRS) with input RMS error 0.002 - 0.005 inch and output 3 - 20 meter. For Sundarban area, union boundaries have been delineated with the help of river course and small atlas of BBS over Reserve Forest maps published by Survey of Bangladesh. Geocoding in the maps has been done according to the Geomaster database 1974 collected from BBS. Other attribute information has been attached according to the Geomaster database 1974. The source map was in Cassinii projection system projection system. It's transformed into Bangladesh Transverse Mercator (BTM) projection system. International boundary is used from SOB Topo map of 1: 50,000 scale and coast line generated from IRS Liss 2005 image.

Sample of Data



Attribute Table

area	distcode	distname	landtype
5682184884.8828	6	Bakerganj	Water
3554182396.8359	78	Patuakhali	Land
3554182396.8359	78	Patuakhali	Water
6349207426.3545	15	Chittagong	Land
6349207426.3545	15	Chittagong	Water
6729382185.3086	19	Comilla	Land
6729382185.3086	19	Comilla	Water
4767934263.2666	75	Noakhali	Land

Bundle Information (Data Field Description and Unit)

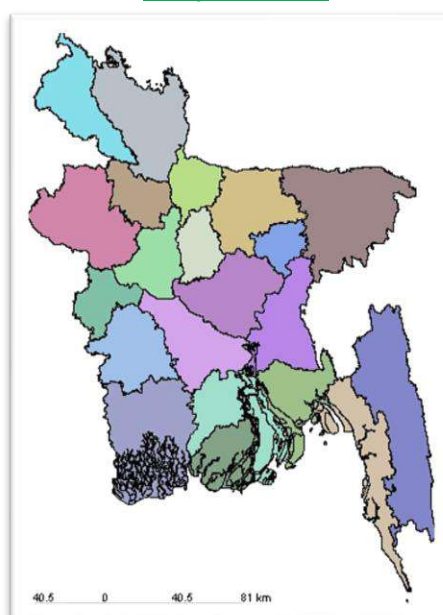
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square Meter
Distcode	Distcode given according to BBS geomaster database of 1974	
Distname	Name of the districts according to the BBS geomaster database	
Landtype	Classification of administrative unit by land and water	

Name of Data layer: **District Boundaries 1981**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of 21 district boundaries of Bangladesh along with the attribute information derived from Population census book 1981 published by Bangladesh Bureau of Statistics (BBS).
Quality	Scale of the source data was 1:63360. Therefore, it is recommended that in any kind of analysis the data layer should not be used exceeding above mentioned scale.
Completeness	This data layer covers all district boundaries according to Geomaster database 1981.
History of the dataset	The source of this dataset is Police Station Maps published by Directorate of Land Record and Survey (DLRS), which were compiled between 1905-1945. The Some maps are still being update and new upazillas are created. Scale of these maps were 1"=1mile were produced by using the Cassinii projection system excluding Chittagong Hill Tracts. Reserve Forest maps published by Survey of Bangladesh were used for Sundarbans region. Attribute information were attached according to the Geomaster database 1981 collected from Bangladesh Bureau of Statistics (BBS).
Purpose of production	This data layer of district boundaries is essential for any data analysis and thematic map preparation. It can linked with BBS statistical information or any other statistical database through geocode. It is also national, regional and local level planning, analysis and management purposes.
Process description	The distict boundaries have been captured by Police Station Maps published by Directorate of Land Record and Survey (DLRS) with input RMS error 0.002 - 0.005 inch and output 3 - 20 meter. For Sundarban area, union boundaries have been delineated with the help of river course and small atlas of BBS over Reserve Forest maps published by Survey of Bangladesh. Geocoding in the maps has been done according to the Geomaster database 1981 collected from BBS. Other attribute information has been attached according to the Geomaster database 1981. The source map was in Cassinii projection system projection system. It's transformed into Bangladesh Transverse Mercator (BTM) projection system. International boundary is used from SOB Topo map of 1: 50,000 scale and coast line generated from IRS Liss 2005 image.

Sample of Data



Attribute Table

area	distcode	distname	landtype
6081103646.532	6	Barisal	Water
3783886314.626	78	Patuakhali	Land
3783886314.626	78	Patuakhali	Water
6146010524.5	15	Chittagong	Land
6146010524.5	15	Chittagong	Water
6729351216	19	Comilla	Land
6729351216	19	Comilla	Water
4744237611.625	75	Noakhali	Land

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square Meter
Distcode	Distcode given according to BBS geomaster database of 1981	
Distname	Name of the districts according to the BBS geomaster database	
Landtype	Classification of administrative unit by land and water	

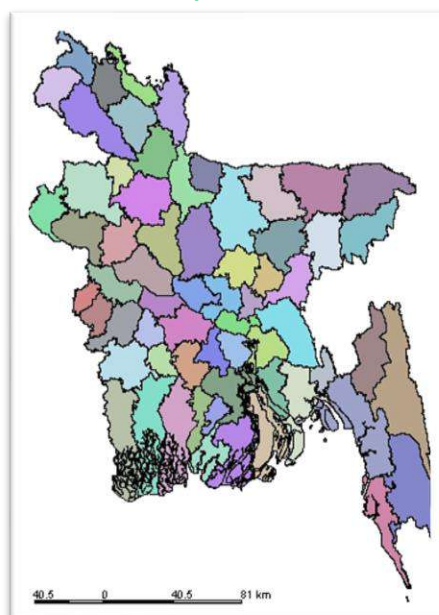
Name of Data layer: **District Boundaries 1991**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of District boundaries of Bangladesh along with the attribute information derived from Geomaster Database, 1991 published by Bangladesh Bureau of Statistics (BBS).
Quality	Scale of the source data was 1:63360. Therefore, it is recommended that in any kind of analysis the data layer should not be used exceeding above mentioned scale.
Completeness	This data layer covers all district boundaries according to Geomaster database 1991.
History of the dataset	The source of this dataset is Police Station Maps published by Directorate of Land Record and Survey (DLRS), which were compiled between 1905-1945. The Some maps are still being update still being update as and new upazillas are created. Scales of these maps were 1"=1mile excluding Chittagong Hill Tracts. Reserve Forest maps published by Survey of Bangladesh were used for Sundarbans region. Attribute information were attached according to the Geomaster database 1991 collected from Bangladesh Bureau of Statistics (BBS).
Purpose of production	This data layer of district boundaries is essential for any data analysis and thematic map preparation. It can linked with BBS statistical information or any other statistical database through geocode. It is also national, regional and local level planning, analysis and management purposes.
Process description	The distict boundaries have been captured by Police Station Maps published by Directorate of Land Record and Survey (DLRS) with input RMS error 0.002 - 0.005 inch and output 3 - 20

meter. For Sundarban area, union boundaries have been delineated with the help of river course and small atlas of BBS over Reserve Forest maps published by Survey of Bangladesh. Geocoding in the maps has been done according to the Geomaster database 1991 collected from BBS. Other attribute information has been attached according to the Geomaster database 1991. The source map was in Cassini projection system. It's transformed into Bangladesh Transverse Mercator (BTM) projection system. International boundary is used from SOB Topo map of 1: 50,000 scale and coast line generated from IRS Liss 2005 image.

Sample of Data



Attribute Table

area	perimeter	divicode	distcode	divname	distname	landtype
1325457270.7	495015.75	1	4	Barisal	Barguna	Water
2250609039.91	1029487.6	1	6	Barisal	Barisal	Water
2005766835.81	848316.03	1	9	Barisal	Bhola	Land
2005766835.81	848316.03	1	9	Barisal	Bhola	Water
2458429069.94	1232094.1	1	78	Barisal	Patuakhali	Water
1109888420.39	428456.8	1	79	Barisal	Pirojpur	Water
4967239764.4	540727.62	2	3	Chittagong	Bandarban	Land
1916929882.91	345412.62	2	12	Chittagong	Brahmanbaria	Land
1695039856.75	222675.15	2	13	Chittagong	Chandpur	Land
1695039856.75	222675.15	2	13	Chittagong	Chandpur	Water

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square Meter
perimeter	Perimeter of the polygon	Meter
Divicode	Divicode given according to BBS geomaster database of 1991	
Distcode	Distcode given according to BBS geomaster database of 1991	

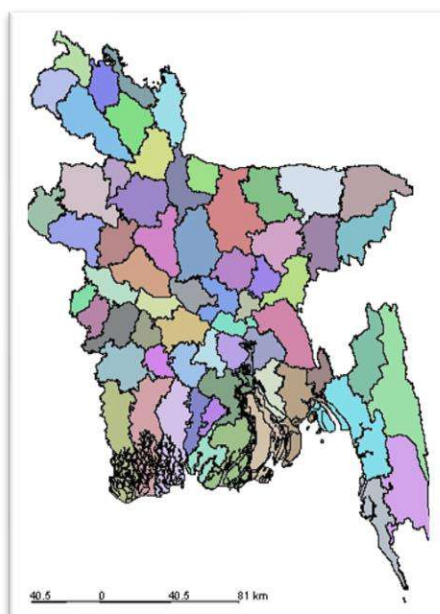
Diviname	Name of the division according to the BBS geomaster database	
Distname	Name of the districts according to the BBS geomaster database	
Landtype	Classification of administrative unit by land and water	

Name of Data layer: **District Boundaries 2001**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of District boundaries of Bangladesh along with the attribute information derived from Geomaster Database, 2001 published by Bangladesh Bureau of Statistics (BBS).
Quality	Scale of the source data was 1:63360. Therefore, it is recommended that in any kind of analysis the data layer should not be used exceeding above mentioned scale.
Completeness	This data layer covers all district boundaries according to Geomaster database 2001.
History of the dataset	The source of this dataset is Police Station Maps published by Directorate of Land Record and Survey (DLRS), which were compiled between 1905-1945. The Some maps are still being update still being update as and new upazillas are created. Scales of these maps were 1"=1mile excluding Chittagong Hill Tracts. Reserve Forest maps published by Survey of Bangladesh were used for Sundarbans region. Attribute information were attached according to the Geomaster database 2001 collected from Bangladesh Bureau of Statistics (BBS).
Purpose of production	This data layer of district boundaries is essential for any data analysis and thematic map preparation. It can linked with BBS statistical information or any other statistical database through geocode. It is also national, regional and local level planning, analysis and management purposes.
Process description	The distict boundaries have been captured by Police Station Maps published by Directorate of Land Record and Survey (DLRS) with input RMS error 0.002 - 0.005 inch and output 3 - 20 meter. For Sundarban area, union boundaries have been delineated with the help of river course and small atlas of BBS over Reserve Forest maps published by Survey of Bangladesh. Geocoding in the maps has been done according to the Geomaster database 2001 collected from BBS. Other attribute information has been attached according to the Geomaster database 2001. The source map was in Cassinii projection system projection system. It's transformed into Bangladesh Transverse Mercator (BTM) projection system. International boundary is used from SOB Topo map of 1: 50,000 scale and coast line generated from IRS Liss 2005 image.

Sample of Data



Attribute Table

area	distcode	divname	distname	landtype
1344607571.3833	1004	Barisal	Barguna	Land
173153508.4879	1004	Barisal	Barguna	Water
2239234986.1279	1006	Barisal	Barisal	Land
278523433.398	1006	Barisal	Barisal	Water
1947241266.6145	1009	Barisal	Bhola	Land
1228286884.3127	1009	Barisal	Bhola	Water
737674805.7592	1042	Barisal	Jhalokati	Land
2581576789.4645	1078	Barisal	Patuakhali	Land
577756276.4457	1078	Barisal	Patuakhali	Water
1268806454.9419	1079	Barisal	Pirojpur	Land

Bundle Information (Data Field Description and Unit)

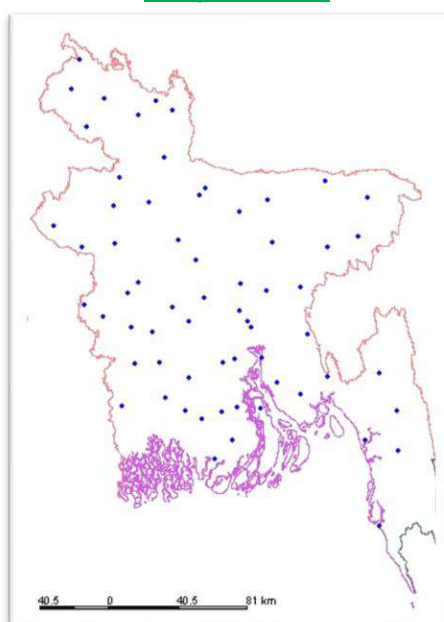
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square Meter
Distcode	Geocode (Division code + district code) is incorporated according to Geomaster database of BBS 2001	
Divname	Name of each division according to BBS geomaster database of 2001	
Distname	Name of each district according to BBS geomaster database of 2001	
Landtype	Classification of administrative unit by land and water	

Name of Data layer: **District Headquarter 1991**

Metadata

Data Type	Spatial
Abstract	A spatial data layer presenting 64 district headquarters with other attribute information according to BBS geo-master database 1991.
Quality	It is recommended that the data layer should be used in 1:5,00,000 Scale or smaller than this. Attribute data complies with BBS geo-master database, 1991 and covers the whole country.
Completeness	Covers all districts of Bangladesh according to the BBS census 1991.
History of the dataset	Source of the data layer is a published map produced by MPO in 1983 under the Ministry of Irrigation Water Development and Flood Control.
Purpose of production	To present the location of the district headquarters and to use the data in different kinds of analysis in national or regional level
Process description	NWRD has captured the headquarter locations from the published map produced by MPO at 1:5,00,000 scale and checked the data layer with the help of an Atlas published by Graphosman.

Sample of Data



Attribute Table

distcode	divname	distname
5077	Rajshahi	Panchagarh
5094	Rajshahi	Thakurgaon
5073	Rajshahi	Nilphamari
5052	Rajshahi	Lalmonirhat
5049	Rajshahi	Kurigram
5085	Rajshahi	Rangpur
5027	Rajshahi	Dinajpur
5032	Rajshahi	Gaibandha

Bundle Information (Data Field Description and Unit)

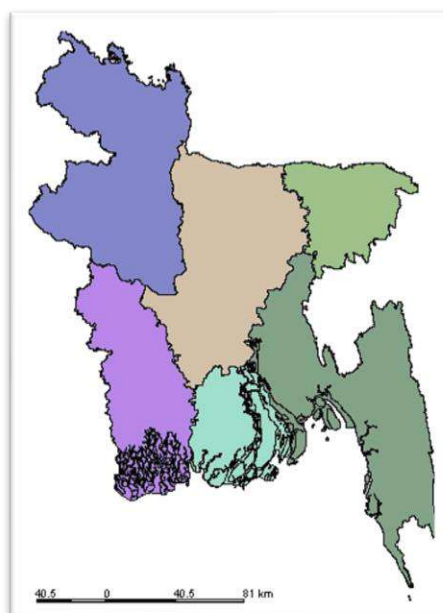
FIELD_NAME	FIELD_DESC	UNIT
Distcode	District code given to district according to BBS geomaster database	
Distname	Name of the districts according to the BBS geomaster database.	
Divname	Division name is given according to BBS geomaster database	

Name of Data layer: **Division Boundaries 1991**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of six division boundaries along with BBS Geocode derived from Geomaster database 1991 published by Bangladesh Bureau of Statistics (BBS).
Quality	Scale of the source data was 1:63360. Therefore, it is recommended that in any kind of analysis the data layer should not be used exceeding above mentioned scale.
Completeness	Covers all divisions according to BBS census 1991.
History of the dataset	The source of this dataset is Police Station Maps published by Directorate of Land Record and Survey (DLRS), which were compiled between 1905-1945. The Some maps are still being update and new upazillas are created. Scales of these maps were 1"=1mile was produced by using the Cassinii projection system excluding Chittagong Hill Tracts. Reserve Forest maps published by Survey of Bangladesh were used for Sundarbans region. Attribute information were attached according to the Geomaster database 1981 collected from Bangladesh Bureau of Statistics (BBS).
Purpose of production	To archive and present the six division boundaries of Bangladesh and to use this boundary in different analysis and management purposes at national and regional level.
Process description	The division boundaries have been captured by Police Station Maps published by Directorate of Land Record and Survey (DLRS) with input RMS error 0.002 - 0.005 inch and output 3 - 20 meter. For Sundarban area, union boundaries have been delineated with the help of river course and small atlas of BBS over Reserve Forest maps published by Survey of Bangladesh. Geocoding in the maps has been done according to the Geomaster database 1991 collected from BBS. Other attribute information has been attached according to the Geomaster database 1991. The source map was in Cassinii projection system projection system. It's transformed into Bangladesh Transverse Mercator (BTM) projection system. International boundary is used from SOB Topo map of 1: 50,000 scale and coast line generated from IRS Liss 2005 image.

Sample of Data



Attribute Table

area	divcode	divname	landtype	area2
10119141874.2913	10	Barisal	Land	10119142767
2260617874.304	10	Barisal	Water	2260617821.15
31193872511.3976	20	Chittagong	Land	31167354944.1
1668521824.5511	20	Chittagong	Water	1668521824.55
58509981.9044	30	Dhaka	Water	58509981.9043
1389333961.6484	40	Khulna	Water	1389333961.65

Bundle Information (Data Field Description and Unit)

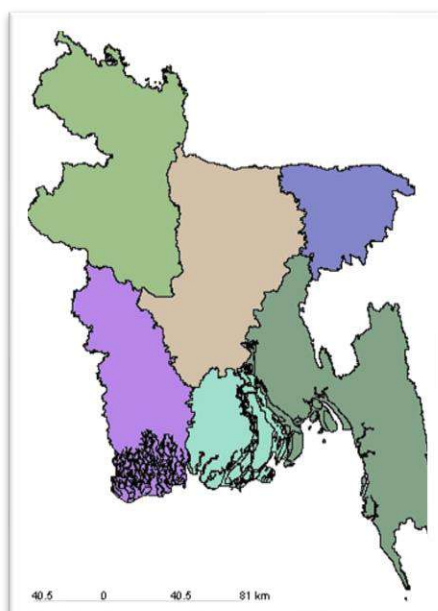
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square Meter
Divcode	A unique code is specified for each division by Bangladesh Bureau of Statistics (BBS) according to geomaster database of 1991	
Divname	Division name given to division according to BBS geomaster database of 1991	
Landtype	Classification of administrative unit by land and water	

Name of Data layer: **Division Boundaries 2001**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of six division boundaries along with BBS Geocode derived from Geomaster database 2001 published by Bangladesh Bureau of Statistics (BBS).
Quality	Scale of the source data was 1:63360. Therefore, it is recommended that in any kind of analysis the data layer should not be used exceeding above mentioned scale.
Completeness	Covers all divisions according to BBS census 2001.
History of the dataset	The source of this dataset is Police Station Maps published by Directorate of Land Record and Survey (DLRS), which were compiled between 1905-1945. The Some maps are still being update and new upazillas are created. Scales of these maps were 1"=1mile was produced by using the Cassinii projection system excluding Chittagong Hill Tracts. Reserve Forest maps published by Survey of Bangladesh were used for Sundarbans region. Attribute information were attached according to the Geomaster database 2001 collected from Bangladesh Bureau of Statistics (BBS).
Purpose of production	To archive and present the six division boundaries of Bangladesh and to use this boundary in different analysis and management purposes at national and regional level.
Process description	The division boundaries have been captured by Police Station Maps published by Directorate of Land Record and Survey (DLRS) with input RMS error 0.002 - 0.005 inch and output 3 - 20 meter. For Sundarban area, union boundaries have been delineated with the help of river course and small atlas of BBS over Reserve Forest maps published by Survey of Bangladesh. Geocoding in the maps has been done according to the Geomaster database 2001 collected from BBS. Other attribute information has been attached according to the Geomaster database 2001. The source map was in Cassinii projection system projection system. It's transformed into Bangladesh Transverse Mercator (BTM) projection system. International boundary is used from SOB Topo map of 1: 50,000 scale and coast line generated from IRS Liss 2005 image.

Sample of Data



Attribute Table

area	divcode	divname	landtype
10119141874.2913	10	Barisal	Land
2260617874.304	10	Barisal	Water
31193872511.3976	20	Chittagong	Land
1668521824.5511	20	Chittagong	Water
30883285883.7225	30	Dhaka	Land
58509981.9044	30	Dhaka	Water

Bundle Information (Data Field Description and Unit)

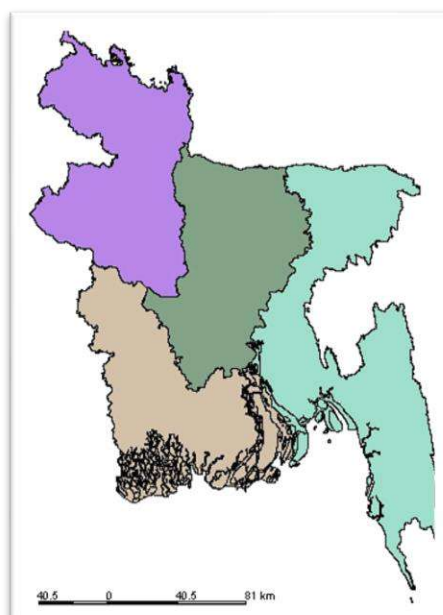
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square Meter
Divcode	A unique code is specified for each division by Bangladesh Bureau of Statistics (BBS) according to geomaster database of 2001	
Divname	Division name given to division according to BBS geomaster database of 2001	
Landtype	Classification of administrative unit by land and water	

Name of Data layer: **Division Boundaries 1981**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of four division boundaries along with BBS Geocode derived from Population census book 1981 published by Bangladesh Bureau of Statistics (BBS).
Quality	Scale of the source data was 1:63360. Therefore, it is recommended that in any kind of analysis the data layer should not be used exceeding above mentioned scale.
Completeness	Covers all divisions according to BBS Population census 1981.
History of the dataset	The source of this dataset is Police Station Maps published by Directorate of Land Record and Survey (DLRS), which were compiled between 1905-1945. The Some maps are still being update and new upazillas are created. Scales of these maps were 1"=1mile was produced by using the Cassinii projection system excluding Chittagong Hill Tracts. Reserve Forest maps published by Survey of Bangladesh were used for Sundarbans region. Attribute information were attached according to the Geomaster database 1981 collected from Bangladesh Bureau of Statistics (BBS).
Purpose of production	To archive and present the four division boundaries of Bangladesh and to use this boundary in different analysis and management purposes at national and regional level.
Process description	The division boundaries have been captured by Police Station Maps published by Directorate of Land Record and Survey (DLRS) with input RMS error 0.002 - 0.005 inch and output 3 - 20 meter. For Sundarban area, union boundaries have been delineated with the help of river course and small atlas of BBS over Reserve Forest maps published by Survey of Bangladesh. Geocoding in the maps has been done according to the Geomaster database 1981 collected from BBS. Other attribute information has been attached according to the Geomaster database 1981. The source map was in Cassinii projection system projection system. It's transformed into Bangladesh Transverse Mercator (BTM) projection system. International boundary is used from SOB Topo map of 1: 50,000 scale and coast line generated from IRS Liss 2005 image.

Sample of Data



Attribute Table

area	divcode	divname	landtype
43574814547.4686	20	Chittagong	Land
1668521824.5511	20	Chittagong	Water
58509981.9044	30	Dhaka	Water
3649951835.9524	40	Khulna	Water
34481093639.7878	50	Rajshahi	Land
30954906264.9104	30	Dhaka	Land

Bundle Information (Data Field Description and Unit)

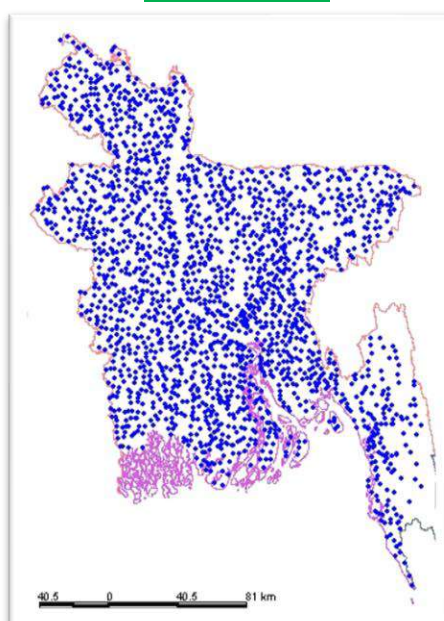
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square Meter
Divcode	A unique code is specified for each division by Bangladesh Bureau of Statistics (BBS) according to geomaster database of 1981	
Divname	Division name given to division according to BBS geomaster database of 1981	
Landtype	Classification of administrative unit by land and water	

Name of Data layer: **Growth Center (LGED)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer containing the locations of Growth Center and Rural Market digitized by Local Government Engineering Department (LGED). Growth centers are rural markets that are mainly consist of the rural assembly and secondary markets which are chosen on some basis of some criteria. The criteria include revenue prospect, amount of trade, area or population and an optimum distance between growth centers in proximity
Quality	It is collected from LGED into digital format and stored it with limited quality checks.
Completeness	The data layer covers all growth centers of Bangladesh identified by LGED.
History of the dataset	Local Government Engineering Department (LGED) generated this data layer from Thana Map showing the tentative location of the growth center and rural market in different administrative units.
Purpose of production	To present and store the location, distribution of the growth center and rural market and to use this data in any kind of socio-economic analysis and planning purpose
Process description	All the district level data of growth center and rural market are appended to make it single data set covering the whole Bangladesh.

Sample of Data



Attribute Table

id	type	name
70	Growth Centre	Shapariordwip Bazar
70	Growth Centre	Teknaf Bazar
70	Growth Centre	Nilla Bazar
70	Growth Centre	Shamlapur Bazar
70	Growth Centre	Whykon Bazar
70	Growth Centre	Balukhali Bazar
70	Growth Centre	Thumbru Bazar
70	Growth Centre	Daroga Bazar
70	Growth Centre	Shonapara Bazar
70	Growth Centre	Maricha Bazar

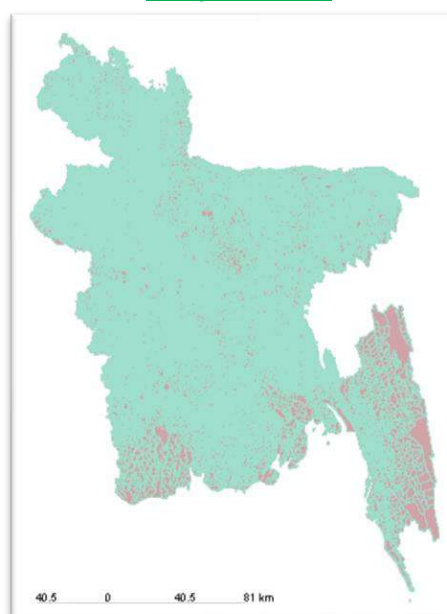
Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Id	Id	
Type	G. Center/Market	
Name	Name of the Growth center / Market	

Metadata

Data Type	Spatial
Abstract	In Bangladesh, a mauza is a type of land unit, corresponding to a specific land area which there may be one or more settlements. Before the 20th century, the term referred to a revenue collection unit. A spatial data layer of mauza boundaries of Bangladesh along with the attribute information derived from Bangladesh Population Census, 2001, BBS published by Bangladesh Bureau of Statistics (BBS). In this database JL numbers of DLRS was also considered as an attribute.
Quality	This is the seamless mauza coverage of Bangladesh, produced in ARC/INFO Version 8.0.2. The source maps were in 1 inch = 1 mile scale and the data layer is also in the same scale. The mauza boundaries are checked, in some cases Mauza boundaries do not match with DLRS Thana maps and also total number of Mauza varied from BBS database (Bangladesh Population Census, 2001).Some Mauzas are found in PS map but not found in BBS database which is shown as a unknown polygon in the coverage . So that in future these polygons will be upgraded by reliable or authorized notification. The attribute information fully complies with the published source. Quality of the data layer largely depends on the techniques/methods adopted in source map production and the expertise of the surveyors of the source map producing agencies.
Completeness	The data layer covers all mauza of Bangladesh according to the Population census 2001 except all major cities (Dhaka, Chittagong, khulna, Barisal, Sylhet, Rajshahi) and Sundarban.
History of the dataset	The source of this dataset is Police Station Maps published by Directorate of Land Record and Survey (DLRS), which were compiled between 1905-1945.The Some maps are still being update as and new upazillas are created. Scale of these maps were 1"=1mile system excluding Chittagong Hill Tracts. Reserve Forest maps published by Survey of Bangladesh were used for Sundarbans region. Attribute information were attached according to the Geomaster database 2001 collected from Bangladesh Bureau of Statistics (BBS).
Purpose of production	This data layer of Mauza boundaries is essential at national, regional and local level planning, analysis and management purposes. It is also essential for land information, land registration and taxation.
Process description	The mauza boundaries have been captured by Police Station Maps published by Directorate of Land Record and Survey (DLRS) with input RMS error 0.002 - 0.005 inch and output 3 - 20 meter. For Sundarban area, mauza boundaries are not included. Geocoding in the maps has been done according to the Geomaster database 2001 collected from BBS. Other attribute information has been attached according to the Geomaster database 2001.The source map was in Cassinii projection system projection system. It's transformed into Bangladesh Transverse Mercator (BTM) projection system. International boundary is used from SOB Topo map of 1: 50,000 scale and coast line generated from IRS Liss 2005 image.

Sample of Data



Attribute Table

area	geocode	divname	distname	thaname	unname	mauzname	jl_no	landtype	remarks
8967670.934	10063667228	Barisal	Barisal	Hizla	Harinathpur	Char Biskatali	20	Water	
31877.93	10063667228	Barisal	Barisal	Hizla	Harinathpur	Char Biskatali	20	Land	
3098786.158	10063667363	Barisal	Barisal	Hizla	Harinathpur	Dakshin Kodalpur	9	Water	NF Census2001
100328.254	10063667228	Barisal	Barisal	Hizla	Harinathpur	Char Biskatali	20	Land	
733634.459	10063255171	Barisal	Barisal	Gaurnadi	Khanjapur	Bhurghata	44	Land	
2551554.877	10063667363	Barisal	Barisal	Hizla	Harinathpur	Dakshin Kodalpur	9	Land	NF Census2001
1086196.447	10063255068	Barisal	Barisal	Gaurnadi	Khanjapur	Bakai Ichhakuri	1	Land	
904648.913	10063255749	Barisal	Barisal	Gaurnadi	Khanjapur	Purba Bakai	8	Land	

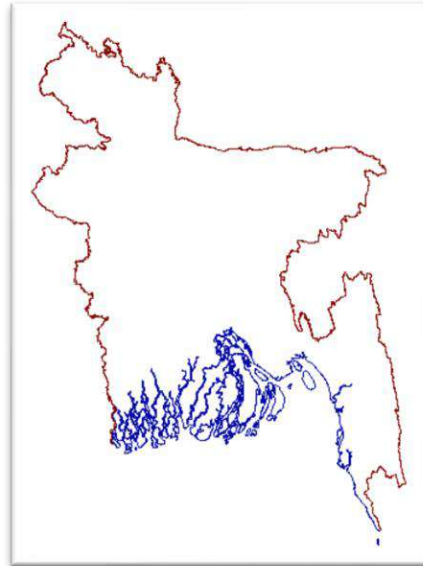
Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area of Each Polygon	Sq. Meter
Geocode	Mauza Geocode (Division code + district code + Upazila / Thana code+ Unioncode+ Mauza code) is incorporated according to Geomaster database of BBS 2001	
Divname	Name of each Division according to BBS geomaster database of 2001	
Distname	Name of each District according to BBS geomaster database of 2001	
Thaname	Name of each Upazila / Thana according to BBS geomaster database of 2001	
Unname	Name of each Union according to BBS geomaster database of 2001	
Mauzname	Name of each Mauza according to BBS geomaster database of 2001	
Jl_no	Jurisdiction list number	
Landtype	Classification of administrative unit by land and water	
Remarks	Important information foe specific mauza	

Name of Data layer: **Coast Line 1997**

Metadata

Sample of Data



Attribute Table

length
745.314
276.76
7597.349
12966.155
21629.137
14020.009

Bundle Information (Data Field Description and Unit)

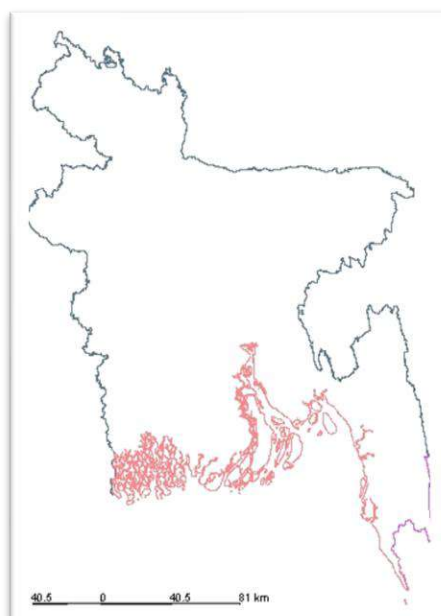
FIELD_NAME	FIELD_DESC	UNIT
Length	Length of the arcs calculated by ArcInfo	Meter

Name of Data layer: **Coast Line 2005**

Metadata

Data Type	Spatial
Abstract	A spatial data layer containing the coastline, estuaries, tidal channels, coastal rivers and coastal char lands etc.
Quality	It is recommended that this data layer should be used in a scale 1:12,000 or smaller than this. As the layer has been updated using IRS Liss (25m resolution) image, so the accuracy and precision level of the dataset depends on the image processing quality
Completeness	Covers coastal area of Bangladesh.
History of the dataset	CEGIS has captured coastal line from IRS Liss image 2005(25m) a scale of 1:12,000.
Purpose of production	To identify the coastal boundaries, major estuaries and other coastal phenomena
Process description	NWRD has updated the existing data layer to capture new chars / islands and shifted channels using IRS Liss image 2005.

Sample of Data



Attribute Table

length
4562.459
5078.558
8014.548
23885.633
2424.497
5762.372
4643.9
15614.572
5190.617
12399.757

Bundle Information (Data Field Description and Unit)

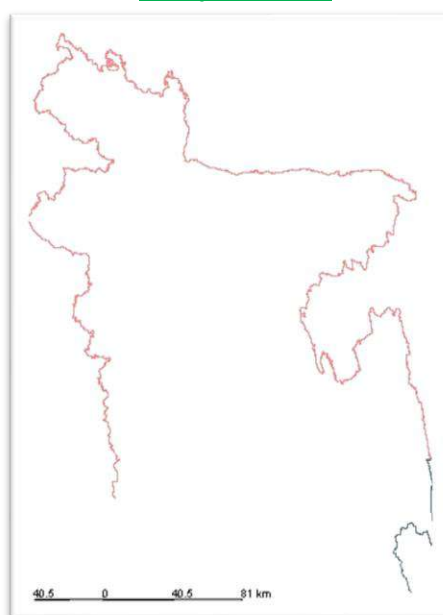
FIELD_NAME	FIELD_DESC	UNIT
Length	Length of the arcs calculated by ArcInfo	Meter

Name of Data layer: **National Boundary**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the political boundary between Bangladesh-India and Bangladesh-Myanmar.
Quality	As the source was in 1:50,000 scale,so the data layer should be used in the same or smaller scale for regional level.
Completeness	This data layer covers the entire national boundary of the country.
History of the dataset	ISPAN (Irrigation Support Project for Asia and Nearest) captured the international boundary under FAP19 from Topo sheets published by SoB at 1:50,000 scale.
Purpose of production	For almost all type of planning, management and administrative works, related to Bangladesh this data layer is the basic requirement. To meet this requirement this data layer has been included in NWRD.
Process description	NWRD has checked the international boundary and recaptured the international boundary for the Eastern Hill region from SoB Topo sheets at 1:50,000 scale with input RMS error 0.003 inch and output error 10-15 meter.

Sample of Data



Attribute Table

length	border
3784141.398	India
289780.974	Myanmar

Bundle Information (Data Field Description and Unit)

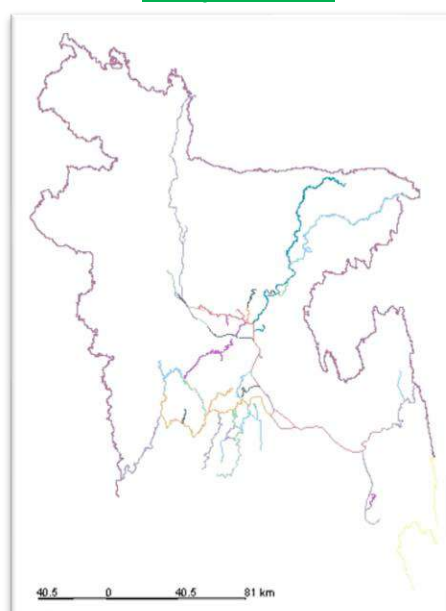
FIELD_NAME	FIELD_DESC	UNIT
Length	Length of international boundary	Meter
Border	Border countries	

Name of Data layer: **Draft Restriction Map of BIWTA 1998**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the draft restriction routes of inland waterways of Bangladesh for the year 1998.
Quality	As the source was in 1:10,00,000 scale,so the data layer should be used in the same scale or smaller than this. Other attribute information is incorporated according to the source map.
Completeness	The data layer covers draft restriction route of 1998 identified by BIWTA.
History of the dataset	Bangladesh Inland Water Transport Authority (BIWTA) generated the source map at 1:10,00,000 scale.
Purpose of production	To indicate the restricted routes in terms of depth to the inland water transportation. This information is also helpful for delineating the navigational routes.
Process description	NWRD has captured the data from a published map titled 'Draft Restrictions Map of Inland Waterways of Bangladesh' produced by Bangladesh Inland Water Transport Authority (BIWTA) in 1998 at 1:10,00,000 scale with input RMS error 0.003in and output error 10 meter.

Sample of Data



Attribute Table

length	d011298_id	draft	len_km
4625.09	400	4	4.63
7925.234	400	4	7.93
5110.99	250	2.5	5.11
26595.333	100	1	26.6
16534.633	400	4	16.53
27484.322	175	1.75	27.48
25869.818	300	3	25.87
21738.366	300	3	21.74

Bundle Information (Data Field Description and Unit)

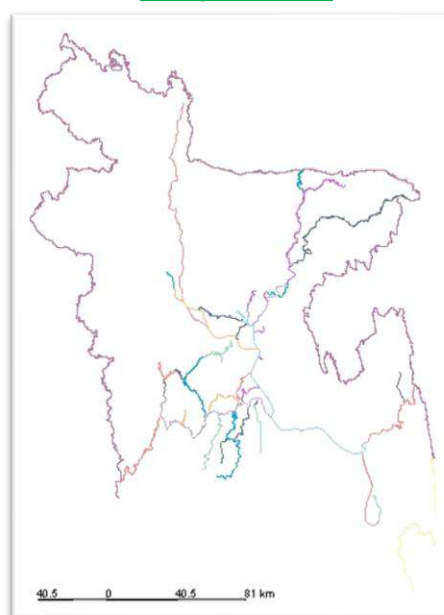
FIELD_NAME	FIELD_DESC	UNIT
Len_km	Length converted to ArcInfo	Kilometer
Draft	Draft according to the source hard copy map	
Length	Length generated by ArcInfo	Meter

Name of Data layer: **Draft Restriction Map of BIWTA 1999**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the draft restriction routes of inland waterways of Bangladesh, Year 1999.
Quality	As the source was in 1:10,00,000 scale,so the data layer should be used in the same scale or smaller than this. The other attribute information is incorporated according to the source map.
Completeness	The data layer covers draft restriction route of 1999 identified by BIWTA.
History of the dataset	Bangladesh Inland Water Transport Authority (BIWTA) generated the source map at 1:10,00,000 scale.
Purpose of production	To indicate the restricted routes in terms of depth to the inland water transportation. The information is also helpful for delineating the navigational routes.
Process description	NWRD has captured the data from a published map titled 'Draft Restrictions Map of Inland Waterways of Bangladesh' produced by Bangladesh Inland Water Transport Authority in 1999 at 1:10,00,000 scale with input RMS error 0.003in and output error 10 meter.

Sample of Data



Attribute Table

length	d010699_id	draft	len_km
46117.514	175	1.75	46.12
37767.175	150	1.5	37.77
127269.432	300	3	127.27
81377.347	300	3	81.38
24186.484	300	3	24.19
25849.399	350	3.5	25.85
36660.452	350	3.5	36.66
2500.927	350	3.5	2.5
13777.462	350	3.5	13.78
15326.597	200	2	15.33

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Length	Length of the navigation route calculated by ArcInfo	Meter
Len_km	Length converted to ArcInfo	Kilometer

FIELD_NAME	FIELD_DESC	UNIT
D010699_id	User id given to each arc	
Draft	Draft according to the source hard copy map	

Name of Data layer: **Inland Water Facilities (1996-97)**

Metadata

Data Type	PDF
Abstract	This data set presents information on inland waterway related various facilities including route statistics, cargo carried and passenger services.
Quality	The data set fully resembles with the source.
Completeness	The data layer covers whole country.
History of the dataset	This data layer was published by Inland Water Transport Authority in Annual Ports & Traffic Report 1996-97.
Purpose of production	To depict the actual facilities related to inland water ways.
Process description	NWRD has stored this data in an arranged form.

Sample of Data

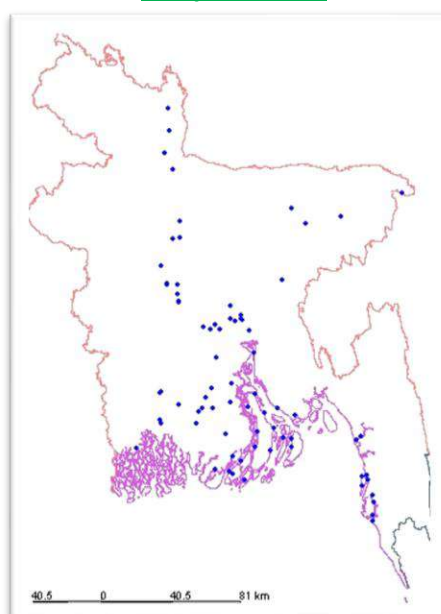
INLAND WATER FACILITIES (1996-97)	
i) Navigable Waterways	5968 km (Rainy Season) 3600 km (Dry Season)
ii) No. of Inland River Ports	11 (Dhaka, Narayanganj, Chandpur, Barisal, Khulna, Patuakhali, Baghabari, Aricha, Nagarbari, Daulatdia & Narsingdi)
iii) No. of Coastal Island Ports (Developed by BIWTA)	23
iv) No. of Ferry ghats	7 (Aricha, Nagarbari, Daulatdia, Bhuapur, Sirajganj, Mawa and Charjanajat)
vi) No. of Launchghats	1320

Name of Data layer: **Location of Inland Waterway Facilities**

Metadata

Data Type	Spatial
Abstract	A spatial data layer presenting the location of the stations that serve inland water related facilities maintained by Bangladesh Inland Water Transport Authority (BIWTA).
Quality	The data layer was stored as it was collected from BIWTA without any kind of quality updating.
Completeness	The data layers covers all the station of BIWTA waterway facilities.
History of the dataset	This data layer was generated by Third Inland Transport Project, Inland Waterways Environmental Monitoring and Control, Ministry of Shipping, Department of Shipping.
Purpose of production	To identify and store the location of the inland waterway facilities.
Process description	NWRD has stored the data layer in an organized way.

Sample of Data



Attribute Table

id	locid	locname	fclass	type	btmlong	btmlat	ddlong	ddlat
2	415	Chawdhuryhat	4	IMPORTANT LAUNCH GHAT	508116.27	597898.66	90.079	23.493
4	407	Satnal	4	IMPORTANT LAUNCH GHAT	560737.88	594315.63	90.595	23.46
7	618	Khulna	6	PILOT STATION	457900.09	523214.34	89.59	22.818
8	616	Kaukhali	6	PILOT STATION	506852.11	502837.09	90.067	22.634
9	410	Jhalakati	4	IMPORTANT LAUNCH GHAT	518679.7	503947.14	90.182	22.644
10	408	Inderhat	4	IMPORTANT LAUNCH GHAT	516586.79	526090.09	90.162	22.844
11	614	Nandibazar	6	PILOT STATION	540228.45	532456.21	90.392	22.901
13	501	Khepupara	5	COASTAL TERMINAL BUILDING	521620.42	431959.92	90.209	21.994

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Intbnd_97_	User id given to each arc at the time of data capturing	
Boarder	Outer Country of the International boundary	
Btmlat	Latitude converted to BTM Projection system	Meter
Btmlong	Longitude converted to BTM projection system	Meter
Type	Characteristics and function of each station	
Fclass	Type of the stations	

FIELD_NAME	FIELD_DESC	UNIT
Locname	Name of each location station	
Locid	Locational Id given by BIWTA	

Name of Data layer: **Navigation Route**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the navigation route of Bangladesh with other attribute information identified by Bangladesh Inland Water Transport Authority (BIWTA).
Quality	The quality of data solely depends on the source. CEGIS ensure only the quality of digital transformation of hard copy maps.
Completeness	The data layer covers all navigation routes identified by BIWTA.
History of the dataset	Bangladesh Inland Water Transport Authority (BIWTA) collects navigation information in regular basis. Navigation route map is generated and published by Department of Hydrography, BIWTA.
Purpose of production	To represent the existing navigation route of Bangladesh, showing categories and to estimate the total length of different types of route for planning purpose.
Process description	Collecting this data layer from BIWTA, NWRD has updated it using a map titled 'Classification of Inland Waterway of Bangladesh' published by the department of Hydrography, BIWTA, Dhaka in 1988. This data is updated in 2012 with the published map of BIWTA in 2011.

Sample of Data

Attribute Table

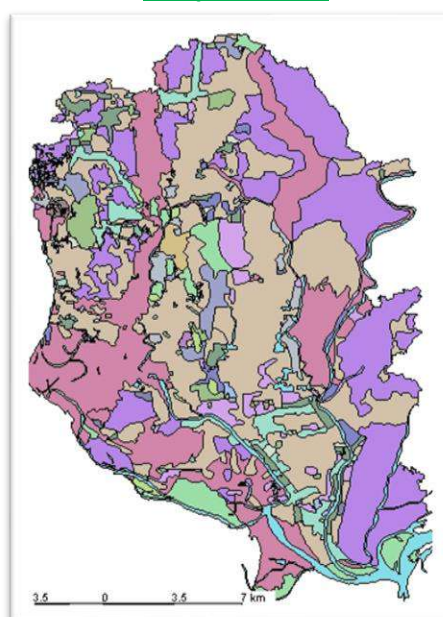
Bundle Information (Data Field Description and Unit)

Name of Data layer: **Detail Area Plan**

Metadata

Data Type	Spatial
Abstract	The Detailed Area Plan (DAP) is third and last tier of Development Plan for Dhaka City i.e. Dhaka Metropolitan Development Plan (DMDP). A spatial data layer provides more detailed planning for specific sub-areas compliant with the Structure Plan and the Urban Area Plan.
Quality	DAP data generated as polygon data using standard GIS applications with WGS1984 datum.
Completeness	This data layer covers Dhaka city, the capital of Bangladesh
History of the dataset	The source of this dataset is RAJUK. The projection system is Bangladesh Transverse Mercator (BTM). Attribute information were attached according to the source.
Purpose of production	Purpose of incorporating the data layer to NWRD is to provide Multi-sector Investment Plan, Providing control for private sector development, Ensure sustainable environment and Providing guideline for development.
Process description	The detail area plan data collected as secondary data from RAJUK. All other attribute information has been attached according to the source. DAP data as polygon data projected in BTM projection.

Sample of Data



Attribute Table

area	id	uid	type	major
315415	9	1	Mixed Use (Residential, Commercial & Industrial)	8
3364837	5	2	General Industrial Zone	8
1072140	5	3	General Industrial Zone	8
93882	5	4	General Industrial Zone	8
4256842	5	5	General Industrial Zone	8
511061	1	6	Urban Residential Zone	7
687940	1	7	Urban Residential Zone	7
934551	18	8	Agriculture with Rural Homestead	7
1872919	18	9	Agriculture with Rural Homestead	7
2449329	1	10	Urban Residential Zone	7

Bundle Information (Data Field Description and Unit)

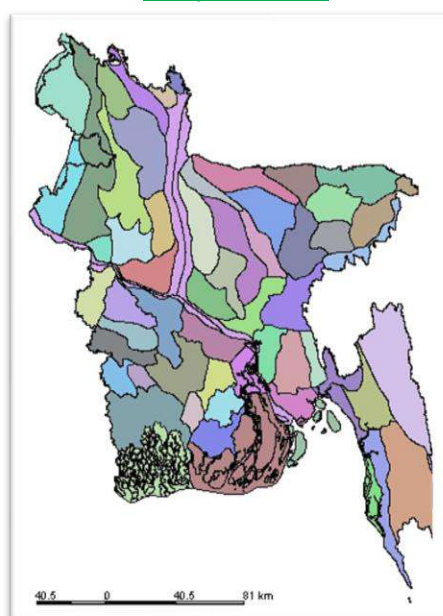
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygone	Sq Meter
Perimeter	Perimeter of each polygone	Meter
Id	Id code of planned area	
Unid	Unique id of each polygon	
Type	Detailed type of planned area	
Major	Code for major type of planned area	

Name of Data layer: **Planning Unit of MPO**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the planning unit boundaries used by the Master Plan Organization (MPO) along with information about catchment boundary.
Quality	It is recommended that the data layer should be used in a scale equal to or smaller than 1:500,000.
Completeness	The data layer covers whole Bangladesh.
History of the dataset	Master Plan Organization (MPO) generated this data, and represented in a 1: 500,000 scale map (1983). From this map NWRD has prepared this data layer.
Purpose of production	Purpose of incorporating the data layer to NWRD was to use it in national or regional level planning and designing, and also to use it as a basic layer for planning area wise analysis.
Process description	NWRD has digitised and prepared the spatial data layer with input RMS error 0.003 inch and output error less than 10 meter.

Sample of Data



Attribute Table

area	mpoplnd	region	catno	planno
138906192	22	NW	NW-15	NW-10
2187463680	17	NW	NW-17	NW-7
508307904	22	NW	NW-15	NW-10
19645050	17	NW	NW-17	NW-7
717289280	13	NW	NW-13	NW-2
1692363136	12	NW	NW-12	NW-3
3306230016	22	NW	NW-15	NW-10
18984280	12	NW	NW-12	NW-3
1645092608	1	NW	NW-1	NW-4
386878912	14	NW	NW-14	NW-1

Bundle Information (Data Field Description and Unit)

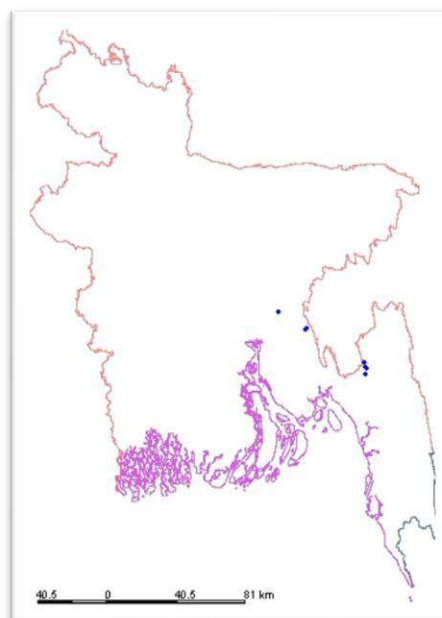
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square meter
Mpoplnid	Planning area ID according to MPO during the NWMP Phase-1 study	
Region	Region classified by MPO	
Catno	Catchment number according to MPO during the NWMP Phase-1 study	
Planno	Planning area number according to MPO during the NWMP Phase-1 study	

Name of Data layer: **Gas Field Locations (LGED)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of the gas field locations of Bangladesh identified by LGED (Local Government Engineering Department).
Quality	The data layer has been stored without ground checking and editing by NWRD. It has been kept as it was received from LGED except converting it from LCC to BTM projection.
Completeness	The data layer covers the Gas fields of Bangladesh identified by LGED.
History of the dataset	LGED generated this data layer under UNDP/ILO project BGD/89/041 using SPOT Image 1989-90, Aerial Photograph 1983-84, Topographic Maps, Thana Maps, and ground verification with the help of thana level technical staffs.
Purpose of production	To present the location of gas fields of Bangladesh this data layer has been included in NWRD as it is important for planning like choosing an industry location.
Process description	NWRD has stored this data layer as it was collected from the source.

Sample of Data



Attribute Table

gasfld_id
550
550
550
550
550
550
550

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Gasfld_id	User id given to each Point	

Name of Data layer : **Grid Substations of BPDB 1996-97**

Metadata

Data Type	Tabular
Abstract	The data layer contains the attribute information of the existing grid substations of Bangladesh Power Development Board (BPDB) such as name, capacity, type etc.
Quality	Quality of the data layer is fully compliance with the annual report published by BPDB.
Completeness	The data layer covers all (85) grid substations of BPDB for the year 1996-97.
History of the dataset	Bangladesh Power Development Board generated the data layer and published in Annual Report, 1996-97.
Purpose of production	The data layer provides the information of existing grid and power stations of BPDB with locations.
Process description	NWRD has converted the data into digital version and organized it in an ordered form.

Sample of Data

Title Grid Substations of BPDB 1996-97					
Name	Type	Code	Zone	Voltagekv	Transfcap
Ashuganj	132KV	2	East	132/33	2X15/25
Ashuganj	230KV	1	Both	230/132	2X150
Baraulia	132KV	2	East	132/33	1X28/40, 1X25/41.6
Chandpur	132KV	2	East	132/33	2X15/20
Chandraghona	132KV	2	East	132/33	2X10/13.3
Chhatak	132KV	2	East	132/33	1X10
Comilla North	132KV	2	East	132/33	1X10
Comilla North	230KV	1	Both	230/132	3X75
Comilla South	132KV	2	East	132/33	2X25/41
Cox's Bazar	132KV	2	East	132/33	1X16/20
Dohazari	132KV	2	East	132/33	2X28/40
Fenchuganj	132KV	2	East	132/33	1X15/20
Feni	132KV	2	East	132/33	2X15/20
Ghorachal	132KV	2	East	132/33	2X50

Bundle Information (Data Field Description and Unit)

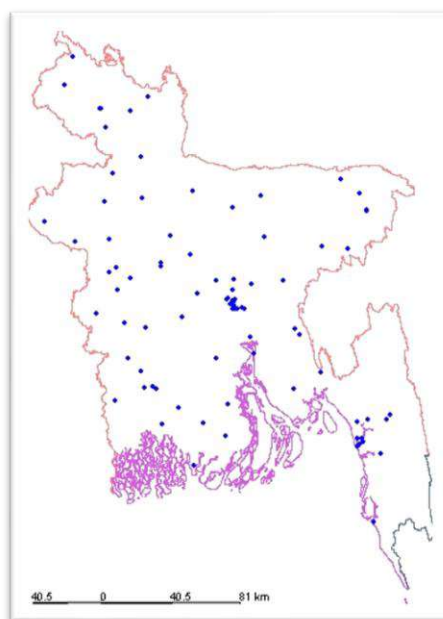
FIELD	FIELDNAME
Name	Name
Type	Type
Code	KV Line Type Code
Zone	Zone
Voltagekv	Voltage KV
Transfcap	Transformer Capacity MVA

Name of Data layer: **Location of Grid Substations**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the power stations and grid substations of Bangladesh Power Development Board (BPDB) with other attribute information.
Quality	As the source was in 1:3,000,000 therefore the data layer should be used in same scale or smaller than this.
Completeness	The data layer covers the whole country.
History of the dataset	Bangladesh Power Development Board generated this locational information in 1:3,000,000 scale and published in Annual Report 1996-97.
Purpose of production	To present the location of the grid stations of Bangladesh this data layer has been included in NWRD.
Process description	NWRD has captured the data layer from a published map titled 'Primary Grid system of Bangladesh Power Development Board'. Other attribute information has also been collected from the Annual Report 1996-97 published by BPDB. The data layer has been generated with input RMS error 0.003 inches and output error 10 meter and checked with the help of administrative boundary generated by NWRD.

Sample of Data



Attribute Table

area	perimeter	gridsysbtm	gridsysbtm	gridsys	gridsys_id	gridsys_a	stncode	stnname	stntype	longdd	latdd	btmlong	btmlat
0	0	1	1	1	1	1	1	BAGERHAT	Grid Sub Station	89.789	22.658	478308.156	505443.281
0	0	2	2	2	2	2	2	BARO AULIA	Grid Sub Station	91.806	22.321	685940.875	469283.656
0	0	3	3	3	3	3	3	BASHUNDHARA	Grid Sub Station	90.432	23.792	543981.125	631024.688
0	0	4	4	4	4	4	4	BHANDARIA	Grid Sub Station	90.075	22.494	507724.844	487327.125
0	0	5	5	5	5	5	5	BOGRA	Grid Sub Station	89.374	24.848	436754.969	748041
0	0	6	6	6	6	6	6	BOTTAIL	Grid Sub Station	89.095	23.879	407853.219	640864.938
0	0	7	7	7	7	7	7	CH.NAWABGANJ	Grid Sub Station	88.256	24.586	323433.031	720046.813
0	0	8	8	8	8	8	8	CHANDPUR	Grid Sub Station	90.649	23.221	566370.313	567905.188

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Stncode	A unique code is given to each station	
Stanname	Name of each station by BPDB	
Gridsys_id	User id given to each point	
Stntype	Type of Stations whether it is power station or sub station	

Name of Data layer : **Power Demand**

Metadata

Data Type	Tabular
Abstract	The data layer represents the yearly power demand of East and West part of the country from 1970 to 1997.
Quality	The data layer fully complies with the Annual Year Book of BPDB.
Completeness	This data layer covers yearly data of the East and West part of the country from 1970 to 1997.
History of the dataset	Bangladesh Power Development Board (BPDB) published this data in Annual Report, 1996-97.
Purpose of production	To estimate the yearly total demand of power of the East and West part of the country and to observe trend of power demand this data layer has been included in NWRD.
Process description	NWRD has converted the data into digital format and stored it in a suitable format.

Sample of Data

Year	Zone	Maxdmd
1960	Both	42
1970-71	East	171.67
1971-72	East	140.59
1972-73	East	174.94
1973-74	East	184.85
1974-75	East	198.76
1975-76	East	219.92
1976-77	East	253.7
1977-78	East	287.32
1978-79	East	331.32

Bundle Information (Data Field Description and Unit)

FIELD	FIELDNAME
Year	Year
Zone	Zone
Maxdmd	Maximum Demand (MW)

Name of Data layer : **Power Generation by plants 1996-97**

Metadata

Data Type	Tabular
Abstract	A data layer describing the power generation capacity, gross energy generation, efficiency rate and other associated information of all the power plants of Bangladesh Power Development Board (BPDB) for 1996-97.
Quality	The data layer fully resembles with the published source.
Completeness	The data layer covers all the power plants of Bangladesh Power Development Board.
History of the dataset	Bangladesh Power Development Board collected and published this information for 1996-1997.
Purpose of production	To estimate the gross energy generation and to consider the efficiency of the plant of that particular year.
Process description	NWRD has collected this data from Power Development Board and converted it into digital format.

Sample of Data

Name	Instcap	Gencap	Grossener	Annpfac	Efficiency
Ashuganj 2X64 MW Steam Turbine	128	55	348.22	31.06	30.01
Ashuganj 3X150 MW Steam Turbine	450	450	3530.05	89.55	37.32
Ashuganj Combined Cycle	90	50	220.21	27.93	21.97
Ashuganj GT 2	56	50	41.95	8.55	21.6
Chittagong 1X60 MW Steam Turbine	60	0	157.18	29.9	27
Chittagong 2X28 MW Barge Mounted GT	56	0	2.72	0.55	33.48
Fenchuganj C.C	90	60	574.96	72.93	39.97
Ghorasal 210 MW S/T (5th unit)	210	210	1340.45	72.87	36.67
Ghorasal 2X210 MW Steam Turbine	420	420	2426.17	65.94	34.99
Ghorasal 2X55 MW Steam Turbine	110	100	399.75	41.48	27.57

Bundle Information (Data Field Description and Unit)

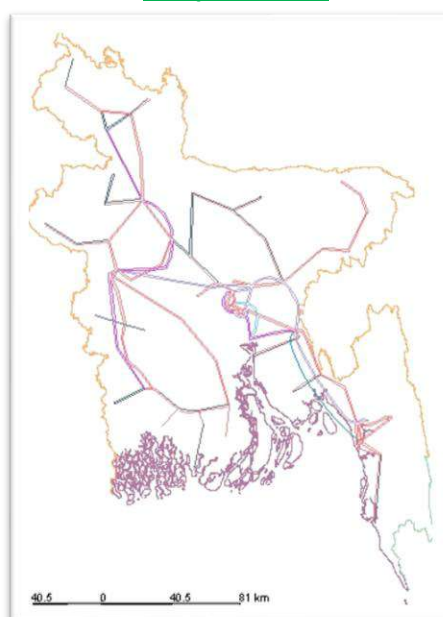
FIELD	FIELDNAME
Name	Name of Power Plant
Instcap	Installed Capacity (MW)
Gencap	Generation Capacity As of June '97 (MW)
Grossener	Gross Energy Generation (GWH)
Annpfac	Annual Plant Factor (%)
Efficiency	Efficiency (%)

Name of Data layer: **Power Transmission Lines 1996-97**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the layout of the power transmission lines of Bangladesh with other attributes information like length and type of the power transmission lines.
Quality	As the source was in 1:3,000,000 the data layer should be used in same scale or smaller than this.
Completeness	The data layer covers the whole country.
History of the dataset	Bangladesh Power Development Board (BPDB) generated this locational information in 1:3,000,000 scale map and published in Annual Report 1996-97.
Purpose of production	To present the location and distribution of the power transmission lines of Bangladesh
Process description	NWRD has captured the data layer from a published map titled 'Primary Grid system of Bangladesh Power Development Board'. Other attribute information has also been collected from the Annual Report 1996-97 published by BPDB. The data layer has been generated with input RMS error 0.003 inches and output error 10 meter. This data layer has been checked with the help of administrative boundary generated by NWRD.

Sample of Data



Attribute Table

length	powerlin_i	code	lintype	lenshpkm
94765.538	4	4	132 KV LINE	94.77
33736.757	8	8	132 KV PLANNED LINE	33.74
84246.172	4	4	132 KV LINE	84.25
26410.582	8	8	132 KV PLANNED LINE	26.41
29690.782	4	4	132 KV LINE	29.69
51894.162	4	4	132 KV LINE	51.89
96176.626	4	4	132 KV LINE	96.18
19982.768	8	8	132 KV PLANNED LINE	19.98

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Length	Length of the arcs calculated by ArcInfo	Meter
Powerlin_id	User id given to each arc	
Code	Unique code is given for each type of transmission line	
Lintype	Line type is demarked depending on the transmission capacity of the lines	
Lenshkm	Length is converted to Kilometer	Kilometer

Name of Data layer : **Transmission Line 1996-97**

Metadata

Data Type	Tabular
Abstract	The data layer describes the attribute information of the existing transmission lines of Bangladesh classifying it in different categories such as 230,132 and 66 kv.
Quality	This database has been updated and checked on the basis of some current information collected from BPDB.
Completeness	The data layer covers almost all the transmission lines of Bangladesh.
History of the dataset	The data layer was generated by Bangladesh Power Development Board and published in Annual Report, 1996-97.
Purpose of production	The data layer is prepared to represent the existing power transmission system of Bangladesh. It is essential in national level planning including power and water sector.
Process description	NWRD has converted the data layer into digital version and organized it in an ordered form.

Sample of Data

Name	Type	Code	Lenkm	Nocircuits	Condname	Consize
Ashuganj-Comilla North	230KV Lines	1	79 Double	Finch	1113 MCM	
Ashuganj-Ghorashal	230KV Lines	1	44 Double	Mallard	795 MCM	
Ashuganj-Jamalpur	132KV Lines	2	166 Single	Grosbeak	636 MCM	
Comilla North-Comilla South	132KV Lines	2	16 Double	Grosbeak	636 MCM	
Comilla South-Chandpur	132KV Lines	2	70 Single	Linnet+Grosbeak	336.4+636 MCM	
EastWest Electrical Interconnector	230KV Lines	1	179 Double	Mallard	795 MCM	
Ghorashal-Haripur-Hasnabad	230KV Lines	1	60 Double	Twin Mallard	-	
Ishurdi-Bheramara	230KV Lines	1	8 Double	-	-	

Bundle Information (Data Field Description and Unit)

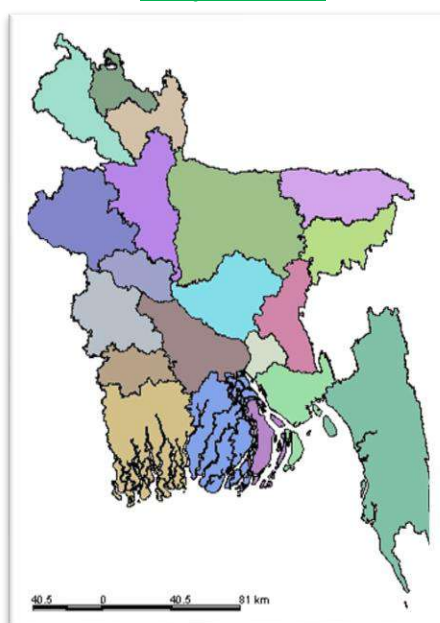
FIELD	FIELDNAME
Name	Name of Existing Transmission Line
Type	Type of Lines
Code	Code of Lines
Lenkm	Length of Line in Km
Nocircuits	No of Circuits
Condname	name of Conductor
Consize	Size of Conductor

Name of Data layer: **BWDB Circle (Jurisdiction) Location**

Metadata

Data Type	Spatial
Abstract	The data layer contains circle (Jurisdiction) locations of Bangladesh Water Development Board (BWDB) with circle name, division name and code.
Quality	Further field verification is very much essential for enhancing the quality and accuracy of the data layer.
Completeness	The data layer covers all the circle office locations as identified by BWDB field engineers.
History of the dataset	The boundaries are identified with the help of field engineers (from circle office) of BWDB using district boundaries of NWRD.
Purpose of production	To present and identify the observation and monitoring circle locations of BWDB with other attribute information.
Process description	The boundary has been identified by the field engineers of BWDB and generated manually by NWRD.

Sample of Data



Attribute Table

area	perimeter	updcircle_	updcircle_	circlename	count	bwdbzone
6644419584	773242.625	20	20	Thakurgaon O & M Circle	23	Northern
2864393472	528342	17	17	Rangpur O & M Circle II	11	Northern
18327448	30445.494	17	17	Rangpur O & M Circle II	11	Northern
4581459456	691162.938	18	18	Rangpur O & M Circle I	17	Northern
8030749184	794577.563	4	4	Bogra O & M Circle	30	North Western
16476310528	910633.188	14	14	Mymensingh O & M Circle	58	Central
8954404864	690485.75	16	16	Rajshahi O & M Circle	34	North Western
7121600512	683048.25	19	19	Sylhet O & M Circle	21	North Eastern

Bundle Information (Data Field Description and Unit)

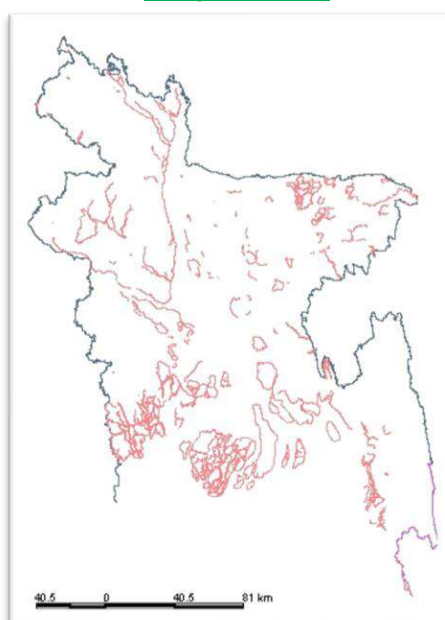
FIELD_NAME	FIELD_DESC	UNIT
Circlename	Name of the circle	
Bwdbzone	BWDB administrative zones	

Name of Data layer: **BWDB Embankment locations**

Metadata

Data Type	Spatial
Abstract	The data layer contains all embankment locations of BWDB (Bangladesh Water Development Board) FCDI (Flood Control Drainage & Irrigation) Projects with attribute information.
Quality	The data layer has been created following the ECDS maps and WSIP attribute data layer. Some anomaly has been observed during data appending operation. Further quality check and field verification is needed for this data layer.
Completeness	The data layer covers all the embankment locations identified by BWDB.
History of the dataset	Source of this data layer are the maps (1: 50,000) prepared by ECDS (Engineering Consultancy and Development Services Ltd.) under the project 'Updating the Inventory of Water Development Systems - BGD/87/021 of UNDP1991'. Besides BWDB Jurisdiction Maps (1:1,25,000 and 1: 2,50,000) have also been used in some cases. Digital database from Water Sector Improvement Project (WSIP) of BWDB 1999 has been used for attribute information.
Purpose of production	To identify the embankment locations of the BWDB FCDI projects. These locations are important for planning and management at national and regional level.
Process description	The data layer has been digitized from the published maps of scale 1:50,000 (prepared by Engineering Consultancy and Development Services Ltd.) 1991. The digitization has been done under Arc/Info GIS (Unix & NT Workstation) environment volume wise (e.g. Volume 2 covers SW Region). Then all the coverage has been appended for making national level data layer. After digitization spatial location of the map features [such as, project boundaries, embankments, town protections, canals and hydraulic structures] were adjusted manually with respect to river database (LANDSAT 97 with 30m resolution). Digital database from Water Sector Improvement Project (WSIP) of BWDB 1999 has been used for attribute information.

Sample of Data



Attribute Table

fnode	tnode	lpoly	rpoly	length	emball	emball_id	scode	ecode
33	34	5	5	88.226	1	1000	0	
57	58	1	1	42.858	2	1000	0	
61	57	10	12	283.128	3	1000	0	
56	64	1	1	497.647	4	1000	0	
131	129	1	1	355.44	5	1000	50400	
137	131	1	18	893.614	6	1000	50400	
142	137	1	20	418.814	7	1000	50400	
145	142	21	18	232.549	8	1000	50400	

Bundle Information (Data Field Description and Unit)

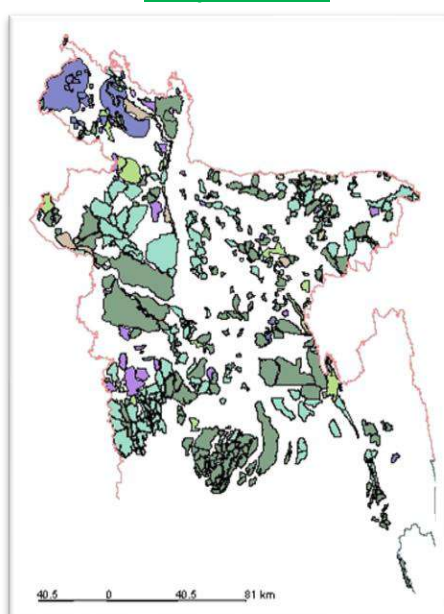
FIELD_NAME	FIELD_DESC	UNIT
Length	Length of the Embankment calculated by ArcInfo	Meter
Ecode	Unique code specified for each embankment by BWDB	
Emball_id	User id given to each arc	
Scode	Unique code is incorporated to one project area according to scheme database compiled by BWDB	

Name of Data layer: **BWDB FCDI Project Locations**

Metadata

Data Type	Spatial
Abstract	A spatial data layer has shown the BWDB project location along with attribute information.
Quality	The data layer has been created following the ECDS maps and WSIP attribute database. Some anomaly has been observed during data appending operation. Further quality checking and field verification are needed for this data layer.
Completeness	The data layer covers all the project locations identified by BWDB.
History of the dataset	Source of this data layer is the hard copy maps at 1: 50,000 scale, prepared by Engineering Consultancy and Development Services Ltd. (ECDS) under the project 'Updating the Inventory of Water Development Systems - BGD/87/021 of UNDP1991'. Besides BWDB Jurisdiction Maps at 1:1,25,000 and 1: 2,50,000 scales, have also been used in some cases. Digital attribute database of 1999 and 2005 derived from Water Sector Improvement Project (WSIP) of BWDB has also been used as attribute information. Also, used IRS image (6mX6m) and some of projects have been verified by field visit under the project WAMIP
Purpose of production	This data layer is essential for identification the location of the projects and to help water sector planning and decision supports for project monitoring and management.
Process description	The data layer has been captured from the published maps (prepared by ECDS) of 1991 at 1:50,000 scales. The digitization has been done under Arc/Info GIS environment. After data capturing, map features were adjusted manually with respect to river database (captured from LANDSAT 97 with 30m resolution), high resolution IRS image (6m X6m) and some of projects have been verified under the project WMIP. The attribute information derived from WSIP of BWDB, has been incorporated to the spatial data layer.

Sample of Data



Attribute Table

area	perimeter	prjallnwmp	scode	zone	sname	tembl	lcan	rs	nopump	notubew	nevglock	old_type
84720861.819	0	0	0	SC	DUMKI LAWKATI SCHEME	0	0	0	0	0	0	FCD
36423919.319	0	0	0	SC	HIZLA EMBANKMENT SCHEME	0	0	0	0	0	0	FCD
31986921.498	32118.833	363	63400	SC	ITABARIA LEBUKHALI SCHEME	35	0	6	0	0	0	FCDI
17325265.906	0	0	0	SC	MURADIA KALAGACHIA SCHEME	0	0	0	0	0	0	FCD

new_type	typecode	parea	bairig	badr	bafc	ystart	ycompl	value	cwheat	status	circle	area_ha
FCD	03	0	0	0	0	1998	1999		0	Complete	Barisal O&M	8472.09
FCD	03	0	0	0	0	1980	1981		0	Complete	Barisal O&M	3642.39
FCD	03	3613	1600	2000	2031	1988	1994	1.61	1200	Complete	Barisal O&M	3198.69
FCD	03	0	0	0	0	1994	1995		0	Complete	Barisal O&M	1732.53

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygone	SqMeter
Perimeter	Perimeter of each polygone	Meter
Prjallnwmp		
Prjallnwmp		
Scode	System code	
Zone	Hydrological Zone	
Sname	System name	
Lemb	Length of Embankment	KM
Lcan	Length of canal	KM
Rs	no. of regulator/sluiice	Number
Nopump	No. of Pumps	Number
Notubew	No. of Tubewells	Number
Nevglock	no. of navigation lock	Number
Old_type	Previous type of the systems	
New_type	New type of the systems	
Typecode	Type code of systems	
Parea	Project Area	Hactare
Bairig	Benefitted area (irrigation)	Hactare
Badr	benefitted area (drainage)	Hactare
Bafc	Benefitted area (flood control)	Hactare
Ystart	Starting year of the system	
Ycompl	Year of completion	
Value	Cost of system	Cr. Tk.
Cwheat	cost of system	Ton
Status	Whether the project is completed or not.	
Circle	BWDB Circle	
Area_ha	Calculated project area	Hactare

Name of Data layer : **BWDB Schemes Information (WSIP)**

Metadata

Data Type	PDF file
Abstract	An attribute data layer containing BWDB scheme names, structure no with code and other associated information.
Quality	Some anomaly has been noticed between attribute data collected from BWDB and the spatial data captured from the published maps of ECDS. Further field investigation is needed.
Completeness	The data layer encompasses attribute information of the FCDI schemes identified by BWDB.
History of the dataset	BWDB (Bangladesh Water Development Board) generated and compiled this data layer from different Flood Control Drainage and Irrigation projects.
Purpose of production	The data layer was developed with a view to present an overall picture of the BWDB Water Sector Improvement Projects.
Process description	NWRD has collected the data layer, checked with the spatial data and stored in an arranged way.

Sample of Data

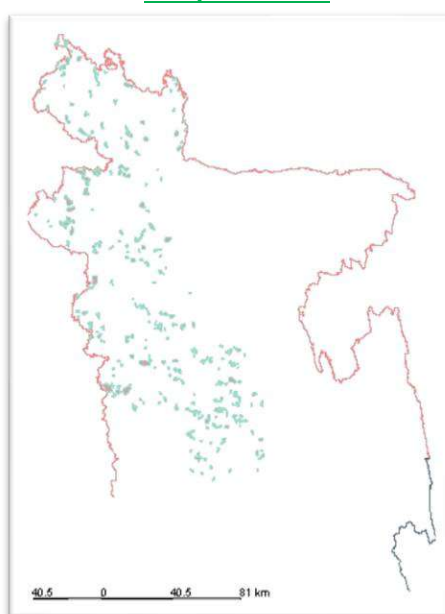
Sl.No	Scode	Zone	SNAME1	WLOC	LEMB	LCAN	RS
1	69401	SC	RE-EXCAVATION OF SAHIA METHAR KUL KHAL	15120	0	8.4	0
2	112900	SC	POLDER 39/1C	15120	32.18	55.5	0
3	69400	SC	BASANTO-TALUKDAR AND SARITKOLA -DUMURTALA PROJECT	15120	0	64	0
4	900010	SC	BANDARIA TOWN PROTECTION	15120	0	0	0
5	112402	SC	BARISAL IRRIGATION PROJECT PHASE-II	15130	0	564.38	180
6	64400	SC	BHOLA IRRIGATION PROJECT PHASE-I & PHASE-II	15210	193.9	1150	0
7	29500	SC	POLDER 56/57 PROJECT	15210	639	895	20
8	29700	SC	POLDER 58/1 PROJECT	15210	36.16	25	0
9	112500	SC	POLDER 58/2	15210	26.6	43	0
10	29900	SC	POLDER 58/3 PROJECT (CHAR FAIZUDDIN)	15210	16.93	27	0
11	87300	SC	DAMUDOR AND OTHER SIDE KHAL PROJECT	15310	0	19.9	0
12	36700	SC	PINGLAKATI KHAL PROJECT	15310	0	15.3	0
13	55902	SC	SATLA BAGDA PROJECT POLDER 3 PT.2	15310	18.84	48	0
14	36900	SC	CHAKAR CHAULAKATI PROJECT	15310	0	9.66	0
15	37600	SC	HIZLA EMBANKMENT PROJECT	15310	39.42	85	0
16	113300	SC	KAKRADHARA EMBANKMENT PROJECT	15310	28.64	28	0
17	153102	SC	KATAKHALI KHAL PROJECT	15310	17.66	17.46	0

Name of Data layer: **Small Scale Water Resources Projects of LGED**

Metadata

Data Type	Spatial
Abstract	A spatial dataset of small scale water resource project areas that are delineated and maintained by LGED (Local Government Engineering Department)
Quality	Quality of the data solely depends on LGED.
Completeness	The data layer covers all the project locations of Bangladesh identified by LGED
History of the dataset	Data has been received from LGED in digital format
Purpose of production	To identify the small scale project areas and to calculate the area under irrigation schemes
Process description	The projection has transferred from LCC to BTM projection. Project boundaries have been checked with available administrative data upto upazila level.

Sample of Data



Attribute Table

area	spid	division	district	upazila	sname	sptype	garea
12420765	SP13062	Rajshahi	Panchagar	Tetulia	Berung River WCS Subproject	WC	257
12704035	SP13061	Rajshahi	Panchagar	Tetulia	Versa WCS Subproject	WC	306
4034420.75	SP14210	Rajshahi	Panchagar	Sadar	Beer Bundh WCS Subproject	WC	260

barea	wmcaname	wmcaregion	wmacrcode	benefhbm	mmale	mfemale	capfdsha
251	Verung River	4	2/11/1998	412	246	94	21320
300	Versa	3	2/11/1998	682	400	119	11300
255	Beer Bundh	21	8/11/1999	222	212	98	5040

capfdsav	capfdtotal	mloan	floan	lamount	lrealize	zrealized	omfund	phase
110982	132302						11500	Phase_I
26100	37400	24	2	32,000	12,500	39.0625	6500	Phase_I
8560	13600						17000	Phase_I

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square Meter
Spid	Unique ID for each subproject	
Division	Name of each division according to BBS geomaster database of 2001	
District	Name of each district according to BBS geomaster database of 2001	
Upazila	Name of each upazila according to BBS geomaster database of 2001	
Spname	Subproject name of LGED	
Sptype	Subproject type (DR= Drainage, WC= Water Control, CAD= Command Area Development, FCD= Flood Control Drainage, DR & WC= Drainage & water Conservation, FMD= Flood Management & Drainage, FC= Flood Control, FMD & WC= Flood Management Drainage & Water Conservation, FCD & WC= Flood Control Drainage & Water Conservation, FM= Flood Management, DR & IRR= Drainage & Irrigation, CAD & Irrigati= Command Area Development & Irrigation, Fisheries= Fisheries, Irrigation= Irrigation)	
Garea	Gross project area	Ha
Barea	Subproject net benifited area	Ha
Wmcaname	Name of the subproject places	
Wmcaregion	Not mentioned in Phase II	
Wmacrcode	Not mentioned in Phase II	
Benefhbm	Nos of beneficiary households	
Mmale	Nos of male members	
Mfemale	Nos of female members	
Capfdsha	Capital fund shares	TK
Capfdsav	Capital fund savings	TK
Capfdtotal	Total capital funds	
Mloan	Total nos of male loanee	
Floan	Total nos of female loanee	
Lamount	Total loan disbursed	TK
Lrealize	Total loan realized	TK
Zrealized	Percentage of loan realized	
Omfund	Not mentioned in Phase II	
Phase	Phase of the subprojects	

Name of Data layer: **District Wise Railway Route**

Metadata

Data Type	Tabular
Abstract	An attribute data layer containing 64-district wise railway route with length and number of railway stations of Bangladesh.
Quality	The information fully complies with the 'Railway Information Book 1998'.
Completeness	The data layer covers information of those districts where railway-line exists.
History of the dataset	Bangladesh Railway published this data in a book titled 'Information Book 1998'.
Purpose of production	To present district wise railway route statistics and to calculate the total length of the railway.
Process description	NWRD has collected the information from the cited source, converted into digital format and stored it as a suitable database form.

Sample of Data

Districtname	Districtcode	Noofstation	Kilometers
BAGERHAT	1	6	21.32
BANDARBAN	3	-	-
BARGUNA	4	-	-
BARISAL	6	-	-
BHOLA	9	-	-
BOGRA	10	18	84.89
BRAHAMANBARIA	12	16	72.07
CHANDPUR	13	10	40.69
CHITTAGONG	15	44	174.32
CHUADANGA	18	10	43.45
COMILLA	19	16	109.36
COX'S BAZAR	22	-	-

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Districtname	District Name	
Districtcode	District Code given by BBS	
Noofstation	No of Stations in a district	Number
Kilometers	Total Length of Railway Rout in a district	Km

Name of Data layer: **Freight of Commodities**

Metadata

Data Type	Tabular
Abstract	The data layer presents principal commodities carried by Bangladesh Railway and its percentage to the total tones for 3 years.
Quality	The information fully complies with the 'Information Book 1999'.
Completeness	The data layer covers whole Bangladesh.
History of the dataset	Bangladesh Railway published this information in a book titled 'Information Book 1999'.
Purpose of production	To present year wise total amount of freight of main goods carried by Bangladesh Railway.
Process description	NWRD has collected this information from the cited source; converted it to a digital file and has stored it. Mainly 20 commodities are listed uniquely and other commodities are lumped for the year 1969-70, 96-97, 97-98.

Sample of Data

Commodities	Year	Freightton	Percenttotal
Cement	1969-70	292	5.98
Coal	1969-70	138	2.83
Cotton raw	1969-70	34	0.67
Fertilizer	1969-70	213	4.37
Fire wood and other fuel	1969-70	22	0.46
Fodder	1969-70	5	0.1
Fuel for the railway	1969-70	-	-
Gram & pulses	1969-70	54	1.1
Iron and steel	1969-70	187	3.83
Jute manufactured	1969-70	47	0.95

Bundle Information (Data Field Description and Unit)

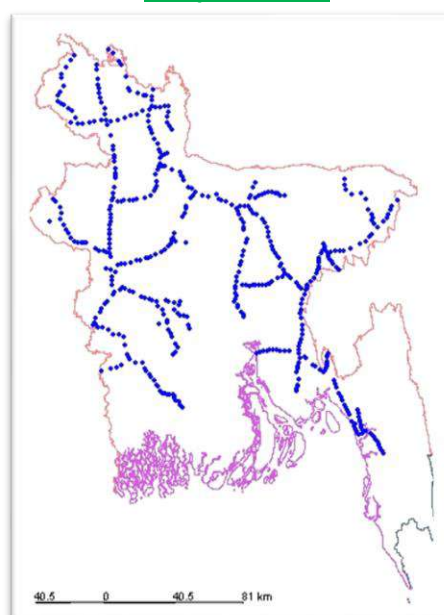
FIELD_NAME	FIELD_DESCRIPTION	UNIT
Commodities	Name of Commodities Carried by Bangladesh Railway	
Year	Financial Year	
Freightton	Weight of Freight Carried by Bangladesh Railway	Ton
Percenttotal	Percentage to the total	Percent

Name of Data layer: **Rail stations**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the locations of rail stations of the entire Bangladesh along with other attribute information.
Quality	The attribute information fully resembles with the source map and as it was in 1 inch = 9.5 mile scale so this data layer should be used in the same scale or smaller than this.
Completeness	The data layer covers available stations according to the source.
History of the dataset	Source of this data layer is a published map titled 'Bangladesh, showing Entire Railway Systems' prepared by Bangladesh Railway in 1 inch = 9.5 miles (1:601920) scale.
Purpose of production	To cater information about the location of rail stations to the planners this data has been included in NWRD data layers.
Process description	NWRD has captured the data from the published map with input RMS error 0.003 inch and output error 10-20 m. Other associated information has also been incorporated from same source.

Sample of Data



Attribute Table

rail_stn_i	stn_id	sl_no	stationnam	ddlong	ddlat	btmlong	btmlat	remarks
1	86	86	DAMUKDIA	88.987	24.095	396785.719	664632.5	
2	93	93	MONSHIGANJ	88.921	23.739	390015.908	625575.624	
3	107	107	PANGSA	89.43	23.785	441904.518	630284.919	
4	115	115	BELGACHI	89.516	23.768	450654.078	628423.631	
5	116	116	SURJANAGAR	89.616	23.769	460911.625	628519.688	
6	117	117	RAJBARI	89.649	23.762	464213.08	627711.778	
7	119	119	GOALUNDA BAZAR	89.764	23.721	475992.236	623152.522	
8	120	120	GOALUNAGHAT	89.785	23.764	478131.322	627846.498	
9	121	121	KHANKANAPUR	89.711	23.68	470494.022	618583.08	
10	122	122	BASANTAPUR	89.75	23.638	474488.219	613933.625	

Bundle Information (Data Field Description and Unit)

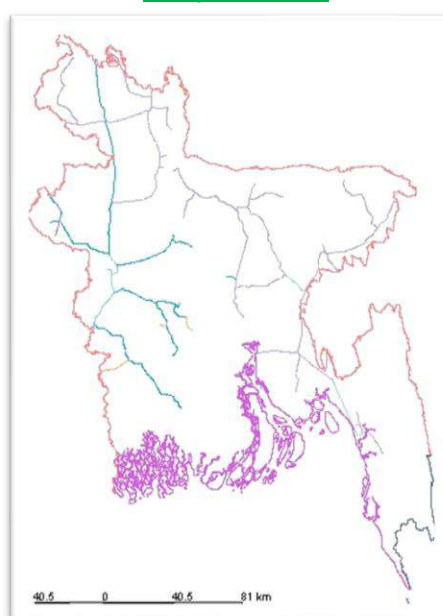
FIELD_NAME	FIELD_DESC	UNIT
Stan_id	User id given to each point	
Stn_no	Identification number given to each point	
Stationnam	Name of the stations according to information book 1997 published by Bangladesh Railway.	
Remark	Note about the station	
X_coord	X-co-ordinate in BTM coordinate	Meter
Y_coord	Y-co-ordinate in BTM coordinate	Meter

Name of Data layer: **Railway Network**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the railway network of the entire railway system of Bangladesh along with other attributes information.
Quality	Source map was in 1:250000 scale therefore, the data layer should be used in the same scale or smaller than this.
Completeness	This data layer covers entire railway network of Bangladesh.
History of the dataset	Railway network of Bangladesh was captured by the AST (Agricultural Sector Team) project funded by Canadian International Development Agency (CIDA) using a GIS software, 'TYDAC SPANS'. AST captured the data from 17 Land Resource Inventory Maps, (AEZ zone maps) produced by BARC under FAO/UNDP Agricultural Development Adviser Project (BGD/81/035) Ministry of Agriculture, Govt. of Bangladesh, December 1985. ISPAN (Irrigation Support Project for Asia and Nearest) converted this data layer into coverage (ArcInfo format). This data layer has been updated in September 2000 by NWRD using recent railway maps collected from Bangladesh Railway.
Purpose of production	For storing the basic rail station location information to meet the requirements of hydrological and infra-structure planning sectors, this data layer has been incorporated in NWRD.
Process description	NWRD has updated the location of the railway lines using IRS image of 1998 and LANDSAT Image 1997. Attribute information has been incorporated using a published map titled 'Bangladesh, showing Raillines' in the 'Information Book' published by Bangladesh Railway in 1997.

Sample of Data



Attribute Table

length	rail_id	gauge	len_km	editsrc
44421.997	1	Meter gauge single	44.42	BR
22449.935	1	Meter gauge single	22.45	BR
1543.565	1	Meter gauge single	1.54	BR
38127.811	1	Meter gauge single	38.13	BR
7157.696	1	Meter gauge single	7.16	BR
3678.77	1	Meter gauge single	3.68	BR
31352.918	1	Broad gauge single	31.35	BR
7528.208	1	Meter gauge single	7.53	BR
3826.303	1	Meter gauge single	3.83	BR
1699.787	1	Meter gauge single	1.7	BR

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Length	Length calculated by ArcInfo	Meter
Rail_id	User id given to each arc	
Gauge	It indicates the type of rail line	
Len_km	Length of the railline calculated in kilometer	Kilometer

Name of Data layer: **Railway Route Statistics**

Metadata

Data Type	Tabular
Abstract	A data layer presenting attribute information such as railway route in kilometer, passenger carried in million etc of Bangladesh for the years 1969-70, 1996-97, and 1997-98.
Quality	The information fully complies with the 'Information Book 1999'.
Completeness	The data layer covers the Railway Networks of whole Bangladesh for the years 1969-70, 1996-97 and 1997-1998.
History of the dataset	Bangladesh Railway published this information in a book titled 'Information Book 1999'.
Purpose of production	For storing the basic railway information to meet the requirements of hydrological and infrastructure planning sectors, this data layer has been incorporated in NWRD.
Process description	NWRD has converted the collected published information into digital form and has archived it in well-organized format.

Sample of Data

Commodities	Year	Freightton	Percenttotal
Cement	1969-70	292	5.98
Coal	1969-70	138	2.83
Cotton raw	1969-70	34	0.67
Fertilizer	1969-70	213	4.37
Fire wood and other fuel	1969-70	22	0.46
Fodder	1969-70	5	0.1
Fuel for the railway	1969-70	-	-
Gram & pulses	1969-70	54	1.1
Iron and steel	1969-70	187	3.83
Jute manufactured	1969-70	47	0.95

Bundle Information (Data Field Description and Unit)

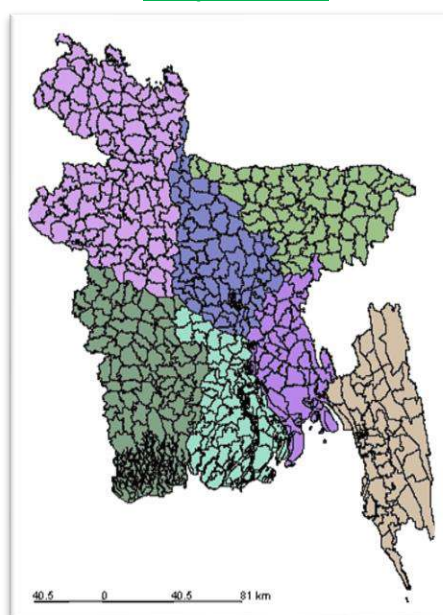
FIELD_NAME	FIELD_DESCRIPTION	UNIT
Item	Different types of Railway items	
Year	Financial Year	
Value	Value of different parameters	Number (Where not mentioned with items)

Name of Data layer: **Extended Hydrological Region**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of extended hydrological planning area of Bangladesh along with other attribute information.
Quality	As the source was in 1:50,000 scale it is recommended that this data layer should be used in the same scale or smaller than this. The attribute information fully complies with the BBS Geo-master database 1991.
Completeness	The data layer has been created for the whole country.
History of the dataset	Hydrological Region does not follow administrative unit, therefore for the analysis of administration-based information spatially, NWMP has proposed extended hydrological region.
Purpose of production	To present and delineate the 8 extended hydrological region boundaries and to use this data in hydrological and other kind of planning purposes at national or regional level.
Process description	NWRD has generated the hydrological region boundary from the cited source. NWMP incorporated the thana boundaries and changed the exiting hydrological region boundaries to solve the mismatching with the thana boundaries. Other attribute information has been incorporated according to BBS Geomaster database 1991.

Sample of Data



Attribute Table

area	geocode	distname	thaname	landtype	exthr
515273615.9315	100409	Barguna	Amtali	Land	2. SC
43146200.6485	100409	Barguna	Amtali	Water	2. SC
100987247.8818	100419	Barguna	Bamna	Land	2. SC
324722084.8277	100428	Barguna	Barguna Sadar	Land	2. SC
38343118.5796	100428	Barguna	Barguna Sadar	Water	2. SC
164855337.9528	100447	Barguna	Betagi	Land	2. SC
238769284.7895	100485	Barguna	Patharghata	Land	2. SC
91664189.2598	100485	Barguna	Patharghata	Water	2. SC
155950729.7881	100602	Barisal	Agailjhara	Land	2. SC
159577033.2979	100603	Barisal	Babuganj	Land	2. SC

Bundle Information (Data Field Description and Unit)

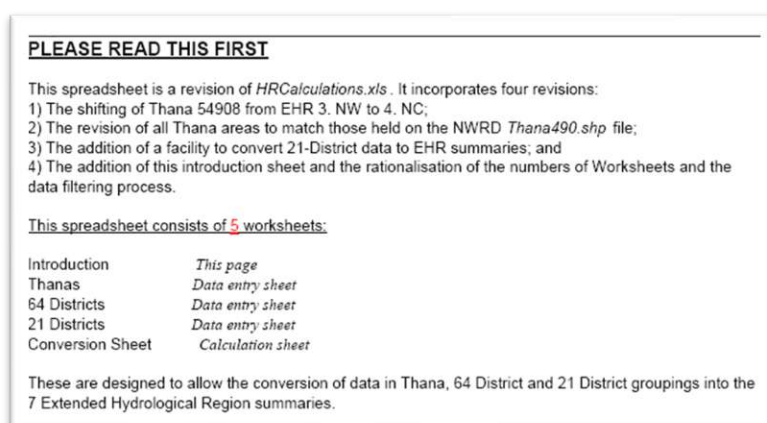
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square meter
Geocode	A unique code given to each district according to BBS geomaster Database 2001	
Distname	District name is given according to BBS geomaster database 2001	
Thaname	Thana name is given according to BBS geomaster database 2001	
Landtype	Landtype	
Exthr	The thanas in between the hydrological boundary	

Name of Data layer : **Hydrological Region Wise Calculation**

Metadata

Data Type	PDF file
Abstract	A spreadsheet calculation that helps to convert the data distributed in 490 thana, 64 districts and 21 districts into 7 hydrological regions.
Quality	This spreadsheet is fully reliable to convert any 490 thana, 64 district and 21 district based data into a 7-extended-hydrological region wise distribution.
Completeness	The spreadsheet calculation is effective only for 490 thana, 64 district and 21 district wise distributed data.
History of the dataset	NWMP has generated this spreadsheet.
Purpose of production	This data layer has been designed with a view for converting the data distributed in 490 thana, 64 district and 21 district wise into 7 extended hydrological regions.
Process description	NWRD has stored this data.

Sample of Data

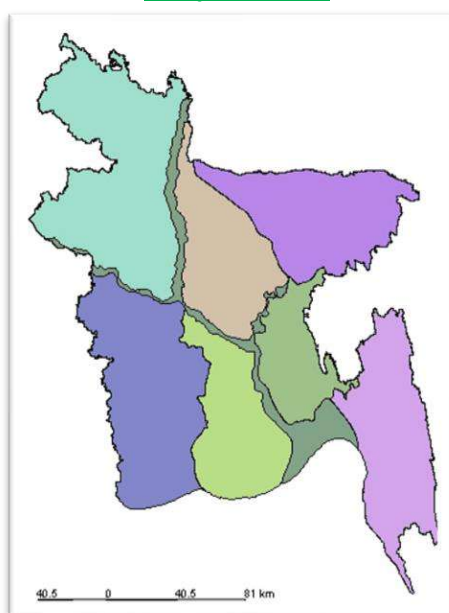


Name of Data layer: **Hydrological Regions**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of extended hydrological planning area of Bangladesh along with other attribute information.
Quality	As the source was in 1:50,000 scale it is recommended that this data layer should be used in the same scale or smaller than this. The attribute information fully complies with the BBS Geo-master database 1991.
Completeness	The data layer has been created for the whole country.
History of the dataset	Hydrological Region does not follow administrative unit, therefore for the analysis of administration-based information spatially, NWMP has proposed extended hydrological region.
Purpose of production	To present and delineate the 8 extended hydrological region boundaries and to use this data in hydrological and other kind of planning purposes at national or regional level.
Process description	NWRD has generated the hydrological region boundary from the cited source. NWMP incorporated the thana boundaries and changed the exiting hydrological region boundaries to solve the mismatching with the thana boundaries. Other attribute information has been incorporated according to BBS Geomaster database 1991.

Sample of Data



Attribute Table

area	hregid	regname
31585839104	1	North West
18984280	1	North West
8852261888	2	River and Estuary
15949474816	3	North Central
20055703552	4	North East
10275513344	6	South East
26477893632	5	South West
19951847424	7	Eastern Hill

Bundle Information (Data Field Description and Unit)

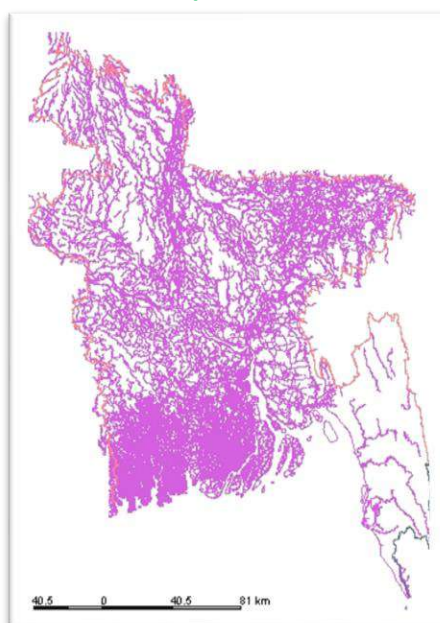
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square meter
Hregid	ID of each region	
Regname	Region Name given by MPO	

Name of Data layer: **Detail Rivers 89**

Metadata

Data Type	Spatial
Abstract	A spatial data layer containing rivers, channels and khals of Bangladesh along with the nomenclature of BWDB, BIWTA and SWMC (for Model river).
Quality	Scale of the source map was 1:50,000. Therefore it is recommended that in any kind of analysis this data layer should not be used exceeding the above scale.
Completeness	The database covers whole Bangladesh.
History of the dataset	ISPAN (Irrigation Support Project for Asia and Near East) captured the rivers that were equal to or above 50 meter wide from SPOT multi spectral image 1989. EGIS- I updated this data using SPOT multi spectral image and EGIS-II enhanced the existing data layer adding Model and Major rivers. After-wards NWRD captured the rivers of Chittagong region from LANDSAT TM image 1997.
Purpose of production	To archive and present the spatial distribution of river system of Bangladesh in detail and to use this data layer in different analytical and planning purposes.
Process description	The ground resolutions of LANDSAT TM and SPOT multi-spectral image were 30m by 30m and 20m by 20m respectively. The scale of the SPOT multi-spectral image was 1:50,000 and the SoB topo-maps were in 1:50,000 scale. River names were incorporated according to Topo-sheets, published by Survey of Bangladesh (SoB), River Network Maps published by Bangladesh Inland Water Transport Authority (BIWTA) and Bangladesh Water Development Board (BWDB) and river names collected from Surface Water Modelling Centre (SWMC).

Sample of Data



Attribute Table

length	detriv_id	modelr	modelrnm	majorrnm	majorr	biwta_name	bwdb_name
3535.004	3	0			1		
559.626	2	0			1	KARATOYA	
1273.934	2	0			1	KARATOYA	
1193.29	2	0			1	KARATOYA	
817.667	2	0			1	KARATOYA	
871.716	2	0			1	KARATOYA	
2467.661	2	0			1	KARATOYA	
1639.478	2	0			1	KARATOYA	
17535.818	3	0			1		
1586.249	2	0			1	KARATOYA	

Bundle Information (Data Field Description and Unit)

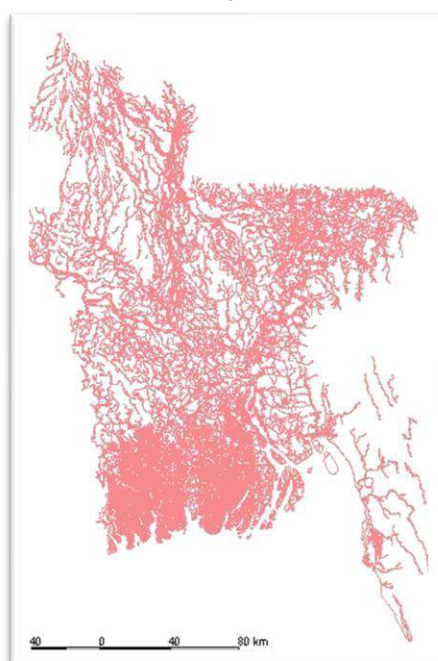
FIELD_NAME	FIELD_DESC	UNIT
Length	Length generated by ArcInfo	Meter
Detlriv_id	User id given to each arc	
Modelr	A unique number identifying whether it is model or non model river(1=model,0=non-model)	
Modelrnm	Name of the model rivers according to SWMC	
Majorr	A unique number identifying whether it is a major or a minor river (1=Major, 0=Minor)	
Biwta_name	Name of the rivers used by BIWTA	
Bwdb_name	Name of the rivers used by BWDB	

Name of Data layer: **Detail Rivers 97**

Metadata

Data Type	Spatial
Abstract	A spatial data layer containing rivers, channels and khals of Bangladesh along with the nomenclature of BWDB, BIWTA and SWMC (for Model river).
Quality	Scale of the source data was 1:50,000. Therefore, it is recommended that in any kind of analysis the data layer should not be used exceeding above mentioned scale.
Completeness	The data layer covers whole Bangladesh.
History of the dataset	The data layer has been uploaded to NWRD from the existing databank of EGIS-II. ISPAN (Irrigation Support Project for Asia and Nearest) captured the rivers that were equal to or greater than 50 meter wide from SPOT multi-spectral image 1989 with 20m ground resolution. EGIS-I updated the existing data set using SPOT multi-spectral images and successively EGIS-II enhanced the existing data layer adding Model and Major rivers.
Purpose of production	The data layer is prepared to delineate the overall river system of the country. The resource assessment and its usages are needed for the planners for development of projects and alleviation of socio-economic concern.
Process description	NWRD has captured the rivers of Chittagong region from LANDSAT TM image 1997 with 30 m ground resolution. Moreover NWRD has checked the other parts of the dataset and updated in accordance with the changed river courses using the same source. Nomenclatures have been attached according to the Toposheets published by SoB and other published maps of Bangladesh Inland Water Transport Authority (BIWTA) and Bangladesh Water Development Board (BWDB). The scale of the SPOT multi spectral image is 1:50,000 and the Topo maps are in 1:50,000 scale.

Sample of Data



Attribute Table

detlr97_id	modelriv	modelrnm	majorriv	majorrnm	biwta_name	bwdb_name	sob_name	brdriv	brdrnod	riv_width	riv_length
5	0		0					0	0	Below 25m	3650.086
5	0		0					0	0	Below 25m	6478.944
1	0		0				Bhesha	0	0	25m - 50m	5235.435
1	0		0				Bhesha	0	0	25m - 50m	949.077
5	0		0					0	0	Below 25m	1226.706
5	0		0				Bhutijhari Khal	0	0	Below 25m	1843.817

Bundle Information (Data Field Description and Unit)

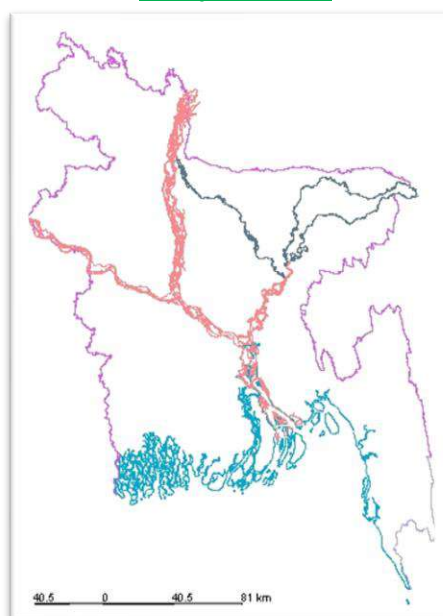
FIELD_NAME	FIELD_DESC	UNIT
Detlr97_id	User id given to each arc	
Modelriv	A unique number identifying whether it is model or non model river (0=No,1=Yes)	
Modelrnm	Name of the model rivers according to SWMC	
Majorriv	A unique number identifying whether it is a major or a minor river (0=Minor,1=Major)	
Majorrnm	Name of the major rivers	
Sob_name	River Name compiled from SOB Topo Map by CEGIS	
Biwta_name	Name of the rivers demarked by BIWTA	
Bwdb_name	Name of the rivers demarked by BWDB	
Brdriv	A unique number identifying whether it is a Border river or not (0=No,1=Yes)	
Brdrnod	Unique code given to each border river by Joint River Commission(1 to 57)	
Riv_width	Description of width of the River	
Riv_length	Arc length of the River	Meter

Name of Data layer: **Main Rivers**

Metadata

Data Type	Spatial
Abstract	The main rivers are defined as the Ganges and the Brahmaputra from the points where they enter the country to the Padma confluence, the Padma itself, and the Meghna from the confluence of the Kushyara and Surma to, and including, the lower Meghna estuary.
Quality	Scale of the source data was 1:50,000. Therefore, it is recommended that in any kind of analysis the data layer should not be used exceeding above mentioned scale.
Completeness	The data layer covers whole Bangladesh.
History of the dataset	The data layer has been uploaded to NWRD from the existing databank of EGIS-II. ISPAN (Irrigation Support Project for Asia and Nearest) captured the rivers that were greater than 100 meter wide from SPOT multi-spectral image 1989 with 20m ground resolution. EGIS-I updated the existing data set using SPOT multi-spectral images and successively EGIS-II enhanced the existing data layer added.
Purpose of production	The data layer is prepared to delineate the main river system of the country. The resource assessment and its usages are needed for the planners for development of projects and alleviation of socio-economic concern.
Process description	NWRD has captured the main rivers of Bangladesh from LANDSAT TM image 1997 with 30 m ground resolution. Moreover NWRD has checked the other parts of the dataset and updated in accordance with the changed river courses using the same source. Nomenclatures have been attached according to the Toposheets published by BBS and other published maps of Bangladesh Inland Water Transport Authority (BIWTA) and Bangladesh Water Development Board (BWDB). The scale of the SPOT multi spectral image is 1:50,000 and the Topo maps are in 1:50,000 scale.

Sample of Data



Attribute Table

length	riv2001_id	biwta_name	bwdb_name	sob_name	rivname	riv_width	riv_class
371.481	3	Hatia Channel	Meghna Lower			Above 100m	Main river
6365.936	3	Hatia Channel	Meghna Lower			Above 100m	Main river
818.492	3	Hatia Channel	Meghna Lower			Above 100m	Main river
724.5	3	Hatia Channel	Meghna Lower			Above 100m	Main river
7149.612	3	Hatia Channel	Meghna Lower			Above 100m	Main river
2681.554	3	Hatia Channel	Meghna Lower	Hatia		Above 100m	Main river
6493.064	3	Hatia Channel	Meghna Lower			Above 100m	Main river
2189.332	3	Hatia Channel	Meghna Lower	Hatia		Above 100m	Main river
7573.1	3	Hatia Channel	Meghna Lower	Hatia		Above 100m	Main river
5427.126	3	Hatia Channel	Meghna Lower	Hatia		Above 100m	Main river

Bundle Information (Data Field Description and Unit)

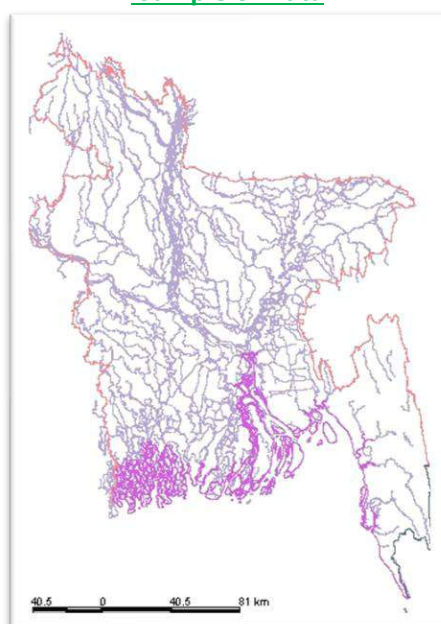
FIELD_NAME	FIELD_DESCRIPTION	UNIT
Length	Internal Parameter: Length of Arc	Meter
Riv2001_id	User id given to each arc	
Biwta_name	Name of the rivers demarked by BIWTA	
Bwdb_name	Name of the rivers demarked by BWDB	
Sob_name	River Name compiled from SOB Topo Map by CEGIS	
Rivname	River Name compiled by CEGIS	
Riv_width	Description of width of the River	Meter
Riv_class	River class according to NWMP's definition	

Name of Data layer: **Major Rivers**

Metadata

Data Type	Spatial
Abstract	A spatial data layer containing the major rivers of Bangladesh. It also includes the trans-boundary rivers and rivers having width equal to or above 100m including BWDB gauge stations and SWMC model rivers.
Quality	Scale of the source map was 1:50,000. Therefore, it is recommended that in any kind of analysis this data layer should not be used exceeding the above scale.
Completeness	This data layer covers all the major rivers of the country.
History of the dataset	ISPAN (Irrigation Support Project for Asia and Nearest) captured the rivers that were equal to or above 50-meter width, from SPOT multi spectral image 1989. EGIS- I updated this data layer using SPOT multi-spectral image and EGIS-II enhanced the existing data adding Model and some other Major rivers. After-wards NWRD has captured the rivers of Chittagong region from LANDSAT TM image 1997.
Purpose of production	To archive and present the spatial distribution of major rivers of Bangladesh and to use this data layer in different analytical and planning purposes.
Process description	Ground resolution of LANDSAT TM and SPOT multispectral image were 30m by 30m and 20m by 20m respectively. Scale of the SPOT multispectral image was 1:50,000 and the SoB topo maps were in 1:50,000 scale. River names have been incorporated according to Toposheets published by Survey of Bangladesh (SoB) and River Network Maps published by Bangladesh Inland Water Transport Authority (BIWTA) and Bangladesh Water Development Board (BWDB). Names used by Surface Water Modelling Center (SWMC) have also been incorporated.

Sample of Data



Attribute Table

length	riv2001_id	modelr	modelnm	majornm	majorr	biwta_name	bwdb_name	sob_name	borderr	brdrcod	rivname	riv_width	riverid
22805.475	2	0			1			Dauk	0	0	Dauk	50m - 100m	26
13707.784	2	0			1			Dauk	0	0	Dauk	50m - 100m	28
35968.59	2	0			1			Dharla	0	0	Dharla	50m - 100m	42
1999.679	5	0			1			Dharla	0	0	Dharla	Below 25m	43
4353.391	1	0			1	Tangan	Tangan	Tangan	0	0	Tangan	25m - 50m	46
306.102	1	0			1	Tangan	Tangan		0	0	Tangan	25m - 50m	47
435.275	5	0			1		Tangan	Tangan	0	0	Tangan	Below 25m	49
453.745	5	0			1		Tangan	Tangan	0	0	Tangan	Below 25m	50
1193.812	1	0			1	Tangan	Tangan	Tangan	0	0	Tangan	25m - 50m	51
2811.262	1	0			1	Tangan	Tangan	Tangan	0	0	Tangan	25m - 50m	63

Bundle Information (Data Field Description and Unit)

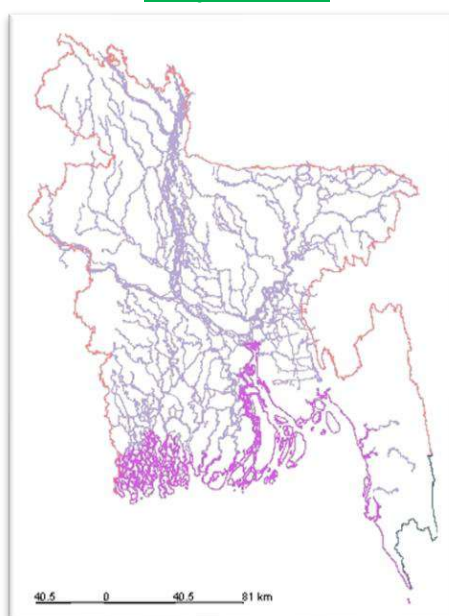
FIELD_NAME	FIELD_DESC	UNIT
Majornm	Name of the rivers used by EGIS-II	
Length	Length generated by ArcInfo	Meter
Bwdb_name	Name of the rivers Used by BWDB	
Biwta_name	Name of the rivers used by BIWTA	
Modelr	A unique number identifying whether it is model or non model river(1=model,0=non-model)	
Majorriv_id	User id given to each arc(1=25m-50m,2=50m-100m,3=Above,5=khal below 25m,6=chanal,30=char)	
Modelnm	Name of the model rivers according to SWMC	

Name of Data layer: **Model Rivers**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of those rivers which have been used in modelling purpose by Surface Water Modelling Centre (SWMC).
Quality	Scale of the source map was in 1:50,000, therefore, it is recommended that in any kind of analysis this data layer should not be used exceeding the above scale.
Completeness	This data layer covers all the rivers used in modeling purposes by Surface Water Modeling Center (SWMC).
History of the dataset	ISPAN (Irrigation Support Project for Asia and Nearest) captured the rivers that were equal to or above 50 meter wide from SPOT multi-spectral image 1989. EGIS-I (Environment and GIS Support Project for Water Sector Planning) updated this data layer using SPOT multi-spectral image and EGIS-II enhanced this existing data layer adding Model Rivers identified by Surface Water Modelling Center (SWMC).
Purpose of production	This data layer is essential while dealing with the Surface Water Model output data of SWMC.
Process description	The ground resolution of LANDSAT TM and SPOT multi spectral image were 30m by 30m and 20m by 20m respectively. Scale of the SPOT multi spectral image was 1:50,000 and the SoB Topo maps were in 1:50,000 scale. River names were incorporated by NWRD to the data layer according to the names used by Surface Water Modelling Centre (SWMC).

Sample of Data



Attribute Table

length	riv2001_id	modeltr	modelrnm	majorrnm	majorr	biwta_name	bwdb_name	sob_name	borderr	brdrccod	rivname	riv_width	riverid
85.866	3	1		Tista River	1			Tista	0	0		Above 100m	155
395.358	3	1	Tangon		1	Tangan	Tangan	Tangan	0	0	Tangan	Above 100m	164
77.172	3	1			1			Tista	0	0	Teesta	Above 100m	179
6104.592	1	1			1	Punarbhaba	Punarbhaba	Punarbhaba	0	0	Punarbhaba	25m - 50m	226
2494.738	1	1	Punarbhaba		1	Punarbhaba	Punarbhaba	Punarbhaba	0	0	Punarbhaba	25m - 50m	239
5493.551	1	1	Punarbhaba		1	Punarbhaba	Punarbhaba	Punarbhaba	0	0	Punarbhaba	25m - 50m	247
3190.955	1	1	Punarbhaba		1	Punarbhaba	Punarbhaba	Punarbhaba	0	0	Punarbhaba	25m - 50m	258
56.594	3	1			1				0	0	Teesta	Above 100m	263
1227.956	1	1	Burikhora Chikly		1	Chikly		Chikly	0	0	Chikly	25m - 50m	269
6562.427	1	1	Punarbhaba		1	Punarbhaba	Punarbhaba	Punarbhaba	0	0	Punarbhaba	25m - 50m	270

Bundle Information (Data Field Description and Unit)

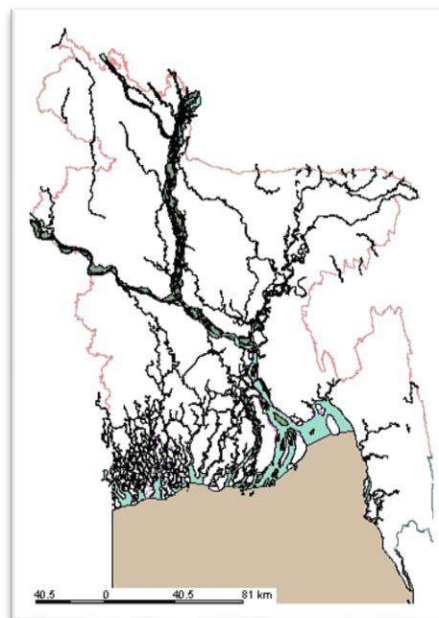
FIELD_NAME	FIELD_DESC	UNIT
Bwdb_name	Name of the rivers used by BWDB	
Length	Length generated by ArcInfo	Meter
Modelriv_id	User id given to each arc	
Modelr	A unique number identifying whether it is model or non model river(0=non-model,1=model)	
Modelrnm	Name of the model rivers according to SWMC	
Majorr	A unique number identifying whether it is a major or a minor river(1=Major,0=Minor)	
Biwta_name	Name of the rivers demarked by BIWTA	

Name of Data layer: **River Polygon**

Metadata

Data Type	Spatial
Abstract	A spatial distribution of the rivers those are equal to or above 100 meter in width, captured as enclosed polygons.
Quality	The scale of the source data (spot image) was 1:50,000, therefore it is recommended that in any kind of analysis this data layer should not be used exceeding the above scale.
Completeness	This data layer covers the rivers that are above 100 meter wide.
History of the dataset	ISPAN (Irrigation Support Project for Asia and Nearest) captured the rivers from SPOT multispectral image 1989 and generated polygon coverage of the river system.
Purpose of production	To present and store the digital data of the rivers those are equal to or above 100 meter wide, captured as a polygon theme and to use this data layer in different kinds of analysis in national or regional level.
Process description	NWRD has organized and stored the data to prepare it as a NWRD data layer.

Sample of Data



Attribute Table

area	perimeter	r97p100m_	r97p100m_i	type
23611096	119466.992	2	3	River
10585291776	26371754	3	3	River
70454712	530401.25	4	3	River
20869062	37855.578	5	30	Char
1473305.625	6095.612	6	30	Char
2389245.25	8239.547	7	30	Char
3475052.25	10334.647	8	30	Char
2498327	9028.066	9	30	Char
13413049	48007.434	10	30	Char
1196331.5	7909.418	11	30	Char
896639.063	4175.082	12	30	Char
1442103.375	6862.615	13	30	Char

Bundle Information (Data Field Description and Unit)

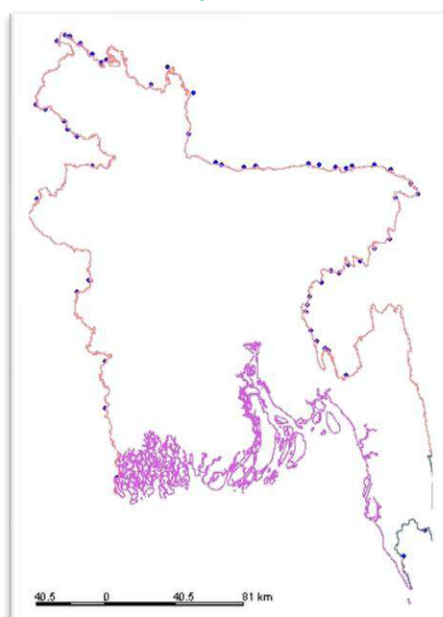
FIELD_NAME	FIELD_DESC	UNIT
Area	Area generated by ArcInfo	Square meter
Perimeter	Perimeter generated by ArcInfo	Meter
Rivpol_id	User Id given to each arc(1=Water,2=Charland,3=Land,4=Bay of Bengal)	
Type	Type indicates where it is a water,a charland, land or a Bey of Bengal	
Rivname	Name of the rivers	

Name of Data layer: **Trans-Boundary Rivers**

Metadata

Data Type	Spatial
Abstract	A spatial data layer representing the rivers that cross the international boundary of Bangladesh and flow through more than one country.
Quality	Source map was in 1:50,000 scale. Therefore, it is recommended that in any kind of analysis this data layer should not be used exceeding the above scale.
Completeness	The data layer presents 57 border rivers according to Joint River Commission.
History of the dataset	Using the existing river network map NWRD has generated this data layer by identifying the transboundary rivers, according to a report published by JRC (Joint River Commission). River network map of NWRD originates from ISPAN. ISPAN captured the rivers that were equal to or above 50 meter wide from SPOT multispectral image 1989. EGIS- I updated this data set using SPOT multispectral image. After-wards NWRD has captured the rivers of Chittagong region from LANDSAT TM image 1997 and updated other parts of the existing data layer in accordance with changed river course.
Purpose of production	This data layer can be used to identify the border river locations and to use it in international water sharing and other hydrological computation purposes.
Process description	The ground resolutions of LANDSAT TM and SPOT multispectral image were 30m by 30m and 20m by 20m respectively. The scale of the SPOT multispectral image was 1:50,000 and the SoB topo maps were in 1:50,000 scale. Other attribute information of border river names demarcated by Joint River Commission was incorporated in this data set.

Sample of Data



Attribute Table

area	perimeter	borrivpntb	borrivpntb	borrivpt	borrivpt_i	code	rivnam	district	thana	ddlong	ddlat	btmlong	btmlat
0	0	1	1	1	15	15	Dahuk	PANCHAGARH	TENTULIA	88.426	26.587	343268.313	941386.688
0	0	2	2	2	17	17	Talma	PANCHAGARH	PANCHAGARH SADAR	88.605	26.499	361045.438	931457.25
0	0	3	3	3	19	19	Deonai-Jamunswari	NILPHAMARI	DOMAR	88.81	26.309	381224.75	910236.813
0	0	4	4	4	20	20	Buri Teesta	NILPHAMARI	DIMLA	88.855	26.292	385709.375	908315
0	0	5	5	5	21	21	Teesta	NILPHAMARI	DIMLA	88.893	26.344	389552.75	914000.5
0	0	6	6	6	22	22	Dharla	LALMONIRHAT	LALMONIRHAT SADAR	89.32	26.151	431993.594	892379.563
0	0	7	7	7	23	23	Dudkumar	KURIGRAM	BHURUNGAMARI	89.641	26.257	464185.031	903910.688
0	0	8	8	8	24	24	Brahmaputra	KURIGRAM	NAGESWARI	89.943	25.947	494293.875	869557.688
0	0	9	9	9	26	26	Chilakhali	SHERPUR	JHENAIGATI	90.126	25.259	512683.656	793454.688
0	0	10	10	10	27	27	Bhugai	SHERPUR	NALITABARI	90.272	25.251	527379.563	792504.188

Bundle Information (Data Field Description and Unit)

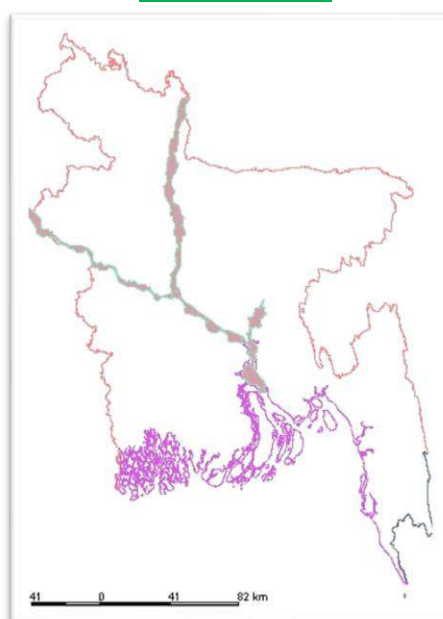
FIELD_NAME	FIELD_DESC	UNIT
Length	Length generated by ArcInfo	Meter
Bdrriv97_i	User id given to each arc	
Brdrcod	Unique code given to each border river by Joint River Commission	
Brname	Name of the border rivers used by Joint River commission	

Name of Data layer: **Bankline of Main Rivers 1973**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 1973. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	LANDSAT MSS Images, February, 1973 with 80 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
1973	Jamuna	1916383723.39
1973	Lower Meghna	544309843.345
1973	Padma & Upper Meghna Confluence	210447544.979
1973	UpperMeghna	337262375.33
1973	Padma	621223215.874
1973	Ganges & Brahmaputra-Jamuna Confluence	106420838.901

Bundle Information (Data Field Description and Unit)

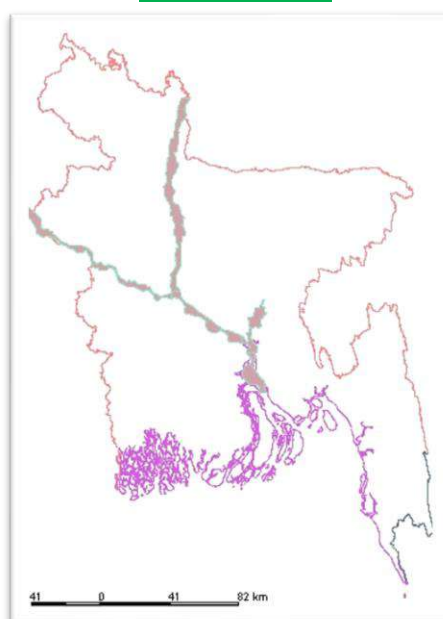
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 1980**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 1980. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	LANDSAT MSS Images, February, 1980 with 80 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
1980	UpperMeghna	341316680.379
1980	Padma & Upper Meghna Confluence	227620594.398
1980	Lower Meghna	536648564.735
1980	Padma	556449366.98
1980	Ganges & Brahmaputra-Jamuna Confluence	99310173.2723
1980	Ganges	1143667521.92

Bundle Information (Data Field Description and Unit)

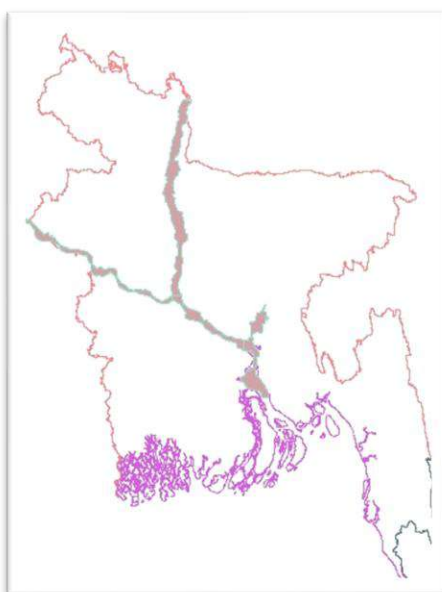
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 1984**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 1984. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	LANDSAT MSS Images, February and March,1984 with 80 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS.Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
1984	Jamuna	2216981196.16
1984	Lower Meghna	576281557.771
1984	Padma & Upper Meghna Confluence	237914242.884
1984	UpperMeghna	342029299.231
1984	Padma	592634174.125
1984	Ganges & Brahmaputra-Jamuna Confluence	99375901.59

Bundle Information (Data Field Description and Unit)

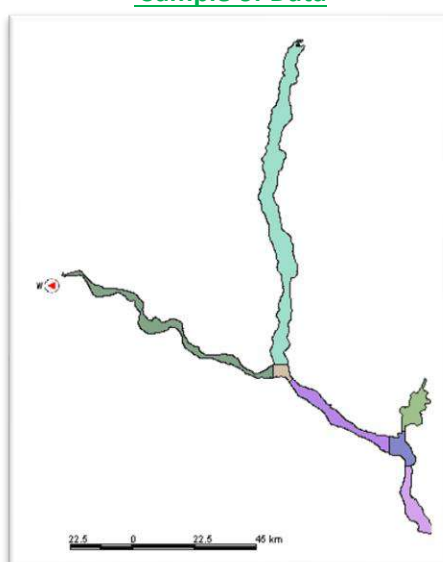
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 1989**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 1989. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	LANDSAT TM Images, January and February, 1989 with 30 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
1989	Jamuna	2426147432.93
1989	Ganges	860673134.923
1989	Ganges & Brahmaputra-Jamuna Confluence	115838471.904
1989	Padma	597236085.194

Bundle Information (Data Field Description and Unit)

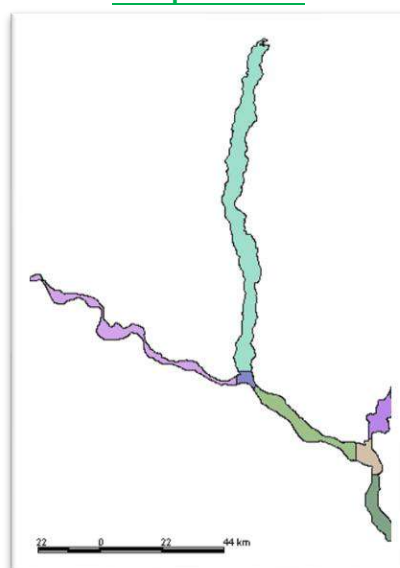
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 1994**

Metadata

Data Type	Spatial
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	LANDSAT TM Images, January, 1994 with 30 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
1994	Jamuna	2549731307.11
1994	Lower Meghna	424175242.179
1994	Padma & Upper Meghna Confluence	261096892.595
1994	UpperMeghna	345243235.506
1994	Padma	683356708.7309999
1994	Ganges & Brahmaputra-Jamuna Confluence	108746882.922
1994	Ganges	853930619.548

Bundle Information (Data Field Description and Unit)

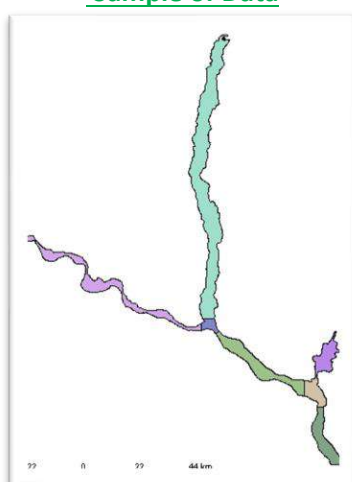
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 1995**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 1995. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	LANDSAT TM Images, November, 1994 and January, 1995 with 30 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
1995	Jamuna	2550905737.92
1995	Lower Meghna	425867346.264
1995	Padma & Upper Meghna Confluence	265285519.872

Bundle Information (Data Field Description and Unit)

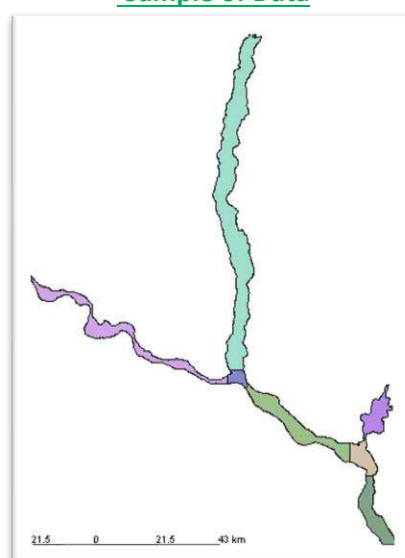
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 1996**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 1996. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	LANDSAT TM Images, January and February, 1996 with 30 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
1996	Jamuna	2574526845.07
1996	Lower Meghna	451513246.259
1996	Padma & Upper Meghna Confluence	267726222.511

Bundle Information (Data Field Description and Unit)

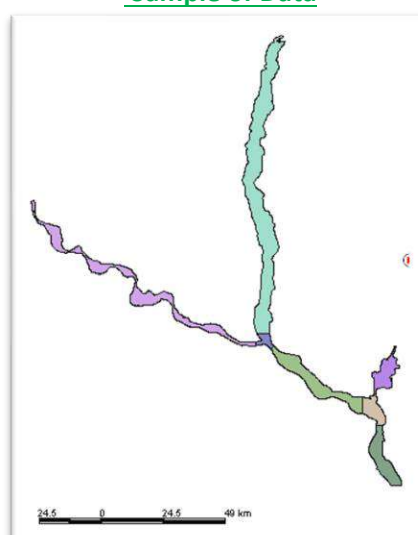
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 1997**

Metadata

Title	Bankline of Main Rivers 1997
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 1997. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	LANDSAT TM Images, January and February, 1997 with 30 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km.

Sample of Data



Attribute Table

year	rivname	area
1997	Jamuna	2608651519.7
1997	Lower Meghna	463920682.988
1997	Padma & Upper Meghna Confluence	269718519.78
1997	UpperMeghna	345495095.051

Bundle Information (Data Field Description and Unit)

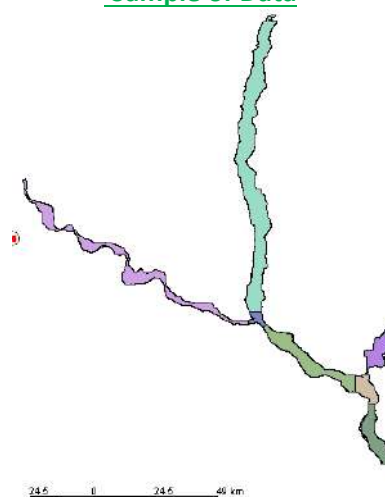
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 1998**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 1998. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	LANDSAT TM Images, February, 1998 with 30 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
1998	Jamuna	2579734147.99
1998	Lower Meghna	479907687.963
1998	Padma & Upper Meghna Confluence	266024452.53
1998	UpperMeghna	343673829.051
1998	Padma	777844298.9579999
1998	Ganges & Brahmaputra-Jamuna Confluence	102909238.932
1998	Ganges	1099996274.51

Bundle Information (Data Field Description and Unit)

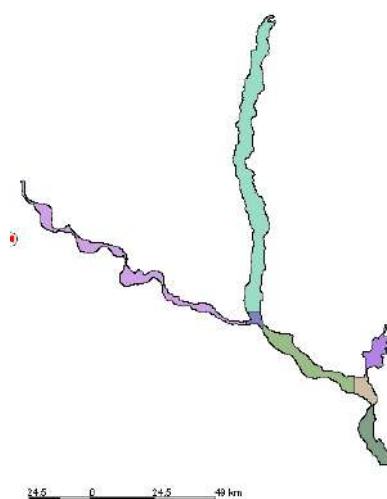
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 1999**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 1999. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	LANDSAT TM Images, January and February, 1999 with 30 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
1998	Jamuna	2579734147.99
1998	Lower Meghna	479907687.963
1998	Padma & Upper Meghna Confluence	266024452.53

Bundle Information (Data Field Description and Unit)

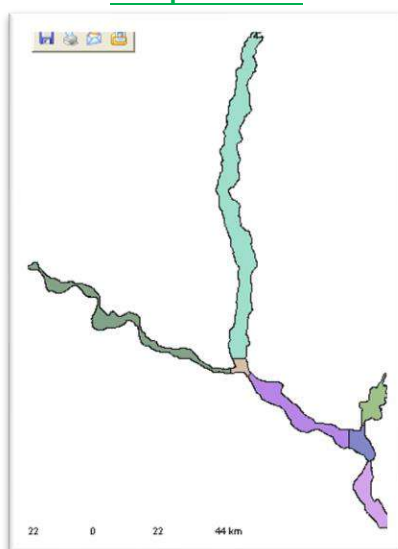
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 2000**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 2000. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	LANDSAT TM Images, January and February, 2000 with 30 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
2000	Jamuna	2650661170.14
2000	Ganges	931208791.501
2000	Ganges & Brahmaputra-Jamuna Confluence	109022823.791

Bundle Information (Data Field Description and Unit)

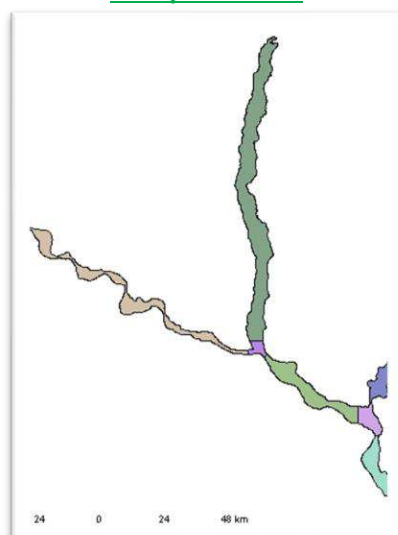
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 2001**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 2001. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	LANDSAT TM Images, January, 2001 with 30 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
2001	Lower Meghna	491458704.981
2001	Jamuna	2659039018.75
2001	Ganges	1166952269.57

Bundle Information (Data Field Description and Unit)

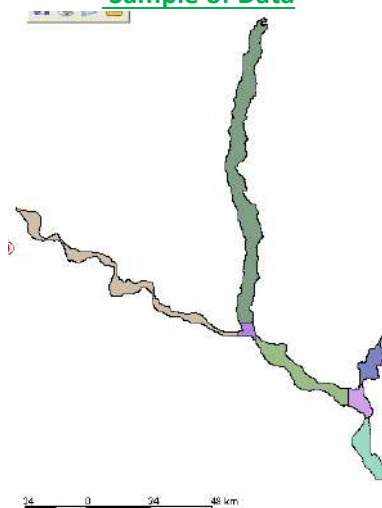
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 2002**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 2002. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	LANDSAT TM Images, January, February and March, 2002 with 30 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
2002	Lower Meghna	506327443.4
2002	Jamuna	2609398733.76
2002	Ganges	1171192206.48
2002	Ganges & Brahmaputra-Jamuna Confluence	112995639.876

Bundle Information (Data Field Description and Unit)

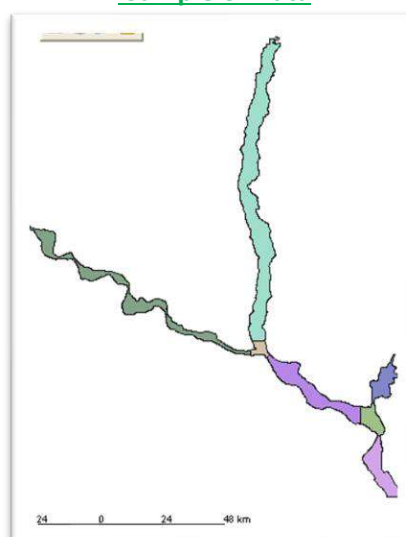
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 2003**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 2003. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	LANDSAT TM Images , January & February, 2003 with 30 m resolution for Padma & Ganges and IRS LISS image, March, 2003 with 24 m resolution for Jamuna have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
2003	Jamuna	2631644627.91
2003	Ganges	1169998271.89
2003	Ganges & Brahmaputra-Jamuna Confluence	115043165.848
2003	Padma	858103771.122

Bundle Information (Data Field Description and Unit)

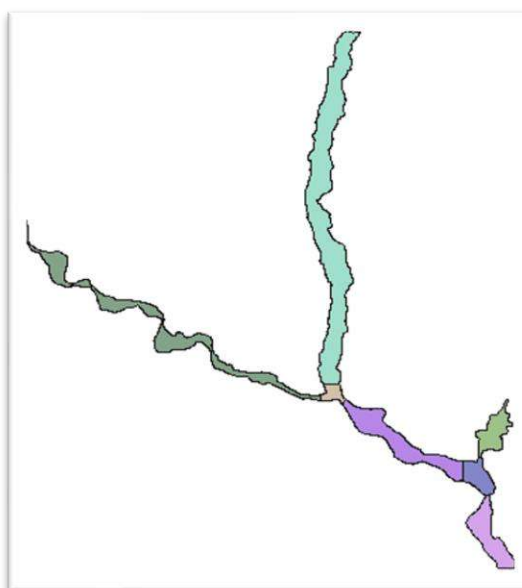
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 2004**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 2004. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	IRS LISS images, December and March, 2004 with 24 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
2004	Jamuna	2655764012.3
2004	Ganges	1223867429.69
2004	Ganges & Brahmaputra-Jamuna Confluence	121469763.593

Bundle Information (Data Field Description and Unit)

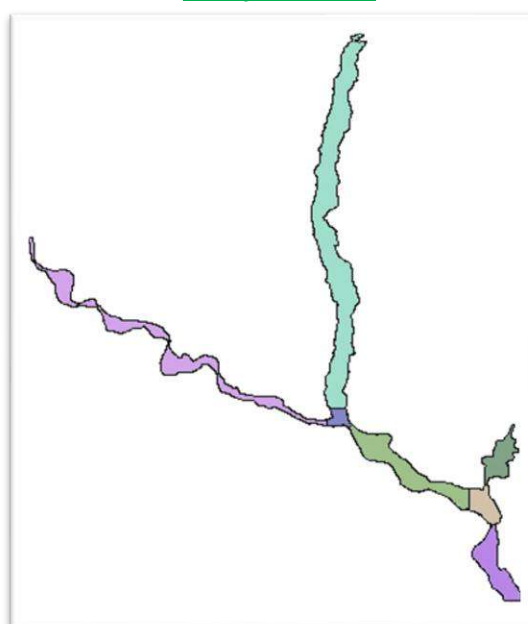
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 2005**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 2005. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	IRS LISS images, January, 2005 with 24 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
2005	Jamuna	2677382089.79
2005	UpperMeghna	348025684.131
2005	Padma & Upper Meghna Confluence	281409853.587

Bundle Information (Data Field Description and Unit)

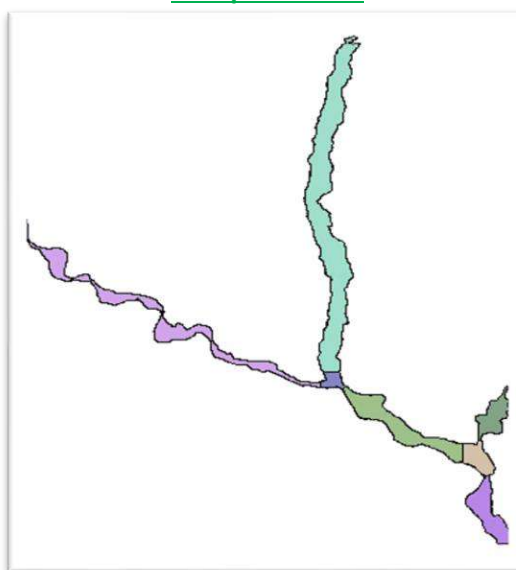
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 2006**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 2007. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	IRS LISS Images , January, February, March, 2007 with 24 m resolution for Padma & Ganges and ASTER image, January, 2007 with 15 m resolution for Jamuna have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
2006	Jamuna	2693718756.2
2006	Ganges	1194467642.36
2006	Ganges & Brahmaputra-Jamuna Confluence	124713209.519

Bundle Information (Data Field Description and Unit)

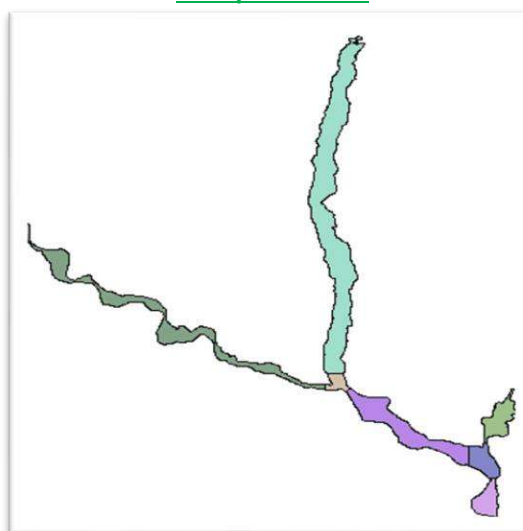
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 2007**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 2007. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	IRS LISS Images , January, February, March, 2007 with 24 m resolution for Padma & Ganges and ASTER image, January, 2007 with 15 m resolution for Jamuna have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
2007	Jamuna	2701330835.62
2007	Ganges	1233144631.73
2007	Ganges & Brahmaputra-Jamuna Confluence	120153666.433

Bundle Information (Data Field Description and Unit)

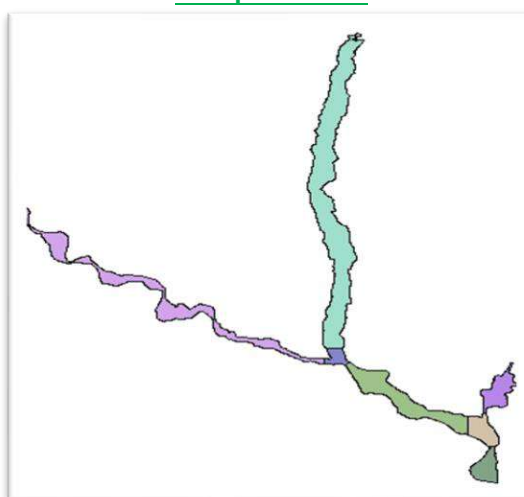
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 2008**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 2008. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	IRS LISS Images, December, 2007 and January , 2008 with 24 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
2008	Jamuna	2722203784.03
2008	Lower Meghna	272254040.32
2008	Padma & Upper Meghna Confluence	286084314.287
2008	UpperMeghna	348131816.677

Bundle Information (Data Field Description and Unit)

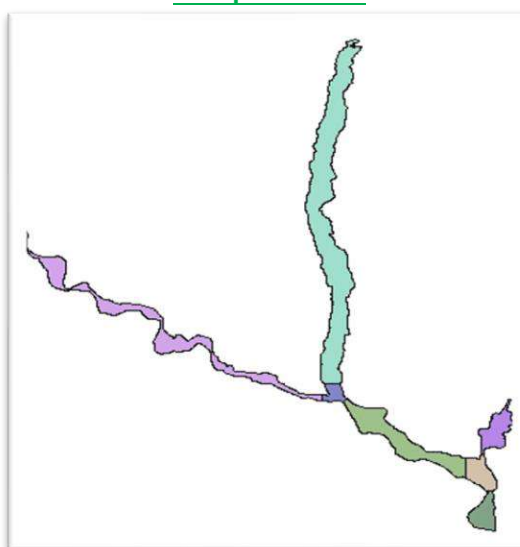
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 2009**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 2009. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	IRS LISS images, January and February, 2009 with 24 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
2009	Jamuna	2736040669.64
2009	Lower Meghna	275892503.379
2009	Padma & Upper Meghna Confluence	287675232.917

Bundle Information (Data Field Description and Unit)

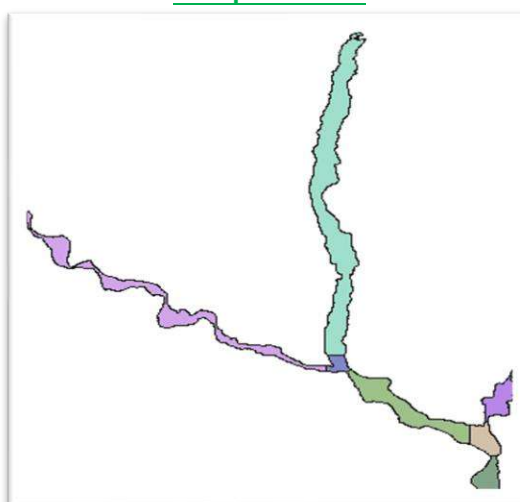
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 2010**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 2010. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	IRS LISS Images, December, 2009 and January , 2010 with 24 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS. Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
2010	Jamuna	2624815129.93
2010	Lower Meghna	280334424.477
2010	Padma & Upper Meghna Confluence	289985741.665

Bundle Information (Data Field Description and Unit)

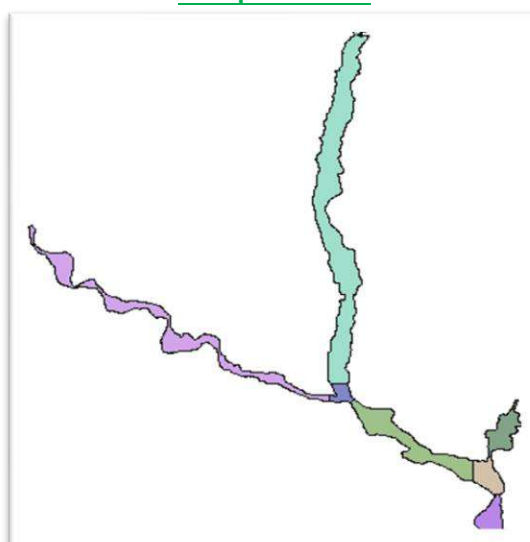
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **Bankline of Main Rivers 2011**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the alignment of bankline along the Main Rivers (Jamuna, Ganges, Padma & Meghna) of 2011. In general banklines include channels, chars and sand bars in the river braid belt.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy, resolution of the images and the procedure of bankline delineation.
Completeness	This data layer has been covered Main Rivers.
History of the dataset	IRS LISS images, January and February, 20011 with 24 m resolution have used for Bankline delineation.
Purpose of production	It will help to take necessary measures for maintain existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines has been delineated following the defined criteria developed by CEGIS.Smaller offshoot channels are considered to be outside the river banklines if the channel did not return to the main channel, the width of the channel was less than 100 m and the channel had a meander radius less than 1 km

Sample of Data



Attribute Table

year	rivname	area
2011	Jamuna	2647709513.2
2011	UpperMeghna	347009423.322
2011	Padma & Upper Meghna Confluence	290143228.963
2011	Lower Meghna	283087653.386

Bundle Information (Data Field Description and Unit)

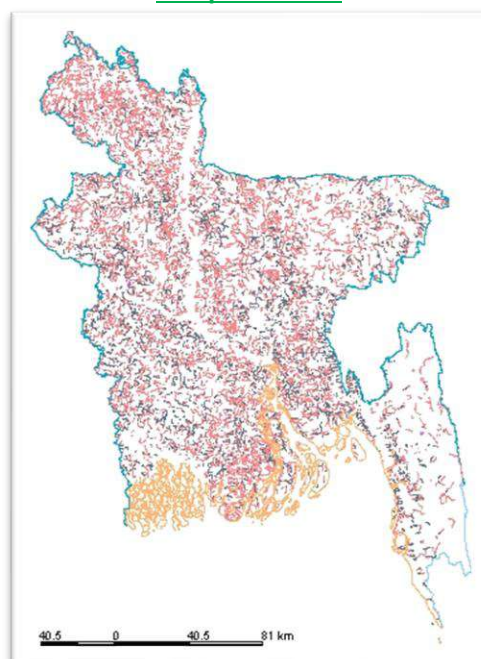
FIELD_NAME	FIELD_DESC	UNIT
Year	Year of bank line	
Rivname	Name of river/confluence	
Area	Area of each polygon	Square meter

Name of Data layer: **LGED Road (Union)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the road networks that connecting villages and farms with Union HQ or local markets or each other. The road network is being digitized by Local Government Engineering Department (LGED) with other associated attribute information.
Quality	It is collected from LGED and stored it without any quality checking
Completeness	This data layer covers entire union road of Bangladesh identified by LGED.
History of the dataset	Local Government Engineering Department (LGED) generated this data layer. Most of the road network data are generated by using GPS field survey.
Purpose of production	To present and store the road network of Bangladesh maintained by LGED and to know its actual length. It will help in planning the infrastructure development of the country. Implementation and upgrading of the new road networks will assist the planners and potential areas for further development.
Process description	It has appended the district wise road network data layer to make it single road data set covering whole Bangladesh and stored it in an arranged way.

Sample of Data



Attribute Table

length	id	type	stpoint	rdid	upid	rdtcode	rdnm	tlenth	crewidth	emb
17.6268	3009	Union Katcha		188943009	18894	3	Panchlia R&H-Hatikumrul UP off. Rd	3.5	2.5	1
211.2005	3009	Union Katcha		188943009	18894	3	Panchlia R&H-Hatikumrul UP off. Rd	3.5	2.5	1
704.6332	3108	Union Katcha		188943108	18894	3	Ramkrishnapur UP office-Basbaria hat via pachan	2.8	2.5	1
1352.239	3011	Union Pacca	YES	188943011	18894	3	Ramkrishnapur UP Office-Rahimabandh bazar road	5.8	4.6	2
305.4524	3011	Union Pacca		188943011	18894	3	Ramkrishnapur UP Office-Rahimabandh bazar road	5.8	4.6	2
166.4501	3011	Union Pacca		188943011	18894	3	Ramkrishnapur UP Office-Rahimabandh bazar road	5.8	4.6	2
69.5165	3011	Union Pacca		188943011	18894	3	Ramkrishnapur UP Office-Rahimabandh bazar road	5.8	4.6	2
956.0324	3011	Union Pacca		188943011	18894	3	Ramkrishnapur UP Office-Rahimabandh bazar road	5.8	4.6	2
1952.0302	3050	Union Katcha		188943050	18894	3	Ramkrishnapur UP off.-Amshara Bazar Choitrahati hat	2.5	2.8	1.2
140.655	3011	Union Pacca		188943011	18894	3	Ramkrishnapur UP Office-Rahimabandh bazar road	5.8	4.6	2

Bundle Information (Data Field Description and Unit)

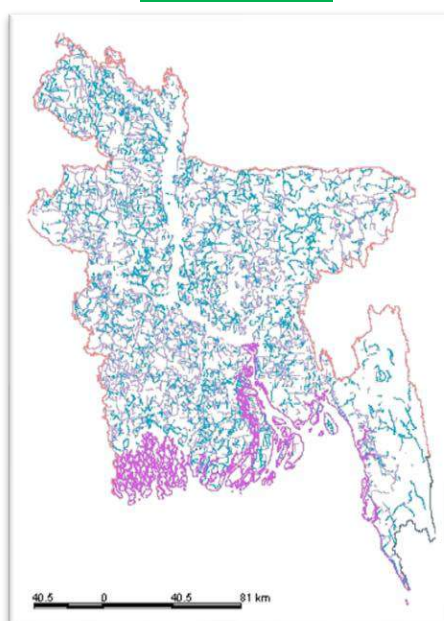
FIELD_NAME	FIELD_DESC	UNIT
Id	Road type id	
Type	Road type identified by LGED	
Stpoint	Structure Location	
Rdid	Unique id of each road	
Upid	Upazila code	
Rdtcode	Road type code	
Rdnm	Road name	
Tlenth	Road length	Km
Cewidth	Crest width	Meter
Emb	Embankment hight	Meter
Length	Segment length of road	Meter

Name of Data layer: **LGED Road (upazila)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the road networks that connecting Union HQs with Upazila HQs or other road system of the country. Upazila level roads are implemented and maintained by Local Government Engineering Department (LGED). Information on road networks, carriage width, height and other relevant parameters are incorporated in the database with other associated attribute information. The road alignments are mostly surveyed by LGED with GPS system.
Quality	It is collected from LGED and stored it with some quality checking.
Completeness	This data layer covers entire upazila road of Bangladesh identified by LGED.
History of the dataset	Local Government Engineering Department (LGED) generated this data layer. Most of the road network data are generated by using GPS field survey.
Purpose of production	The purpose of production of GIS based road network is to assess the future needs based on social and infrastructural facilities and help to improve the overall livelihood pattern of the people. Future needs can be identify easily and maintenance of the existing roads can be done properly by using the GIS database. Proper estimates on actual road length and infill requirement along with allocation of resources can be done efficiently by administrative units.
Process description	All the district level road network data are appended and a layer is produced to make it single road data set covering Bangladesh and stored it in an arranged way. Some overshoot and undershoot in the GIS data are updated using Satellite based images of CEGIS.

Sample of Data



Attribute Table

id	upazilaid	rdid	start	end	rdname	type	roadlength	callength	rdtypecode	crestwidth	stpoint	embkheight	remarks
2005	18194	181942005	Mundumala Hat	Hat bakoil (GCM) road (Tanore part).	Mundumala Hat - Hat bakoil (GCM) road (Tanore part).	Upazila Pacca	13.85	0.42	2	5.5		0.8	
2005	18194	181942005	Mundumala Hat	Hat bakoil (GCM) road (Tanore part).	Mundumala Hat - Hat bakoil (GCM) road (Tanore part).	Upazila Pacca	13.85	1.06	2	5.5		0.8	
2004	18194	181942004	Mundumala Hat Godagari road via Jata Battala	Mundumala Hat Godagari road via Jata Battala	Mundumala Hat Godagari road via Jata Battala - Mundumala Hat Godagari road via Jata Battala	Upazila Pacca	4.05	0.24	2	6.5		0.8	
2004	18194	181942004	Mundumala Hat Godagari road via Jata Battala	Mundumala Hat Godagari road via Jata Battala	Mundumala Hat Godagari road via Jata Battala - Mundumala Hat Godagari road via Jata Battala	Upazila Pacca	4.05	1.31	2	6.5		0.8	

Bundle Information (Data Field Description and Unit)

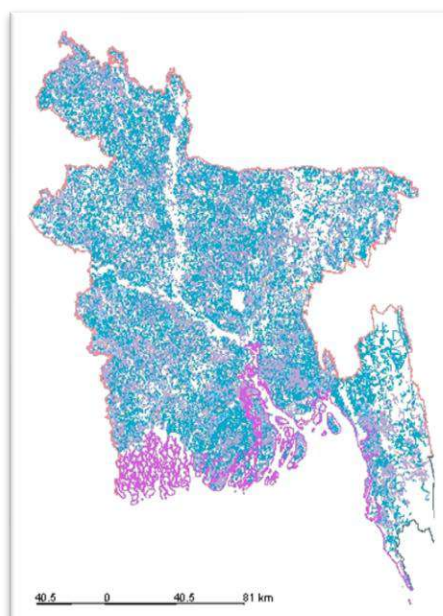
FIELD_NAME	FIELD_DESC	UNIT
Id	Road type id	
Upazilaid	Upazila code	
Rdid	Unique id of each road	
Start	Start location of each road	
End	End location of each road	
Rdname	Road Name	
Type	Road Type	
Roadlength	Road length	Km
Callength	Segment length of each road	Km
Rdtypecode	Road type code	
Crestwidth	Crest width	
Stpoint	Structure Location	
Embkheight	Embankment hight	
Remarks	Additional Information	

Name of Data layer: **LGED Road (Village)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the road networks that connecting within a village of Bangladesh identified by Local Government Engineering Department (LGED) with other associated attribute information.
Quality	It is collected from LGED and stored it without any quality checking
Completeness	This data layer covers entire village road of Bangladesh identified by LGED.
History of the dataset	Local Government Engineering Department (LGED) generated this data layer
Purpose of production	To present and store the road network of Bangladesh maintained by LGED and to know its actual length.
Process description	It has appended the district wise road network data layer to make it single road data set covering hole Bangladesh and stored it in an arranged way.

Sample of Data



Attribute Table

length	id	type	stpoint	rdid	upazilaid	rdtypecode	rdname	totlength	crestwidth	embkheight
684.4451	5024	Village B Katcha		188945024	18894	5	Hati Kumrul-Shoroshoti River	1.25	2.38	1
1825.9769	4058	Village A Katcha	YES	188944058	18894	4	Bonbaria UZR-solonga dighor UZR	6.2	2.4	2.3
166.8434	4058	Village A Katcha		188944058	18894	4	Bonbaria UZR-solonga dighor UZR	6.2	2.4	2.3
1404.6514	4058	Village A Katcha		188944058	18894	4	Bonbaria UZR-solonga dighor UZR	6.2	2.4	2.3
1592.5836	5127	Village B Katcha		188945127	18894	5	Bonbaria Pucca-Pechrepara	1.5	2.6	1.1
171.3991	4070	Village A Katcha		188944070	18894	4	Hatikumrul UP office-Charia Nutan hat via Hatipara road	4.5	2.8	1.3

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Length	Segment length of road	Meter
Id	Road type id	
Type	Road type identified by LGED	

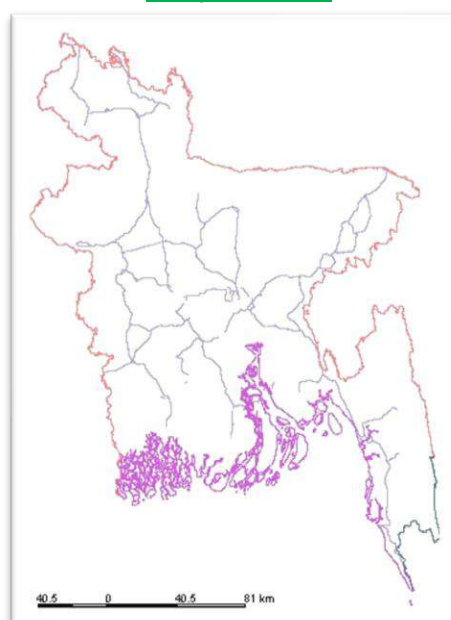
FIELD_NAME	FIELD_DESC	UNIT
Stpoint	Structure Location	
Rdid	Unique id of each road	
Upazilaid	Upazila code	
Rdtypecode	Road type code	
Rdname	Road name	
Totlength	Road length	Km
Crestwidth	Crest width	Meter
Embkheight	Embankment hight	Meter

Name of Data layer: **National Highway of RHD**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the national road network of Bangladesh with other attribute information identified by Department of Roads and Highways (RHD). National road connecting national capital with divisional head quarters, old district headquarters, port cities and international highways.
Quality	It is collected from RHD and stored it with quality checking.
Completeness	The data layer covers all the roads identified by the Department of Roads and Highway.
History of the dataset	Department of Roads and Highways generated this data layer.
Purpose of production	To represent the existing road network of Bangladesh and to estimate the total length of different types of roads for planning purpose.
Process description	Collecting this data layer in digital format, NWRD has updated it partly using IRS image of 2000 onward with 6 m resolution. Other attribute information have also been incorporated according to RHD Road network Database.

Sample of Data



Attribute Table

rhdrdsid	gisroadid	rdnr	rdname	rdnrs1	start	end	rdtype	roadlength	callength	rdclassid	remarks
1	1	N1	Dhaka(Jatrabari) - Teknaf	N1_05	Batherhat More	Karanaihat	National Highway	452.783	48.6339	1	
1	1	N1	Dhaka(Jatrabari) - Teknaf	N1_03	Chandina	Feni	National Highway	452.783	75.3853	1	
1	1	N1	Dhaka(Jatrabari) - Teknaf	N1_01	Dhaka (Jatrabari)	Katchpur Bridge	National Highway	452.783	9.6901	1	
1	1	N1	Dhaka(Jatrabari) - Teknaf	N1_04	Feni	Alongkar Cinema Hall	National Highway	452.783	87.5601	1	
1	1	N1	Dhaka(Jatrabari) - Teknaf	N1_02	Katchpur Bridge	Chandina	National Highway	452.783	60.4673	1	
1	1	N1	Dhaka(Jatrabari) - Teknaf	N1_07	Link Road Cox's Bazar	Teknaf(Shapla chattar)	National Highway	452.783	78.7633	1	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Rhdrdsid	Road id given by RHD	
Gisroadid	Road id given by CEGIS	

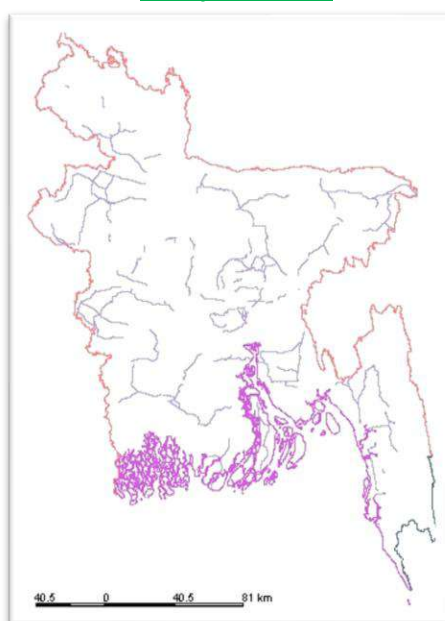
FIELD_NAME	FIELD_DESC	UNIT
Rdnr	Road type with each road Id	
Rdname	Road name	
Rdnrsl	Road type with each road Id given by CEGIS	
Start	Start location name of road	
End	End location name of road	
Rdtype	Road Type	
Roadlength	Road length given by RHD	Km
Callength	Calculated road segments length	km
Rdclassid	Road class id	
Remarks	Additional information	

Name of Data layer: **Regional Highway of RHD**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing regional road network of Bangladesh with other attribute information identified by Department of Roads and Highways (RHD). Road connecting different regions with each other, which are not connected by the national highways
Quality	It is collected from RHD and stored it with quality checking.
Completeness	The data layer covers all the roads identified by the Department of Roads and Highway.
History of the dataset	Department of Roads and Highways generated this data layer.
Purpose of production	To represent the existing road network of Bangladesh and to estimate the total length of different types of roads for planning purpose.
Process description	Collecting this data layer in digital format, NWRD has updated it partly using IRS image of 2000 onward with 6 m resolution. Other attribute information have also been incorporated according to RHD Road network Database.

Sample of Data



Attribute Table

rhdrsid	gisroadid	rdnr	rdname	rdnrst	start	end	rdtype	roadlength	callength	rdclassid	remarks
67	67	R110	Jatrabari - Chasara	R110_02	Demra Ghat	Chasara	Regional Highway	19.01	12.917	2	
67	67	R110	Jatrabari - Chasara	R110_01	Jatrabari	Demra Ghat	Regional Highway	19.01	6.1749	2	
68	68	R111	Chasara - Signboard	R111_01	Chasara	Signboard	Regional Highway	8.636	8.0356	2	
70	70	R113	Madanpur - Sayedpur	R113_01	Madanpur	Nabiganj Bus Stand	Regional Highway	11.878	6.7897	2	
70	70	R113	Madanpur - Sayedpur	R113_02	Nabiganj Bus Stand	Sayedpur	Regional Highway	11.878	4.9268	2	
71	71	R114	Nayapur - Puran Para (Narsingdi)	R114_02	Araihazar	Puran Para (Narsingdi)	Regional Highway	54.782	20.1838	2	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Rhdrsid	Road id given by RHD	
Gisroadid	Road id given by CEGIS	

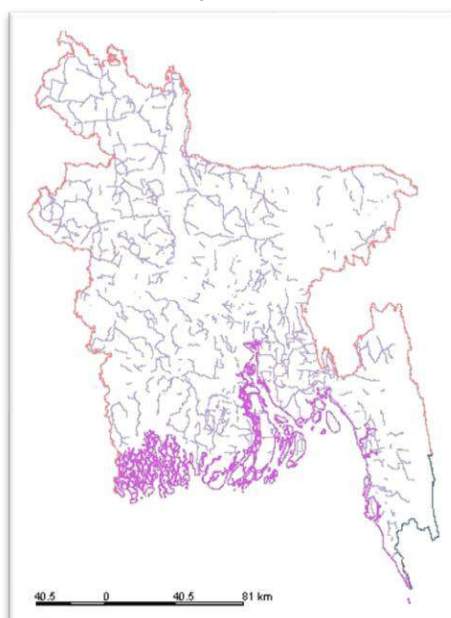
FIELD_NAME	FIELD_DESC	UNIT
Rdnr	Road type with each road Id	
Rdname	Road name	
Rdnrsl	Road type with each road Id given by CEGIS	
Start	Start location name of road	
End	End location name of road	
Rdtype	Road Type	
Roadlength	Road length given by RHD	Km
Callength	Calculated road segments length	km
Rdclassid	Road class id	
Remarks	Additional information	

Name of Data layer: **Zila Road (RHD)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the zila road network of Bangladesh. Roads connecting Upazila HQs and important growth centers/places of economic or strategic importance with the nearest national/regional highway network or Roads connecting Upazilla HQs with each other.
Quality	It is collected from RHD and stored it with quality checking.
Completeness	The data layer covers all the roads identified by the Department of Roads and Highway.
History of the dataset	Department of Roads and Highways generated this data layer.
Purpose of production	To represent the existing road network of Bangladesh and to estimate the total length of different types of roads for planning purpose.
Process description	Collecting this data layer in digital format, NWRD has updated it partly using IRS image of 2000 onward with 6 m resolution. Other attribute information have also been incorporated according to RHD Road network Database.

Sample of Data



Attribute Table

rhdrdsid	gisroadid	rdnr	rdname	rdnrs1	start	end	rdtype	roadlength	callength	rdclassid	remarks
355	355	Z1001	Ramu - Naikhongchhari	Z1001_01	Ramu	Naikhongchhari	Zila Road	12	11.1572	3	
337	337	Z1002	Baraitali - Paharchanda	Z1002_01	Baraitali	Paharchanda	Zila Road	6.939	6.9477	3	
332	332	Z1004	Janatabazar - Moheshkhali (Gorokghata)	Z1004_01	Janatabazar	Moheshkhali (Gorokghata)	Zila Road	27.325	27.2591	3	
354	354	Z1005	Fashikhali - Aikadam	Z1005_01	Fashikhali	Aikadam	Zila Road	38.468	37.588	3	
356	356	Z1006	Chimbuk - Lama	Z1006_01	Chimbuk	Lama	Zila Road	44.12	17.4063	3	
358	358	Z1007	Aziznagar - Gazalia	Z1007_01	Aziznagar	Gazalia	Zila Road	29.282	10.9737	3	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Rhdrdsid	Road id given by RHD	
Gisroadid	Road id given by CEGIS	

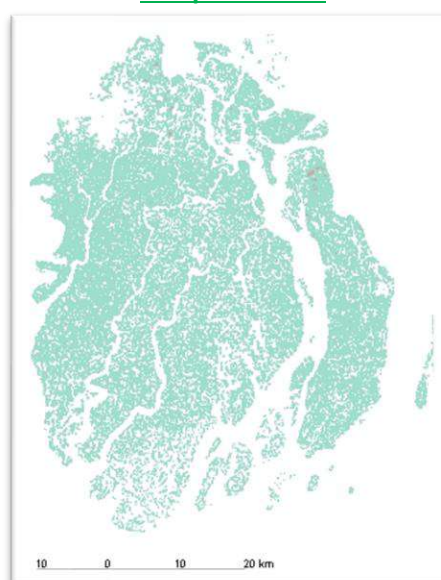
FIELD_NAME	FIELD_DESC	UNIT
Rdnr	Road type with each road Id	
Rdname	Road name	
Rdnrsl	Road type with each road Id given by CEGIS	
Start	Start location name of road	
End	End location name of road	
Rdtype	Road Type	
Roadlength	Road length given by RHD	Km
Callength	Calculated road segments length	km
Rdclassid	Road class id	
Remarks	Additional information	

Name of Data layer: **Settlement Location of Barisal Division**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the settlement location of Barisal division delineated by Local Government Engineering Department (LGED).
Quality	NWRD has checked and edited the data layer using detail rivers and water bodies.
Completeness	The data layer covers Barisal division.
History of the dataset	LGED generated this data layer under UNDP/ILO Project BGD/89/041.
Purpose of production	To present and store the locational distribution of the settlement of Barisal Division and to use this data in any kind of socio-economic analysis and management purpose.
Process description	LGED has generated the data layer using SPOT Image 1989-90, Aerial Photograph 1983-84, Topographic Maps, and by ground truthing with the help of Thana level technical staffs.

Sample of Data



Attribute Table

area	perimeter	div1_id
6606.783	306.753	1
6106.242	318.467	1
10471.859	397.557	1
5529.289	271.897	1
3126.484	206.02	1
3871.162	229.941	1
6674.455	302.432	1
714100.75	5442.653	1

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area generated by ArcInfo	Square Meter
Perimeter	Perimeter generated by ArcInfo	Meter
Div1cl_id	User id given to each arc	

Name of Data layer: **Settlement Location of Chittagong Division**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the settlement location of Chittagong division delineated by Local Government Engineering Department (LGED).
Quality	NWRD has checked and edited the data layer using detail rivers and water bodies.
Completeness	The data layer covers Chittagong division.
History of the dataset	LGED generated this data layer under UNDP/ILO Project BGD/89/041.
Purpose of production	To present and store the locational distribution of the settlement of Chittagong Division and to use this data in any kind of socio-economic analysis and management purpose.
Process description	LGED has generated the data layer using SPOT Image 1989-90, Aerial Photograph 1983-84, Topographic Maps, and by ground truthing with the help of Thana level technical staffs.

Sample of Data



Attribute Table

area	perimeter	div02cl_id
7896.453	322.723	1
73738.703	1484.172	1
50513.184	1114.167	1
281111.594	3443.979	1
11715.5	435.262	1
97220.43	1789.376	1
119950.547	1784.11	1
6246.625	293.346	1
7429.336	319.684	1
32365.006	766.679	1

Bundle Information (Data Field Description and Unit)

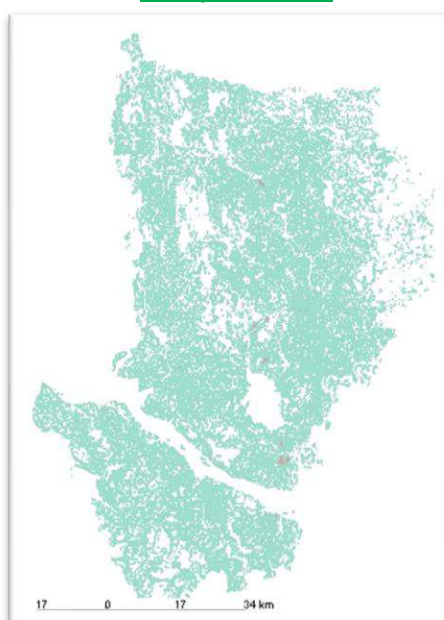
FIELD_NAME	FIELD_DESC	UNIT
Area	Area generated by ArcInfo	Square Meter
Perimeter	Perimeter generated by ArcInfo	Meter
Div1cl_id	User id given to each arc	

Name of Data layer: **Settlement Location of Dhaka Division**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the human settlement location of Dhaka division delineated by Local Government Engineering Department (LGED).
Quality	The data layer has been stored in an organized way by NWRD without any quality checking.
Completeness	The data layer covers Dhaka division.
History of the dataset	Local Government Engineering Department generated this data layer under UNDP/ILO Project BGD/89/041.
Purpose of production	To present and store the locational distribution of the settlement of Dhaka Division and to use this data in any kind of socio-economic analysis and management purpose.
Process description	LGED has generated the data layer using SPOT Image 1989-90, Aerial Photograph 1983-84, Topographic Maps, and by ground truthing with the help of Thana level technical staffs. NWRD has checked and edited the data layer using detail rivers and water bodies generated by NWRD.

Sample of Data



Attribute Table

area	perimeter	div02cl_id
7896.453	322.723	1
73738.703	1484.172	1
50513.184	1114.167	1
281111.594	3443.979	1
11715.5	435.262	1
97220.43	1789.376	1
119950.547	1784.11	1
6246.625	293.346	1
7429.336	319.684	1
32365.006	766.679	1

Bundle Information (Data Field Description and Unit)

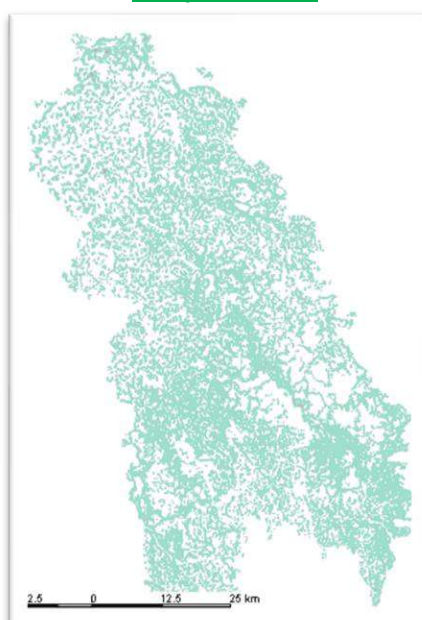
FIELD_NAME	FIELD_DESC	UNIT
Area	Area generated by ArcInfo	Square Meter
Perimeter	Perimeter generated by ArcInfo	Meter
Div1cl_id	User id given to each arc	

Name of Data layer: **Settlement Location of Khulna Division**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the human settlement location of Khulna division delineated by Local Government Engineering Department (LGED).
Quality	The data layer has been stored in an organized way by NWRD without any quality checking.
Completeness	The data layer covers Khulna division.
History of the dataset	Local Government Engineering Department generated this data layer under UNDP/ILO Project BGD/89/041.
Purpose of production	To present and store the locational distribution of the settlement of Khulna Division and to use this data in any kind of socio-economic analysis and management purpose.
Process description	LGED has generated the data layer using SPOT Image 1989-90, Aerial Photograph 1983-84, Topographic Maps, and by ground truthing with the help of Thana level technical staffs. NWRD has checked and edited the data layer using detail rivers and water bodies generated by NWRD.

Sample of Data



Attribute Table

area	perimeter	div02cl_id
7896.453	322.723	1
73738.703	1484.172	1
50513.184	1114.167	1
281111.594	3443.979	1
11715.5	435.262	1
97220.43	1789.376	1
119950.547	1784.11	1
6246.625	293.346	1
7429.336	319.684	1
32365.006	766.679	1

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area generated by ArcInfo	Square Meter
Perimeter	Perimeter generated by ArcInfo	Meter
Div1cl_id	User id given to each arc	

Name of Data layer: **Settlement Location of Rajshahi Division**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the human settlement location of Rajshahi division delineated by Local Government Engineering Department (LGED).
Quality	The data layer has been stored in an organized way by NWRD without any quality checking.
Completeness	The data layer covers Rajshahi division.
History of the dataset	Local Government Engineering Department generated this data layer under UNDP/ILO Project BGD/89/041.
Purpose of production	To present and store the locational distribution of the settlement of Rajshahi Division and to use this data in any kind of socio-economic analysis and management purpose.
Process description	LGED has generated the data layer using SPOT Image 1989-90, Aerial Photograph 1983-84, Topographic Maps, and by ground truthing with the help of Thana level technical staffs. NWRD has checked and edited the data layer using detail rivers and water bodies generated by NWRD.

Sample of Data



Attribute Table

area	perimeter	div5_id
15969.095	487.214	1
14978.497	488.947	1
27862.574	886.676	1
24873.463	774.536	1
5347.382	266.522	1
19628.072	531.472	1
74677.039	1454.164	1
60234.992	1244.265	1
9457.067	350.906	1
24932.27	732.194	1

Bundle Information (Data Field Description and Unit)

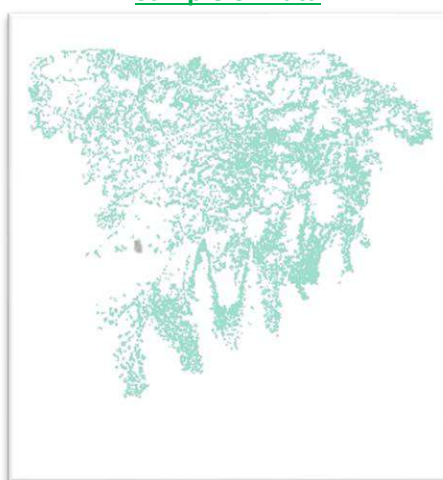
FIELD_NAME	FIELD_DESC	UNIT
Area	Area generated by ArcInfo	Square Meter
Perimeter	Perimeter generated by ArcInfo	Meter
Div1cl_id	User id given to each arc	

Name of Data layer: **Settlement Location of Sylhet Division**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the human settlement location of Sylhet division delineated by Local Government Engineering Department (LGED).
Quality	The data layer has been stored in an organized way by NWRD without any quality checking.
Completeness	The data layer covers Sylhet division.
History of the dataset	Local Government Engineering Department generated this data layer under UNDP/ILO Project BGD/89/041.
Purpose of production	To present and store the locational distribution of the settlement of Sylhet Division and to use this data in any kind of socio-economic analysis and management purpose.
Process description	LGED has generated the data layer using SPOT Image 1989-90, Aerial Photograph 1983-84, Topographic Maps, and by ground truthing with the help of Thana level technical staffs. NWRD has checked and edited the data layer using detail rivers and water bodies generated by NWRD.

Sample of Data



Attribute Table

area	perimeter	div6_id
2203.303	191.23	1
5223.953	270.037	1
13954.145	517.853	1
7515.48	355.465	1
10608.783	449.574	1
24845.777	673.96	1
3766.045	242.773	1
28663.961	756.663	1
4185.807	250.741	1
58102.836	1913.835	1

Bundle Information (Data Field Description and Unit)

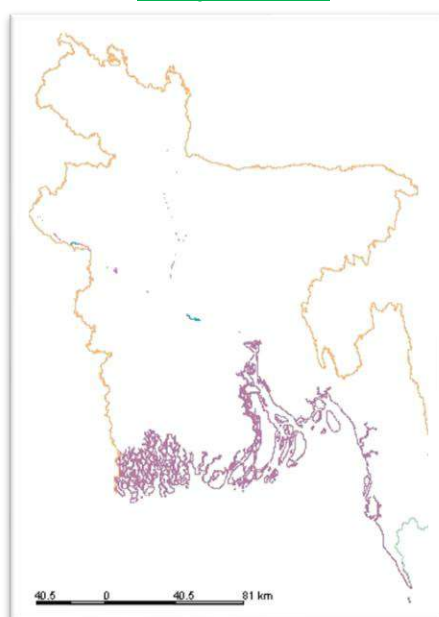
FIELD_NAME	FIELD_DESC	UNIT
Area	Area generated by ArcInfo	Square Meter
Perimeter	Perimeter generated by ArcInfo	Meter
Div1cl_id	User id given to each arc	

Name of Data layer: **River Bank Protection Structure**

Metadata

Data Type	Spatial
Abstract	A spatial data layer presents different riverine structures such as embankment, revetment, spur, hard point, groyne, etc.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy of the images.
Completeness	This data layer covers main rivers of Bangladesh.
History of the dataset	This data layer has been collected from CEGIS in digital format. CEGIS has captured this data from multi spectral LANDSAT image 2010 with the help of BWDB.
Purpose of production	This data layer is essential for any riverine structure analysis and decision supports for river training management which will help to protect flood and bank erosion. It is very important data for disaster management planning and analysis.
Process description	CEGIS has captured this data from multi spectral LANDSAT image 2010 with the help of BWDB and validate with field verification. Following this NWRD has enhanced it with some missing information.

Sample of Data



Attribute Table

sname	stype	rivname	bank	length
Faridpur Protection (517,580 L)	Revetment	Ganges	RB	0
Godagari Revetment	Revetment	Ganges	LB	0
Charghat Revetment	Revetment	Ganges	LB	0
Bheramara Hard Point	Hard Point	Ganges	RB	0
Pakshi Hard Point	Hard Point	Ganges	LB	0
Pakshi_ Bheramara Guid Bund	Guide Bundh	Ganges	RB	0
Pakshi_ Bheramara Guid Bund	Guide Bundh	Ganges	RB	0
Pakshi_ Ishwardi Guid Bund	Guide Bundh	Ganges	LB	0
Spur_ 3	Spur	Ganges	LB	897
Spur_1 Eroded	Spur	Ganges	LB	883
Spur_ 4	Spur	Ganges	LB	623
Spur_ 5	Spur	Ganges	LB	783

Bundle Information (Data Field Description and Unit)

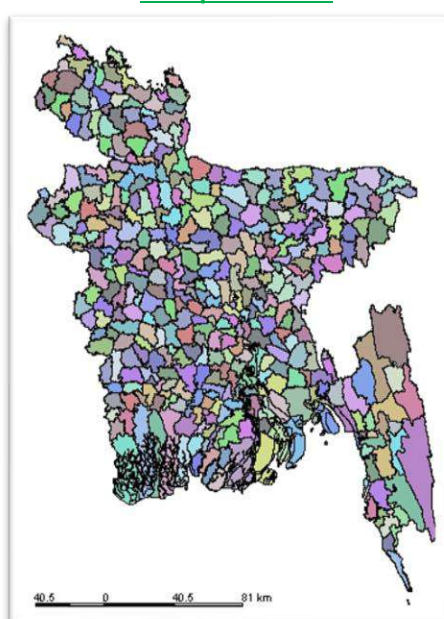
FIELD_NAME	FIELD_DESC	UNIT
Sname	Structure Name	
Stype	Structure Type	
Rivname	River Name	
Bank	River bank side	
Slength	Length of the structure	Meter

Name of Data layer: **Thana Boundaries 1961**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of 408 thana (second lowest administrative unit) boundaries of Bangladesh along with the attribute information derived from population census book published by Bangladesh Bureau of Statistics (BBS) in 1961.
Quality	Scale of the source data was 1:63360. Therefore, it is recommended that in any kind of analysis the data layer should not be used exceeding above mentioned scale.
Completeness	This data layer covers all thana boundaries according to BBS census 1961.
History of the dataset	The source of this dataset is Police Station Maps published by Directorate of Land Record and Survey (DLRS), which were compiled between 1905-1945. The Some maps are still being update still being update as and new upazillas are created. Scale of these maps were 1"=1mile system excluding Chittagong Hill Tracts. Reserve Forest maps published by Survey of Bangladesh were used for Sundarbans region. Attribute information were attached according to the Geomaster database 1961 collected from Bangladesh Bureau of Statistics (BBS).
Purpose of production	Thana boundaries are essential parameter in administrative as well as nationwide or regional level planning and management activities. This data layer is therefore to archive and present 408 thana boundaries of the country.
Process description	The upazila/ thana boundaries have been captured by Police Station Maps published by Directorate of Land Record and Survey (DLRS) with input RMS error 0.002 - 0.005 inch and output 3 - 20 meter. For Sundarban area, union boundaries have been delineated with the help of river course and small atlas of BBS over Reserve Forest maps published by Survey of Bangladesh. Geocoding in the maps has been done according to the Geomaster database 1991 collected from BBS. Other attribute information have been attached according to the Geomaster database 1961. The source map was in Cassinii projection system projection system. It's transformed into Bangladesh Transverse Mercator (BTM) projection system. International boundary is used from SOB Topo map of 1: 50,000 scale and coast line generated from IRS Liss 2005 image.

Sample of Data



Attribute Table

area	geocode	distname	thananame	landtype	area_sqkm
122022016	21504	Chittagong	Anowara	Land	122.02
7262221	21508	Chittagong	Banshkhali	Land	7.26
7262221	21508	Chittagong	Banshkhali	Water	7.26
64581488	21512	Chittagong	Boalkhali	Water	64.58
554096192	21516	Chittagong	Chakaria	Land	554.1
48613644	21524	Chittagong	Cox's Bazar Sadar	Land	48.61
72543016	21528	Chittagong	Doublemooring	Land	72.54
72543016	21528	Chittagong	Doublemooring	Water	72.54
721529024	21533	Chittagong	Fatikchhari	Land	721.53
260357216	21537	Chittagong	Hathazari	Land	260.36

Bundle Information (Data Field Description and Unit)

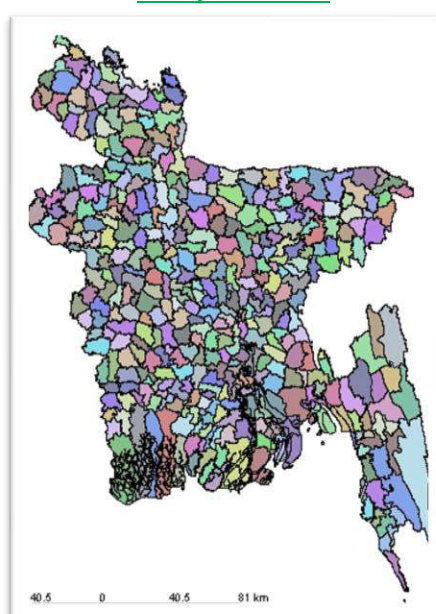
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Squre Meter
Geocode	Geocode (Division code + district code + thana code) is incorporated according to Geomaster database of BBS 1961	
Distname	Name of each district according to BBS geomaster database of 1961	
Thananame	Name of each thana according to BBS geomaster database of 1961	
Landtype	Classification of administrative unit by land and water	
Area_sqkm	Area converted to square kilometer.	Square Kilometer

Name of Data layer: **Thana Boundaries 1974**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of 418 thana (third lowest administrative unit) boundaries of Bangladesh along with the attribute information derived from Population census book 1974 published by Bangladesh Bureau of Statistics (BBS).
Quality	Scale of the source data was 1:63360. Therefore, it is recommended that in any kind of analysis the data layer should not be used exceeding above mentioned scale.
Completeness	This layer covers all thana boundaries according to BBS census 1974.
History of the dataset	The source of this dataset is Police Station Maps published by Directorate of Land Record and Survey (DLRS), which were compiled between 1905-1945. The Some maps are still being update still being update as and new upazillas are created. Scale of these maps were 1"=1mile system excluding Chittagong Hill Tracts. Reserve Forest maps published by Survey of Bangladesh were used for Sundarbans region. Attribute information were attached according to the Geomaster database 1974 collected from Bangladesh Bureau of Statistics (BBS).
Purpose of production	Thana boundaries are important administrative units in national or regional level analysis, planning and management activities. In this regard The 418 Thana Boundaries layer (according to the population census 1974) is therefore to archive and use as the
Process description	The upazila/ thana boundaries have been captured by Police Station Maps published by Directorate of Land Record and Survey (DLRS) with input RMS error 0.002 - 0.005 inch and output 3 - 20 meter. For Sundarban area, union boundaries have been delineated with the help of river course and small atlas of BBS over Reserve Forest maps published by Survey of Bangladesh. Geocoding in the maps has been done according to the Geomaster database 1991 collected from BBS. Other attribute information have been attached according to the Geomaster database 1974. The source map was in Cassinii projection system projection system. It's transformed into Bangladesh Transverse Mercator (BTM) projection system. International boundary is used from SOB Topo map of 1: 50,000 scale and coast line generated from IRS Liss 2005 image.

Sample of Data



Attribute Table

area	geocode	distname	thananame	landtype	area_sqkm
122022016	21504	Chittagong	Anowara	Land	122.02
122022016	21504	Chittagong	Anowara	Water	122.02
7262221	21508	Chittagong	Banshkhali	Land	7.26
7262221	21508	Chittagong	Banshkhali	Water	7.26
64581488	21512	Chittagong	Boalkhali	Water	64.58
554096192	21516	Chittagong	Chakaria	Land	554.1
48613644	21524	Chittagong	Cox's Bazar Sadar	Land	48.61
72543016	21528	Chittagong	Doublemooring	Land	72.54
72543016	21528	Chittagong	Doublemooring	Water	72.54
721529024	21533	Chittagong	Fatikchhari	Land	721.53

Bundle Information (Data Field Description and Unit)

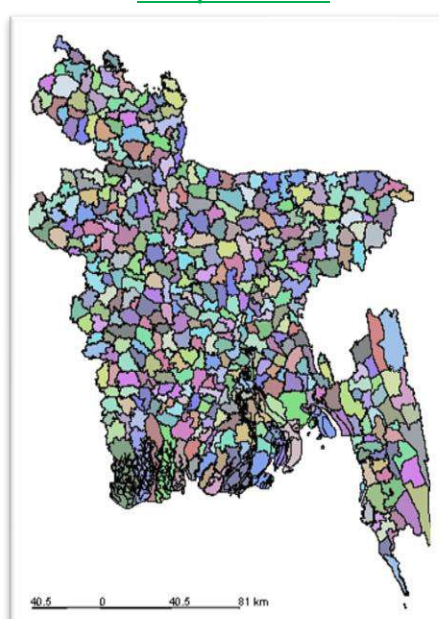
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square Meter
Geocode	Geocode (Division code + district code + thana code) is incorporated according to Geomaster database of BBS 1961	
Distname	Name of each district according to BBS geomaster database of 1961	
Thananame	Name of each thana according to BBS geomaster database of 1961	
Landtype	Classification of administrative unit by land and water	
Area_sqkm	Area converted to square kilometer.	Square Kilometer

Name of Data layer: **Thana Boundaries 1981**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of 464 thana (second lowest administrative unit) boundaries of Bangladesh along with the attribute information derived from Population census book 1981 published by Bangladesh Bureau of Statistics (BBS).
Quality	Scale of the source data was 1:63360. Therefore, it is recommended that in any kind of analysis the data layer should not be used exceeding above mentioned scale.
Completeness	This data layer covers all thana boundaries according to Population Census 1981.
History of the dataset	The source of this dataset is Police Station Maps published by Directorate of Land Record and Survey (DLRS), which were compiled between 1905-1945. The Some maps are still being update still being update as and new upazillas are created. Scales of these maps were 1"=1mile system excluding Chittagong Hill Tracts. Reserve Forest maps published by Survey of Bangladesh were used for Sundarbans region. Attribute information were attached according to the Geomaster database 1981 collected from Bangladesh Bureau of Statistics (BBS).
Purpose of production	Thana boundaries are essential parameter in administrative as well as nationwide or regional level planning and management activities. This data layer is therefore to archive and present 464 thana boundaries of the country.
Process description	The upazila/ thana boundaries have been captured by Police Station Maps published by Directorate of Land Record and Survey (DLRS) with input RMS error 0.002 - 0.005 inch and output 3 - 20 meter. For Sundarban area, union boundaries have been delineated with the help of river course and small atlas of BBS over Reserve Forest maps published by Survey of Bangladesh. Geocoding in the maps has been done according to the Geomaster database 1991 collected from BBS. Other attribute information have been attached according to the Geomaster database 1981. The source map was in Cassinii projection system projection system. It's transformed into Bangladesh Transverse Mercator (BTM) projection system. International boundary is used from SOB Topo map of 1: 50,000 scale and coast line generated from IRS Liss 2005 image.

Sample of Data



Attribute Table

area	geocode	distname	thananame	landtype	area_sqkm
161214960	20000	Chittagong Kotwali		Land	161.21
161214960	20000	Chittagong Kotwali		Water	161.21
122014256	21504	Chittagong Anowara		Land	122.01
6540306.5	21508	Chittagong Banshkhali		Land	6.54
6540306.5	21508	Chittagong Banshkhali		Water	6.54
64584204	21512	Chittagong Boalkhali		Land	64.58
64584204	21512	Chittagong Boalkhali		Water	64.58
554120064	21516	Chittagong Chakaria		Land	554.12
206331568	21518	Chittagong Chandanaish		Land	206.33
206331568	21518	Chittagong Chandanaish		Water	206.33

Bundle Information (Data Field Description and Unit)

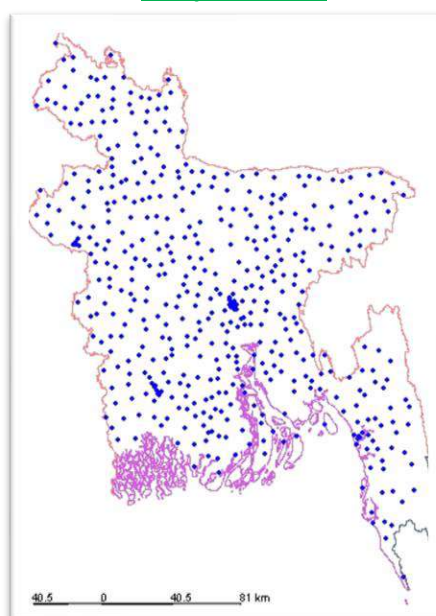
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Squre Meter
Geocode	Geocode (Division code + district code + thana code) is incorporated according to Geomaster database of BBS 1961	
Distname	Name of each district according to BBS geomaster database of 1961	
Thananame	Name of each thana according to BBS geomaster database of 1961	
Landtype	Classification of administrative unit by land and water	
Area_sqkm	Area converted to square kilometer.	Square Kilometer

Name of Data layer: **Upazila/Thana Headquarter 1991**

Metadata

Data Type	Spatial
Abstract	A spatial data layer depicting the 490-thana headquarters locations with associated attribute information derived from Geomaster database 1991 published by Bangladesh Bureau of Statistics.
Quality	As the source was in 1:50,000 scale, the data layer should be used in the same scale.
Completeness	The data layer covers the whole country.
History of the dataset	This data layer has been prepared using published map of Master Plan Organization (MPO), Ministry of Water Resource in 1983, titled 'Zila, Upazila, Thana, Catchment & Regional Boundary Map' which was 1:500,000 scale.
Purpose of production	Thana headquarter locations are essential for country wide or regional level planning or in administrative purposes.
Process description	NWRD has captured this data layer from the published map of MPO with input RMS error 0.003 inch output error 10 meter. Locations of the thana headquarters have been checked and corrected with the help of thana maps of an Atlas published by Graphosman in 1

Sample of Data



Attribute Table

geocode	distname	thana_name	type	x_coord	y_coord
57790	Panchagarh	Tentulia	THQ	88.345	26.485
55270	Lalmonirhat	Patgram	THQ	88.997	26.364
57773	Panchagarh	Panchagarh Sadar	DHQ	88.56	26.33
57704	Panchagarh	Atwari	THQ	88.453	26.306
57725	Panchagarh	Boda	THQ	88.559	26.199
57312	Nilphamari	Dimla	THQ	88.929	26.129
54906	Kurigram	Bhurungamari	THQ	89.671	26.111
57734	Panchagarh	Debiganj	THQ	88.76	26.123
55233	Lalmonirhat	Hatibandha	THQ	89.143	26.126
57315	Nilphamari	Domar	THQ	88.828	26.106

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Geocode	Geocode (Division code + district code + thana code) is incorporated according to Geomaster database of BBS 1991.	
Distname	Name district according to BBS geomaster database of 1991	

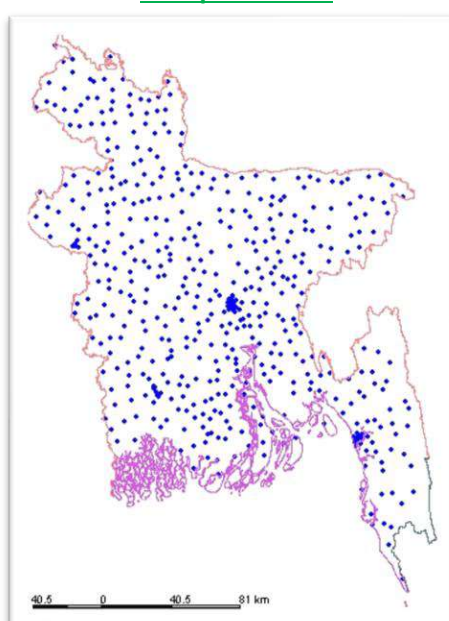
FIELD_NAME	FIELD_DESC	UNIT
Thana_name	Name thana according to BBS geomaster database of 1991	
Type	Thana (THQ)and District headquarter (DHQ)	
X_coord	Longitude value of each location	Degree Decimal
Y_coord	Latitude value of each location	Degree Decimal

Name of Data layer: **Upazila/Thana Headquarter 2001**

Metadata

Data Type	Spatial
Abstract	A spatial data layer depicting the 508 upazila/thana headquarters locations with associated attribute information derived from Geomaster database 2001 published by Bangladesh Bureau of Statistics.
Quality	As the source was in 1:50,000 scale, the data layer should be used in the same scale.
Completeness	The data layer covers the whole country.
History of the dataset	This data layer has been prepared using published map of Master Plan Organization (MPO), Ministry of Water Resource in 1983, titled 'Zila, Upazila, Thana, Catchment & Regional Boundary Map' which was 1:500,000 scale. And used mauza and ward boundary, GPS survey and population census 2001
Purpose of production	Thana headquarter locations are essential for country wide or regional level planning or in administrative purposes.
Process description	NWRD has captured this data layer from the published map of MPO with input RMS error 0.003 inch output error 10 meter. Locations of the thana headquarters have been checked and corrected with the help of mauza and ward boundary, GPS survey, population census 2001 and thana maps of an Atlas published by Graphosman in 1

Sample of Data



Attribute Table

geocode	distname	thaname	type
507790	Panchagarh	Tentulia	Upazila HQ
505270	Lalmonirhat	Patgram	Upazila HQ
507773	Panchagarh	Panchagarh Sadar	Upazila HQ
507704	Panchagarh	Atwari	Upazila HQ
507725	Panchagarh	Boda	Upazila HQ
507312	Nilphamari	Dimla	Upazila HQ
504906	Kurigram	Bhurungamari	Upazila HQ
507734	Panchagarh	Debiganj	Upazila HQ
505233	Lalmonirhat	Hatibandha	Upazila HQ
507315	Nilphamari	Domar	Upazila HQ

Bundle Information (Data Field Description and Unit)

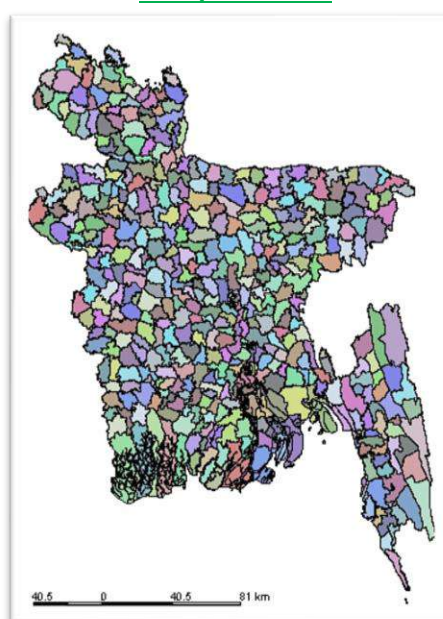
FIELD_NAME	FIELD_DESC	UNIT
Geocode	Geocode (Division code + district code + thana code) is incorporated according to Geomaster database of BBS 1991.	
Distname	Name district according to BBS geomaster database of 1991	
Thana_name	Name thana according to BBS geomaster database of 1991	
Type	Thana (THQ)and District headquarter (DHQ)	

Name of Data layer: **Upazila/Thana Boundaries 1991**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of Upazila/Thana boundaries of Bangladesh along with the attribute information derived from Geomaster Database, 1991 published by Bangladesh Bureau of Statistics (BBS).
Quality	Scale of the source data was 1:63360. Therefore, it is recommended that in any kind of analysis the data layer should not be used exceeding above mentioned scale.
Completeness	This data layer covers all thana boundaries according to Geomaster database 1991.
History of the dataset	The source of this dataset is Police Station Maps published by Directorate of Land Record and Survey (DLRS), which were compiled between 1905-1945. The Some maps are still being update still being update as and new upazillas are created. Scales of these maps were 1"=1mile system excluding Chittagong Hill Tracts. Reserve Forest maps published by Survey of Bangladesh were used for Sundarbans region. Attribute information were attached according to the Geomaster database 1991 collected from Bangladesh Bureau of Statistics (BBS).
Purpose of production	This data layer of Upazila/ thana boundaries is essential for any data analysis and thematic map preparation. It can linked with BBS statistical information or any other statistical database through geocode. It is also national, regional and local level planning, analysis and management purposes.
Process description	The upazila/ thana boundaries have been captured by Police Station Maps published by Directorate of Land Record and Survey (DLRS) with input RMS error 0.002 - 0.005 inch and output 3 - 20 meter. For Sundarban area, union boundaries have been delineated with the help of river course and small atlas of BBS over Reserve Forest maps published by Survey of Bangladesh. Geocoding in the maps has been done according to the Geomaster database 1991 collected from BBS. Other attribute information has been attached according to the Geomaster database 1991. The source map was in Cassinii projection system projection system. It's transformed into Bangladesh Transverse Mercator (BTM) projection system. International boundary is used from SOB Topo map of 1: 50,000 scale and coast line generated from IRS Liss 2005 image.

Sample of Data



Attribute Table

area	geocode	distname	thananame	landtype	area_sqkm
536680032	10409	Barguna	Amtali	Water	536.68
85046688	10419	Barguna	Bamna	Land	85.05
316190912	10428	Barguna	Barguna Sadar	Land	316.19
316190912	10428	Barguna	Barguna Sadar	Water	316.19
149529392	10447	Barguna	Betagi	Land	149.53
238010256	10485	Barguna	Patharghata	Land	238.01
238010256	10485	Barguna	Patharghata	Water	238.01
155073632	10602	Barisal	Agailjhara	Land	155.07

Bundle Information (Data Field Description and Unit)

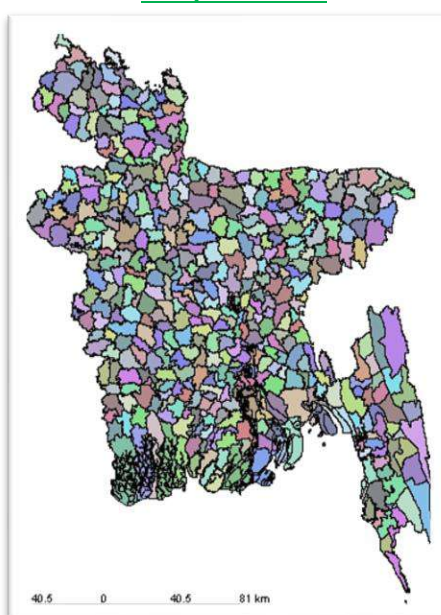
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Squre Meter
Geocode	Geocode (Division code + district code + thana code) is incorporated according to Geomaster database of BBS 1991	
Distname	Name of each district according to BBS geomaster database of 1991	
Thananame	Name of each thana according to BBS geomaster database of 1991	
Landtype	Classification of administrative unit by land and water	
Area_sqkm	Area converted to square kilometer	Square Kilometer

Name of Data layer: **Upazila/Thana Boundaries 2001**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of Upazila/Thana boundaries of Bangladesh along with the attribute information derived from Geomaster Database, 2001 published by Bangladesh Bureau of Statistics (BBS).
Quality	Scale of the source data was 1:63360. Therefore, it is recommended that in any kind of analysis the data layer should not be used exceeding above mentioned scale.
Completeness	This data layer covers all thana boundaries according to Geomaster database 2001.
History of the dataset	The source of this dataset is Police Station Maps published by Directorate of Land Record and Survey (DLRS), which were compiled between 1905-1945. The Some maps are still being update still being update as and new upazillas are created. Scales of these maps were 1"=1mile system excluding Chittagong Hill Tracts. Reserve Forest maps published by Survey of Bangladesh were used for Sundarbans region. Attribute information were attached according to the Geomaster database 2001 collected from Bangladesh Bureau of Statistics (BBS).
Purpose of production	This data layer of Upazila/ thana boundaries is essential for any data analysis and thematic map preparation. It can linked with BBS statistical information or any other statistical database through geocode. It is also national, regional and local level planning, analysis and management purposes.
Process description	The upazila/ thana boundaries have been captured by Police Station Maps published by Directorate of Land Record and Survey (DLRS) with input RMS error 0.002 - 0.005 inch and output 3 - 20 meter. For Sundarban area, union boundaries have been delineated with the help of river course and small atlas of BBS over Reserve Forest maps published by Survey of Bangladesh. Geocoding in the maps has been done according to the Geomaster database 1991 collected from BBS. Other attribute information has been attached according to the Geomaster database 2001. The source map was in Cassinii projection system projection system. It's transformed into Bangladesh Transverse Mercator (BTM) projection system. International boundary is used from SOB Topo map of 1: 50,000 scale and coast line generated from IRS Liss 2005 image.

Sample of Data



Attribute Table

area	thacode	divname	distname	thaname	landtype
515273615.9315	100409	Barisal	Barguna	Amtali	Land
43146200.6485	100409	Barisal	Barguna	Amtali	Water
100987247.8818	100419	Barisal	Barguna	Bamna	Land
324722084.8277	100428	Barisal	Barguna	Barguna Sadar	Land
38343118.5796	100428	Barisal	Barguna	Barguna Sadar	Water
164855337.9528	100447	Barisal	Barguna	Betagi	Land
238769284.7895	100485	Barisal	Barguna	Patharghata	Land
91664189.2598	100485	Barisal	Barguna	Patharghata	Water
155950729.7881	100602	Barisal	Barisal	Agailjhara	Land
159577033.2979	100603	Barisal	Barisal	Babuganj	Land

Bundle Information (Data Field Description and Unit)

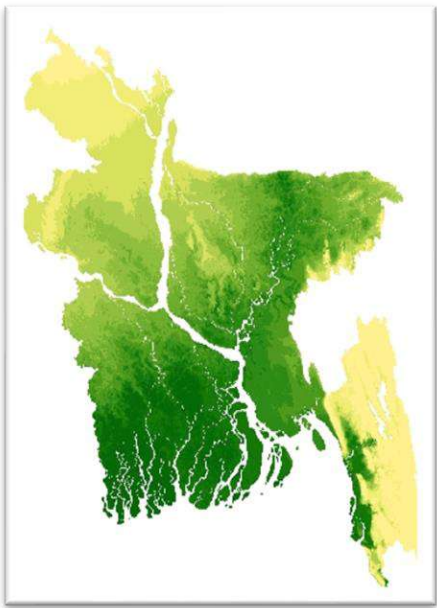
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Squre Meter
Geocode	Geocode (Division code + district code + thana code) is incorporated according to Geomaster database of BBS 2001	
Distname	Name of each district according to BBS geomaster database of 2001	
Thananame	Name of each thana according to BBS geomaster database of 2001	
Landtype	Classification of administrative unit by land and water	
Area_sqkm	Area converted to square kilometer	Square Kilometer

Name of Data layer: **Digital Elevation Model**

Metadata

Data Type	Grid
Abstract	A grid data layer representing the continuous elevation of the land surface of Bangladesh.
Quality	The data layer is in grid format. In accordance with the input data the cell size of this DEM is 300m by 300m. The actual resolution depends on the source data that was with 500 m horizontal resolution and 0.1 feet vertical resolution. The final DEM has been checked with the DEM generated by FAP19 and the filled up gaps have been checked with LANDSAT image 1997.
Completeness	The data layer covers whole Bangladesh.
History of the dataset	Master Plan Organisation (MPO) digitised a national level grid of elevation points with 1 km by 1 km resolution from Topographic maps published by BWDB. FAP19 increased the resolution up to 500m by 500m grid and developed a DEM with 300 m resolution. Afterwards NWRD updated the existing base elevation points using Contour maps with scale of 4 inch = 1 mile, Irrigation maps, and Topo maps and regenerated a national level DEM. The scales of Irrigation and Topo maps are 1:40,000 and 1:50,000 respectively.
Purpose of production	Digital elevation model can be used in digital terrain analysis for various environmental, engineering, urban and rural planning purposes. Further it can be used for soil erosion modelling, crop suitability modelling, environmental modelling, natural reso
Process description	NWRD has updated the base data layer adding elevation points for some missing areas e.g., part of Sundarbans, Chittagong Hill Tract, a small portion of Sylhet division and major part of Madhupur Tract and subsequently generated a DEM with 300m resolution. After calculating the base DEM the major rivers of Bangladesh have been clipped and given value of no data. Waterbodies larger than 36 hectare have also been incorporated to the data layer and assigned an elevation subtracting '1' from the mean value, calculated from the base DEM and in Sundarbans region an average assumed value of 1 meter was used for the whole area. For the areas where no spot elevation data were available, an interpolation method has been applied to cover the area. Landsat images of 1997 are used for additional information where needed. For interpolation of the areas where no elevation data exist the Inverse Distance Weighted (IDW) method is applied. This method is available under ArcInfo. A polygon was created for the areas where elevation points had to be generated by interpolation. By using a 350m buffer surrounding the respective polygon the input points for the interpolation were selected from the existing spot elevation data. The IDW method was applied to generate the intermediate points. In case of Madhupur Track a 500 m buffer area was chosen to select the surrounding points for interpolation. For interpolation of the areas where no elevation data exist the Inverse Distance Weighted (IDW) method is applied. This method is available under ArcInfo. A polygon was created for the areas where elevation points had to be generated by interpolation. By using a 350m buffer surrounding the respective polygon the input points for the interpolation were selected from the existing spot elevation data. The IDW method was applied to generate the intermediate points. In case of Madhupur Track a 500 m buffer area was chosen to select the surrounding points for interpolation.

Sample of Data



Attribute Table

value	count
-45	6
-41	9
-40	15
-39	156
-38	126
-37	2

Bundle Information (Data Field Description and Unit)

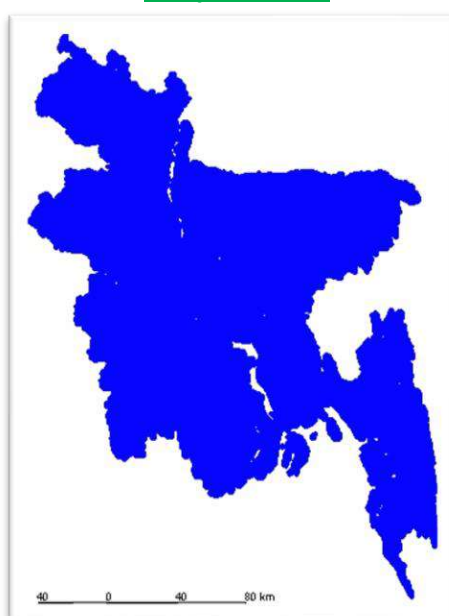
FIELD_NAME	FIELD_DESC	UNIT
Value	Spot height	cm, pwd
Count	No times corresponding spot height presents in the data set	

Name of Data layer:	Land Elevation Points	(Restricted)

Metadata

Data Type	Spatial
Abstract	A spatial data layer containing the spot elevation points all over Bangladesh.
Quality	For 4"= 1 mile map point interval is 250 and for 1:40,000 scale map point interval is 500. It is recommended that the data layer should be used in around 1:50000 scale. Points captured by NWRD have been checked with the source maps.
Completeness	This data layer covers whole Bangladesh.
History of the dataset	Master Plan Organization (MPO) captured a national level grid of elevation points with 1km horizontal resolution from BWDB Topographic maps, which were compiled between 1952 and 1964. Afterwards FAP 19 team interpreted and digitized the spot elevation data from the Bangladesh Water Development Board (BWDB) Topographic maps by manually superimposing a transparent 500 meter grid template on the maps and recorded the elevation points nearest up to each grid intersection. The scale of the topographic maps were 1:8,000 and 1:16,000.
Purpose of production	The data layer is useful for creating digital elevation model and digital terrain model.
Process description	Along with the existing data layer captured by FAP 19 NWRD has captured more points from contour maps and Irrigation maps prepared by BWDB with input error 0.003-0.005 inches and output error 10-20m to update this data layer. For Chittagong region both contour lines and points were captured from Topographic maps collected from Survey of Bangladesh (SoB). Points and lines were also extracted manually from LANDSAT image 1997 in some small areas. The scale of these three kinds (BWDB contour maps, Irrigation maps and SoB Topographic map) of maps were 4"= 1 mile, 1:40,000 and 1:50,000.

Sample of Data



Attribute Table

area	perimeter	dempntall	dempntall	spot_ht	spot_eleva	int_pln
0	0	684	684	20.85	2085	0
0	0	658	658	20.06	2006	0
0	0	650	650	19.82	1982	0
0	0	635	635	19.36	1936	0
0	0	650	650	19.82	1982	0
0	0	661	661	20.15	2015	0
0	0	854	854	26.04	2604	0
0	0	835	835	25.46	2546	0
0	0	639	639	19.48	1948	0
0	0	678	678	20.67	2067	0

Bundle Information (Data Field Description and Unit)

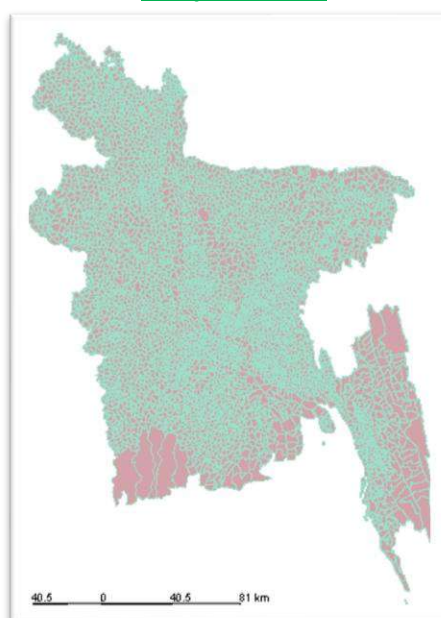
FIELD_NAME	FIELD_DESC	UNIT
Dempntall_	User Identification number	
Spot_ht	Spot Height	meter, pwd
Spot_eleva	Spot Height	Centimeter, pwd
Int_pln	Describing the interpolated points	

Name of Data layer: **Union Boundaries 1991**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of union boundaries of Bangladesh along with the attribute information derived from Geomaster Database, 1991 published by Bangladesh Bureau of Statistics (BBS).
Quality	As the source maps were in 1 inch = 1 mile scale, so the data layer should be used in the same scale. The union boundaries are checked. The attribute information fully complies with the published source. Quality of the data layer largely depends on the techniques/methods adopted in source map production and the expertise of the surveyors of the source map producing agencies.
Completeness	The data layer covers all unions of Bangladesh according to the Population census 1991.
History of the dataset	The source of this dataset is Police Station Maps published by Directorate of Land Record and Survey (DLRS), which were compiled between 1922-1964. Some maps were also compiled after this period. Scales of these maps were 1"=1mile. Reserve Forest maps published by Survey of Bangladesh were used for Sundarbans region. Attribute information were attached according to the Geomaster database collected from Bangladesh Bureau of Statistics (BBS).
Purpose of production	This data layer of union boundaries is essential at national, regional and local level planning, analysis and management purposes.
Process description	The union boundaries have been captured by NWRD from the cited sources with input RMS error 0.003 - 0.005 inch and output 3 - 20 meter. For Sundarban area, union boundaries have been delineated with the help of river course and small atlas of BBS over Reserve Forest maps published by Survey of Bangladesh. Spatial accuracy level has been maintained up to 80%-90%. Geocoding in the maps has been done according to the Geomaster database collected from BBS. Other attribute information has been attached according to the Geomaster database 1991.

Sample of Data



Attribute Table

area	perimeter	geocode	distname	thananame	unionname
20727870	25292.047	779013000	Panchagarh	Tentulia	Banglabandha
29541902	25046.004	779094000	Panchagarh	Tentulia	Tirnaihat
32055126	35625.582	779054000	Panchagarh	Tentulia	Buraburi
14803856	28391.334	779027000	Panchagarh	Tentulia	Bhojanpur
30602118	30542.25	779067000	Panchagarh	Tentulia	Salbahan
25221648	29407.578	779081000	Panchagarh	Tentulia	Tentulia
37121576	53122.535	779040000	Panchagarh	Tentulia	Bhojanpur Debnagar
47012212	71558.18	777383000	Panchagarh	Panchagarh Sadar	Satmara

Bundle Information (Data Field Description and Unit)

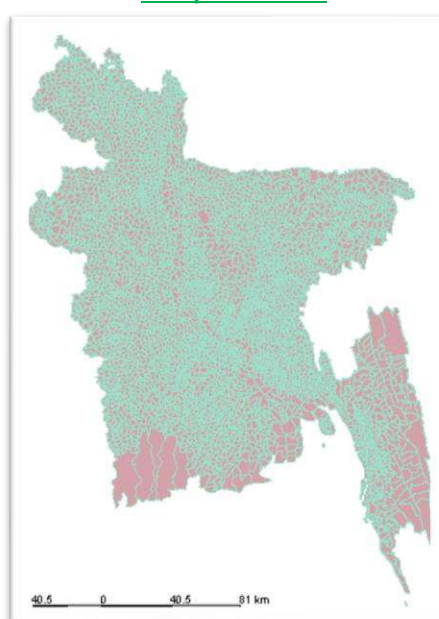
FIELD_NAME	FIELD_DESC	UNIT
Thananame	Name of each thana according to BBS geomaster database of 1991	
Distname	Name of each district according to BBS geomaster database of 1991	
Unionname	Name of each union according to BBS geomaster database of 1991	
Perimeter	Perimeter generated by ArcInfo	Meter
Area	Area generated by ArcInfo	Squre Meter
Geocode	Geocode (Division code + district code + thana code) is incorporated according to Geomaster database of BBS 1991.	

Name of Data layer: **Union Boundaries 2001**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of union boundaries of Bangladesh along with the attribute information derived from Geomaster Database, 2001 published by Bangladesh Bureau of Statistics (BBS). It is smallest administrative rural geographic unit comprising of mauza and villages and having union parishad institution.
Quality	Scale of the source data was 1:63360. Therefore, it is recommended that in any kind of analysis the data layer should not be used exceeding above mentioned scale.
Completeness	The data layer covers all unions of Bangladesh according to the Population census 2001.
History of the dataset	The source of this dataset is Police Station Maps published by Directorate of Land Record and Survey (DLRS), which were compiled between 1905-1945. The Some maps are still being update still being update as and new upazillas are created. Scale of these maps were 1"=1mile system excluding Chittagong Hill Tracts. Reserve Forest maps published by Survey of Bangladesh were used for Sundarbans region. Attribute information were attached according to the Geomaster database 2001 collected from Bangladesh Bureau of Statistics (BBS).
Purpose of production	This data layer of union boundaries is essential at national, regional and local level planning, analysis and management purposes.
Process description	The union boundaries have been captured by Police Station Maps published by Directorate of Land Record and Survey (DLRS) with input RMS error 0.002 - 0.005 inch and output 3 - 20 meter. For Sundarban area, union boundaries have been delineated with the help of river course and small atlas of BBS over Reserve Forest maps published by Survey of Bangladesh. Geocoding in the maps has been done according to the Geomaster database 2001 collected from BBS. Other attribute information has been attached according to the Geomaster database 2001. The source map was in Cassini projection system. It's transformed into Bangladesh Transverse Mercator (BTM) projection system. International boundary is used from SOB Topo map of 1: 50,000 scale and coast line generated from IRS Liss 2005 image.

Sample of Data



Attribute Table

area	uncode	divname	distname	thaname	unname	landtype
41156013.4248	10040913	Barisal	Barguna	Amtali	Amtali	Land
23042178.9751	10040915	Barisal	Barguna	Amtali	Arpangashia	Land
8410246.7251	10040915	Barisal	Barguna	Amtali	Arpangashia	Water
34413077.1133	10040923	Barisal	Barguna	Amtali	Atharagashia	Land
117797388.5161	10040939	Barisal	Barguna	Amtali	Barabagi	Land
15300812.5386	10040939	Barisal	Barguna	Amtali	Barabagi	Water
32314645.7778	10040947	Barisal	Barguna	Amtali	Chowra	Land
46229306.8813	10040963	Barisal	Barguna	Amtali	Guliskhali	Land
69591132.0107	10040971	Barisal	Barguna	Amtali	Haldia	Land
54267061.3076	10040979	Barisal	Barguna	Amtali	Karabaria	Land

Bundle Information (Data Field Description and Unit)

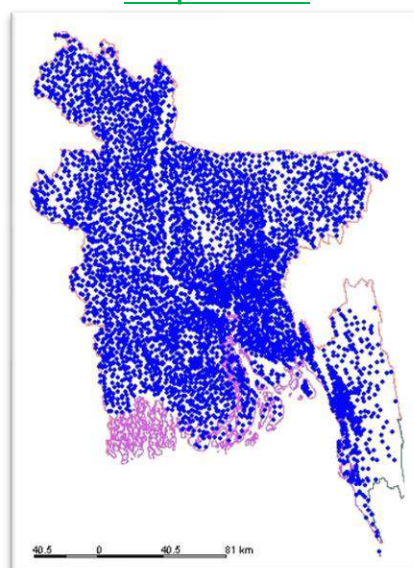
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square Meter
Uncode	Geocode (Division code + district code + thana code+union code) is incorporated according to Geomaster database of BBS 2001.	
Divname	Name of each division according to BBS geomaster database of 2001	
Distname	Name of each district according to BBS geomaster database of 2001	
Thaname	Name of each thana according to BBS geomaster database of 2001	
Unname	Name of each union/citycorporation ward according to BBS geomaster database of 2001	
Landtype	Classification of administrative unit by land and water	

Name of Data layer: **Union Headquarter (LGED)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer containing the locations of union headquarters captured by Local Government Engineering Department (LGED).
Quality	The data layer has been stored as it was collected from LGED without any ground checking and converted the data layer from LCC to BTM projection system.
Completeness	The data layer covers all the union headquarters identified from 2001 census data
History of the dataset	LGED has generated this data layer under UNDP/ILO PROJECT BGD/89/041 using SPOT Image 1989-90, Aerial Photograph 1983-84, Topographic Maps, Thana Maps, and ground truthing with the help of thana level technical staffs.
Purpose of production	This data layer of union headquarter locations is essential for planning and administrative purposes.
Process description	NWRD has collected data from LGED and checked with mauza data, road and river. And, also incorporated attribute information from union database.

Sample of Data



Attribute Table

unioncod01	divname	distname	thaname	uniname
1786629	Barisal	Patuakhali	Kala Para	Dhulasar
1786647	Barisal	Patuakhali	Kala Para	Lata Chapli
1786623	Barisal	Patuakhali	Kala Para	Khaprabhanga
1785734	Barisal	Patuakhali	Galachipa	Char Montaz
1786659	Barisal	Patuakhali	Kala Para	Mithaganj
1785783	Barisal	Patuakhali	Galachipa	Rangabali
1786635	Barisal	Patuakhali	Kala Para	Lalua
1092570	Barisal	Bhola	Char Fasson	Char Kukri Mukri
1785727	Barisal	Patuakhali	Galachipa	Bara Baisdia
1786671	Barisal	Patuakhali	Kala Para	Nilganj

Bundle Information (Data Field Description and Unit)

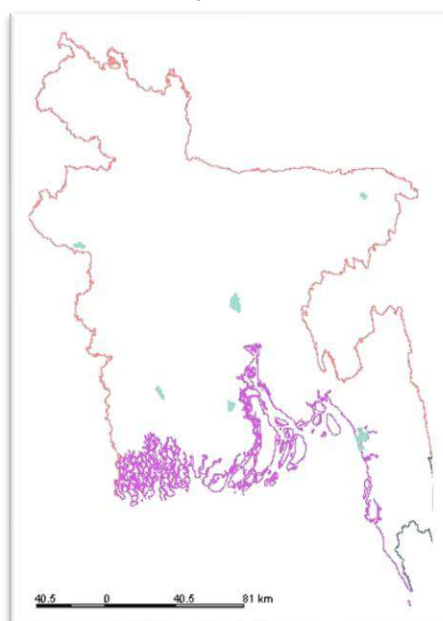
FIELD_NAME	FIELD_DESC	UNIT
Unioncod01	Geocode (Division code + district code + thana code+uion code) is incorporated according to Geomaster database of BBS 2001.	
Divname	Name of each division according to BBS geomaster database of 2001	
Distname	Name of each district according to BBS geomaster database of 2001	
Thaname	Name of each thana according to BBS geomaster database of 2001	
Uniname	Name of each union/citycorporation ward according to BBS geomaster database of 2001	

Name of Data layer: **City Corporation Ward Boundary**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of six city corporation ward boundaries of Bangladesh along with the attribute information derived from Geomaster Database, 2001 published by Bangladesh Bureau of Statistics (BBS).
Quality	Quality of this data layer totally depends on the data collection process of the source organization.
Completeness	The data layer covers six city corporation ward boundaries of Bangladesh.
History of the dataset	Maps of six city corporation ward boundaries have generated by respective city corporation authority in different time and resolution. Most of the maps were in hardcopy format but that have not properly geo-referenced.
Purpose of production	This data layer of City corporation ward boundaries is essential for any data analysis and thematic map preparation. It can linked with BBS statistical information or any other statistical database through geocode. It is also national, regional and local level planning, analysis and management purposes.
Process description	All maps have been collected from different city corporation into hard copy format. Four city corporation map was found in BTM projection system but another two city corporation (Sylhet and Barisal) maps was not geo-referenced . All maps have been digitized using GIS software and geo-referenced it and checked with IRS image, Coastal map of Bangladesh and Mauza boundary of DLRS.

Sample of Data



Attribute Table

area	unicode	divname	distname	thaname	unname	landtype
1765627.46	10065101	Barisal	Barisal	Barisal Sadar (kotwali)	Ward No-01	Land
574314.5781	10065102	Barisal	Barisal	Barisal Sadar (kotwali)	Ward No-02	Land
1934547.7148	10065103	Barisal	Barisal	Barisal Sadar (kotwali)	Ward No-03	Land
1766832.0195	10065104	Barisal	Barisal	Barisal Sadar (kotwali)	Ward No-04	Land
843019.2764	10065105	Barisal	Barisal	Barisal Sadar (kotwali)	Ward No-05	Land
563540.9863	10065106	Barisal	Barisal	Barisal Sadar (kotwali)	Ward No-06	Land
795038.1016	10065107	Barisal	Barisal	Barisal Sadar (kotwali)	Ward No-07	Land
219857.2549	10065108	Barisal	Barisal	Barisal Sadar (kotwali)	Ward No-08	Land
388865.998	10065109	Barisal	Barisal	Barisal Sadar (kotwali)	Ward No-09	Land
823984.8447	10065110	Barisal	Barisal	Barisal Sadar (kotwali)	Ward No-10	Land

Bundle Information (Data Field Description and Unit)

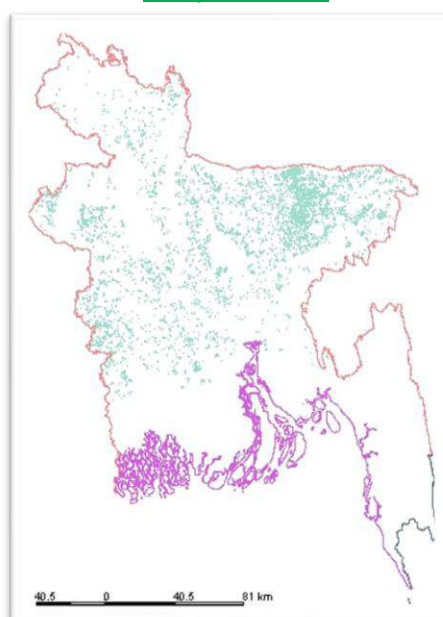
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of Each Polygon	Meter
Unicode	Union code (Division code + district code + thana code+ Unioncode) is incorporated according to Geomaster database of BBS 2001	
Divname	Name of each Division according to BBS geomaster database of 2001	
Distname	Name of each District according to BBS geomaster database of 2001	
Thaname	Name of each Thana according to BBS geomaster database of 2001	
Unname	Name of each Union according to BBS geomaster database of 2001	
Landtype	Classification of administrative unit by land and water	

Name of Data layer: **Perennial Waterbodies, 1989**

Metadata

Data Type	Spatial
Abstract	A spatial data layer representing the location of perennial water bodies of Bangladesh.
Quality	The scale of the source map was 1:50,000 therefore, it is recommended that in any kind of analysis this dataset should not be used exceeding the above scale. Location of the water bodies have been checked with the help of the SoB Topographic maps and BWDB Water Body map. As the data layer was captured from satellite images so its accuracy and precision depends on the image processing quality as well as data capturing methods and accuracy.
Completeness	This data layer covers whole Bangladesh except Chittagong Hill Tracts and Sundarbans area.
History of the dataset	ISPAN (Irrigation Support Project for Asia and Nearest) captured the perennial water bodies from SPOT multi spectral image for FAP 19. EGIS-I updated the data layer adding more information from SPOT image. Afterwards NWRD has enhanced it.
Purpose of production	To present the spatial distribution of water bodies of Bangladesh and to use the data layer for fishery resource assessment, management and other kinds of environmental monitoring, conservation purposes.
Process description	NWRD has updated the existing data layer with some missing information from SPOT 89 image. Topographic maps collected from Survey of Bangladesh (SoB) and Water body map collected from Bangladesh Water Development Board have also been used to update the data layer. The SPOT image was printed copy and the scale of the SPOT multi spectral image was 1:50,000. The scale of SoB Toposheets and BWDB maps were 1:40,000, 1:7920 respectively. Ground resolution of SPOT image was 20m by 20m.

Sample of Data



Attribute Table

area	perimeter	wbcode	wbname	type
153309.578	4375.89	252001		2
73474.281	2075.133	252002		2
216863.453	4418.288	177001		1
150812.516	3609.935	152003		1
111054.195	2735.796	277002		2
28797.305	1069.92	249001		2
21875.32	705.465	249002		2
288737.563	5481.52	277003		2
59898.719	1379.068	277004		2
52736.063	1403.618	249003		2

Bundle Information (Data Field Description and Unit)

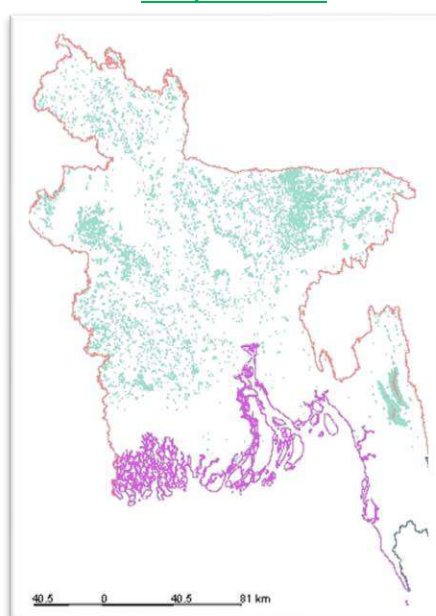
FIELD_NAME	FIELD_DESC	UNIT
Type	Type of waterbody (if it is a boar or a beel)	
Wbcode	Water bodies code (Type+ district code+ serial no)	
Wbname	Name of each waterbody polygon	
Perimeter	Perimeter generated by ArcInfo	Meter
Area	Area generated by ArcInfo	Squre Meter

Name of Data layer: **Perennial Waterbodies, 1997**

Metadata

Data Type	Spatial
Abstract	A spatial data layer representing the location of perennial water bodies of Bangladesh.
Quality	Scale of the source map was 1:50,000 therefore it is recommended that in any kind of analysis this data should not be used exceeding the above scale. Locations of the water bodies have been checked with help of the SoB Topographic maps and BWDB Water Body map. As the data layer was captured from satellite images so its accuracy and precision depends on the image processing quality as well as data capturing methods.
Completeness	This data layer covers whole Bangladesh except Chittagong Hill Tracts and Sundarbans area.
History of the dataset	ISPAN (Irrigation Support Project for Asia and Nearest) captured the perennial water bodies from SPOT multi spectral image for FAP 19. EGIS-I updated the data layer adding more information from SPOT image. Following this NWRD has enhanced it with some missing information from SPOT 89 image, LANDSAT 97 image and IRS 98 image. Topographic maps collected from Survey of Bangladesh (SoB) and Water body map collected from Bangladesh Water Development Board have also been used to update the data layer.
Purpose of production	To present the spatial distribution of water bodies of Bangladesh and to use the data layer for fishery resource assessment, management and other kinds of environmental monitoring, conservation purposes.
Process description	NWRD has updated the existing dataset with some missing information from SPOT 89 image, LANDSAT 97 image and IRS 98 image (part). Topographic maps collected from Survey of Bangladesh (SoB) and Water body map collected from Bangladesh Water Development Board have also been used to update the data layer. LANDSAT and IRS images were in digital format and SPOT image was as printed copy. Georeference accuracy of LANDSAT TM image was 30 m. Scale of the SPOT multi spectral image was 1:50,000. The scale of SoB Toposheets and BWDB maps were 1:40,000 and 1:7920 respectively. Ground resolution of SPOT, LANDSAT TM, and IRS were 20m by 20 m, 30m by 30m and 6m by 6m respectively.

Sample of Data



Attribute Table

area	perimeter	wbsbd97	wbsbd97_id	wbsbd	wbsbd_id	wbcode	wbname	type	catch_swmc	area_ha	area_sqkm	connect
55513.949	1091.28	2	0	0	0	0		0		5.551	0.056	0
40560.359	797.993	3	1	2	10	0		0		4.056	0.041	0
93600.82	1578.072	4	2	3	10	0		0		9.36	0.094	0
108366.07	1874.469	5	3	4	10	0	Tulsi Beel	1		10.837	0.108	0
38666.414	1282.347	6	4	5	10	0		1	NW-30	3.867	0.039	0
27927.922	615.938	7	5	6	10	0		0		2.793	0.028	0
125920.398	3433.012	8	6	7	10	0		1	NW-30	12.592	0.126	0
35351.012	775.425	9	7	8	10	0		1	NW-30	3.535	0.035	0
47375.242	1396.803	10	8	9	10	0		1	NW-30	4.738	0.047	0
211853.25	4665.111	11	9	10	252001	252001		2	NW-30	21.185	0.212	0

Bundle Information (Data Field Description and Unit)

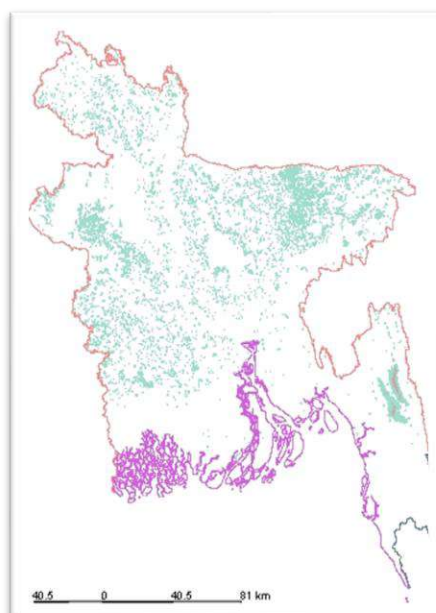
FIELD_NAME	FIELD_DESC	UNIT
Wbname	Name of the Waterbody	
Type	Type of Waterbody (0 = Unknown, 1 = Beel, 2= Baor)	
Catch_swmc	SWMC catchment numbers	
Connect	Connectivity with river	
Area_ha	Area	Hectare
Area_sqkm	Area	Square meter

Name of Data layer: **Perennial Waterbodies, 1999**

Metadata

Data Type	Spatial
Abstract	A spatial data layer representing the location of perennial water bodies of Bangladesh.
Quality	Scale of the source map was 1:50,000 therefore it is recommended that in any kind of analysis this data should not be used exceeding the above scale. Locations of the water bodies have been checked with help of the SoB Topographic maps and BWDB Water Body map. As the data layer was captured from satellite images so its accuracy and precision depends on the image processing quality as well as data capturing methods.
Completeness	This data layer covers whole Bangladesh except Chittagong Hill Tracts and Sundarbans area.
History of the dataset	ISPAN (Irrigation Support Project for Asia and Nearest) captured the perennial water bodies from SPOT multi spectral image for FAP 19. EGIS-I updated the data layer adding more information from SPOT image. Following this NWRD has enhanced it with some missing information from SPOT 89 image, LANDSAT 97 image and IRS 98 image. Topographic maps collected from Survey of Bangladesh (SoB) and Water body map collected from Bangladesh Water Development Board have also been used to update the data layer.
Purpose of production	To present the spatial distribution of water bodies of Bangladesh and to use the data layer for fishery resource assessment, management and other kinds of environmental monitoring, conservation purposes.
Process description	NWRD has updated the existing dataset with some missing information from SPOT 89 image, LANDSAT 97 image and IRS 98 image (part). Topographic maps collected from Survey of Bangladesh (SoB) and Water body map collected from Bangladesh Water Development Board have also been used to update the data layer. LANDSAT and IRS images were in digital format and SPOT image was as printed copy. Georeference accuracy of LANDSAT TM image was 30 m. Scale of the SPOT multi spectral image was 1:50,000. The scale of SoB Toposheets and BWDB maps were 1:40,000 and 1:7920 respectively. Ground resolution of SPOT, LANDSAT TM, and IRS were 20m by 20 m, 30m by 30m and 6m by 6m respectively.

Sample of Data



Attribute Table

area	perimeter	wbsbd97	wbsbd97_id	wbsbd	wbsbd_id	wbcode	wbname	type	catch_swmc	area_ha	area_sqkm	connect
55513.949	1091.28	2	0	0	0	0		0		5.551	0.056	0
40560.359	797.993	3	1	2	10	0		0		4.056	0.041	0
93600.82	1578.072	4	2	3	10	0		0		9.36	0.094	0
108366.07	1874.469	5	3	4	10	0	Tulsi Beel	1		10.837	0.108	0
38666.414	1282.347	6	4	5	10	0		1	NW-30	3.867	0.039	0
27927.922	615.938	7	5	6	10	0		0		2.793	0.028	0
125920.398	3433.012	8	6	7	10	0		1	NW-30	12.592	0.126	0
35351.012	775.425	9	7	8	10	0		1	NW-30	3.535	0.035	0
47375.242	1396.803	10	8	9	10	0		1	NW-30	4.738	0.047	0
211853.25	4665.111	11	9	10	252001	252001		2	NW-30	21.185	0.212	0

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Wbname	Name of the Waterbody	
Type	Type of Waterbody (0 = Unknown, 1 = Beel, 2= Baor)	
Catch_swmc	SWMC catchment numbers	
Connect	Connectivity with river	
Area_ha	Area	Hectare
Area_sqkm	Area	Square meter

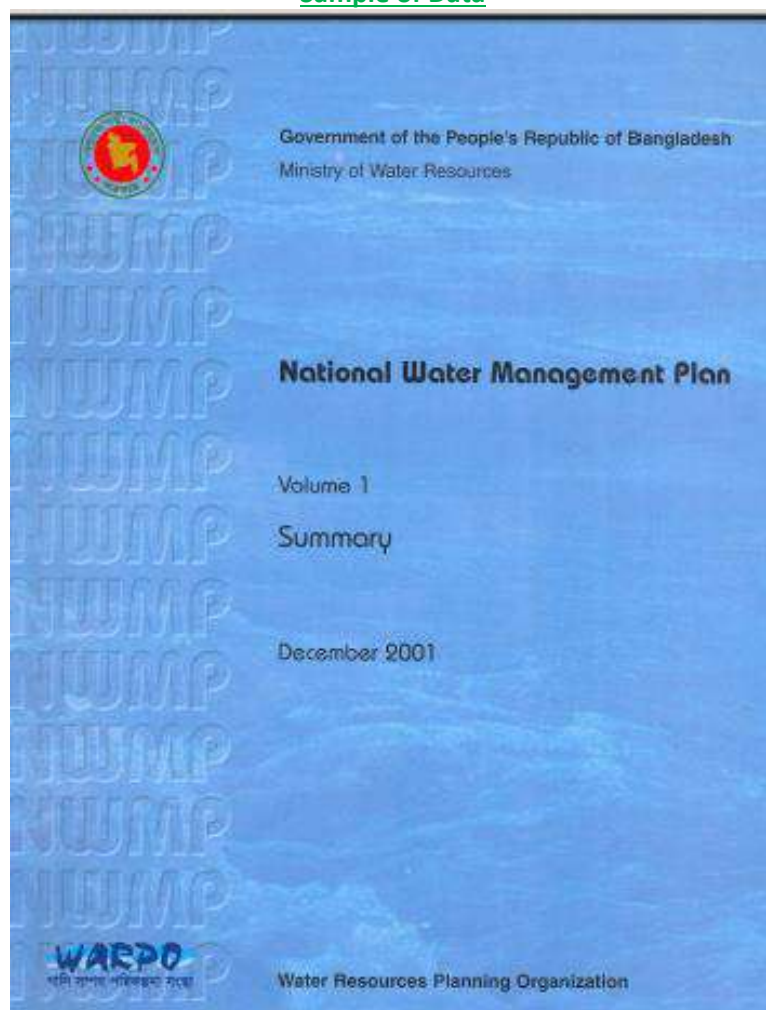
Document and Reports

Name of Data layer: **NWMP Reports December 2001**

Metadata

Data Type	PDF file
Abstract	
Quality	
Completeness	
History of the dataset	
Purpose of production	
Process description	

Sample of Data



Environment

Name of Data layer: **Eco-tourism Information**

Metadata

Data Type	Tabular
Abstract	A tabular data of Eco-tourism information in Bangladesh is collected from Department of Forest, Bangladesh. Eco-tourism is nature-based tourism that involves education and interpretation of the natural environment and is managed to be ecologically sustainable.
Quality	Quality of this data layer depends on the data analysis process of the source organization.
Completeness	Information has covered 18 locations of Eco-tourism site in Bangladesh has presented according to the source.
History of the dataset	Source of the data layer is from Department of Forest. There are 18 sites of eco-tourism captured in this dataset according to the source.
Purpose of production	This data layer will help the planners to identify the area having unique features or attributes in natural scenic beauty, wildlife, wilderness, benefit and help to conserve the nature. It is also an useful data for the tourists, tourisms and biologists.
Process description	NWRD has collected this data in digital format from Department of Forest and organized it in an ordered form to prepare it as a NWRD data layer.

Sample of Data

Id	Name	Locacc	Area	Year	Exifac
1	National Botanical Garden, Dhaka	It is situated at Mirpur, about 16 km NW of Dhaka and accessible by road.	84	1961	The garden is well planned and provides learning and recreational facilities adjacent to the Zoo. It is divided into 57 sections, and is managed by Forest Department under Ministry of Environment and Forests, Government of Bangladesh. The garden houses about 56,000 individual of trees, herbs, and shrubs including huge collection of aquatic plants. Many exotic plants have been introduced in the garden and are routinely propagated under the local climatic conditions. Rare and exotic plants of 60 species are found in the garden include Anthurium (Anthurium crystallinum), Camphor (Cinamomum camphora), Rabbit Fern (Davallia canariensis), Dambia (Dombeya spectabilis), white 'Rangan' (Ixora superba), little Mussanda (Mussaenda luteola), Amazon Lily (Victoria amazonica), 'Harhjora' (Vitis quadrangularis), African Tulip (Spathodea campanulata), Sambucas (Sambucus nigra), white 'Chandan' (Santalum album), etc. A modern vegetative propagation arrangement and a tissue culture laboratory have been established in the garden for propagation of rare species. Initially, tissue culture of orchids and other rare species have been adopted. Besides, a huge rose garden, criss-crossing lake, watch deck, artificial water fall, bridge over the lake and above all the thousands of migratory birds in winter are the main attractions of the National Botanical Garden.
2	Dhaka Zoo	It is situated at Mirpur, 16km NW of Dhaka and accessible by road.	92		It harbors nearly 1400 animals and birds belonging to 124 species. The species are lions, Royal Bengal Tigers, Panthers, Kangaroo, Tapir, Deer, Monkeys, Chimpanzees, Pythons, and Crocodiles, Elephants, Colourful Birds and other animals. There is a Zoological Museum in the garden which displays stuffed animals and birds, which is rich in collection. Angling and picnic facilities available inside the Zoo.

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Id	Serial Number of the eco-tourism spot	
Name	Name of the eco-tourism spot	
Locacc	Description of geographic location and accessibility of the spot	
Area	Area coverage of the eco-tourism location	Hectare
Year	Year of establishment	
Exifac	Detail description of features and facilities of the eco-tourism location	

Name of Data layer: **Standards for Sector-wise Industrial Effluent or Emission**

Metadata

Data Type	Tabular
Abstract	The data layer presents the maximum allowable limits of different parameters of industrial effluents and emissions.
Quality	The data layer fully complies with The Environment Conservation Rules, 1997.
Completeness	The data layer contains information of the Standards for Sector-wise Industrial Effluent or Emission allowed for industries.
History of the dataset	Department of Environment (DoE), Bangladesh has set the Standards for Sector-wise Industrial Effluent or Emission for industries and the government published in the Bangladesh Gazette, Extra-ordinary Issue of 28-8-1997 and amended by Notifications S.R.O 29-Law/2002, S.R.O 234-Law/2002 and S.R.O 88-Law/2003. This rule is widely known as "The Environment Conservation Rules, 1997".
Purpose of production	Standards for Sector-wise Industrial Effluent or Emission data are essential for determining the quality of the effluents. It is also important for environmental monitoring, planning and limit setting of different parameters of industrial wastes. Analysis of environmental degradation and preventive measures can be determined. In this context the data layer can be used in environmental studies.
Process description	NWRD has converted the data layer into digital format and stored in an ordered form.

Sample of Data

Sino	Indtyp	Matrluse	Source	Effemi	Parameter	Std	Stdunit	Note
1	Fertilizer Plant	Nitrogenous fertilizer plant	-	Effluent (liquid waste)	As Nitrogen	-	mg/l	-
2	Fertilizer Plant	Nitrogenous fertilizer plant	-	Effluent (liquid waste)	Total Kjeldahl Nitrogen	-	mg/l	-
3	Fertilizer Plant	Nitrogenous fertilizer plant	-	Effluent (liquid waste)	pH	-	-	-
4	Fertilizer Plant	Nitrogenous fertilizer plant	-	Effluent (liquid waste)	Chromium at discharge point of the chromate removal plant (as total Cr)	0.5	mg/l	-
5	Fertilizer Plant	Nitrogenous fertilizer plant	-	Effluent (liquid waste)	Hexavalent Chromium	0.1	mg/l	-
6	Fertilizer Plant	Nitrogenous fertilizer plant	-	Effluent (liquid waste)	Suspended Solids	100	mg/l	-
7	Fertilizer Plant	Nitrogenous fertilizer plant	-	Effluent (liquid waste)	Oil and Grease	10	mg/l	-
8	Fertilizer Plant	Nitrogenous fertilizer plant	-	Effluent (liquid waste)	Wastewater flow	10	m3/t Urea	-

Bundle Information (Data Field Description and Unit)

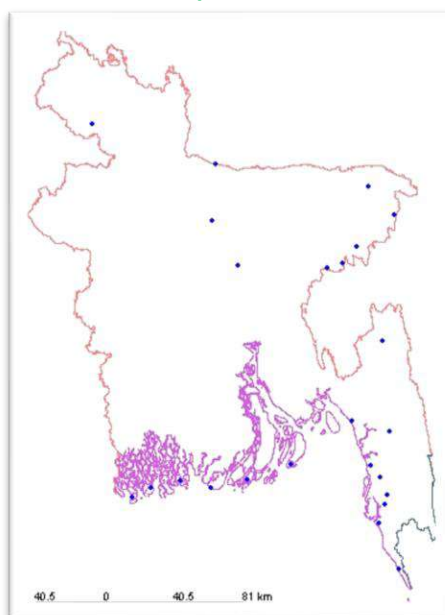
FIELD_NAME	FIELD_DESC	UNIT
Sino	Serial number	
Indtyp	Type of Industry	
Matrluse	Type of Material used	
Source	Source of effluent or emission	
Effemi	Type of effluent or emission	
Parameter	Parameter of effluent or emission	
Std	Standard of allowable limit of effluent or emission	
Stdunit	Unit of parameters	
Note	Note	

Name of Data layer: **Protected Areas**

Metadata

Data Type	Spatial
Abstract	Protected area define as an area of land or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means. Three categories of protected areas, namely National Parks, Wildlife Sanctuaries and Game Reserves are identified by FD.
Quality	Quality of this data layer totally depends on the data collection process of the source organization.
Completeness	The data layer covers all protected area of Bangladesh identified by DoFo.
History of the dataset	Source of the dataset was produced by Department of Forest.
Purpose of production	Protected areas play a prime role of national and regional plan for biodiversity conservation in the country. It will help too promote and implement a system of biodiversity conservation and sustainable management.
Process description	Data has been collected from Department of Forest into digital format. The source data was in LCC projection system. It is transformed into Bangladesh Transverse Mercator (BTM) projection system.

Sample of Data



Attribute Table

id	patype	ids	name	wsname
20	WS	14	Char Kukri-Mukri Wildlife Sanctuary	Wildlife Sanctuary
20	WS	12	Pablakhali	Wildlife Sanctuary
20	WS	17	Sundarban West Wildlife sanctuary	Wildlife Sanctuary
20	WS	16	Sundarban South Wildlife Sanctuary	Wildlife Sanctuary
20	WS	15	Sundarban East Wildlife Sanctuary	Wildlife Sanctuary
20	WS	11	Rema-Kalenga Wildlife Sanctuary	Wildlife Sanctuary
20	WS	13	Chunati Wildlife Sanctuary	Wildlife Sanctuary
10	NP	8	Himchari	National Park
10	NP	7	Kaptai	National Park
10	NP	5	Lawachara N. Park	National Park

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Id	Protected area Id	
Patype	Protected Area Type	
Ids	Unique Id	
Name	Location name of the protected area	
Wsname	Sanctuary Name	

Name of Data layer: **Environmental Parameters of NEMAP**

Metadata

Data Type	Tabular
Abstract	A data layer showing 490 thana wise occurrence of environmental parameters identified by NEMAP. The parameters include 16 different environmental issues like natural hazards, pollution, forestry etc.
Quality	As the data layer has been collected from other organization therefore its quality depends on the data generation procedure of the concerned agency.
Completeness	The data layer covers 490 thana of Bangladesh.
History of the dataset	The data layer was generated by National Environmental Management Action Plan (NEMAP).
Purpose of production	Purpose of incorporating the data layer into NWRD is to provide the concerned people a picture of the environmental parameters all over the country.
Process description	NWRD has converted the data in digital format and stored it in an arranged form.

Sample of Data

Geocode91	Nwrld_location_description	Flag	Upzcode	Nemap_location_description	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
10409	BARGUNAmtali	52	188	BORGUNA Amtali	9	9	9	18	18	0	0	0	0	9	0	0	9	18	0	0
10419	BARGUNABamna	53	213	BORGUNA Bamna	0	0	0	0	50	0	0	0	0	0	0	0	0	50	0	0
10428	BARGUNABarguna Sadar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10447	BARGUNABetagi	6	184	BORGUNA Betagi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10485	BARGUNAPatharghata	6	185	BORGUNA Borguna	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0
10602	BARISALAgailjhara	3	204	BARISAL Agailjhara	12	8	0	0	27	0	0	0	4	0	0	0	35	15	0	0
10603	BARISALBabuganj	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10607	BARISALBakerganj	3	208	BARISAL Bakerganj	8	13	6	0	10	10	10	8	8	2	2	0	17	8	0	0
10610	BARISALBanari Para	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10632	BARISALGaurnadi	3	203	BARISAL Gaurnadi	0	13	0	0	13	0	0	0	20	0	0	13	27	13	0	0

Bundle Information (Data Field Description and Unit)

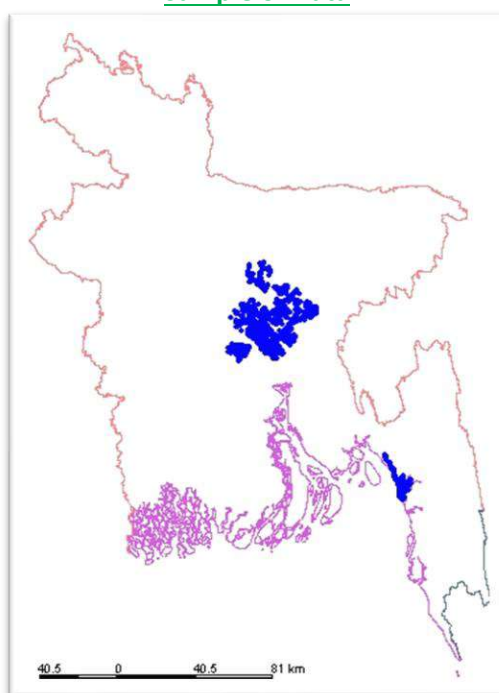
FIELD	FIELDNAME
P1	Natural Hazards
P2	Pollution
P3	Water and Related issues
P4	Energy resources depletion
P5	Forestry
P6	Erosion and soil depletion
P7	Fisheries and Livestock
P8	Bio-diversity
P9	Agriculture
P10	FCDI Created Environmental Problems
P11	Urban Environmental Problems
P12	Industrial Hazards
P13	Sanitation and Health Hazards
P14	Socio-environmental
P15	Infrastructure
P16	Others

Name of Data layer: **Industrial Location of Major Cities**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of 9393 Industries located in the major cities of Bangladesh along with the attribute information derived from the study of GIS based Decision Support System (DSS) 2009 by the Department of Environment (DoE).
Quality	Industry location generated as point data using GPS with WGS1984 datum. Department of environment (DoE) is the owner of this data.
Completeness	This data layer covers districts around Dhaka and Chittagong.
History of the dataset	The source of this dataset is GIS based Decision Support System (DSS) of Department of Environment (DoE), which is surveyed physically using GPS between 2008-2009. The projection system is Bangladesh Transverse Mercator (BTM). Attribute information were attached according to the questionnaire used for the survey.
Purpose of production	This data layer of Industry is essential for any data analysis and decision supports to monitor industry operations and waste management practices those who are responsible for the environmental pollution. It is very important data for planning, analysis and management purposes for existing industries as well as for the new establishments.
Process description	Industry locations are collected as primary data using GPS. Other attribute information have been attached according to the physical survey using questionnaire in 2008 and 2009. Industry location as point data projected in BTM projection.

Sample of Data



Attribute Table

ind_id	ind_name	ind_type	ind_cat	btm_long	btm_lat	product	comence	owner_name	ind_add
21506001	Sufiyan Poultry Farm	Orange (Kha)	Paltry (>250 no.)	690390.564	479514.5487	Chicken		Md. Abu Sufiyan	Uttar Wajidia, Panchlaish, Bayejid, Chittagong, Ph-01815885292
21506002	Yunus Poultry Farm	Orange (Kha)	Paltry (>250 no.)	689047.5338	478938.2036	Poultry		Md. Yunus	Buliapara, Fulgaon, Bayejid, Chandgaon Ph-01716085015
21506003	Kamal Poultry Farm	Orange (Kha)	Paltry (>250 no.)	690091.0753	478280.3336	Chicken		Md. Mahbul Alam	Koaish, Wajidia, Bayejid, Chittagong,
21506004	S.Alam Factory	Orange (Kha)	PVC instrument	689458.466	478549.4545	PVC Pipe		Md. Jahurul Alam	Horipur, Wajidia, Bayejid, Chittagong, Ph-01811233686

phone	fax	email	web	mouza_lane	union_ward	upazilla	district	division	etp	doe_clear	renewal	eia	surround	etp_status
0	0			Not Found	Ward No-03	Bayejid Bostami	Chittagong	Chittagong	No	No				
0	0			Not Found	Ward No-02	Bayejid Bostami	Chittagong	Chittagong	No	No				
0	0			Not Found	Ward No-03	Bayejid Bostami	Chittagong	Chittagong	No	No				
0	0			Not Found	Ward No-03	Bayejid Bostami	Chittagong	Chittagong	No	No				

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Ind_id	Identity Number of Industry	
Ind_name	Name of Industry	
Ind_type	Type of Industry	
Ind_cat	Industry Category	
Btm_long	Projected Coordinate System - Longitude (Easting)	Meter
Btm_lat	Projected Coordinate System -Latitude (Northing)	Meter
Product	Principal Product	
Comence	Commencing Date	
Owner_name	Name of the Owner of the industry	
Ind_add	Address of Industry	
Phone	Phone Number	
Fax	Fax Number	
Email	E-mail Address	
Web	Web Site	

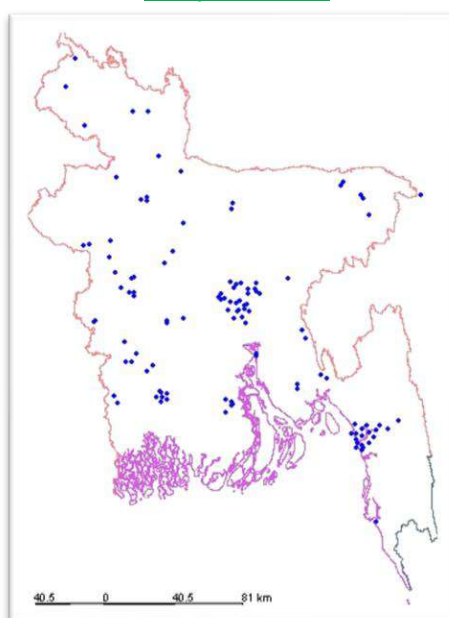
FIELD_NAME	FIELD_DESC	UNIT
Mouza_lane	Mouza/Lane Name	
Union_ward	Union/Ward Name	
Upazilla	Upazila/Thana Name	
District	District Name	
Division	Division Name	
Etp	Effluent Treatment Plant (ETP)	
Doe_clear	Environmental Clearance from DoE	
Renewal	Renewal date of environmental clearance	
Eia	Has the industry carried out EIA	
Surround	Surrounding Scenario	
Etp_status	Functional status of ETP	
Ind_status	Functional status of Industry	

Name of Data layer: **Industries Discharge to Rivers with Location**

Metadata

Data Type	Spatial
Abstract	This data layer represents the spatial information of the industries all over the country discharging their effluents directly to the adjacent rivers.
Quality	The location was not checked with any authentic source. Quality of this data layer depends on the data generating quality and method of the source agency generating quality and method of the source agency.
Completeness	The data layer covers the industries identified by Third Inland Transport Project.
History of the dataset	The information was generated by Mott MacDonald under Third Inland Transport Project (IWT3), Inland Waterways Environmental Monitoring and Control, Department of Shipping, Ministry of Shipping.
Purpose of production	To present the location of industries with other information.
Process description	NWRD has stored the data as it was collected from BIWTA.

Sample of Data



Attribute Table

clasname	locname	ctegorie	code	name	tyepe	location	discriptn	categorie	clst_code
Pulp Mill	Chatak	Paper & Pulp	2	Sarkar Press	Paper & Pulp	Narshingdi	1072	Paper & Pulp	1
Fertilizer Factory	Fenchuganj	Chemicals	1	Padma Pesticide Formulati	Chemicals	Chittagong	302	Chemicals	1
Paper Mill	India	Paper & Pulp	2	Sarkar Press	Paper & Pulp	Narshingdi	1072	Paper & Pulp	1

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Location	Distrct location of the industry	
Name	Name of the industry	
Code	Unique code is defined for a prticular category of industry	
Locname	Positional location of the industry	
Categorie	Catagore of the industry according to the production	

Name of Data layer: **Industries Dispose to the Rivers**

Metadata

Data Type	Tabular
Abstract	The data layer presents the list of industries with type that dispose to the adjacent rivers identified by IWT3 project.
Quality	The data layer contains the name of the industries but there is no specific location information.
Completeness	The data layer presents all the industries identified by BIWTA under IWT3 project.
History of the dataset	The information was collected under third Inland Water Transport Project (IWT3), Inland Waterways Environmental Monitoring and Control, Department of Shipping, Ministry of Shipping.
Purpose of production	To identify mostly polluted areas and rivers by industrial effluence
Process description	NWRD has updated this information incorporating geocode and stored this data in an organized form.

Sample of Data

Id	Name	Location	Type	Typecode	Levelcode	District	Thana	Geocode
1	M/s. Bagerhat Sea Foods Pvt. Ltd.	Fakirhat, Bagerhat	Food	9	1	BAGERHAT	FAKIRHAT	40134
2	M/s. Bangladesh Foods and Associate Products	Shashanghat, Bagerhat	Food	9	1	BAGERHAT	BAGERHAT SADAR	40108
3	M/s. Kashem Engineering	Bagerhat	Engineering	7	2	BAGERHAT	BAGERHAT SADAR	40108
4	M/s. Star Engineering Works	Bagerhat	Engineering	7	2	BAGERHAT	BAGERHAT SADAR	40108
5	M/s. Hawladar Engineering Works	Bagerhat	Engineering	7	2	BAGERHAT	BAGERHAT SADAR	40108
6	M/s. S.M Engineering Stadium Road	Bagerhat	Engineering	7	2	BAGERHAT	BAGERHAT SADAR	40108
7	M/s. MS. Engineering	Bagerhat	Engineering	7	2	BAGERHAT	BAGERHAT SADAR	40108
8	M/s. Sonali Biri Factory	Mollahat, Bagerhat	Food	9	2	BAGERHAT	MOLLAHAT	40156
9	Barisal Textile Mill	Paschim Kaunia	Textile	5	1	BARISAL	BARISAL SADAR (KOTWALI)	10651
10	Swapna Textiles Mills Ltd.	Paschim Kaunia	Textile	5	1	BARISAL	BARISAL SADAR (KOTWALI)	10651

Bundle Information (Data Field Description and Unit)

TYPE	TYPE CODE	LEVELNAME	LEVEL CODE	EM_WASTEWATER	EM_GAS	EM_SOLIDWASTE
Chemical	1	Chemical	1	susp.solids, Cl ₂ , Pb, acids, colour	Diff. Gases, CO, Cl ₂ , NO, SO	sludge
Chemical	1	Fertilizer	2	water with H ₂ SO ₄ , H ₃ PO ₄ , HF, flurides, phosphates, NH ₃ , NH ₄ -salts, Amines, CH ₃ -OH, H ₂ S.	SPM, Fluorides, NH ₃ , H ₂ S.	ash, gypsum, arsenic sludge.
Chemical	1	Pesticide	3	acids, organic, solvents, CN, Cl, phenolic compounds, Pb, Cu, As, Hg.	Cl ₂ , organic solvents, acid vapours.	packages material, filter dust, sludge.
Chemical	1	Pharmaceutical	4	colour, organic, solvents, hormones, suspended solids, Cr, Cl ₂ ,	alcohols, chloro forms,	packages material, filter dust, sludge, glass
Chemical	1	Paint	5	Cr, Pb, Cu, Cd, organic solvents, cyanides	alcohol, organic, solvents, tarpin	packaging material, sludge
Chemical	1	Soap	6	acids, fatty acids, phosphate, oils		sludge

TYPE	TYPE CODE	LEVELNAME	LEVEL CODE	EM_WASTEWATER	EM_GAS	EM_SOLIDWASTE
Chemical	1	Clinic	7	blood	alcohol, chloroform	cotton, packages,plastic, brocken, glass
Chemical	1	Rubber	8			rubber pieces
Chemical	1	Ceramic/Cement	9	suspended solids,alkalies, temperature	SPM	dust, coal piles
Paper	2	Newspaper	1			paper pieces,waste paper
Paper	2	Paper Mills	2	organic matter, SS,colour, Zn,Hg, chloride	SO4 prticulate matter,odorou s compounds	waste water sludge,ash, bark wood,paper trash,cellulose fibre,china clay
Paper	2	Stationary	3			packageing materials, Papers
Paper	2	Magazine	4			packageing materials, Papers
Paper	2	Packageing	5			packageing materials, Papers
Paper	2	Board	6			packageing materials, Papers
Paper	2	Printing /press	7			packageing materials, Papers
Paper	2	Timber	8		SPM	saw dust, bark , wood
Sugar	3	Sugar Mill	1	SS, organic matter, acids, colour.	SPM	bagasse
Sugar	3	Distillaries	2	SS, organic matter, acids, colour.		
Sugar	3	Suar & Distillaries	3	SS, organic matter, acids, colour.	SPM	bagasse
Leather	4	Shoe Factory	1			leather pieces
Leather	4	Tannery	2	dissolved lime, hydrogensulphide, acids, chromium, dyes, oils, SS, organic matter.	SPM, H2S.	lime & chromium, sludge, fleshs, shavings, trimmings.
Leather	4	Leather	3	dissolved lime, hydrogensulphide, acids, chromium, dyes, oils, SS, organic matter.	SPM, H2S.	lime & chromium, sludge, fleshs, shavings, trimmings.
Textile	5	Textile Mills	1	alkali,Cl,dyes, N,P,organic matter, SS.	SPM	yarn, cloth, ink waste, packing materials.
Textile	5	Jute Mills	2	alkali,Cl,dyes, N,P,organic matter, SS.	SPM	fibre, packing materials.

TYPE	TYPE CODE	LEVELNAME	LEVEL CODE	EM_WASTEWATER	EM_GAS	EM_SOLIDWASTE
Textile	5	Cottage Industry	3			wood, bamboo,fibre, jute
Textile	5	Silk Industry	4	alkali,Cl,dyes, N,P,organic matter, SS.	SPM	silk, cocoon,packing materials.
Textile	5	Dyeing Industries	5	alkali,Cl,dyes, N,P,organic matter, SS.	SPM	yarn, cloth,ink wast.,packing materials.
Petroleum	6	Refinnary	1	waste water	gas	solid waste
Petroleum	6	Vegetable Oil	2	SS,Fe,oil,colour,dissolved solids	SPM	
Petroleum	6	Garrages	3	waste water	gas	solid waste
Petroleum	6	Petrol Pump	4		gas	solid waste
Petroleum	6	Gas Field	5	waste water	gas	solid waste
Engineering	7	Steel	1	acids/alkalies,SS,Cr,Cu,Zn,Ni,Cd.	gas	solid waste
Engineering	7	Re-Rolling Mills	2	acids/alkalies,SS,Cr,Cu,Zn,Ni,Cd.	gas	Iron dust
Engineering	7	Engineering Workshops	3	acids/alkalies,SS,Cr,Cu,Zn,Ni,Cd.	gas	Rod, Iron piece,
Engineering	7	Automobile	4	Oil, Petroleum prod.	gas	solid waste
Engineering	7	Iron/Metal manufacturing	5	acids/alkalies,SS,Cr,Cu,Zn,Ni,Cd.	gas	solid waste
Engineering	7	Alumonium Factory	6	Al,	gas	solid waste
Engineering	7	Wire House	7	waste water	gas	solid waste
Power	8	Power Station	1	Hot water		
Power	8	Ice Plant	2	Cold water		
Food	9	Fish Processing Industries	1	BOD,	gas	solid waste
Food	9	Tobacco	2	waste water	gas	solid waste
Food	9	Rice Mills	3		gas	saw dust
Food	9	Beverages	4	waste water	gas	solid waste
Food	9	Biscuits & Bread Fac.	5		gas	solid waste
Food	9	Salt	6	waste water		solid waste
Unknown	10	Municipality/City Corporation	1			garbages
Unknown	10	Office	2			solid waste
Unknown	10	Others	3			

Name of Data layer: **Ownership of Industry 1991-92**

Metadata

Data Type	Tabular
Abstract	A basic industrial data layer showing 64-district wise number of establishments and different types of industries with total people engaged, for the year 1991-92.
Quality	The data layer fully resembles with the Census of Manufacturing Industry 1995.
Completeness	The data layer covers information of 64 districts.
History of the dataset	This information was published in Census of Manufacturing Industry 1995 by BBS (Bangladesh Bureau of Statistics). BBS generated this data layer.
Purpose of production	To provide the information of ownership of industrial establishment and number of people involved in those industries that are important for socio-economic analyses.
Process description	NWRD has converted the data into digital format and stored it in an organized form.

Sample of Data

Distname	Distcode	Ownership	Noest	Assets	Pereng
BAGERHAT	1	Government	-	-	-
BANDARBAN	3	Government	1	99342	508
BARGUNA	4	Government	-	-	-
BARISAL	6	Government	4	138103	11355
BHOLA	9	Government	-	-	-
BOGRA	10	Government	1	30084	205
BRAHAMANBARIA	12	Government	3	51619	2653
CHANDPUR	13	Government	-	-	-
CHITTAGONG	15	Government	37	26547188	38028
CHUADANGA	18	Government	3	140820	1659
COMILLA	19	Government	3	136172	1791
COX'S BAZAR	22	Government	-	-	-

Bundle Information (Data Field Description and Unit)

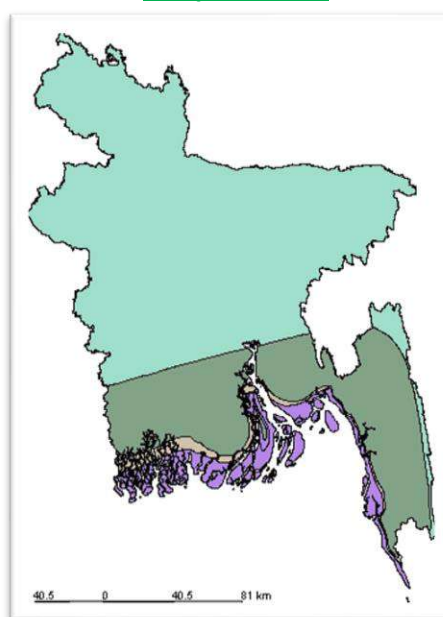
FIELD	FIELDNAME
Distname	District Name
Distcode	District Code
Ownership	Type of Ownership
Noest	No of Establishment
Assets	Total Fixed Assets End Year 1991-92
Pereng	Person Engaged

Name of Data layer: **Cyclone Risk Area**

Metadata

Data Type	Spatial
Abstract	A spatial data layer depicting the cyclone risk area of Bangladesh.
Quality	As the source was in 1:10,00,000 scale it is recommended that the data layer should be used in the same scale or smaller than this.
Completeness	Covers whole Bangladesh.
History of the dataset	Source of this data layer is a published map (1:10,00,000) titled 'Areas Affected by Cyclone' prepared by Ministry of Relief Disaster Management Bureau, Govt. of Bangladesh for natural hazards mapping in 1992.
Purpose of production	To identify the risk intensity of cyclone throughout the country and to use this data layer in different analysis and planning purpose.
Process description	NWRD has captured the data layer from the above mentioned published map with input RMS error 0.003 inch and output error 10 meter. International boundary prepared from Topo maps published by Survey of Bangladesh (SoB) in 1:50,000 scale and coastline generated by EGIS-II using 1997 LANDSAT image, have also been used to update the data layer.

Sample of Data



Attribute Table

area	areaname	areacode	surgeh
18984280	NO DATA	0	NO DATA
1463773184	NO DATA	0	NO DATA
1613780.625	NO DATA	0	NO DATA
3931561	NO DATA	0	NO DATA
372188.5	NO DATA	0	NO DATA
686799.875	NO DATA	0	NO DATA
178321.781	NO DATA	0	NO DATA
234448.797	NO DATA	0	NO DATA
114128.953	NO DATA	0	NO DATA

Bundle Information (Data Field Description and Unit)

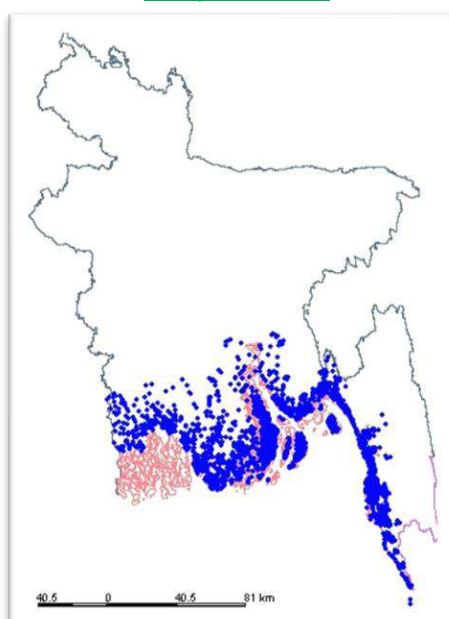
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square Meter
Areaname	Risk area identified by DMB	
Areacode	Risk code	
Surgeh	Surge height	Meter

Name of Data layer: **Cyclone Shelter (CDMP)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the locations of cyclone shelter of entire Bangladesh along with other attribute information. Cyclone shelter is to provide refuge for the population of the cyclone prone areas of Bangladesh
Quality	The data layer covers available all shelter locations according to the source.
Completeness	This data generated as point theme using GPS with WGS1984 datum and collected from DMB and stored it with quality checking.
History of the dataset	This data layer was produced by the Comprehensive Disaster Management Programme (CDMP) for the Ministry of Food and Disaster Management, Government of the People's Republic of Bangladesh
Purpose of production	To cater information about the location of cyclone shelter to the planners and this data has been included in NWRD data layers.
Process description	Data has been collected from Comprehensive Disaster Management Programme (CDMP) into standard GIS format which is projected in BTM projection.

Sample of Data



Attribute Table

id	thana_srl n	district	upazila	union	designtyp e	shelter _co	sheltern a m	geocode	mouza	village	latde g
1241F LR	69	Cox's Bazar	Cox's Bazar Sadar	Khurush kul	BDRCS Type 1	Not usable	Raster Para Red Crescent Shelter	22224596 80	Khurushk ul	Raster Para	21
1245 MRR	59	Cox's Bazar	Ramu	Fatekh kul	LGED Type 1	Not usable	33 No. Uttar Fatekhark ul GPS	22266092 29	Fatekhark ul	Fatekh arkul	21

1264 MRR	74	Cox's Bazar	Cox's Bazar Sadar	Bharuak hali	Others	Usable	Paschim Bharuakh ali Non GPS	22224100 52	Bharuakh ali	Paschi m Bharua khali	21
1017 MRR	22	Khulna	Paikgach ha	Chandkh ali	Others	Usable	36 No. Fotahpur GPS	44764165 78	Kaoali	Fotahp ur	22

latmi n	latse c	lond eg	lonm in	lons ec	distance _u	resppers on	comm unityp	annualb udg	amoun t	constr ucte	funded by	yearofcons	structuret
29	28.5	91	59	31.6	2	Md. Mostak Ahmed	N	N	0	BDRCS	BDRCS	1993	RCC
25	50	92	4	50	2	Piomothe uddin (Head Master)	N	N	0	LGED	ADB	1993-1994	RCC
29	58	92	1	23	2	Md. Badiur Alam (Head Master)	N	N	0	CHCP	CHCP	1993	RCC
30	45	89	15	11	2	Md. Atiur Rahman	N	N	0	LGED	PEDP II	2006	RCC

floor_s pac	nosfl oor	capac ity	toilet	nooft oilet	sepa rate to	groundf loo	availa blew	valuab lefa	womens pace	facilitie s	typeo fuse	vul_cy clon	vul_tsu nam	vul_eq
1700	2	850	N	0	N	0	N	N	N	N	No use	Y	Y	Y
1400	2	700	Y	2	Y	2	Y	N	N	N	Educ ation cente r	Y	Y	Y
1400	2	700	Y	2	Y	2	N	N	N	N	Educ ation cente r	Not Assesse d	Not Assesse d	Not Assesse d
1000	2	500	Y	1	N	1	Y	N	N	N	Educ ation cente r	Not Assesse d	Not Assesse d	Not Assesse d

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Thana_srln	Upazila wise Serial Number	
Id	Shelter Identification Number	
District	District	
Upazila	Upazila	
Union	Union	
Designtype	Design Type	
Shelter_co	Shelter Condition	
Shelternam	Name of the Shelter	
Geocode	GeoCode (BBS) 2001	
Mouza	Mouza	
Village	Village	
Latdeg	Latitude Degree	
Latmin	Latitude Minute	
Latsec	Latitude Second	
Londeg	Longitude Degree	
Lonmin	Longitude Minute	
Lonsec	Longitude Second	
Distance_u	Shelter Distant from Upazila Head Quarter	
Respperson	Responsible Person	
Communityp	Community Participation Available	
Annualbudg	Annual Budget for Maintenance	
Amount	BDT taka for Maintenance	
Constructe	Constructed Agency	
Fundedby	Funded Agency	
Yearofcons	Year of Construction	
Structuret	Structure Type	
Floor_spac	Floor Space	Sq. ft.
Nosfloor	Number of Floors	
Capacity	Capacity (Person)	
Toilet	Toilet Facilities	
Nooftoilet	Number of Toilets	
Separateto	Separate Toilet for Women	
Groundfloo	Number of Toilets in Ground Floor	
Availablew	Water supply Facilities	
Valuablefa	Valuable Goods Storage Facilities	
Womenspace	Separate space for Women	
Facilities	Access facilities for Disabled	
Typeofuse	Normal Time Use	
Vul_cyclon	Structural Vulnerability for Cyclone	
Vul_tsunam	Structural Vulnerability for Tsunami	
Vul_eq	Structural Vulnerability for Earthquake	

Metadata

Sample of Data

Attribute Table

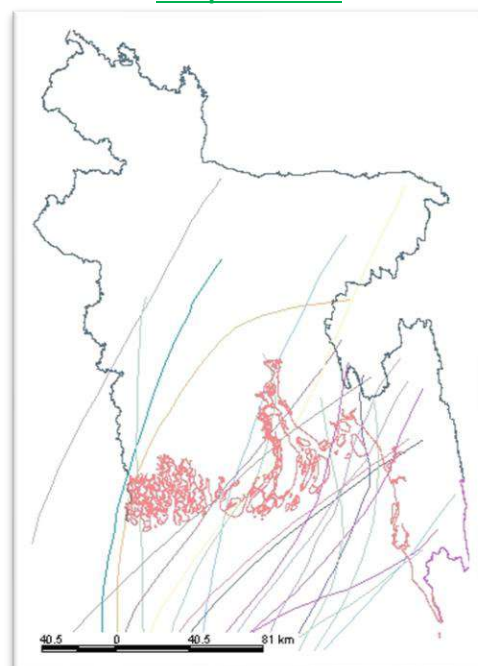
Bundle Information (Data Field Description and Unit)

Name of Data layer: **Cyclone Track**

Metadata

Data Type	Spatial
Abstract	Cyclones are tropical revolving storms which is a storm system characterized by a large low-pressure center and numerous thunderstorms that produce strong winds and heavy rain. The coastal regions of Bangladesh are subject to damaging cyclones almost every year. Its generally occur in early summer (April-May) or late rainy season (October-November). A spatial data layer of cyclone tracks shows the path of historical cyclone occurrences during 1905 to 1991 in the Bay of Bengal.
Quality	Historical Cyclone Storm Tracks generated as line data using standard GIS applications with WGS1984 datum.
Completeness	This data layer covers all districts of Bangladesh
History of the dataset	The source of this dataset is (Mention source here). The projection system is Bangladesh Transverse Mercator (BTM). Attribute information were attached according to the source map.
Purpose of production	This data layer of historical cyclone storm tracks is essential for any data analysis and decision supports on disaster preparedness planning in Bangladesh. It is very important data for disaster management planning, analysis and relief distribution.
Process description	The Historical Cyclone Storm Tracks collected as secondary data from the source map. Other attribute information have been attached according to the source map. Historical Cyclone Storm Tracks as line data projected in BTM projection.

Sample of Data



Attribute Table

length	year	id
451560	1946	1
457888	1909	2
489902	1965	3
528433	1940	4
389024	1985	5
605843	1958	6
372899	1937	8
457076	1970	9
295802	1963	10
356593	1935	12
354806	1905	13

Bundle Information (Data Field Description and Unit)

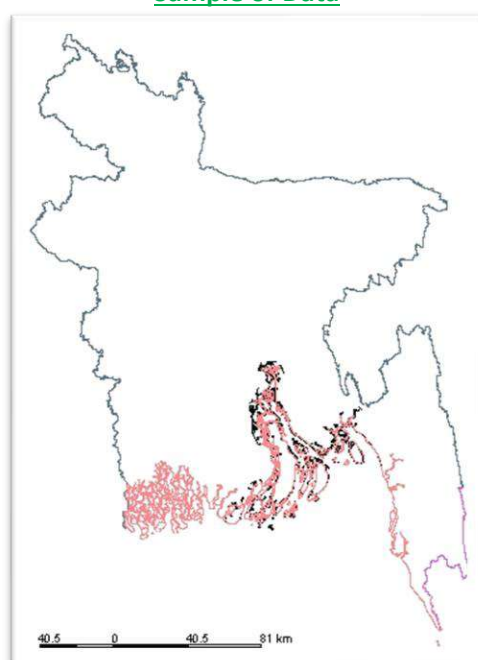
FIELD_NAME	FIELD_DESC	UNIT
Id	Identity Number of cyclone track	
Length	Length of the storm track	Meter
Year	Year of occurrence	

Name of Data layer: **Erosion and Accretion (1996-2001) in Coastal Zone**

Metadata

Data Type	Spatial
Abstract	The spatial data layer represents the area of shoreline erosion and accretion along the coast line from 1996 -2001.Shorelines include channels, islands chars and sand bars in the confluence of the Bay of Bengal.
Quality	The accuracy and reliability of the data layer depend on the georeferencing accuracy of the images and the procedure of bankline delineation.
Completeness	
History of the dataset	LANDSAT TM Image of 1996 and 2001 with 30 m resolution have been used for estimating erosion and accretion.
Purpose of production	It will help to take necessary measures for maintaining existing bank protection structures, planning for bank protection and reducing community suffering.
Process description	Banklines of 1996 and 2001 have been delineated following the defined criteria developed by CEGIS. Loss of flood plain in between two banklines indicates erosion whereas gain of that indicates accretion Overlaying the shorelines delineated from 1996 and 2001using satellite images provides information on erosion and accretion during the period and the magnitude.

Sample of Data



Attribute Table

year	thacode	distname	thaname	type	parea
1996	21379	Chandpur	Uttar Matlab	Erosion	1214860.969
1996	21376	Chandpur	Matlab	Erosion	109188.561
1996	21376	Chandpur	Matlab	Erosion	127143.555
1996	21376	Chandpur	Matlab	Erosion	19452.372
1996	21379	Chandpur	Uttar Matlab	Erosion	184480.132
1996	21379	Chandpur	Uttar Matlab	Erosion	8583.667
1996	21322	Chandpur	Chandpur Sadar	Erosion	216470.964
1996	21322	Chandpur	Chandpur Sadar	Erosion	842.965
1996	21376	Chandpur	Matlab	Erosion	920.042
1996	21379	Chandpur	Uttar Matlab	Erosion	734473.077
1996	21379	Chandpur	Uttar Matlab	Erosion	549725.132
1996	38614	Shariatpur	Bhedarganj	Erosion	4.655

Bundle Information (Data Field Description and Unit)

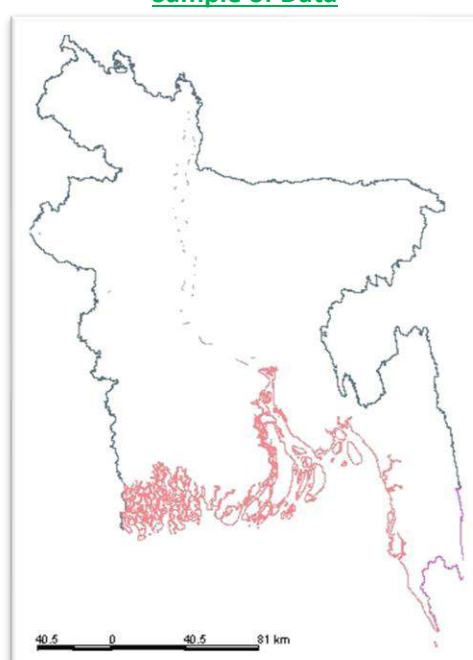
FIELD_NAME	FIELD_DESC	UNIT
Area	Sq. Meter	
Year	Year	
Thacode	Thana code (Division code + district code + thana code) is incorporated according to Geomaster database of BBS 2001	
Distname	Name of each district according to BBS geomaster database of 2001	
Thaname	Name of each thana according to BBS geomaster database of 2001	
Type	Erosion and Accretion	

Name of Data layer: **Erosion Vulnerable Location**

Metadata

Data Type	Spatial
Abstract	This data layer specifies the locations under threat of river bank erosion along the main rivers of Bangladesh.
Quality	Since the rivers in Bangladesh are dynamic, this data layer need to be updated annually to ensure quality of the datasets.
Completeness	This data layer covers main rivers of Bangladesh
History of the dataset	Available satellite images (1973-2006) of CEGIS. Series of satellite images were analyzed to prepare the location map of vulnerable points in the major rivers of the country.
Purpose of production	It would assist national planners to set location-wise priority of maintenance of bank protection structures and construction and maintenance strategy.
Process description	Erosion vulnerable locations were identified based on time-series satellite images and prediction tools in CEGIS.

Sample of Data



Attribute Table

id	prob	index
1	50%	1
1	50%	1
1	50%	1
1	50%	1
1	50%	1
1	50%	1
1	50%	1
2		1
2		1

Bundle Information (Data Field Description and Unit)

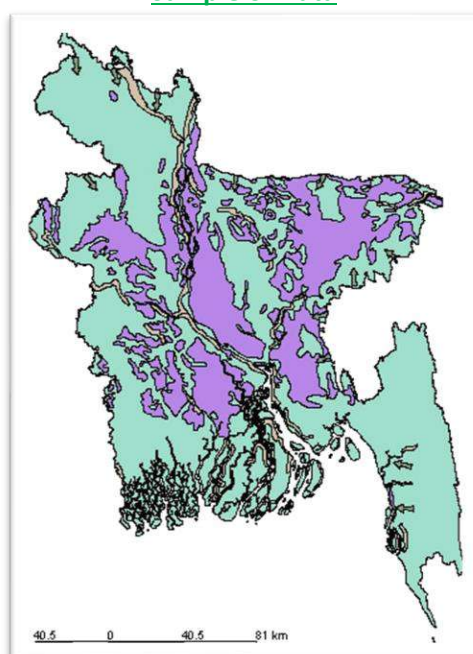
FIELD_NAME	FIELD_DESC	UNIT
Id	Id	
Prob	Percentage of bank erosion probability	
Index	Index	

Name of Data layer: **Flood & River Bank Erosion**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the areas affected by flood and riverbank erosion along with other attribute information.
Quality	As the source was in 1:10,00,000 scale it is recommended that the data layer should be used in same scale. While the data layer was updated using different data layers therefore it inherits the same level of error and precision of those layers.
Completeness	The data layer covers whole Bangladesh but for a great area data is not available.
History of the dataset	Source of this data layer is a published map titled 'Areas Affected by Flood & River Bank Erosion' prepared by Ministry of Relief Disaster Management Bureau, Govt. of Bangladesh under Natural Hazard Mapping in 1992.
Purpose of production	To demarcate the areas affected by floods and riverbank erosion and to provide some basic information about the hazard prone areas.
Process description	NWRD has captured the data from the cited published source with input RMS error 0.003 inch and output error 10 meter and updated it using the international boundary (recaptured for Chittagong part) prepared from Topo maps, published by Survey of Bangladesh (SoB) at 1:50,000 scale and coastline generated by EGIS-II using LANDSAT 1997 image.

Sample of Data



Attribute Table

area	areacode	affected
248884528	0	No Data
91323432	2	FLASH FLOOD AREA
18984280	0	No Data
939774272	3	Riverbank Erosion
87508960	2	FLASH FLOOD AREA
1767448064	0	No Data
64901244	1	NORMAL FLOOD AREA
88039552	2	FLASH FLOOD AREA
688284416	1	NORMAL FLOOD AREA
423941760	3	Riverbank Erosion

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Areacode	Areacode is given according to hazard type	
Affected	Area affected by what type of disaster	
Area	Area generated by ArcInfo	Square Meter
Perimeter	Perimeter generated by ArcInfo	Meter

Name of Data layer: **Seismic data of Bangladesh**

Metadata

Data Type	Tabular
Abstract	Earthquake means shaking and vibration at the surface of the earth resulting from underground movement along a fault plane.
Quality	The collected data has been used to look the spatial distribution using GIS tools. The reported geographic co-ordinates are converted to BTM and overlaid to Bangladesh. Some of the observation shows very far away and needs more clarification. The quality depends on the data generation process of the source organization.
Completeness	The data layer covers whole Bangladesh.
History of the dataset	BMD collected the occurrences of earthquake in and around Bangladesh from 1918 to 2002 showing the co-ordinates of their epicenters, magnitude, depth of the focus or hypocentre. Data was collected in digital format from BMD.
Purpose of production	The data layer contains the occurrences of earthquake in the country. It will help the planners and designers to understand the occurrences of the earthquake, about its intensity and duration, which will help in designing major structural interventions, losses and mitigation measures for future planning.
Process description	This data has been converted to a database format and made compatible to NWRD data layers.

Sample of Data

Datetime	Timehr	Timemin	Timesec	Latitude	Longitude	Magnitude	Intensity	Depth	Distance	Duration
7/8/1918	-	-	-	24.5	91	7.6	-	Normal	-	-
9/9/1923	-	-	-	25.3	91	7.1	-	Normal	-	-
3/15/1927	-	-	-	24.5	95	6.5	-	130	-	-
9/2/1930	-	-	-	25.5	90	7.1	-	Normal	-	-
9/29/1930	-	-	-	25	94	7.1	-	Normal	-	-
3/6/1932	-	-	-	25.5	92.5	7.4	-	Normal	-	-
3/24/1932	-	-	-	25	90	7.4	-	Normal	-	-
3/27/1932	-	-	-	24.5	92	7.4	-	Normal	-	-
8/14/1932	-	-	-	26	95.5	7	-	120	-	-
11/9/1932	-	-	-	26.5	92	7.4	-	Normal	-	-
3/6/1933	-	-	-	26	90.5	7.6	-	Normal	-	-
1/15/1934	-	-	-	26.5	86.5	8.3	-	Normal	-	-

Attribute Table

area	areacode	affected
248884528	0	No Data
91323432	2	FLASH FLOOD AREA
18984280	0	No Data
939774272	3	Riverbank Erosion
87508960	2	FLASH FLOOD AREA
1767448064	0	No Data
64901244	1	NORMAL FLOOD AREA
88039552	2	FLASH FLOOD AREA
688284416	1	NORMAL FLOOD AREA
423941760	3	Riverbank Erosion

Bundle Information (Data Field Description and Unit)

FIELDNAME	FIELDDESCRIPTION	UNIT
Date	Date of occurrence	Date
Timehr	Time of occurrence in Hours	BST
Timemin	Time of occurrence in Minutes	BST
Timesec	Time of occurrence in Seconds	BST
Latitude	Latitude of epicenter	Decimal degrees
Longitude	Longitude of epicenter	Decimal degrees
Magnitude	Magnitude in Richter's scale	Richter's Scale
Intensity	Classification according to magnitude (Intensity Table)	
Depth	Depth of focus or hypocenter (Normal - about 33 Km)	Km
Distance	Distance from Chittagong Observator	Km
Duration	Duration of quake	Second

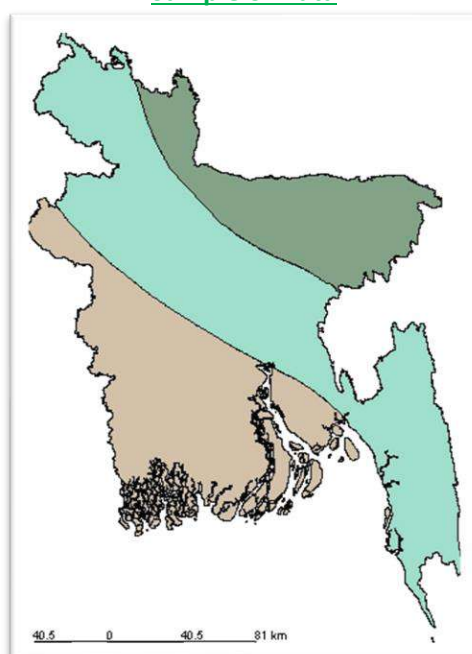
INTENSITY	MAGNITUDE
Violent	8 and Higher
Major	7 - 7.9
Severe	6 - 6.9
Moderate	5 - 5.9
Light	4 - 4.9
Minor	3 - 3.9
Very minor	< 3.0

Name of Data layer: **Seismic Zone**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the earthquake potentials of the country dividing it into different zones with respect to basic seismic co-efficient.
Quality	As the source was in 1:10,00,000 scale it is recommended that the data layer should be used in this scale or smaller than this. While the data layer has been updated using different data layers therefore it encounters same level of error and precision that inherits in those layers.
Completeness	The data layer covers whole Bangladesh.
History of the dataset	Source of this data layer is a published map titled 'Bangladesh Earthquake Zones' prepared by Ministry of Relief Disaster Management Bureau, Govt. of Bangladesh in its activity Natural Hazard Mapping in 1992 at 1:10,00,000 scale.
Purpose of production	To identify the risk potentials of earthquake throughout the country and to use this data layer in different environment related analysis and planning purpose.
Process description	NWRD has captured the data layer from the published map 'Bangladesh Earthquake Zones' with input RMS error 0.003inches and output error 10meter. Other attribute information has been added according to the source map. International boundary and coastal boundary of the data layer have been updated with the new version generated by NWRD.

Sample of Data



Attribute Table

area	zone	coeffic
18984280	II	0.05g
26679855104	I	0.08g
1349822.75	II	0.05g
3931561	III	0.04g
170685.563	II	0.05g
686799.875	III	0.04g

Bundle Information (Data Field Description and Unit)

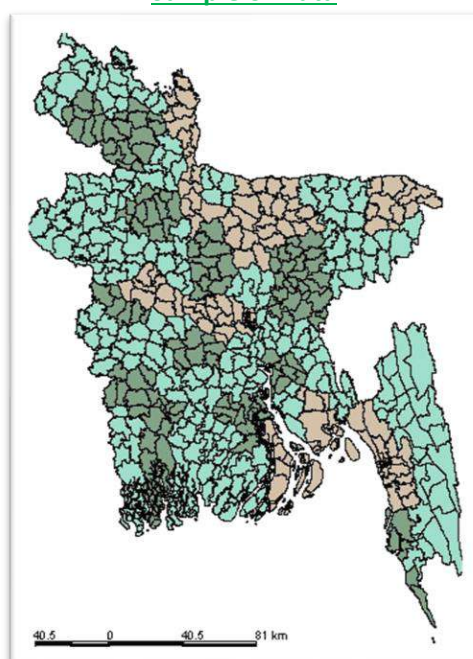
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square Meter
Zone	Zone is demarcated depending on the seismic co-efficient	
Coeffic	Risk potentials of earthquake throughout the country identified by 'Bangladesh Earthquake Zones' prepared by Ministry of Relief Disaster Management Bureau	

Name of Data layer: **Tornado Affected Area**

Metadata

Data Type	Spatial
Abstract	A spatial data layer demarcating the Tornado prone and severe storm prone areas of Bangladesh.
Quality	As the source was in 1:10,00,000 scale it is recommended that it should be used in same scale or smaller than this. Accuracy level of this data layer depends on the source map.
Completeness	The data layer covers all the tornado-affected districts of Bangladesh.
History of the dataset	Source map of this data layer is a published map titled 'Areas Affected by Tornadoes'. This map was prepared by the Disaster Management Bureau, Ministry of Disaster Management and Relief, Govt. of Bangladesh in 1992 under the project 'Assistance to Ministry of Relief in Coordination of Cyclone Rehabilitation' (BGD/91/021) under the activity 'Natural Hazard Mapping'. Scale of the original map was 1:10,00,000.
Purpose of production	This data layer can be useful in identifying the risk intensity of Tornado throughout the country.
Process description	NWRD has captured the data layer from the map 'Areas Affected by Tornadoes' with input RMS error 0.003 inch and output 10 meter also have been updated using the international boundary (recaptured for Chittagong part) prepared from Topo maps, published by Survey of Bangladesh (SoB) at 1:50,000 scale and coastline generated by EGIS-II using LANDSAT 1997 image.

Sample of Data



Attribute Table

area	geocode	district	thana	hazard	tornadoaff
515273615.9315	100409	Barguna	Amtali	0	No Data
100987247.8818	100419	Barguna	Bamna	0	No Data
324722084.8277	100428	Barguna	Barguna Sadar	0	No Data
164855337.9528	100447	Barguna	Betagi	0	No Data
155950729.7881	100602	Barisal	Agailjhara	2	Severe Storm Area
159577033.2979	100603	Barisal	Babuganj	2	Severe Storm Area
373798098.4196	100607	Barisal	Bakerganj	2	Severe Storm Area
130976368.0341	100610	Barisal	Banari Para	2	Severe Storm Area
148753952.0537	100632	Barisal	Gauradi	2	Severe Storm Area
220422679.4532	100669	Barisal	Muladi	2	Severe Storm Area

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square Meter
Geocode	Geocode (Division code + district code + thana code) is incorporated according to Geomaster database of BBS 1991.	
District	Name of each district according to BBS geomaster database of 1991	
Thana	Name of each thana according to BBS geomaster database of 1991	
Hazard	Identification of hazard type	
Tornadoaff	Name of the hazards	

Name of Data layer: **Salinity Impact in Sundarbans**

Metadata

Data Type	Tabular
Abstract	This data layer represents monthly salinity impact in Sundarbans measured at 4 stations of 4 ranges.
Quality	The data layer fully complies with the source data.
Completeness	Data exists only for 4 stations at four different ranges of Sundarbans.
History of the dataset	Department of Forestry (DoFo) generated this data layer.
Purpose of production	The data layer contains soil and water conductivity at different depths at stations of Sundarbans, those are very useful to the environmentalists, researchers and planners for better understanding of the present status of salinity in Sundarbans.
Process description	NWRD has collected this data from Department of Forestry and organized it in an ordered form to prepare it as a NWRD data layer.

Sample of Data

Range	Station	Parameter	Soildepthcode	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Chandpai	Chandpai	1	1	1989	-	-	-	5000	5500	5300	4700	4000	3800	4000	4000	4200
Chandpai	Chandpai	1	2	1989	-	-	-	48000	5300	5200	4800	3800	3700	4000	4000	4300
Chandpai	Chandpai	1	3	1989	-	-	-	47000	5300	5300	4800	3800	3700	3800	3800	4200
Chandpai	Chandpai	1	4	1989	-	-	-	47000	5200	5300	5000	4000	3600	3800	3800	4200
Chandpai	Chandpai	2	1	1989	-	-	-	14000	14000	11000	7000	5000	4000	4500	5000	6500
Chandpai	Chandpai	2	2	1989	-	-	-	14000	14000	11500	7500	5000	4000	4500	5000	6500
Khulna	Kassiabad	1	1	1989	-	-	-	6800	7500	7000	6400	5700	5600	5800	6000	6200
Khulna	Kassiabad	1	2	1989	-	-	-	6700	7400	7200	6500	5700	5600	5700	5900	6100

Bundle Information (Data Field Description and Unit)

PARAMETER	SOILDEPTHCODE	SOILDEPTH_CM_
1	1	0-1
1	2	1-25
1	3	25-50
1	4	75-100
2	1	High Tide
2	2	Low Tide

PARAMETER	DESCRIPTION
1	Soil Conductivity in Mhos
2	Water Conductivity in Mhos

Name of Data layer: **Soil Salinity Information**

Metadata

Data Type	Tabular
Abstract	A Tabular data layer provides soil salinity information of coastal region. Salt affected soils are caused by excess accumulation of salts, typically most pronounced at the soil surface. Salts can be transported to the soil surface by capillary transport from a salt laden water table and then accumulate due to evaporation; it can also be concentrated in soils due to human activity. As soil salinity increases, salt effects can result in degradation of soils and vegetation.
Quality	Quality of this data layer depends on the data analysis process of the source organization.
Completeness	The data layer covers costal area of Bangladesh
History of the dataset	SRDI collected soil salinity data in different location in coastal area of Bangladesh.
Purpose of production	This data layer are very useful to the environmentalists, researchers and planners for better understanding of the present status of salinity
Process description	NWRD has collected this data in digital format from SRDI and organized it in an ordered form to prepare it as a NWRD data layer.

Sample of Data

Siteno	Sseries	District	Upazila	Slocatation	Landtype	Year	Month	Ssalinity
3	Gopalpur	Narail	Narail Sadar	Narail ferry ghat	High Land	1998	Apr	0.78
3	Gopalpur	Narail	Narail Sadar	Narail ferry ghat	High Land	1998	Aug	0.65
3	Gopalpur	Narail	Narail Sadar	Narail ferry ghat	High Land	1998	Dec	0.92
3	Gopalpur	Narail	Narail Sadar	Narail ferry ghat	High Land	1998	Feb	0.92
3	Gopalpur	Narail	Narail Sadar	Narail ferry ghat	High Land	1998	Jan	0.92
3	Gopalpur	Narail	Narail Sadar	Narail ferry ghat	High Land	1998	Jul	0.65
3	Gopalpur	Narail	Narail Sadar	Narail ferry ghat	High Land	1998	Jun	0.92
3	Gopalpur	Narail	Narail Sadar	Narail ferry ghat	High Land	1998	Mar	0.78
3	Gopalpur	Narail	Narail Sadar	Narail ferry ghat	High Land	1998	May	0.92
3	Gopalpur	Narail	Narail Sadar	Narail ferry ghat	High Land	1998	Nov	0.65
3	Gopalpur	Narail	Narail Sadar	Narail ferry ghat	High Land	1998	Oct	0.65
3	Gopalpur	Narail	Narail Sadar	Narail ferry ghat	High Land	1998	Sep	0.65
3	Gopalpur	Narail	Narail Sadar	Narail ferry ghat	High Land	1999	Apr	1.04
3	Gopalpur	Narail	Narail Sadar	Narail ferry ghat	High Land	1999	Aug	-
3	Gopalpur	Narail	Narail Sadar	Narail ferry ghat	High Land	1999	Feb	0.65
3	Gopalpur	Narail	Narail Sadar	Narail ferry ghat	High Land	1999	Jan	0.65
3	Gopalpur	Narail	Narail Sadar	Narail ferrv ghat	High Land	1999	Jul	-

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Siteno	Site Number	
Sseries	Name of soil series define by SRDI	
District	Name of District	
Upazila	Name of Upazila	
Slocatation	Name of site for Soil Sampling	
Land type	Land type	
Year	Year	
Month	Month	
Ssalinity	Soil salinity	ds/m

Name of Data layer: **Heavy Metals Concentration (Dhaka)**

Metadata

Data Type	PDF file
Abstract	The data layer reveals the concentration of heavy metal in river water around Dhaka city and the recommended value for drinking water by Environmental Quality Standards (EQS) for Bangladesh (DoE July 1991).
Quality	This data layer fully complies with the source.
Completeness	The study was done at different points of the rivers around Dhaka city.
History of the dataset	This data is the result of testing of river water at different points around Dhaka city. The test was done by DWASA-BCSIR & SWMC-BUET under Dhaka Water Resources management Programme, 4th Dhaka Water Supply Project.
Purpose of production	To monitor the actual concentration of heavy metals as well as water quality of the rivers around Dhaka city and to compare with the recommended value for drinking water by DoE July, 1991
Process description	NWRD has converted the data into digital format and organized it in an ordered form.

Sample of Data

Concentration of Heavy Metals in Surrounding Rivers (DWASA '97)

Sample ID	Concentration (mg/l)						
	Al	Cd	Cr	Pb	Hg	Se	Zn
Buriganga: Hazaribagh	3.262	0.008	0.232	0.47	0.0033	0.0006	0.402
Buriganga: Chandnighat	5.396	0.006	0.006	0.25	0.0016	ND	0.984
Buriganga: Friendship Bridge	3.27	0.014	0.036	ND	0.0021	0.001	0.56
Turag: Amin Bazar	11.884	0.018	0.11	0.394	0.0058	0.0002	1.002
Lakhya: Demra Intake	2.952	0.006	0.028	0.074	0.0032	0.0005	0.246
Balu: Zirani Khal	2.166	0.006	0.0224	ND	0.0010	ND	1.122
Recommended value for drinking water **	0.2	0.005	0.05	0.05	0.001	0.01	5

ND Not detectable

** Environmental Quality Standards (EQS) for Bangladesh ; DoE July 1991.

Name of Data layer: **Supply Water Salinity, Khulna**

Metadata

Data Type	PDF file
Abstract	The data layer presents surface water salinity of Rupsa river, daily discharge characteristics in Khulna and Bardia station from 1991-92, mean monthly salinity at different stations of Khulna in 1990, salinity measured at Bardia station from 1980-81 to 19
Quality	As the data layer was collected by different organizations in different time its quality and reliability depend on the data collection and compilation procedure of those organizations.
Completeness	The data layer covers Khulna District.
History of the dataset	Components of this data layer have collected by different organizations in different time and the Environment section of WARPO has compiled it.
Purpose of production	The data layer was developed to monitor the salinity status of Khulna District.
Process description	NWRD has stored this data layer in arranged way.

Sample of Data

SURFACE WATER STUDIES: SALINITY AND DISCHARGE	
D1.	Salinity
Salinity levels have to be appreciated in the context of the different users, as summarized in Table D1. 1. It is also important to distinguish between the various 'salinity' measurement indicators, which are quoted in different sources:	
TDS	Total dissolved Solids; mg/l; ppm
CL	Chloride Levels; mg/l; ppm
EC	Electrical Conductivity; mmhos cm ⁻¹ or ?S (micro siemens in SI) {note mmhos or micro mhos are one millionth of a mhos}
TABLE D1. 1	
Guidelines for Threshold and Maximum Tolerance Levels for Salinity	
Degree of Salinity Problem	

Name of Data layer: **Surface Water Quality, Chittagong**

Metadata

Data Type	Tabular
Abstract	The data layer presents the values of different water quality parameters of rivers and other water sources at discharge locations of different industries with location and date of sample collected.
Quality	The data layer fully complies with the published book of DoE.
Completeness	The data layer contains information of the surface water quality of the major rivers at different discharge point of industries.
History of the dataset	The data has been collected and compiled based on sample survey carried out by the Department of Environment (DoE) and has been published in the book titled 'Water Quality Data of Department of Environment' and 'Water Quality Data 2007, Chittagong division', for the period of 1980-1993 and 2001 to 2006 respectively.
Purpose of production	Surface water quality measurements are very much essential for environmental monitoring, planning and limit setting of the discharged water quality of different industries into rivers. In this context the data layer can be used in environmental studies.
Process description	NWRD has converted the data layer into digital format and stored in an ordered form.

Sample of Data

Id	Place	Location	Watsrc	Labcode	Datetime	Time	Tempf	Templ	Phf	Phl	Ec	Chloride	Chlorine	Palkal	Talkal	Turbidity
195	MOHARA	MIDDLE OF THE RIVER HALDA AT MOHARA NEAR WASA INTAKE POINT (LOW)	HALDA RIVER	273	10/7/1990	-	30	27	-	7.3	110	6	0	0	56	30
196	MOHARA	SIDE OF THE RIVER HALDA AT MOHARA NEAR WASA INTAKE POINT (LOW)	HALDA RIVER	283	11/11/1990	-	30	29	-	7.4	130	3.5	0	0	64	35

Setsolid	Ts	Tds	Tdvs	Ss	Tvstvbc	Ammonia	Totalcol	Fc	Do	Bod	Cod	Calhard	Hardtotal	Nitraten	Orthphos

3.1	208	192	0	16	0/0	0	-	-	6	2.1	23	-	-	-	-

3.2	185	86	0	97	0/0	0	-	-	6.3	1.6	22	-	-	-	-

Sulphate	Lead	Nitrate	Ammonian	Chromium	Cadmium	Arsenic	Iron	Othermetal	Othermetal	Colicolon	Remark	Notes	Evaluation
0	-	-	-	-	-	-	0	0	-	-	0	-	-

0	-	-	-	-	-	-	0	0	-	-	0	-	-

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Id	Identification number	
Place	Location area	
Location	Location of sample water source	
Watsrc	Source of the sample water	
Labcode	Laboratory code of the test	
Datetime	Date	
Time	Sample collection time	
Tempf	Temperature of the field	Celcius
Templ	temperature of the laboratory	Celcius
Phf	pH of the sample at field	
Phl	pH of the sample at laboratory	
Ec	Electric conductivity	micro-mohs/cm
Chloride	Chloride	mg/l
Chlorine	Residual chlorine	mg/l
Palkal	Phosphate Alkalinity	mg/l
Talkal	Total Alkalinity	mg/l
Turbidity	Turbidity	JTU/NTU
Setsolid	Settable solids	ml/l
Ts	Total Solids	mg/l
Tds	Total Dissolved Solids	mg/l
Tdvs	Total Dissolved Volatile Solids	mg/l
Ss	Suspended Solids	mg/l
Tvstvbc	Total Volatile Solids/Total Virus Bacteria Count	mg/l,No./1 ml
Ammonia	Ammonia	mg/l
Totalcol	Total coliform	cfu/100ml
Fc	Fecal coliform	cfu/100ml
Do	Dissolved Oxygen	mg/l
Bod	Biochemical Oxygen Demand	mg/l (5 days BOD at 200C)

FIELD_NAME	FIELD_DESC	UNIT
Cod	Chemical Oxegen Demand	mg/l
Calhard	Calcium Hardness	mg/l
Hardtotal	Total Hardness	mg/l (CaCO3)
Nitraten		mg/l
Orthphos	Orthophosphate	mg/l
Sulphate	Sulphate	mg/l
Lead	Lead	mg/l
Nitrate	Nitrate/Nitrite	mg/l
Ammonian		mg/l
Chromium	Chromium	mg/l
Cadmium	Cadmium	mg/l
Arsenic	Arsenic	mg/l
Iron	Iron	mg/l
Othhermetal	Other metals	mg/l
Othernmetal	Other non-metals	mg/l
Colicolon	ColiColonies	Colonies/100 ml (24 hrs. incubation at 350C)
Remark	Remark	
Notes	Notes of the laboratory	
Evaluation	Evaluation of the sample	

Name of Data layer: **Surface Water Quality, Dhaka**

Metadata

Data Type	Tabular
Abstract	The data layer presents the values of different water quality parameters of rivers and other water sources at discharge locations of different industries with location and date of sample collected.
Quality	The data layer fully complies with the published book of DoE.
Completeness	The data layer contains information of the surface water quality of the major rivers at different discharge point of industries.
History of the dataset	The data has been collected and compiled based on sample survey carried out by the Department of Environment (DoE) and has been published in the book titled 'Water Quality Data of Department of Environment' and 'Water Quality Data 2007, Dhaka division', for the period of 1980-1998 and 2000 to 2007 respectively.
Purpose of production	Surface water quality measurements are very much essential for environmental monitoring, planning and limit setting of the discharged water quality of different industries into rivers. In this context the data layer can be used in environmental studies.
Process description	NWRD has converted the data layer into digital format and stored in an ordered form.

Sample of Data

Id	Place	Location	Watsrc	Labcode	Datetime	Time	Tempf	Templ	Phf	Phl	Ec	Chloride	Chlorine	Palkal
127	Ghorashal Fertilizer Factory	Main drain of Ghorashal Fertilizer Factory	Sitalakhya	449	7/8/1995	4:30:00 PM	33	30	7.4	7.5	200	30	-	0
128	Farashganj Khhyaghat	Horizontally 35' ahead from the point of the Burigonga river at Farashganj Khhyaghat, (1' depth)	Burigonga	452	7/9/1995	1:00:00 PM	30	29	7.3	7.4	130	8	-	0

Talkal	Turbidity	Setsolid	Ts	Tds	Tdvs	Ss	Tvstvbc	Ammonia	Totalcol	Fc	Do	Bod	Cod	Calhard	Hardtotal	Nitraten	Orthphos	Sulphate
150	<25	<0.1	194	144	-	50	-	-	-	5.8	0.3	-	-	-	-	-	-	-
74	62	0.1	155	95	-	60	-	-	-	6.6	3.5	-	-	-	-	-	-	-

Lead	Nitrate	Ammonian	Chromium	Cadmium	Arsenic	Iron	Othermetal	Othermetal	Colicolon	Remark	Notes	Evaluation
-	-	-	-	-	-	-	-	-	-	-	-	All parameters are acceptable but SS is upper than EQS parameters.
-	-	-	-	-	-	-	-	-	-	-	-	All parameters are acceptable but SS is upper than EQS parameters.

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Id	Identification number	
Place	Location area	
Location	Location of sample water source	
Watsrc	Source of the sample water	
Labcode	Laboratory code of the test	
Datetime	Date	
Time	Sample collection time	
Tempf	Temperature of the field	Celcius
Templ	temperature of the laboratory	Celcius
Phf	pH of the sample at field	
Phl	pH of the sample at laboratory	
Ec	Electric conductivity	micro-mohs/cm
Chloride	Chloride	mg/l
Chlorine	Residual chlorine	mg/l
Palkal	Phosphate Alkalinity	mg/l
Talkal	Total Alkalinity	mg/l
Turbidity	Turbidity	JTU/NTU
Setsolid	Settable solids	ml/l
Ts	Total Solids	mg/l
Tds	Total Dissolved Solids	mg/l
Tdvs	Total Dissolved Volatile Solids	mg/l
Ss	Suspended Solids	mg/l
Tvstvbc	Total Volatile Solids/Total Virus Bacteria Count	mg/l, No./1 ml
Ammonia	Ammonia	mg/l
Totalcol	Total coliform	cfu/100ml
Fc	Fecal coliform	cfu/100ml
Do	Dissolved Orogen	mg/l
Bod	Biochemical Orogen Demand	mg/l (5 days BOD at 200C)
Cod	Chemical Orogen Demand	mg/l

FIELD_NAME	FIELD_DESC	UNIT
Calhard	Calcium Hardness	mg/l
Hardtotal	Total Hardness	mg/l (CaCO ₃)
Nitraten		mg/l
Orthphos	Orthophosphate	mg/l
Sulphate	Sulphate	mg/l
Lead	Lead	mg/l
Nitrate	Nitrate/Nitrite	mg/l
Ammonian		mg/l
Chromium	Chromium	mg/l
Cadmium	Cadmium	mg/l
Arsenic	Arsenic	mg/l
Iron	Iron	mg/l
Othermetal	Other metals	mg/l
Othernmetal	Other non-metals	mg/l
Colicolon	ColiColonies	Colonies/100 ml (24 hrs. incubation at 350C)
Remark	Remark	
Notes	Notes of the laboratory	
Evaluation	Evaluation of the sample	

Name of Data layer: **Surface Water Quality, Dhaka City**

Metadata

Data Type	Tabular
Abstract	The data layer presents water quality parameter values tested at some rivers around Dhaka city and waste water of different areas of the city with location and date of sample collection from 1997 to 1998.
Quality	This data layer is the result of some tests, therefore its quality depends on the sample collection and accuracy of the test.
Completeness	The data layer presents the water quality of the rivers around and some wastewater locations of Dhaka City.
History of the dataset	SWMC collected the data under the projects namely, WSP (Water Supply Program)1998, Fourth Dhaka Water Supply Project, and Dhaka Water Resources Management Program.
Purpose of production	Surface water quality measurements are very much essential for environmental monitoring and planning. In this context the data layer can be used in environmental studies.
Process description	NWRD has stored the data layer in an organized form.

Sample of Data

Sample ID	Nature of Sample	Date of Collection	Parameters Tested (mg/l)									
			BOD	NH3 - N	NO3 - N	T - PO4 as P	Cr	Pb	Zn	F. Coli (1000/100ml)	T. Coli (1000/100ml)	
S-3	Waste Water	1/5/1998	11.0	NA	NA	NA	Nil	Nil	1.102	3.1	3.8	
S-3	Waste Water	2/9/1998	95.0	NA	NA	NA	0.015	Nil	2.999	0.42	0.56	
S-3	Waste Water	2/24/1998	155.0	4.42	NA	0.370	0.016	0.022	0.163	10.8		
S-4	Waste Water	1/5/1998	27.0	NA	NA	NA	0.017	0.057	0.210	82	102	
S-4	Waste Water	2/15/1998	90.0	10.53	NA	1.890	0.014	0.066	2.392	520	640	
S-4	Waste Water	2/4/1998	42.5	NA	NA	NA	0.022	0.016	2.989	1200		
S-5	Waste Water	1/5/1998	51.0	NA	NA	NA	0.013	0.049	0.265	836	987	
S-5	Waste Water	2/15/1998	240.0	27.63	NA	7.150	0.024	0.057	0.821	32000	54000	
S-5	Waste Water	2/4/1998	230.0	NA	NA	NA	0.027	0.089	3.555	9200		
S-6	Waste Water	1/5/1998	52.0	NA	NA	NA	0.017	0.016	0.230	525	667	
S-6	Waste Water	2/15/1998	390.0	33.43	NA	8.010	0.018	0.058	0.821	3000	3920	
S-6	Waste Water	2/4/1998	85.0	NA	NA	NA	0.031	0.114	4.941	2000		
S-7	Waste Water	12/29/1997	400.0	NA	NA	NA	10.080	NA	NA			
S-7	Waste Water	1/11/1998	560.0	NA	NA	NA	31.083	NA	NA			
S-7	Waste Water	2/11/1998	420.0	98.90	NA	8.820	17.240	0.151	2.654	3200		
S-8	Waste Water	12/29/1997	110.0	NA	NA	NA	0.058	NA	NA			
S-8	Waste Water	1/11/1998	155.0	NA	NA	NA	0.125	NA	NA			
S-8	Waste Water	2/11/1998	580.0	40.88	NA	13.300	0.270	0.111	2.161	17600		
S-9	Waste Water	1/11/1998	305.0	NA	NA	NA	0.039	NA	NA			
S-9	Waste Water	2/9/1998	240.0	50.45	NA	12.790	0.029	0.129	2.480	24800		
S-10	Waste Water	1/11/1998	510.0	NA	NA	NA	0.119	NA	NA			
S-10	Waste Water	2/9/1998	520.0	43.23	NA	14.940	0.091	0.144	4.489	20000		
Mohaa - K	Waste Water	12/29/1997	200.0	NA	NA	NA	0.080	NA	NA			

Bundle Information (Data Field Description and Unit)

SWQWSPCode		
Field Name	Field Description	Unit
Sample ID	Sample ID	
Nature of Sample	Nature of Sample	
Date of Collection	Date of Collection	
BOD	Biological Oxygen Demand	mg/l
NH3-N	Ammonia as Nitrogen	mg/l
NO3-N	Nitrate as Nitrogen	mg/l
T-PO4 as P	Total Phosphate as Phosphorus	mg/l
Cr	Cromium	mg/l
Pb	Lead	mg/l
Zn	Zinc	mg/l
F.Coli	Faecal Coliform	n/100 ml
T.Coli	Total Coliform	n/100 ml

Name of Data layer: **Surface Water Quality, Khulna**

Metadata

Data Type	Tabular
Abstract	The data layer presents the values of different water quality parameters of rivers and other water sources at discharge locations of different industries with location and date of sample collected.
Quality	The data layer fully complies with the published book of DoE.
Completeness	The data layer contains information of the surface water quality of the major rivers at different discharge point of industries.
History of the dataset	The data has been collected and compiled based on sample survey carried out by the Department of Environment (DoE) and has been published in the book titled 'Water Quality Data of Department of Environment' and 'Water Quality Data 2007, Khulna division', for the period of 1980-1993 and 2001 to 2006 respectively.
Purpose of production	Surface water quality measurements are very much essential for environmental monitoring, planning and limit setting of the discharged water quality of different industries into rivers. In this context the data layer can be used in environmental studies.
Process description	NWRD has converted the data layer into digital format and stored in an ordered form.

Sample of Data

Id	Place	Location	Watsrc	Labcode	Datetime	Time	Tempf	Templ	Phf	Phl	Ec	Chloride	Chlorine	Palkal
197	CHORER HAT	MIDDLE OF THE RIVER BHOIRAB NEAR CHORERHAT GHAT (DEEP) (HIGH)	BHOIRAB RIVER		185 5/16/1989	12:40:00 PM	35	33	7.9	8	8780	1990	0	0
198	CHORER HAT	SIDE OF THE RIVER BHOIRAB NEAR CHORERHAT GHAT(LOW)	BHOIRAB RIVER	228	6/8/1989	10:30:00 AM	30	31	8	8	2500	425	0	0

Talkal	Turbidity	Setsolid	Ts	Tds	Tdvs	Ss	Tvstvbc	Ammonia	Totalcol	Fc	Do	Bod	Cod	Calhard	Hardtotal	Nitraten	Orthphos	Sulphate
128	-	-	0	0	0	0.0		0	-	-	6.2	1.8	0	-	-	-	-	0
112	-	-	0	0	0	0.0		0	-	-	6.8	1.2	0	-	-	-	-	0

Lead	Nitrate	Ammonian	Chromium	Cadmium	Arsenic	Iron	Othermetal	Othernmetal	Colicolon	Remark	Notes	Evaluation
-	-	-	-	-	0	0.2	-	-	0	-	-	-
-	-	-	-	-	0	0.2	-	-	0	-	-	-

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Id	Identification number	
Place	Location area	
Location	Location of sample water source	
Watsrc	Source of the sample water	
Labcode	Laboratory code of the test	
Datetime	Date	
Time	Sample collection time	
Tempf	Temperature of the field	Celcius
Templ	temperature of the laboratory	Celcius
Phf	pH of the sample at field	
Phl	pH of the sample at laboratory	
Ec	Electric conductivity	micro-mohs/cm
Chloride	Chloride	mg/l
Chlorine	Residual chlorine	mg/l
Palkal	Phosphate Alkalinity	mg/l
Talkal	Total Alkalinity	mg/l
Turbidity	Turbidity	JTU/NTU
Setsolid	Settable solids	ml/l
Ts	Total Solids	mg/l
Tds	Total Dissolved Solids	mg/l
Tdvs	Total Dissolved Volatile Solids	mg/l
Ss	Suspended Solids	mg/l
Tvstvbc	Total Volatile Solids/Total Virus Bacteria Count	mg/l, No./1 ml
Ammonia	Ammonia	mg/l
Totalcol	Total coliform	cfu/100ml
Fc	Fecal coliform	cfu/100ml
Do	Dissolved Oxygen	mg/l
Bod	Biochemical Oxygen Demand	mg/l (5 days BOD at 200C)
Cod	Chemical Oxygen Demand	mg/l
Calhard	Calcium Hardness	mg/l
Hardtotal	Total Hardness	mg/l (CaCO ₃)
Nitraten		mg/l
Orthphos	Orthophosphate	mg/l
Sulphate	Sulphate	mg/l
Lead	Lead	mg/l
Nitrate	Nitrate/Nitrite	mg/l
Ammonian		mg/l
Chromium	Chromium	mg/l
Cadmium	Cadmium	mg/l
Arsenic	Arsenic	mg/l
Iron	Iron	mg/l
Othermetal	Other metals	mg/l
Othernmetal	Other non-metals	mg/l

FIELD_NAME	FIELD_DESC	UNIT
Colicolon	ColiColonies	Colonies/100 ml (24 hrs. incubation at 350C)
Remark	Remark	
Notes	Notes of the laboratory	
Evaluation	Evaluation of the sample	

Name of Data layer: **Surface Water Quality, Rajshahi**

Metadata

Data Type	Tabular
Abstract	The data layer presents the values of different water quality parameters of rivers and other water sources at discharge locations of different industries with location and date of sample collected.
Quality	The data layer fully complies with the published book of DoE.
Completeness	The data layer contains information of the surface water quality of the major rivers at different discharge point of industries.
History of the dataset	The data has been collected and compiled based on sample survey carried out by the Department of Environment (DoE) and has been published in the book titled 'Water Quality Data of Department of Environment and 'Water Quality Data 2007, Rajshahi division', for the period of 1980-1993 and 2001 to 2006 respectively.
Purpose of production	Surface water quality measurements are very much essential for environmental monitoring, planning and limit setting of the discharged water quality of different industries into rivers. In this context the data layer can be used in environmental studies.
Process description	NWRD has converted the data layer into digital format and stored in an ordered form.

Sample of Data

ID	Place	Location	Watsrc	Labcode	Datetime	Time	Tempf	Templ	Phf	Phi	Ec	Chloride	Chlorine	Palkal	Talkal	Turbidity	Setsolid
189	Effluent of Marshal Distillery	Effluent of Marshal Distries Main drain	Effluent from Main drain	45	12/17/2000	-	42	-	-	2.70000	6800	-	-	0.0	-		
190	Effluent of Marshal Distillery	Effluent of Marshal Distries Main drain	Effluent from Main drain	31	4/27/2001	-	-	40	-	2.430000	2650	-	-	0.0	-		
191	Effluent of Marshal Distillery	Effluent of Marshal Distries Main drain	Effluent from Main drain	42	5/20/2001	-	-	42	-	2.620000	1600	-	-	0.0	-		
192	Effluent of Marshal Distillery	Effluent of Marshal Distries Main drain	Effluent from Main drain	52	7/11/2001	-	-	38	-	3.410000	1225	-	-	0.0	-		
Ts	Tds	Tdvs	Ss	Tvstvbc	Ammonia	Totalcol	Fc	Do	Bod	Cod	Calhard	Hardtotal	Nitraten	Orthphos	Sulphate	Lead	Nitrate
-	60000	20000	-	-	-	-	-	0	-	80000	-	-	-	-	-	-	-
30000	20000	-	-	-	-	-	-	0	710	40000	-	-	-	-	-	-	-
30000	10000	-	-	-	-	-	-	0	620	40000	-	-	-	-	-	-	-
9456	6748	-	-	-	-	-	-	0	600	30000	-	-	-	-	-	-	-

Orthophos	Sulphate	Lead	Nitrate	Ammonian	Chromium	Cadmium	Arsenic	Iron	Othermetal	Othermetal	Colicolon	Remark	Notes	Evaluation
-	-	-	-	-	-	-	-	5.8	-	-	-	-	-	-
-	-	-	-	-	-	-	-	1.6	-	-	-	-	-	-
-	-	-	-	-	-	-	-	1.5	-	-	-	-	-	-
-	-	-	-	-	-	-	-	1.2	-	-	-	-	-	-

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Id	Identification number	
Place	Location area	
Location	Location of sample water source	
Watsrc	Source of the sample water	
Labcode	Laboratory code of the test	
Datetime	Date	
Time	Sample collection time	
Tempf	Temperature of the field	Celcius
Templ	temperature of the laboratory	Celcius
Phf	pH of the sample at field	
Phl	pH of the sample at laboratory	
Ec	Electric conductivity	micro-mohs/cm
Chloride	Chloride	mg/l
Chlorine	Residual chlorine	mg/l
Palkal	Phosphate Alkalinity	mg/l
Talkal	Total Alkalinity	mg/l
Turbidity	Turbidity	JTU/NTU
Setsolid	Settable solids	ml/l
Ts	Total Solids	mg/l
Tds	Total Dissolved Solids	mg/l
Tdvs	Total Dissolved Volatile Solids	mg/l
Ss	Suspended Solids	mg/l
Tvstvbc	Total Volatile Solids/Total Virus Bacteria Count	mg/l,No./1 ml
Ammonia	Ammonia	mg/l
Totalcol	Total coliform	cfu/100ml
Fc	Fecal coliform	cfu/100ml
Do	Dissolved Oxygen	mg/l
Bod	Biochemical Oxygen Demand	mg/l (5 days BOD at 200C)
Cod	Chemical Oxygen Demand	mg/l
Calhard	Calcium Hardness	mg/l

FIELD_NAME	FIELD_DESC	UNIT
Hardtotal	Total Hardness	mg/l (CaCO ₃)
Nitraten		mg/l
Orthphos	Orthophosphate	mg/l
Sulphate	Sulphate	mg/l
Lead	Lead	mg/l
Nitrate	Nitrate/Nitrite	mg/l
Ammonian		mg/l
Chromium	Chromium	mg/l
Cadmium	Cadmium	mg/l
Arsenic	Arsenic	mg/l
Iron	Iron	mg/l
Othermetal	Other metals	mg/l
Othernmetal	Other non-metals	mg/l
Colicolon	ColiColonies	Colonies/100 ml (24 hrs. incubation at 350C)
Remark	Remark	
Notes	Notes of the laboratory	
Evaluation	Evaluation of the sample	

Metadata

Data Type	PDF file
Abstract	The dataset contains analysis of the waste water test results of some sample tanneries including the information of different chemical components.
Quality	The data layer is not generated by NWRD. Quality and reliability of this data set depends on the data generation and compilation procedure of the source organization.
Completeness	The data layer covers some sample tannery.
History of the dataset	The data layer was generated through survey conducted on some sample tanneries by BKH in 1997, TA No 1769-BAN, under the 'Industrial Pollution Control Management,' project.
Purpose of production	To monitor the water pollution condition in concerned tanneries and to use this data layer in environmental studies.
Process description	NWRD has stored the data layer in an arranged way.

Sample of Data

Results of wastewater analysis from the sampled tanneries

Ind. No.	Sample Source	pH	BOD (mg/l)	COD (mg/l)	TSS (mg/l)	SO ₄ (mg/l)	S (mg/l)	NO ₃ -N (mg/l)	Kjeld-N (mg/l)	Cl (mg/l)	Cr (mg/l)	Pb (mg/l)	Zn (mg/l)
001	1+2+3+4	8.1	10,800	16,000	11,489	806	400			21,000	2,558	1.16	0.86
001A	2	11.7	1,050	1,540	4,323		175						
001B	3	8.7	2,200	3,800	6,856	2,736			1,650				
001C	5+6+8	4.3	2,550	3,100	7,730								
001D	1	3.5	1,100	2,250	15,868	3,869					3,818		
001E	4	7.0	4,110	6,500	8,965					17,250			
006	2	11.3	9,000	18,200	22,822		1,500			30,500			
009	2+4	9.6	1,500	6,500	5,992	221	85	550		16,000	361	0.27	0.48
011	Adjacent Drain	8.7	4,200	8,500	7,525	446	40			14,500	7	0.09	0.56
013	2+3+4	9.5	5,400	8,600	7,292	672	70	40	800	22,000	932	0.80	0.82
024	2+3	8.3	32,800	49,500	16,851					36,000			
025	4	4.2	28,800	51,600	22,535					40,000			
119	2+4	8.6	2,400	3,000	9,317	2,515	60	138	650	47,500	733	0.49	1.33
121	3+4	7.5	34,800	49,200	23,081	3,360	15	68	435	41,350	2,865	0.76	0.73
121A	4	4.5	350	2,820	11,269	1,718					3,382		
121B	9	4.5	0	300	4,015								
121C	3	8.4	1,750	2,400	6,275	2,948			1,770				
121D	1	7.7	2,450	4,800	5,547					13,750			
121E	2	11.0	3,330	4,100	6,430		230						

Name of Data layer: **Surface Water Quality (Non Tidal), BWDB**

Metadata

Data Type	Tabular
Abstract	The data layer presents the values of different water quality parameters of rivers and date of sample collected.
Quality	The data layer fully complies with BWDB.
Completeness	The data layer contains surface water quality (River water) information of the major rivers.
History of the dataset	Bangladesh Water Development Board has collected and stored the data through different stations.
Purpose of production	Surface water quality measurements are very much essential for environmental monitoring, planning and limit setting of the discharged water quality of different industries into rivers. In this context the data layer can be used in environmental and river morphological studies.
Process description	The data layer was collected from BWDB and NWRD has checked the obvious errors and stored in an ordered format.

Sample of Data

Stnid	Stnname	River	Note	Datetime	Bp	T	Ph	Do	Sal	Tds	Ec	Tp	Fe	Cl
110	Comilla	Gumti-Burinadi	Comilla	06/01/2009	-	30	8.1	8.01	0	31	162	25	0.4	25
110	Comilla	Gumti-Burinadi	Comilla	06/02/2009	-	32	7.1	8.1	0	31	162	25	0.3	25
110	Comilla	Gumti-Burinadi	Comilla	06/03/2009	-	30	7.1	8.1	1	31	163	23	0.4	25
110	Comilla	Gumti-Burinadi	Comilla	06/04/2009	-	32	7.1	8.1	0	32	163	25	0.4	25
110	Comilla	Gumti-Burinadi	Comilla	06/05/2009	-	31	7.1	8.08	0	31	163	21	0.4	25
110	Comilla	Gumti-Burinadi	Comilla	06/06/2009	-	29	7.1	8.01	0	31	163	21	0.4	25
134A	Baushi Bridge	Jhenai	Bausibridge	03/01/2009	-	30	7.7	8.1	0.1	32	240	30	0.5	24
134A	Baushi Bridge	Jhenai	Bausibridge	03/02/2009	-	30	7.6	8.2	0.1	31	240	30	0.5	24
134A	Baushi Bridge	Jhenai	Bausibridge	03/03/2009	-	30	7.5	8.3	0.1	33	245	33	0.5	25
134A	Baushi Bridge	Jhenai	Bausibridge	03/04/2009	-	27	7.8	8.1	0.1	32	235	32	0.2	22
134A	Baushi Bridge	Jhenai	Bausibridge	03/05/2009	-	28	7.6	8.2	0	32	238	28	0.5	21
134A	Baushi Bridge	Jhenai	Bausibridge	03/06/2009	-	29.5	7.5	8.01	0	32	239	26	0.5	24
211	Godagari	Mohananda	-	25/06/2002	762	29.38	9.12	2.87	0.09	1215	189.8	2032	-	-
211	Godagari	Mohananda	-	26/09/2002	-	30.13	8.71	5.48	0	0.12	195.8	-	-	-

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Stnid	Station ID	
Stnname	Station Name	
River	River Name	
Note	Note	
Datetime	Date	
Bp	Berometric Pressure	
T	Turbidity	JTU/NTU
Ph	pH	
Do	Dissolved Oxygen	mg/l

FIELD_NAME	FIELD_DESC	UNIT
Sal	Salinity	mg/l
Tds	Total Dissolved Solids	mg/l
Ec	Electric conductivity	micro-mohs/cm
Tp	Transparency	JTU/NTU
Fe	Iron	mg/l
Cl	Chloride	mg/l

Name of Data layer: **Surface Water Quality (Tidal), BWDB**

Metadata

Data Type	Tabular
Abstract	The data layer presents the values of different water quality parameters of rivers and date of sample collected.
Quality	The data layer fully complies with BWDB.
Completeness	The data layer contains surface water quality (River water) information of the major rivers.
History of the dataset	Bangladesh Water Development Board has collected and stored the data through different stations.
Purpose of production	Surface water quality measurements are very much essential for environmental monitoring, planning and limit setting of the discharged water quality of different industries into rivers. In this context the data layer can be used in environmental and river morphological studies.
Process description	The data layer was collected from BWDB and NWRD has checked the obvious errors and stored in an ordered format.

Sample of Data

Stnid	Stnname	River	Note	Datetime	Bp	T	Ph	Do	Sal	Tds	Ec	TP	Fe	Cl
115	Daudkandi	Gumti-Burinadi	-	06/01/2009	-	30	7	8.2	0	31	162	22	0.3	20
115	Daudkandi	Gumti-Burinadi	Daudkandi	06/02/2009	-	32	7	8.15	0	32	161	23	0.3	21
115	Daudkandi	Gumti-Burinadi	Daudkandi	06/03/2009	-	30	7	8.16	0	31	161	25	0.3	21
115	Daudkandi	Gumti-Burinadi	Daudkandi	06/04/2009	-	32	7	8.2	0	32	161	25	0.2	22
115	Daudkandi	Gumti-Burinadi	Daudkandi	06/05/2009	-	31	7	8.25	0	32	162	25	0.3	25
115	Daudkandi	Gumti-Burinadi	-	06/06/2009	-	29	7.1	8.01	0	32	162	23	0.3	27
177	Lakhpur	Lakhya	-	17/04/2001	-	30.4	7.95	6.9	-	255	510	-	-	-
177	Lakhpur	Lakhya	-	25/08/2007	-	30	8	0.07	0.02	130	2.66	61	14.4	12
177	Lakhpur	Lakhya	-	25/11/2007	-	26	7.2	0.08	0.03	132	265	362	1.3	20
177	Lakhpur	Lakhya	-	25/02/2008	-	21	7.6	0.06	0.03	131	260	60	1.5	25
177	Lakhpur	Lakhya	-	25/03/2008	-	30	7.8	0.09	0.02	1369	266	60	1.46	24
177	Lakhpur	Lakhya	-	25/04/2008	-	33.5	9.6	0.07	0.02	137	277	60	1.43	25
177	Lakhpur	Lakhya	-	25/05/2008	-	30	8.7	0.1	0.02	139	276	60	1.42	26
177	Lakhpur	Lakhya	-	11/06/2008	-	27	8.5	0.1	0.02	138	275	65	1.41	22

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Stnid	Station ID	
Stnname	Station Name	
River	River Name	
Note	Note	
Datetime	Date	
Bp	Beromettric Pressure	
T	Turbidity	JTU/NTU
Ph	pH	
Do	Dissolved Oxygen	mg/l
Sal	Salinity	mg/l
Tds	Total Dissolved Solids	mg/l

FIELD_NAME	FIELD_DESC	UNIT
Ec	Electric conductivity	micro-mohs/cm
Tp	Transparency	JTU/NTU
Fe	Iron	mg/l
Cl	Chloride	mg/l

Fisheries

Name of Data layer: **Bagda Culture Area**

Metadata

Data Type	Grid
Abstract	This data layer presents the bagda culture area of Khulna, Bagerhat, Satkhira district
Quality	NWRD has not done any quality check.
Completeness	Data is available for Khulna, Bagerhat, Satkhira district.
History of the dataset	NWRD has organized and stored this data layer in an ordered form.
Purpose of production	This data layer can be used in different fish resource related analysis with other related information such as number of people engaged, quantity and sale rate of bagda etc.
Process description	This data layer was generated from LANDSAT TM 2001 and compiled by land classification using Eardas Imagine software in GRID format.

Sample of Data

Attribute Table

Bundle Information (Data Field Description and Unit)

Name of Data layer: **Export of Fish and Fish Products**

Metadata

Data Type	Excel File
Abstract	The data layer presents amount of fish and fish products exported from Bangladesh during 1983-84 to 2008-09.
Quality	The data layer fully complies with the published source. No quality checking has been done by NWRD.
Completeness	The data layer covers the whole country.
History of the dataset	The data layer was generated and compiled by Export Promotion Bureau.
Purpose of production	The data layer has been developed with a view to calculate total quantity of exported fish and fish products and to estimate the total earning of different years from fisheries sector.
Process description	NWRD has collected the data from Fishery Statistical Yearbook 1983-84 to 2001-02 and converted it to digital file and stored it.

Sample of Data

Year	Fsrmpqnty	Fsrmpval	Ffroglqnty	Ffroglval	Ffishqnty	Ffishval	Dfishqnty	Dfishval	Sdfqnty
1983-84	8818	155.5	2495	19.25	2817	14.17	74	0.86	283
1984-85	12682	199.45	1365	10.27	3297	14.77	47	0.55	382
1985-86	13631	269.31	2463	30.07	5017	36.5	786	10.06	422
1986-87	16275	341.75	2168	30.56	4046	35.41	402	4.9	295
1987-88	15023	361.17	2708	42.42	4191	28.35	475	6.69	372
1988-89	15386	382.05	2685	43.82	2427	22.59	567	13.89	293

Sdfval	Ttcqnty	Ttcval	Sfmqnty	Sfmval	Otherqnty	Otherval	Totalqnty	Totalval	Ptee
3.21	440	2.52	43	1.3	-	-	14970	196.81	9.89
3.66	425	2.43	108	2.12	-	-	18306	233.25	9.66
4.95	679	4.11	50	1.25	-	-	23048	356.25	14.65
3.84	461	4.1	114	3.49	-	-	23761	424.05	12.99
4.81	524	6.06	130	4.62	-	-	23423	454.12	11.93
4.12	293	2.65	68	2.77	-	-	21719	471.89	11.51

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Year	Year	
Fsrmpqnty	Frozen Shrimp Quantity	Tons
Fsrmpval	Frozen Shrimp Value	Core Taka
Ffroglqnty	Frozen Frogleg	Tons
Ffroglval	Frozen Frogleg	Core Taka
Ffishqnty	Frozen Fish	Tons
Ffishval	Frozen Fish	Core Taka

FIELD_NAME	FIELD_DESC	UNIT
Dfishqnty	Dry Fish	Tons
Dfishval	Dry Fish	Core Taka
Sdfqnty	Saled & Dehydrated Fish	Tons
Sdfval	Saled & Dehydrated Fish	Core Taka
Ttcqnty	Turtles/Tortoise/Crab	Tons
Ttcval	Turtles/Tortoise/Crab	Core Taka
Sfmqnty	Shark fin & Fish Maws	Tons
Sfmval	Shark fin & Fish Maws	Core Taka
Otherqnty	Other	Tons
Otherval	Other	Core Taka
Totalqnty	Total	Tons
Totalval	Total	Core Taka
Ptee	Percentage of total Export Earning	Percentage

Name of Data layer: **Fish Catch by Species**

Metadata

Data Type	Tabular
Abstract	The data layer reveals total fish catch from inland and marine sources according to species type from 1985-86 to 2007-08.
Quality	The data layer fully complies with the published source.
Completeness	Information is available for the whole country.
History of the dataset	The data was recorded during Catch Assessment Survey by the Fisheries Resource Survey System, Department of Fisheries, Govt. of Bangladesh and published in Fishery Statistical Yearbook of Bangladesh. The species which has been considered in the database are : 1. Major Carp- Rui, Catla, Mrigal. 2. Exotic Carp- Silver Carp, Common Carp, Mirror Carp, Grass Carp. 3. Other Carp- Ghania, Kalbasu, Kalia. 4. Cat Fish- Rita, Boal, Pangas, Chital, Silon, Aor, Bacha. 5. Snake Head- Shol, Gazar Taki. 6. Live Fish- Koi, Singhi, Magur. 7. Other Marine Fish- Includes all other marine fishes except those mentioned above.
Purpose of production	The data layer has been generated with a view to inform species type wise marine and inland fish catch statistics and to use this data in fishery and other environment related analysis management and planning purposes.
Process description	NWRD has gathered the data from Fishery Statistical Yearbook and converted it to digital files and stored it in an arranged way.

Sample of Data

Species	Year	Inland	Marine	Total
Bombay Duck (Harpondon nehereus)	1985-86	-	21811	21811
Cat Fish	1985-86	29924	-	29924
Cat Fish	1986-87	18599	-	18599
Exotic Carp	1985-86	-	-	0
Exotic Carp	1986-87	11737	-	11737
Hilsa/Illich	1985-86	94794	96294	191088
Indian Salmon (Polydactylus Indicus)	1985-86	-	639	639
Jew Fish (Poa,Lambu,Kaladatina etc.)	1985-86	-	6680	6680
Live Fish	1985-86	14563	-	14563
Major Carp	1985-86	85275	-	85275
Major Carp	1986-87	88638	-	88638
Other Carp	1985-86	17972	-	17972
Other Carp	1986-87	10394	-	10394
Other Inland Fish	1985-86	253451	-	253451

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Year	Year	
Inland	Inland Fish Production	Metric Ton
Marine	Marine Fish Production	Metric Ton
Total	Total Fish Production	Metric Ton

ID	SPECIES	SPENAME
1	Major Carp	Rui, Catla, Marigal
2	Exotic Carp	Silver Carp,Common Carp,Mirror Carp,Grass Carp.
3	Other Carp	Ghania, Kalbaus, Kalia.
4	Cat Fish	Rita, Boal, Pangas, Chital, Silon, Aor,Bacha.
5	Sanke Head	Shol, Gazar,Taki.
6	Live Fish	Koi, Singhi,Magur
7	Other Marine Fish	Other Marine Fish includes all other marine fishes except those mentioned above
8	Inland/Marine	Inland and Marine Fish, all are in Mton

Name of Data layer: **Fish Catch by Species for All Rivers (19 Districts)**

Metadata

Data Type	Tabular
Abstract	The data layer contains 19 districts wise annual Fish catch information of all rivers from 1983-84 to 1994-95.
Quality	The data layer fully complies with Fishery Statistical YearBook of Bangladesh.
Completeness	Information is available for 19 old districts according to BBS census, 1974.
History of the dataset	The data was collected by the Department of Fisheries, Govt. of Bangladesh. Catch of Chittagong Hill Tracts is included in Chittagong district and catch of Khulna excludes the Sundarbands area.
Purpose of production	The data layer has been generated with a view to inform 19 district wise fish catch statistics and to use this data in fishery and other environment related analysis management and planning purposes.
Process description	NWRD has collected the data from Fishery Statistical Yearbook of Bangladesh (1983-84 to 1994-95), and converted it to digital version and stored it in an organized way. Fish catch of Jamalpur is included in Mymensing District. The name of Barisal district is changed to Bakerganj, according to BBS census, 1974.

Sample of Data

District	Distcode	Year	Mcarp	Ocarp	Catfish	Snkhead	Livefish	Hilsha	Bshrimp	Sshrimp	Misc
Bakerganj	6	1983-84	662	9	1902	-	96	44639	580	3616	8346
Bakerganj	6	1984-85	454	5	2844	-	58	36518	395	2353	7791
Bakerganj	6	1985-86	3	1	389	-	-	65278	114	1011	3754
Bakerganj	6	1986-87	3	-	81	-	-	52875	435	2230	4872
Bakerganj	6	1987-88	-	-	34	-	-	35119	75	543	12529
Bakerganj	6	1988-89	16	-	48	-	24	41104	499	307	6103
Bakerganj	6	1989-90	2	-	40	-	-	61461	-	257	2071
Bakerganj	6	1990-91	-	-	538	-	-	30641	-	121	3254
Bakerganj	6	1991-92	-	-	217	-	-	28861	2	78	321
Bakerganj	6	1992-93	8	-	203	-	-	31770	-	124	1237

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	Name of district	
Distcode	District Code	
Year	Year of catch	
Rcode	River Code	
Mcarp	Major Carp (Rui, Catla, Mrigal)	Mton
Ocarp	Other Carp (Ghania, Kalbasu, Kalia)	Mton
Catfish	Cat fish (Rita, Boal, Pangas, Silon, Aor, Bacha)	Mton
Snkhead	Snake Head (Shol, Gazar, Taki)	Mton
Livefish	Live fish (Koi, Singhi, Magur)	Mton
Hilsha	Hilsha	Mton
Bshrimp	Big shrimp	Mton
Sshrimp	Small shrimp	Mton
Misc	Miscellaneous (other fishes)	Mton

Name of Data layer: **Fish Catch by Species for All Rivers (64 Districts)**

Metadata

Data Type	Tabular
Abstract	The data layer contains 64 districts wise annual Fish catch information of all rivers from 1995-96 to 2007-08.
Quality	The data layer fully complies with Fishery Statistical YearBook of Bangladesh.
Completeness	Information is available for 64 districts according to BBS census.
History of the dataset	The data was collected by the Department of Fisheries, Govt. of Bangladesh.
Purpose of production	The data layer has been generated with a view to inform 64 district wise fish catch statistics and to use this data in fishery and other environment related analysis management and planning purposes.
Process description	NWRD has collected the data from Fishery Statistical Yearbook of Bangladesh (1995-96-to 2001-02), and converted it to digital version and stored it in an organized way.

Sample of Data

District	Distcode	Year	Mcarp	Ocarp	Catfish	Snkhead	Livefish	Hilsha	Bshrimp	Sshrimp	Misc
Bagerhat	1	1995-96	-	-	-	-	-	77	20	2980	1604
Bagerhat	1	1996-97	-	-	-	-	-	71	242	1129	1399
Bagerhat	1	1997-98	-	-	1	-	-	44	96	996	1305
Bagerhat	1	1998-99	-	-	-	-	-	64	105	860	984
Bagerhat	1	1999-00	-	-	-	-	-	27	666	3373	2367
Bagerhat	1	2000-01	-	-	-	-	-	725	120	308	3629
Bagerhat	1	2001-02	-	-	-	-	19	29	182	929	2560
Bandarban	3	1995-96	7	7	-	-	-	-	-	12	12

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	Name of district	
Distcode	District Code	
Year	Year of catch	
Rcode	River Code	
Mcarp	Major Carp (Rui, Catla, Mrigal)	Mton
Ocarp	Other Carp (Ghania, Kalbasu, Kalia)	Mton
Catfish	Cat fish (Rita, Boal, Pangas, Silon, Aor, Bacha)	Mton
Snkhead	Snake Head (Shol, Gazar, Taki)	Mton
Livefish	Live fish (Koi, Singhi, Magur)	Mton
Hilsha	Hilsha	Mton
Bshrimp	Big shrimp	Mton
Sshrimp	Small shrimp	Mton
Misc	Miscellaneous (other fishes)	Mton

Name of Data layer: **Fish Catch by Species for Other Rivers (19 Districts)**

Metadata

Data Type	Tabular
Abstract	The data layer contains 19 districts wise annual Fish catch information of all rivers excluding the major rivers (Padma, Meghna, Jamuna, Brahmaputra, Gorai and Old Brahmaputra) from 1983-84 to 1994-95.
Quality	The data layer fully complies with Fishery Statistical YearBook of Bangladesh.
Completeness	Information is available for 19 old districts according to BBS census, 1974.
History of the dataset	The data was collected by the Department of Fisheries, Govt. of Bangladesh. Catch of Chittagong Hill Tracts is included in Chittagong district and catch of Khulna excludes the Sundarbands area.
Purpose of production	The data layer has been generated with a view to inform 19 district wise fish catch statistics and to use this data in fishery and other environment related analysis management and planning purposes.
Process description	NWRD has collected the data from Fishery Statistical Yearbook of Bangladesh (1983-84 to 1994-95), and converted it to digital version and stored it in an organized way. Fish catch of Jamalpur is included in Mymensing District. The name of Barisal district is changed to Bakerganj, according to BBS census, 1974.

Sample of Data

District	Distcode	Year	Mcarp	Ocarp	Catfish	Snkhead	Livefish	Hilsha	Bshrimp	Sshrimp	Misc
Bakerganj	6	1984-85	293	5	820	-	58	12103	-	2071	4202
Bakerganj	6	1985-86	3	1	81	-	-	13860	112	785	2181
Bakerganj	6	1986-87	3	-	81	-	-	13115	435	635	3103
Bakerganj	6	1987-88	0	-	34	-	-	10849	75	541	5126
Bakerganj	6	1988-89	16	-	48	-	24	13138	266	262	2772
Bakerganj	6	1989-90	2	-	40	-	-	21129	-	257	1091
Bakerganj	6	1990-91	-	-	255	-	-	10981	-	121	1207
Bakerganj	6	1991-92	-	-	217	-	-	9663	2	78	142

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	Name of district	
Distcode	District Code	
Year	Year of catch	
Rcode	River Code	
Mcarp	Major Carp (Rui, Catla, Mrigal)	Mton
Ocarp	Other Carp (Ghania, Kalbasu, Kalia)	Mton
Catfish	Cat fish (Rita, Boal, Pangas, Silon, Aor, Bacha)	Mton
Snkhead	Snake Head (Shol, Gazar, Taki)	Mton
Livefish	Live fish (Koi, Singhi, Magur)	Mton
Hilsha	Hilsha	Mton
Bshrimp	Big shrimp	Mton
Sshrimp	Small shrimp	Mton
Misc	Miscellaneous (other fishes)	Mton

Name of Data layer: **Fish Catch by Species for Other Rivers (64 Districts)**

Metadata

Data Type	Tabular
Abstract	The data layer contains 64 districts wise annual Fish catch information of all rivers excluding the major rivers (Padma, Meghna, Jamuna and Brahmaputra) from 1995-96 to 2007-08.
Quality	The data layer fully complies with Fishery Statistical YearBook of Bangladesh.
Completeness	Information is available for 64 districts according to BBS census.
History of the dataset	The data was collected by the Department of Fisheries, Govt. of Bangladesh. Catch of Sundarbans is not included in Khulna district.
Purpose of production	The data layer has been generated with a view to inform 64 district wise fish catch statistics and to use this data in fishery and other environment related analysis management and planning purposes.
Process description	NWRD has collected the data from Fishery Statistical Yearbook of Bangladesh (1995-96 to 2001-02), and converted it to digital version and stored it in an organized way.

Sample of Data

District	Distcode	Year	Mcarp	Ocarp	Catfish	Snkhead	Livefish	Hilsha	Bshrimp	Sshrimp	Misc
Bagerhat	1	1995-96	-	-	-	-	-	77	20	2980	1604
Bagerhat	1	1996-97	-	-	-	-	-	71	242	1129	1399
Bagerhat	1	1997-98	-	-	1	-	-	44	96	996	1305
Bagerhat	1	1998-99	-	-	-	-	-	64	105	860	984
Bagerhat	1	1999-00	-	-	-	-	-	27	666	3373	2367
Bagerhat	1	2000-01	-	-	-	-	-	725	120	308	3629
Bagerhat	1	2001-02	-	-	-	-	19	29	182	929	2560
Bandarban	3	1995-96	7	7	-	-	-	-	-	12	12

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	Name of district	
Distcode	District Code	
Year	Year of catch	
Rcode	River Code	
Mcarp	Major Carp (Rui, Catla, Mrigal)	Mton
Ocarp	Other Carp (Ghania, Kalbasu, Kalia)	Mton
Catfish	Cat fish (Rita, Boal, Pangas, Silon, Aor, Bacha)	Mton
Snkhead	Snake Head (Shol, Gazar, Taki)	Mton
Livefish	Live fish (Koi, Singhi, Magur)	Mton
Hilsha	Hilsha	Mton
Bshrimp	Big shrimp	Mton
Sshrimp	Small shrimp	Mton
Misc	Miscellaneous (other fishes)	Mton

Name of Data layer: **Fish Catch by Species for Principal Rivers (19 Districts)**

Metadata

Data Type	Tabular
Abstract	The data layer contains 19 districts wise annual Fish catch information of major rivers (Padma, Meghna, Jamuna, Brahmaputra, Gorai and Old Brahmaputra) from 1983-84 to 1994-95.
Quality	The data layer fully complies with Fishery Statistical YearBook of Bangladesh.
Completeness	Information is available for 19 old districts according to BBS census, 1974.
History of the dataset	The data was collected by the Department of Fisheries, Govt. of Bangladesh.
Purpose of production	The data layer has been generated with a view to inform 19 district wise fish catch statistics and to use this data in fishery and other environment related analysis management and planning purposes.
Process description	NWRD has collected the data from Fishery Statistical Yearbook of Bangladesh (1983-84 to 1994-95), and converted it to digital version and stored it in an organized way. Fish catch of Jamalpur is included in Mymensing District. Fish catch of Tetulia river is included in Barisal district and the name of Barisal is changed to Bakerganj, according to BBS census, 1974.

Sample of Data

District	Distcode	Year	Rivercode	Mcarp	Ocarp	Catfish	Snkhead	Livfish	Hilsha	Bshrimp	Sshrimp	Misc
Bakerganj	6	1983-84	2	-	-	2045	-	-	39786	-	4955	4464
Bakerganj	6	1983-84	6	212	-	621	-	-	25560	580	307	1726
Bakerganj	6	1983-84	7	89	9	24	-	96	672	-	312	612
Bakerganj	6	1984-85	6	161	-	2024	-	-	24415	395	282	3589
Bakerganj	6	1985-86	6	-	-	308	-	-	51418	2	226	1573
Bakerganj	6	1986-87	6	-	-	-	-	-	39760	-	1595	1769
Bakerganj	6	1987-88	6	-	-	0	-	-	24270	-	2	7403
Bakerganj	6	1988-89	6	-	-	-	-	-	27966	233	45	3331

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	Name of district	
Distcode	District Code	
Year	Year of catch	
Rcode	River Code	
Mcarp	Major Carp (Rui, Catla, Mrigal)	Mton
Ocarp	Other Carp (Ghania, Kalbasu, Kalia)	Mton
Catfish	Cat fish (Rita, Boal, Pangas, Silon, Aor, Bacha)	Mton
Snkhead	Snake Head (Shol, Gazar, Taki)	Mton
Livfish	Live fish (Koi, Singhi, Magur)	Mton
Hilsha	Hilsha	Mton
Bshrimp	Big shrimp	Mton
Sshrimp	Small shrimp	Mton
Misc	Miscellaneous (other fishes)	Mton

Name of Data layer: **Fish Catch by Species for Principal Rivers (64 Districts)**

Metadata

Data Type	Tabular
Abstract	The data layer contains 64 districts wise annual Fish catch information of major rivers (Padma, Meghna, Jamuna and Brahmaputra) from 1995-96 to 2007-08.
Quality	The data layer fully complies with Fishery Statistical YearBook of Bangladesh.
Completeness	Information is available for 64 districts according to BBS census.
History of the dataset	The data was collected by the Department of Fisheries, Govt. of Bangladesh.
Purpose of production	The data layer has been generated with a view to inform 64 district wise fish catch statistics and to use this data in fishery and other environment related analysis management and planning purposes.
Process description	NWRD has collected the data from Fishery Statistical Yearbook of Bangladesh (1995-96-to 2001-02), and converted it to digital version and stored it in an organized way.

Sample of Data

District	Distcode	Year	Rivercode	Mcarp	Ocarp	Catfish	Snkhead	Livefish	Hilsha	Bshrimp	Sshrimp	Misc
Barisal	6	1995-96	6	-	-	230	-	-	9876	-	-	4380
Barisal	6	1996-97	6	-	-	199	-	-	14365	-	-	4720
Barisal	6	1997-98	6	-	-	205	-	-	15035	-	-	4935
Barisal	6	1998-99	6	-	-	205	-	-	15035	-	-	4935
Barisal	6	1999-00	6	-	-	321	-	-	16235	-	-	4579
Barisal	6	2000-01	6	-	-	301	-	-	15231	-	-	4794
Barisal	6	2001-02	6	-	-	285	-	-	14102	-	-	4666
Bhola	9	1995-96	6	-	-	119	-	-	8001	-	-	5648

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	Name of district	
Distcode	District Code	
Year	Year of catch	
Rcode	River Code	
Mcarp	Major Carp (Rui, Catla, Mrigal)	Mton
Ocarp	Other Carp (Ghania, Kalbasu, Kalia)	Mton
Catfish	Cat fish (Rita, Boal, Pangas, Silon, Aor, Bacha)	Mton
Snkhead	Snake Head (Shol, Gazar, Taki)	Mton
Livefish	Live fish (Koi, Singhi, Magur)	Mton
Hilsha	Hilsha	Mton
Bshrimp	Big shrimp	Mton
Sshrimp	Small shrimp	Mton
Misc	Miscellaneous (other fishes)	Mton

Name of Data layer: **Fish Catch from Baors (19 Districts)**

Metadata

Data Type	Tabular
Abstract	The data layer reveals annual total fish catch statistics from Baors by four old districts and the area of Baors from 1983-84 to 2001-02.
Quality	The data layer fully complies with the published source. No quality check on the values done by NWRD.
Completeness	The data layer contains fish catch statistics of 4 old district from 1983-84 to 2001-02.
History of the dataset	The data was recorded from Catch Assessment Survey by the Fisheries Resource Survey System, Department of Fisheries, Govt. of Bangladesh and published in Fishery Statistical Yearbooks. Area have been generated from SPARRSO report. The data layers are organised by Government and Private managed baors. The Government managed baors are : Bergobindapur, Baluhar, Joydia, Fatehpur, Marjad, Kathgara, & Jampa. and Private managed baors are : Sirisdia, Baonidaha, Simulia, Korincha, Sarjad & Rajapur.
Purpose of production	The data layer has been generated with a view to calculate total fish catch from Baors and to compare with the production of previous years.
Process description	NWRD has accumulated the data from Fishery Statistical Yearbook and converted it to digital files and stored it in an arranged way.

Sample of Data

District	Year	Areabaors	Catbaors	Rategovt	Rateprvt
Faridpur	1983-84	965	130	420	135
Faridpur	1984-85	965	169	-	-
Faridpur	1985-86	965	125	390	129
Faridpur	1986-87	965	172	318	177
Faridpur	1987-88	965	162	412	167
Jessore	1983-84	2734	491	420	135
Jessore	1984-85	2734	531	-	-
Jessore	1985-86	2734	612	390	129
Jessore	1986-87	2734	685	318	177
Jessore	1987-88	2734	793	412	167

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	District Name	
Year	Year of annual total catch	
Areabaors	Area of Baors	Hectare
Catbaors	Catch of Boars	Mton
Rategovt	Catch rate of Government managed Baors	kg/ha
Rateprvt	Catch rate of Private managed Baors	kg/ha

Name of Data layer: **Fish Catch from Beels (19 Districts)**

Metadata

Data Type	Tabular
Abstract	The data layer reveals 19 (old) district-wise annual total fish catch statistics from beels and the area of beels from 1983-84 to 2001-02.
Quality	The data layer fully complies with the published source. No quality check has been done by NWRD.
Completeness	The data layer presents old 19 district wise fish statistics.
History of the dataset	Areas of the beel were generated by SPARRSO and published in SPARRSO Report (Beels & Dead River) and the fish catch is collected from Catch Assessment Survey by the Fisheries Resource Survey System, Department of Fisheries. Catch of Jamalpur is included in Mymensingh District.
Purpose of production	The data layer has been generated with a view to calculate total fish catch from beels and to give a comparative view of the production of previous years.
Process description	NWRD has accumulated the data from Fishery Statistical Yearbook, converted it to digital files and stored it in an arranged way.

Sample of Data

District	Distcode	Year	Areabeel	Estcatch
BARISAL	6	1983-84	79	36
BARISAL	6	1984-85	79	14
BOGRA	10	1983-84	3801	1710
CHITTAGONG	15	1983-84	456	206
CHITTAGONG HILL TRACTS	99	1983-84	-	-
COMILLA	19	1983-84	1103	496
DHAKA	26	1983-84	4918	2213
DINAJPUR	27	1983-84	1252	563
FARIDPUR	29	1983-84	1915	862
JESSORE	41	1983-84	5037	2267

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	Districts Name	
Distcode	District code	
Year	Year of annual total catch	
Areabeel	Area of Beels	Hectare
Estcatch	Estimated annual total catch	Mton

Name of Data layer: **Fish Catch from Flood Land (19 Districts)**

Metadata

Data Type	Tabular
Abstract	The data layer presents 19 old district wise average fish catch per household and annual total estimated catch statistics from flood land from 1983-84 to 1992-93.
Quality	The data layer fully complies with the published source.
Completeness	The data layer presents 19 old district wise fish catch statistics from flood land.
History of the dataset	The data has been recorded and compiled during Catch Assessment of Subsistence Fisheries Survey by the Fisheries Resource Survey System, Department of Fisheries, Govt. of Bangladesh and published in Fishery Statistical Yearbooks of Bangladesh .
Purpose of production	The data layer has been generated with a view to calculate total fish catch from flood lands and to provide a comparative view of the production of previous years.
Process description	NWRD has accumulated the data from Fishery Statistical Yearbook, converted it to digital files and stored it in an arranged way.

Sample of Data

District	Districtcode	Year	Fhh	Avgcathh	Tcatest
BAKERGANJ	6	1991-92	556	26.17	14550.52
BAKERGANJ	6	1992-93	558	16.55	9234.9
BOGRA	10	1992-93	392	8.94	3504.48
CHITTAGONG	15	1992-93	719	14.94	10741.86
CHITTAGONG HILL TRACTS	99	1992-93	71	36.26	2574.46
COMILLA	19	1992-93	916	46.47	42566.52
DHAKA	26	1992-93	1409	20.26	28546.34
DINAJPUR	27	1992-93	466	22.69	10573.54
FARIDPUR	29	1992-93	573	44.59	25550.07
JESSORE	41	1992-93	482	27.35	13182.7

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	19/64 District Name	
Districtcode	District Code	
Year	Year of catch	
Fhh	No of subsistence fisheries HH	(000)
Avgcathh	Average catch per HH	Kg
Tcatest	Total catch estimated	Mton

Name of Data layer: **Fish Catch from Flood Land (64 Districts)**

Metadata

Data Type	Tabular
Abstract	The data layer presents 64 district wise average fish catch per household and annual total estimated catch statistics from flood land from 1993-94 to 2007-08.
Quality	The data layer fully complies with the published source.
Completeness	The data layer presents 64 district wise fish catch statistics from flood land.
History of the dataset	The data has been recorded and compiled during Catch Assessment of Subsistence Fisheries Survey by the Fisheries Resource Survey System, Department of Fisheries, Govt. of Bangladesh and published in Fishery Statistical Yearbooks of Bangladesh.
Purpose of production	The data layer has been generated with a view to calculate total fish catch from flood lands and to provide a comparative view of the production of previous years.
Process description	NWRD has accumulated the data from Fishery Statistical Yearbook, converted it to digital files and stored it in an arranged way.

Sample of Data

District	Districtcode	Year	Fhh	Avgcathh	Tcatest
BAGERHAT	1	1993-94	237	11.72	2777.64
BANDARBAN	3	1993-94	18	17.03	306.54
BARGUNA	4	1993-94	86	16.74	1439.64
BARISAL	6	1993-94	245	2.62	641.9
BHOLA	9	1993-94	168	4	672
BOGRA	10	1993-94	439	4.85	2129.15
BRAHMANBARIA	12	1993-94	187	52.99	9909.13
CHANDPUR	13	1993-94	274	55.51	15209.74
CHITTAGONG	15	1993-94	570	15.7	8949
CHUADANGA	18	1993-94	53	12.72	674.16

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	19/64 District Name	
Districtcode	District Code	
Year	Year of catch	
Fhh	No of subsistence fisheries HH	(000)
Avgcathh	Average catch per HH	Kg
Tcatest	Total catch estimated	Mton

Name of Data layer: **Fish Catch from Inland Water (19 Districts)**

Metadata

Data Type	Tabular
Abstract	The data layer contains 19 district wise Fish catch information from 1983-84 to 1994-95.
Quality	The data layer fully complies with Fishery Statistical YearBook of Bangladesh.
Completeness	Information is available for 19 districts.
History of the dataset	The data was collected by the Department of Fisheries, Govt. of Bangladesh.
Purpose of production	The data layer has been generated with a view to inform 19 district wise fish catch statistics and to use this data in fishery and other environment related analysis management and planning purposes.
Process description	NWRD has collected the data from Fishery Statistical Yearbook of Bangladesh, and converted it to digital version and stored it in an organized way.

Sample of Data

District	Distcode	Catchtype	Mcode	Modename	Year	Tsvalue
Barisal	6	1	2	Beels	1983-84	36
Barisal	6	1	2	Beels	1984-85	14
Barisal	6	1	2	Beels	1985-86	17
Barisal	6	1	2	Beels	1986-87	14
Barisal	6	1	2	Beels	1987-88	27
Barisal	6	1	2	Beels	1988-89	24
Barisal	6	1	2	Beels	1989-90	25
Barisal	6	1	2	Beels	1990-91	25
Barisal	6	2	1	Boar	1983-84	-
Barisal	6	2	1	Boar	1984-85	-

Bundle Information (Data Field Description and Unit)

FIELD	FIELDNAME
District	District Name
Distcode	District Code
Catchtype	1 - Capture, 2 - Culture
Mcode	Source of Catch Code
Modename	Source of Catch
Year	Year of Survey
Tsvalue	Annual Fish Catch in Metric Ton

Name of Data layer: **Fish Catch from Inland Water (64 Districts)**

Metadata

Data Type	Tabular
Abstract	An attribute data layer presenting the amount of annual fish catch by 64 districts for the year 1995-96 to 2007-08.
Quality	The data layer fully complies with Fishery Statistical YearBook of Bangladesh.
Completeness	Data is available for 64 districts.
History of the dataset	The data was recorded by the Department of Fisheries, Govt. of Bangladesh.
Purpose of production	The data layer has been generated with a view to inform 64 district wise fish catch statistics and to use this data in different fishery and environment related analysis, management and planning purposes.
Process description	NWRD has collected the data from Fishery Statistical Yearbook of Bangladesh, and convert it to digital version and stored it in an organized way.

Sample of Data

District	Distcode	Catchtype	Mcode	Modename	Year	Tsvalue
BAGERHAT	1	1	2	Beels	1995-96	-
BAGERHAT	1	1	2	Beels	1996-97	-
BAGERHAT	1	1	2	Beels	1997-98	-
BAGERHAT	1	1	2	Beels	1998-99	-
BAGERHAT	1	1	2	Beels	1999-00	-
BAGERHAT	1	1	2	Beels	2000-01	-
BAGERHAT	1	1	2	Beels	2001-02	-
BAGERHAT	1	1	4	Flood Land	1995-96	1211
BAGERHAT	1	1	4	Flood Land	1996-97	3555
BAGERHAT	1	1	4	Flood Land	1997-98	4252

Bundle Information (Data Field Description and Unit)

FIELD	FIELDNAME
District	District Name
Distcode	District Code
Catchtype	1 - Capture, 2 - Culture
Mcode	Source of Catch Code
Modename	Source of Catch
Year	Year of Survey
Tsvalue	Annual Fish Catch in Metric Ton

Name of Data layer: **Fish Catch from Kaptai Lake**

Metadata

Data Type	Tabular
Abstract	The data layer contains species wise annual fish catch from Kaptai Lake from 1983-84 to 2007-08.
Title	Fish Catch from Kaptai Lake
Quality	The data layer fully resembles with the published source.
Completeness	The data layer presents fish catch statistics of Kaptai Lake from 1983-84 to 2007-08.
History of the dataset	The data was recorded and compiled by Bangladesh Fisheries Development Corporation and published by Department of Fisheries, Govt. of Bangladesh in Fishery Statistical Yearbooks.
Purpose of production	The data layer has been developed to calculate total fish catch according to species from Kaptai Lake and to provide a comparative view of the production of previous years.
Process description	NWRD has collected the data from Fishery Statistical Yearbook, converted it to digital files and stored it in an arranged way.

Sample of Data

District	Distcode	Catchtype	Mcode	Modename	Year	Tsvalue
BAGERHAT	1	1	2	Beels	1995-96	-
BAGERHAT	1	1	2	Beels	1996-97	-
BAGERHAT	1	1	2	Beels	1997-98	-
BAGERHAT	1	1	2	Beels	1998-99	-
BAGERHAT	1	1	2	Beels	1999-00	-
BAGERHAT	1	1	2	Beels	2000-01	-
BAGERHAT	1	1	2	Beels	2001-02	-
BAGERHAT	1	1	4	Flood Land	1995-96	1211
BAGERHAT	1	1	4	Flood Land	1996-97	3555
BAGERHAT	1	1	4	Flood Land	1997-98	4252

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
Species	Species name	
Year	Year of catch	
Cattonne	Annual total catch	Mton

Name of Data layer: **Fish Catch from Marine Source**

Metadata

Data Type	Tabular
Abstract	The data layer presents catch of fish and shrimp from marine source in terms of fishing type and mode from 1983-84 to 2007-08.
Quality	The data layer fully resembles with the published source.
Completeness	The data layer covers fish statistics from marine sources.
History of the dataset	The data was recorded and compiled by the Department of Fisheries, Govt. of Bangladesh and published in Fishery Statistical Yearbooks.
Purpose of production	The data layer has been generated to present and calculate total fish and shrimp catch from marine source and to provide a comparative picture of the production of previous years.
Process description	NWRD has gathered the data from Fishery Statistical Yearbooks, converted it to digital files and stored it in an arranged way.

Sample of Data

Typefish	Modename	Typemode	Year	Nocraft	Nounit	Catshmp	Catfish	Cattot
Artisanal	Gill Net Fishing	Large Meshed Gill Net	1984-85	100	-	-	-	3500
Artisanal	Gill Net Fishing	Registered	1983-84	2857	-	-	-	0
Artisanal	Gill Net Fishing	Small Meshed Gill Net	1984-85	2900	-	-	-	98000
Artisanal	Gill Net Fishing	Un-registered	1983-84	500	-	-	-	0
Artisanal	Long Line Fishing	Mechanised	1984-85	300	-	-	-	0
Artisanal	Long Line Fishing	Non Mechanised	1984-85	350	-	-	-	3000
Artisanal	Long Line Fishing	-	1983-84	743	-	-	-	3000
Artisanal	Other Gears Fishing	-	1983-84	-	-	-	-	10000
Artisanal	Other Gears Fishing	-	1984-85	1000	-	-	-	11500
Artisanal	Set Bag Net Fishing	All Season	1983-84	7410	-	-	-	18006

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
Typefish	Type of Fishing	
Modename	Type of Craft	
Typemode	Type of Trawler/Boat	
Year	Year of Catch	
Nocraft	Number of Craft	Trawler/Bo
Nounit	Number of Unit	Gear/Net
Catshmp	Catch of Shrimp	Mton
Catfish	Catch of Fish	Mton
Cattot	Total Catch	Mton

Name of Data layer: **Fish Catch from Pond (19 Districts)**

Metadata

Data Type	Tabular
Abstract	The data layer presents 19 old district-wise area of ponds and total fish production from these ponds.
Quality	The data layer fully resembles with the published source.
Completeness	The data layer presents information of ponds identified by DoF (Department of Fisheries).
History of the dataset	Pond area has been generated on the basis of 40 sample thana surveyed and published by SPARRSO. Fish catch data were recorded and compiled during Catch Assessment Survey of Ponds by the Department of Fisheries, Govt. of Bangladesh and published in Fishery Statistical Yearbooks of Bangladesh 1983-84 to 1992-93.
Purpose of production	To calculate total fish catch from ponds and to provide the data to the researchers and planners for use.
Process description	NWRD has accumulated the data from Fishery Statistical Yearbook, converted it to digital files and stored it in an arranged way.

Sample of Data

District	Distcode	Year	Apcul	Apculble	Apder	Aptotal	Ppcul	Ppculble	Ppder	Pptotal
BAKERGANJ	6	1983-84	17790	6819	4463	29072	8361	934	268	9563
BOGRA	10	1983-84	7254	4724	2051	14029	3409	647	123	4179
CHITTAGONG	15	1983-84	17850	16211	1288	35349	8390	2221	77	10688
CHITTAGONG	15	1984-85	17850	16211	1288	35349	6783	1329	72	8184
CHITTAGONG HILL TRACTS	99	1983-84	-	-	-	-	-	-	-	-
COMILLA	19	1983-84	22546	7695	3243	33484	10597	1054	195	11846
DHAKA	26	1983-84	6091	6876	3990	16957	2863	942	239	4044
DINAJPUR	27	1983-84	12251	7979	3464	23694	5758	1093	208	7059
FARIDPUR	29	1983-84	5612	6335	3675	15622	2638	868	221	3727
JESSORE	41	1983-84	14508	2380	784	17672	6819	326	47	7192

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	District Name	
Distcode	District code number	
Year	Year of annual total catch	
Apcul	Area of Ponds Culture	Hectare
Apculble	Area of Ponds Culturable	Hectare
Apder	Area of Ponds Derelict	Hectare
Aptotal	Area of Total Ponds	Hectare
Ppcul	Production of Ponds Culture	Mton
Ppculble	Production of Ponds Culturable	Mton
Ppder	Production of Ponds Derelict	Mton
Pptotal	Production of Ponds Total	Mton

Name of Data layer: **Fish Catch from Pond (64 Districts)**

Metadata

Data Type	Tabular
Abstract	The data layer presents 64 district-wise area of ponds and total fish production from these ponds from 1993-94 to 2007-08.
Quality	The data layer fully resembles with the published source.
Completeness	The data layer presents information of ponds identified by DoF (Department of Fisheries).
History of the dataset	Pond area has been generated on the basis of 40 samples thana surveyed and published by SPARRSO and sample survey of 9 districts conducted by Mymensingh Aquaculture Extension Project. Fish catch data were recorded and compiled during Catch Assessment Survey of Ponds by the Department of Fisheries, Govt. of Bangladesh and published in Fishery Statistical Yearbooks of Bangladesh.
Purpose of production	To calculate total fish catch from ponds and to provide the data to the researchers and planners for use.
Process description	NWRD has accumulated the data from Fishery Statistical Yearbook, converted it to digital files and stored it in an arranged way.

Sample of Data

District	Distcode	Year	Apcul	Apculble	Apder	Aptotal	Ppcul	Ppculble	Ppder	Pptotal
BAGERHAT	1	1993-94	2443	400	318	3161	1223	48	29	1300
BANDARBAN	3	1993-94	-	-	-	-	-	-	-	-
BARGUNA	4	1993-94	3516	1348	882	5746	2059	165	58	2282
BARISAL	6	1993-94	5890	2258	1477	9625	3689	533	168	4390
BHOLA	9	1993-94	6717	2575	1685	10977	4510	616	328	5454
BOGRA	10	1993-94	5451	3550	1542	10543	5899	1716	533	8148
BRAHMANBARIA	12	1993-94	6406	2186	922	9514	7529	839	85	8453
CHANDPUR	13	1993-94	5655	1930	813	8398	4623	794	326	5743
CHITTAGONG	15	1993-94	12481	11335	900	24716	12944	7161	494	20599
CHUADANGA	18	1993-94	717	294	266	1277	728	91	68	887

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	District Name	
Distcode	District code number	
Year	Year of annual total catch	
Apcul	Area of Ponds Culture	Hectare
Apculble	Area of Ponds Culturable	Hectare
Apder	Area of Ponds Derelict	Hectare
Aptotal	Area of Total Ponds	Hectare
Ppcul	Production of Ponds Culture	Mton
Ppculble	Production of Ponds Culturable	Mton
Ppder	Production of Ponds Derelict	Mton
Pptotal	Production of Ponds Total	Mton

Name of Data layer: **Fish Catch from River (19 Districts)**

Metadata

Data Type	Tabular
Abstract	The data layer presents 19 old district wise total fish production from three major and some other rivers.
Quality	The data layer fully resembles with the published source.
Completeness	The data layer presents information of catch from three major rivers and some other rivers.
History of the dataset	The data layer was recorded and compiled in Catch Assessment Survey by the Department of Fisheries, Govt. of Bangladesh and published in Fishery Statistical Yearbook of Bangladesh 1984-85 to 1994-95.
Purpose of production	To calculate total fish catch from three main rivers and other rivers and to provide the data to the researchers and planners.
Process description	NWRD has accumulated the data from Fishery Statistical Yearbook, converted it to digital files and stored it in an arranged way.

Sample of Data

District	Distcode	Year	Lmeghna	Umeghna	Lpadma	Upadma	Jamuna	Brahmaputra	Othriver	Total
BAKERGANJ	6	1984-85	30866	-	-	-	-	-	19552	50418
BOGRA	10	1984-85	-	-	-	-	1255	-	1601	2856
CHITTAGONG	15	1984-85	-	-	-	-	-	-	18763	18763
CHITTAGONG	15	1985-86	-	-	-	-	-	-	25105	25105
CHITTAGONG HILL TRACTS	99	1984-85	-	-	-	-	-	-	-	0
COMILLA	19	1984-85	4925	2639	-	-	-	-	3296	10860
DHAKA	26	1984-85	-	4255	2103	-	322	-	6953	13633
DINAJPUR	27	1984-85	-	-	-	-	-	-	1278	1278
FARIDPUR	29	1984-85	34	-	4360	1322	-	-	2396	8112
JESSORE	41	1984-85	-	-	-	-	-	-	1858	1858

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	District Name	
Distcode	District Code	
Year	Year of annuaal total catch	
Lmeghna	Lower Meghna	
Umeghna	Upper Meghna	
Lpadma	Lower Padma	
Upadma	Upper Padma	
Jamuna	Jamuna	
Brahmaputra	Brahmaputra	
Othriver	Other Rivers	
Total	Total Catch	Mton

Name of Data layer: **Fish Catch from River (64 Districts)**

Metadata

Data Type	Tabular
Abstract	The data layer presents 64-district wise total fish production from three major and some other rivers from 1995-96 to 2007-08.
Quality	The data layer fully resembles with the published source. No quality check has been done by NWRD.
Completeness	The data layer presents information of catch from three major rivers and some other rivers.
History of the dataset	The data layer was recorded and compiled in Catch Assessment Survey by the Department of Fisheries, Govt. of Bangladesh and published in Fishery Statistical Yearbook of Bangladesh.
Purpose of production	To calculate total fish catch from three main rivers and other rivers and to provide the data to the researchers and planners.
Process description	NWRD has accumulated the data from Fishery Statistical Yearbook, converted it to digital files and stored it in an arranged way.

Sample of Data

District	Distcode	Year	Lmeghna	Umeghna	Lpadma	Upadma	Jamuna	Brahmaputra	Othriver	Total
BAGERHAT	1	1995-96	-	-	-	-	-	-	4681	4681
BANDARBAN	3	1995-96	-	-	-	-	-	-	38	38
BARGUNA	4	1995-96	-	-	-	-	-	-	6096	6096
BARISAL	6	1995-96	14486	-	-	-	-	-	2466	16952
BHOLA	9	1995-96	13768	-	-	-	-	-	4288	18056
BOGRA	10	1995-96	-	-	-	-	83	-	137	220
BRAHMANBARIA	12	1995-96	-	1586	-	-	-	-	747	2333
CHANDPUR	13	1995-96	11174	-	-	-	-	-	4225	15399

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	District Name	
Distcode	District Code	
Year	Year of annuaal total catch	
Lmeghna	Lower Meghna	
Umeghna	Upper Meghna	
Lpadma	Lower Padma	
Upadma	Upper Padma	
Jamuna	Jamuna	
Brahmaputra	Brahmaputra	
Othriver	Other Rivers	
Total	Total Catch	Mton

Name of Data layer: **Fish Catch from Shrimp and Fish Farm**

Metadata

Data Type	Tabular
Abstract	The data layer presents statistics of total area under shrimp cultivation; amount of total shrimp catch and other fish catch from shrimp and fish farms (according to the districts of respective census year) from 1983-84 to 2007-08.
Quality	The data layer fully complies with the published source.
Completeness	The data layer covers shrimp cultivated area.
History of the dataset	The data layer was collected under Shrimp Farm Survey and Catch Assessment Survey by shrimp cell of DoF (Department of Fisheries) and was published in Fishery Statistical yearbooks of Bangladesh.
Purpose of production	The data layer was developed with a view to calculate total fish and shrimp catch from shrimp farms and to compare with the production of previous years.
Process description	NWRD has accumulated the data layer from Fishery Statistical Yearbook, converted it to digital files and has stored it in an arranged way.

Sample of Data

District	Distcode	Year	Areashmp	Catshmp	Catfish	Total
BARISAL	6	1984-85	781	85	55	140
BARISAL	6	1985-86	45	5	2	7
BARISAL	6	1986-87	45	6	2	8
CHITTAGONG	6	1984-85	23437	2553	1657	4210
CHITTAGONG	15	1983-84	19531	1836	1445	3281
CHITTAGONG	15	1986-87	24755	3354	1279	4633
CHITTAGONG	75	1985-86	24755	2597	846	3443
JESSORE	41	1983-84	422	33	31	64

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	Districts name	
Distcode	District code number	
Year	Year of Annual Total Catch	
Areashmp	Area of Shrimp	Hectare
Catshmp	Catch of Shrimp	Mton
Catfish	Catch of Cat Fish	Mton
Total	Total Catch	Mton

Name of Data layer: **Fish Catch from Fisheries Sectors**

Metadata

Data Type	Tabular
Abstract	The data layer presents annual fish production from different type of water areas from 1983-84 to 2007-08.
Quality	The data layer fully resembles with the published source. No quality check has been done by NWRD.
Completeness	The data layer covers whole country.
History of the dataset	The data layer was recorded and compiled by the Department of Fisheries, Govt. of Bangladesh and published in Fishery Statistical Yearbooks of Bangladesh. Total catch by sectors of the inland fisheries was estimated on the basis of frame survey/ FRSS. Kaptai lake catch has been estimated b BFDC and Sundarban catch by Forest Department. Total catch of the marine fisheries were estimated by the Marine Department of Fisheries.
Purpose of production	To calculate total fish catch from different water areas and to compare with the production of previous years.
Process description	NWRD has gathered the data from Fishery Statistical Yearbook, converted it to digital files and stored it in an arranged way.

Sample of Data

District	Distcode	Year	Areashmp	Catshmp	Catfish	Total
BARISAL	6	1984-85	781	85	55	140
BARISAL	6	1985-86	45	5	2	7
BARISAL	6	1986-87	45	6	2	8
CHITTAGONG	6	1984-85	23437	2553	1657	4210
CHITTAGONG	15	1983-84	19531	1836	1445	3281
CHITTAGONG	15	1986-87	24755	3354	1279	4633
CHITTAGONG	75	1985-86	24755	2597	846	3443
JESSORE	41	1983-84	422	33	31	64

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
Typefish	Type of Fishing	
Modename	Type of Craft	
Typemode	Type of Trawler/Boat	
Year	Year of annual Total Catch	
Waterarea	Water Area	Hectare
Tcatch	Total Catch	Mton
Carea	Area Wise Total Catch	Kg/Hec

Name of Data layer: **Golda Culture Area**

[Metadata](#)

[Sample of Data](#)

[Bundle Information \(Data Field Description and Unit\)](#)

Name of Data layer: **Shrimp Area Statistics**

Metadata

Data Type	Tabular
Abstract	The data layer presents statistics of shrimp area distribution of the country from 1983-84 to 2008-09.
Quality	The data layer fully complies with the published source.
Completeness	The data layer covers shrimp cultivated area of Bangladesh identified by DoF
History of the dataset	The data was collected under a detail survey carried out by thana fishery officers and assistant fishery officers of Department of Fishery and was published in Fishery Statistical Yearbook of Bangladesh.
Purpose of production	The data layer was developed with a view to calculate total area under shrimp cultivation and to show the rate of change with respect to the base year.
Process description	NWRD has accumulated the data layer from Fishery Statistical Yearbook, converted it to digital files and stored it in an arranged way.

Sample of Data

Division	Year	Area
Chittagong	1983-84	23437
Chittagong	1984-85	24781
Chittagong	1985-86	24781
Chittagong	1987-88	27544
Chittagong	1988-89	29792
Chittagong	1993-94	29792
Chittagong	1994-95	29792
Chittagong	1995-96	29792

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Division	Division Name	
Year	Year	
Area	Shrimp area distribution	

Name of Data layer: **Spawn Collection from Natural Sources**

Metadata

Data Type	Tabular
Abstract	This data layer provides statistics of Carp Spawn / Fertilized Egg Collection of different districts from Natural Sources for the period 1983-84 to 2007-08.
Quality	The data layer fully complies with the published source.
Completeness	The data layer covers some selected areas.
History of the dataset	This data layer was collected and compiled through Catch Assessment Survey by the Department of Fisheries, Govt. of Bangladesh and published in Fishery Statistical Yearbooks of Bangladesh 1983-84 to 2007-08.
Purpose of production	This data layer can be used in different fish resource related analysis with other related information such as number of people engaged, frequency of spawning, quantity and sale rate of spawn etc.
Process description	NWRD has accumulated the dataset from Fishery Statistical Yearbook, converted to digital format and stored it in an arranged way.

Sample of Data

District	Year	Thana	Ccentre	Rivername	Nosavar	Nope	Nonu	Nobu	Cperiod	Frequency	Qsfec	Sr	Remark	Sn
Bogra	1984	Bogra	-	Brahmaputra-Jamuna	73	609	2108	84	May - June	-	3347	-	-	3
Faridpur	1984	Faridpur	-	Lower Padma	205	881	4012	319	May - July	-	3380	-	-	16
Gaibandha	1984	Gaibandha	-	Brahmaputra-Jamuna	148	1238	5478	282	May - June	-	7887	-	-	2
Jamalpur	1984	Jamalpur	-	Brahmaputra-Jamuna	43	260	886	40	May - June	-	340	-	-	5
Jamalpur	1984	Jamalpur	-	Old Brahmaputra	8	35	205	8	May - July	-	45	-	-	8
Kurigram	1984	Kurigram	-	Brahmaputra-Jamuna	20	100	404	20	May - June	-	953	-	-	1

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
District	District Name	
Year	Year	
Thana	Thana Name	
Ccentre	Collection Centre	
Rivername	Name of River	
Nosavar	Number of Savar	Number
Nope	Number of People Engaged	Number
Nonu	Number of Net Used	Number
Nobu	Number of Boat Used	Number
Cperiod	Collection Period	
Frequency	Frequency of Spawning Time	
Qsfec	Quantity of Spawn/Fertilized Egg Caught	Kg
Sr	Sale Rate	Tk/Kg
Remark	Remark	
Sn	Serial Number	

Name of Data layer: **Species Composition of Beel Catch**

Metadata

Data Type	Tabular
Abstract	The data layer presents species type wise annual fish catch from beel areas of Mymensingh and Sylhet district from 1985-86 to 2007-08.
Quality	The data layer fully complies with the published source.
Completeness	The data layer covers beel areas of Mymensingh and Sylhet districts.
History of the dataset	The data layer was collected and compiled based on sample beel survey on old Mymensingh & Sylhet district by the Department of Fishery and published in Fishery Statistical Yearbooks.
Purpose of production	The data layer has been developed with a view to calculate species type wise total fish catch from beel areas of Mymensingh and Sylhet district.
Process description	NWRD has accumulated the dataset from Fishery Statistical Yearbook, converted to digital format and stored it in an arranged way.

Sample of Data

Species	Year	Prodfish	Afish
Air (Mystus aor/Mystus Seenghala)	1997-98	1987	2.93
Baim (Mastacembelus spp.)	1997-98	332	0.49
Boal (Wallago attu)	1997-98	4428	6.53
Carpio(Cyprinus carpio)	1997-98	298	0.42
Catla (Catla Catla)	1997-98	8185	12.07
Chapila (Gudusia Chapra)	1997-98	502	0.74
Chital/Phali (Notopterus Chitala/Nnotopterus)	1997-98	604	0.89
Gonia (Labeo gonius)	1997-98	88	0.13
Grass Crap (Ctenopharyngodon idellus)	1997-98	285	0.44
Kalbaus (Labeo gonius)	1997-98	224	0.33

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
Species	Species composition of Beel Catch	
Year	Year of catch	
Prodfish	Total Production of Fish	Mton
Afish	Annual Fishery	%

Name of Data layer: **Species Composition of pond Catch**

Metadata

Data Type	Tabular
Abstract	The data layer presents species composition of annual fish-catch from ponds in percent of weight dividing the ponds in three categories such as Cultured, Culterable and Derelict from 1985-86 to 2007-08.
Quality	The data layer fully complies with the published source.
Completeness	The data layer covers ponds of Mymensingh and Sylhet district.
History of the dataset	The data layer has been collected and compiled based on sample survey by the Department of Fishery and published in Fishery Statistical Yearbooks.
Purpose of production	To calculate species type wise total fish catch from ponds in percentage of weight.
Process description	NWRD has accumulated the data layer from Fishery Statistical Yearbook, converted to digital format and stored it in an arranged way.

Sample of Data

Species	Year	Cultured	Culble	Derelict	Country
Aor (<i>Mystus aor</i> / <i>Mystus Seenghala</i>)	1985-86	0.19	0.5	0.1	0.23
Aor (<i>Mystus aor</i> / <i>Mystus Seenghala</i>)	1986-87	0.26	0.53	0.43	0.32
Boal (<i>Wallago attu</i>)	1985-86	0.08	2.79	2.21	0.84
Catla (<i>Catla Catla</i>)	1985-86	35.62	4.48	1.24	25.66
Chital/Phati (<i>Notopterus chitala</i> / <i>N.notopterus</i>)	1985-86	0.17	1.51	0.99	0.51
Grass Carp (<i>Ctenopharyngodon idellus</i>)	1985-86	1.83	0.09	-	1.28
Kalbasu (<i>Labeo callbasu</i>)	1985-86	0.91	0.37	0.01	0.7
Koi (<i>Anabas testudineus</i>)	1985-86	0.42	4.4	6.74	1.94

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
Species	Species composition of Pond Catch	
Year	Year wise total catch	
Cultured	Cultured	%
Culble	Culturable	%
Derelict	Derelict	%
Country	Country	%

Name of Data layer: **Species Group Composition of Flood Lands Catch (19 Districts)**

Metadata

Data Type	Tabular
Abstract	This data layer provides information regarding the percent of catch of a particular fish species with respect to total catch in each district for a year.
Quality	The data layer fully complies with the published source.
Completeness	The data layer covers 19 old districts.
History of the dataset	The data has been collected and compiled based on sample village study carried out by the Department of Fishery and has been published in Fishery Statistical Yearbooks of 1985-86 to 1992-93.
Purpose of production	This data may be used for analysis of relative production and assess the diversity of different fish species in a region. Besides it gives year-wise trend of catch for a particular fish-group of a region.
Process description	NWRD has accumulated the data from Fishery Statistical Yearbook and converted it to digital form to prepare it as a NWRD data layer.

Sample of Data

Districts	Districtcode	Year	Carp	Catfish	Snhead	Livefish	Oindfish	Bshrimp	Sshrimp
BAKERGANJ	6	1985-86	-	-	4.45	20.71	52.76	-	22.08
BOGRA	10	1985-86	-	-	19.58	17.58	54.75	-	8.09
CHITTAGONG	15	1985-86	-	-	3.26	4.16	68.13	-	24.45
CHITTAGONG	15	1986-87	-	-	6.12	-	82.45	-	11.43
CHITTAGONG HILL TRACTS	99	1985-86	-	-	-	-	-	-	-
COMILLA	19	1985-86	5.8	3.65	3.13	5.66	59.76	-	22
DHAKA	26	1985-86	-	1.66	14.78	4.67	68.39	-	10.5
DINAJPUR	27	1985-86	-	-	18.37	11.05	70.58	-	-

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
Districts	District Name	
Districtcode	District Code	
Year	Year of Flood Lands Catch	
Carp	Carp	%
Catfish	Cat Fish	%
Snhead	Snake Fish	%
Livefish	Live Fish	%
Oindfish	Other Inland Fish	%
Bshrimp	Big Shrimp	%
Sshrimp	Small Shrimp	%

Name of Data layer: **Species Group Composition of Flood Lands Catch (64 Districts)**

Metadata

Data Type	Tabular
Abstract	This data layer provides information regarding the percent of catch of a particular fish species with respect to total catch in each district for a year.
Quality	The data layer fully complies with the published source.
Completeness	The data layer covers 64 districts.
History of the dataset	The data has been collected and compiled based on sample village study carried out by the Department of Fishery and has been published in Fishery Statistical Yearbooks of 1993-94 to 2007-08.
Purpose of production	This data may be used for analysis of relative production and assess the diversity of different fish species in a region. Besides it gives year-wise trend of catch for a particular fish-group of a region.
Process description	NWRD has accumulated the data from Fishery Statistical Yearbook and converted it to digital form to prepare it as a NWRD data layer.

Sample of Data

Districts	Districtcode	Year	Carp	Catfish	Snhead	Livefish	Oindfish	Bshrimp	Sshrimp
BAGERHAT	1	1993-94	0	0	29.03	8.93	62.04	0	0
BARGUNA	4	1993-94	0	0	0	0	52.92	9.73	37.35
BARISAL	6	1993-94	0	0	0	0	27.55	0	72.45
DHAKA	26	1993-94	15.89	7.57	0.55	4.27	71.72	0	0
FARIDPUR	29	1993-94	0	0	13.27	49.32	37.41	0	0
GAZIPUR	33	1993-94	0	0	24.84	21.47	44.77	0	8.92
GOPALGANJ	35	1993-94	0	0	19.77	29.53	50.61	0	0.09
JAMALPUR	39	1993-94	0	0	0	0	100	0	0

Bundle Information (Data Field Description and Unit)

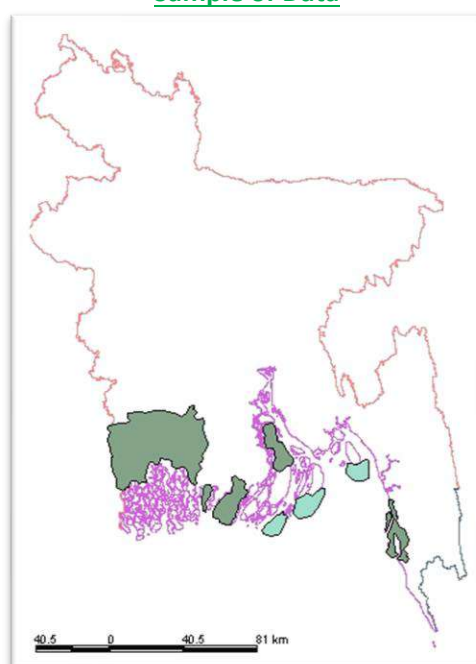
FIELD	DESCRIPTION	UNIT
Districts	District Name	
Districtcode	District Code	
Year	Year of Flood Lands Catch	
Carp	Carp	%
Catfish	Cat Fish	%
Snhead	Snake Fish	%
Livefish	Live Fish	%
Oindfish	Other Inland Fish	%
Bshrimp	Big Shrimp	%
Sshrimp	Small Shrimp	%

Name of Data layer: **Fish Habitat**

Metadata

Data Type	Spatial
Abstract	Fish habitat is any area in an aquatic ecosystem that provides something important that fishes need to live. A spatial data layer presenting the Hilisa Spawning and Saltwater shrimp habitat area.
Quality	Fish habitat data generated as polygon data using standard GIS applications with WGS1984 datum.
Completeness	This data layer covers all over the Bangladesh
History of the dataset	The source of this dataset is ESPAN and EGIS 1999, Mott MacDonald IWT III EMC 1998, DHV MES 1998, compiled by NWMP project NWMP. The projection system is Bangladesh Transverse Mercator (BTM). Attribute information were attached according to the source map.
Purpose of production	This data layer is essential for conservation and development of fisheries resources.
Process description	The fish habitat data derived as secondary data from the source map. Other attribute information have been attached according to the source map. Fish habitat data as polygon data projected in BTM projection.

Sample of Data



Attribute Table

id	type
1	Hilisa Spawning Areas
1	Hilisa Spawning Areas
1	Hilisa Spawning Areas
2	Saltwater Shrimp
2	Saltwater Shrimp
2	Saltwater Shrimp
2	Saltwater Shrimp
2	Saltwater Shrimp
2	Saltwater Shrimp

Bundle Information (Data Field Description and Unit)

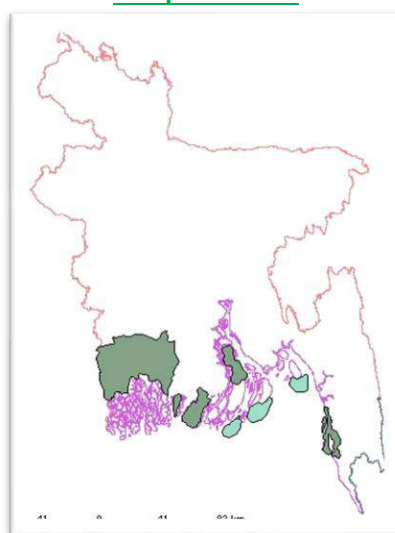
FIELD_NAME	FIELD_DESC	UNIT
Id	Fish habitat area Identity Number	
Type	Type of fish	

Name of Data layer: **Hilisa Spawning and Shrimp Farming Area**

Metadata

Data Type	Spatial
Abstract	Fish habitat is any area in an aquatic ecosystem that provides something important that fishes need to live. A spatial data layer presenting the Hilisa Spawning and Saltwater shrimp habitat area.
Quality	Fish habitat data generated as polygon data using standard GIS applications with WGS1984 datum.
Completeness	This data layer covers all over the Bangladesh
History of the dataset	The source of this dataset is ESPAN and EGIS 1999, Mott MacDonald IWT III EMC 1998, DHV MES 1998, compiled by NWMP project NWMP. The projection system is Bangladesh Transverse Mercator (BTM). Attribute information were attached according to the source map.
Purpose of production	This data layer is essential for conservation and development of fisheries resources.
Process description	The fish habitat data derived as secondary data from the source map. Other attribute information have been attached according to the source map. Fish habitat data as polygon data projected in BTM projection.

Sample of Data



Attribute Table

id	type
1	Hilisa Spawning Areas
1	Hilisa Spawning Areas
1	Hilisa Spawning Areas
2	Saltwater Shrimp

Bundle Information (Data Field Description and Unit)

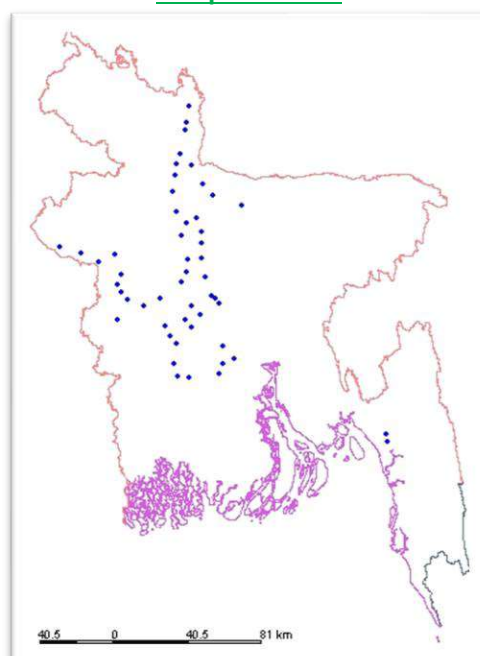
FIELD_NAME	FIELD_DESC	UNIT
Id	Fish habitat area Identity Number	
Type	Type of fish	

Name of Data layer: **Fish Breeding Area**

Metadata

Data Type	Spatial
Abstract	Fish Breeding grounds are identified for the fruitful catch of fish fry.
Quality	Quality of this data layer totally depends on the data collection process of the source organization.
Completeness	The data layer covers all Fish Breeding Ground of Bangladesh .
History of the dataset	The location were digitized from a book named " Fress Water Fisheries of Bangladesh" by Ataur Rahman Khan.
Purpose of production	The data layer represent the fish breeding area area located in which area and take measure to protect the ground.
Process description	The digitized locations were in Geo-projection system. It is transformed into Bangladesh transverse Mercator (BTM) Projection system.

Sample of Data



Attribute Table

id	st_name	w_kg
1	Kurigran	200-500
2	Chilmari	200-500
3	Gaibandha	200-500
4	Fulchuri	500-above
5	Saghata	500-above
6	Sonatola	500-above
7	Sariakandi	200-500
8	Kazipur	0-200
9	Sirajganj	500-above

Bundle Information (Data Field Description and Unit)

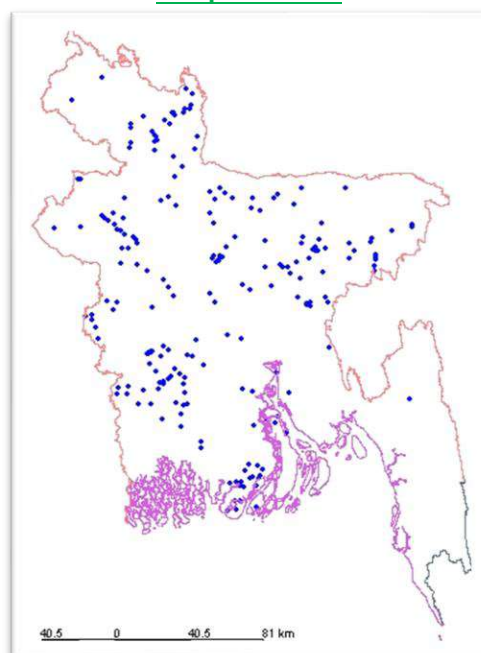
FIELD_NAME	FIELD_DESC	UNIT
Id		
St_name	Location of fish breeding ground	
W_kg	Production of fish breeding ground	Kg

Name of Data layer: **Information on Fish Sanctuary**

Metadata

Data Type	Spatial
Abstract	Fish sanctuaries are no-fishing zones reserved for the reproduction of fish populations. These are declared to prevent fishing in a certain area for a particular species.
Quality	Quality of this data layer depends on the data collection process of the source organization.
Completeness	The data layer covers all fish sanctuaries of Bangladesh identified by DoF.
History of the dataset	The database has been collected from Department of Fisheries as hard copy.
Purpose of production	The data layer represent the fish sanctuary distribution in each district declared by the Department of Fisheries.
Process description	The data about fish sanctuaries was hard copy publication of Department of Fisheries. The sanctuaries were placed as per spatial location and where the location were not identified then a tentative location were placed.

Sample of Data



Attribute Table

id	thacode	divname	distname	thaname	wbdname	wbdarea	sancno	sancarea	benfno	projname	source
8	40134	Khulna	Bagerhat	Fakirhat	Kaliganga & Sanjukta Beel	50	2	10	1297	Forth Fisheries Project	DoF
218	40160	Khulna	Bagerhat	Morrelganj	Katakhal Beel	44.53	1	0	168	Fisheries Development and Management in Chhara & Beel in western part of the	DoF

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Id	Unique Identification Number of the Fish Sanctuary	
Thacode	Name of each thana according to BBS geomaster database of 2001	
Divname	Name of each Division according to BBS geomaster database of 2001	
Distname	Name of each district according to BBS geomaster database of 2001	
Thaname	Name of each thana according to BBS geomaster database of 2001	
Wbdname	Name of the Waterbody	
Wbdarea	Area of the Waterbody	Hectare
Sancno	Number of sanctuary	
Sancarea	Area restricted for the Sanctuary	Hectare
Benfno	Number of beneficiary	
Projname	Name of the project	
Source	Source of the data	

Forest

Name of Data layer:	Forest Land (District 64) in 1998	(Restricted)

Metadata

Data Type	Tabular
Abstract	The data layer presents 64-district wise forestland distribution in different categories as reserve forest, protected forest, acquired forest etc.
Quality	The data layer fully resembles with the published source. No quality checking has been done by NWRD.
Completeness	The data layer covers 64 districts of Bangladesh.
History of the dataset	Department of Forest (DoFo) collected, compiled and published the dataset.
Purpose of production	The data layer has been generated with a view to give the researcher ready-to-use information of forest area distribution by districts.
Process description	NWRD has collected it from DoF and converted it to digital format and stored.

Sample of Data

Distname	Distcode	Resfr8ha	Resfr2ha	Protfr	Acquirfr	Vestfr	Usfunderdof	Usfunderdc	Khasland	Totfrland
BAGERHAT	1	231016.2	-	-	-	-	-	-	-	231016.2
BANDARBAN	3	74872.06	27497.83	-	-	-	29744.87	168718.3	-	300833.1
BARGUNA	4	6990.71	2766.57	-	-	-	-	-	2798.97	12556.26
BARISAL	6	-	-	-	-	-	-	-	-	-
BHOLA	9	-	12890.73	-	-	-	-	-	-	12890.73
BOGRA	10	-	-	-	-	-	-	-	205	205
BRAHAMANBARIA	12	-	-	-	0.46	-	-	-	-	0.46
CHANDPUR	13	-	-	-	0.85	-	-	-	-	0.85

Bundle Information (Data Field Description and Unit)

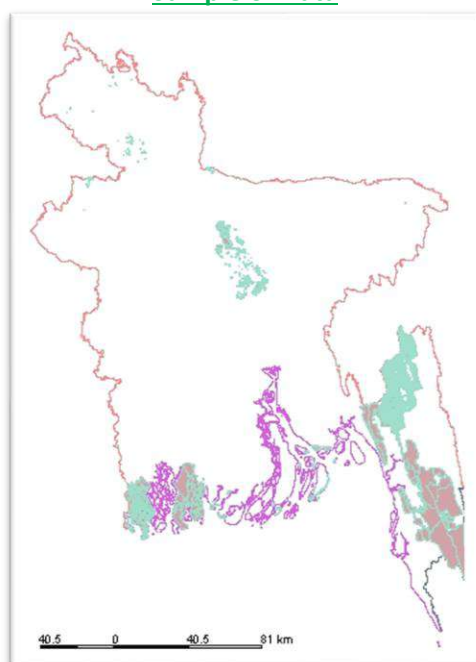
FIELD	UNIT	FIELDNAME
Distname		District Name
Distcode		District Code
Resfr8ha	Hactare	Reserved Forest under 20 acre
Resfr2ha	Hactare	Reserved Forest under 4 & 6 acre
Protfr	Hactare	Protected Forset
Acquirfr	Hactare	Acquired Forest
Vestfr	Hactare	Vested Forest
Usfunderdof	Hactare	Unclassified State Forest under Department of forest
Usfunderdc	Hactare	Unclassified State Forest under DC
Khasland	Hactare	Khas Land
Totfrland	Hactare	Total Forest land

Name of Data layer:	Forest Location (LGED)	(Restricted)

Metadata

Data Type	Spatial
Abstract	A spatial data layer shows the forest locations of Bangladesh identified by LGED (Local Government Engineering Department).
Quality	The data layer has been stored without any ground checking. It has been converted from LCC to BTM projection system.
Completeness	The data layer covers the forest area identified by LGED.
History of the dataset	LGED generated this data layer under UNDP/ILO Project BGD/89/041 using SPOT Image 1989-90, Aerial Photograph 1983-84, Topographic Maps, Thana Maps, and ground verification with the help of thana level technical staffs.
Purpose of production	To present the actual status of forest area the data layer has been incorporated to NWRD.
Process description	NWRD has checked and edited the data using detail rivers and water bodies generated by NWRD and has stored the data layer in an ordered form.

Sample of Data



Attribute Table

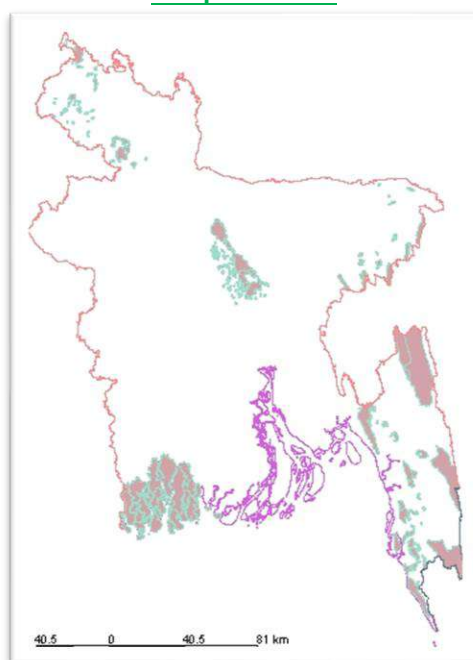
area	perimeter	forst_	forst_id
750212.688	3929.444	2	0
271040.813	1975.912	3	0
386835.094	3056.902	4	0
565962.75	3137.822	5	0
867834.625	3500.732	6	0
321438.469	2321.153	7	0
162920.313	2539.903	8	0
159089.563	1801.503	9	0

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area of Polygon	Sq. m.
Perimeter	Perimeter of polygon	m
Forest_	Internal ID Number	
Forest_id	External/user ID Number	

Metadata

Data Type	Spatial
Abstract	A data layer containing the spatial distribution and attribute information of forest areas of Bangladesh.
Quality	The source map was in 1:1000000 scale therefore this data layer should be used in same scale or smaller than this.
Completeness	The data layer covers whole Bangladesh.
History of the dataset	This data layer was generated from a published LANDSAT image of 1984. The source image was in 1:1000000 scale and was collected from SPARRSO. SPARRSO delineated the boundary of different forest areas with their nomenclature. Associated attribute information of this data layer has been incorporated according to BBS (Bangladesh Bureau of Statistics) geo-master database 1991.
Purpose of production	To present the forest location information of Bangladesh along with its attribute information and to use this data in fishery, forestry and other kinds of environmental analysis, management and planning purposes.
Process description	The data layer has been digitized with input RMS error 0.003in and output error 10 meter.

Sample of Data***Attribute Table***

area	perimeter	code	f_name	distname	distcode
5779212	10626.446	0		PANCHAGARH	77
4425881.5	7949.489	0		PANCHAGARH	77
11773942	15365.101	0		PANCHAGARH	77
135894528	88851.352	0		PANCHAGARH	77
12712905	17309.279	0		PANCHAGARH	77
9936269	14163.692	0		PANCHAGARH	77
6613477.5	10113.882	0		PANCHAGARH	77

Bundle Information (Data Field Description and Unit)

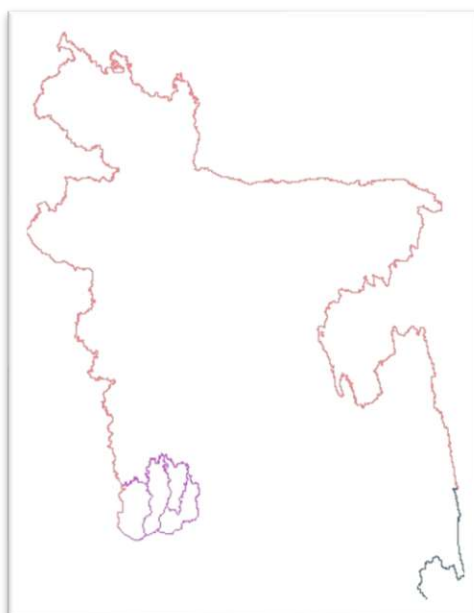
FIELD_NAME	FIELD_DESC	UNIT
Distname	District name given according to BBS geomaster database 1991	
Distcode	District code given according to BBS geomaster database 1991	
F_name	Name of the forest demarked by Space and Remote Sensing Research Organization	
Code	A unique code given to each forest type	
Perimeter	Perimeter generated by ArcInfo	Meter
Area	Area generated by ArcInfo	Squre Meter

Name of Data layer:	Forest Range of Sundarbans 1998	(Restricted)

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the Sundarbans Forest Range areas identified by the Forest Department.
Quality	As the source was in 1:600,000 scale the data layer should be used in the same scale or smaller than this.
Completeness	This data layer covers forest ranges of Sundarbans identified by the Department of Forest.
History of the dataset	Bangladesh Forest Department generated the data layer.
Purpose of production	To present the forest ranges of Sundarbans and to use this data in fishery, forestry and in other kinds of environmental analysis, management and planning purposes.
Process description	NWRD has captured the data from a published map titled 'Offices in the Sundarbans Reserved Forest' at 1:600,000 scale prepared by RIMS/GIS Unit, Forest Resource Management Project, Bangladesh Forest Department, Dhaka 1998.

Sample of Data



Attribute Table

length	id
22156.938	0
60890.254	0
58239.688	0
51925.359	0
7492.104	0
16395.576	0
6536.409	0

Bundle Information (Data Field Description and Unit)

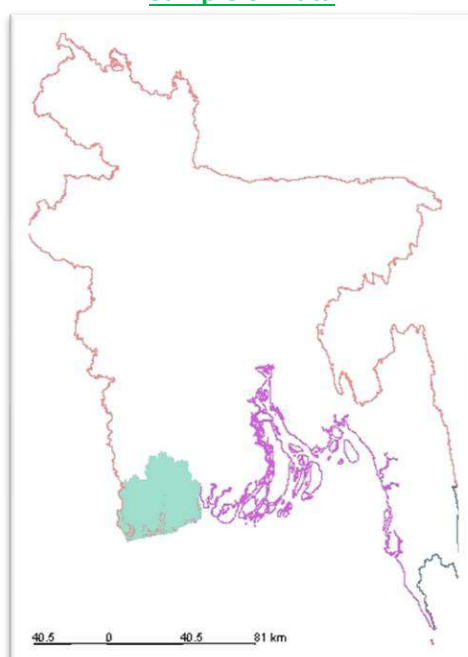
FIELD_NAME	FIELD_DESC	UNIT
Length	Length calculated by ArcInfo	Meter

Name of Data layer:	Sundarban Forest Landuse	(Restricted)

Metadata

Data Type	Spatial
Abstract	The Sundarbans Reserved Forest (SRF) is the largest single forest resource in the country, covering approximately 6 000 sqkm of mangroves .This data layer contains different types of vegetation, species, block number of Sundarbans Reserved Forest.
Quality	Quality of this data layer depends on the data collection process of the source organization.
Completeness	The data layer covers sundarban forest area of Bangladesh identified by DoFo.
History of the dataset	Source of the dataset was produced by Department of Forest. Data was derived from 1:50,000 SPOT satellite imagery, 1989. Amended by using 1:15000 air photography flown by QASco Ltd., 1995 under the Forest Resources Management Project of Bangladesh Forest Department. Interpretation of air photos by F.T. O pena and C.G. Versoza. Transfer of photo interpretation results by RIMS-GIS Unit of Bangladesh Forest Department . Location of permanent features/stations and river names adjusted in June 2001. Checking, updating and corrections by Sundarban Biodiversity Conservation Project (SBCP), supervision by DCF, RIMS, DoF.
Purpose of production	It will help too promote and implement a system of biodiversity conservation and sustainable management of forest.
Process description	Data has been collected from Department of Forest into digital format and stored this data layer as it was collected from the Forestry Department

Sample of Data



Attribute Table

block	vgroup_id	user_id	vegtype	mixture	height	closure	heightclas	closurecla	stratum	area_ha	grpname
4	1	17000	Waterbody	Waterbody	NA	NA	N	N	0	500.2	Waterbody
4	1	17000	Waterbody	Waterbody	NA	NA	N	N	0	812.6	Waterbody
4	1	1022	Sundri	No mixture resp. n.a.	< 15m >= 10m	< 70% >= 30% (b)	2	b	11	4.4	Waterbody
4	1	17000	Waterbody	Waterbody	NA	NA	N	N	0	2093.7	Waterbody
4	1	17000	Waterbody	Waterbody	NA	NA	N	N	0	635.9	Waterbody

Bundle Information (Data Field Description and Unit)

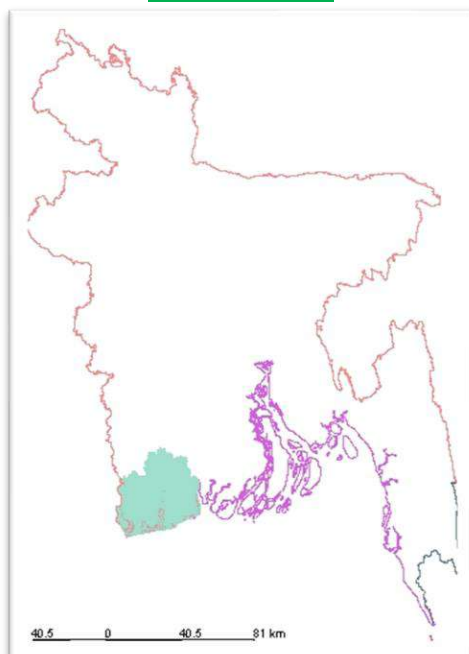
FIELD_NAME	FIELD_DESC	UNIT
Block	Forest Block	
Vgroup_id	Group wise Vegetation ID	
User_id	User Id	
Vegtype	Vegetation Type	
Mixture	Mixture	
Height	Height Range (m)	
Closure	Canopy Coverage (%)	
Heightclas	Height Range Class	
Closurecla	Canopy Coverage Class	
Stratum	Stratum	
Area_ha	Area of Each Polygon	Hectare
Grpname	Species group name and others	

Name of Data layer:	Wildlife Sanctuaries & National Park	(Restricted)

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the wildlife sanctuaries and national parks identified by the Department of Forest of Bangladesh.
Quality	The quality and accuracy of the data layer depend on the quality of the source map, data capturing method and other related conditions of data generating procedure.
Completeness	The data layer covers all the wildlife sanctuaries & National Park identifies by Department of Forest.
History of the dataset	Department of Forest (DoFo) captured this data.
Purpose of production	This data layer reveals the spatial information of the wildlife sanctuaries and national parks of Bangladesh with their area.
Process description	NWRD has stored this data layer as it was collected from the Forestry Department.

Sample of Data



Attribute Table

area	perimeter	area_ha	wsname
13132995	24874.578	1313.3	Lawachara N. Park
17826692	30641.203	1793.5	Rema-Kalenga Wildlife Sanctuary
296807904	185136.625	29680.8	Chunati (5km buffer)
405541856	93200.508	40554.2	Sundarban East Wildlife Sanctuary
83071472	87913.461	8307.1	Chunati Wildlife Sanctuary
35610548	25339.41	3561.1	Char Kukri-Mukri Wildlife Sanctuary
1367183.625	6694.907	136.7	Chunati Wildlife Sanctuary
5092522	10384.285	747.7	Char Kukri-Mukri Wildlife Sanctuary
2384603.25	10468.725	747.7	Char Kukri-Mukri Wildlife Sanctuary

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Wsname	Name of the wildlife sanctuaries and national park identified by Department of Forestry	
Area_ha	Area calculated in hectare	
Perimeter	Perimeter generated by ArcInfo	Meter
Area	Area generated by ArcInfo	Square Meter

Ground Water

Name of Data layer: **Census of irrigated area for Kharif crops**

Metadata

Data type	Tabular
Abstract	These data layers represent the Aman area irrigated by different modes.
Quality	The data was compiled from the NMIC census report of different years. The reported values are kept unchanged without making any quantitative checks.
Completeness	The data layer covers information of the whole country by 1981 census (464 Upazila).
History of the dataset	The National Minor Irrigation Project (NMIDP) with the assistance of the Department of Agricultural Extension (DAE), undertook the survey for different years as National Minor Irrigation Census (NMIC).
Purpose of production	To present the status of Kharif irrigated crop area coverage in the country and observe the trend. It will ultimately help in planning the future irrigation facilities to improve the overall food production.
Process description	This data layer has been generated from a series of NMIC reports of different years.

Sample of Data

Geocode	Year	Nca	Amanstw	Amanfmtw	Amanllp	Amanmopu	Amantrad	Otherstw	Otherfmtw	Otherllp
20000	1999	4345	-	-	-	-	-	-	-	-
21516	1999	25369	-	-	-	92	6	-	-	-
21518	1999	7873	-	-	-	-	18	-	-	34
21524	1999	8007	-	-	-	-	1	-	-	-
21533	1999	23523	-	-	11	-	-	1	-	1
21537	1999	9673	-	-	2	-	-	4	-	5
21545	1999	5281	-	-	-	-	-	-	-	-
21547	1999	10798	-	-	-	-	-	-	-	-
21549	1999	8487	16	-	-	-	-	-	-	-
21553	1999	18430	-	-	5	-	8	-	-	-

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Geocode	Thana Geocode	
Year	Year	
Nca	Net Cultivable Area	Hectare
Amanstw	Area covered by Shallow tube well, deep set STW and very deep set STW for Aman crop	Hectare
Amanfmtw	Area covered by force mode tube well and deep tube well for Aman crop	Hectare
Amanllp	Area covered by low lift pump for Aman crop	Hectare
Amanmopu	Area covered by manually operated pumping unit for Aman crop	Hectare
Amantrad	Area covered by traditional means of pumping for Aman crop	Hectare
Otherstw	Area covered by Shallow tube well, deep set STW and very deep set STW for other crops	Hectare
Otherfmtw	Area covered by force mode tube well and deep tube well for other crops	Hectare
Otherllp	Area covered by low lift pump for other crops	Hectare

Name of Data layer: **Census of irrigated area for Rabi crops**

Metadata

Data Type	Tabular
Abstract	This data layer presents the irrigated area coverage of Rabi crops in the country.
Quality	The data was compiled from the NMIC census report of different years. The reported values are kept unchanged without making any quantitative checks.
Completeness	The data layer covers information of the whole country by 1981 census (464 Upazila).
History of the dataset	The National Minor Irrigation Project (NMIDP) with the assistance of the Department of Agricultural Extension (DAE), undertook the survey for different years as National Minor Irrigation Census (NMIC).
Purpose of production	To present the status of Rabi irrigated crop area coverage in the country and to observe the change in trend. It will ultimately help in planning the future irrigation facilities to improve the overall food production.
Process description	To present the status of Rabi irrigated crop area coverage in the country and to observe the change in trend. It will ultimately help in planning the future irrigation facilities to improve the overall food production.

Sample of Data

code	Year	Nca	Borostw	Borofmtw	Borollp	Boromopu	Borotrad	Wheatstw	Wheatfmtw	Wheatllp	Wheatmopu	Wheattrad	Otherstw	Otherfmtw	Otherllp	Othermopu
40607	1999	25836	-	-	140	-	-	-	-	-	-	-	-	-	2	-
40610	1999	8162	6	-	2789	21	803	-	-	1	-	1	-	-	1	-
40614	1999	12329	-	-	309	-	16	-	-	-	-	-	-	-	-	-
40618	1999	25377	-	-	10303	127	-	-	-	100	-	-	-	-	51	13
40621	1999	21132	4	-	8399	-	8	-	-	6	-	-	-	-	1	-
40625	1999	32715	98	-	3499	-	-	-	-	3	-	-	-	-	-	-
40629	1999	10369	-	-	1671	58	-	-	-	-	-	8	-	-	1	1
40632	1999	11452	-	-	4216	-	-	-	-	-	-	-	-	-	-	-
40636	1999	14274	-	-	1966	-	-	-	-	-	-	-	-	-	-	-
40640	1999	15038	-	-	3863	-	-	-	-	1	-	-	-	-	-	-
40643	1999	11328	-	-	6	-	-	-	-	-	-	-	-	-	-	-
40647	1999	5246	-	-	137	-	87	-	-	-	-	-	-	-	-	-
40651	1999	15008	-	-	4158	18	119	-	-	44	-	-	-	-	191	-
40654	1999	21343	-	-	6882	49	8	-	-	18	-	106	-	-	16	-
40658	1999	25202	-	-	2092	-	1906	-	-	-	-	-	-	-	-	-
40662	1999	24525	17	-	5867	-	-	-	-	2	-	-	-	-	-	-
40665	1999	7033	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40669	1999	15296	6	-	4083	-	101	-	-	7	-	40	-	-	-	-
40673	1999	15658	8	-	1213	-	-	-	-	-	-	-	-	-	-	-
40676	1999	15839	5	-	1457	-	1020	-	-	-	1	11	-	-	-	47

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Geocode	Thana Geocode	
Year	Year	
Nca	Net Cultivable Area	Hectare
Borostw	Area covered by Shallow tube well, deep set STW and very deep set STW for Boro crop	Hectare
Borofmtw	Area covered by force mode tube well and deep tube well for Boro crop	Hectare
Borollp	Area covered by low lift pump for Boro crop	Hectare
Boromopu	Area covered by manually operated pumping unit for Boro crop	Hectare
Borotrad	Area covered by traditional means of pumping for Boro crop	Hectare
Wheatstw	Area covered by Shallow tube well, deep set STW and very deep set STW for Wheat crop	Hectare
Wheatfmtw	Area covered by force mode tube well and deep tube well for Wheat crop	Hectare
Wheatllp	Area covered by low lift pump for Wheat crop	Hectare

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Wheatmopu	Area covered by manually operated pumping unit for Wheat crop	Hectare
Wheattrad	Area covered by traditional means of pumping for Wheat crop	Hectare
Otherstw	Area covered by Shallow tube well, deep set STW and very deep set STW for other crops	Hectare
Otherfmtw	Area covered by force mode tube well and deep tube well for other crops	Hectare
Otherllp	Area covered by low lift pump for other crops	Hectare
Othermopu	Area covered by manually operated pumping unit for other crops	Hectare
Othertrad	Area covered by traditional means of pumping for other crops	Hectare

Name of Data layer: **Irrigated Areas by Shallow Tubewells**

Metadata

Data Type	PDF File
Abstract	The data layer contains the information of total area irrigated by shallow tubewells during 1982-83 to 1996-97.
Quality	The data have been collected by NMIDP. The quality and accuracy of the data depends on the data collection and compilation method.
Completeness	The data layer covers the whole country and data is available from 1982 to 1996.
History of the dataset	The data was collected by National Minor Irrigation Development Project (NMIDP) and published in National Minor Irrigation Census.
Purpose of production	To estimate the area under irrigation by shallow tubewells and to observe the changes of irrigated area with time.
Process description	NWRD has converted the data layer into digital version and stored it in an organized form.

Sample of Data

Table18			
Total Areas Irrigated by Shallow Tubewells (STWs), 1982/83 to 1996/97			
Yea (1)	Area irrigated by Shallow Tubewells (STWs) (000 ha)	Percentage change on previous year	Three year average percentage change
1982	371.5		
1983	480.0	29.2	
1984	586.4	22.2	
1985	586.4	0.0	17.1
1986	639.4	9.0	10.4
1987	753.1	17.8	8.9
1988	941.3	25.0	17.3
1989	1037.2	10.2	17.7

Name of Data layer: **Irrigation Census**

Metadata

Data Type	Tabular
Abstract	The data layer presents 464 thana wise net cultivable area with number of different types of tube well and area covered by these modes. The information is available from 1975 to 1999.
Quality	The data is fully complies with the source.
Completeness	The data layer covers whole country and information is available from 1975 to 1997.
History of the dataset	Nation Minor Irrigation Development Project collected this data and published in Minor Irrigation Census.
Purpose of production	To calculate thana wise net ground water abstraction and area under abstraction by a particular mode.
Process description	NWRD has converted the data layer into digital version and stored it in an organised form.

Sample of Data

Geocode	Year	Nca	Nostw	Nodsstw	Novdsstw	Nofmtw	Nodtw	Nollp	Nomopu	Notrad	Areastw	Areafmtw
20000	1975	4345	5	-	-	-	25	12	-	-	0	0
20000	1979	4345	-	-	-	-	-	-	-	-	0	0
20000	1980	4345	-	-	-	-	-	-	-	-	0	0
20000	1982	4345	-	-	-	-	-	-	-	-	0	0
20000	1983	4345	-	-	-	-	-	-	-	-	0	0
20000	1985	4345	0	-	-	-	0	-	-	-	0	0
20000	1986	4345	-	-	-	-	-	-	-	-	0	0
20000	1987	4345	-	-	-	-	-	-	-	-	0	0

Areallp	Areamopu	Areatrad	Nostwnop	Nodsstwnop	Novdsstwnop	Nofmtwnop	Nodtwnop	Nollpnop
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Geocode	Thana Geocode	
Year	Year	
Nca	Net Cultivable Area	Hectare
Nostw	Number of Shallow tube well	Number
Nodsstw	Number of deep set Shallow tube well	Number
Novdsstw	Number of very deep set Shallow tube well	Number
Nofmtw	Number of force mode tube well	Number
Nodtw	Number of deep tube well	Number
Nollp	Number of low lift pump	Number
Nomopu	Number of manually operated pumping unit	Number
Notrad	Number of traditional means of pumping	Number
Areastw	Area covered by Shallow tube well, deep set Shallow tube well and very deep set Shallow tube well	Hectare

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Areafmtw	Area covered by force mode tube well and deep tube well	Hectare
Areallp	Area covered by low lift pump	Hectare
Areamopu	Area covered by manually operated pumping unit	Hectare
Areatrad	Area covered by traditional means of pumping	Hectare
Nostwnop	Number of non-operated Shallow tube well	Number
Nodsstwnop	Number of non-operated deep set Shallow tube well	Number
Novdsstwnop	Number of non-operated very deep set Shallow tube well	Number
Nofmtwnop	Number of non-operated force mode tube well	Number
Nodtwnop	Number of non-operated very dee tube well	Number
Nollpnop	Number of non-operated low left pump	Number

Name of Data layer: **Aquifer Transmissivity 1991**

Metadata

Data Type	Tabular
Abstract	The data layer contains 490 thana wise aquifer transmissivity with other associated information.
Quality	The data layer fully complies with the source.
Completeness	Data is available for 372 out of 490 thana of Bangladesh.
History of the dataset	MPO (Master Plan Organization) collected this data for ground water modelling and published in simulation reports 1991.
Purpose of production	To present information regarding the physical and hydraulic characteristics of aquifers that are important considerations for determining the possibilities and cost of ground water well construction for different purposes.
Process description	NWRD has collected the dataset from WARPO, converted to digital format and organized it.

Sample of Data

Geocode	District	Thana	Kv	Thickness	Transmissivity
14240	JHALOKATI	JHALOKATI SADAR	-	-	-
14243	JHALOKATI	KANTHALIA	-	-	-
14273	JHALOKATI	NALCHITY	-	-	-
14284	JHALOKATI	RAJAPUR	-	-	-
33936	JAMALPUR	JAMALPUR SADAR	0.02	6	3000
33958	JAMALPUR	MADARGANJ	0.02	6	4500
33961	JAMALPUR	MELANDAHA	0.02	6	4000
33985	JAMALPUR	SARISHABARI	0.1	6	5000

Bundle Information (Data Field Description and Unit)

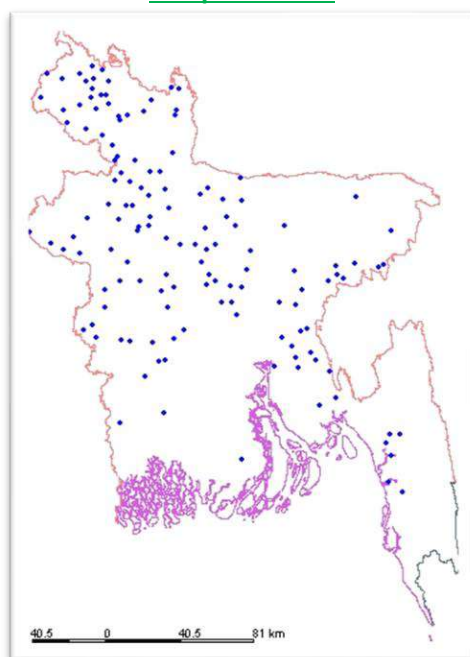
FIELD_NAME	FIELD_DESCRIPTION	UNIT
Geocode	Spacial Identification Code Given By BBS (Bangladesh Bureau Of Statistics)	
District	District name	
Thana	Thana name	
Kv	Co-efficient of Transmissivity	m/day
Thickness	Aquifer thickness	meter
Transmissivity	Transmissivity	m2/day

Name of Data layer: **Aquifer Transmissivity by pump test 1982**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the locations of the aquifer testing holes and the results of pump tests analysis conducted by BWDB and other agencies in 1982.
Quality	As the source was in 1:10,00,000 scale,so the data layer should be used in the same scale or smaller than this. Attribute information fully complies with the published source.
Completeness	The data layer covers 137 aquifer-testing locations all over the country.
History of the dataset	BWDB and UNDP carried out the aquifer test analysis all over Bangladesh in 1982 and published in the report on Ground Water Survey.
Purpose of production	To present information regarding the physical and hydraulic characteristics of aquifers that are important considerations for determining the possibilities and cost of ground water well construction for different purposes.
Process description	The location dataset has been captured from the published map titled 'Transmissivity of Main Aquifer' published by BWDB and UNDP under 'Ground Water Survey, Hydrological condition of Bangladesh' project. The source was at 1:10,00,000 scale.

Sample of Data



Attribute Table

transmissi	well_num	tran_val	orga_id	remark	ddlong	ddlat	btm lon	btm lat
1	DI-1	1370	1	BWDB	88.429	26.113	342917.125	888885.563
2	DI-3	6400	1	BWDB	88.196	25.92	319330.844	867837.25
3	H-260	2190	1	BWDB	88.617	25.852	361425.813	859790.25
4	DI-4	1200	1	BWDB	88.478	25.68	347286.969	840849.125
5	RA-6	2370	1	BWDB	89.055	25.71	405243.563	843646.938
6	RA-3	1700	1	BWDB	89.14	25.762	413790.813	849315.188
7	RA-1	4670	1	BWDB	89.61	26.029	460990	878713.688
8	RA-2	4790	1	BWDB	89.699	26.024	469911.094	878151.25
9	RA-7	5020	1	BWDB	89.664	25.817	466368.656	855167.563

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Transmissi	External/user ID Number generated by ArcInfo	
Well_num	Well identification number of each well incorporated according to the source map	
Tran_val	Transmissivity value of each well location incorporated here according to the source map	
Orga_id	Id given by NWRD to demarcate the source organisation name of the aquifers according to the supplied map (1= BWDB,2 = Other Agencies, By Testing wells,3 = Other Agencies,By Development Test Data)	
Remark	Remark indicates the name of the source agencies of the well locations	

Name of Data layer: **Depth Storage Data of MPO**

Metadata

Data Type	Tabular
Abstract	The data layer is the output of Depth/Storage Model of MPO (Master Plan Organization).
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The model output covers 382 Thana.
History of the dataset	The Depth Storage model was adapted during the first phase of MPO. It was slightly modified and made operational during September 1989. The model was calibrated for individual thana for the period covering hydrological years 1972/73 to 1988/89.
Purpose of production	The data layer can be used to compute the net storage in the aquifer system available for groundwater abstraction.
Process description	NWRD has stored the data in an arranged way.

Sample of Data

Gcod	Thana_name	Dep01	Stp01l	Stp01m	Stp01h	Sta01l	Sta01m	Sta01h	Dep02	Stp02l	Stp02m	Stp02h	Sta02l	Sta02m	Sta02h	Dep03	Stp03l	Stp03m	Stp03h	Sta03l
10602	AGAILJHORA	1	10	20	30	0	1	2	2	21	42	62	13	26	40	3	34	67	100	27
10603	BABUGANJ	1	11	22	34	5	10	16	2	24	46	69	19	37	55	3	37	71	105	33
10607	BAKERGANJ	1	10	20	30	9	19	29	2	20	40	60	20	41	62	3	31	61	92	32
10610	BANARIPARA	1	20	35	50	22	40	57	2	40	70	100	45	79	112	3	60	105	150	66
10632	GOURNADI	1	15	29	42	9	16	24	2	34	62	89	28	50	72	3	57	101	145	51
10636	HIJLA	1	10	20	30	0	0	0	2	20	40	60	7	15	22	3	30	60	90	18
10651	KOTWALI	1	13	25	38	13	24	36	2	28	52	76	30	55	81	3	42	79	115	45
10662	MEHENDIGANJ	1	10	20	30	11	22	34	2	20	40	60	24	48	72	3	30	60	90	35

Bundle Information (Data Field Description and Unit)

FIELD	FIELDNAME	UNIT	MM	J
Gcod	BBS Geocode			
Thana_name	Thana name			
Dep'mm'	Depth Interval	meter	Depth in meter	-
Stp'mm''j'	Potential Storage	mm	Depth in meter	L-Low, M-Medium, H-High
Sta'mm''j'	Net available storage	mm	Depth in meter	L-Low, M-Medium, H-High

Name of Data layer: **Potential Recharge Data of MPO**

Metadata

Data Type	Tabular
Abstract	This data layer contains thana-wise output of MPO Recharge Model which include percentage of area at different flood level, usable recharge at low, medium and high estimates with other related parameters useful for irrigation related studies.
Quality	Quality of the model information depends on the input data and calibration and verification of the model.
Completeness	The model output covers 344 thana of Bangladesh.
History of the dataset	This data layer is the output of Potential Recharge Model of MPO (Master Plan Organization). The recharge model was generated during the first phase of Ground water modelling of MPO and it was made operational during September 1989. The model was calibrated for individual thana for the period covering hydrological years 1972/73 to 1988/89.
Purpose of production	The data layer can be used to compute the potential recharge of the aquifer system for 1972/73 to 1988-89 hydrological years i.e., the maximum possible recharge to the aquifer system from rainfall and flooding.
Process description	NWRD has stored the data in an arranged way.

Sample of Data

Gcod	Thana_name	Dep01	Stp01l	Stp01m	Stp01h	Sta01l	Sta01m	Sta01h	Dep02	Stp02l	Stp02m	Stp02h	Sta02l	Sta02m	Sta02h	Dep03	Stp03l	Stp03m	Stp03h	Sta03l
10602	AGAILJHORA	1	10	20	30	0	1	2	2	21	42	62	13	26	40	3	34	67	100	27
10603	BABUGANJ	1	11	22	34	5	10	16	2	24	46	69	19	37	55	3	37	71	105	33
10607	BAKERGANJ	1	10	20	30	9	19	29	2	20	40	60	20	41	62	3	31	61	92	32
10610	BANARIPARA	1	20	35	50	22	40	57	2	40	70	100	45	79	112	3	60	105	150	66
10632	GOURNADI	1	15	29	42	9	16	24	2	34	62	89	28	50	72	3	57	101	145	51
10636	HIJLA	1	10	20	30	0	0	0	2	20	40	60	7	15	22	3	30	60	90	18
10651	KOTWALI	1	13	25	38	13	24	36	2	28	52	76	30	55	81	3	42	79	115	45
10662	MEHENDIGANJ	1	10	20	30	11	22	34	2	20	40	60	24	48	72	3	30	60	90	35

Bundle Information (Data Field Description and Unit)

CODE	DESCRIPTION
1	Low
2	Medium
3	High

FIELD	FIELDNAME	UNIT
Gcod	BBS Geocode	
Thana_name	Thana Name	
Area	MPO Area	km2
F0	Perenatg of area under F0	percentage
F1	Perenatg of area under F1	percentage
F2	Perenatg of area under F2	percentage
F3	Perenatg of area under F3	percentage
Endyrd	Depth to water table prior to irrigation	meter

FIELD	FIELDNAME	UNIT
Enddrd	Depth to water table at end of dry season	meter
Urlow	Useable recharge at Low estimates	mm
Urmed	Useable recharge at Medium estimates	mm
Urhigh	Useable recharge at High estimates	mm
A'm'	Intercept of Linear relationship between recharge and rainfall	
B'm'	Slope of Linear relationship between recharge and rainfall	
R'm'	Correlation coefficient	
Al'm'	Intercept of log-linear relationship between recharge and rainfall	
Bl'm'	Slope of log-linear relationship between recharge and rainfall	
Rl'm'	Correlation coefficient	
M	PR Class 1-Low, 2- Medium Low, 3- Medium, 4- Medium High, 5- High	

Metadata

Data Type	Tabular
Abstract	The data layer presents the resource potential limits of different abstraction modes at three-storage classes, useable recharge classes and each flood phase.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The data layer covers 377 thanas.
History of the dataset	The data layer is the output of Resource Potential Model. The resource potential model was generated during the second phase of Ground water modelling of Master Plan Organisation (MPO)
Purpose of production	The data layer can be used for the assessment of ground water resource potentials for a variety of pumping modes, including shallow tubewells, deep set shallow tubewells, low and high capacity deep tubewells.
Process description	NWRD has stored the data in an arranged way.

Sample of Data

Gcod	Thana_name	Dep01	Stp01l	Stp01m	Stp01h	Sta01l	Sta01m	Sta01h	Dep02	Stp02l	Stp02m	Stp02h	Sta02l	Sta02m	Sta02h	Dep03	Stp03l	Stp03m	Stp03h	Sta03l
10602	AGAILJHORA	1	10	20	30	0	1	2	2	21	42	62	13	26	40	3	34	67	100	27
10603	BABUGANJ	1	11	22	34	5	10	16	2	24	46	69	19	37	55	3	37	71	105	33
10607	BAKERGANJ	1	10	20	30	9	19	29	2	20	40	60	20	41	62	3	31	61	92	32
10610	BANARIPARA	1	20	35	50	22	40	57	2	40	70	100	45	79	112	3	60	105	150	66
10632	GOURNADI	1	15	29	42	9	16	24	2	34	62	89	28	50	72	3	57	101	145	51
10636	HIJLA	1	10	20	30	0	0	0	2	20	40	60	7	15	22	3	30	60	90	18
10651	KOTWALI	1	13	25	38	13	24	36	2	28	52	76	30	55	81	3	42	79	115	45
10662	MEHENDIGANJ	1	10	20	30	11	22	34	2	20	40	60	24	48	72	3	30	60	90	35

Bundle Information (Data Field Description and Unit)

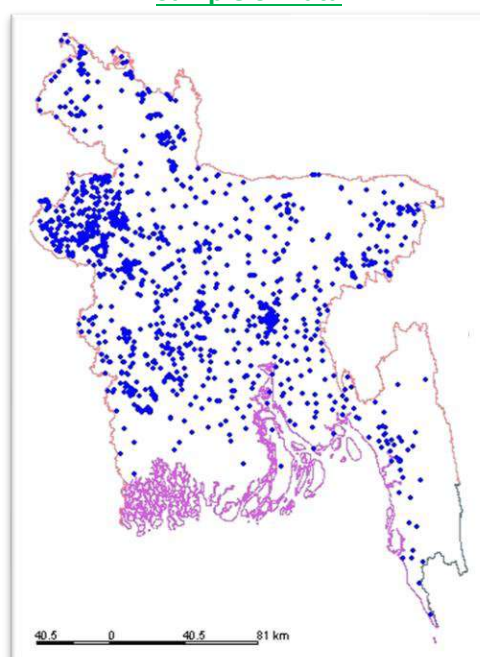
FIELD	FIELDNAME	UNIT	CAPACITY	PUMP LIMIT	M	J	MM
Gcode	BBS Geocode						
Thananame	Thana Name						
Rp'm'0'j'	RP for Village Hand Tubewell	Mm3	0.03 cusec	6 m	Depth storage class : 1-Low, 2-Medium, 3-High	Useable Recharge Class : 1-Low, 2-Medium, 3-High	-
Rp1'm''mm'j'	RP for STW	Mm3	0.5 cusec	7 m	Depth storage class : 1-Low, 2-Medium, 3-High	Useable Recharge Class : 1-Low, 2-Medium, 3-High	Floodphase : 1-F0, 2-F1, 3-F2, 4-F3
Rp2'm''mm'j'	RP for DSSTW	Mm3	0.5 cusec	9 m	Depth storage class : 1-Low, 2-Medium, 3-High	Useable Recharge Class : 1-Low, 2-Medium, 3-High	Floodphase : 1-F0, 2-F1, 3-F2, 4-F3
Rp3'm''mm'j'	RP for VDSSTW	Mm3	0.5 cusec	11 m	Depth storage class : 1-Low, 2-Medium, 3-High	Useable Recharge Class : 1-Low, 2-Medium, 3-High	Floodphase : 1-F0, 2-F1, 3-F2, 4-F3
Rp4'm''mm'j'	RP for DTW1	Mm3	1.0 cusec	20 m	Depth storage class : 1-Low, 2-Medium, 3-High	Useable Recharge Class : 1-Low, 2-Medium, 3-High	Floodphase : 1-F0, 2-F1, 3-F2, 4-F3
Rp5'm''mm'j'	RP for DTW2	Mm3	2.0 cusec	20 m	Depth storage class : 1-Low, 2-Medium, 3-High	Useable Recharge Class : 1-Low, 2-Medium, 3-High	Floodphase : 1-F0, 2-F1, 3-F2, 4-F3

Name of Data layer: **Borehole Locations of BWDB**

Metadata

Data Type	Spatial
Abstract	A spatial data layer presenting the location of boreholes for deriving the lithological description of the subsurface layers encountered in the respective holes.
Quality	The bore logs are detail. This data layer is recommended to use in a scale less than 1:63,360. Further check is needed for ensuring quality.
Completeness	The data layer covers whole Bangladesh.
History of the dataset	This data layer was generated by Bangladesh Water Development Board (BWDB). Largest part of this dataset was generated by BWDB from their borehole locations and Bangladesh Agricultural Development Corporation (BADC) collected the rest of them. BADC have 1000 exploration well throughout the country and these were computerized by BWDB.
Purpose of production	To provide spatial and associated attribute information of the boreholes which will help to identify the rock or soil type below the ground surface. This data is essential for delineating the aquifer system of an area.
Process description	NWRD has collected the data layer from BWDB in soft copy format and generated the point locations using the latitude, longitude, mauza and Jurisdiction Location numbers collected from BWDB. Locations have been checked using the attribute information.

Sample of Data



Attribute Table

pntbtm_id	geocode	borehole_i	mouza	village	site	jl_no	plot_n o	previous_r	groun d_ele	depth_ m
233	41908600	GL4190002	Sharsha	Sharsha	Union-Sharsha			GW/J-426		107
1150	64068400	GL6406005	Parora		Union-Mithapur	94	419	BMDA/NA 0-001		58
1151	64062100	GL6406006	Poydari	Poydari	Union-Badalgachi	549	392	BMDA/Na -002		64

diameter_c	drill_purpose	start_date	end_date_d	agency_drilling	date_last_drilling	user_last_drilling	x_coord	y_coord	ddlong	ddlat
8	Ground Water Survey	11/24/1977	11/30/1977	GWC/BW DB	11/13/1995	Samad	393039.906	550239.375	88.956	23.059
36	Irrigation	5/16/1988	5/16/1988	BIADP	4/1/1999	Admin	397082.938	762677.688	88.988	24.978
36	Irrigation	3/17/1988	3/18/1988	BMDA	4/1/1999	Admin	385208.5	763265.75	88.862	24.983

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Pntbtm_id	Internal Id created by Arcinfo	
Geocode	Unique code (Division Code + District Code+ Thana Code) attached according to BBS census 1991	
Bprehole_id	Intenal id generated by ArcInfo	
Mouza	Name of the mauza according to the supplied source	
Village	Name of the villages where the holes exists	
Site	Site of the hole	
Jl_no	JL number according to DLRS Police Station map	
Plot_no	Identification number of the plots	
Previous_r	Not defined by the source	
Ground_ele	Ground elevation in meter	
Depth_m	Depth of the hole measured in meter	Meter
Diameter_c	Diameter of the hole	
Drill_purp	Purpose of drilling	
Start_date_d	Start date of drilling	
End_date_d	End date of dirilling	
Agency_dri	Name of the drilling agencies.	
Date_last_	Date of last drilling	
User_last_	Not defined by the source	
X_coord	X Coordinate value of the hole	
Y_coord	Y coordinate value of the hole	

Name of Data layer: **Lithology of BWDB**

Metadata

Data Type	Tabular
Abstract	This data layer represents lithological information collected at different boreholes maintained by BWDB (Bangladesh Water Development Board).
Quality	The data have been collected by BWDB. Its accuracy and reliability depend on the data collection procedure.
Completeness	The data layer presents lithology data for all the stations maintained by BWDB.
History of the dataset	The data have been collected from the boreholes and compiled by Bangladesh Water Development Board for a long period of time.
Purpose of production	To provide lithological information of the boreholes which will help to identify the rock or soil type below the ground surface. This data is essential for delineating the aquifer system of an area.
Process description	NWRD has checked the data layer and stored it in an arranged way.

Sample of Data

District_code	Thana_code	Borehole_id	Depth_m	Materials	Quantity	Sample_colour	Date_last_update	User_last_update	Geocode
67	02	GL6702012	57.95	FSDMSDVSD	701505	Grey	10/28/1998	Admin	36702
67	02	GL6702012	78.69	MSDFSDCSD	701505	Grey	10/28/1998	Admin	36702
67	02	GL6702012	89.67	MSDCSDFSD	701505	Grey	10/28/1998	Admin	36702
67	02	GL6702012	92.42	CLY	100	Grey	10/28/1998	Admin	36702
67	02	GL6702012	100.65	MSDCSDGVL	701505	Grey	10/28/1998	Admin	36702
67	02	GL6702012	107.36	FSDVSD	7005	Grey	10/28/1998	Admin	36702
67	02	GL6702013	3.05	CLYSLTVSD	701505	Grey	10/28/1998	Admin	36702
67	02	GL6702013	27.75	FSDVSDMSD	701505	Grey	10/28/1998	Admin	36702

Bundle Information (Data Field Description and Unit)

FIELD	SAMPLE_DATA	DESCRIPTION
District_code	67	
Thana_code	02	
Borehole_id	GL6702012	GL For Ground Level;First Two Digits (67) For DISTRICT_CODE,Middle Two Digits (02) For THANA_CODE & Last Digits For (012) BoreHole Code
Depth_m	57.9500007629395	Borehole Depth In Meters
Materials	FSDMSDVSD	Type Of Materials; Each Three Digits Represents Each Type Of Materials: SHL-Shale; CTN-Concretion; PET-Pet; DCM-Decomposed Material; CLY-Clay; MIC-Mica;SLT-Silt; VSD-Very Fine Sand; FSD- Fine Sand; MSD-Medium Sand; CSD-Coarse Sand; GVL-Gravel
Quantity	701505	Percent Of Materials According To Types; 70 For FSD,15 For MSD, 05 For VSD
Sample_colour	Grey	
Date_last_update	28/10/1998	
User_last_update	Admin	

Name of Data layer: **Groundwater Depth Data of BADC/DTW2**

Metadata

Data Type	Tabular
Abstract	This data layer contains the information of yearly maximum and minimum ground water depth as time series.
Quality	In this data layer information is available for 1474 stations from 1984 to1991. But this time range of data availability is not applicable to all stations. Besides there are missing of data in some stations within the specified range of data availability.
Completeness	The data layer covers 1474 stations of BADC/DTW2.
History of the dataset	Bangladesh Agricultural Development Corporation (BADC) collected this time series attribute information. The total number of monitoring wells of BADC is 1477. The data was collected in soft copy.
Purpose of production	To monitor the yearly trend of ground water depth through series of time of an area concerned this data layer has been included in NWRD.
Process description	NWRD has collected this data from BADC and organized them in an ordered form.

Sample of Data

Id	Year	Maxdepth_old	Maxdepth_updated	Mindepth_old	Mindepth_updated
2194	1984	7.9	7.9	1.68	1.68
2194	1985	4.62	4.62	1.91	1.91
2194	1986	0	-	1.68	1.68
2194	1987	5.61	5.61	1.3	1.3
2194	1988	10.72	10.72	0	-
2194	1989	11.07	11.07	0	-
2194	1990	0	-	0	-
2194	1991	0	-	0	-

Bundle Information (Data Field Description and Unit)

FIELD	FIELD_NAME	UNIT
Id	ID of Each Station	
Year	Data Capturing Year	
Maxdepth_old	Maximum Groundwater Depth from Surface (Original Value Collected from Source)	Meter (m)
Mindepth_old	Minimum GroundWater Depth from Surface (Original Value Collected from Source)	Meter (m)
Mindepth_updated	Minimum GroundWater Depth from Surface (all zero values and other obvious error are made null)	Meter (m)
Maxdepth_updated	Maximum Groundwater Depth from Surface (all zero values and other obvious error are made null)	Metrer (m)

Name of Data layer: **Groundwater Depth Data of BMDA**

Metadata

Data Type	Tabular
Abstract	This data layer contains fortnightly information of ground water level in time series collected by Barind Multipurpose Development Authority (BMDA).
Quality	In this data layer information is available for 50 stations from 1-1-86 to 16-1-99. But this time range of data availability is not applicable to all stations. Besides there are missing of data in some stations within the specified range of data availability.
Completeness	The data layer covers 50 stations of BMDA.
History of the dataset	Barind Multipurpose Development Authority (BMDA) collected this time series attribute information. Total number of monitoring wells of BMDA is 50. The data was in soft copy.
Purpose of production	To monitor the ground water level of Barind area, BMDA collected this data fortnightly.
Process description	NWRD has collected this data layer from BMDA and organized them in an ordered form.

Sample of Data

Id	Datetime	Waterdepth_old	Waterdepth_updated
1	01/01/1986	10.25	10.25
1	16/01/1986	10.39	10.39
1	01/02/1986	10.52	10.52
1	16/02/1986	10.56	10.56
1	01/03/1986	10.61	10.61
1	16/03/1986	10.63	10.63
1	01/04/1986	10.84	10.84
1	16/04/1986	10.84	10.84

Bundle Information (Data Field Description and Unit)

FIELD	FIELD_NAME	UNIT
Id	Id of Each Station	
Datetime	Data Capturing Date	
Waterdepth_old	Groundwater Depth from Surface (Original Value Collected from Source)	Meter (m)
Waterdepth_updated	GroundWater Depth from Surface (all zero values and other obvious error are made null)	Meter (m)

Name of Data layer: **Groundwater Depth of NEMIP**

Metadata

Data Type	Tabular
Abstract	A time series data layer provides information of the ground water depth fortnightly covering north east part of the country, collected by North East Minor Irrigation Project (NEMIP).
Quality	In this data layer information is available for 248 stations from 1984 to 1991. But this time range of data availability is not applicable to all stations. Besides there are missing of data in some stations within the specified range of data availability.
Completeness	The data layer covers 248 stations (north east part of the country) collected by NEMIP.
History of the dataset	This time series attribute information was collected by the North East Minor Irrigation Project. Total number of monitoring wells of NEMIP is 258 covering North-East part of the country. The data has been collected as soft copy from NEMIP.
Purpose of production	To monitor the ground water level of north east part of the country and to use this data in analysis purpose.
Process description	NWRD has collected this data layer from NEMIP and organized them in an ordered form.

Sample of Data

Id	Datetime	Waterdepth_old	Waterdepth_updated
8186	01/01/1995	2.76	2.76
8186	16/01/1995	2.82	2.82
8186	01/02/1995	3.04	3.04
8186	16/02/1995	3.2	3.2
8186	01/03/1995	3.32	3.32
8186	16/03/1995	3.63	3.63
8186	01/04/1995	3.93	3.93
8186	16/04/1995	3.98	3.98

Bundle Information (Data Field Description and Unit)

FIELD	FIELD_NAME	UNIT
Id	Id of Each Station	
Datetime	Data Capturing Date	
Waterdepth_old	Groundwater Depth from Surface (Original Value Collected from Source)	Meter (m)
Waterdepth_updated	GroundWater Depth from Surface (all zero values and other obvious error are made null)	Meter (m)

Name of Data layer: **Groundwater Level Attribute of BWDB wells**

Metadata

Data Type	Tabular
Abstract	An attribute data layer of groundwater wells of BWDB with Geocode, depth, RL and other related information.
Quality	As the data was derived from BWDB the quality of this data layer depends on the data generating quality of the source organization.
Completeness	The data layer covers the information of the 1256 ground water wells maintained by BWDB.
History of the dataset	Bangladesh Water Development Board (BWDB) generated the data layer.
Purpose of production	The data layer has been generated to archive all related information of groundwater level monitoring wells of Bangladesh Water Development Board (BWDB).
Process description	NWRD has checked the data and stored it in an ordered form.

Sample of Data

Id	Wellid	Newid	Oldid	Geocode	District	Thana	Village	Nchange	Welltype	Ins_date	Latitude	Longitude	RI	Ph	Depth
2168	2947007	FAR007	FA001	32947	FARIDPUR	FARIDPUR SADAR	Chawk bazar	1	Piezometer	12/5/1984	233545	895048	8.48	0.46	30.77
2169	2764034	DIN034	DI054	52764	DINAJPUR	DINAJPUR SADAR	Galdhihi	0	Piezometer	1/28/1993	99	99	43.38	0.39	23.78
2170	2760028	DIN028	DI054	52760	DINAJPUR	KHANSAMA	Gobindapur	0	Dug	2/1/1961	255530	884430	47.95	0.76	8.08
2171	2747020	DIN020	DI058	52747	DINAJPUR	HAKIMPUR	Charkai	0	Dug	2/1/1961	252400	885915	29.74	0.76	-
2172	2710001	DIN001	DI058	52710	DINAJPUR	BIRAMPUR	East jaganathpur	0	Piezometer	1/25/1993	252400	885915	29.81	0.39	20.73
2173	2654014	DHA014	DH1245	32654	DHAKA	MOTIJHEEL	60-south khilga	1	Dug	7/1/1979	234500	902515	6.49	0.53	6.22

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Id	Station Identification Number Given By Bangladesh Water Development Board (BWDB) (Station: The region Where The Well is Situated).	
Wellid	Well identification Number (Last three digit is for well number,Middle two is district code and the rest is division code)	
Newid	Given By BWDB; Incorporating The Abrivated New District Name (Where The Well Is Situated) With ID i.e.BAG For Bagerhat.	
Oldid	Given By BWDB; Incorporating The Abrivated Old District Name (Where The Well Is Situated) With ID i.e.PT For Bagerhat.	
Geocode	Code indicating administrative unit given by BBS (Bangladesh Bureau of Statistics)	
District	District Name	
Thana	Thana Name	
Village	Village Name	
Nchange	Number of changes in the Well Type	Number
Welltype	Well Type	
Ins_date	Date of Instalation	
Latitude	Latitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meters
Longitude	Longitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meters
RI	Reduced Level (RL) of The Measuring Point Well	Meters
Ph	Parapet Height	Meters
Depth	Depth from Measuring Point to Ground Water Level	Meters

Name of Data layer: **Groundwater Level Declination (Forecast)**

Metadata

Data Type	Tabular
Abstract	The data layer presents 490 thana wise Tara pump distribution for the year 1992 and provides forecast of the declination of ground water level and prediction of different Hand Tubewell (TARA) mode that will be required in 1995, 2000, 2010 and in full deve
Quality	Data was generated by DPHE/UNICEF. Therefore its reliability and quality largely depend on the data generating procedure of the source organization.
Completeness	The data layer covers 490 thana of Bangladesh.
History of the dataset	DPHE/UNICEF conducted the study during 1993-94 by assigning EPC Ltd. (Engineering and Planning Consultants Ltd.) in association with Mott MacDonald Ltd.
Purpose of production	The study was conducted to forecast the groundwater declination of Bangladesh.
Process description	NWRD has stored this data layer in an arranged way.

Sample of Data

District	Thana	Geocode	Y1992	Tara92	Tara95	Tara2000	Tara2010	Tarafull
BOGRA	GABTALI	51040	106	2	Marginal Tara (6-8 m)	Marginal Tara (6-8 m)	Marginal Tara (6-8 m)	Marginal Tara (6-8 m)
BOGRA	SONATOLA	51095	66	1	Marginal Tara (6-8 m)	Marginal Tara (6-8 m)	Marginal Tara (6-8 m)	Marginal Tara (6-8 m)
COMILLA	DEBIDWAR	21940	0	0	Nr 6 (upto 6 m)	Tara (8-15 m)	Tara (8-15 m)	Marginal Super Tara (15-16 m)
FARIDPUR	ALFADANGA	32903	0	0	Marginal Tara (6-8 m)	Marginal Tara (6-8 m)	Marginal Tara (6-8 m)	Marginal Tara (6-8 m)

Bundle Information (Data Field Description and Unit)

FIELD	FIELDNAME
District	District Name
Thana	Thana Name
Geocode	BBS Geocode 1991
Y1992	Distribution of Tara Pump of 1992
Tara92	Code used as 1 - < 100 Tara Pumps, 2 - >=100 Tara Pumps of 1992
Tara95	Predicted HTW for 1995
Tara2000	Predicted HTW for 2000
Tara2010	Predicted HTW for 2010
Tarafull	Predicted HTW for Full Development

Name of Data layer: **Groundwater Level of BWDB**

Metadata

Data Type	Time Series Table
Abstract	A time series data layer representing the weekly information of ground water level collected by BWDB (Bangladesh Water Development Board) throughout the country.
Quality	In this data layer information is available from 1965 to 1999. But this time range of data availability is not applicable to all stations. Besides there are missing of data in some stations within the specified range of data availability.
Completeness	The data layer covers 1256 wells of BWDB all over the country.
History of the dataset	BWDB collected this time series attribute information. Total number of monitoring wells of BWDB is 1256 throughout the country. The data has been collected as soft copy from BWDB.
Purpose of production	To monitor the ground water depth and level of the area concerned and to use this data in analysis purpose.
Process description	NWRD has collected this data from BWDB. BWDB collected the data as depth to water table from measuring point, reduced level of the place and parapet height. NWRD has derived the parameter water level i.e. depth of water level with respect to the standard datum and stored the data as convenient to use. Both ground water depth from surface and level are available.

Sample of Data

Id	Newid	Ph	RI_parapet	Gwd_surface	Gwd_rl	Datetime	Gwd_old	Gwd_updated
100	BOG004	0.3	15.8	2.75	12.75	22/09/1997	3.05	3.05
100	BOG004	0.3	15.8	3.23	12.27	13/10/1997	3.53	3.53
100	BOG004	0.3	15.8	3.56	11.94	20/10/1997	3.86	3.86
100	BOG004	0.3	15.8	3.92	11.58	27/10/1997	4.22	4.22
100	BOG004	0.3	15.8	4.05	11.45	03/11/1997	4.35	4.35
100	BOG004	0.3	15.8	3.87	11.63	10/11/1997	4.17	4.17
100	BOG004	0.3	15.8	4.13	11.37	17/11/1997	4.43	4.43
100	BOG004	0.3	15.8	4.19	11.31	24/11/1997	4.49	4.49

Bundle Information (Data Field Description and Unit)

FIELD	SAMPLE_DATA	UNIT	INTERPRETATION
Id	51		Station Identification Number Given by Bangladesh Water Development Board (BWDB) (Station: The region where the well is situated).
Newid	BAG001		Given by BWDB; Incorporating the Abrivated District Name (Where the well is situated) with ID i.e.BAG for Bagerhat.
Ph	0.46	Meter, pwd	Parapet Height
RI_parapet	2.29	Meter, pwd	Reduced Level (RL) of groundwater level
Gwd_surface	1.19	Meter	Depth of Water from Ground Surface (GWD_Updated - Ph)
Gwd_rl	0.64	Meter, pwd	Ground Water Level (RL_Parapet - GWD_Updated)
Datetime	6/4/1979		Date of Data Collection.
Gwd_old	1.65	Meter	Depth of Water from Measuring Point (Collected from Source)
Gwd_updated	1.65	Meter	Depth of Water from Measuring Point (Updated)

Name of Data layer: **Groundwater Level of DPHE**

Metadata

Data Type	Time Series Table
Abstract	A time series data layer representing the yearly information of ground water level collected by DPHE.
Quality	In this data layer information is available for 5655 stations from 1986 to 2002. But this time range of data availability is not applicable to all stations. Besides there are missing of data in some stations within the specified range of data availability.
Completeness	The data layer covers 5655 stations of DPHE.
History of the dataset	Department of Public Health and Engineering (DPHE) collected this time series attribute information. Total number of monitoring wells of DPHE is 5655 throughout the country. The data has been collected as soft copy from DPHE.
Purpose of production	To monitor the yearly trend of ground water level this data layer is useful.
Process description	NWRD has collected this data from DPHE and organized them in an ordered form.

Sample of Data

Id	Year	Waterdepth
3671	1904	0
3671	1905	0
3671	1986	0
3671	1987	0
3671	1988	0
3671	1989	0
3671	1990	3.66
3671	1991	3.96

Bundle Information (Data Field Description and Unit)

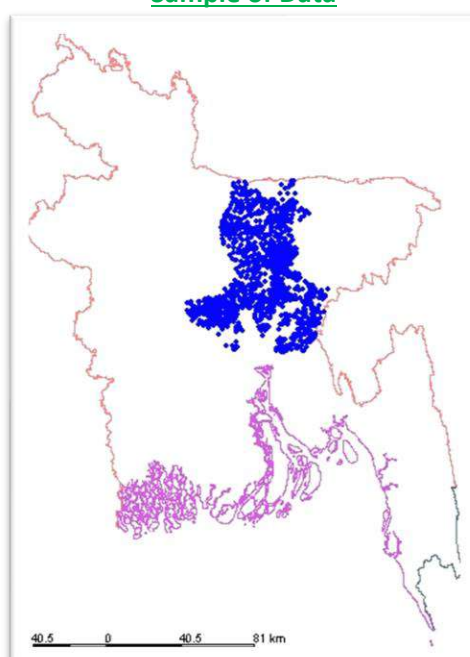
FIELD	FIELD_NAME	UNIT
Year	Year of Data Capturing	
Waterdepth	Groundwater Depth from Surface	Meter (m)
Id	ID of Each Station	

Name of Data layer: **Groundwater Level Stations of BADC/DTW2**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of ground water monitoring stations/wells of BADC/DTW2 in which ground water level is measured.
Quality	Locations of the stations have been checked with the associated attribute database. It is recommended that the data layer should be used in 1:1000000 scale for the whole country and for region level the scale should be smaller than this.
Completeness	The data layer covers 1474 stations of BADC/DTW2.
History of the dataset	Data in soft copy format has been collected from BADC under the project Deep Tube Well 2 and has been processed by NWRD. Total number of monitoring wells of BADC is 1477.
Purpose of production	The dataset has been incorporated to present the spatial distribution of the ground water level monitoring stations of BADC/DTW2 and also the spatial information is needed to link the quantitative ground water data..
Process description	NWRD has generated a point data layer with the coordinate values collected from BADC. But there were some anomalies. Therefore with the help of the attribute databases collected from BADC the location of the ambiguous points have been placed at the center following the available lowest administrative units. Some points have been created at the centers of the administrative units where there were no coordinate values.

Sample of Data



Attribute Table

Stationid	Geocode	Jlno	Btmlon	Btmlat	Ddlon	Ddlat	Thacode	Thaname
2350	2191588	410	616406	614482.5	91.14	23.64	21915	BRAHMAN PARA
2351	2191582	58	612738.81	610827.19	91.11	23.61	21915	BRAHMAN PARA
2352	2191582	47	612275.94	609308.13	91.1	23.59	21915	BRAHMAN PARA
2353	2191582	59	612264.06	609806.56	91.1	23.6	21915	BRAHMAN PARA
2354	2191582	54	613450.88	608418	91.11	23.58	21915	BRAHMAN PARA
2355	2191582	47	612323.44	609426.75	91.1	23.59	21915	BRAHMAN PARA
2356	2191582	55	611765.63	607860.25	91.1	23.58	21915	BRAHMAN PARA
2357	2191582	47	612216.63	609225	91.1	23.59	21915	BRAHMAN PARA

Bundle Information (Data Field Description and Unit)

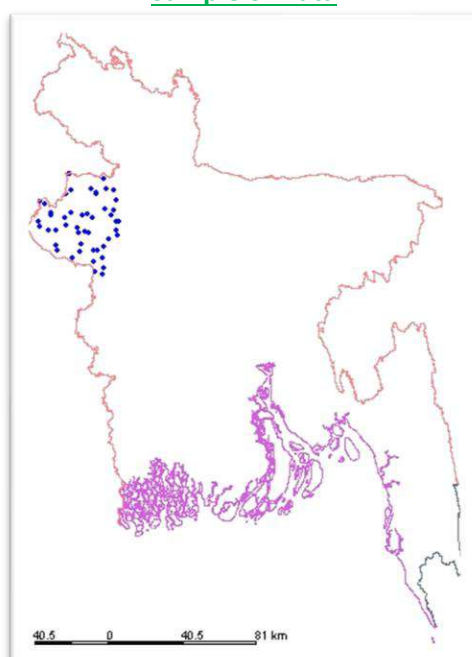
FIELD_NAME	DESCRIPTION	UNIT
Stationid	Station Identification Number Given By BADC. (Station: The Region Where The Well Is Situated).	
Geocode	Spacial Identification Code Given By BBS (Bangladesh Bureau Of Statistics)	
Jlno	Jurisdiction List Number	
Btmlon	Longitude With BTM (Bangladesh Transverse Mercator) Correction In Meters	Meter
Btmlat	Latitude With BTM (Bangladesh Transverse Mercator) Correction In Meters	Meter
Ddlon	Longitude In Degree Decimal	Degree Decimal
Ddlat	Latitude In Degree Decimal	Degree Decimal

Name of Data layer: **Groundwater Level Stations of BMDA**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the location of ground water monitoring stations/wells of Barind area maintained by BMDA (Barind Multi-purpose Development Authority).
Quality	Locations of the stations have been checked with the associated attribute database derived from BMDA. Ground checking is required for some locations. It is recommended that the data layer should be used in 1:1000000 scale for the whole country and for region level the scale should be smaller than this.
Completeness	The data layer covers 50 observation wells of BMDA.
History of the dataset	This data has been collected from Barind Multipurpose Development Authority (BMDA) in digital format.
Purpose of production	The dataset has been incorporated to NWRD to present the spatial distribution of the ground water level monitoring stations of BMDA and also the spatial information is needed to link the quantitative ground water data with it.
Process description	In this data layer the total number of observation wells is 50. NWRD generated a point data layer with the co-ordinate values collected from BMDA. Some station locations, derived from their latitude and longitude mentioned in the attribute tables of these stations, do not match with their actual position. To adjust this anomaly the mismatched stations have been placed at the center of the available lowest administrative units.

Sample of Data



Attribute Table

Stationid	Geocode	Mauza	Village	Jlno	Plotno	Btmllon	Btmllat	Ddlon	Ddlat
1	706611	Damdama / A -	-	-	259/372	324364.19	726802.31	88.26	24.65
10	647923	West Daul	-	203.00000	378	348509.34	769948.63	88.5	25.04
15	647560	Ghugumari	-	211.00000	89	376316.66	767189.19	88.77	25.02
16	647586	Kantodigh	-	181.00000	228	371356.72	770980.19	88.73	25.05
17	645009	Bagachara	-	301.00000	210/213	386503.13	749017.19	88.88	24.85
18	645038	Mollapara	-	170.00000	291/174	376959.81	765221.25	88.78	25
19	646984	Darazpur	-	214.00000	800	360857.63	742555.81	88.62	24.79
2	706644	Kamaitiko	-	92.00000	312	333187.31	726073.44	88.35	24.64

Bundle Information (Data Field Description and Unit)

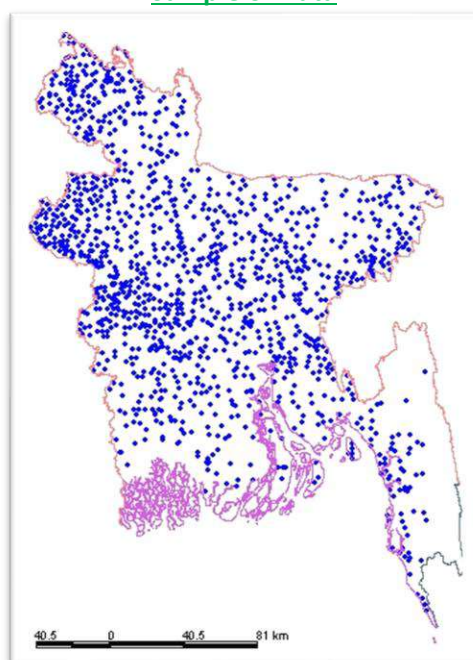
FIELD_NAME	DESCRIPTION	UNIT
Stationid	Station Identification Number Given By BADC. (Station: The Region Where The Well Is Situated).	
Geocode	Spacial Identification Code Given By BBS (Bangladesh Bureau Of Statistics)	
Jlno	Jurisdiction List Number	
Btmlon	Longitude With BTM (Bangladesh Transverse Mercator) Correction In Meters	Meter
Btmlat	Latitude With BTM (Bangladesh Transverse Mercator) Correction In Meters	Meter
Ddlon	Longitude In Degree Decimal	Degree Decimal
Ddlat	Latitude In Degree Decimal	Degree Decimal

Name of Data layer: **Groundwater Level Stations of BWDB**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of ground water monitoring stations/ wells of BWDB (Bangladesh Water Development Board) at which ground water level of a particular area is measured weekly.
Quality	As the information has been captured from a map of 1:1,000,000 scale it is recommended that this map should not be in a scale larger than this. Quality check is required for some stations.
Completeness	The data layer covers 1256 stations of Bangladesh Water Development Board (BWDB) all over the country.
History of the dataset	NWRD has generated the point data layer with the coordinates collected from Bangladesh Water Development Board (BWDB) in soft copy. But there were anomalies between coordinate values and the stated location of wells by BWDB. Then points were captured from Hydrological Network, Water Table and Water Quality maps. Hydrology Department of BWDB under United Nations Department for Development Support and Management Services Project produced these maps in 1991.
Purpose of production	The dataset has been incorporated to NWRD to present the spatial distribution of the ground water level monitoring stations of BWDB and also the spatial information is needed to link the quantitative ground water data with it.
Process description	Total number of monitoring wells is 1256. The scale of the source map was 1:1000000. The point locations have been checked with the attribute data collected from the office of Hydrology section of Bangladesh Water Development Board (BWDB). Some station locations, derived from their latitude and longitude mentioned in the attribute tables of these stations, do not match with their actual position. To adjust this anomaly the mismatched stations have been placed at the center of the available lowest administrative units. Some information have not been found and reported to BWDB for their consideration.

Sample of Data



Attribute Table

Gwlwdb_id	Well_id	Newid	Geocode	Thana	Village	Btmlon	Btmlat	Ddlon	Ddlat
58134028	8134028	RAJ028	813438	GODAGARI	Sreemontapur	330007.94	706789.25	88.32	24.47
58153030	8153030	RAJ030	815381	MOHANPUR	Lalich	366037.53	724433.31	88.68	24.63
58172032	8172032	RAJ032	817215	PABA	Damkurahat	350325.06	700381.69	88.52	24.41
58172033	8172033	RAJ033	817271	PABA	Bagdhanihat	356190.41	708714.81	88.58	24.49
58172035	8172035	RAJ035	817287	PABA	Hatgodagari	367758.16	702384.69	88.7	24.43
58172036	8172036	RAJ036	817271	PABA	Paba	359302.34	700767.75	88.61	24.42
58172037	8172037	RAJ037	817239	PABA	Namobhadra	366385.78	696911.5	88.68	24.38
58172038	8172038	RAJ038	817271	PABA	Bhodra	358148.5	702105.63	88.6	24.43

Bundle Information (Data Field Description and Unit)

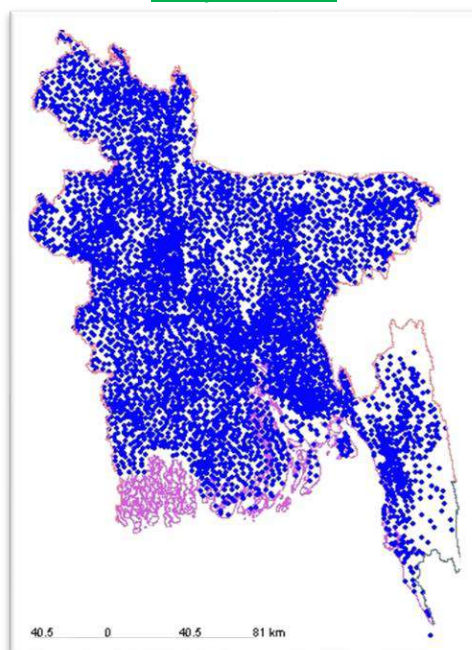
FIELD	SAMPLE_DATA	DESCRIPTION
Gwlwdb_id	17790021	
Well_id	7790021	Well Identification Number
Newid	PAN021	Given By BWDB; Incorporating The Abrivated District Name (Where The Well Is Situated) With ID i.e.PAN For Panchagarh.
Geocode	779013	Spatial Code Given By BBS (Bangladesh Bureau Of Statistics)
Thana	TENTULIA	
Village	Bangla bandh	
Btmlon	341832.28	Longitude With BTM (Bangladesh Transverse Mercator) Correction In Meters
Btmlat	942256.81	Latitude With BTM (Bangladesh Transverse Mercator) Correction In Meters
Ddlon	88.41	Longitude In Degree Decimal
Ddlat	26.59	Latitude In Degree Decimal

Name of Data layer: **Groundwater Level Stations of DPHE**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the ground water monitoring stations/wells of DPHE at which ground water level of a particular area is measured yearly.
Quality	Locations of the stations have been checked with the help of major rivers and associated attribute information derived from DPHE. Ground checking is required for some stations. It is recommended that the data layer should be used in 1:1000000 scale for the whole country and for region level the scale should be smaller than this.
Completeness	The data layer covers 5655 stations of Department of Public Health and Engineering (DPHE).
History of the dataset	The original source of this data layer is a digital data set with coordinate values and other associated attributes information collected from Department of Public Health and Engineering (DPHE).
Purpose of production	The dataset has been incorporated to NWRD to present the spatial distribution of the ground water level monitoring stations of DPHE and also the spatial information is needed to link the quantitative ground water data with it.
Process description	In this data layer total number of observation wells is 5665. NWRD has generated a point data layer with the coordinate values collected from DPHE. Some station locations, derived from their latitude and longitude mentioned in the attribute tables of these stations, do not match with their actual position. To adjust this anomaly the mismatched stations have been placed at the center of the available lowest administrative units.

Sample of Data



Attribute Table

Stationid	Geocode	Distname	Thananame	Unionname	Unino	Lon	Lat	Btmlon	Btmlat	Welltype	Welldepth	Pumptype	Fe	Remark
3671	037319	Bandarban	Naikhongchhari	Baishari	43601	92	22	733091	388971.7	RW/ST	30/120	SU/T1	6	-
3672	037338	Bandarban	Naikhongchhari	Dochhari	43602	92	22	740260.15	382950.55	RW/ST	30/120	SU/T1	6	-
3673	037357	Bandarban	Naikhongchhari	Ghandung	43603	92	21	727554.77	356210.81	RW/ST	30/120	SU/T1	6	-
3674	037376	Bandarban	Naikhongchhari	Naikhongchhari	43604	92	21	734235.54	371529.17	RW/ST	30/120	SU/T1	6	-
3675	030431	Bandarban	Aikadam	Aikadam	43701	92	22	746256.1	398969.97	RW/ST	35/120	SU/T1	6	-
3676	030463	Bandarban	Aikadam	Chokhyong	43702	92	22	741973.37	406790.37	RW/ST	35/120	SU/T1	6	-
3677	035115	Bandarban	Lama	Aziznagar	43801	0	0	716658.32	422404.79	RW/ST	35/120	SU/T1	9	-
3678	035131	Bandarban	Lama	Fasyakhali	43802	92	22	723387.36	404083.22	RW/ST	35/120	SU/T1	8	-

Bundle Information (Data Field Description and Unit)

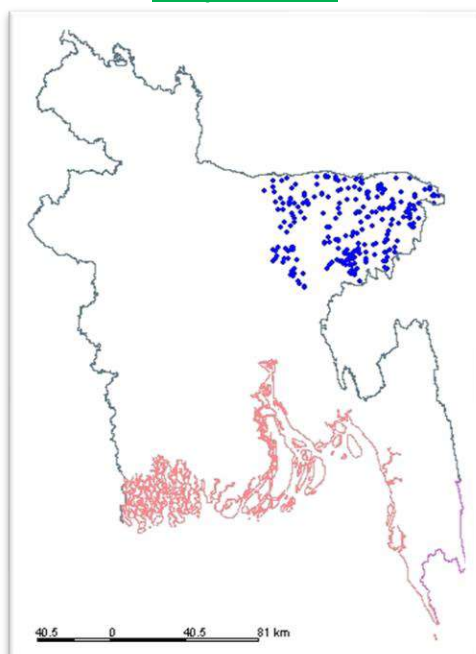
FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stationid	Unique identification given by NWRD	
Geocode	BBS code given to each well as per the location (Divcode+distcode+Thanacode+unioncode)	
Distname	District name used from BBS geomaster files	
Thananame	Thana name used from BBS geomaster files	
Unionname	Union name used from BBS geomaster files	
Unino	Unique identification given by DPHE	
Lon	Longitude of the well	Degree decimal
Lat	Latitude of the well	Degree decimal
Btmlong	Longitude of the well from Bangladesh transverse mercator	meter
Btmlat	Latitude of the well from Bangladesh transverse mercator	meter
Welltype	well type defined as per depth of the well	
Welldepth	Depth of well	meter
Pumptype	Pump type	
Fe	Contained iron	mg/l
Remark		

Name of Data layer: **Groundwater Level Stations of NEMIP**

Metadata

Data Type	Spatial
Abstract	A spatial data layer presenting the location of ground water monitoring stations/wells of NEMIP (North East Minor Irrigation Project) in which ground water level of a particular area is measured fortnightly.
Quality	Locations of the stations have been checked with the associated attribute database derived from NEMIP. Ground checking is required for some station. It is recommended that the data layer should be used in 1:1000000 scale for the whole country and for region level the scale should be smaller than this.
Completeness	The data layer covers 258 stations of North East Minor Irrigation Project (NEMIP).
History of the dataset	Source of this data layer is the digital data with coordinate values and other associated attribute information collected from North East Minor Irrigation Project (NEMIP).
Purpose of production	The dataset has been incorporated to NWRD to present the spatial distribution of the ground water level monitoring stations of NEMIP and also the spatial information is needed to link the quantitative ground water data with it.
Process description	In this data layer total number of observation wells is 258. NWRD generated a point data set with the coordinate values collected from NEMIP. Some station locations, derived from their latitude and longitude mentioned in the attribute tables of these stations, do not match with their actual position. To adjust this anomaly the mismatched stations have been placed at the center of the available lowest administrative units.

Sample of Data



Attribute Table

Stationid	Geocode	Mauza	Village	Jlno	Plotno	Btmlon	Btmlat	Ddlon	Ddlat
8150	360213	Birat	-	-	30	626681.25	715021.13	91.25	24.55
8151	360267	Rajanagar	-	59.00000	1299	622130.13	709295.13	91.21	24.5
8152	360267	Demikandi	-	63.00000	119	621722	707860.56	91.2	24.48
8153	360281	Sibpasha	-	44.00000	1431	627683	710000.06	91.26	24.5
8154	360511	Satparia	-	65.00000	7	654780.56	692895.94	91.53	24.34
8155	360511	Barauri	-	78.00000	303	654020.94	692094.06	91.52	24.34
8156	360523	Kandarbap	-	130.00000	2507	655793.44	686861.06	91.54	24.29
8158	360535	Raghnath	-	108.00000	262	650017.56	690674.75	91.48	24.32

Bundle Information (Data Field Description and Unit)

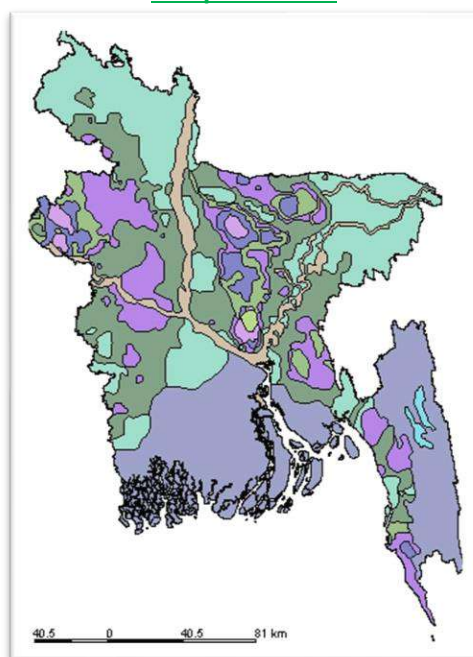
FIELD1	SAMPLE_DATA	DESCRIPTION
Stationid	2	Station Identification Number Given By North East Minor Irrigation Project (Station: The Region Where The Well Is Situated).
Geocode	706644	Spacial Identification Code Given By BBS (Bangladesh Bureau Of Statistics)
Mauza	Kamaitiko	
Village		
Jlno	92.00000	Jurisdiction List Number
Plotno	312	Plot Identification No Given By DLRS (Directorate Of Land Records & Surveys)
Btmlon	333187.313	Longitude With BTM (Bangladesh Transverse Mercator) Correction In Meters
Btmlat	726073.438	Latitude With BTM (Bangladesh Transverse Mercator) Correction In Meters
Ddlon	88.352	Longitude In Degree Decimal
Ddlat	24.642	Latitude In Degree Decimal

Name of Data layer: **Groundwater Zoning**

Metadata

Data Type	Spatial
Abstract	A spatial data layer, representing the ground water zone of Bangladesh considering parameter of ground water table along with the attribute information derived from the source map of Survey and monitoring project for development of minor irrigation by BADC in June 2004.
Quality	Groundwater zoning data generated as polygon data using standard GIS applications with WGS1984 datum.
Completeness	This data layer covers all over the Bangladesh
History of the dataset	BADC generated this data layer showing ground water zone all over the country.
Purpose of production	The dataset has been incorporated to present the spatial distribution of the ground water table zone which will help the planners for Irrigation and drainage development planning
Process description	The Groundwater zoning map derived as secondary data from the source map of BADC. Other attribute information have been attached according to the source map. Groundwater zoning data as polygon data projected in BTM projection.

Sample of Data



Attribute Table

area	perimeter	gw_table_m	zone
12160821379	1410803	2-5.3	1
18984279.512	28841.814	2-5.3	1
279706236.33	71530.227	5.3-7.6	2
6569142699.9	2009174.125	River	83
8467420138.4	1127413.125	5.3-7.6	2
13653084.611	14401.463	7.6-9.8	3
413567719.86	132948.781	2-5.3	1
131816480.97	58943.07	7.6-9.8	3

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygone	SqMeter
Perimeter	Perimeter of each polygone	
Gw_table_m	Groundwater table class	Meter
Zone	Groundwater zone Id	

Metadata

Data Type	Tabular
Abstract	An accumulated attribute data layer of arsenic testing well locations, arsenic concentration and other associated information recorded by different organizations between 1990 to1998.
Quality	The data layer has been stored without any checking.
Completeness	The data layer covers 9037 arsenic testing locations in 294 Thana.
History of the dataset	The data layer has been recorded by different organizations in different year between 1990 to 1998. These are mainly DPHE, DCH/SOES, REB/NRECA, 18DTP, BRAC, NICKSON 1997, GKW 1990, Safiullah 98, BUET/NEMIP, BCSIR/NEMIP, DANIDA1998.
Purpose of production	To represent the results of arsenic survey classified by depth up to thana level. This data layer can be used in different arsenic related studies.
Process description	NWRD has stored the collective data layer in an arranged way.

Sample of Data

Geocode	District	Thana	Unionname	Mouza_vill	Location	Caretaker	Remarks	Pnt2281_se	Longitude	Latitude	Sample_nr	Other_ref
10800000	BAGERHAT	BAGERHAT SADAR	PAURASHAVA	MUNICIPAL AREA	60 GAMBUJ DIGHI	-	-	14	89.78308	22.67583	159.00000	-
10817000	BAGERHAT	BAGERHAT SADAR	BARAI PARA	KARTIC DIA	nitai chandra go-shami	-	-	8	89.75830	22.75033	402.00000	-
10860000	BAGERHAT	BAGERHAT SADAR	JATRAPUR	AFRA	PRIMARY SCHOOL	-	-	9	89.74447	22.72752	128.00000	-
10860000	BAGERHAT	BAGERHAT SADAR	JATRAPUR	JATRAPUR	JATRAPUR BAZAR	-	-	10	89.74447	22.72532	129.00000	-

Sampledate	Year_inst	Depth_m	Pump_type	Date_analy	As_astext	As_ppm	Datasource	Gt_bgd	Gt_who	As_cat	Wd_cat
8/25/96	-	-	3.00000	9/10/96	-	0.01	DPHE	0	0	1	-
10/3/96	-	18.00000	1.00000	10/12/96	-	0.07	DPHE	1	1	3	2
8/25/96	-	26.00000	1.00000	8/27/96	-	0	DPHE	0	0	-	2
8/25/96	-	19.00000	1.00000	8/27/96	-	0.02	DPHE	0	1	2	2

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Geocode	Geocode	
District	District Name	
Thana	Thana Name	
Unionname	Union Name	
Mouza_vill	Mouza or Village name	
Location	Address	
Caretaker	Name of the care taker	
Remarks		
Pnt2281_se		
Longitude	Longitude	

FIELD_NAME	FIELD_DESC	UNIT
Latitude	Latitude	
Sample_nr	Sample number	
Other_ref	Other reference	
Sampledate	Date of sample collection	
Year_inst	Year of Instalation	
Depth_m	Depth	meter
Pump_type	Type of Pump	
Date_analy	Date of analysis	
As_astext	Arsenic value as text format	
As_ppm	Arsenic value in ppm	
Datasource	Source of data	
Gt_bgd	Greater than Bangladesh standard	
Gt_who	Greater than WHO standard	
As_cat		
Wd_cat		

Name of Data layer: **Arsenic Contamination of 62 Thana (BAMWSP)**

Metadata

Data Type	Tabular
Abstract	The data layer represent the number of arsenic con
Quality	Bangladesh Arsenic Mitigation Water Supply Project (BAMWSP) under the supervision of DPHE, surveyed all the tube wells of 62 upzillas. The quality of the data set solely depends on the survey procedure being conducted by the agency.
Completeness	According to the survey report it covers all the w
History of the dataset	The survey work was done by BAMWSP for 42 upzilla's and 20 upazilla's were done by UNICEF. The wells are tested with field kit of each tube wells in the upazilla's. The tested wells are demarcated if contaminated and number of safe tube wells are identified.
Purpose of production	Arsenic contamination in drinking water is a major problem in Bangladesh. It is required to know the contaminated wells, as well as the level of contamination to safe guard the community/people about its toxicity and harmful effects.
Process description	NWRD has processed the hard copy data format into digital and incorporate it into a administrative based according to BBS.

Sample of Data

Geocode	Divname	Distname	Upname	Unionname	Village	Ward	Operatedtw	Assafetw	Ascontw	Perascontw	Popsurv	Aspatidn	
10602	Barisal	Barisal	Agailjhara		5	86	45	4382	833	3549	0.81	162348	64
10603	Barisal	Barisal	Babuganj		6	87	54	5956	1969	3987	0.67	163086	106
10610	Barisal	Barisal	Banari Para		8	77	72	3251	1252	1999	0.61	167467	110
10632	Barisal	Barisal	Gaurnadi		7	101	63	4406	1635	2771	0.63	166642	62
10694	Barisal	Barisal	Wazirpur		9	109	81	6297	1604	4693	0.75	264751	116
14240	Barisal	Jhalokati	Jhalokati Sadar		9	174	81	4473	2545	1928	0.43	153999	72
17914	Barisal	Pirojpur	Bhandaria		7	33	63	4408	2819	1589	0.36	154096	15
21204	Chittagong	Brahmanbaria	Banchharampur		13	118	117	17628	5164	12464	0.71	310045	68

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Geocode	Geocode Upto thana level (Div. + Dist. + Thana)	
Division	Division name	
District	District name	
Thana	Thana name	
Union	Union number	
Village	Village number	
Ward	Word number	
Operatedtw	Total operated Tubewell	
Assafetw	Arsenic safe Tubewell	
Ascontw	Arsenic Contaminated Tubewell	
Perascontw	Percent of Arsenic contaminated tubewell	
Popsurv	population surveyed	
Aspatidn	Arsenic patient Identified	

Metadata

Data Type	Tabular
Abstract	An attribute data layer showing the Thana level statistics of number of wells that contain arsenic at specified depths.
Quality	The data layer has been stored as it was collected from DPHE.
Completeness	The survey was conducted over 437 thana.
History of the dataset	DPHE (Department of Public Health and Engineering) conducted the survey in 1998.
Purpose of production	To represent the results of arsenic survey classified by depth up to Thana (second lowest administrative unit) level and to use this data layer in different arsenic related studies.
Process description	NWRD has converted the data layer into digital format and has stored it in an organized form.

Sample of Data

Distname	Upname	Unionname	Unigcode	Count	Nr_wells	Ave_av_dep	Sum_nr_lt3	Sum_nr_30	Sum_nr_100
BARGUNA	AMTALI	AMTALI	1040907	11	50	288.6	0	0	0
BARGUNA	BAMNA	BAMNA	1041923	4	20	239.4	2	0	1
BARGUNA	BARGUNA SADAR	AYLA PATAKATA	1042809	10	31	284.3	0	0	0
BARGUNA	BETAGI	BETAGI	1044711	7	0	0	0	0	0
BHOLA	BHOLA SADAR	ALINAGAR	1091807	14	57	261.4	1	0	0
BHOLA	CHAR FASSON	AMINABAD	1092509	11	33	281.3	0	0	0
BHOLA	DAULATKHAN	BHABANIPUR	1092909	10	39	266.2	0	0	1
BHOLA	MANPURA	HAJIRHAT	1096523	4	15	284.3	0	0	0

Sum_nr_mt2	Sum_yes_lt	Sum_yes30	Sum_yes100	Sum_yes_mt	Pcy_lt30	Pcy30_100	Pcy100_200	Pcy_mt200
50	0	0	0	0	-	-	-	0
17	0	0	0	0	0	-	0	0
31	0	0	0	0	-	-	-	0
0	0	0	0	0	-	-	-	-
56	0	0	0	0	0	-	-	0
33	0	0	0	0	-	-	-	0
38	0	0	0	0	-	-	0	0
15	0	0	0	0	-	-	-	0

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Distname	District Name	
Upname	Upazilla Name	
Unionname	Union Name	
Unigcode	Union Geocode as used by BBS	
Count	Number of unions with data	Number
Nr_wells	Number of wells tested in thana	Number
Ave_av_dep	Average depth of wells	meter
Sum_nr_lt3	Total number of wells with depth less than 30 meter	Number
Sum_nr_30	Total number of wells with depth within 30-100 meter	Number
Sum_nr_100	Total number of wells with depth within 100-200 meter	Number
Sum_nr_mt2	Total number of wells with depth greater than 200 meter	Number

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Sum_yes_lt	Total number of 'yes' results in wells with depth less than 30 meter ('yes' indicates the presence of arsenic)	Number
Sum_yes30_	Total number of 'yes' results in wells with depth within 30-100 meter ('yes' indicates the presence of arsenic)	Number
Sum_yes100	Total number of 'yes' results in wells with depth within 100-200 meter ('yes' indicates the presence of arsenic)	Number
Sum_yes_mt	Total number of 'yes' results in wells with depth greater than 200 meter ('yes' indicates the presence of arsenic)	Number
Pcy_lt30	Percent of 'yes' results in wells with depth less than 30 meter ('yes' indicates the presence of arsenic)	Percent
Pcy30_100	Percent of 'yes' results in wells with depth within 30-100 meter ('yes' indicates the presence of arsenic)	Percent
Pcy100_200	Percent of 'yes' results in wells with depth within 100-200 meter ('yes' indicates the presence of arsenic)	Percent
Pcy_mt200	Percent of 'yes' results in wells with depth greater than 200 meter ('yes' indicates the presence of arsenic)	Percent

Metadata

Data Type	Tabular
Abstract	An attribute data layer showing the union level statistics of number of wells that contain arsenic at specified depths.
Quality	The data layer has been stored as it was collected from DPHE.
Completeness	The survey was conducted over 4506 union.
History of the dataset	DPHE (Department of Public Health and Engineering) conducted the survey in 1998.
Purpose of production	To represent the results of arsenic survey classified by depth up to union level and to use this data layer in different arsenic related studies.
Process description	NWRD has stored the data layer in database format.

Sample of Data

Geo_code	Distname	Upname	Unionname	Remarks	Av_depth_m	Depth_yes	Depth_no	Nr_tests	Yes_nr	No_nr
4015827000	BAGERHAT	MONGLA	BURIRDANGA	-	21.3	0	21.3	3	0	3
4015829000	BAGERHAT	MONGLA	CHILA	-	10.7	0	10.7	2	0	2
4015889000	BAGERHAT	MONGLA	SUNDARBAN	-	10.9	0	10.9	3	0	3
4016005000	BAGERHAT	MORRELGANJ	BAHARBUNIA	-	15.8	0	15.8	5	0	5
4016011000	BAGERHAT	MORRELGANJ	BALAIUNIA	-	16.9	0	16.9	5	0	5
4016029000	BAGERHAT	MORRELGANJ	CHINGRAKHALI	-	12.4	0	12.4	5	0	5

Nr_lt30	Nr_30_100	Nr_100_200	Nr_mt200	Yes_lt30m	Yes30_100	Yes100_200	Yes_mt200m	Sl
3	0	0	0	0	0	0	0	20
2	0	0	0	0	0	0	0	19
3	0	0	0	0	0	0	0	18
5	0	0	0	0	0	0	0	17
5	0	0	0	0	0	0	0	16
5	0	0	0	0	0	0	0	15

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Geo_code	Administrative code given by BBS (Bangladesh Bureau Of Statistics)	
Distname	District Name	
Upname	Upazilla Name	
Unionname	Union Name	
Remarks		
Av_depth_m	Average depth of well	meter
Depth_yes	Average depth of well at which arsenic exists	meter
Depth_no	Average depth of well at which arsenic does not exist	meter
Nr_tests	Number of wells tested in union	Number
Yes_nr	Total number of wells indicating presence of arsenic	Number
No_nr	Total number of wells indicating absence of arsenic	Number
Nr_lt30	Total number of wells with depth less than 30 meter	Number
Nr_30_100	Total number of wells with depth within 30-100 meter	Number
Nr_100_200	Total number of wells with depth within 100-200 meter	Number
Nr_mt200	Total number of wells with depth greater than 200 meter	Number

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Yes_lt30m	Total number of 'yes' results in wells with depth less than 30 meter ('yes' indicates the presence of arsenic)	Number
Yes30_100	Total number of 'yes' results in wells with depth within 30-100 meter ('yes' indicates the presence of arsenic)	Number
Yes100_200	Total number of 'yes' results in wells with depth within 100-200 meter ('yes' indicates the presence of arsenic)	Number
Yes_mt200m	Total number of 'yes' results in wells with depth greater than 200 meter ('yes' indicates the presence of arsenic)	Number

Name of Data layer:	Arsenic in Three Thana	(Restricted)

Metadata

Data Type	PDF File
Abstract	Results of chemical test analysis of arsenic in three Thanas, which are under special study area of DPHE.
Quality	The data has been stored as it was collected from DPHE.
Completeness	The study area covers mainly 3 thana (Lakshmipur Sadar, Faridpur Sadar and Nawabganj Sadar).
History of the dataset	DPHE conducted the survey and chemical analysis in 1998.
Purpose of production	To observe and present the status of arsenic in three special study areas.
Process description	NWRD has checked the data, corrected the Geocodes (Unique administrative codes given by BBS) and stored the data layer in a database format.

Sample of Data

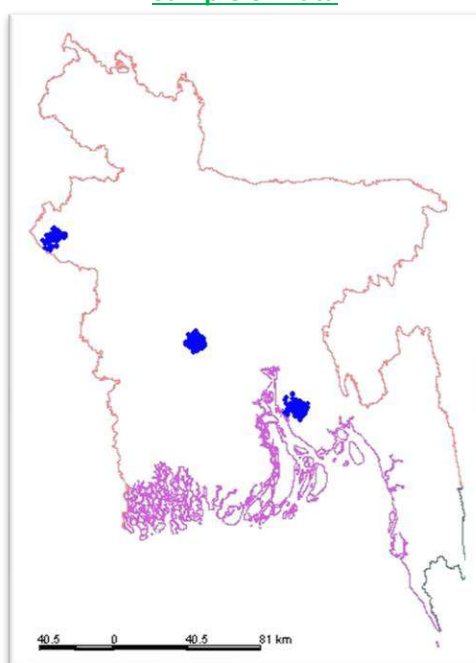
AREA	PERIMETER	SS1998TM	SS1998TM I	SL NO	LONGITUDE	LATITUDE	FIELD NO	LAB REF	SOEPH M	DATE	T ASMGPL	SITE ID
0	0	38	142	142	90.9111	22.9439	BTS142	980742	12	3/12/1998	0.062	
0	0	45	149	149	90.7767	22.9322	BTS149	980749	9	3/14/1998	0.0654	SE3496
0	0	44	148	148	90.8828	22.9422	BTS148	980748	9	3/13/1998	0.1074	
0	0	43	147	147	90.9142	22.8903	BTS147	980747	9	3/13/1998	0.0013	
0	0	42	146	146	90.9289	22.9261	BTS146	980746	15	3/13/1998	0.0552	
0	0	41	145	145	90.9303	22.9878	BTS145	980745	184	3/13/1998	0.0018	
0	0	39	143	143	90.8728	22.9128	BTS143	980743	16	3/12/1998	0.0432	
0	0	48	152	152	90.8294	22.9347	BTS152	980752	230	3/14/1998	0.0003	SE3500
0	0	37	140	140	90.9006	22.9144	BTS140	980740	9	3/12/1998	0.0462	
0	0	36	139	139	90.8894	22.8933	BTS139	980739	279	3/12/1998	0.0006	
0	0	35	138	138	90.8581	22.885	BTS138	980738	13	3/12/1998	0.0856	
0	0	34	137	137	90.8369	22.9133	BTS137	980737	13	3/11/1998	0.1026	
0	0	33	136	136	90.8642	22.8567	BTS136	980736	9	3/11/1998	0.0152	SE3495
0	0	40	144	144	90.9731	22.96	BTS144	980744	190	3/13/1998	0.0001	

Name of Data layer:	Arsenic in Three Thana with Locations	(Restricted)

Metadata

Data Type	Spatial
Abstract	A spatial data layer of arsenic survey over three thana with information of location of the wells conducted by DPHE (Department of Public Health and Engineering).
Quality	The data has been stored as it was collected from DPHE.
Completeness	The survey was conducted over three thana.
History of the dataset	Department of Public Health and Engineering (DPHE) conducted the survey in 1998.
Purpose of production	To represent the arsenic survey results of special three thanas (Nawabganj Sadar, Faridpur Sadar, Lakshmipur Sadar) with the location of the wells.
Process description	NWRD has converted the data in digital format and stored them in an organized form to prepare it as a NWRD data layer.

Sample of Data



Attribute Table

ss1998tm_i	sl_no	longitude	latitude	field_no	lab_ref	sdepth_m	date	t_asmgpl	site_id
101	101	90.7844	22.8731	BTS101	980701	11	3/6/1998	0	SE3491
102	102	90.7858	22.8686	BTS102	980702	197	3/6/1998	0.0004	
103	103	90.755	22.895	BTS103	980703	10	3/6/1998	0.1504	
104	104	90.7986	22.9083	BTS104	980704	246	3/6/1998	0.0013	
105	105	90.8133	22.93	BTS105	980705	11	3/6/1998	0.1892	
106	106	90.8086	22.9458	BTS106	980706	18	3/7/1998	0.364	
107	107	90.7669	22.9794	BTS107	980707	15	3/7/1998	0.0416	
109	109	90.8042	22.9806	BTS109	980709	10	3/7/1998	0.39	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Ss1998tm_id	ARC/INFO system data (DO NOT EDIT)	
Sl_no	Serial number	
Longitude	X Coordinate	Degree Decimal
Latitude	Y Coordinate	Degree Decimal
Field_no	Field identification number	
Lab_ref	Laboratory analysis identification number	
Sdepth_m	Groundwater sample depth in meter	
Date	Date sampled	
T_asmgpl	Arsenic concentration in mg/l	
Site_id	Site identification used for regional survey samples	

Metadata

Data Type	Tabular
Abstract	Results of chemical analysis of ground water conducted at national level by the Department of Public Health and Engineering (DPHE).
Quality	The data layer is stored as it was collected from DPHE.
Completeness	The study covers 3530 site locations over the country.
History of the dataset	DPHE conducted the chemical analysis of ground water under GW Arsenic Survey project.
Purpose of production	To observe the ground water quality of the country including arsenic
Process description	NWRD has collected the data layer and stored it in an organized way.

Sample of Data

Sample_id	Site_id	Temp	Year_const	Well_type	Depth_m	Geo_code	Geocode	As_ugl	Al_mgl	B_mgl	B_ppm	Ba_mgl	Ca_mgl	Ca_ppm	Co_mgl	Cr_mgl
S98_02688	982688	982688	1996	DTW	30	1063613	1063613	1.5	< 0.04	0.5	0.5	0.021	6.74	6.74	< 0.008	< 0.02
S98_02720	982720	982720	1996	STW	14	1091850	1091850	163	< 0.04	0.29	0.29	0.051	74.2	74.2	< 0.008	< 0.02
S98_03331	983331	983331	1996	DTW	315	10651	10651	2.8	< 0.04	0.2	0.2	0.018	7.77	7.77	< 0.008	< 0.02
S98_03333	983333	983333	1974	STW	14	1063613	1063613	41.5	< 0.04	0.03	0.03	0.077	78.8	78.8	< 0.008	< 0.02
S98_03495	983495	983495	1994	DTW	339	1060794	1060794	< 0.5	< 0.04	0.35	0.35	0.009	7.85	7.85	< 0.008	< 0.02
S98_03794	983794	983794	1976	STW	20	329188	329188	66.3	0.02	< 0.1	0.05	0.217	120	120	< 0.003	< 0.002

K_ppm	Li_mgl	Mg_mgl	Mg_ppm	Mn_mgl	Mn_ppm	Na_ppm	P_mgl	P_ppm	Si_mgl	So4_mgl	So4_ppm	Sr_mgl	Sr_ppm	V_mgl	Zn_mgl	Zn_ppm	Calc_ec	Sar
2 < 0.003	3.46	3.46	0	0.02	248	0.6	0.6	10.6	< 0.2	0.1	0.0867	0.09	< 0.006	< 0.008	0	1146	19.28	
12 < 0.003	48.6	48.6	1	0.82	169	0.9	0.9	14	0.3	0.3	0.389	0.39	< 0.006	0.079	0.08	1549	3.73	
2.1 < 0.005	4.08	4.08	0	0.03	157	0.3	0.3	11.5	< 0.2	0.1	0.0928	0.09	< 0.006	0.011	0.01	761	11.31	
2.4 < 0.004	15.8	15.8	1	0.66	15.4	0.5	0.5	14.5	8.1	8.1	0.227	0.23	< 0.006	< 0.008	0	603	0.41	
2.1 < 0.003	4.41	4.41	0	0.02	183	0.3	0.3	10.8	< 0.2	0.1	0.102	0.1	< 0.006	< 0.008	0	877	12.91	
2.5 < 0.004	25.3	25.3	0	0.27	25.7	1.5	1.5	19.9	43.4	43.4	0.272	0.27	< 0.002	0.014	0.01	948	0.55	

Attribute Table

ss1998tm_i	sl_no	longitude	latitude	field_no	lab_ref	sdepth_m	date	t_asmgpl	site_id
101	101	90.7844	22.8731	BTS101	980701	11	3/6/1998	0	SE3491
102	102	90.7858	22.8686	BTS102	980702	197	3/6/1998	0.0004	
103	103	90.755	22.895	BTS103	980703	10	3/6/1998	0.1504	
104	104	90.7986	22.9083	BTS104	980704	246	3/6/1998	0.0013	
105	105	90.8133	22.93	BTS105	980705	11	3/6/1998	0.1892	
106	106	90.8086	22.9458	BTS106	980706	18	3/7/1998	0.364	
107	107	90.7669	22.9794	BTS107	980707	15	3/7/1998	0.0416	
109	109	90.8042	22.9806	BTS109	980709	10	3/7/1998	0.39	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Sample_id	Sample Identification	
Site_id	Site Identification	
Temp	Temperature	OC/OF
Year_const	Year of Construction	
Well_type	Well Type	
Depth_m	Depth	
Geo_code	A unique code given to each well by DPHE	
Geocode	A unique code given to each well by DPHE	
As_ugl	Arsenic Content	Microgram/l

FIELD_NAME	FIELD_DESC	UNIT
Al_mgl	Alluminium content	mg/l
B__mgl	Boron content	mg/l
B_ppm	Boron content	Parts per milion
Ba_mgl	Barium content	mg/l
Ca_mgl	Calcium content	mg/l
Ca_ppm	Calcium content	Parts per milion
Co_mgl	Cobalt content	mg/l
Cr_mgl	Cromimum content	mg/l
Cu_mgl	Copper content	mg/l
Fe_mgl	Iron content	mg/l
Fe_ppm	Iron content	Parts per milion
K__mgl	Potasium content	mg/l
K_ppm	Potasium content	ppm
Li_mgl	Lithium content	mg/l
Mg_mgl	Magnisum content	mg/l
Mg_ppm	Magnisum content	ppm
Mn_mgl	Manganise content	mg/l
Mn_ppm	Manganise content	ppm
Na_ppm	Sodium content	ppm
P__mgl	Phosphoras content	mg/l
P_ppm	Phosphoras content	ppm
Si_mgl	Silicon content	mg/l
So4_mgl	Sulphate content	mg/l
So4_ppm	Sulphate content	ppm
Sr_mgl	Strontium content	mg/l
Sr_ppm	Strontium content	ppm
V__mgl	Vanadium content	mg/l
Zn_mgl	Zinc content	mg/l
Zn_ppm	Zinc content	ppm
Calc_ec	Electric Conductivity	
Sar	Sodium Absorption Rate	

Name of Data layer: **Combined Field Test Results of Arsenic 1998**

Metadata

Data Type	Tabular
Abstract	Results of arsenic survey conducted by DPHE, NGO Forum and Grameen Bank.
Quality	The data layer has been stored as it was collected from DPHE. Only the Geocodes have been checked and other attributes are kept without checking.
Completeness	The survey was conducted over 64 districts.
History of the dataset	DPHE, NGO Forum and Grameen Bank conducted the survey in 1998 and summarized the data according to thana.
Purpose of production	To represent the results of arsenic survey and to use this data set in different arsenic related studies.
Process description	NWRD has checked the data and only the Geocode is updated according to 490 thana Geocode, published by BBS and stored the data layer in an organized way.

Sample of Data

Distname	Upname	Geocode	Dphe_nr	Dphe_yes	Gram_nr	Gram_yes	Ngof_nr	Ngo_yes	All_nr	All_yes	Pct_yes	Bbs_pop91	Est_pop98	Risk_pop98	Exp_pop98
CHANDPUR	MATLAB	21376	80	57	2	2	-	-	82	59	72	445607	530346	-	381849
CHANDPUR	SHAHRASTI	21395	42	32	11	10	-	-	53	42	79.2	180643	214995	-	170276
CHITTAGONG	ANOWARA	21504	0	0	-	-	-	-	0	0	-	219446	261177	-	0
CHITTAGONG	BANSHIKHALI	21508	0	0	-	-	-	-	0	0	-	320339	381256	-	0
CHITTAGONG	BOALKHALI	21512	0	0	-	-	-	-	0	0	-	195607	232805	-	0
CHITTAGONG	CHANDANAISH	21518	0	0	-	-	-	-	0	0	-	172843	205712	-	0
CHITTAGONG	FATIKCHHARI	21533	0	0	-	-	-	-	0	0	-	388013	461799	-	0
CHITTAGONG	HATHAZARI	21537	0	0	-	-	-	-	0	0	-	321004	382048	-	0

Bundle Information (Data Field Description and Unit)

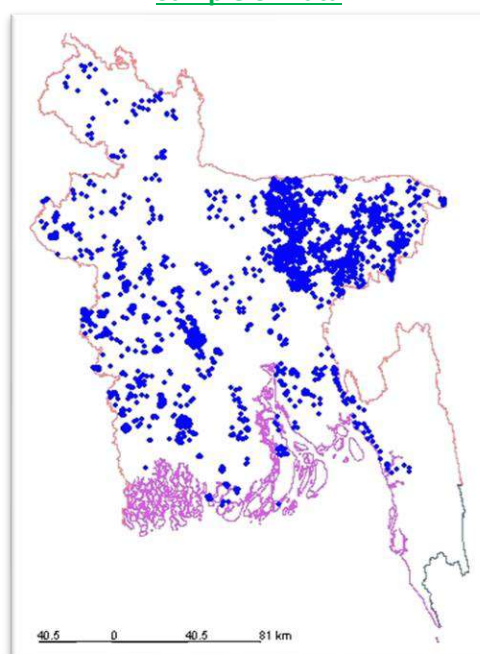
FIELD_NAME	FIELD_DESCRIPTION	UNIT
Distname	DISTRICT NAME	
Upname	UPAZILLA NAME	
Geocode	Administrative code as used by BBS	
Dphe_nr	Number of wells tested by DPHE	Number
Dphe_yes	Number of wells where arsenic is present (Tested by DPHE)	Number
Gram_nr	Number of wells tested by Grameen Bank	Number
Gram_yes	Number of wells where arsenic is present (Tested by Grameen Bank)	Number
Ngof_nr	Number of wells tested by NGO Forum	Number
Ngo_yes	Number of wells where arsenic is present (Tested by NGO Forum)	Number
All_nr	Total number of wells tested	Number
All_yes	Total number of wells where arsenic is present	Number
Pct_yes	Percent of wells contaminated	Percent
Bbs_pop91	Population according to 1991 BBS census	Number
Est_pop98	Estimated population in 1998 (inflated at 2.2%)	Number
Risk_pop98		
Exp_pop98	Expected population in 1998 affected by arsenic	Number

Name of Data layer: **Combined Lab Test Results of Arsenic with Locations**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of chemical analysis results of arsenic survey with information of location conducted by different organizations.
Quality	NWRD has stored the data layer as it was collected from DPHE. No quality check has been done by NWRD.
Completeness	The study area covers 199 thana of 58 districts of Bangladesh.
History of the dataset	The data layer has been recorded by different organizations in different year between 1990 to 1998. These are mainly DPHE, DCH/SOES, REB/NRECA, 18DTP, BRAC, NICKSON 1997, GKW 1990, Safiullah 98, BUET/NEMIP, BCSIR/NEMIP, DANIDA1998.
Purpose of production	To observe and present the status of arsenic at national level with testing well locations.
Process description	NWRD has checked the data and only the Geocode has been updated according to BBS 490 thana Geocode and has stored the data layer in an organized way.

Sample of Data



Attribute Table

comb_l abbt	geoc ode	ser ial _nr	distric t	thana	union	mouza_v ill	location	rem arks	aslab t_m_	aslab tm_id	exlab re_f	care take r	longit ude	latitu de
1	1347 3	95	BAGER HAT	FAKIRH AT	PILJANG A	SAMBAGAT	GAHER ALI		68	95	95		89.672	22.734
2	1347 3	129	BAGER HAT	FAKIRH AT	PILJANG A	BELTOLI	SHEIKH MOHAMMAD ABDUL HAQ		102	129	129		89.676	22.731
3	1347 3	130	BAGER HAT	FAKIRH AT	PILJANG A	BELTOLI	ABUDUL SHAHID DHALI		103	130	130		89.658	22.732
4	1347 3	135	BAGER HAT	FAKIRH AT	PILJANG A		SHANU MALLIK		108	135	135		89.665	22.747

sample_nr	other_ref	sampledate	year_inst	depth_m	pump_type	date_analy	as_astext	as_ppm	datasource	gt_bgd	gt_who	as_cat	remarks	btm_long	btm_lat
84		30/07/1996	1991	12	1	30/07/1996		1	DPHE	1	1	6	UN	466321.719	513923.281
1729				-9999	0	21/10/1996		0	DPHE	0	1	2	UN	466687.406	513517.75
1730				-9999	0	21/10/1996		0	DPHE	0	1	2	UN	464859.563	513702.156
1562				-9999	0	07/10/1996		0	DPHE	1	1	3	UN	465630.156	515347.156

Bundle Information (Data Field Description and Unit)

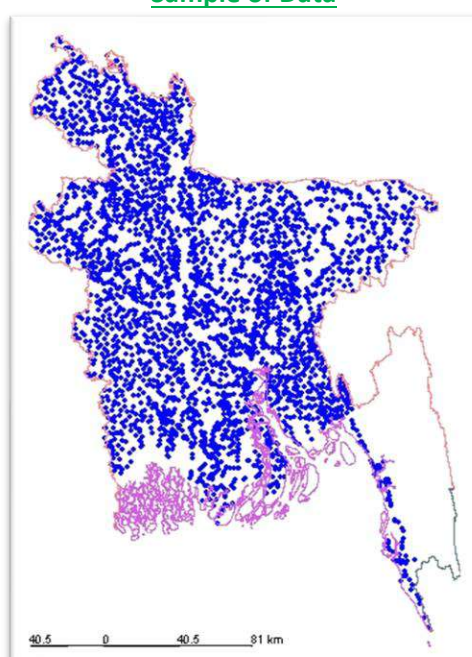
FIELD_NAME	FIELD_DESC	UNIT
Geocode	Unique code (Division Code + District Code+ Thana Code) attached according to BBS census 1991	
Serial_nr	Record number	
District	Name of District	
Thana	Name of Thana	
Union	Name of Union	
Mauza_vill	Name of Mauza or Village	
Location	Additional place name or description	
Remarks	Not defined by the source	
Area	Not defined by the source	
Perimeter	Not defined by the source	
Aslabtm_	Internal id generated by ArcInfo	
Aslabtm_id	User id given to each location	
Exlabref	Not defined by the source	
Caretaker	Name of the caretaker or owner	
Longitude	X Coordinate	Degree
Latitude	Y Coordinate	Degree
Sample_nr	Original survey number	
Other_ref	Other identifier given in source file	
Sampledate	Date of sample collection	
Year_inst	Year of setting up the well	
Depth_m	Depth of ground water samples	Meter
Pump_type	Type of well	
Date_analy	Date of sample analysis	Date
As_astext	Arsenic result stored as character string	
As_ppm	Arsenic concentration	Purse per Million
Datasource	Source of the data	
Gt_bgd	0' or '1' indicates whether or not sample exceeds the Bangladesh standrad value of .005 mg/l.	
Gt_who	0' or '1' indicates whether or not sample exceeds the WHO standrad value of .001 mg/l.	
As_cat	Not defined by the source	
Wd_cat	Not defined by the source	
Remarks	Not defined by the source	

Name of Data layer: **Groundwater Arsenic with Locations**

Metadata

Data Type	Spatial
Abstract	Information of ground water arsenic level throughout the country with testing well locations, depth and well type surveyed by DPHE (Department of Public Health & Engineering).
Quality	The data layer has been stored as it was collected from DPHE.
Completeness	The study covers 3534 site locations over the country.
History of the dataset	The study has been conducted by DPHE.
Purpose of production	To present the information of arsenic contamination level and well location throughout the country
Process description	NWRD has stored the data layer in an organized form.

Sample of Data



Attribute Table

gsac9899_i	site_id	sample_id	field_id	geo_code	s_date	lat_dd	long_d	year_c	well_type	depth_m
980701	980701	S98_00701	RIP3491, BTS101	25143 85190	6/3/1998	22.8731	90.7844	1992	Shallow HP TW	11
980718	980718	S98_00718	RIP3492, BTS118	25143 10666	8/3/1998	23.0194	90.8786	1971	Shallow HP TW	12
980724	980724	S98_00724	RIP3493, BTS124	25143 95147	10/3/1998	22.965	90.9597	1995	Private HP TW	12
980727	980727	S98_00727	RIP3498, BTS127	25143 20346	10/3/1998	22.9253	90.9744	1997	Private HP TW	262

owner	division	district	thana	union	mouza	as_u	as_p	gt10p	gt50p	gt200pp	gt400p	gt600
						agl	pm	pb	pb	b	pb	ppb

near sluicagate	Chittagon g	Lakshmipur	Lakshmipur Sadar	Shakchar	Char Ramani Mohan	13	0.013	1	0	0	0	0
Nandigram High School	Chittagon g	Lakshmipur	Lakshmipur Sadar	Baksipur	Nandigram	256	0.256	1	1	1	0	0
Mr Nurunnabi	Chittagon g	Lakshmipur	Lakshmipur Sadar	Uttar Joypur	Chandra Prabhag	38	0.038	1	0	0	0	0
Kamarchat Bazar	Chittagon g	Lakshmipur	Lakshmipur Sadar	Chandra ganj	Ganipur	8	0.008	0	0	0	0	0

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Gsac9899_i	User id given to each point location	
Site_id	Identification number of site	
Sample_id	Id of each sample location according to the source	
Field_id	Not defined by the source	
Geo_code	Unique code (Division Code + District Code+ Thana Code) attached according to BBS census 1991	
S_date	Date of survey	
Lat_dd	Latitude in degree decimal	Degree Decimal
Long_dd	Longitude in degree decimal	Degree Decimal
Year_const	Which year the well is constructed	
Well_type	Type of the well	
Depth_m	Arsenic Testing well depth	Meter
Owner	Name of the Well owner	
Division	Name of the Division	
District	Name of the District	
Thana	Name of the Thana	
Union	Name of the Union	
Mouza	name of the Mouza	
As_ugl	Not defined by the source	
As_ppm	Amount of arsenic concentration	Purse per Million
Log10_as	Not defined by the source	
Gt10ppb	Not defined by the source	
Gt50ppb	Not defined by the source	
Gt200ppb	Not defined by the source	
Gt400ppb	Not defined by the source	
Gt600ppb	Not defined by the source	

Name of Data layer: **Groundwater Quality Data of BWDB**

Metadata

Data Type	Time Series Table
Abstract	It is a time series data layer of groundwater quality on the basis of 20-different water quality parameter collected by Bangladesh Water Development Board (BWDB).
Quality	In this data layer information is available for 109 stations from 1- 4 -1972 to 30- 6 -1997. But this data is very scattered. There is no fixed interval of data collection.
Completeness	The data layer covers information of ground water quality for 25 years.
History of the dataset	Bangladesh Water Development Board (BWDB) collected this time series data from different water quality monitoring stations for a long period of time. Total number of monitoring wells of BWDB is 117. The data has been collected in digital format from BWDB.
Purpose of production	To monitor 20-different parameters of ground water quality of a particular area.
Process description	NWRD has collected this data from BWDB and organized them in an ordered form.

Sample of Data

Id	Laboratory	Datesamp	Dateanls	Welldepth	Welldia	Deptopscrn	Depbotscrn	Sampanlsid	Bicarbonate	Boron	Calcium
8880	-	-	15/11/1973	137.16	-	-	-	1	-	-	-
8880	-	-	29/08/1975	-	-	-	-	2	-	-	-
8880	-	-	05/03/1976	137.16	-	-	-	3	107	-	6
8880	-	-	18/01/1977	137.16	-	-	-	4	194	-	5
8880	-	-	17/01/1978	137.16	-	-	-	5	100	-	12
8880	-	-	11/03/1979	137.16	-	-	-	6	136	-	14
8880	-	-	13/10/1979	146.3	-	-	-	7	97	-	11
8880	-	-	07/05/1980	146.3	-	-	-	8	136.64	0.03	10.4

Carbonate	Chloride	Co2	Ec	Flouride	Hardness	Iron	Magnesium	Manganese	Nitrate	Ph	Potassium	Sar	Silica	Sodium	Sulphate	Tds
-	5	-	-	-	-	0.1	-	-	-	6.6	-	-	-	-	-	4 53
-	9	-	-	-	-	1.17	-	-	-	7.2	-	-	-	-	-	8 161
-	11	-	-	-	-	3.2	15	-	-	7.6	-	7.71	9	25	-	148
12	10.4	-	-	-	-	0.34	6.4	-	1.1	9.5	-	40.75	36	97	-	175
-	8	2	-	-	-	0.7	6.7	-	2	7.5	-	2.34	31.8	40.6	-	103.6
17	23	-	-	-	-	4	4.6	-	-	9.5	-	4.93	38.5	83.9	-	204.8
-	9.5	12	-	-	-	13.7	8.5	0.1	-	7	-	2.59	41.5	45.6	-	122.8
-	17	13	-	-	-	2.26	5.34	-	0.3	9.5	-	2.79	33	43	82.3	170

Bundle Information (Data Field Description and Unit)

FIELD	SAMPLE_DATA	UNIT	DESCRIPTION
Id	8880		
Laboratory	F/L		F For Field & L For Laboratory
Datesamp			Date Of sample Collection
Dateanls	23/11/1994		Date Of sample Analysis
Welldepth	27.230832	Meter	Depth Of Well
Welldia		Meter	Dia Of Well
Deptopscrn		Meter	Depth Of Top Screen
Depbotscrn		Meter	Depth Of Bottom Screen
Sampanlsid	15		ID Of Sample For Analysis
Bicarbonate	86	mg/l	
Boron	0	mg/l	
Calcium	18.8	mg/l	
Carbonate	0	mg/l	

FIELD	SAMPLE_DATA	UNIT	DESCRIPTION
Chloride	120	mg/l	
Co2	52	mg/l	
Ec		mmohs	Electrical Conductivity
Flouride	0.14	mg/l	
Hardness	47	mg/l	
Iron	4	mg/l	
Magnesium	10.99	mg/l	
Manganese	0	mg/l	
Nitrate	0.8	mg/l	
Ph	7.7		
Potassium	6	mg/l	
Sar	20.21	mg/l	Sodium Absorption Rate
Silica	56.1	mg/l	
Sodium	78	mg/l	
Sulphate	2	mg/l	
Tds	90	mg/l	Total Disolved Solid

Name of Data layer: **Groundwater Quality Data of DPHE**

Metadata

Data Type	Time Series Table
Abstract	A time series data layer revealing different parameters of groundwater quality collected by Department of Public Health Engineering (DPHE).
Quality	In this data layer information is available for 228 stations of DPHE from 1960 to 1993. But this time range of data availability is not applicable to all stations. Besides there are missing of data in some stations within the specified range of data availability.
Completeness	The data layer covers information of ground water quality for 33 years.
History of the dataset	Department of Public Health Engineering (DPHE) collected this time series data from different water quality monitoring stations for a long period of time. Total number of monitoring wells of DPHE is 228 throughout the country. The data has been collected in digital format from DPHE.
Purpose of production	To monitor the different parameters of ground water quality of a particular area as time series this data has been included in NWRD.
Process description	NWRD has collected this data from DPHE and organized them in an ordered form.

Sample of Data

Id	Laboratory	Datesamp	Dateanls	Welldepth	Welldia	Deptopscrn	Depbotscrn	Sampanlsid	Ec	Fe
8403		-	30/12/1988	121.91	-	94.48	118.86	1 350	1.4	
8403	F	-	16/06/1990	121.91	-	94.48	118.86	7 380	-9	
8403		-	17/06/1990	121.91	-	94.48	118.86	2 380	0.2	
8403	F	-	29/08/1990	121.91	-	94.48	118.86	8 565	-9	
8403		-	30/08/1990	121.91	-	94.48	118.86	3 540	0.2	
8403	F	-	31/12/1990	121.91	-	94.48	118.86	9 415	-9	
8403		-	02/01/1991	121.91	-	94.48	118.86	4 415	0.5	
8403	F	-	20/04/1991	121.91	-	94.48	118.86	10 423	-9	

Bundle Information (Data Field Description and Unit)

FIELD	SAMPLE_DATA	UNIT	DESCRIPTION
Id	8403		
Laboratory	F/L		F For Field & L For Laboratory
Datesamp			Date Of Sample Collection
Dateanls	16/06/1990		Date Of Sample Analysis
Welldepth	121.91	Meter	
Welldia		Meter	
Deptopscrn	94.48	Meter	Depth Of Top Screen
Depbotscrn	118.86	Meter	Depth Of Bottom Screen
Sampanlsid	10		ID Of Sample For Analysis
Ec	423	mmohs	Electrical Conductivity
Fe	-9	mg/l	'-9' Refers To No Availability Of Data

Name of Data layer: **Groundwater Quality Data of NEMIP 1997**

Metadata

Data Type	Time Series Table
Abstract	A time series data layer of 12-different parameters of groundwater quality collected by North East Minor Irrigation project (NEMIP).
Quality	In this data layer information is available for 217 stations from 1997 to 1997. But this time range of data availability is not applicable to all stations. Besides there are missing of data in some stations within the specified range of data availability.
Completeness	The data layer covers information of ground water quality for 1 year.
History of the dataset	This time series data was collected by North East Minor Irrigation Project (NEMIP) from different water quality monitoring stations for a long period of time. Total number of monitoring wells of NEMIP is 249. The data has been collected in digital format from NEMIP
Purpose of production	To monitor 12-different parameters of ground water quality of a particular area as time series this data layer has been included in NWRD.
Process description	NWRD has collected this data from NEMIP and organized them in an ordered form.

Sample of Data

Id	Laboratory	Datesamp	Dateanls	Welldepth	Welldia	Deptopscrn	Depbotscrn	Sampanlsid
8631	-	-	17/06/1997	-	-	-	-	1
8632	-	-	21/06/1997	-	-	-	-	1
8633	-	-	21/07/1997	-	-	-	-	1
8634	-	-	20/07/1997	-	-	-	-	1
8635	-	-	21/07/1997	-	-	-	-	1
8636	-	-	07/01/1997	-	-	-	-	1

Boron	Calcium	Carbonate	Chloride	Ecw	Fe	Magnesium	Nitrate	Ph	Potassium	Sar	Sodium
0.38	21.86	200.08	28.56	0.37	1.13	19.86	0.72	7.3	4.25	1.93	47.45
0.49	13.46	204.96	19.53	0.47	1.41	12.3	0.21	7.3	44.1	0.6	13.6
0.45	6.73	117.12	8.16	0.19	12.47	6.65	0.12	7	4.9	0.43	6.4
0.01	6.73	82.96	8.16	0.14	0.42	3.46	0.11	7	6.8	0.34	4.3
0.49	10.09	170.36	12.24	0.16	2.4	0.68	0.66	7.7	20.1	0.69	8.6
0.07	11.77	97.6	12.24	0.16	9.28	16.25	0.42	7.4	16.4	0.21	4.9

Bundle Information (Data Field Description and Unit)

FIELD	SAMPLE_DATA	DESCRIPTION	UNIT
Id	8995	Station ID	
Laboratory		F For Field & L For Laboratory	
Datesamp		Date Of Sample Collection	
Dateanls	24/01/1996	Date Of Sample Analysis	
Welldepth			Meter
Welldia			Meter
Deptopscrn		Depth Of Top Screen	Meter
Depbotscrn		Depth Of Bottom Screen	Meter
Sampanlsid	1	ID Of Sample For Analysis	
Alkalinity	25		mg/l
Ec	0	Electrical Conductivity	

FIELD	SAMPLE_DATA	DESCRIPTION	UNIT
Iron	2		mg/l
Manganese	7		mg/l
Nitrate	-9	'-9' Refers To No Availability Of Data	mg/l
Ph	6		

Name of Data layer: **Groundwater Quality Data of NMIDP**

Metadata

Data Type	Time Series Table
Abstract	A time series data layer of 6-different parameters of groundwater quality, collected by National Minor Irrigation Development Project (NMIDP), under Ministry of Agriculture, Govt. of Bangladesh.
Quality	In this data layer information is available for 31 stations from 20 -1 -1996 to 2-12 -1997. But this time range of data availability is not applicable to all stations. Besides there are missing of data in some stations within the specified range of data availability.
Completeness	The data layer covers information on ground water quality for 2 years.
History of the dataset	This time series data was collected by National Minor Irrigation Development Project (NMIDP) from different water quality monitoring stations for a long period of time. Total number of monitoring wells of NMIDP is 31 covering mainly the north-central and north-west part of the country. The data has been collected in digital format.
Purpose of production	To monitor 17-different parameters of ground water quality of a particular area.
Process description	Collecting the data from NMIDP, NWRD has organized them in an ordered form.

Sample of Data

Id	Laboratory	Datesamp	Dateanls	Welldepth	Welldia	Deptopscrn	Depbotscrn	Sampanlsid	Alkalinity	Ec	Iron	Manganese	Nitrate	Ph
8995 -	-	24/01/1996	-	-	-	-	-	1	25	0	2	7	-9	6
8995 -	-	14/07/1996	-	-	-	-	-	2	25	0	1	20	0	7
8995 -	-	16/08/1996	-	-	-	-	-	3	50	0	1	5	0	6
8995 -	-	14/09/1996	-	-	-	-	-	4	25	0	2	30	0	6
8995 -	-	18/10/1996	-	-	-	-	-	5	25	0	2	20	0	6
8995 -	-	13/11/1996	-	-	-	-	-	6	25	0	1	25	4	6
8995 -	-	27/12/1996	-	-	-	-	-	7	50	0	2	30	0	6
8995 -	-	23/01/1997	-	-	-	-	-	8	50	0	0	30	-9	7

Bundle Information (Data Field Description and Unit)

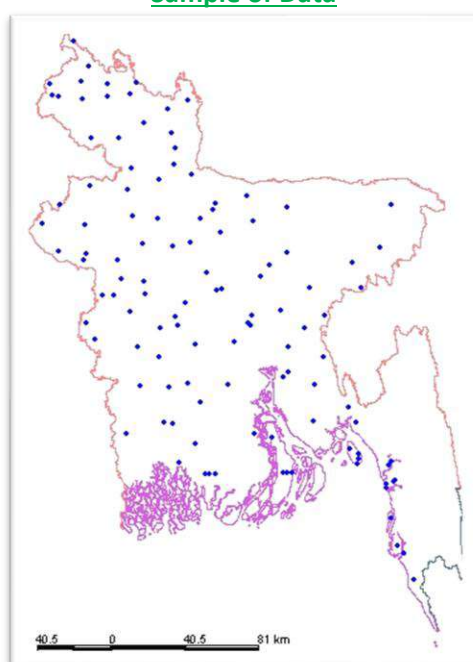
FIELD	SAMPLE_DATA	DESCRIPTION	UNIT
Id	8995	Station ID	
Laboratory		F For Field & L For Laboratory	
Datesamp		Date Of Sample Collection	
Dateanls	24/01/1996	Date Of Sample Analysis	
Welldepth			Meter
Welldia			Meter
Deptopscrn		Depth Of Top Screen	Meter
Depbotscrn		Depth Of Bottom Screen	Meter
Sampanlsid	1	ID Of Sample For Analysis	
Alkalinity	25		mg/l
Ec	0	Electrical Conductivity	
Iron	2		mg/l
Manganese	7		mg/l
Nitrate	-9	'-9' Refers To No Availability Of Data	mg/l
Ph	6		

Name of Data layer: **Groundwater Quality Stations of BWDB**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of groundwater quality monitoring stations/wells of Bangladesh Water Development Board (BWDB)
Quality	As the information is captured from a map of 1:1000000 scale it is recommended that this map should not be used exceeding the above scale. Ground checking is required to some extent.
Completeness	The data layer covers 116 stations of BWDB.
History of the dataset	Source of this data layer is a published map titled 'Hydrological Network map' produced by Hydrology Department of BWDB in 1991. The map was in 1:1000000 scale.
Purpose of production	The dataset has been incorporated to NWRD to present the spatial distribution of the ground water quality monitoring stations of BWDB and also the spatial information is needed to link the quantitative ground water data with it.
Process description	NWRD has captured the point locations from the cited source and the locations have been checked with the attribute data collected from (BWDB). Some station locations, derived from their latitude and longitude mentioned in the attribute tables of these stations, do not match with their actual position. To adjust this anomaly the mismatched stations have been placed at the center of the available lowest administrative units.

Sample of Data



Attribute Table

Stationid	Oldid	Depth	Wellid	Geocode	Btmlon	Btmlat	Ddlon	Ddlat
8914	5	30.1 to 40	2712005	271286000	358563.31	873002.81	88.59	25.97
8915	9	20.1 to 30 m	2747009	274713000	411379.56	796885.44	89.12	25.29
8917	8	20.1 to 30 m	2777008	277734000	398453.47	830197.13	88.99	25.59
8921	20	Up to 10 m	3230020	323094000	442196.5	785162.31	89.43	25.18
8922	18	10.1 to 20 m	3291018	329150000	459459.19	819697.19	89.6	25.5
8928	21	10.1 to 20 m	3847021	384719000	408056	773842.44	89.09	25.08

Bundle Information (Data Field Description and Unit)

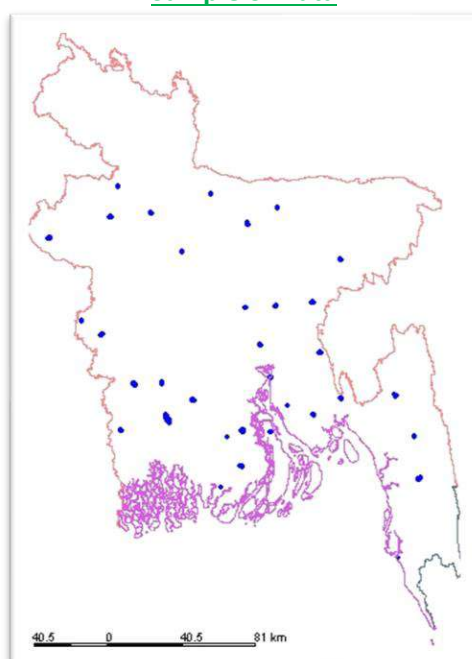
FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stationid	Station Id	
Oldid	Old ID	
Depth	DEPTH OF WELL	Meter
Wellid	WELL ID	
Geocode	Code indicating administrative unit given by BBS (Bangladesh Bureau of Statistics)	
Btmlon	Longitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meter
Btmlat	Latitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meter
Ddlon	Longitude In Degree Decimal	In Degree Decimal
Ddlat	Latitude In Degree Decimal	In Degree Decimal

Name of Data layer: **Groundwater Quality Stations of DPHE**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of groundwater quality monitoring stations/wells maintained by Department of Public Health and Engineering (DPHE).
Quality	Locations of the stations have been checked with the help of major rivers and associated attribute information collected from DPHE. Field verification is required in some cases. It is recommended that the data should be used in 1:1000000 scale for the whole country and for regional level the scale should be smaller than this.
Completeness	The data layer covers 228 stations of DPHE.
History of the dataset	This data layer has been collected from the Department of Public Health and Engineering (DPHE). DPHE provided the data in digital format and the data was not processed.
Purpose of production	The dataset has been incorporated to NWRD to present the spatial distribution of the ground water quality monitoring stations of DPHE and also the spatial information is needed to link the quantitative ground water data with it.
Process description	In this data layer total number of observation wells is 228. NWRD has generated this point data layer with the coordinate values collected from DPHE. Some station locations, derived from their latitude and longitude mentioned in the attribute tables of these stations, do not match with their actual position. To adjust this anomaly the mismatched stations have been placed at the center of the available lowest administrative units.

Sample of Data



Attribute Table

Stationid	Wellid	Town	Wellloc	Geocode	Btmlon	Btmlat	Ddlon	Ddlat
8403	01-002-001	GAZIPUR	RAJBARI WATER WORKS	333000000	539756.31	643952.19	90.39	23.91
8404	01-002-002	GAZIPUR	CHHAYA BITHI	333000000	540550.56	644069.56	90.4	23.91
8405	01-002-003	GAZIPUR	JOYDEBPUR BAZAR	333000000	538878.19	644281.06	90.38	23.91
8406	01-002-010	BARISHAL	NEW VATIKHANA	65100000	536631.75	510696.5	90.36	22.71
8407	01-006-001	MUNSHIGANJ	ZAMINDAR PARA(WWC)	595600000	555179.31	603793.25	90.54	23.55
8408	01-006-002	MUNSHIGANJ	ZAMINDAR PARA (WWC)	595600000	555697.88	603724.13	90.55	23.55

Bundle Information (Data Field Description and Unit)

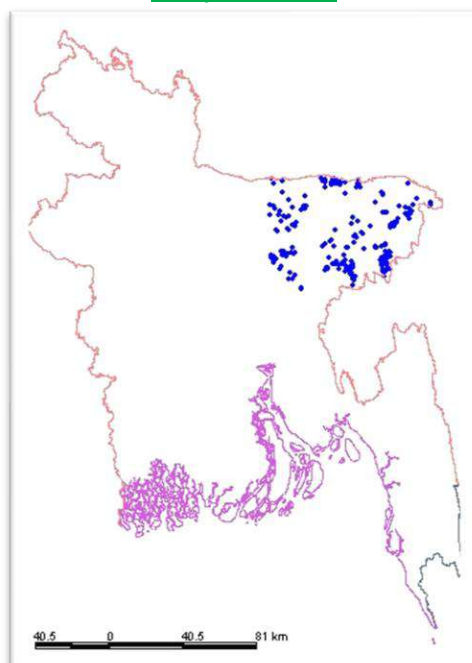
FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stationid	Station Id	
Wellid	WELL ID	
Town	TOWN NAME	
Wellloc	WELL LOCATION	
Geocode	Code indicating administrative unit given by BBS (Bangladesh Bureau of Statistics)	
Btmlon	Longitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meter
Btmlat	Latitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meter
Ddlon	Longitude In Degree Decimal	In Degree Decimal
Ddlat	Latitude In Degree Decimal	In Degree Decimal

Name of Data layer: **Groundwater Quality Stations of NEMIP**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of groundwater quality monitoring stations/wells maintained by North East Minor Irrigation Project (NEMIP).
Quality	Location of the points have been checked with the help of major rivers and associated attribute information derived from NEMIP. Ground checking is required to some extent. It is recommended that the data set should be used in 1:1000000 scale for the whole country and for regional level the scale should be smaller than this.
Completeness	The data layer covers the 217-stations of NEMIP.
History of the dataset	This data layer has been collected from North East Minor Irrigation Project (NEMIP), under Agricultural Ministry, Govt. of Bangladesh. The collected data was in soft copy and was not processed.
Purpose of production	The dataset has been incorporated to NWRD to present the spatial distribution of the ground water quality monitoring stations of NEMIP and also the spatial information is needed to link the quantitative ground water data with it.
Process description	In this data layer total number of observation wells is 249. NWRD has generated this point data layer with the coordinate values collected from NEMIP. Some station locations, derived from their latitude and longitude mentioned in the attribute tables of these stations, do not match with their actual position. To adjust this anomaly the mismatched stations have been placed at the center of the available lowest administrative units.

Sample of Data



Attribute Table

Stationid	Oldid	Geocode	Mouza	Btmllon	Btmllat	Ddlon	Ddlat
8631	1	364457	Poil	647377.69	694147.19	91.45	24.36
8632	10	364409	-	644754.06	691081.38	91.43	24.33
8633	100	585638	Narainpure	687141.38	696858.81	91.85	24.38
8634	101	585638	Kumrakapon	686866.44	693206.63	91.84	24.34
8635	102	585619	Jalalia	689335.69	695070.69	91.87	24.36
8636	103	585609	Sripure	692199.94	684491.5	91.89	24.26

Bundle Information (Data Field Description and Unit)

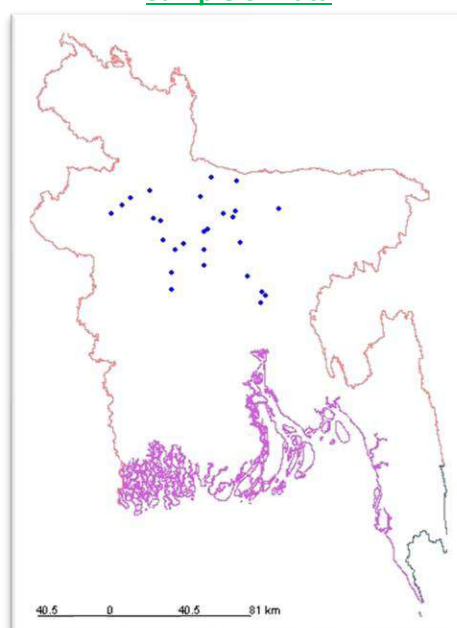
FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stationid	Station Id	
Wellid	WELL ID	
Town	TOWN NAME	
Wellloc	WELL LOCATION	
Geocode	Code indicating administrative unit given by BBS (Bangladesh Bureau of Statistics)	
Btmlon	Longitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meter
Btmlat	Latitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meter
Ddlon	Longitude In Degree Decimal	In Degree Decimal
Ddlat	Latitude In Degree Decimal	In Degree Decimal

Name of Data layer: **Groundwater Quality Stations of NMIDP**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of groundwater quality monitoring stations/wells maintained by National Minor Irrigation Development Project (NMIDP).
Quality	Locations of the stations have been checked with the help of major rivers and associated attribute information derived from NMIDP. Ground checking may be required to some extent. It is recommended that the data layer should be used in 1:1000000 scale for the whole country and for regional level the scale should be smaller than this.
Completeness	The data layer covers 31 stations of NMIDP.
History of the dataset	This data has been collected by National Minor Irrigation Development Project (NMIDP), under Agricultural Ministry, Govt. of Bangladesh. This data layer has been collected by NWRD as soft copy and it was not processed.
Purpose of production	The dataset has been incorporated to NWRD to present the spatial distribution of the ground water quality monitoring stations of NMIDP and also the spatial information is needed to link the quantitative ground water data with it.
Process description	In this data layer total number of observation wells is 31. NWRD has generated this point data with the coordinate values collected from NMIDP. Some station locations, derived from their latitude and longitude mentioned in the attribute tables of these stations, do not match with their actual position. To adjust this anomaly the mismatched stations have been placed at the center of the available lowest administrative units.

Sample of Data



Attribute Table

Stationid	Wellno	Geocode	Village	Dt_code	Btmilon	Btmilat	Ddilon	Ddilat
8995	13	338666	Satiabari	3386	547058.94	665198.31	90.46	24.1
8996	13-A	338666	Satiabari	3386	547024.56	665194.06	90.46	24.1
8997	5	393600	--	3936	493478.84	755439.06	89.94	24.92
8998	12	611317	Bhoradoba	6113	538862.69	702655.31	90.38	24.44
8999	12-A	611317	Bhoradoba	6113	538729.63	702965.81	90.38	24.44
9000	10	612035	Teligram	6120	530254.31	730985.5	90.3	24.7
9001	8	612481	Kismat Na	6124	535127.06	772691.25	90.35	25.07
9002	7	615267	Matzbari	6152	533636	739142.75	90.33	24.77
9003	6	616577	Moniramba	6165	519196.81	735299.63	90.19	24.73
9004	25	670287	Panchrukh	6702	562055.63	634648.56	90.61	23.82

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stationid	Station Id	
Wellid	WELL ID	
Town	TOWN NAME	
Wellloc	WELL LOCATION	
Geocode	Code indicating administrative unit given by BBS (Bangladesh Bureau of Statistics)	
Btmlon	Longitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meter
Btmlat	Latitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meter
Ddlon	Longitude In Degree Decimal	In Degree Decimal
Ddlat	Latitude In Degree Decimal	In Degree Decimal

Name of Data layer:	Regional Arsenic Survey 1998	(Restricted)

Metadata

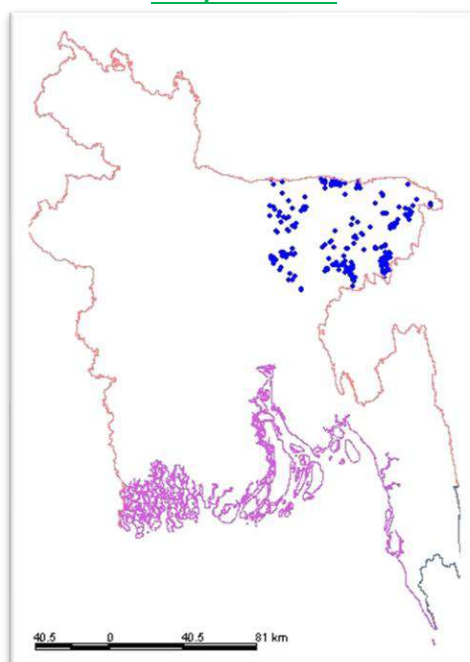
Data Type	PDF File
Abstract	Results of chemical analysis of ground water carried out by the Department of Public Health and Engineering (DPHE) in their Regional Arsenic Survey.
Quality	NWRD has stored the data layer as it was collected from DPHE.
Completeness	The study area covers about 43 districts of Bangladesh.
History of the dataset	DPHE conducted the survey and made chemical analysis in 1998.
Purpose of production	To observe and present the status of arsenic as well as other chemical elements at regional level.
Process description	NWRD has checked the data, corrected only the geocodes and stored the data in an organized form.

Sample of Data

SITE_ID	DISTNAME	UPNAME	UNIONNAME	UNIGCODE	DEPTH_M	ARSENIC	SODIUM	POTASSIUM	CALCIUM
NC0001	NARAYANGANJ	SONARGAON	AMINPUR	3670408	41.00000	0.324	14.00000	3.4	48.60000
NC0009	NARAYANGANJ	RUPGANJ	TARABO	3676887	59.00000	<0.006	49.60000	1.4	37.90000
NC0014	NARAYANGANJ	ARAIHAZAR	SATGRAM	3670287	36.00000	<0.006	169.00000	2.2	6.80000
NC0025	MANIKGANJ	SINGAIR	DHALLA	3568243	58.00000	<0.006	23.40000	1.6	44.80000
NC0033	NARAYANGANJ	BANDAR	BANDAR	3670615	61.00000	<0.006	80.20000	5	63.10000
NC0042	MANIKGANJ	SHIBALAYA	ULAIL	3567871	52.00000	0.041	50.40000	4.4	79.90000
NC0050	MANIKGANJ	HARIRAMPUR	CHALA	3562836	31.00000	0.06	34.50000	8.3	89.70000
NC0057	MANIKGANJ	GHIOR	BANAJURI	3562223	44.00000	0.089	15.00000	4.5	74.30000
NC0074	MANIKGANJ	SATURIA	BALIATI	3567019	24.00000	0.02	8.50000	2.6	53.00000
NC0084	DHAKA	DHAMRAI	DHAMRAI	3261435	65.00000	<0.006	38.70000	3.5	96.90000
NC0102	DHAKA	KERANIGANJ	BASTA	3263808	43.00000	<0.006	23.00000	2.9	57.20000
NC0110	DHAKA	DOHAR	JOYPARA	3261810	60.00000	0.184	29.90000	6	112.50000
NC0118	DHAKA	NAWABGANJ	BANDURA	3266220	20.00000	0.133	76.20000	1.9	74.10000
NC0601	MUNSHIGANJ	LOHAJANG	LOHAJANG	3594479	92.00000	0.133	183.10000	7	45.60000
NC0608	MUNSHIGANJ	GAZARIA	GAZARIA	3592442	13.00000	0.12	8.10000	3.4	52.00000
NC0640	MUNSHIGANJ	TONGIBARI	BETKA	3599431	47.00000	0.263	11.20000	6	68.30000
NE0320	SYLHET	BISHWANATH	BISHWANATH	6912021	56.00000	0.053	36.50000	2.3	7.30000
NE0327	SYLHET	ZAKIGANJ	ZAKIGANJ	6919485	27.00000	0.08	47.30000	2.5	10.10000
NE0349	SYLHET	BALAGANJ	BALAGANJ	6910806	91.00000	0.139	99.70000	1.3	7.90000
NE0377	SYLHET	FENCHUGANJ	FENCHUGANJ	6913523	34.00000	<0.006	12.70000	2.2	4.20000
NE0391	SYLHET	KANAIGHAT	KANAIGHAT	6915947	47.00000	0.151	28.40000	3.7	17.60000
NE0417	SUNAMGANJ	CHHATAK	CHHATAK	6902309	110.00000	0.246	85.40000	<1	
NF0440	SUNAMGANJ	JAGANNATHPIUR	PATAI	6904766	126.00000	0.023	52.40000	1.2	5.00000

Metadata

Data Type	Spatial
Abstract	Results of regional arsenic survey with information of location of the wells conducted by DPHE (Department of Public Health and Engineering).
Quality	The data is stored as it is collected from DPHE without any quality and consistency checking.
Completeness	The survey was conducted over 43 districts.
History of the dataset	DPHE conducted the survey at regional level in 1998 and archived the data layer in digital format.
Purpose of production	To observe the present status of arsenic at regional level this data layer has been incorporated into NWRD.
Process description	Collecting this data from DPHE, NWRD has stored it without any quality check.

Sample of Data*Attribute Table*

ssa_id	geo_code	rs1998tm_i	samp_le_id	source_id	site_id	lab_ref	longitude	latitude	distname	thana_name	unionname	mouza	owner_name	users_no
1	670408000	50001	RIP0001	50001	NC0001		90.609	23.642	NARAYANGANJ	SONARGAON	AMINPUR	Aminpur	T.N.O Residence	30
2	670451008	50002	RIP0002	50002	NC0002		90.599	23.639	NARAYANGANJ	SONARGAON	MUGRAPARA	Dulurbargh	Wur Rahman	60
3	670468992	50003	RIP0003	50003	NC0003		90.611	23.624	NARAYANGANJ	SONARGAON	PIRIJPUR	Asharichar	H Ali Pradhan	20
4	670417024	50004	RIP0004	50004	NC0004		90.631	23.673	NARAYANGANJ	SONARGAON	BAIDYERBAZAR	Khanshardi	Khardi P. School	800

const_year	well_type	date	depth_ft	depth_m	as_pat_ient	as_ye_arid	fe_st_ains	mn_st_ains	ch4_gas	h2s_gas	turbi_dity	col_our	dataso_urce	dphe_lab	dphe_as
1986	STW	4/3/1998	125	41	0		N	N	N	N	N		RS-GSAC	AH	0.136
1997	DTW	4/3/1998	350	115	0		Y	N	N	Y	N		RS-GSAC	AFH	0.002
1970	STW	9/3/1998	90	30	0		Y	Y	N	N	N		RS-GSAC	AH	0.1
1989	STW	9/3/1998	90	30	0		Y	N	N	N	N		RS-GSAC	AFH	0.17

belowd_etec	belo_wbg_sdl	as_mg_l	dphe_fe	dphe_th	dphe_qc	dphe_a_s2	dphe_2f_e	dphe_t_h2	bgs_qc	bgs_a_s	gt_bgd	gt_w_ho
False	False	0.136		248	False				True	0.324	1	1
False	False	0.002	1.04000	286	False				False	0	0	0
False	False	0.1		238	False				False	0.22408	1	1
False	False	0.17	4.09000	268	False				False	0.31079	1	1

geol_unit	provenance	lithology	aezcode	physio	range_cl	depthcl	ironcl	hardcl
Alluvial Sand	Old Meghna Est.	Alluvium	MO649	MO	5	3		4
						4	3	4
Alluvial Sand	Meghna (River)	Alluvium	MM659	MM	4	2		4
Alluvial Sand	Old Meghna Est.	Alluvium	MO646	MO	5	2	4	4

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Geocode	Unique code (Division Code + District Code+ Thana Code) attached according to BBS census 1991	
Rs1998tm_i	ARC/INFO system data (DO NOT EDIT)	
Sample_id	Regional Survey number	
Source_id	Not defined by the source	
Site_id	Not defined by the source	
Lab_ref	Not defined by the source	
Longitude	X Coordinate	Degree Decimal
Latitude	Y Coordinate	Degree Decimal
Distname	Name of District	
Thananame	Name of Thana	
Unionname	Name of Union	
Mouza	Name of Mouza	
Owner_name	Name of Owner	
Users_no	Number of Users	

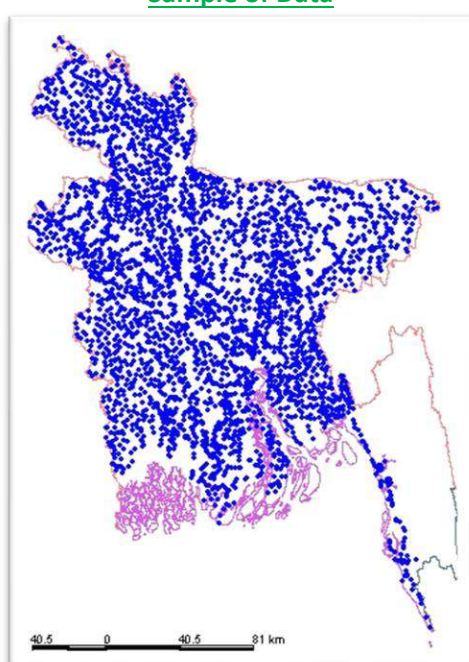
FIELD_NAME	FIELD_DESC	UNIT
Const_year	Construction Year	
Well_type	Type of Well	
Date	Date of smple collection	
Depth_ft	Depth of the surveying well	Feet
Depth_m	Depth of the surveying well	Meter
As_patient	Number of arsenic patients using well (if any)	
As_yearid	Not defined by the source	
Fe_stains	Iron staining present around well	
Mn_stains	Manganese staining present around well	
Ch4_gas	Methane gas discharge	
H2s_gas	Hydrogen sulphide detected	
Turbidity	Identification whether water id turbid or not	
Colour	Colour noted in water	
Datasource	Name of source organisation	
Dphe_lab	Flag used to confirm data entry.	
Dphe_as	Total arsenic concentration in mg/l measured in the DPHE zonal laboratory.	
Belowdetect	Quality control on data entry for when DPHE arsenic was below detection limit.	
Belowbgddl	Below BGS detection limit	
As_mgl	Duplicate of DPHE_AS double entered as a quality control on data entry	
Dphe_fe	Total iron concentration measured in DPHE zonal laboratory	
Dphe_th	Total hardness measured in DPHE zonal laboratory	
Dphe_qc	Not defined by the source	
Dphe_as2	Duplicate analysis of arsenic in DPHE zonal lab	
Dphe_2fe	Duplicate analysis of iron in DPHE zonal lab	
Dphe_th2	Duplicate analysis of total hardness measured in DPHE zonal laboratory	
Bgs_qc	Sample in original 10% quality control set sent to BGS Lab in UK.	
Bgs_as	Total arsenic concentration in mg/l measured in the BGS (Wallingford) laboratory. Values below the practical detection limit (0.0005mg/l) have been assigned a nominal value of 0.0001 mg/l. Records with zero values were not analysed.	
Gt_bgd	Flag (=1) to indicate arsenic concentration greater than the Bangladesh Standard (0.05 mg/l)	
Gt_who	Flag (=1) to indicate arsenic concentration greater than the WHO Guideline (0.01 mg/l)	
Geol_unit	Stratigraphic unit on which the well is located as determined by overlaying the GPS co-ordinates onto a digital version the map of Alam et al (1990).	
Provenance	River system	
Lithology	Generalised lithology of the 'GEOL_UNIT' above.	
Aezcode	Soil association on which the well is located as determined by overlaying the GPS co-ordinates onto a digital version the map of FAO/UNDP (1988). OR Code indicating a particular type of agro-ecological zone and subzone	
Physio	Two letter code corresponding to the physiographic unit code in AEZCODE above.	
Range_cl	Not defined by the source	
Depthcl	Not defined by the source	
Ironcl	Not defined by the source	
Hardcl	Not defined by the source	

Name of Data layer: **Regional Arsenic Survey 2000**

Metadata

Data Type	Spatial
Abstract	Results of chemical analysis of ground water carried out by the Department of Public Health and Engineering (DPHE) in their Regional Arsenic Survey.
Quality	NWRD has stored the data layer as it was collected from Web.
Completeness	The survey was conducted over 61 districts.
History of the dataset	DPHE and BGS conducted the survey and made chemical analysis in 2000.
Purpose of production	To observe and present the status of arsenic as well as other chemical elements at regional level.
Process description	NWRD has collected the data and convert the data into shape file.

Sample of Data



Attribute Table

sample_id	fieldid	date	lat_deg	long_deg	btm_long	btm_lat	year_constr	well_type	well_depth	owner	division
S98_00701	RIP3491, BTS101	3/6/1998	22.873	90.784	580411.054	529466.435	1992	Shallow HP TW	11	near sluicagate	Chittago
S98_00718	RIP3492, BTS118	3/8/1998	23.019	90.879	590058.575	545683.315	1971	Shallow HP TW	12	Nandigram High School	Chittago
S98_00724	RIP3493, BTS124	3/10/1998	22.965	90.96	598397.134	539757.581	1995	Private HP TW	12	Mr Nurunna bi	Chittago

district	thana	union	mouza	geocode	as	al	b	ba	ca	co	cr	cu	fe	k	li	mg	mn	na	p	si	so4	sr	v	zn
Lakshmipur	Lakshimpur Sada	Shakhar	Char Ramani Mohan	2514385190	13	< 0.04	0.27	0.096	49.6	< 0.08	< 0.02	< 0.08	1.17	11	0.0013	0.327	0.624	211	0.7	12.2	1.2	0.304	< 0.06	0.049

Laksh mipur	Laksh mipur Sada	Baksi pur	Nandi gram	2514 3106 66	256	< 0.0 4	0.0 4	0.01	56. 9	< 0.0 08	< 0.0 2	< 0.0 08	1.7 4	6 9	< 0.0 03	29 9	0.44 7	7. 9	1.2	13. 9	< 0.2	0.2 46	< 0.00 6	0.03 1
Laksh mipur	Laksh mipur Sada	Uttar Joyp ur	Chand ra Prabh abag	2514 3951 47	38	< 0.0 4	0.2 6	0.01 3	16. 6	< 0.0 08	< 0.0 2	< 0.0 08	0.3 17	7 1	0.00 3	15 7	0.23 1	20 5	0.6	13. 8	1.5	0.1 08	< 0.00 6	0.02 1

Bundle Information (Data Field Description and Unit)

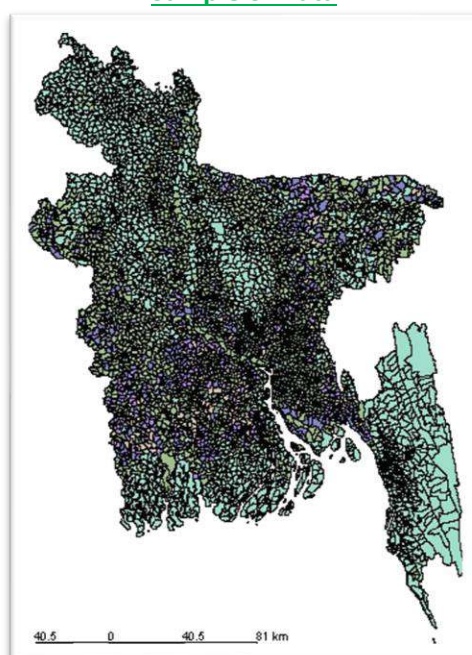
FIELD_NAME	FIELD_DESCRIPTION	UNIT
Sample_id	Sample identification in the Laboratory	
Fieldid	Sample identification in the field	
Date	Sample collection date from the field	
Lat_deg	Latitude	Degree Decimal
Long_deg	Lonitude	Degree Decimal
Year_const	Year of Construction	
Well_type	Well type	
Well_depth	Well depth	Meter
Owner	Owner of the well	
Division	Name of the Division	
District	Name of the District	
Thana	Name of the Thana	
Union	Name of the Union	
Mouza	Name of the Mauza	
Geocode	Geocode Up to Mouza (Div. + Dis. + Thana. + Union. + Mauza.)	
As	Arsenic conatined	micro gm/l
Al	Aluminium contained	mg/L
B	Boron contained	mg/L
Ba	Barium contained	mg/L
Ca	Calcium contained	mg/L
Co	Cobalt contained	mg/L
Cr	Cromimum contained	mg/L
Cu	Copper contained	mg/L
Fe	Iron contained	mg/L
K	Potasium contained	mg/L
Li	Lithium contained	mg/L
Mg	Magnisium contained	mg/L
Mn	Manganise conatined	mg/L
Na	Sodium contained	mg/L
P	Phosporas contained	mg/L
Si	Silicon Contained	mg/L
So4	Sulphate contained	mg/L
Sr	Strontium contained	mg/L
V	Vanadium contained	mg/L
Zn	Zinc contained	mg/L

Name of Data layer: **Union wise Arsenic Information**

Metadata

Data Type	Spatial
Abstract	This spatial data layer showing the union level statistics of number of tube wells contaminated with arsenic poisoning. Arsenic may be found in water which has flowed through arsenic-rich rocks. Severe health effects have been observed in populations drinking arsenic-rich water over long period.
Quality	Bangladesh Arsenic Mitigation Water Supply Project (BAMWSP) under the supervision of DPHE, surveyed all the tube wells of unions. The quality of the data set solely depends on the survey procedure being conducted by the agency.
Completeness	The data layer covers all arsenic affected unions of Bangladesh identified by DPHE.
History of the dataset	The survey work was done by BAMWSP and others. Information are compiled by NAMIC. The wells are tested with field kit of each tube wells in the unions. The tested wells are marked if contaminated and number of safe tube wells are identified. The safe range of arsenic contamination is considered to be 0.05 mg/l by the Bangladesh Government, whereas WHO adopted a standard of 0.01 mg/l.
Purpose of production	Arsenic contamination in drinking water is a major problem in Bangladesh. It is required to know the contaminated wells, as well as the level of contamination to safe guard the community/people about its toxicity and harmful effects. Future projects can be taken to prioritized the areas for alternative sources of drinking water in the affected areas.
Process description	Data has been collected from DPHE into digital format and combined it with spatial (Union database) data.

Sample of Data



Attribute Table

Bundle Information (Data Field Description and Unit)

Name of Data layer: **Rural Water Supply by Thana**

Metadata

Data Type	Tabular
Abstract	This data layer presents the rural water supply system condition in each thana (only surveyed thana)
Quality	This data layer fully compiles with the published source, NWRD has not done any quality check.
Completeness	The survey was conducted over 490 thanas.
History of the dataset	DPHE conducted the survey and archive the data.
Purpose of production	This data layer can be used in different water related analysis.
Process description	NWRD has collected the data from the YEAR BOOK of DPHE.

Sample of Data

Geocode	Divname	Distname	Upname	Year	Shallow	Deep	Tara	Rwell	Vsst_sst	Psf	Irp	Dsp	Total
10409	Barisal	Barguna	Amtali	1998-99	0	2410	0	0	0	0	0	0	2410
10419	Barisal	Barguna	Bamna	1998-99	0	848	0	0	68	0	0	0	916
10428	Barisal	Barguna	Barguna Sadar	1998-99	0	2420	0	0	0	0	0	0	2420
10447	Barisal	Barguna	Betagi	1998-99	0	1606	0	0	0	0	0	0	1606
10485	Barisal	Barguna	Patharghata	1998-99	2050	1067	0	0	637	350	0	0	4104
10602	Barisal	Barisal	Agailjhara	1998-99	1654	366	0	0	0	0	0	0	2020
10603	Barisal	Barisal	Babuganj	1998-99	1720	540	0	0	0	0	0	0	2260
10607	Barisal	Barisal	Bakerganj	1998-99	1733	2794	0	0	0	0	0	0	4527

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Geocode	Geocode of the Thana	
Divname	Name of the Division	
Distname	Name of the District	
Upname	Name of the Upazilla	
Year	Survey year	
Shallow	Shallow Tubewell	Number
Deep	Deep Tubewell	Number
Tara	Tara Pump	Number
Rwell	Ringwell	Number
Vsst_sst	Very Shallow Shrouded Tubewell/Shallow Shrouded Tubewell	Number
Psf	Pond Sand Filter	Number
Irp	Iron Removal Plant	Number
Dsp	Deep Set Pumps	Number
Total	Total number of wells in the thana	Number

Name of Data layer: **Urban Water Supply by District**

Metadata

Data Type	Tabular
Abstract	This data layer presents the Urban water supply system condition in Bangladesh
Quality	This data layer fully compiles with the published source, NWRD has not done any quality check.
Completeness	The survey was conducted over 61 districts.
History of the dataset	DPHE conducted the survey and archive the data.
Purpose of production	This data layer can be used in different water related analysis, such as how many people are engaged to operate the system, total expenditure and can estimate to establish a water supply system in a new urban area..
Process description	NWRD has collected the data from the YEAR BOOK of DPHE.

Sample of Data

Circle	Pourashava	Year	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15
Chittagong	Chandpur	1999	150000	9560	4	2	3	47.9	3190	150	559	80	2400	35	6800	16	Jointly
Chittagong	Cox's Bazar	1999	73500	3542	5	0	0	23	723	0	910	40	0	7	1000	11	Jointly
Chittagong	Feni	1999	94392	10820	3	3	0	27	1161	15	119	79	700	9	2026	9.25	Jointly
Chittagong	Habiganj	1999	50000	4401	4	1	1	19.4	1090	20	262	25	682	15	2200	14	Jointly
Chittagong	Lakshmipur	1999	75720	11112	2	1	1	25	1600	3	2100	480	88000	19	3000	20	Municipality
Chittagong	Maulvibazar	1999	50000	4320	4	0	0	28	1050	14	447	115	0	11	2520	12	PWSS
Chittagong	Noakhali	1999	126574	10400	5	1	1	24	259	3	923	620	45	3	537	8	Jointly

F16	F17	F18	F19	F20	F21	F22	F23	F24	S25	S26	S27	S28	S29	S30	S31	S32	S33	S34
3.25	1.42	1.25	5.92	3.53	3.14	3.8	268	45	37.65	10	5.5	60	66.6	52.32	2.9	1.1	1.68	88.95
0.32	0.25	0.3	0.87	0.67	0.33	0.91	46.55	18	12.79	20	10	100	31.43	27.7	2.9	0.97	1.3	49.25
0.53	0.36	0.16	1.05	0.74	0.57	0.15	31.92	9.57	17.58	4.86	6	40	43	42.44	1.73	0.78	1.42	77.03
0.72	0.52	0.12	1.36	1.54	1.3	10.87	0	3.75	32.34	23	3.5	110	56.19	50.14	2.06	1.38	0.88	84.42
0.72	0.65	0.4	1.77	2.33	1.98	22	0	14	27.87	0.75	21	150	64	46.63	1.97	1.19	0.76	84.98
0.65	0.3	0.1	1.05	1.3	1.1	2.1	4	7	30.1	30	8	100	37.5	58.14	1.39	1.05	0.81	84.62
0.45	0.12	0.15	0.72	0.12	0.04	0.1	20	3.91	2.9	21.88	8	40	10.79	51.57	4.47	1.16	6	33.33

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Circle	DPHE circle	
Pourashava	Name of the Pourashava	
Year	Year of survey	
G1	Population	Nos
G2	Holding	Nos
G3	Production Well (Running)	Nos
G4	Overhead Tank (Operational)	Nos
G5	Treatment Plant (Operational)	Nos
G6	Length of Pipe line	Km
G7	Service Connection	Nos
G8	Stand Post (Operational)	Nos
G9	Running Hand Tubewell (Public)	Nos
G10	Road (Pucca and Semi Pucca)	Km

G11	Total Storage Capacity	m3
G12	PWSS Staff	Nos
G13	Daily Water Production	m3
G14	Daily Pumping Hour	Hour
G15	Water Supply System Operated By	Jointly
F16	Electricity Cost per month	Lakh
F17	Staff Cost per month	Lakh
F18	Other Cost per month	Lakh
F19	Total operating cost	Lakh
F20	Average monthly Billed (current)	Lakh
F21	Average monthly Collection (current)	Lakh
F22	Bank Balance (End of June '99)	Lakh
F23	Electricity Arrears (June '99)	Lakh
F24	Consumer's Arrear (June '99)	Lakh
S25	Service Coverage (pipe water)	Percent
S26	Hand Tubewell Coverage	Percent
S27	Water availability	Hour
S28	Water Tariff (1/2" size)	Taka
S29	Connection per km of pipe line	Nos
S30	Un accounted for water	Percent
S31	Unit Production Cost	Taka/m3
S32	PWSS Staff /100 connection	Nos
S33	Operating Rating (Expenditure/Bill)	NA
S34	Collection efficiency (current)	Percent

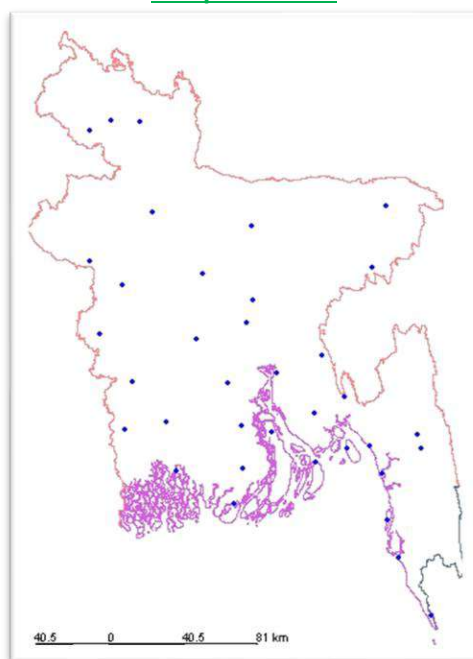
Meteorological

Name of Data layer: **Climatic stations of BMD**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing the 36 meteorological station locations maintained by Bangladesh Meteorological Department (BMD). Meteorological data like rainfall, humidity, sunshine hour, wind-speed, temperature etc. are collected from these stations regul
Quality	Locations of stations have been checked with the associated attributes. It is recommended that the data layer should be used in 1:1000000 scale for the whole country and for region level the scale should be smaller than this.
Completeness	The data layer covers 36 meteorological stations of BMD.
History of the dataset	BMD has generated the original source of this dataset and provided it to NWRD as softcopy format.
Purpose of production	To present the location of the climatic stations along with other attribute information and to use it in different study.
Process description	BMD provided a tabular format soft copy dataset. NWRD has generated a point dataset using the station IDs and coordinate values.

Sample of Data



Attribute Table

Id	Stationid	Stationname	Mcode	Grndelev	Instheight	Latitude	Longitude	Btmlong	Btmlat	Insdate	U2	Remarks
1	11704	BARISAL	950	2.54	12.8	22.7	90.37	534184.2	515676.5	01-APR-63	0.72	Town
2	11706	BHOLA	951	4.74	8.5	22.68	90.65	566759.4	508368.25	13-JUL-70	0.77	Town
3	10408	BOGRA	883	18.44	14.6	24.85	89.36	436054.6	748258.56	04-JAN-43	0.71	Town
4	11316	CHANDPUR	941	6.04	11.9	23.22	90.66	571586.1	573037.43	13-MAR-64	0.73	Town
6	11313	COMILLA	933	6.54	8.5	23.46	91.18	620834.4	591736.18	12-MAR-72	0.77	Airport
8	11111	DHAKA	923	9.14	10	23.76	90.38	539020.2	628265.68	01-JAN-58	0.75	Town, To be confirmed for InsHeight
9	10120	DINAJPUR	863	36.44	12	25.63	88.65	367820.7	837345.31	20-MAY-83	0.73	Town
10	11505	FARIDPUR	41929	8.54	11.4	23.6	89.83	484698.5	609734.43	07-MAY-83	0.73	Town

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stationid	Station ID	
Stationname	Station Name	
Mcode	International station code - WMO (World Meteorological Organization)	
Grndelev	Ground Elevation	meter PWD
Instheight	Height of Instrument above ground surface	meter
Latitude	Latitude in degree decimal	In Degree Decimal
Longitude	Longitude in degree decimal	In Degree Decimal
Btmlong	Longitude in BTM (Bangladesh Transverse Mercator) Coordinate system	meter
Btmlat	Latitude in BTM (Bangladesh Transverse Mercator) Coordinate system	meter
Insdate	Date of Instalation	
U2	Factor for calculating wind speed at 2 meter height (FAO 56)	m/sec
Id	Serial ID	
Remarks	Location of the station and other information	

Name of Data layer: **Evaporation Data of BMD**

Metadata

Data Type	Time Series Table
Abstract	A time series data layer containing the daily evaporation data collected by Bangladesh Meteorological Department (BMD).
Quality	In this data layer information is available from 1983 to 2011. But this time range of data availability is not applicable for all stations. Besides there are missing of data at some stations within the specified range of data availability. The Data layer has been checked up to some extent (obvious error) by NWRD.
Completeness	The information covers all the 14 evaporation stations of BMD.
History of the dataset	BMD collected this time series evaporation data. Source data was in digital format.
Purpose of production	Daily evaporation data is an essential parameter in hydrology and environment related studies. Therefore, to support such type of works this data layer has been included in NWRD.
Process description	NWRD has collected this data from BMD and organized them in a database format.

Sample of Data

Stationid	Datetime	Tsvalue_old	Tsvalue_updated
12	30/10/1990	2.6	2.6
12	01/11/1990	3.5	3.5
12	02/11/1990	2.5	2.5
12	03/11/1990	2.6	2.6
12	04/11/1990	2.7	2.7
12	05/11/1990	2	2
12	06/11/1990	3.5	3.5
12	07/11/1990	2.3	2.3
12	08/11/1990	2.7	2.7
12	09/11/1990	2.5	2.5

Bundle Information (Data Field Description and Unit)

FIELD	FIELD_NAME	UNIT
Stationid	ID of Each Station	
Datetime	Data Capturing Date	
Tsvalue_old	Original Time Series Value Collected from Source	MiliMeter (mm)
Tsvalue_updated	Time Series Values Updated (All 9999 Values are Deleted)	MiliMeter (mm)

Name of Data layer: **Evaporation Data of BWDB**

Metadata

Data Type	Time Series Table
Abstract	A time series data layer containing the daily evaporation data collected by Bangladesh Water Development Board (BWDB).
Quality	In this data layer daily information is available from 1964 to 1998 for 47 stations. But this time range of data availability is not applicable to all stations. Besides there are missing of data in some stations within the specified range of data availability. The Data layer has been checked up to some extent (obvious error) by NWRD.
Completeness	The data layer covers 47 evaporation stations of BWDB.
History of the dataset	Bangladesh Water Development Board (BWDB) collected this time series attribute information. The data was in digital format.
Purpose of production	Daily evaporation data is an essential parameter in hydrology and environment related studies. Therefore, to support such type of works this data layer has been included in NWRD.
Process description	NWRD has collected this data from BWDB and organized them in a database format.

Sample of Data

Stationid	Datetime	Tsvalue_old	Tsvalue_updated
1	01/04/1965	6.1	6.1
1	02/04/1965	4.8	4.8
1	03/04/1965	12.2	12.2
1	04/04/1965	5.3	5.3
1	05/04/1965	5.6	5.6
1	06/04/1965	5.1	5.1
1	07/04/1965	5.1	5.1
1	08/04/1965	7.1	7.1

Bundle Information (Data Field Description and Unit)

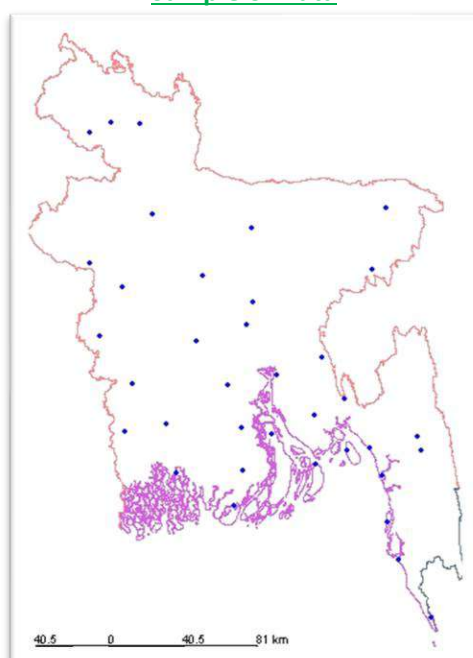
FIELD	FIELD_NAME	UNIT
Stationid	ID of Each Station	
Datetime	Data Capturing Date	
Tsvalue_old	Original Time Series Value collected from Source	MiliMeter
Tsvalue_updated	Time Series Value Updated (All 9999 Values are Deleted)	MiliMeter

Name of Data layer: **Evaporation Stations of BMD**

Metadata

Data Type	Spatial
Abstract	A spatial data layer presenting different meteorological stations maintained by Bangladesh Meteorological Department (BMD).
Quality	It is recommended that this data should be used in 1:250,000 scale or smaller than this.
Completeness	The data layer covers 12 evaporation stations maintained by BMD.
History of the dataset	Source of the data layer is a hard copy dataset consisting of the coordinate values collected from BMD.
Purpose of production	The dataset has been incorporated to NWRD for presenting the spatial distribution of the evaporation stations as well as to link the time series values of daily evaporation with the stations and further to use it as the base data layer in different analys
Process description	NWRD has generated the point data layer using the latitude, longitude values and station numbers collected from BMD and checked using the administrative boundary.

Sample of Data



Attribute Table

Stnid	Stnname	Ddlong	Ddlat	X_coord	Y_coord
12	DINAJPUR	88.68	25.65	367820.69	837345.31
21	RANGPUR	89.23	25.73	423077.25	846101.69
22	BOGRA	89.37	24.85	436054.59	748258.56
41	BARISAL	90.33	22.75	534184.25	515676.5
42	KHULNA	89.53	22.78	452070.97	519366.47
51	MYMENSINGH	90.43	24.72	543787.44	733454.06
52	SREEMANGAL	91.73	24.3	675847.75	688313
53	MANIKGANJ	90	23.78	500000	629984.44

Bundle Information (Data Field Description and Unit)

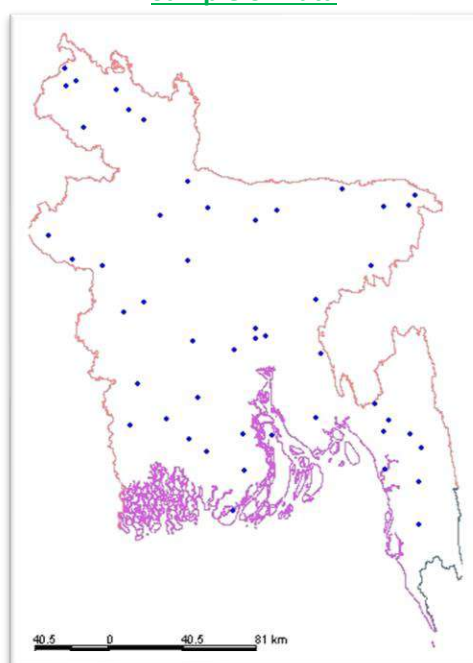
FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stnid	Station ID	
Stnname	Station Name	
Ddlong	Longitude In Degree Decimal	In Degree Decimal
Ddlat	Latitude In Degree Decimal	In Degree Decimal
X_coord	X Coordinate	
Y_coord	Y Coordinate	

Name of Data layer: **Evaporation Stations of BWDB**

Metadata

Data Type	Spatial
Abstract	A spatial data layer presenting different meteorological stations maintained by Bangladesh Water Development Board (BWDB).
Quality	It is recommended that this data should be used in 1:250,000 scale or smaller than this.
Completeness	This data layer covers all the (50) evaporation stations of BWDB.
History of the dataset	Source of the data layer is a hard copy dataset consisting of the coordinate values collected from BWDB.
Purpose of production	The dataset has been incorporated to NWRD for presenting the spatial distribution of the evaporation stations as well as to link the time series values of daily evaporation with the stations and further to use it as the base data layer in different analys
Process description	NWRD has generated the point data layer using the information of latitude, longitude and station number collected from BWDB.

Sample of Data



Attribute Table

Stnid	Stnname	Rainid	Ddlong	Ddlat	Btmlong	Btmlat	Statstn	Insttype	Statinst	Subdivid	Instaldate	Discondate
1	Amla	214	89.08	23.88	405929.47	641483.88	REC	A/M	A	PB	01.1.61	-
10	Dhaka	9	90.49	23.73	550370	623674.63	REC	M	M	DA	08.7.60	12.10.79
11	Dinajpur	168	88.63	25.7	362151.44	842710.81	RE	M	M	DP	01.11.60	-
12	Fatikchari	311	91.84	22.7	688642.38	511536.31	R	M	M	CT	20.5.61	-
125	Sheola	125	92.14	24.92	716385.06	757341.38	R	M/A	M	SY	27.9.62	-
13	Fatulla	408	90.49	23.63	549799.56	613132.25	-	M	-	DA	25.2.61	23.8.80

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stnid	Station ID	
Stnname	Station Name	
Rainid	BWDB Station ID of Rainfall	
Ddlong	Longitude In Degree Decimal	In Degree Decimal
Ddlat	Latitude In Degree Decimal	In Degree Decimal
Btmlong	Longitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meters
Btmlat	Latitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meters

Name of Data layer: **Monthly Calculated Eto**

Metadata

Data Type	Time Series Table
Abstract	A time series data layer containing the monthly average evapotranspiration (Eto) calculated from daily data collected by Bangladesh Meteorological Department (BMD) at 31 stations. To facilitate the trend analyses data has been presented as time series.
Quality	The data layer contains monthly average evapotranspiration data from 1961 to 1998 of 31 stations of BMD. But this time range of data availability is not applicable to all stations. Besides there are missing of data in some stations within the specified range of data availability.
Completeness	The data layer covers all the stations of BMD. The maximum time span of this data layer is 38 year.
History of the dataset	This data layer was derived from the daily evaporation data of BMD.
Purpose of production	Monthly average evapotranspiration is an essential parameter for hydrological and environmental trend analysis. This data layer is therefore to provide this information readily.
Process description	NWMP has calculated the monthly data from the daily information collected by BMD. This data layer has been kept as time series to facilitate analytical work. But to organize this type of data in mdb (Microsoft Database) as time series, every data should have a date. For this reason monthly average data has been kept with the 1st date of the month.

Sample of Data

Stationid	Datetime	Eto
10120	01/01/1989	1.54
10120	01/06/1989	2.78
10120	01/07/1989	3.6
10120	01/08/1989	4.13
10120	01/09/1989	2.92
10120	01/10/1989	3.39
10120	01/11/1989	2.46
10120	01/12/1989	1.85

Bundle Information (Data Field Description and Unit)

FIELD	SAMPLEDATA	DESCRIPTION	UNIT
Stationid	10120		
Datetime	01/01/1989		
Eto	1.5438845413	Value Of Evapotranspiration	Milimeter

Name of Data layer: **Humidity Data of BMD**

Metadata

Data Type	Time Series Table
Abstract	This time series data layer contains 3 hourly relative humidity data collected by BMD.
Quality	The data layer contains relative humidity data from 1948 to 2008. This data is recorded 8 times in a day. There is some missing of data in some stations.
Completeness	The data layer contains about 60-year data.
History of the dataset	BMD has been collecting and storing this data from different meteorological stations throughout the country for a long period of time.
Purpose of production	To observe relative humidity, an important meteorological parameter, of an area.
Process description	NWRD has collected digital data from BMD and organized it in an ordered form.

Sample of Data

Stationid	Datetime	Humidity_old	Humidity_updated
10120	01/01/1948 03:00:00	87	87
10120	01/01/1948 12:00:00	58	58
10120	02/01/1948 03:00:00	71	71
10120	02/01/1948 12:00:00	59	58
10120	03/01/1948 03:00:00	71	71
10120	03/01/1948 12:00:00	59	59
10120	04/01/1948 03:00:00	71	71
10120	04/01/1948 12:00:00	55	55
10120	05/01/1948 03:00:00	71	71
10120	05/01/1948 12:00:00	63	63

Bundle Information (Data Field Description and Unit)

FIELD	FIELD_NAME	UNIT
Stationid	ID of Each Stations	
Datetime	Data Capturing Date	
Humidity_old	Original Time Series Values collected from Source	Percentage
Humidity_updated	Value Updated(All Negative Values,0 Value and Other Obvious are Deleted)	Percentage

Name of Data layer: **Solar Radiation**

Metadata

Data Type	Time Series Table
Abstract	Solar radiation describes the visible and near-visible (ultraviolet and near-infrared) radiation emitted from the sun. Historically, solar measurements have been taken with horizontal instruments over the complete day. A time series data layer containing the daily solar radiation data collected by Bangladesh Meteorological Department (BMD).
Quality	Quality of this data layer totally depends on the data collection process of the source organization.
Completeness	The data layer covers data from the year 1983 to 2008 of 10 meteorological stations of BMD.
History of the dataset	BMD has been collecting and storing the daily solar radiation from different meteorological stations throughout the country for a long period of time.
Purpose of production	Study on solar radiation is important for utilization of photovoltaic and thermal systems over the country. Also, it is an essential parameter in hydrology and environment related studies.
Process description	NWRD has collected this data from BMD and organized it in a database format to prepare it as a NWRD data layer.

Sample of Data

Stationid	Datetime	Tsvalue_old	Tsvalue_updated
10208	01/01/2001	28.72	28.72
10208	02/01/2001	129.27	129.27
10208	03/01/2001	129.27	129.27
10208	04/01/2001	86.18	86.18
10208	05/01/2001	86.18	86.18
10208	06/01/2001	86.18	86.18
10208	07/01/2001	129.27	129.27
10208	08/01/2001	129.27	129.27
10208	09/01/2001	129.27	129.27
10208	10/01/2001	129.27	129.27

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Stationid	ID of Each Station	
Datetime	Data Capturing Date	
Tsvalue_old	Original Time Series Value collected from Source	cal/cm2/day
Tsvalue_updated	Time Series Values Updated	cal/cm2/day

Name of Data layer: **Dependable Rainfall of BMD**

Metadata

Data Type	Tabular
Abstract	The data layer contains dependable rainfall data at 80% dependency level i.e., the rainfall exceeding in 4 years out of 5 year for any month.
Quality	The data is the calculated rainfall value at 80% dependency level. The accuracy and reliability of the dataset depend on the base data and calculation method. NWMP has checked the quality of the dataset and it is satisfactory according to the base data.
Completeness	Data is available from 1960 to 1999.
History of the dataset	Daily rainfall data was recorded by Bangladesh Meteorological Department (BMD).
Purpose of production	To use the data layer in different type of hydrological analysis and planning purposes.
Process description	NWMP calculated dependable rainfall at 80% dependency level from the daily rainfall data recorded by BMD. This data layer was calculated using the Cunanan's method.

Sample of Data

Stationid	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Tyr	Dry80	Wet80
10120	0	0	0	4.84	79.88	219.28	257.12	206.36	214.12	35.44	0	0	1425.88	122.64	1221.64
10208	0	0	1.84	32.2	168	248.44	276.24	153.44	161.8	49.32	0	0	1719.64	291.48	1345.8
10320	0	0.84	0	9.84	65.2	140.76	191.08	149.32	125	43.08	0	0	1143.04	172.08	916.52
10408	0	0.24	1.44	14.88	107.2	196.96	273.2	172.68	158.44	40.36	0	0	1326.8	165	1086.6
10609	0	0	0.24	39.64	180.84	224.48	280.2	154.2	199.48	43.88	0	0	1609.04	277.84	1338.56
10705	0	5.32	55.92	202.52	352.64	588.84	581.28	392.88	343.96	100.12	0	0	3426.72	754.68	2522.16
10724	0	0	0.88	74.2	206.48	286.92	209.96	204.4	147.12	73.28	0.24	0	1774.84	400.8	993.76
10910	0	0	0	18	81.48	154.44	153.56	147.6	136.48	24.28	0	0	1061.92	176.2	812.16

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
All fields have same unit including tyr (total year value) except station id		mm
Dry80	80% Dry (November to May) season rainfall	mm
Wet80	80% Wet (June to October) season rainfall	mm

Name of Data layer: **Dependable Rainfall of BWDB**

Metadata

Data Type	Tabular
Abstract	The data layer contains dependable rainfall data at 80% dependency level i.e. the rainfall exceeded 4 years out of 5 for any month.
Quality	The data is the calculated rainfall value at 80% dependency level. The accuracy and reliability of the dataset depend on the base data and calculation method. NWMP has checked the quality of the dataset and it is satisfactory according to the base data.
Completeness	Data is available from 1962 to 1996.
History of the dataset	Daily rainfall data was recorded by BWDB (Bangladesh Water Development Board).
Purpose of production	To use the data layer in different type of hydrological analysis and planning purposes.
Process description	NWMP calculated dependable rainfall at 80% dependency level from the rainfall data recorded by BWDB. This data layer was calculated according to the following equation i.e., probability, $p=(n-q)/(N-2q)$, where n is the rank ordered from 1 to N and q is a parameter; the value of q is 0.4 recommended by Cunnane (1978).

Sample of Data

Stationid	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Tyr	Dry80	Wet80
314	0	0	0.63	70.44	181.65	353.76	296.78	281.54	133.31	53.7	0.03	0	84.19	84.19	0
315	0	0	0	63.33	136.99	383.78	341.34	318.57	185.64	66.1	0	0	2107.02	318.7	1437.93
316	0	0	0	15.79	68.2	318.28	411.81	238.23	135.42	50.08	0	0	1696.23	194.25	1331.32
317	0	0	0	26.29	164.41	488.59	516.28	361.96	199.33	103.82	0	0	2622.7	294.18	1989.13
318	0	0	0	18.32	63.61	225.56	277.45	162	130.07	36.58	0	0	1060.14	176.52	845.72
319	0	0	0	25.88	82.9	198.19	165.7	151.95	77.75	24.46	0	0	158.47	81.65	62.26
32	0	0	3.04	31.02	159.2	257.79	270.5	189.33	150.79	33.37	0	0	1441.24	227.76	1132.56
320	0	0	0.67	68.32	162.89	443.25	434.59	411.8	260.64	97.65	0	0	2707.5	348.12	1962.18

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
All fields have same unit including tyr (total year value) except station id		mm
Dry80	80% Dry (November to May) season rainfall	mm
Wet80	80% Wet (June to October) season rainfall	mm

Name of Data layer: **NAM Catchment Runoff for Dry of EH**

Metadata

Data Type	Tabular
Abstract	This dataset contains monthly 10-days total runoff (November - April) which is the Rainfall-Runoff model output for dry period (November-April) of Eastern Hill region that has been generated for each NAM catchment for the period of 1965-66 to 1989-90.
Quality	The quality of the model information depends on the input data and calibration and verification of the model.
Completeness	The data layer has been created for General Model area
History of the dataset	The runoff generated within the catchment area is computed by NAM Simulation.
Purpose of production	Runoff has been generated to assess the contribution of rainfall in a particular catchment for each decade of the month for dry period.
Process description	The model results are processed as monthly 10-days total.

Sample of Data

Region_id	Catchment_name	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
7	CA-02	1996-97	146.25	44.86	34.61	30.66	27.18	23.94	21.09	18.69	16.47	14.51	12.86	11.53	10.35	9.17	8.08	7.12	6.31
7	CA-02	1997-98	40.61	36	31.9	28.27	25.06	22.08	19.45	17.24	15.19	13.38	11.85	10.63	9.54	8.45	7.54	99999.99	99999.99
7	CA-03	1995-96	99999.99	99999.99	99999.99	0	0	0	0	0	0	0	0	0	0	0	65.09	4.28	0
7	CA-03	1996-97	20.68	3.23	2.19	0.63	0.04	0	0	0	0	0	0	0	0	0	24.04	0	0

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Region_id	Region Id	
Catchment_name	Catchment Name	
Year	Year	
Nov01	Total runoff for the first decade of November	Cubic meter
Nov02	Total runoff for the second decade of November	Cubic meter
Nov03	Total runoff for the last decade of November	Cubic meter
Dec01	Total runoff for the first decade of December	Cubic meter
Dec02	Total runoff for the second decade of December	Cubic meter
Dec03	Total runoff for the last decade of December	Cubic meter
Jan01	Total runoff for the first decade of January	Cubic meter
Jan02	Total runoff for the second decade of January	Cubic meter
Jan03	Total runoff for the last decade of January	Cubic meter
Feb01	Total runoff for the first decade of February	Cubic meter
Feb02	Total runoff for the second decade of February	Cubic meter
Feb03	Total runoff for the last decade of February	Cubic meter
Mar01	Total runoff for the first decade of March	Cubic meter
Mar02	Total runoff for the second decade of March	Cubic meter
Mar03	Total runoff for the last decade of March	Cubic meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Apr01	Total runoff for the first decade of April	Cubic meter
Apr02	Total runoff for the second decade of April	Cubic meter
Apr03	Total runoff for the last decade of April	Cubic meter
Minimum	Minimum runoff	Cubic meter

Name of Data layer: **NAM Catchment Runoff for Dry of GM**

Metadata

Data Type	Tabular
Abstract	This dataset contains monthly 10-days total runoff which is the Rainfall-Runoff model output for dry period (November-April) of General Model area that has been generated for each NAM catchment for the period of 1965-66 to 1989-90.
Quality	The quality of the model information depends on the input data and calibration and verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The runoff generated within the catchment area is computed by NAM Simulation.
Purpose of production	Runoff has been generated to assess the contribution of rainfall in a particular catchment for each decade of the month for dry period.
Process description	The model results are processed as monthly 10 - days total.

Sample of Data

Region_id	Catchment_name	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
7	CA-02	1996-97	146.25	44.86	34.61	30.66	27.18	23.94	21.09	18.69	16.47	14.51	12.86	11.53	10.35	9.17	8.08	7.12	6.31
7	CA-02	1997-98	40.61	36	31.9	28.27	25.06	22.08	19.45	17.24	15.19	13.38	11.85	10.63	9.54	8.45	7.54	999999.99	999999.99
7	CA-03	1995-96	999999.99	999999.99	999999.99	0	0	0	0	0	0	0	0	0	0	0	65.09	4.28	0
7	CA-03	1996-97	20.68	3.23	2.19	0.63	0.04	0	0	0	0	0	0	0	0	0	24.04	0	0

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Region_id	Region Id	
Catchment_name	Catchment Name	
Year	Year	
Nov01	Total runoff for the first decade of November	Cubic meter
Nov02	Total runoff for the second decade of November	Cubic meter
Nov03	Total runoff for the last decade of November	Cubic meter
Dec01	Total runoff for the first decade of December	Cubic meter
Dec02	Total runoff for the second decade of December	Cubic meter
Dec03	Total runoff for the last decade of December	Cubic meter
Jan01	Total runoff for the first decade of January	Cubic meter
Jan02	Total runoff for the second decade of January	Cubic meter
Jan03	Total runoff for the last decade of January	Cubic meter
Feb01	Total runoff for the first decade of February	Cubic meter
Feb02	Total runoff for the second decade of February	Cubic meter
Feb03	Total runoff for the last decade of February	Cubic meter
Mar01	Total runoff for the first decade of March	Cubic meter
Mar02	Total runoff for the second decade of March	Cubic meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Mar03	Total runoff for the last decade of March	Cubic meter
Apr01	Total runoff for the first decade of April	Cubic meter
Apr02	Total runoff for the second decade of April	Cubic meter
Apr03	Total runoff for the last decade of April	Cubic meter
Minimum	Minimum runoff	Cubic meter

Name of Data layer: **NAM Catchment Runoff for Dry of NC**

Metadata

Data Type	Tabular
Abstract	This dataset contains monthly 10-days total runoff which is the Rainfall-Runoff model output for dry period (November-April) of North Central region that has been generated for each NAM catchment for the period of 1965-66 to 1989-90.
Quality	The quality of the model information depends on the input data and calibration and verification of the model.
Completeness	The data layer has been created for the North Central region (covers the region bounded by the Jamuna, Ganges, Meghna, Old Brahmaputra, and includes the national capital Dhaka).
History of the dataset	The runoff generated within the catchment area is computed by NAM Simulation.
Purpose of production	Runoff has been generated to assess the contribution of rainfall in a particular catchment for each decade of the month for dry period.
Process description	The model results are processed as monthly 10-days total.

Sample of Data

Region_id	Catchment_name	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
7	CA-02	1996-97	146.25	44.86	34.61	30.66	27.18	23.94	21.09	18.69	16.47	14.51	12.86	11.53	10.35	9.17	8.08	7.12	6.31
7	CA-02	1997-98	40.61	36	31.9	28.27	25.06	22.08	19.45	17.24	15.19	13.38	11.85	10.63	9.54	8.45	7.54	99999.99	99999.99
7	CA-03	1995-96	99999.99	99999.99	99999.99	0	0	0	0	0	0	0	0	0	0	0	65.09	4.28	0
7	CA-03	1996-97	20.68	3.23	2.19	0.63	0.04	0	0	0	0	0	0	0	0	0	24.04	0	0

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Region_id	Region Id	
Catchment_name	Catchment Name	
Year	Year	
Nov01	Total runoff for the first decade of November	Cubic meter
Nov02	Total runoff for the second decade of November	Cubic meter
Nov03	Total runoff for the last decade of November	Cubic meter
Dec01	Total runoff for the first decade of December	Cubic meter
Dec02	Total runoff for the second decade of December	Cubic meter
Dec03	Total runoff for the last decade of December	Cubic meter
Jan01	Total runoff for the first decade of January	Cubic meter
Jan02	Total runoff for the second decade of January	Cubic meter
Jan03	Total runoff for the last decade of January	Cubic meter
Feb01	Total runoff for the first decade of February	Cubic meter
Feb02	Total runoff for the second decade of February	Cubic meter
Feb03	Total runoff for the last decade of February	Cubic meter
Mar01	Total runoff for the first decade of March	Cubic meter
Mar02	Total runoff for the second decade of March	Cubic meter
Mar03	Total runoff for the last decade of March	Cubic meter
Apr01	Total runoff for the first decade of April	Cubic meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Apr02	Total runoff for the second decade of April	Cubic meter
Apr03	Total runoff for the last decade of April	Cubic meter
Minimum	Minimum runoff	Cubic meter

Name of Data layer: **NAM Catchment Runoff for Dry of NE**

Metadata

Data Type	Tabular
Abstract	This dataset contains monthly 10-days total runoff which is the Rainfall-Runoff model output for dry period (November-April) of North-East region that has been generated for each NAM catchment for the period of 1965-66 to 1989-90.
Quality	The quality of the model information depends on the input data and calibration and verification of the model.
Completeness	The data layer has been created for the North East region (covers the entire north east of the country east of the Old Brahmaputra and north of the upper Meghna at Bhairab Bazar).
History of the dataset	The runoff generated within the catchment area is computed by NAM Simulation.
Purpose of production	Runoff has been generated to assess the contribution of rainfall in a particular catchment for each decade of the month for dry period.
Process description	The model results are processed as monthly 10-days total.

Sample of Data

Region_id	Catchment_name	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
7	CA-02	1996-97	146.25	44.86	34.61	30.66	27.18	23.94	21.09	18.69	16.47	14.51	12.86	11.53	10.35	9.17	8.08	7.12	6.31
7	CA-02	1997-98	40.61	36	31.9	28.27	25.06	22.08	19.45	17.24	15.19	13.38	11.85	10.63	9.54	8.45	7.54	99999.99	99999.99
7	CA-03	1995-96	99999.99	99999.99	99999.99	0	0	0	0	0	0	0	0	0	0	0	65.09	4.28	0
7	CA-03	1996-97	20.68	3.23	2.19	0.63	0.04	0	0	0	0	0	0	0	0	0	24.04	0	0

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Region_id	Region Id	
Catchment_name	Catchment Name	
Year	Year	
Nov01	Total runoff for the first decade of November	Cubic meter
Nov02	Total runoff for the second decade of November	Cubic meter
Nov03	Total runoff for the last decade of November	Cubic meter
Dec01	Total runoff for the first decade of December	Cubic meter
Dec02	Total runoff for the second decade of December	Cubic meter
Dec03	Total runoff for the last decade of December	Cubic meter
Jan01	Total runoff for the first decade of January	Cubic meter
Jan02	Total runoff for the second decade of January	Cubic meter
Jan03	Total runoff for the last decade of January	Cubic meter
Feb01	Total runoff for the first decade of February	Cubic meter
Feb02	Total runoff for the second decade of February	Cubic meter
Feb03	Total runoff for the last decade of February	Cubic meter
Mar01	Total runoff for the first decade of March	Cubic meter
Mar02	Total runoff for the second decade of March	Cubic meter
Mar03	Total runoff for the last decade of March	Cubic meter
Apr01	Total runoff for the first decade of April	Cubic meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Apr02	Total runoff for the second decade of April	Cubic meter
Apr03	Total runoff for the last decade of April	Cubic meter
Minimum	Minimum runoff	Cubic meter

Name of Data layer: **NAM Catchment Runoff for Dry of NW**

Metadata

Data Type	Tabular
Abstract	This dataset contains monthly 10-days total runoff which is the Rainfall-Runoff model output for dry period (November-April) of North-West region that has been generated for each NAM catchment for the period of 1965-66 to 1989-90.
Quality	The quality of the model information depends on the input data and calibration and verification of the model.
Completeness	The data layer has been created North West region (bounded by the Brahmaputra river to the east, the Ganges to the south, and the international border to the north and west).
History of the dataset	The runoff generated within the catchment area is computed by NAM Simulation.
Purpose of production	Runoff has been generated to assess the contribution of rainfall in a particular catchment for each decade of the month for dry period.
Process description	The model results are processed as monthly 10-days total.

Sample of Data

Region_id	Catchment_name	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
7	CA-02	1996-97	146.25	44.86	34.61	30.66	27.18	23.94	21.09	18.69	16.47	14.51	12.86	11.53	10.35	9.17	8.08	7.12	6.31
7	CA-02	1997-98	40.61	36	31.9	28.27	25.06	22.08	19.45	17.24	15.19	13.38	11.85	10.63	9.54	8.45	7.54	99999.99	99999.99
7	CA-03	1995-96	99999.99	99999.99	99999.99	0	0	0	0	0	0	0	0	0	0	0	65.09	4.28	0
7	CA-03	1996-97	20.68	3.23	2.19	0.63	0.04	0	0	0	0	0	0	0	0	0	24.04	0	0

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Region_id	Region Id	
Catchment_name	Catchment Name	
Year	Year	
Nov01	Total runoff for the first decade of November	Cubic meter
Nov02	Total runoff for the second decade of November	Cubic meter
Nov03	Total runoff for the last decade of November	Cubic meter
Dec01	Total runoff for the first decade of December	Cubic meter
Dec02	Total runoff for the second decade of December	Cubic meter
Dec03	Total runoff for the last decade of December	Cubic meter
Jan01	Total runoff for the first decade of January	Cubic meter
Jan02	Total runoff for the second decade of January	Cubic meter
Jan03	Total runoff for the last decade of January	Cubic meter
Feb01	Total runoff for the first decade of February	Cubic meter
Feb02	Total runoff for the second decade of February	Cubic meter
Feb03	Total runoff for the last decade of February	Cubic meter
Mar01	Total runoff for the first decade of March	Cubic meter
Mar02	Total runoff for the second decade of March	Cubic meter
Mar03	Total runoff for the last decade of March	Cubic meter
Apr01	Total runoff for the first decade of April	Cubic meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Apr02	Total runoff for the second decade of April	Cubic meter
Apr03	Total runoff for the last decade of April	Cubic meter
Minimum	Minimum runoff	Cubic meter

Name of Data layer: **NAM Catchment Runoff for Dry of SE**

Metadata

Data Type	Tabular
Abstract	This dataset contains monthly 10-days total runoff which is the Rainfall-Runoff model output for dry period (November-April) of South-East region that has been generated for each NAM catchment for the period of 1965-66 to 1989-90.
Quality	The quality of the model information depends on the input data and calibration and verification of the model.
Completeness	The data layer has been created for the South East region (covers the area lying to the south and east of Meghna River and Estuary and north of the Bay of Bengal).
History of the dataset	The runoff generated within the catchment area is computed by NAM Simulation.
Purpose of production	Runoff has been generated to assess the contribution of rainfall in a particular catchment for each decade of the month for dry period.
Process description	The model results are processed as monthly 10-days total.

Sample of Data

Region_id	Catchment_name	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
7	CA-02	1996-97	146.25	44.86	34.61	30.66	27.18	23.94	21.09	18.69	16.47	14.51	12.86	11.53	10.35	9.17	8.08	7.12	6.31
7	CA-02	1997-98	40.61	36	31.9	28.27	25.06	22.08	19.45	17.24	15.19	13.38	11.85	10.63	9.54	8.45	7.54	99999.99	99999.99
7	CA-03	1995-96	99999.99	99999.99	99999.99	0	0	0	0	0	0	0	0	0	0	0	65.09	4.28	0
7	CA-03	1996-97	20.68	3.23	2.19	0.63	0.04	0	0	0	0	0	0	0	0	0	24.04	0	0

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Region_id	Region Id	
Catchment_name	Catchment Name	
Year	Year	
Nov01	Total runoff for the first decade of November	Cubic meter
Nov02	Total runoff for the second decade of November	Cubic meter
Nov03	Total runoff for the last decade of November	Cubic meter
Dec01	Total runoff for the first decade of December	Cubic meter
Dec02	Total runoff for the second decade of December	Cubic meter
Dec03	Total runoff for the last decade of December	Cubic meter
Jan01	Total runoff for the first decade of January	Cubic meter
Jan02	Total runoff for the second decade of January	Cubic meter
Jan03	Total runoff for the last decade of January	Cubic meter
Feb01	Total runoff for the first decade of February	Cubic meter
Feb02	Total runoff for the second decade of February	Cubic meter
Feb03	Total runoff for the last decade of February	Cubic meter
Mar01	Total runoff for the first decade of March	Cubic meter
Mar02	Total runoff for the second decade of March	Cubic meter
Mar03	Total runoff for the last decade of March	Cubic meter
Apr01	Total runoff for the first decade of April	Cubic meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Apr02	Total runoff for the second decade of April	Cubic meter
Apr03	Total runoff for the last decade of April	Cubic meter
Minimum	Minimum runoff	Cubic meter

Name of Data layer: **NAM Catchment Runoff for Dry of SW**

Metadata

Data Type	Tabular
Abstract	This dataset contains monthly 10-days total runoff which is the Rainfall-Runoff model output for dry period (November-April) of South West region that has been generated for each NAM catchment for the period of 1965-66 to 1989-90.
Quality	The quality of the model information depends on the input data and calibration and verification of the model.
Completeness	The data layer has been created for the South West region (covers the area lying to the south of the Ganges and west of the Meghna estuary).
History of the dataset	The runoff generated within the catchment area is computed by NAM Simulation.
Purpose of production	Runoff has been generated to assess the contribution of rainfall in a particular catchment for each decade of the month for dry period.
Process description	The model results are processed as monthly 10-days total.

Sample of Data

Region_id	Catchment_name	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
7	CA-02	1996-97	146.25	44.86	34.61	30.66	27.18	23.94	21.09	18.69	16.47	14.51	12.86	11.53	10.35	9.17	8.08	7.12	6.31
7	CA-02	1997-98	40.61	36	31.9	28.27	25.06	22.08	19.45	17.24	15.19	13.38	11.85	10.63	9.54	8.45	7.54	99999.99	99999.99
7	CA-03	1995-96	99999.99	99999.99	99999.99	0	0	0	0	0	0	0	0	0	0	0	65.09	4.28	0
7	CA-03	1996-97	20.68	3.23	2.19	0.63	0.04	0	0	0	0	0	0	0	0	0	24.04	0	0

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Region_id	Region Id	
Catchment_name	Catchment Name	
Year	Year	
Nov01	Total runoff for the first decade of November	Cubic meter
Nov02	Total runoff for the second decade of November	Cubic meter
Nov03	Total runoff for the last decade of November	Cubic meter
Dec01	Total runoff for the first decade of December	Cubic meter
Dec02	Total runoff for the second decade of December	Cubic meter
Dec03	Total runoff for the last decade of December	Cubic meter
Jan01	Total runoff for the first decade of January	Cubic meter
Jan02	Total runoff for the second decade of January	Cubic meter
Jan03	Total runoff for the last decade of January	Cubic meter
Feb01	Total runoff for the first decade of February	Cubic meter
Feb02	Total runoff for the second decade of February	Cubic meter
Feb03	Total runoff for the last decade of February	Cubic meter
Mar01	Total runoff for the first decade of March	Cubic meter
Mar02	Total runoff for the second decade of March	Cubic meter
Mar03	Total runoff for the last decade of March	Cubic meter
Apr01	Total runoff for the first decade of April	Cubic meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Apr02	Total runoff for the second decade of April	Cubic meter
Apr03	Total runoff for the last decade of April	Cubic meter
Minimum	Minimum runoff	Cubic meter

Name of Data layer: **NAM Catchment Runoff for Wet of EH**

Metadata

Data Type	Tabular
Abstract	This dataset contains monthly 10-days total runoff which is the Rainfall-Runoff model output for wet period (May-October) of Eastern Hill region that has been generated for each NAM catchment for the period of 1965-66 to 1989-90.
Quality	The quality of the model information depends on the input data and calibration and verification of the model.
Completeness	The data layer has been created for Eastern Hill region.
History of the dataset	The runoff generated within the catchment area is computed by NAM Simulation.
Purpose of production	Runoff has been generated to assess the contribution of rainfall in a particular catchment for each decade of the month for monsoon season.
Process description	The model results are post processed as monthly 10-days total.

Sample of Data

Region_id	Catchment_name	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03	Maximum
7	CA-03	1996-97	0	123.23	10.44	0.04	34.05	22.89	67.24	2.46	55.83	164.29	26.69	24.57	16.8	51.9	67.6	40.92	10.94	50.39	527.1
7	CA-03	1997-98	0	0.04	22.25	44.27	11.36	62.95	152.37	193.17	72.39	96.22	80.59	23.63	55.75	27.64	57.44	32.31	10.97	8.38	690.1
7	CA-04	1996-97	0	66.58	7.59	0.04	5.36	2.7	26.09	1.13	14.96	34.43	9.79	13.56	4.99	7.78	16.2	30.33	4.28	12.66	282.1
7	CA-04	1997-98	0	2.66	12.77	4.31	3.92	14.51	46.25	88.07	23.52	23.21	16.47	10.15	16.86	15.91	22.55	16.56	3.94	2.99	305.1

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Region_id	Region Id	
Catchment_name	Catchment Name	
Year	Year	
Nov01	Total runoff for the first decade of November	Cubic meter
Nov02	Total runoff for the second decade of November	Cubic meter
Nov03	Total runoff for the last decade of November	Cubic meter
Dec01	Total runoff for the first decade of December	Cubic meter
Dec02	Total runoff for the second decade of December	Cubic meter
Dec03	Total runoff for the last decade of December	Cubic meter
Jan01	Total runoff for the first decade of January	Cubic meter
Jan02	Total runoff for the second decade of January	Cubic meter
Jan03	Total runoff for the last decade of January	Cubic meter
Feb01	Total runoff for the first decade of February	Cubic meter
Feb02	Total runoff for the second decade of February	Cubic meter
Feb03	Total runoff for the last decade of February	Cubic meter
Mar01	Total runoff for the first decade of March	Cubic meter
Mar02	Total runoff for the second decade of March	Cubic meter
Mar03	Total runoff for the last decade of March	Cubic meter
Apr01	Total runoff for the first decade of April	Cubic meter
Apr02	Total runoff for the second decade of April	Cubic meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Apr03	Total runoff for the last decade of April	Cubic meter
Minimum	Minimum runoff	Cubic meter

Name of Data layer: **NAM Catchment Runoff for Wet of GM**

Metadata

Data Type	Tabular
Abstract	This dataset contains monthly 10-days total runoff which is the Rainfall-Runoff model output for wet period (May-October) of General Model area that has been generated for each NAM catchment for the period of 1965-66 to 1989-90.
Quality	The quality of the model information depends on the input data and calibration and verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The runoff generated within the catchment area is computed by NAM Simulation.
Purpose of production	Runoff has been generated to assess the contribution of rainfall in a particular catchment for each decade of the month for monsoon season.
Process description	The model results are post processed as monthly 10-days total.

Sample of Data

Region_id	Catchment_name	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03	Maximum
7 CA-03		1996-97	0	123.23	10.44	0.04	34.05	22.89	67.24	2.46	55.83	164.29	26.69	24.57	16.8	51.9	67.6	40.92	10.94	50.39	527.4
7 CA-03		1997-98	0	0.04	22.25	44.27	11.36	62.95	152.37	193.17	72.39	96.22	80.59	23.63	55.75	27.64	57.44	32.31	10.97	8.38	690.1
7 CA-04		1996-97	0	66.58	7.59	0.04	5.36	2.7	26.09	1.13	14.96	34.43	9.79	13.56	4.99	7.78	16.2	30.33	4.28	12.66	282.1
7 CA-04		1997-98	0	2.66	12.77	4.31	3.92	14.51	46.25	88.07	23.52	23.21	16.47	10.15	16.86	15.91	22.55	16.56	3.94	2.99	305.1

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Region_id	Region Id	
Catchment_name	Catchment Name	
Year	Year	
Nov01	Total runoff for the first decade of November	Cubic meter
Nov02	Total runoff for the second decade of November	Cubic meter
Nov03	Total runoff for the last decade of November	Cubic meter
Dec01	Total runoff for the first decade of December	Cubic meter
Dec02	Total runoff for the second decade of December	Cubic meter
Dec03	Total runoff for the last decade of December	Cubic meter
Jan01	Total runoff for the first decade of January	Cubic meter
Jan02	Total runoff for the second decade of January	Cubic meter
Jan03	Total runoff for the last decade of January	Cubic meter
Feb01	Total runoff for the first decade of February	Cubic meter
Feb02	Total runoff for the second decade of February	Cubic meter
Feb03	Total runoff for the last decade of February	Cubic meter
Mar01	Total runoff for the first decade of March	Cubic meter
Mar02	Total runoff for the second decade of March	Cubic meter
Mar03	Total runoff for the last decade of March	Cubic meter
Apr01	Total runoff for the first decade of April	Cubic meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Apr02	Total runoff for the second decade of April	Cubic meter
Apr03	Total runoff for the last decade of April	Cubic meter
Minimum	Minimum runoff	Cubic meter

Name of Data layer: **NAM Catchment Runoff for Wet of NC**

Metadata

Data Type	Tabular
Abstract	This dataset contains monthly 10-days total runoff which is the Rainfall-Runoff model output for wet period (May-October) of General Model area that has been generated for each NAM catchment for the period of 1965-66 to 1989-90.
Quality	The quality of the model information depends on the input data and calibration and verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The runoff generated within the catchment area is computed by NAM Simulation.
Purpose of production	Runoff has been generated to assess the contribution of rainfall in a particular catchment for each decade of the month for monsoon season.
Process description	The model results are post processed as monthly 10-days total.

Sample of Data

Region_id	Catchment_name	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03	Maximum
7 CA-03		1996-97	0	123.23	10.44	0.04	34.05	22.89	67.24	2.46	55.83	164.29	26.69	24.57	16.8	51.9	67.6	40.92	10.94	50.39	527.4
7 CA-03		1997-98	0	0.04	22.25	44.27	11.36	62.95	152.37	193.17	72.39	96.22	80.59	23.63	55.75	27.64	57.44	32.31	10.97	8.38	690.1
7 CA-04		1996-97	0	66.58	7.59	0.04	5.36	2.7	26.09	1.13	14.96	34.43	9.79	13.56	4.99	7.78	16.2	30.33	4.28	12.66	282.1
7 CA-04		1997-98	0	2.66	12.77	4.31	3.92	14.51	46.25	88.07	23.52	23.21	16.47	10.15	16.86	15.91	22.55	16.56	3.94	2.99	305.1

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Region_id	Region Id	
Catchment_name	Catchment Name	
Year	Year	
Nov01	Total runoff for the first decade of November	Cubic meter
Nov02	Total runoff for the second decade of November	Cubic meter
Nov03	Total runoff for the last decade of November	Cubic meter
Dec01	Total runoff for the first decade of December	Cubic meter
Dec02	Total runoff for the second decade of December	Cubic meter
Dec03	Total runoff for the last decade of December	Cubic meter
Jan01	Total runoff for the first decade of January	Cubic meter
Jan02	Total runoff for the second decade of January	Cubic meter
Jan03	Total runoff for the last decade of January	Cubic meter
Feb01	Total runoff for the first decade of February	Cubic meter
Feb02	Total runoff for the second decade of February	Cubic meter
Feb03	Total runoff for the last decade of February	Cubic meter
Mar01	Total runoff for the first decade of March	Cubic meter
Mar02	Total runoff for the second decade of March	Cubic meter
Mar03	Total runoff for the last decade of March	Cubic meter
Apr01	Total runoff for the first decade of April	Cubic meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Apr02	Total runoff for the second decade of April	Cubic meter
Apr03	Total runoff for the last decade of April	Cubic meter
Minimum	Minimum runoff	Cubic meter

Name of Data layer: **NAM Catchment Runoff for Wet of NE**

Metadata

Data Type	Tabular
Abstract	This dataset contains monthly 10-days total runoff which is the Rainfall-Runoff model output for wet period (May-October) of General Model area that has been generated for each NAM catchment for the period of 1965-66 to 1989-90.
Quality	The quality of the model information depends on the input data and calibration and verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The runoff generated within the catchment area is computed by NAM Simulation.
Purpose of production	Runoff has been generated to assess the contribution of rainfall in a particular catchment for each decade of the month for monsoon season.
Process description	The model results are post processed as monthly 10-days total.

Sample of Data

Region_id	Catchment_name	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03	Maximum
7 CA-03		1996-97	0	123.23	10.44	0.04	34.05	22.89	67.24	2.46	55.83	164.29	26.69	24.57	16.8	51.9	67.6	40.92	10.94	50.39	527.1
7 CA-03		1997-98	0	0.04	22.25	44.27	11.36	62.95	152.37	193.17	72.39	96.22	80.59	23.63	55.75	27.64	57.44	32.31	10.97	8.38	690.1
7 CA-04		1996-97	0	66.58	7.59	0.04	5.36	2.7	26.09	1.13	14.96	34.43	9.79	13.56	4.99	7.78	16.2	30.33	4.28	12.66	282.1
7 CA-04		1997-98	0	2.66	12.77	4.31	3.92	14.51	46.25	88.07	23.52	23.21	16.47	10.15	16.86	15.91	22.55	16.56	3.94	2.99	305.1

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Region_id	Region Id	
Catchment_name	Catchment Name	
Year	Year	
Nov01	Total runoff for the first decade of November	Cubic meter
Nov02	Total runoff for the second decade of November	Cubic meter
Nov03	Total runoff for the last decade of November	Cubic meter
Dec01	Total runoff for the first decade of December	Cubic meter
Dec02	Total runoff for the second decade of December	Cubic meter
Dec03	Total runoff for the last decade of December	Cubic meter
Jan01	Total runoff for the first decade of January	Cubic meter
Jan02	Total runoff for the second decade of January	Cubic meter
Jan03	Total runoff for the last decade of January	Cubic meter
Feb01	Total runoff for the first decade of February	Cubic meter
Feb02	Total runoff for the second decade of February	Cubic meter
Feb03	Total runoff for the last decade of February	Cubic meter
Mar01	Total runoff for the first decade of March	Cubic meter
Mar02	Total runoff for the second decade of March	Cubic meter
Mar03	Total runoff for the last decade of March	Cubic meter
Apr01	Total runoff for the first decade of April	Cubic meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Apr02	Total runoff for the second decade of April	Cubic meter
Apr03	Total runoff for the last decade of April	Cubic meter
Minimum	Minimum runoff	Cubic meter

Name of Data layer: **NAM Catchment Runoff for Wet of NW**

Metadata

Data Type	Tabular
Abstract	This dataset contains monthly 10-days total runoff which is the Rainfall-Runoff model output for wet period (May-October) of General Model area that has been generated for each NAM catchment for the period of 1965-66 to 1989-90.
Quality	The quality of the model information depends on the input data and calibration and verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The runoff generated within the catchment area is computed by NAM Simulation.
Purpose of production	Runoff has been generated to assess the contribution of rainfall in a particular catchment for each decade of the month for monsoon season.
Process description	The model results are post processed as monthly 10-days total.

Sample of Data

Region_id	Catchment_name	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03	Maximum
7 CA-03		1996-97	0	123.23	10.44	0.04	34.05	22.89	67.24	2.46	55.83	164.29	26.69	24.57	16.8	51.9	67.6	40.92	10.94	50.39	527.4
7 CA-03		1997-98	0	0.04	22.25	44.27	11.36	62.95	152.37	193.17	72.39	96.22	80.59	23.63	55.75	27.64	57.44	32.31	10.97	8.38	690.1
7 CA-04		1996-97	0	66.58	7.59	0.04	5.36	2.7	26.09	1.13	14.96	34.43	9.79	13.56	4.99	7.78	16.2	30.33	4.28	12.66	282.1
7 CA-04		1997-98	0	2.66	12.77	4.31	3.92	14.51	46.25	88.07	23.52	23.21	16.47	10.15	16.86	15.91	22.55	16.56	3.94	2.99	305.1

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Region_id	Region Id	
Catchment_name	Catchment Name	
Year	Year	
Nov01	Total runoff for the first decade of November	Cubic meter
Nov02	Total runoff for the second decade of November	Cubic meter
Nov03	Total runoff for the last decade of November	Cubic meter
Dec01	Total runoff for the first decade of December	Cubic meter
Dec02	Total runoff for the second decade of December	Cubic meter
Dec03	Total runoff for the last decade of December	Cubic meter
Jan01	Total runoff for the first decade of January	Cubic meter
Jan02	Total runoff for the second decade of January	Cubic meter
Jan03	Total runoff for the last decade of January	Cubic meter
Feb01	Total runoff for the first decade of February	Cubic meter
Feb02	Total runoff for the second decade of February	Cubic meter
Feb03	Total runoff for the last decade of February	Cubic meter
Mar01	Total runoff for the first decade of March	Cubic meter
Mar02	Total runoff for the second decade of March	Cubic meter
Mar03	Total runoff for the last decade of March	Cubic meter
Apr01	Total runoff for the first decade of April	Cubic meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Apr02	Total runoff for the second decade of April	Cubic meter
Apr03	Total runoff for the last decade of April	Cubic meter
Minimum	Minimum runoff	Cubic meter

Name of Data layer: **NAM Catchment Runoff for Wet of SE**

Metadata

Data Type	Tabular
Abstract	This dataset contains monthly 10-days total runoff which is the Rainfall-Runoff model output for wet period (May-October) of General Model area that has been generated for each NAM catchment for the period of 1965-66 to 1989-90.
Quality	The quality of the model information depends on the input data and calibration and verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The runoff generated within the catchment area is computed by NAM Simulation.
Purpose of production	Runoff has been generated to assess the contribution of rainfall in a particular catchment for each decade of the month for monsoon season.
Process description	The model results are post processed as monthly 10-days total.

Sample of Data

Region_id	Catchment_name	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03	Maximum
7	CA-03	1996-97	0	123.23	10.44	0.04	34.05	22.89	67.24	2.46	55.83	164.29	26.69	24.57	16.8	51.9	67.6	40.92	10.94	50.39	527.1
7	CA-03	1997-98	0	0.04	22.25	44.27	11.36	62.95	152.37	193.17	72.39	96.22	80.59	23.63	55.75	27.64	57.44	32.31	10.97	8.38	690.1
7	CA-04	1996-97	0	66.58	7.59	0.04	5.36	2.7	26.09	1.13	14.96	34.43	9.79	13.56	4.99	7.78	16.2	30.33	4.28	12.66	282.1
7	CA-04	1997-98	0	2.66	12.77	4.31	3.92	14.51	46.25	88.07	23.52	23.21	16.47	10.15	16.86	15.91	22.55	16.56	3.94	2.99	305.1

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Region_id	Region Id	
Catchment_name	Catchment Name	
Year	Year	
Nov01	Total runoff for the first decade of November	Cubic meter
Nov02	Total runoff for the second decade of November	Cubic meter
Nov03	Total runoff for the last decade of November	Cubic meter
Dec01	Total runoff for the first decade of December	Cubic meter
Dec02	Total runoff for the second decade of December	Cubic meter
Dec03	Total runoff for the last decade of December	Cubic meter
Jan01	Total runoff for the first decade of January	Cubic meter
Jan02	Total runoff for the second decade of January	Cubic meter
Jan03	Total runoff for the last decade of January	Cubic meter
Feb01	Total runoff for the first decade of February	Cubic meter
Feb02	Total runoff for the second decade of February	Cubic meter
Feb03	Total runoff for the last decade of February	Cubic meter
Mar01	Total runoff for the first decade of March	Cubic meter
Mar02	Total runoff for the second decade of March	Cubic meter
Mar03	Total runoff for the last decade of March	Cubic meter
Apr01	Total runoff for the first decade of April	Cubic meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Apr02	Total runoff for the second decade of April	Cubic meter
Apr03	Total runoff for the last decade of April	Cubic meter
Minimum	Minimum runoff	Cubic meter

Name of Data layer: **NAM Catchment Runoff for Wet of SW**

Metadata

Data Type	Tabular
Abstract	This dataset contains monthly 10-days total runoff which is the Rainfall-Runoff model output for wet period (May-October) of General Model area that has been generated for each NAM catchment for the period of 1965-66 to 1989-90.
Quality	The quality of the model information depends on the input data and calibration and verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The runoff generated within the catchment area is computed by NAM Simulation.
Purpose of production	Runoff has been generated to assess the contribution of rainfall in a particular catchment for each decade of the month for monsoon season.
Process description	The model results are post processed as monthly 10-days total.

Sample of Data

Region_id	Catchment_name	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03	Maximum
7	CA-03	1996-97	0	123.23	10.44	0.04	34.05	22.89	67.24	2.46	55.83	164.29	26.69	24.57	16.8	51.9	67.6	40.92	10.94	50.39	527.4
7	CA-03	1997-98	0	0.04	22.25	44.27	11.36	62.95	152.37	193.17	72.39	96.22	80.59	23.63	55.75	27.64	57.44	32.31	10.97	8.38	690.1
7	CA-04	1996-97	0	66.58	7.59	0.04	5.36	2.7	26.09	1.13	14.96	34.43	9.79	13.56	4.99	7.78	16.2	30.33	4.28	12.66	282.1
7	CA-04	1997-98	0	2.66	12.77	4.31	3.92	14.51	46.25	88.07	23.52	23.21	16.47	10.15	16.86	15.91	22.55	16.56	3.94	2.99	305.1

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Region_id	Region Id	
Catchment_name	Catchment Name	
Year	Year	
Nov01	Total runoff for the first decade of November	Cubic meter
Nov02	Total runoff for the second decade of November	Cubic meter
Nov03	Total runoff for the last decade of November	Cubic meter
Dec01	Total runoff for the first decade of December	Cubic meter
Dec02	Total runoff for the second decade of December	Cubic meter
Dec03	Total runoff for the last decade of December	Cubic meter
Jan01	Total runoff for the first decade of January	Cubic meter
Jan02	Total runoff for the second decade of January	Cubic meter
Jan03	Total runoff for the last decade of January	Cubic meter
Feb01	Total runoff for the first decade of February	Cubic meter
Feb02	Total runoff for the second decade of February	Cubic meter
Feb03	Total runoff for the last decade of February	Cubic meter
Mar01	Total runoff for the first decade of March	Cubic meter
Mar02	Total runoff for the second decade of March	Cubic meter
Mar03	Total runoff for the last decade of March	Cubic meter
Apr01	Total runoff for the first decade of April	Cubic meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Apr02	Total runoff for the second decade of April	Cubic meter
Apr03	Total runoff for the last decade of April	Cubic meter
Minimum	Minimum runoff	Cubic meter

Name of Data layer: **Rainfall (Monthly) of BMD**

Metadata

Data Type	Tabular
Abstract	An attribute data layer containing the monthly rainfall data calculated from daily values collected by Bangladesh Meteorological Department (BMD).
Quality	The data layer contains monthly rainfall data from 1960 to 1999 for 31 stations of BMD. But this time range of data availability is not applicable to all stations. Besides there are missing of data in some stations within the specified range of data availability.
Completeness	The data layer covers information of 31 stations of BMD.
History of the dataset	This data layer was generated by NWMP (National Water Management Plan) from the daily rainfall data of BMD.
Purpose of production	Monthly total rainfall is essential for hydrological and environmental trend analysis. This data layer has been incorporated to NWRD to provide monthly information readily.
Process description	NWRD has collected the daily rainfall data from BMD, checked and edited up to a certain possible extent (obvious errors). Afterwards NWMP has prepared the analysed result that has been incorporated into NWRD.

Sample of Data

Stationid	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yeartotal	Dry	Wet
10120	1960	0	0	36	0	188	219	573	146	370	34	0	0	1566	224	1342
10120	1961	0	4	0	4	68	404	149	192	133	105	0	4	1063	80	983
10120	1962	5	2	10	27	64	193	179	556	347	52	0	0	1435	108	1327
10120	1963	0	0	86	68	104	246	380	287	325	185	22	0	1703	280	1423
10120	1964	0	0	5	109	231	363	555	217	316	219	0	0	2015	345	1670
10120	1965	0	0	69	0	81	1054	446	718	334	15	0	0	2717	150	2567
10120	1966	19	0	3	20	194	57	602	264	266	30	26	26	1507	288	1219
10120	1967	0	0	151	62	119	226	328	172	407	105	0	0	1570	332	1238

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stationid	Station ID	
Year	Year	
Jan	Total rainfall in January	
Feb	Total rainfall in February	
Mar	Total rainfall in March	
Apr	Total rainfall in April	
May	Total rainfall in May	
Jun	Total rainfall in June	
Jul	Total rainfall in July	
Aug	Total rainfall in August	
Sep	Total rainfall in September	
Oct	Total rainfall in October	
Nov	Total rainfall in November	
Dec	Total rainfall in December	
Yeartotal	Yearly total rainfall	
Dry	Dry (November to May) season rainfall	
Wet	Wet (June to October) season rainfall	

Name of Data layer: **Rainfall (Monthly) of BWDB**

Metadata

Data Type	Tabular
Abstract	An attribute data layer containing the monthly rainfall data calculated from daily values collected by Bangladesh Water Development Board (BWDB).
Quality	The data layer contains monthly rainfall data from 1957 to 1997 of 296 stations of BWDB. But this time range of data availability is not applicable to all stations. Besides there are missing of data in some stations within the specified range of data availability.
Completeness	The data layer covers information of 296 stations.
History of the dataset	This data layer was generated by NWMP (National Water Management Plan) from the daily rainfall data of BWDB.
Purpose of production	Monthly total rainfall is essential for hydrological and environmental trend analysis. This data layer has been incorporated to NWRD to provide monthly information readily.
Process description	NWRD has collected the daily rainfall data from BWDB, checked and edited up to a certain possible extent (obvious errors). Afterwards NWMP has prepared the analysed result that has been incorporated into NWRD.

Sample of Data

Stationid	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totalyear	Dry	Wet
1	1962	-	-	-	81.3	197.8	383	293.8	140.8	62.2	92.5	0	0	1251.4	279.1	972.3
1	1963	0	0	8.3	25.1	109.7	306.6	175.8	245.8	164.8	97.5	27	0	1160.6	170.1	990.5
1	1964	0.3	21.1	5.8	105	215.8	474.5	367.5	257.1	116.9	387.4	0	0	1951.4	348	1603.4
1	1965	0	2	36.3	75.3	85.9	423.7	312.9	385.6	216.5	18.3	12.7	2.3	1571.5	214.5	1357
1	1966	12.1	0	1.5	44.3	139.9	395.1	204.1	286.2	143.7	134	18	12.5	1391.4	228.3	1163.1
1	1967	20.3	2	94.7	155	117.6	375.3	370.8	499.4	486.7	226.1	0	1.8	2349.7	391.4	1958.3
1	1968	0	0	23.6	20.6	127.8	268.5	334.3	317.8	82	103.4	23.1	0	1301.1	195.1	1106
1	1975	3.3	1.3	18.7	76.7	184.8	77	599.2	164.8	125.8	158.3	42.7	0	1452.6	327.5	1125.1

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stationid	Station ID	
Year	Year	
Jan	Total rainfall in January	
Feb	Total rainfall in February	
Mar	Total rainfall in March	
Apr	Total rainfall in April	
May	Total rainfall in May	
Jun	Total rainfall in June	
Jul	Total rainfall in July	
Aug	Total rainfall in August	
Sep	Total rainfall in September	
Oct	Total rainfall in October	
Nov	Total rainfall in November	
Dec	Total rainfall in December	

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Yeartotal	Yearly total rainfall	
Dry	Dry (November to May) season rainfall	
Wet	Wet (June to October) season rainfall	

Name of Data layer: **Rainfall of BMD**

Metadata

Data Type	Tabular
Abstract	A time series data layer containing the daily rainfall data collected by Bangladesh Meteorological Department (BMD).
Quality	It contains data from 1948 to 2008 of 34 rainfall stations of BMD. But this time range of data availability is not applicable to all stations. Besides there are missing of data in some stations within the specified range of data availability.
Completeness	This data layer covers 34 stations of BMD.
History of the dataset	BMD has been collecting and storing the daily data from different rainfall stations throughout the country for a long period of time and provided the dataset to NWRD.
Purpose of production	Daily rainfall data is an essential parameter in hydrology and environment related studies. Therefore, to support this type of work this data layer has been included in NWRD.
Process description	NWRD has collected this data from BMD and organized them in a database format to prepare it as a NWRD data layer.

Sample of Data

Stationid	Datetime	Tsvalue_old	Tsvalue_updated
10120	01/01/1948	0	0
10120	02/01/1948	0	0
10120	03/01/1948	0	0
10120	04/01/1948	0	0
10120	05/01/1948	0	0
10120	06/01/1948	0	0
10120	07/01/1948	0	0
10120	08/01/1948	0	0

Bundle Information (Data Field Description and Unit)

FIELD	FIELD_NAME	UNIT
Stationid	ID of Each Station	
Datetime	Data Capturing Date	
Tsvalue_old	Original Value of Daily Rainfall collected from Source	MilliMeter (mm)
Tsvalue_updated	Updated Value of Daily Rainfall (All negative values,Records with abnormal high value are deleted)	MilliMeter (mm)

Name of Data layer: **Rainfall of BWDB**

Metadata

Data Type	Tabular
Abstract	A time series data layer containing the daily rainfall data collected by Bangladesh Water Development Board (BWDB).
Quality	The data layer contains data from April 1957 to December 2008 of 312 rainfall stations of BWDB. But this time range of data availability is not applicable to all stations. Besides there are missing of data in some stations within the specified range of data availability.
Completeness	This data layer covers 312 out of 316 rainfall stations of BWDB.
History of the dataset	Bangladesh Water Development Board has been collecting and storing the daily data from different rainfall stations throughout the country for a long period of time and provided the dataset to NWRD.
Purpose of production	Daily rainfall data is an essential parameter in hydrology and environment related studies. Therefore, to support this type of work this data layer has been included in NWRD.
Process description	NWRD has collected this data from BWDB and organized them in an ordered form to prepare

Sample of Data

Stationid	Datetime	Tsvalue_old	Tsvalue_updated
1	01/04/1962	0	0
1	02/04/1962	0	0
1	03/04/1962	0	0
1	04/04/1962	0	0
1	05/04/1962	0	0
1	06/04/1962	0	0
1	07/04/1962	0	0
1	08/04/1962	0	0

Bundle Information (Data Field Description and Unit)

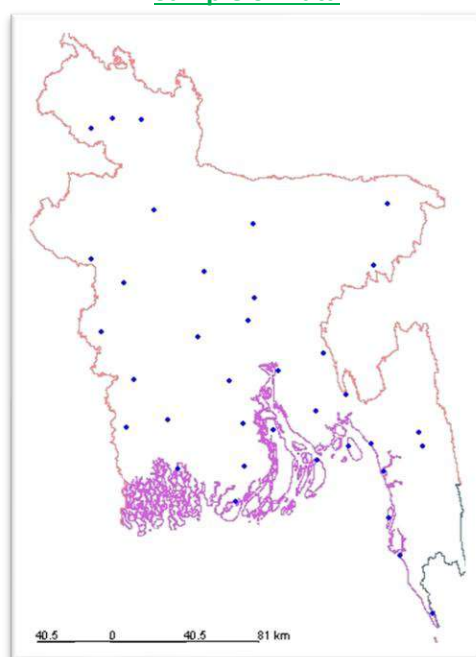
FIELD	FIELD_NAME	UNIT
Stationid	ID of Each Station	
Datetime	Data Capturing Date	
Tsvalue_old	Original Value of Daily Rainfall collected from Source	Millimeter (mm)
Tsvalue_updated	Updated Value of Daily Rainfall (All negative values, Records with abnormal high value are deleted)	Millimeter (mm)

Name of Data layer: **Rainfall Stations of BMD**

Metadata

Data Type	Spatial
Abstract	This data layer shows spatially, the rainfall i.e. meteorological station locations of Bangladesh Meteorological Department (BMD).
Quality	Locations of the stations have been checked with the associated attribute database. It is recommended that the data layer should be used in 1:1000000 for the whole country and for region level the scale should be smaller than this.
Completeness	The data layer covers all the 31 stations of BMD.
History of the dataset	Bangladesh Meteorological Department collected this data and has provided this data to NWRD in digital form.
Purpose of production	While dealing with the rainfall data of BMD this spatial information of measuring stations is a must to link the quantitative data with its location. This is the purpose of creating this data layer.
Process description	NWRD has collected this data in digital format from BMD. This data layer file was loaded by NWRD into 'Microsoft Excel' to convert it into a 'Text File' format and point coverage was generated using the station IDs and coordinate values. Then it was edited using the national coverage (Thana Administrative Units) and BBS Geocode list to correct the station locations.

Sample of Data



Attribute Table

Id	Stationid	Stationname	Mcode	Grndelev	Instheight	Latitude	Longitude	Btm-long	Btm-lat	Insdate	U2	Remarks
1	11704	BARISAL	950	2.54	12.8	22.7	90.37	534184.2	515676.5	01-APR-63	0.72	Town
2	11706	BHOLA	951	4.74	8.5	22.68	90.65	566759.4	508368.25	13-JUL-70	0.77	Town
3	10408	BOGRA	883	18.44	14.6	24.85	89.36	436054.6	748258.56	04-JAN-43	0.71	Town
4	11316	CHANDPUR	941	6.04	11.9	23.22	90.66	571586.1	573037.43	13-MAR-64	0.73	Town
6	11313	COMILLA	933	6.54	8.5	23.46	91.18	620834.4	591736.18	12-MAR-72	0.77	Airport
8	11111	DHAKA	923	9.14	10	23.76	90.38	539020.2	628265.68	01-JAN-58	0.75	Town, To be confirmed for InsHeight

Bundle Information (Data Field Description and Unit)

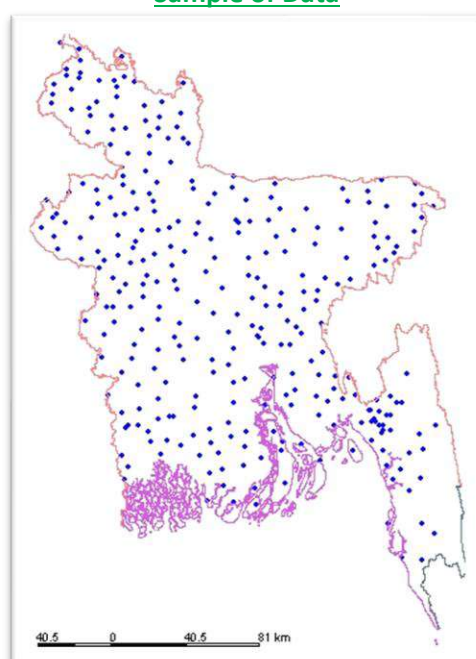
FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stationid	Station ID	
Stationname	Station Name	
Mcode	International station code - WMO (World Meteorological Organization)	
Grndelev	Ground Elevation	meter PWD
Instheight	Height of Instrument above ground surface	meter
Latitude	Latitude in degree decimal	In Degree Decimal
Longitude	Longitude in degree decimal	In Degree Decimal
Btmlong	Longitude in BTM (Bangladesh Transverse Mercator) Coordinate system	meter
Btmlat	Latitude in BTM (Bangladesh Transverse Mercator) Coordinate system	meter
Insdate	Date of Instalation	
U2	Factor for calculating wind speed at 2 meter height (FAO 56)	m/sec
Id	Serial ID	
Remarks	Location of the station and other information	

Name of Data layer: **Rainfall Stations of BWDB**

Metadata

Data Type	Spatial
Abstract	This data layer contains the information of location of the meteorological stations (including rainfall measuring stations) that are established and being maintained by Bangladesh Water Development Board (BWDB).
Quality	As the source map was in 1:250,000 scale this data layer is recommended to use in this scale or smaller than this scale.
Completeness	This data layer covers all the 304 rainfall stations of BWDB.
History of the dataset	The source of this data layer is a published map titled 'Hydrometric Station Map' prepared by BWDB and also a digital file containing the coordinate values of the stations.
Purpose of production	The dataset has been incorporated to NWRD for presenting the spatial distribution of the rainfall stations as well as to link the time series values of daily rainfall with the stations and further to use it as the base data layer in different rainfall rel
Process description	NWRD has generated the point coverage using latitude, longitude and station number collected in digital format from BWDB and also captured the stations from the cited hard copy map. NWRD has compared the locations generated from both of the sources. Station name and station identification number (Station ID) have also been incorporated to the point data by NWRD.

Sample of Data



Attribute Table

Stnid	Stnname	Ddlong	Ddlat	Btmlong	Btmlat	Statstn	Insttype	Statinst	Subdivid	Instaldate	Discondate
1	Atghoria	89.25	24.12	424349.78	668418.81	R	M	M	PB	11.9.61	-
10	Daulatpur	89.83	23.96	483508.93	649649.56	R	M	M	DA	14.11.61	-
101	Bhairab Bazar	90.98	24.06	599682	661155.31	R	M	M	BB	11.9.61	-
102	Bholaganj	91.82	25.14	684345.12	782357.25	R	M	M	SY	09.9.61	-
103	Brahmanbaria	91.1	23.96	612125.43	650391.5	RE	M	M	BB	05.2.61	-
104	Chandbagh	91.88	24.58	690787.75	719964.62	R	M	M	SY	04.3.61	-

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stnid	Station ID	
Stnname	Station Name	
Ddlong	Longitude In Degree Decimal	In Degree Decimal
Ddlat	Latitude In Degree Decimal	In Degree Decimal
Btmlong	Longitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meters
Btmlat	Latitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meters

Name of Data layer: **Surface Water Model Output of Rainfall & ET**

Metadata

Data Type	Tabular
Abstract	The data layer contains MPO catchment and planning area wise monthly rainfall and evapotranspiration. These data are the output of Surface Water Model of Master Plan Organization (MPO).
Quality	The quality of the model information depends on the input data and calibration and verification of the model
Completeness	The data layer covers all the MPO identified planning areas.
History of the dataset	MPO collected rainfall and evapotranspiration data from BWDB and BMD, converted to digital format and used as the input parameters of Surface Water Model.
Purpose of production	The data layer was built with a view to calculate the catchment wise water balance parameters, evapotranspiration and rainfall for hydrological planning purpose.
Process description	NWRD has organized and stored this data layer in an ordered form.

Sample of Data

Pa_ca	Pa	Ca	Fn	Nm	Parameter	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
P1C14	1	14	5	M	Rainfall-m	0.13	0.33	0.56	0.62	0.48	0.44	0.15	0.01	0.01	0.01	0.01	0.03	2.73
P1C14	1	14	7	M	ET-m	0.12	0.11	0.11	0.12	0.16	0.11	0.1	0.06	0.04	0.05	0.06	0.08	1.04
P2C13	2	13	5	M	Rainfall-m	0.11	0.32	0.49	0.58	0.38	0.37	0.14	0.01	0.01	0.01	0.01	0.03	2.42
P2C13	2	13	7	M	ET-m	0.11	0.1	0.1	0.11	0.14	0.1	0.09	0.06	0.03	0.05	0.05	0.07	0.95
P3C12	3	12	5	M	Rainfall-m	0.1	0.29	0.47	0.62	0.42	0.39	0.14	0.01	0.01	0.01	0.01	0.03	2.46
P3C12	3	12	7	M	ET-m	0.12	0.11	0.11	0.1	0.13	0.1	0.1	0.05	0.03	0.05	0.05	0.08	0.93
P4C1	4	1	5	M	Rainfall-m	0.09	0.27	0.42	0.61	0.43	0.36	0.13	0.01	0.01	0.01	0.01	0.03	2.35
P4C1	4	1	7	M	ET-m	0.11	0.1	0.09	0.11	0.14	0.1	0.09	0.07	0.03	0.05	0.05	0.08	0.93
P4C5	4	5	5	M	Rainfall-m	0.1	0.28	0.47	0.63	0.44	0.39	0.14	0.01	0.01	0.01	0.01	0.03	2.48
P4C5	4	5	7	M	ET-m	0.11	0.1	0.11	0.11	0.13	0.1	0.09	0.06	0.02	0.05	0.05	0.07	0.92

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Pa	Planning Area No	
Ca	Catchment No	
Fn	Parameter Code	
Nm	Modeled (M), Nonmodeled (N)	
Parameter	Delstorage - Change in flow storage, CI - Cropping Intensity, CWR - Crop water requirement, Irr - Irrigation, SWAbstr - Surface water abstraction, GW Abstr - Ground water Abstraction	
Apr	Value of the parameter for the month of April	Cubic meter/sec
May	Value of the parameter for the month of May	Cubic meter/sec
Jun	Value of the parameter for the month of June	Cubic meter/sec
Jul	Value of the parameter for the month of July	Cubic meter/sec
Aug	Value of the parameter for the month of August	Cubic meter/sec
Sep	Value of the parameter for the month of September	Cubic meter/sec
Oct	Value of the parameter for the month of October	Cubic meter/sec
Nov	Value of the parameter for the month of November	Cubic meter/sec

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Dec	Value of the parameter for the month of December	Cubic meter/sec
Jan	Value of the parameter for the month of January	Cubic meter/sec
Feb	Value of the parameter for the month of February	Cubic meter/sec
Mar	Value of the parameter for the month of March	Cubic meter/sec
Mean	Monthly average value of the parameter given in MPO report	Cubic meter/sec
Cmean	Mean Calculated of the parameter	Cubic meter/sec
Diff	Difference between mean and Calculated Mean	Cubic meter/sec

Name of Data layer: **Sunshine Hours, BMD**

Metadata

Data Type	Tabular
Abstract	The data layer contains daily sunshine hours collected from different meteorological stations of Bangladesh Meteorological Department (BMD).
Quality	The data layer contains daily sunshine-hours from 1961 to 2008. There are some missing of data in some stations. The dataset is checked for obvious error.
Completeness	The data layer covers 34 stations of BMD and contains data of 48 years.
History of the dataset	BMD collected the data from different meteorological stations for a long period of time.
Purpose of production	Daily sunshine-hour is an important parameter in hydro-meteorological and climatic analysis. This data layer was accumulated to provide this information as time series.
Process description	NWRD has collected the data from BMD and after editing the obvious errors it has stored in an organized form.

Sample of Data

Stationid	Datetime	Tsvalue_old	Tsvalue_updated
10120	01/01/1989	-	-
10120	02/01/1989	-	-
10120	03/01/1989	-	-
10120	04/01/1989	-	-
10120	05/01/1989	-	-
10120	06/01/1989	-	-
10120	07/01/1989	-	-
10120	08/01/1989	-	-
10120	09/01/1989	-	-
10120	10/01/1989	-	-

Bundle Information (Data Field Description and Unit)

FIELD	FIELD_NAME	UNIT
Stationid	Id of Each Station	
Datetime	Data Capturing Date	
Tsvalue_old	Original Time Series Value Collected from Source	Hour
Tsvalue_updated	Time Series Values Updated (Values > 14.2 are deleted)	Hour

Name of Data layer: **Temperature Data of BMD**

Metadata

Data Type	Tabular
Abstract	The data layer contains the daily maximum and minimum Temperature at 34 meteorological stations that are maintained by of BMD (Bangladesh Meteorological Department).
Quality	The data layer contains daily maximum and minimum temperature data from the year of 1948 to 2008 for 34 stations. There are some missing of data in some stations. Quality of this data layer totally depends on the data collection process of the source organization.
Completeness	The data layer covers about 60 years information and all the meteorological stations of Bangladesh.
History of the dataset	BMD has collected this data for a long period of time in 34 meteorological stations, all over the country.
Purpose of production	Daily maximum and minimum Temperature is an essential parameter in hydrological and hydro-meteorological studies. This data layer has been generated to present the time series records collected by BMD that will certainly facilitate different types of studies.
Process description	After collecting this data from BMD, NWRD has checked and edited the obvious errors and stored in an ordered form.

Sample of Data

Stationid	Datetime	Maxtemp_old	Maxtemp_updated	Mintemp_old	Mintemp_updated
10120	01/01/1948	26.6	26.6	10.2	10.2
10120	02/01/1948	26.6	26.6	14.8	14.8
10120	03/01/1948	26.6	26.6	13.1	13.1
10120	04/01/1948	26.6	26.6	14.8	14.8
10120	05/01/1948	26.6	26.6	14.8	14.8
10120	06/01/1948	27	27	14.8	14.8
10120	07/01/1948	26.6	26.6	11.7	11.7
10120	08/01/1948	26.6	26.6	11.7	11.7

Bundle Information (Data Field Description and Unit)

FIELD	FIELD_NAME	UNIT
Stationid	ID of Each Station	
Datetime	Data Capturing Date	
Maxtemp_old	Original Value of Maximum Temperature Collected from Source	Degree Centigrade (°C)
Maxtemp_updated	Updated Value of Maximum Temperature(All 0 Values,Values Greater than 44.2°C,All Negative Values,Values Less than 1,and Values with Other Obvious Error are Deleted)	Degree Centigrade (°C)
Mintemp_old	Original Value of Minimum Temperature Collected from Source	Degree Centigrade (°C)
Mintemp_updated	Updated Value of Minimum Temperature(All 0 Values,Values Greater than 44.2°C,All Negative Values,Values Less than 1 and Values with Other Obvious Error are Deleted)	Degree Centigrade (°C)

Name of Data layer: **Wind Speed of BMD**

Metadata

Data Type	Tabular
Abstract	BMD collects wind speed and directional data eight times in a day for a number of stations.
Quality	The data layer contains daily data of a number of stations all over the country from 1980 to 2008. There are some missing of data for some period in some stations. The data has been checked for obvious error and deleted from the database as missing value. Null value and calm conditions are not stored in the database.
Completeness	The data layer contains records for a period of 39 years and covers all the stations of BMD.
History of the dataset	BMD collected this data from different meteorological stations throughout the country for a long period of time.
Purpose of production	Daily prevailing wind speed with direction is an important parameter in many hydrological and hydro-meteorological analysis. Planners need to know the wind speed with directions for design and implement many water resources and related projects.
Process description	NWRD has collected this data layer from BMD and organized them in an ordered form.

Sample of Data

Stationid	Direction	Datetime	Tsvalue_old	Tsvalue_updated
10120	1	31/03/1981 03:00:00	222.24	222.24
10120	1	28/04/1981	266.69	266.69
10120	1	04/09/1988 09:00:00	133.34	133.34
10120	1	18/02/1989 21:00:00	222.24	222.24
10120	1	19/02/1989	444.48	444.48
10120	1	07/04/1989 21:00:00	44.45	44.45
10120	1	08/04/1989	88.9	88.9
10120	2	21/03/1991 21:00:00	88.9	88.9
10120	2	06/02/1992 18:00:00	44.45	44.45
10120	1	19/08/1993 21:00:00	88.9	88.9

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Stationid	Id of each Station	
Direction	Wind Direction in Degree	Degree
Datetime	Data Capturing Date	
Tsvalue_old	Original Time Series Value Collected from Source	Km/day
Tsvalue_updated	Time Series Values Updated	Km/day

Socio-Economic

Name of Data layer: **Agricultural Household Statistics 1996**

Metadata

Data Type	Tabular
Abstract	A 64-district wise statistics, depicting the number of different type of farms and non-farm holdings possessed by different households, classified according to some specific belongings for the year 1996.
Quality	Quality of this data layer depends on the data collection and compilation procedure adopted by BBS.
Completeness	The data layer covers 64 districts of Bangladesh.
History of the dataset	Bangladesh Bureau of Statistics (BBS) generated and compiled this data.
Purpose of production	To provide detail information of household numbers according to the farmland ownership with respect to 64 district.
Process description	NWRD has converted the dataset to digital format.

Sample of Data

Distcode	Itemcode	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
1	1	243470	371	37434	18089	62227	31752	22037	27316	143332	37524	6720	187576
1	2	7983	32	1940	917	2841	890	519	382	4632	398	64	5094
1	3	322788	0	0	484	10959	18523	23214	47885	100581	145764	75959	322304
1	4	91.37	0	0	33.94	71.5	84.48	88.94	91.52	86.95	94.16	95.74	92.14
1	5	20930	0	0	2	385	1487	2086	4151	8109	9677	3142	20928
1	6	6.48	0	0	0.41	3.51	8.03	8.99	8.67	8.06	6.64	4.14	6.49
1	7	-	-	-	-	-	-	-	-	-	-	-	-
1	8	366	0	16	5	32	32	27	74	165	122	58	345

Bundle Information (Data Field Description and Unit)

FIELD	FIELD_NAME
Distcode/divcode	District Code/Division Code
Itemcode	Item Code
C1	All Holdings
C2	NON-FARM HOUSEHOLDS With no operated area G2
C3	NON-FARM HOUSEHOLDS With no cultivated area
C4	NON-FARM HOUSEHOLDS With 01-04 cultivated area
C5	FARM HOLDINGS Small 0.05-0.49 acre
C6	FARM HOLDINGS Small 0.50-0.99 acre
C7	FARM HOLDINGS Small 1.00-1.49 acre
C8	FARM HOLDINGS Small 1.50-2.49 acre
C9	FARM HOLDINGS Small Total
C10	FARM HOLDINGS Medium 2.50-7.49 acre
C11	FARM HOLDINGS Large 7.50+ acre
C12	FARM HOLDINGS Total farm holdings

ITEMCODE	ITEMNAME
1	Male headed holdings
2	Female headed holdings
3	Net cultivated area
4	% of operated area
5	Net irrigated area
6	% of cultivated area
7	HOLDING REPORTING OWNERSHIP & NUMBER OF AGRICULTURAL EQUIPMENT
8	Holding reporting Deep-Tube Well
9	Holding reporting Low Lift Pump
10	Number of Low Lift Pumps
11	Holding reporting Power Pumps
12	Number of Power Pumps
13	Holding reporting Power Tillers
14	Number of Power Tillers
15	HOLDING REPORTING OWNERSHIP & NUMBER OF RURAL TRANSPORT
16	Holding reporting boat
17	Number of boats

Name of Data layer: **Hard Core & Basic Poverty (64 Districts)**

Metadata

Data Type	Tabular
Abstract	The data layer presents 64-district wise calorie consumption rate per household.
Quality	This data layer fully complies with unpublished report of BBS.
Completeness	The data layer covers 64 districts according to census 1991.
History of the dataset	Bangladesh Bureau of Statistics collected the data. Options for Ganges Dependent Area (OGDA) collected it from BBS and transferred it to NWRD.
Purpose of production	To inform the basic poverty condition in terms of the calorie consumption. This data has been presented 64-district wise.
Process description	NWRD has stored the data in an organized form.

Sample of Data

Distname	Distcode	Perhhl2122	Perhhl1805
BAGERHAT	1	68.88	36.51
BANDARBAN	3	63.67	32.65
BARGUNA	4	52.11	22.33
BARISAL	6	43.78	19.28
BHOLA	9	44.2	23.2
BOGRA	10	55.98	31.27
BRAHAMANBARIA	12	58.6	36
CHANDPUR	13	60.4	31.49
CHITTAGONG	15	50.39	25.88
CHUADANGA	18	41.48	18.44

Bundle Information (Data Field Description and Unit)

FIELD	FIELDNAME
District	District Name
Perhhl2122	Percentage of HH consuming less than 2122 Kilo Cal
Perhhl1805	Percentage of HH consuming less than 1805 Kilo Cal
Distcode	District Code

Name of Data layer: **Household Income 1995 (64 Districts)**

Metadata

Data Type	Tabular
Abstract	The data layer reveals 64-district wise average household income from different sectors.
Quality	This data set fully complies with the published report of BBS.
Completeness	The data layer covers 64 districts according to BBS census 1995.
History of the dataset	Bangladesh Bureau of Statistics generated the data layer and published in Statistics on Poverty Alleviation in 1995.
Purpose of production	As the data layer reveals a statistics of district wise average household income of people engaged in different occupations therefore it can be used in different type of socio-economic analysis at national and regional level.
Process description	NWRD has converted the data layer into digital format and organized it in an ordered form.

Sample of Data

Distname	Distcode	Hhwork	Agriculture	Industry	Water	Construct	Trans	Business	Service	Other
BAGERHAT	1	386441	185695	4136	295	5010	9418	64008	8767	105548
BANDARBAN	3	53004	44068	1328	37	579	522	6464	2606	26116
BARGUNA	4	211193	126949	1001	173	3218	2245	27363	5246	43566
BARISAL	6	551356	282419	9435	1118	9380	10441	94438	14669	144019
BHOLA	9	357755	239542	2089	267	4926	6273	46472	5028	82515
BOGRA	10	684069	495163	12825	1023	8182	17283	91504	9272	141731
BRAHAMANBARIA	12	529759	328958	13846	1379	6698	8854	75828	8435	99324
CHANDPUR	13	511680	265666	8660	1470	8849	11296	72135	10618	89192
CHITTAGONG	15	1289999	395281	128812	8262	36676	72276	281921	47947	527154
CHUADANGA	18	217638	162445	6367	219	2398	3537	28947	4070	28544

Bundle Information (Data Field Description and Unit)

FIELD	FIELDNAME
District	District Name
Hhwork	Average HH Income from HH Work
Agriculture	Average HH Income from Agriculture
Industry	Average HH Income from Industry
Water	Average HH Income from Water, Gas, Elect
Construct	Average HH Income from Construction
Trans	Average HH Income from Transportation and Communication
Business	Average HH Income from Business
Service	Average HH Income from Service
Other	Average HH Income from Other
Distcode	District Code

Name of Data layer: **Household Information 1981 (464 Thana)**

Metadata

Data Type	Tabular
Abstract	This data layer contains 464-thana wise house holdings, agricultural land, literacy rate and other attribute information.
Quality	This data layer fully complies with the published report of BBS.
Completeness	The data layer covers 464 thana according to census 1981.
History of the dataset	Bangladesh Bureau of Statistics generated the data layer and published in Statistical Yearbook of Bangladesh 1981.
Purpose of production	As the data layer reveals a census of thana wise households information with agricultural land and literacy rate therefore it can be used in different type of socio-economic analysis at national and regional level.
Process description	NWRD has converted the data into digital version and organized it in an ordered form.

Sample of Data

District	Thana	Geocode	Hh	Agland	Age	Cult	Rate	Water
BARISAL	AGAILJHARA	40602	-	-	-	-	-	-
BARISAL	BABUGANJ	40603	22362	18033	18310	21085	38.5	8963
BARISAL	BAKERGANJ	40607	54212	38015	43555	37030	37.3	9943
BARISAL	BANARI PARA	40610	23369	14473	17809	14488	39.8	8503
BARISAL	BARISAL SADAR (KOTWALI)	40651	54424	26458	49914	23138	47.6	25599
BARISAL	BHANDARIA	40614	25588	15684	18007	16458	43	3850
BARISAL	BHOLA SADAR	40618	48874	22565	34947	39918	20.5	25886
BARISAL	BURHANUDDIN	40621	36535	21900	26450	35814	19.4	15927
BARISAL	CHAR FASSON	40625	45804	24671	27623	44328	17.2	20133
BARISAL	DAULATKHAN	40629	25090	13864	17461	22024	20.8	16490

Bundle Information (Data Field Description and Unit)

FIELD	SAMPLE_DATA	DESCRIPTION	UNIT
District	BARISAL		
Thana	BABUGANJ		
Geocode	40603		
Hh	22362	No of House Hold in 1981	Number
Agland	18033	House Hold owning Agricultural Land	Number
Age	18310	No of People 10-14	Number
Cult	21085	No of People in Cultivation over 10 years	Number
Rate	38.5	Literacy Rate	Percent
Water	8963	House Hold with Potable Water	Number

Name of Data layer: **Household Information 1991 (490 Thana)**

Metadata

Data Type	Tabular
Abstract	This data layer contains 490 thana wise households, agricultural land, literacy rate and other attribute information.
Quality	This data layer fully complies with the published report of BBS.
Completeness	The data layer covers 490 thana according to census 1991.
History of the dataset	Bangladesh Bureau of Statistics generated the data layer and published in Statistical Yearbook of Bangladesh 1991.
Purpose of production	As the data layer reveals a census of 490-thana wise households information with agricultural land, literacy rate etc. therefore, it can be used in different type of socio-economic analysis at national and regional level.
Process description	NWRD has converted the data into digital version and organized it in an ordered form.

Sample of Data

District	Thana	Geocode	Du91	Agland91	Npo1091	No10agri91	Lr91	Dusafefaw91	Dusani91
BAGERHAT	BAGERHAT SADAR	40108	45527	24960	89434	23604	49.9	30592	41182
BAGERHAT	CHITALMARI	40114	24306	17877	44351	26093	37	17706	21761
BAGERHAT	FAKIRHAT	40134	24286	15156	46298	17628	43	22733	19408
BAGERHAT	KACHUA	40138	18553	10710	33777	14258	42.5	11099	17387
BAGERHAT	MOLLAHAT	40156	21465	14174	39190	21522	31.6	16755	17626
BAGERHAT	MONGLA	40158	27192	8338	55883	11096	42.8	4431	23360
BAGERHAT	MORRELGANJ	40160	61210	31570	113338	39688	49.5	14937	58245
BAGERHAT	RAMPAL	40173	33119	17400	62805	20956	45.5	8935	31008
BAGERHAT	SARANKHOLA	40177	19588	8999	36630	10850	41.8	5802	18600
BANDARBAN	ALIKADAM	20304	4923	1668	9556	4990	20.7	800	2659

Bundle Information (Data Field Description and Unit)

FIELD	SAMPLE_DATA	DESCRIPTION	UNIT
District	BAGERHAT	District Name	
Thana	CHITALMARI	Thana Name	
Geocode	40114	Thana Geocode	
Du91	24306	No of Dwelling Units	Number
Agland91	17877	DU owning Agricultural Land	Number
Npo1091	44351	No of people over 10 years	Number
No10agri91	26093	No of people over 10 years in Agriculture	Number
Lr91	37	Literacy rate	Percent
Dusafefaw91	17706	DU with safe water	Number
Dusani91	21761	DU with sanitation	Number

Name of Data layer: **Household Information 2001**

Metadata

Data Type	Tabular
Abstract	This data layer contains 508 Upazila / thana wise households, agricultural land, literacy rate and other attribute information.
Quality	This data layer fully complies with the published report of BBS.
Completeness	The data layer covers 508 thana according to census 2001.
History of the dataset	Bangladesh Bureau of Statistics generated the data layer and published in Statistical Yearbook of Bangladesh 2001.
Purpose of production	As the data layer reveals a census of 508-Upazila/ Thana wise households information with agricultural land, literacy rate etc. therefore, it can be used in different type of socio-economic analysis at national and regional level.
Process description	NWRD has converted the data into digital version and organized it in an ordered form.

Sample of Data

Geocode	Divisionname	Districtname	Upazillaname	Hh01	Du01	Agland01	Npo1001	No10agri01	Lr01	Dusafefaw01	Dusani01
100409	Barisal	Barguna	Amtali	54404	53445	38580	195285	51860	45.9	37139	18695
100419	Barisal	Barguna	Bamna	15201	15003	10891	52577	12761	64.2	7133	9104
100428	Barisal	Barguna	Barguna Sadar	50765	49791	32939	183184	36662	55.2	35820	21982
100447	Barisal	Barguna	Betagi	25121	24521	19504	90714	19770	59.7	19316	14337
100485	Barisal	Barguna	Patharghata	34477	33888	21853	123181	23808	63.2	10791	16145
100602	Barisal	Barisal	Agailjhara	31599	30980	25437	116288	25808	59.3	12849	24790
100603	Barisal	Barisal	Babuganj	29958	29255	22817	108626	19811	61.1	15378	19949
100607	Barisal	Barisal	Bakerganj	72377	71799	49991	257411	40013	59.3	13553	31169
100610	Barisal	Barisal	Banari Para	31658	31244	18952	114871	17892	60.8	6553	24243
100632	Barisal	Barisal	Gaurnadi	37047	36157	25893	133713	25282	59.4	12515	29983

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	SAMPLE_DATA	UNIT
Geocode	Upazila /Thana Geocode	40114	
Divisionname	Division Name	Dhaka	
Districtname	District Name	Kushtia	
Upazillaname	Thana Name	Gaurnadi	
Hh01	No. of Household Units	54404	Number
Du01	No. of Dwelling Units	24306	Number
Agland01	DU owning Agricultural Land	17877	Number
Npo1001	No. of people over 10 years	44351	Number
No10agri01	No. of people over 10 years in Agriculture	26093	Number
Lr01	Literacy rate	37	Percent
Dusafefaw01	DU with safe water	17706	Number
Dusani01	DU with sanitation	21761	Number

Name of Data layer: **Industry Establishment and Classification 1993**

Metadata

Data Type	Tabular
Abstract	The data layer presents 64-district wise number of different kinds of manufacturing industries with number of establishments and total people engaged in each type of industry.
Quality	The data layer fully complies with the 'Directory of Industries 1993'.
Completeness	The data layer covers 64 districts of Bangladesh.
History of the dataset	The data was published in 'The Directory of Industries', 1993 by Bangladesh Small Industries Corporation (BSIC).
Purpose of production	To estimate district wise number of manufacturing industries and people engaged in those industries.
Process description	NWRD has converted the data into digital format and stored it in an organized form.

Sample of Data

Distname	Distcode	P30	P31	P32	P33	P34	P35	P36	P37	P38	P39	Noest	Pereng
BAGERHAT	1	0	45	4	14	3	2	28	0	6	1	103	2986
BANDARBAN	3	0	8	1	0	0	0	9	0	1	0	19	5124
BARGUNA	4	0	16	0	3	1	0	11	0	0	0	31	1699
BARISAL	6	0	99	21	31	24	32	50	3	42	9	311	20111
BHOLA	9	0	24	2	5	1	0	8	0	0	1	41	2718
BOGRA	10	0	384	45	84	44	63	60	4	104	8	796	26446
BRAHAMANBARIA	12	0	88	20	9	0	4	47	2	11	1	182	7793
CHANDPUR	13	0	131	26	15	2	6	19	0	20	0	219	14707

Bundle Information (Data Field Description and Unit)

FIELD	FIELDNAME
Distname	District Name
Distcode	District Code
P30	Not adequately defined (NAD)
P31	Manufacture of food, beverage and tobacco
P32	Textile wearing, apparel and leather industries
P33	Manufacturing of wood product including furniture
P34	Manufacturing of paper, paper products, printing & publishing
P35	Manufacturing of chemicals, petroleum, coal, rubber and plastic product
P36	Manufacturing of non-metallic mineral except petroleum and coal
P37	Basic metal industries
P38	Manufacturing of fabricated metal product, machinery & equipment
P39	Other manufacturing industries
Noest	No of Establishment
Pereng	Total Person Engaged

Name of Data layer: **Population Census 1961**

Metadata

Data Type	Tabular
Abstract	An attribute data layer containing 408-thana wise total population and other relevant information such as BBS area, number of male, female and number of rural,urban population according to 1961 census.
Quality	The data layer fully complies with the source population census book of 1961.
Completeness	The data layer covers all the thanas according to BBS census 1961.
History of the dataset	Thana wise population data were collected through population census conducted in 1961 and published in Population Census Book by Bangladesh Bureau of Statistics.
Purpose of production	Population census data are very much essential in different socio-economic studies, so the data layer has been included to NWRD for providing the researchers the basic population information.
Process description	NWRD has converted the published data in digital format and has organized them to prepare it as a NWRD data layer.

Sample of Data

District	Thana	Geocode	Bbsarea	Male	Female	Urban	Rural	Total
BAKERGANJ	AMTALI	40609	658.37	72348	69240	-	141588	141588
BAKERGANJ	BABUGANJ	40603	147.74	44036	42035	-	86071	86071
BAKERGANJ	BAKERGANJ	40607	404.35	108323	104278	-	212601	212601
BAKERGANJ	BAMNA	40619	101.09	20770	20012	-	40782	40782
BAKERGANJ	BANARI PARA	40610	129.6	42603	42581	-	85184	85184
BAKERGANJ	BARGUNA SADAR	40628	378.43	62780	60174	-	122954	122954
BAKERGANJ	BARISAL SADAR (KOTWALI)	40651	292.9	106563	89193	69936	125820	195756
BAKERGANJ	BAUPHAL	40638	554.69	99818	97036	-	196854	196854

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	District Name	
Thana	Thana Name	
Geocode	Administrative Code Given By BBS (Bangladesh Bureau Of Statistics)	
Bbsarea	Area According To BBS (Bangladesh Bureau Of Statistics)	Squre Km
Male	Number of MALE	Number
Female	Number of FEMALE	Number
Urban	Number of Population in URBAN areas	Number
Rural	Number of Population in RURAL areas	Number
Total	Total population in thana	Number

Name of Data layer: **Population Census 1974**

Metadata

Data Type	Tabular
Abstract	An attribute data layer containing 418-thana wise total population and other relevant information such as BBS area, number of male, female and number of rural, urban population according to 1974 census.
Quality	The data layer fully complies with the source population census book of 1974.
Completeness	The data layer covers all the thanas according to BBS census 1974.
History of the dataset	Thana wise population data were collected through population census conducted in 1974 and published in Population Census Book by Bangladesh Bureau of Statistics.
Purpose of production	Population census data are very much essential in different socio-economic studies, so the data layer has been included to NWRD for providing the researchers the basic population information.
Process description	NWRD has converted the published data in digital format and has organized them to prepare it as a NWRD data layer.

Sample of Data

District	Thana	Geocode	Bbsarea	Male	Female	Urban	Rural	Total
BAKERGANJ	AMTALI	40609	658.37	72348	69240	-	141588	141588
BAKERGANJ	BABUGANJ	40603	147.74	44036	42035	-	86071	86071
BAKERGANJ	BAKERGANJ	40607	404.35	108323	104278	-	212601	212601
BAKERGANJ	BAMNA	40619	101.09	20770	20012	-	40782	40782
BAKERGANJ	BANARI PARA	40610	129.6	42603	42581	-	85184	85184
BAKERGANJ	BARGUNA SADAR	40628	378.43	62780	60174	-	122954	122954
BAKERGANJ	BARISAL SADAR (KOTWALI)	40651	292.9	106563	89193	69936	125820	195756
BAKERGANJ	BAUPHAL	40638	554.69	99818	97036	-	196854	196854

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	District Name	
Thana	Thana Name	
Geocode	Administrative Code Given By BBS (Bangladesh Bureau Of Statistics)	
Bbsarea	Area According To BBS (Bangladesh Bureau Of Statistics)	Squre Km
Male	Number of MALE	Number
Female	Number of FEMALE	Number
Urban	Number of Population in URBAN areas	Number
Rural	Number of Population in RURAL areas	Number
Total	Total population in thana	Number

Name of Data layer: **Population Census 1981**

Metadata

Data Type	Tabular
Abstract	An attribute data layer containing 464-thana wise total population and other relevant information such as BBS area, number of male, female and number of rural, urban population according to 1981 census.
Quality	The data layer fully complies with the source population census book of 1981.
Completeness	The data layer covers all the thanas according to BBS census 1981.
History of the dataset	Thana wise population data were collected through population census conducted in 1981 and published in Population Census Book by Bangladesh Bureau of Statistics.
Purpose of production	Population census data are very much essential in different socio-economic studies, so the data layer has been included to NWRD for providing the researchers the basic population information.
Process description	NWRD has converted the published data in digital format and has organized them to prepare it as a NWRD data layer.

Sample of Data

District	Thana	Geocode	Bbsarea	Male	Female	Urban	Rural	Total
BARISAL	AGAILJHARA	40602	161.82	71089	70746	0	141835	141835
BARISAL	BABUGANJ	40603	164.88	66562	64533	3852	127243	131095
BARISAL	BAKERGANJ	40607	417.2	154838	157248	12123	299963	312086
BARISAL	BANARI PARA	40610	134.32	64545	64387	5769	123163	128932
BARISAL	BHANDARIA	40614	163.56	65101	65004	17264	112841	130105
BARISAL	BHOLA SADAR	40618	413.16	142074	132710	32838	241946	274784
BARISAL	KANTHALIA	40643	152.08	52404	52301	6509	98196	104705
BARISAL	KAWKHALI	40647	79.64	34148	33526	5277	62397	67674
BARISAL	LALMOHAN	40654	396.24	100737	95250	23456	172531	195987
BARISAL	MANPURA	40665	373.19	18592	15095	2757	30930	33687
BARISAL	MATHBARIA	40658	353.25	112130	109346	16304	205172	221476
BARISAL	MEHENDIGANJ	40662	435.79	134663	129653	23918	240398	264316

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	District Name	
Thana	Thana Name	
Geocode	Administrative Code Given By BBS (Bangladesh Bureau Of Statistics)	
Bbsarea	Area According To BBS (Bangladesh Bureau Of Statistics)	Sqre Km
Male	Number of MALE	Number
Female	Number of FEMALE	Number
Urban	Number of Population in URBAN areas	Number
Rural	Number of Population in RURAL areas	Number
Total	Total population in thana	Number

Name of Data layer: **Population Census 1991**

Metadata

Data Type	Tabular
Abstract	An attribute data layer containing 490-thana wise total population and other relevant information such as BBS area, number of male, female and number of rural, urban population according to 1991 census.
Quality	The data layer fully complies with the source population census book of 1991.
Completeness	The data layer covers all the thanas according to BBS census 1991.
History of the dataset	Thana wise population data were collected through population census conducted in 1991 and published in Population Census Book by Bangladesh Bureau of Statistics.
Purpose of production	Population census data are very much essential in different socio-economic studies, so the data layer has been included to NWRD for providing the researchers the basic population information.
Process description	NWRD has converted the published data in digital format and has organized them to prepare it as a NWRD data layer.

Sample of Data

District	Thana	Geocode	Bbsarea	Male	Female	Urban	Rural	Total
BARISAL	GAURNADI	10632	144.18	87721	83881	29365	142237	171602
BARISAL	HIZLA	10636	515.36	87726	78539	10047	156218	166265
BARISAL	MEHENDIGANJ	10662	435.79	150050	142386	28571	263865	292436
BARISAL	MULADI	10669	261.02	86815	85133	10096	161852	171948
BARISAL	WAZIRPUR	10694	248.35	115374	111741	6801	220314	227115
BHOLA	BHOLA SADAR	10918	413.16	182643	169031	65502	286172	351674
BHOLA	BURHANUDDIN	10921	284.67	106603	101875	30176	178302	208478
BHOLA	CHAR FASSON	10925	1106.31	176119	165919	31918	310120	342038
BHOLA	DAULATKHAN	10929	316.99	80631	72827	16043	137415	153458
BHOLA	LALMOHAN	10954	396.24	128167	124330	27894	224603	252497

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	District Name	
Thana	Thana Name	
Geocode	Administrative Code Given By BBS (Bangladesh Bureau Of Statistics)	
Bbsarea	Area According To BBS (Bangladesh Bureau Of Statistics)	Squre Km
Male	Number of MALE	Number
Female	Number of FEMALE	Number
Urban	Number of Population in URBAN areas	Number
Rural	Number of Population in RURAL areas	Number
Total	Total population in thana	Number

Name of Data layer: **Population Census 2001**

Metadata

Data Type	Tabular
Abstract	An attribute data layer containing 508-Upazila/thana wise total population and other relevant information such as BBS area, number of male, female and number of rural, urban population according to 2001 census.
Quality	The data layer fully complies with the source population census book of 2001.
Completeness	The data layer covers all the thanas according to BBS census 2001.
History of the dataset	Thana wise population data were collected through population census conducted in 2001 and published in Population Census Book by Bangladesh Bureau of Statistics.
Purpose of production	Population census data are very much essential in different socio-economic studies, so the data layer has been included to NWRD for providing the researchers the basic population information.
Process description	NWRD has converted the published data in digital format and has organized them to prepare it as a NWRD data layer.

Sample of Data

District	Thana	Geocode	Bbsarea	Male	Female	Urban	Rural	Total
Barguna	Amtali	100409	720.76	132017	127740	18179	241578	259757
Barguna	Bamna	100419	101.05	34721	35082	7106	62697	69803
Barguna	Barguna Sadar	100428	454.39	120830	116783	26954	210659	237613
Barguna	Betagi	100447	167.75	60067	59289	10855	108501	119356
Barguna	Patharghata	100485	387.36	82687	79338	24488	137537	162025
Barisal	Agailjhara	100602	155.47	78193	77468	10643	145018	155661
Barisal	Babuganj	100603	164.88	74008	72732	9144	137596	146740
Barisal	Bakerganj	100607	412.99	174076	179833	19748	334161	353909
Barisal	Banari Para	100610	134.86	77435	75442	14894	137983	152877
Barisal	Barisal Sadar (Kotwali)	100651	317.6	243290	219742	234783	228249	463032

Bundle Information (Data Field Description and Unit)

FIELD	DESCRIPTION	UNIT
District	District Name	
Thana	Upazila/Thana Name	
Geocode	Administrative Code Given By BBS (Bangladesh Bureau Of Statistics)	
Bbsaarea	Area According To BBS (Bangladesh Bureau Of Statistics)	Squre Km
Male	Number of MALE	Number
Female	Number of FEMALE	Number
Urban	Number of Population in URBAN areas	Number
Rural	Number of Population in RURAL areas	Number
Total	Total population in thana	Number

Name of Data layer: **Population Projection**

Metadata

Data Type	Tabular
Abstract	This data layer presents the population increment prediction in Bangladesh
Quality	This data layer fully compiles with the published source, NWRD has not done any quality check.
Completeness	The data layer covers all the thanas according to BBS census 1991.
History of the dataset	NWMP conducted this prediction methodology. The source of prediction is WORLD BANK/BCAS Bangladesh study 2020. The projection was done for urban and rural seperately.
Purpose of production	This data layer can be used in different socio-echnomic analysis.
Process description	NWRD collected this data from NWMP.

Sample of Data

Geocode91	Distcod91	Mc	District91	Thana91	Cu_pop91	Cr_pop91	Area81	Cu_pop81	Cr_pop81
10409	104	0	BARGUNA	AMTALI	13308	242948	536.68	9195	188683
10419	104	0	BARGUNA	BAMNA	6585	62570	85.05	5401	59654
10428	104	0	BARGUNA	BARGUNA SADAR	23287	207065	316.19	17184	183725
10447	104	0	BARGUNA	BETAGI	10403	105886	149.53	8859	105426
10485	104	0	BARGUNA	PATHARGHATA	16810	124334	238.01	12377	108988
10602	106	0	BARISAL	AGAILJHARA	8581	145886	155.07	0	146380

U_2000	U_2005	U_2010	U_2015	U_2020	U_2025	R_2000	R_2005	R_2010	R_2015	R_2020	R_2025
15655	18984	22672	26943	31573	36427	289304	299748	308327	312804	313923	310565
7212	8102	9089	10231	11469	12767	64834	65345	65764	65983	66037	65873
26675	31481	36807	42972	49656	56665	225835	230064	233537	235350	235803	234443
11207	12348	13612	15076	16663	18326	106236	106315	106380	106414	106422	106397
19274	22768	26639	31121	35980	41075	136745	139541	141838	143036	143336	142437
16860	28603	41615	56679	73010	90134	145511	145427	145357	145321	145312	145339

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Geocode91	Geocode Upto thana level (Div. + Dist. + Thana) based on BBS	
Distcode91	Geocode Upto thana level (Div. + District) based on BBS	
Mc	Metropolitan city	
District91	District name based on census 1991 of BBS	
Thana91	Thana name based on census 1991 of BBS	
Cu_pop91	Census of urban population 1991of BBS	
Cr_pop91	Census of rural population 1991of BBS	
Area81	Area of the thana according to census of BBS	square kilometer
Cu_pop81	Census of urban population 1981of BBS	
Cr_pop81	Census of rural population 1981of BBS	
U_2000	Urban population 2000	
U_2005	Urban population 2005	
U_2010	Urban population 2010	
U_2015	Urban population 2015	

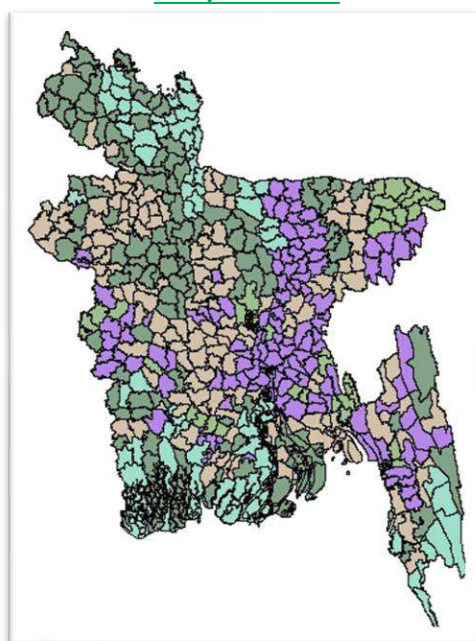
FIELD_NAME	FIELD_DESCRIPTION	UNIT
U_2020	Urban population 2020	
U_2025	Urban population 2025	
R_2000	Rural population 2000	
R_2005	Rural population 2005	
R_2010	Rural population 2010	
R_2015	Rural population 2015	
R_2020	Rural population 2020	
R_2025	Rural population 2025	

Name of Data layer: **Poverty Map**

Metadata

Data Type	Spatial
Abstract	Poverty map is calculated (CBN approach) to represent the level of per capita expenditure required to meet the basic needs of the members of a household, including an allowance for non-food consumption called Upper poverty line. And poverty refers to household-level hunger. Households in food poverty do not have enough food to meet the energy. A household is classified as poor if it's per capita calorie intake is less than the standard per capita calorie requirement (1805 kcal/day) called lower poverty line.
Quality	Quality of this data layer depends on the data collection process of the source organization.
Completeness	The data layer covers poverty of Bangladesh identified by DoF.
History of the dataset	The dataset was produced by Bangladesh Bureau of Statistics/ World Food Programme' 2005. Poverty data is analyzed based on: Household income, food /nutrition in-take, assets/resources position, farm land holding under ownership, employment duration in th
Purpose of production	It can help to understand the long term solutions and intensity of poverty for future allocation of funds and development works. Poverty can identify where poverty exists and to aid the planning of social intervention programmes. It can also be used in different type of socio-economic analysis at national and regional level.
Process description	Data has been collected from World Food Programme (WFP) into digital format and combined it with spatial (508 thanas) data.

Sample of Data



Attribute Table

area	thacode	divname	distname	thaname	landtype	upoverty	lpoverty
515273615.9316	100409	Barisal	Barguna	Amtali	Land	61% or greater	44% or greater
43146200.6484	100409	Barisal	Barguna	Amtali	Water	61% or greater	44% or greater
100987247.8818	100419	Barisal	Barguna	Bamna	Land	49% - 60%	33% - 43%
324722084.8276	100428	Barisal	Barguna	Barguna Sadar	Land	61% or greater	44% or greater

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square Meter
Thacode	Geocode (Division code + district code + thana code) is incorporated according to Geomaster database of BBS 2001.	
Divname	Name of each division according to BBS geomaster database of 2001	
Distname	Name of each district according to BBS geomaster database of 2001	
Thaname	Name of each thana according to BBS geomaster database of 2001	
Landtype	Classification of administrative unit by land and water	
Upoverity	Upper poverty level Incidence class	
Lpoverty	Lower poverty level Incidence class	

Name of Data layer: **Statistics on Health Condition 1996**

Metadata

Data Type	Tabular
Abstract	The data layer presents 64-district wise percentage of population with severe malnutrition, affected by diarrhoea and having access to safe water and sanitation for the year 1996.
Quality	Quality of the data layer depends on the quality of data collection, compilation and some other factors. NWRD has not done any quality checking.
Completeness	The data layer covers 64 districts according to BBS census 1991.
History of the dataset	UNICEF generated this data layer. NWRD has collected it from UNICEF.
Purpose of production	To observe the condition of malnutrition as well as diarrhoeal disease in Bangladesh of 1996 this data layer will be useful.
Process description	NWRD has organized the data in an ordered form.

Sample of Data

Distname	Distcode	Pop	Permal	Perdiarr	Persafewater	Persani
BAGERHAT	1	1611000	4	20	60	56
BANDARBAN	3	271000	6	52	56	10
BARGUNA	4	867000	6	53	96	55
BARISAL	6	2481000	7	48	99	56
BHOLA	9	1673000	13	57	97	16
BOGRA	10	3053000	6	47	100	48
BRAHAMANBARIA	12	2438000	10	53	99	26
CHANDPUR	13	2309000	4	60	94	29

Bundle Information (Data Field Description and Unit)

FIELD	FIELDNAME
District	District Name
Pop	Total Population Estimated for 1996
Permal	Percentage of Population in Severe Malnutrition within 12 to 59 months (Mid-upper arm circumference < 12.5 cm)
Perdiarr	Percentage of Total Population in Diarrheal Disease
Persafewater	Percentage of Total Population with Safe Water
Persani	Percentage of Total Population with Sanitation Access

Name of Data layer: **Tribal Population 1991 (64 District)**

Metadata

Data Type	Tabular
Abstract	The data layer contains distribution of tribal population (64-district wise) for the year of 1991.
Quality	The data layer fully complies with source.
Completeness	The data layer covers 64 districts according to 1991 census.
History of the dataset	Bangladesh Bureau of Statistics (BBS) prepared the data layer. NWRD has collected it from BBS.
Purpose of production	This data layer provides the district wise tribal population distribution of Bangladesh, therefore can be used in different type of ethnic and socio-economic research.
Process description	NWRD has converted the data layer into digital format and organized it in an ordered form.

Sample of Data

Sample of Data

District	Distcode	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15
BAGERHAT	1	-	-	-	-	-	-	-	-	-	-	-	-	-
BANDARBAN	3	-	6429	-	1681	4163	-	-	-	-	-	1425	1150	226
BARGUNA	4	-	-	-	-	-	-	-	-	-	-	-	-	-
BARISAL	6	-	-	-	-	1049	-	-	-	-	-	-	-	-
BHOLA	9	-	-	-	-	-	-	-	52	-	-	-	-	-
BOGRA	10	-	-	-	-	-	-	-	-	-	-	-	-	-
BRAHAMANBARIA	12	-	-	-	-	734	-	-	-	-	-	-	-	-

C16	C17	C18	C19	C20	C21	C22	C23	C24	C25	C26	C27	C28	C29	C30	C31	C32
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9953
-	59288	-	-	21963	-	-	99	-	-	-	5493	-	8187	-	-	229
-	237	-	-	-	-	-	-	-	1849	-	-	-	-	-	-	6410
-	997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2601
-	-	-	-	-	-	-	-	-	160	-	-	-	-	-	-	11048
-	3085	-	-	-	-	-	-	-	-	10327	-	-	-	-	-	7248
-	856	-	-	-	-	-	-	-	-	-	-	-	-	-	-	858

Bundle Information (Data Field Description and Unit)

FIELD	FIELDNAME
Distname	District Name
Distcode	District Code
C3	Bongshi
C4	Bum
C5	Bunna
C6	Chak
C7	Chakma
C8	Koch
C9	Garo
C10	Hajong
C11	Harizon

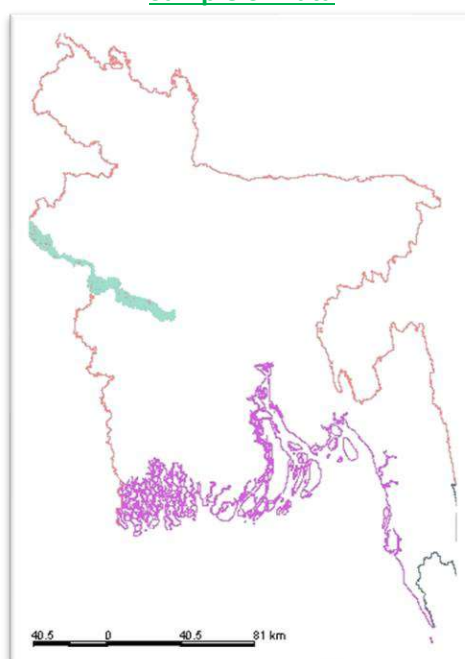
FIELD	FIELDNAME
C12	Khasia
C13	Khyang
C14	Khumi
C15	Lushai
C16	Mahat/ Mahatu
C17	Marma
C18	Manipuri
C19	Munda
C20	Murang
C21	Mroo
C22	Pahary
C23	Pangkhu
C24	Raj-bongshi
C25	Rakhain
C26	Saontal
C27	Tan-chaynga
C28	Tipra
C29	Tripura
C30	Urang
C31	Urua
C32	Other

Name of Data layer: **Char Land Information of Ganges**

Metadata

Data Type	Spatial
Abstract	The dataset is the output of physical and human environment study conducted over the char lands of Ganges river in 1993.
Quality	The quality of the summary output dataset largely depends on the survey method, accuracy of data processing and compiling etc.
Completeness	The study covers surveyed charlands of the Ganges river.
History of the dataset	The dynamic physical and human environment of riverine charlands study was conducted jointly by FAP16 (Flood Action Plan), the environmental study and FAP19, the Geographic Information System, and both was performed by ISPAN (Irrigation Support Project for Asia and the Near East) with financial assistance of USAID under the Bangladesh Flood Action Plan (FAP) in 1992-93. This dataset depicts the socio-economic status of the charlands of Ganges river.
Purpose of production	The study was conducted with a view to make an inventory of resources, people and infrastructures of the charlands, for collecting additional information on hazards, using Satellite images to analyse physical changes and land use and integrating this anal
Process description	NWRD stored this dataset without any further modification.

Sample of Data



Attribute Table

area	perimeter	gsurvey_	gsurvey_id	geocode	mauzacod	reliable	numpolys	thanacod	shade	survey
2278127	7319.761	2	1021	808853874	874		1	8088	74	1
5539310	14446.43	3	1030	808853120	120		1	8088	74	1
4584355	12299.58	4	1032	808853768	768		1	8088	74	1
2855849	8184.53	5	1036	808853366	366		1	8088	74	1
2086958	6682.349	6	1037	808853869	869		1	8088	74	1
2771614	7838.501	7	1038	808853748	748		1	8088	74	1

polyin	char	cty_bank	reach	po_mi	pi_mi	so_mi	si_mi	pcul	lg_dry	lg_hhld	sl_dry	poul	boat_m	boat_nm	kutch	shel	ext87	dur87	ext88	dur88	ext8992	dur8992	hf87
1	3	5	1	1	1	1	1	7	1	1	1	1	1	1	1	1	2	2	8	5	6	5	1
1	3	5	1	2	2	2	2	6	4	6	3	4	7	5	5	2	2	2	8	7	6	5	2
1	3	5	1	2	3	4	3	5	6	7	6	5	7	5	5	2	2	2	8	5	6	4	2
1	3	5	1	1	1	1	1	7	1	1	1	1	1	1	1	1	2	2	8	5	6	5	1
1	3	5	1	2	2	2	2	7	4	6	5	5	7	5	6	2	2	2	8	6	6	5	2
1	3	5	1	2	3	4	2	3	3	7	3	4	7	4	3	2	2	2	8	5	6	4	2

pr_sc	se_sc	he_fa	he_vi	deadfld	deadhaz	cicat	drycat	borocat	rabc	auscat	bamcat	sand	age	p81den	p92den	popdif	er87ar	er87hm	er88ar	er88hm	er8992a	er8992h	humcul
1	1	1	1	1	1	4	2	3	5	5	2	5	4	1	1	3	1	1	1	1	1	1	1
3	6	7	2	2	3	4	2	3	5	5	2	4	7	5	5	5	2	2	2	2	2	2	5
3	6	6	2	2	3	4	2	3	5	6	2	3	7	7	7	1	2	2	2	2	2	2	7
1	1	1	1	1	1	4	2	3	5	6	2	5	4	1	1	3	1	1	1	1	1	1	1
4	7	7	2	2	3	4	2	3	5	6	2	5	7	6	7	5	2	2	2	2	2	2	7
2	7	7	2	2	3	4	2	3	6	6	2	6	4	2	3	4	2	2	2	2	2	2	3

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area	Square meter
Perimeter	Pereimeter	Meter
Gsurvey_	Internal Id	
Gsurvey_id	User id	
Geocode	Geocode (Division Code+ District Code+ Thanacode + Union code +Mouza code)	
Mauzacod		
Reliable		
Numpolys		
Thanacod	Unique code	
Shade		
Survey		
Polyin		
Char	Different Type of Char (1 = Island char, 2 = Attached Char, 3 = Detached Mainland, 4 = Unprotected Main land, 5 = Submerged, 6 = No data recorded)	
Cty_bank		
Reach		
Po_mi	Percent of Permanent out-Migration	Percent
Pi_mi	Percent of seasonal in - Migration	Percent
So_mi	Percent of seasonal Out - Migration	Percent
Si_mi	Percent of seasonal in - Migration	Percent
Pcul	Portion of Land Cultivation	Percent
Lg_dry	Density of Large Livestock to dryseason land area	Animals/Sq km area
Lg_hhld		
Sl_dry	Density of Large Livestock to dryseason land area	Animals/Sq km area
Poul	Poultry ownership	
Boat_m	Mechanised boat	Number
Boat_nm	Non-mechanised boat	Number
Kutch	Katcha household	Percent
Shel		
Ext87	Peak flood extent 1987	
Dur87	Duration of peak flood extent 1987	

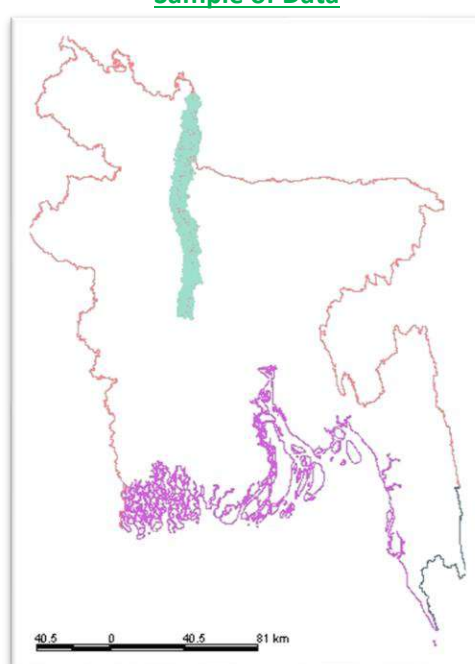
FIELD_NAME	FIELD_DESC	UNIT
Ext88	Peak flood extent 1988	
Dur88	Duration of peak flood 1988	
Ext8992	Peak flood extent 1989 - 1992	
Dur8992	Duration of peak flood 1989 - 1992	
Hf87	House flooded in 1987	Percent
Hd87	House Destroyed by flood 1987	Percent
Hf88	House flooded in 1988	Percent
Hd88	House destroyed in 1988	Percent
Hf8992	House flooded during 1989-1992	Percent
Hd8992	House destroyed by flood 1989-1992	Percent
Pr_sc	Primary educational facilities	
Se_sc	Secondary Education facilities by Mauza	
He_fa	Health facilities by mauza	
He_vi	Last visit by health worker	
Deadfld		
Deadhaz		
Cicat	Cropping intensity	Percent
Drycat	Dry land crop	Percent
Borocat	Area covered by Borocrop	
Rabcat		
Auscat		
Bamcat		
Sand	Extent of sandy soil	Percent
Age		
P81den	Population density distribution	Persons/Sq. km
P92den	Population density distribution	Persons/Sq. km
Popdif	Population density between 1981-1991	
Er87ar	Area eroded in 1987	Percent
Er87hm	Households erodedin 1987	Percent
Er88ar	Area eroded in 1988	Percent
Er88hm	Households erodedin 1988	Percent
Er8992a	Area eroded during 1989 to 1992	Percent
Er8992h	Household eroded during 1989-1992	
Humcul		

Name of Data layer: **Char Land Information of Jamuna River**

Metadata

Data Type	Spatial
Abstract	The dataset is the output of physical and human environment study conducted over the charlands of Jamuna river in 1993.
Quality	The quality of the summary output dataset largely depends on the survey method, accuracy of data processing and compiling etc.
Completeness	The study covers surveyed charlands of the Jamuna river.
History of the dataset	The dynamic physical and human environment of riverine charlands study was conducted jointly by FAP16 (Flood Action Plan), the environmental study and FAP19, the Geographic Information System, and both was performed by ISPAN (Irrigation Support Project for Asia and the Near East) with financial assistance of USAID under the Bangladesh Flood Action Plan (FAP) in 1992-93. This dataset depicts the socio-economic status of the charlands of Jamuna river.
Purpose of production	The study was conducted with a view to make an inventory of resources, people and infrastructures of the charlands, for collecting additional information on hazards, using Satellite images to analyse physical changes and land use and integrating this anal
Process description	NWRD stored this dataset without any further modification.

Sample of Data



Attribute Table

area	perimeter	gsurvey_	gsurvey_id	geocode	mauzacod	reliable	numpolys	thanacod	shade	survey
2278127	7319.761	2	1021	808853874	874		1	8088	74	1
5539310	14446.43	3	1030	808853120	120		1	8088	74	1
4584355	12299.58	4	1032	808853768	768		1	8088	74	1
2855849	8184.53	5	1036	808853366	366		1	8088	74	1
2086958	6682.349	6	1037	808853869	869		1	8088	74	1
2771614	7838.501	7	1038	808853748	748		1	8088	74	1

polyin	char	cty_bank	reach	po_mi	pi_mi	so_mi	si_mi	pcul	lg_dry	lg_hhld	sl_dry	poul	boat_m	boat_nm	kutch	shel	ext87	dur87	ext88	dur88	ext8992	dur8992	hf87
1	3	5	1	1	1	1	1	7	1	1	1	1	1	1	1	1	2	2	8	5	6	5	1
1	3	5	1	2	2	2	2	6	4	6	3	4	7	5	5	2	2	2	8	7	6	5	2
1	3	5	1	2	3	4	3	5	6	7	6	5	7	5	5	2	2	2	8	5	6	4	2
1	3	5	1	1	1	1	1	7	1	1	1	1	1	1	1	1	2	2	8	5	6	5	1
1	3	5	1	2	2	2	2	7	4	6	5	5	7	5	6	2	2	2	8	6	6	5	2
1	3	5	1	2	3	4	2	3	3	7	3	4	7	4	3	2	2	2	8	5	6	4	2

pr_sc	se_sc	he_fa	he_vi	deadfld	deadhaz	cicat	drycat	borocat	rabcat	auscat	bamcat	sand	age	p81den	p92den	popdif	er87ar	er87hm	er88ar	er88hm	er8992a	er8992h	humcul
1	1	1	1	1	1	4	2	3	5	5	2	5	4	1	1	3	1	1	1	1	1	1	1
3	6	7	2	2	3	4	2	3	5	5	2	4	7	5	5	5	2	2	2	2	2	2	5
3	6	6	2	2	3	4	2	3	5	6	2	3	7	7	7	1	2	2	2	2	2	2	7
1	1	1	1	1	1	4	2	3	5	6	2	5	4	1	1	3	1	1	1	1	1	1	1
4	7	7	2	2	3	4	2	3	5	6	2	5	7	6	7	5	2	2	2	2	2	2	7
2	7	7	2	2	3	4	2	3	6	6	2	6	4	2	3	4	2	2	2	2	2	2	3

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area	Square meter
Perimeter	Pereimeter	Meter
Gsurvey_	Internal Id	
Gsurvey_id	User id	
Geocode	Geocode (Division Code+ District Code+ Thanacode + Union code +Mouza code)	
Mauzacod		
Reliable		
Numpolys		
Thanacod	Unique code	
Shade		
Survey		
Polyin		
Char	Different Type of Char (1 = Island char, 2 = Attached Char, 3 = Detached Mainland, 4 = Unprotected Main land, 5 = Submerged, 6 = No data recorded)	
Cty_bank		
Reach		
Po_mi	Percent of Permanent out-Migration	Percent
Pi_mi	Percent of seasonal in - Migration	Percent
So_mi	Percent of seasonal Out - Migration	Percent
Si_mi	Percent of seasonal in - Migration	Percent
Pcul	Portion of Land Cultivation	Percent
Lg_dry	Density of Large Livestock to dryseason land area	Animals/Sq km area
Lg_hhld		
Sl_dry	Density of Large Livestock to dryseason land area	Animals/Sq km area
Poul	Poultry ownership	
Boat_m	Mechanised boat	Number
Boat_nm	Non-mechanised boat	Number
Kutch	Katcha household	Percent
Shel		
Ext87	Peak flood extent 1987	
Dur87	Duration of peak flood extent 1987	

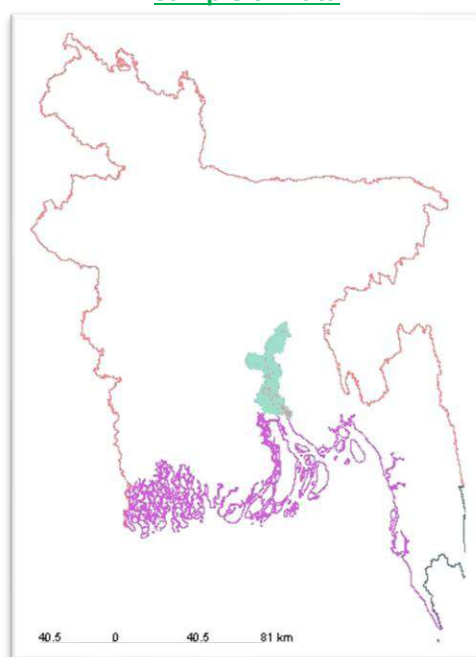
FIELD_NAME	FIELD_DESC	UNIT
Ext88	Peak flood extent 1988	
Dur88	Duration of peak flood 1988	
Ext8992	Peak flood extent 1989 - 1992	
Dur8992	Duration of peak flood 1989 - 1992	
Hf87	House flooded in 1987	Percent
Hd87	House Destroyed by flood 1987	Percent
Hf88	House flooded in 1988	Percent
Hd88	House destroyed in 1988	Percent
Hf8992	House flooded during 1989-1992	Percent
Hd8992	House destroyed by flood 1989-1992	Percent
Pr_sc	Primary educational facilities	
Se_sc	Secondary Education facilities by Mauza	
He_fa	Health facilities by mauza	
He_vi	Last visit by health worker	
Deadfld		
Deadhaz		
Cicat	Cropping intensity	Percent
Drycat	Dry land crop	Percent
Borocat	Area covered by Borocrop	
Rabcat		
Auscat		
Bamcat		
Sand	Extent of sandy soil	Percent
Age		
P81den	Population density distribution	Persons/Sq. km
P92den	Population density distribution	Persons/Sq. km
Popdif	Population density between 1981-1991	
Er87ar	Area eroded in 1987	Percent
Er87hm	Households erodedin 1987	Percent
Er88ar	Area eroded in 1988	Percent
Er88hm	Households erodedin 1988	Percent
Er8992a	Area eroded during 1989 to 1992	Percent
Er8992h	Household eroded during 1989-1992	
Humcul		

Name of Data layer: **Char Land Information of Meghna River**

Metadata

Data Type	Spatial
Abstract	The dataset is the output of physical and human environment study conducted over the charlands of Meghna river in 1993.
Quality	The quality of the summary output dataset largely depends on the survey method, accuracy of data processing and compiling etc.
Completeness	The study covers surveyed charlands of the Meghna river.
History of the dataset	The dynamic physical and human environment of riverine charlands study was conducted jointly by FAP16 (Flood Action Plan), the environmental study and FAP19, the Geographic Information System, and both was performed by ISPAN (Irrigation Support Project for Asia and the Near East) with financial assistance of USAID under the Bangladesh Flood Action Plan (FAP) in 1992-93. This dataset depicts the socio-economic status of the charlands of Meghna river.
Purpose of production	The study was conducted with a view to make an inventory of resources, people and infrastructures of the charlands, for collecting additional information on hazards, using Satellite images to analyse physical changes and land use and integrating this anal
Process description	NWRD stored this dataset without any further modification.

Sample of Data



Attribute Table

area	perimeter	gsurvey_	gsurvey_id	geocode	mauzacod	reliable	numpolys	thanacod	shade	survey
2278127	7319.761	2	1021	808853874	874		1	8088	74	1
5539310	14446.43	3	1030	808853120	120		1	8088	74	1
4584355	12299.58	4	1032	808853768	768		1	8088	74	1
2855849	8184.53	5	1036	808853366	366		1	8088	74	1
2086958	6682.349	6	1037	808853869	869		1	8088	74	1
2771614	7838.501	7	1038	808853748	748		1	8088	74	1

polyin	char	cty_bank	reach	po_mi	pi_mi	so_mi	si_mi	pcul	lg_dry	lg_hhld	sl_dry	poul	boat_m	boat_nm	kutch	shel	ext87	dur87	ext88	dur88	ext8992	dur8992	hf87
1	3	5	1	1	1	1	1	7	1	1	1	1	1	1	1	1	2	2	8	5	6	5	1
1	3	5	1	2	2	2	2	6	4	6	3	4	7	5	5	2	2	2	8	7	6	5	2
1	3	5	1	2	3	4	3	5	6	7	6	5	7	5	5	2	2	2	8	5	6	4	2
1	3	5	1	1	1	1	1	7	1	1	1	1	1	1	1	1	2	2	8	5	6	5	1
1	3	5	1	2	2	2	2	7	4	6	5	5	7	5	6	2	2	2	8	6	6	5	2
1	3	5	1	2	3	4	2	3	3	7	3	4	7	4	3	2	2	2	8	5	6	4	2

pr_sc	se_sc	he_fa	he_vi	deadfld	deadhaz	cicat	drycat	borocat	rabcat	auscat	bamcat	sand	age	p81den	p92den	popdif	er87ar	er87hm	er88ar	er88hm	er8992a	er8992h	humcul
1	1	1	1	1	1	4	2	3	5	5	2	5	4	1	1	3	1	1	1	1	1	1	1
3	6	7	2	2	3	4	2	3	5	5	2	4	7	5	5	5	2	2	2	2	2	2	5
3	6	6	2	2	3	4	2	3	5	6	2	3	7	7	7	1	2	2	2	2	2	2	7
1	1	1	1	1	1	4	2	3	5	6	2	5	4	1	1	3	1	1	1	1	1	1	1
4	7	7	2	2	3	4	2	3	5	6	2	5	7	6	7	5	2	2	2	2	2	2	7
2	7	7	2	2	3	4	2	3	6	6	2	6	4	2	3	4	2	2	2	2	2	2	3

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area	Square meter
Perimeter	Pereimeter	Meter
Gsurvey_	Internal Id	
Gsurvey_id	User id	
Geocode	Geocode (Division Code+ District Code+ Thanacode + Union code +Mouza code)	
Mauzacod		
Reliable		
Numpolys		
Thanacod	Unique code	
Shade		
Survey		
Polyin		
Char	Different Type of Char (1 = Island char, 2 = Attached Char, 3 = Detached Mainland, 4 = Unprotected Main land, 5 = Submerged, 6 = No data recorded)	
Cty_bank		
Reach		
Po_mi	Percent of Permanent out-Migration	Percent
Pi_mi	Percent of seasonal in - Migration	Percent
So_mi	Percent of seasonal Out - Migration	Percent
Si_mi	Percent of seasonal in - Migration	Percent
Pcul	Portion of Land Cultivation	Percent
Lg_dry	Density of Large Livestock to dryseason land area	Animals/Sq km area
Lg_hhld		
SI_dry	Density of Large Livestock to dryseason land area	Animals/Sq km area
Poul	Poultry ownership	
Boat_m	Mechanised boat	Number
Boat_nm	Non-mechanised boat	Number
Kutch	Katcha household	Percent
Shel		
Ext87	Peak flood extent 1987	

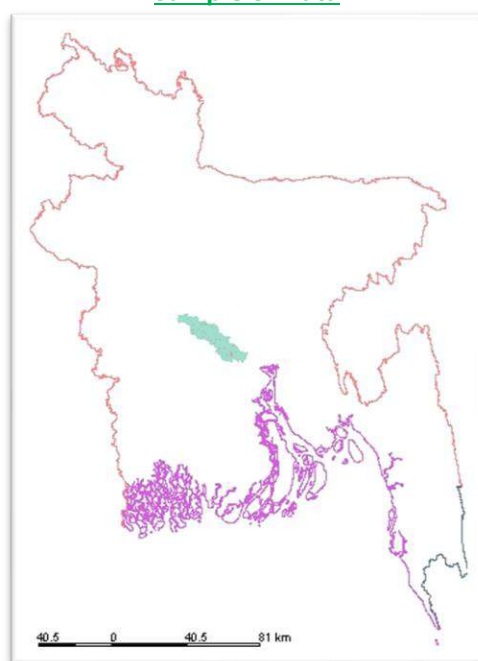
FIELD_NAME	FIELD_DESC	UNIT
Dur87	Duration of peak flood extent 1987	
Ext88	Peak flood extent 1988	
Dur88	Duration of peak flood 1988	
Ext8992	Peak flood extent 1989 - 1992	
Dur8992	Duration of peak flood 1989 - 1992	
Hf87	House flooded in 1987	Percent
Hd87	House Destroyed by flood 1987	Percent
Hf88	House flooded in 1988	Percent
Hd88	House destroyed in 1988	Percent
Hf8992	House flooded during 1989-1992	Percent
Hd8992	House destroyed by flood 1989-1992	Percent
Pr_sc	Primary educational facilities	
Se_sc	Secondary Education facilities by Mauza	
He_fa	Health facilities by mauza	
He_vi	Last visit by health worker	
Deadfld		
Deadhaz		
Cicat	Cropping intensity	Percent
Drycat	Dry land crop	Percent
Borocat	Area covered by Borocrop	
Rabcat		
Auscat		
Bamcat		
Sand	Extent of sandy soil	Percent
Age		
P81den	Population density distribution	Persons/Sq. km
P92den	Population density distribution	Persons/Sq. km
Popdif	Population density between 1981-1991	
Er87ar	Area eroded in 1987	Percent
Er87hm	Households erodedin 1987	Percent
Er88ar	Area eroded in 1988	Percent
Er88hm	Households erodedin 1988	Percent
Er8992a	Area eroded during 1989 to 1992	Percent
Er8992h	Household eroded during 1989-1992	
Humcul		

Name of Data layer: **Char Land Information of Padma River**

Metadata

Data Type	Spatial
Abstract	The dataset is the output of physical and human environment study conducted over the charlands of Padma river in 1993.
Quality	The quality of the summary output dataset largely depends on the survey method, accuracy of data processing and compiling etc.
Completeness	The study covers surveyed charlands of the Padma river.
History of the dataset	The dynamic physical and human environment of riverine charlands study was conducted jointly by FAP16 (Flood Action Plan), the environmental study and FAP19, the Geographic Information System, and both was performed by ISPAN (Irrigation Support Project for Asia and the Near East) with financial assistance of USAID under the Bangladesh Flood Action Plan (FAP) in 1992-93. This dataset depicts the socio-economic status of the charlands of Padma river.
Purpose of production	The study was conducted with a view to make an inventory of resources, people and infrastructures of the charlands, for collecting additional information on hazards, using Satellite images to analyse physical changes and land use and integrating this anal
Process description	NWRD stored this dataset without any further modification.

Sample of Data



Attribute Table

area	perimeter	gsurvey_	gsurvey_id	geocode	mauzacod	reliable	numpolys	thanacod	shade	survey
2278127	7319.761	2	1021	808853874	874		1	8088	74	1
5539310	14446.43	3	1030	808853120	120		1	8088	74	1
4584355	12299.58	4	1032	808853768	768		1	8088	74	1
2855849	8184.53	5	1036	808853366	366		1	8088	74	1
2086958	6682.349	6	1037	808853869	869		1	8088	74	1
2771614	7838.501	7	1038	808853748	748		1	8088	74	1

polyin	char	cty_bank	reach	po_mi	pi_mi	so_mi	si_mi	pcul	lg_dry	lg_hhld	sl_dry	poul	boat_m	boat_nm	kutch	shel	ext87	dur87	ext88	dur88	ext8992	dur8992	hf87
1	3	5	1	1	1	1	1	7	1	1	1	1	1	1	1	1	2	2	8	5	6	5	1
1	3	5	1	2	2	2	2	6	4	6	3	4	7	5	5	2	2	2	8	7	6	5	2
1	3	5	1	2	3	4	3	5	6	7	6	5	7	5	5	2	2	2	8	5	6	4	2
1	3	5	1	1	1	1	1	7	1	1	1	1	1	1	1	1	2	2	8	5	6	5	1
1	3	5	1	2	2	2	2	7	4	6	5	5	7	5	6	2	2	2	8	6	6	5	2
1	3	5	1	2	3	4	2	3	3	7	3	4	7	4	3	2	2	2	8	5	6	4	2

pr_sc	se_sc	he_fa	he_vi	deadfld	deadhaz	cicat	drycat	borocat	rabcat	auscat	bamcat	sand	age	p81den	p92den	popdif	er87ar	er87hm	er88ar	er88hm	er8992a	er8992h	humcul
1	1	1	1	1	1	4	2	3	5	5	2	5	4	1	1	3	1	1	1	1	1	1	1
3	6	7	2	2	3	4	2	3	5	5	2	4	7	5	5	5	2	2	2	2	2	2	5
3	6	6	2	2	3	4	2	3	5	6	2	3	7	7	7	1	2	2	2	2	2	2	7
1	1	1	1	1	1	4	2	3	5	6	2	5	4	1	1	3	1	1	1	1	1	1	1
4	7	7	2	2	3	4	2	3	5	6	2	5	7	6	7	5	2	2	2	2	2	2	7
2	7	7	2	2	3	4	2	3	6	6	2	6	4	2	3	4	2	2	2	2	2	2	3

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area	Square meter
Perimeter	Pereimeter	Meter
Gsurvey_	Internal Id	
Gsurvey_id	User id	
Geocode	Geocode (Division Code+ District Code+ Thanacode + Union code +Mouza code)	
Mauzacod		
Reliable		
Numpolys		
Thanacod	Unique code	
Shade		
Survey		
Polyin		
Char	Different Type of Char (1 = Island char, 2 = Attached Char, 3 = Detached Mainland, 4 = Unprotected Main land, 5 = Submerged, 6 = No data recorded)	
Cty_bank		
Reach		
Po_mi	Percent of Permanent out-Migration	Percent
Pi_mi	Percent of seasonal in - Migration	Percent
So_mi	Percent of seasonal Out - Migration	Percent
Si_mi	Percent of seasonal in - Migration	Percent
Pcul	Portion of Land Cultivation	Percent
Lg_dry	Density of Large Livestock to dryseason land area	Animals/Sq km area
Lg_hhld		
Sl_dry	Density of Large Livestock to dryseason land area	Animals/Sq km area
Poul	Poultry ownership	
Boat_m	Mechanised boat	Number
Boat_nm	Non-mechanised boat	Number
Kutch	Katcha household	Percent
Shel		
Ext87	Peak flood extent 1987	
Dur87	Duration of peak flood extent 1987	

FIELD_NAME	FIELD_DESC	UNIT
Ext88	Peak flood extent 1988	
Dur88	Duration of peak flood 1988	
Ext8992	Peak flood extent 1989 - 1992	
Dur8992	Duration of peak flood 1989 - 1992	
Hf87	House flooded in 1987	Percent
Hd87	House Destroyed by flood 1987	Percent
Hf88	House flooded in 1988	Percent
Hd88	House destroyed in 1988	Percent
Hf8992	House flooded during 1989-1992	Percent
Hd8992	House destroyed by flood 1989-1992	Percent
Pr_sc	Primary educational facilities	
Se_sc	Secondary Education facilities by Mauza	
He_fa	Health facilities by mauza	
He_vi	Last visit by health worker	
Deadfld		
Deadhaz		
Cicat	Cropping intensity	Percent
Drycat	Dry land crop	Percent
Borocat	Area covered by Borocrop	
Rabcat		
Auscat		
Bamcat		
Sand	Extent of sandy soil	Percent
Age		
P81den	Population density distribution	Persons/Sq. km
P92den	Population density distribution	Persons/Sq. km
Popdif	Population density between 1981-1991	
Er87ar	Area eroded in 1987	Percent
Er87hm	Households erodedin 1987	Percent
Er88ar	Area eroded in 1988	Percent
Er88hm	Households erodedin 1988	Percent
Er8992a	Area eroded during 1989 to 1992	Percent
Er8992h	Household eroded during 1989-1992	
Humcul		

Name of Data layer: **Average Crop Yield and Input 1992**

Metadata

Data Type	PDF file
Abstract	This data layer provides information of average yield of main crops and inputs i.e. seeds, fertilizer, manure, agro-chemical fertilizer, manpower, and farm power engaged for crop production.
Quality	The data layer is an estimate, derived from the base data collected from different organizations. Therefore its quality depends on the base data and estimation method.
Completeness	The data layer covers whole country.
History of the dataset	NWMP has estimated the average yield and crop input following the 'Guidelines for Project Assessment' (GPA) of FPCO under Flood Action Plan, May1992.
Purpose of production	This data layer was developed to analyze the social and economic setting of National Water Management Plan and to provide the data to various development agencies, research organizations and professionals for financial and economic feasibility studies.
Process description	NWRD has stored the data layer as it was collected from NWMP.

Sample of Data

Crop	YIELD (t/ha)		Seed (kg)	Fertiliser (kg)			Manure (kg)	Agro-chemicals (kg)	Labour-days	Farm power (2) (ox-pair days)
	Main crop	By-product		Urea	TSP	MOP				
<u>Paddy:</u>										
B Aus	1.25	2.5	85	50	0	0	1,000	0	110	30
HYV T Aus (Irrig.)	2.75	2.75	30	100	50	10	1,000	0.5	170	30
B (DW) Aman	1.5	3	85	50	0	0	300	0	100	30
LT Aman	2.2	4.4	30	80	25	5	500	0.25	130	35
HYV T Aman:										
- Rainfed	3.25	3.25	30	150	65	20	500	1	165	35
- Irrigated	3.75	3.75	30	175	70	25	500	1	180	35
HYV Boro	4.5	4.5	30	210	90	30	500	1	200	32
Hybrid Rice	5.5	4.5	15	210	90	30	500	1	215	32

Name of Data layer: **Average Harvest-time Crop Prices**

Metadata

Data Type	PDF file
Abstract	Divisional average (1994-95 to 1998-99) of harvest-time crop price, at constant 1998-99 prices (Tk per 100 kg) calculated using the GDP deflators according to BBS statistics.
Quality	The data layer is the result of analysis performed over agricultural data collected from Department of Agricultural Marketing. Therefore its quality depends on the base data and estimation method and quality.
Completeness	The analysis covers six divisions.
History of the dataset	NWMP has analysed the data which has been collected from Department of Agricultural Marketing.
Purpose of production	This data layer was developed to analyse the social and economic settings of National Water Management Plan and to provide it to various development agencies, research organizations and professionals for financial and economic feasibility studies.
Process description	NWRD has stored the data layer as it was collected from NWMP.

Sample of Data

Year	Rice (2)					Wheat (2)				
	International Parity Price (Thai Long Grain 5% broken, parboiled, CIF Bangladesh)	Open Market Price, Parboiled		Open Market Sales, Urban		International Parity Price (USA Hard Red Wheat, CIF Bangladesh)	Normal Open Market Price		Open Market Sales, Urban	
		US\$/Tonne	% of Int. Parity Price	US\$/Tonne	% of Int. Parity Price		US\$/tonne	% of IFP	US\$/tonne	% of IFP
July-Dec 1993	259	216	83	291	112	189	141	75	180	95
1994	279	279	100	265	95	200	164	82	144	72
1995	336	318	95	273	81	227	197	87	179	79
1996	360	269	75	266	74	252	200	79	190	76
1997	330	235	71	256	77	203	200	98	209	103

Name of Data layer: **Comparison of International Parity Price**

Metadata

Data Type	PDF file
Abstract	Comparison of International Parity (IP) Prices and Bangladesh market prices for Rice and Wheat for July 1993 to July 1998 period.
Quality	The data layer was generated on the basis of UN Rate of Exchange in Bangladesh.
Completeness	The comparison was done only for rice and wheat price.
History of the dataset	The data layer was generated by World Food Programme (WFP) and published in Bangladesh Food Grain Digest. NWMP used the data layer in Investment Criteria and Economic Pricing analysis.
Purpose of production	This data layer has been developed to analyze the social and economic setting of National Water Management Plan and to provide the data layer to various development agencies, research organizations and professionals.
Process description	NWRD has stored the data layer as it was collected from NWMP.

Sample of Data

Year	Rice (2)					Wheat (2)				
	International Parity Price (Thai Long Grain 5% broken, parboiled, CIF Bangladesh)	Open Market Price, Parboiled		Open Market Sales, Urban		International Parity Price (USA Hard Red Wheat, CIF Bangladesh)	Normal Open Market Price		Open Market Sales, Urban	
		US\$/Tonne	% of Int. Parity Price	US\$/Tonne	% of Int. Parity Price		US\$/tonne	% of IFP	US\$/tonne	% of IFP
July-Dec 1993	259	216	83	291	112	189	141	75	180	95
1994	279	279	100	265	95	200	164	82	144	72
1995	336	318	95	273	81	227	197	87	179	79
1996	360	269	75	266	74	252	200	79	190	76
1997	330	235	71	256	77	203	200	98	209	103

Metadata

Data Type	PDF file
Abstract	The data layer presents estimated costs and returns (economic and financial) for different food grains at average yields (Tk per ha at 1998/99 constant prices).
Quality	The data layer has been estimated on the basis of different sources. Therefore, its' quality depends on the base data and estimation method.
Completeness	The estimation has been done for major crops.
History of the dataset	NWMP has estimated the cost and return on the basis of 'Guidelines for Project Assessment' of FPCO under Flood Action Plan, May 1992.
Purpose of production	This data layer has been developed to analyze the social and economic setting of National Water Management Plan and to provide the data layer to various development agencies, research organizations.
Process description	NWRD has stored the data layer as it was collected from NWMP.

Sample of Data

Item	Unit	Quantity	INPUT AND OUTPUT PRICES				COSTS AND RETURNS PER HECTARE			
			Present		Projected		Present		Projected	
			Financial	Economic	Financial	Economic	Financial	Economic	Financial	Economic
GROSS RETURNS										
- Paddy grain	tonne	1.25	6,290	6,290	5,870	5,870	7,863	7,863	7,338	7,338
- Paddy straw	tonne	2.5	1000	900	1000	900	2,500	2,250	2,500	2,250
Total			7,290	7,190	6,870	6,770	10,363	10,113	9,838	9,588

Name of Data layer: **Crop Input Prices (Assumed)**

Metadata

Data Type	PDF file
Abstract	Farm-gate level crop input prices (financial & economic) assumed at 1998 constant prices.
Quality	The data layer has been estimated on the basis of different sources. Therefore, the quality of the dataset depends on the base data and estimation method.
Completeness	The estimate has been prepared for major crops.
History of the dataset	NWMP has estimated the prices on the basis of several publications. These are, a report titled 'Estimation of Economic Prices of Selected Products for Use in Valuation of Water Management Projects of Bangladesh', by Shahabuddin / IA Syed; the 1994/95 and 1995/96 National Minor Irrigation Census; BBS wage rate statistics and the Kalni-Kushiyara, South West Area Water Resource Development Project and IFAD Small holder Crop Improvement Project Reports, all published in 1998.
Purpose of production	This data layer was developed to analyze the social and economic setting of National Water Management Plan and to provide the data to various development agencies, research organizations and professionals for financial and economic feasibility studies.
Process description	NWRD has stored the data layer as it was collected from NWMP.

Sample of Data

Item	Financial price	Adjustment factor	Economic price
1. Seed and planting material (Tk / kg) (1)			
Paddy :			
- Local Aus	11	1.0	11
- HYV Aus	11	1.0	11
- Local and B Aman	13	1.0	13
- HYV Aman	13	1.0	13
- Local Boro	11	1.0	11
- HYV Boro	11	1.0	11

Name of Data layer: **Crop Input Prices at Farm-gate level 1998-99**

Metadata

Data Type	PDF file
Abstract	Farm-gate level crop input prices (financial & economic) assumed at 1998/99 constant prices.
Quality	The data layer has been estimated on the basis of different sources. So, the quality of the dataset depends on the base data and estimation method.
Completeness	The estimate has been prepared for major crops.
History of the dataset	NWMP has estimated the prices on the basis of several publications. These are, a report titled 'Estimation of Economic Prices of Selected Products for Use in Valuation of Water Management Projects of Bangladesh', by Shahabuddin / IA Syed; the 1994/95 and 1995/96 National Minor Irrigation Census; BBS wage rate statistics and the Kalni-Kushiyara, South West Area Water Resource Development Project and IFAD Smallholder Crop Improvement Project Reports, all published in 1998.
Purpose of production	This data layer has been developed to analyze the social and economic setting of National Water Management Plan and to provide the data to various development agencies, research organizations and professionals for financial and economic feasibility studies.
Process description	NWRD has stored the data layer as it was collected from NWMP.

Sample of Data

Item	Financial price	Adjustment factor to economic prices	Economic price
1. Seed and planting material (Tk / kg) (1)			
Paddy :			
- Local Aus	11	1.0	11
- HYV Aus	11	1.0	11
- Local and B Aman	13	1.0	13
- HYV Aman	13	1.0	13
- Local Boro	11	1.0	11
- HYV Boro	11	1.0	11
Wheat	14	1.0	14
Jute	40	0.9	36
Sugarcane	1.5	1.0	1.5
Pulses (masur)	30	1.0	30
Oilseeds (mustard)	25	1.0	25
Potatoes	14	0.9	13
Spices (onions)	600	0.9	540
Vegetables (radish)	300	0.9	270

Name of Data layer: **Crop Output Prices at Farm-gate**

Metadata

Data Type	PDF file
Abstract	Farm-gate level crop output prices (financial & Economic) assumed at 1998 constant prices.
Quality	The data layer is estimation, based on different factors. Therefore, its' consistency depends on the base data and estimation method.
Completeness	The estimation has been done for major crops.
History of the dataset	NWMP has estimated the output prices on the basis of national average harvest time prices for 1994/95 - 1995/96, from the BBS 1997 Annual Statistical Yearbook, adjusted by the GDP Deflator to derive the values at 1998 / 99 constant prices.
Purpose of production	This data layer has been developed to analyze the social and economic setting of National Water Management Plan and to provide the data to various development agencies, research organizations and professionals for financial and economic feasibility studie
Process description	NWRD has stored the data layer as it was collected from NWMP.

Sample of Data

Item	PRESENT		PROJECTED	
	Financial (1)	Economic	Financial (4)	Economic
Paddy : Import parity				
Local Aus	6,290	6,290	5,870	5,870
HYV Aus	6,500	6,500	6,060	6,060
Local Aman	7,710	7,710	7,190	7,190
B Aman	7,710	7,710	7,190	7,190
HYV Aman	7,800	7,800	7,280	7,280
Local Boro	6,410	6,410	5,980	5,980
HYV Boro	6,480	6,480	6,040	6,040
Overall weighted average; (see Section 3.2.5)	7,100	7,100	6,620	6,620

Name of Data layer: **Crop Prices (by Product)**

Metadata

Data Type	PDF file
Abstract	Prices of five crops recorded in the NMIC farmer surveys for 1994/1995 and 1995/1996.
Quality	Quality of the data layer depends on the quality of survey conducted by NMIC.
Completeness	The prices have been recorded for 5 crops (HYV Boro, T Aman HYV, T Aman Local, Wheat and Jute).
History of the dataset	At first financial price of the crops were estimated by Dr Q Shahabuddin and I A Sayed. Recently crop (by product) prices have been recorded through the farm surveys for annual National Minor Irrigation Census and have been published in NMIC Census Report for 1994/1995 and 1995/1996. The prices have been inflated to a 1999/98 constant price-basis by applying the Agricultural Products Wholesale Price Index.
Purpose of production	This data layer has been developed to analyze the social and economic setting of National Water Management Plan and to provide the data to various development agencies, research organizations and professionals for financial and economic feasibility studie
Process description	NWRD has stored the data layer as it was collected from NWMP.

Sample of Data

Crop	1994/95	1995/96	Average at 1998/99 prices (2)
HYV Boro	760 (398)	740 (453)	880
T Aman HYV	570 (182)	630 (267)	700
T Aman Local	810 (75)	930 (29)	1,020
Wheat	930 (46)	1,010 (40)	1,140
Jute	1,000 (73)	1,150 (59)	1,260

Metadata

Abstract	Present and projected economic and financial prices of crop at farm-gate at 1997/98 constant prices.
Quality	The estimation is based on different factors. Therefore its quality depends on the base data and estimation method.
Completeness	Estimation has been done only for four crops.
History of the dataset	NWMP estimated the present and projected economic and financial price of farm level crop at 1997/98 constant price on the basis world market prices of agricultural commodities derived from World Bank Commodity Price Projection of August 1998 at 1990 constant price terms and a guideline titled 'Estimation of Economic Prices of Selected Products for Use Valuation of Water Management Projects in Bangladesh,' published in March 1998 by Dr.Q Shahabuddin and Iqbal Ahmed.
Purpose of production	This data layer has been developed to analyse the social and economic settings of National Water Management Plan and to provide the data to various development agencies, research organizations and professionals for financial and economic feasibility studi
Process description	NWRD has stored the data layer as it was collected from NWMP

Sample of Data

Crop	Pricing basis	Present		Projected	
		Financial	Economic	Financial	Economic
Paddy	Import parity	7,689	7,725	7,172	7,205
	Export parity	4,776	5,025	4,260	4,505
Wheat	Import parity	8,654	8,629	7,990	7,962

Name of Data layer: **Economic Hardship (64 Districts)**

Metadata

Data Type	Spatial
Abstract	The data layer presents 64 district wise economic hardship condition of Bangladesh.
Quality	Quality and reliability of this data layer depend on the data generation and compilation procedure of the source organization.
Completeness	The data layer covers 64 districts.
History of the dataset	Bangladesh Bureau of Statistics (BBS) published this data layer in 1991.
Purpose of production	To observe district wise general economic hardship condition of Bangladesh and to use this data in different socio-economic analysis and planning purposes.
Process description	NWRD has stored the data layer in an arranged way.

Sample of Data

District	Distcode	Perhheh	Perhhneh	Lvlehtemp	Lvlehpro
BAGERHAT	1	45.31	54.69	35.73	64.27
BANDARBAN	3	26.4	73.6	15.6	84.4
BARGUNA	4	57	43	37.8	62.2
BARISAL	6	45.89	54.11	27.45	72.55
BHOLA	9	42.2	57.8	19.8	80.2
BOGRA	10	54.4	45.6	33	67
BRAHAMANBARIA	12	34.73	65.27	19.36	80.64
CHANDPUR	13	24	76	18.2	81.8
CHITTAGONG	15	29	71	19.8	80.2
CHUADANGA	18	53.4	46.6	28.6	71.4

Bundle Information (Data Field Description and Unit)

FIELD	FIELDNAME
District	District Name
Perhheh	Percentage of HH having Economic Hardship
Perhhneh	Percentage of HH having No Economic Hardship
Lvlehtemp	Percentage of Level of Economic Hardship Temporary
Lvlehpro	Percentage of Level of Economic Hardship Prolonged
Distcode	District Code

Name of Data layer: **Electricity Generation by IPPs**

Metadata

Data Type	PDF file
Abstract	Recent Prices quoted for Electricity Generation by IPPs (Independent Power Producer) and other sources.
Quality	The data layer complies with the source.
Completeness	The data layer covers Bangladesh and some other countries.
History of the dataset	NWMP has collected the data from Mott MacDonald Power Division and Bangladesh newspapers.
Purpose of production	To estimate the recent prices quoted for electricity generation by IPPs and compare with the other countries.
Process description	NWRD has stored the data as it was collected from NWMP

Sample of Data

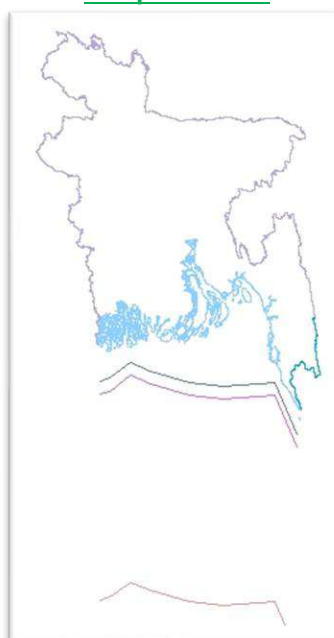
Plant	Tk / kWh at 1998/99 prices (1)
1. Khulna 110 MW barge - mounted plant	2.42
2. Haripur 300 MW combined cycle plant	1.17 – 1.59
3. Meghnaghat 300 MW power station	1.16 – 1.42
4. IPPs in India (gas-fired):	
- Potalganga, Maharashtra : 4.7 US cents / kWh	2.29
- Dabhol, Maharashtra : 5.2 cents / kWh	2.53
- Kanpur, Kerala, LNG-fuelled : 5.2 - 5.5 cents / kWh	2.68

Name of Data layer: **Exclusive Economic Zone of Bangladesh**

Metadata

Type of dataset	Spatial
Abstract	The limits of the sea declared by the Government b
Quality	The economic zone is based on the eight baseline points on 10 fathom contour.
Completeness	It covers the territorial water of the country ext
History of the dataset	The information has been extracted from Proclamation No. LT-I/3/74 of the Government of Bangladesh of 13 April 1974 of the territorial waters and maritime zones act no 26.
Purpose of production	The economic zone of the country has great importance on security regulations and right to take measures to control pollution in the high seas.
Process description	NWRD has collected this data layer from ICZMP and generate the line linking the eight base line points. The territorial waters is considered 12 nautical miles seaward and EEZ extending 200 nautical mile measured from the baselines.

Sample of Data



Attribute Table

id	descriptio	remarks
1	Exclusive Economic Zone	200 nautical miles from Baselin
3	Baseline/Low Water Line	10 fathom contour line
2	Limits of the Sea	12 nautical miles from Baseline

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Id	ID of Exclusive Economic Zone of Bangladesh given by NWRD	
Descriptio	Description of Exclusive Economic Zone of Bangladesh	
Remarks	Remarks	

Name of Data layer: **Export Parity Prices of Crops (Estimated)**

Metadata

Data Type	PDF file
Abstract	Present and projected Export parity prices of different crops estimated by NWMP.
Quality	The estimation is done based on different parameters. Therefore, its quality depends on the base data and estimation method.
Completeness	Estimation was performed for Jute and paddy.
History of the dataset	World Bank quoted the export prices from 1998 Commodity Price Projections given in 1990 constant price and adjusted by the MUV index to convert it to 1997-98 price basis. Later NWMP estimated the prices based on the commodities forecast by World Bank and a updated Guideline for Project Assessment carried out by Dr Q Shahabuddin and Iqbal Ahmed and adjusted to 1998/99 prices on the basis of the BBS GDP Deflator.
Purpose of production	This data layer has been developed to analyze the social and economic settings of National Water Management Plan and to provide the data to various development agencies, research organizations and professionals for financial and economic feasibility studi
Process description	NWRD has stored the data as it is collected from NWMP.

Sample of Data

Item	Unit	SCF(2)	Present		Projected	
			Financial	Economic	Financial	Economic
World Bank estimated price of rice(Thai 5%Brokens FOB Bangkok) (1)	US\$/t	-	307	307	284	284
Quality adjustment (see Section 3.2.2)		-	0.75	0.75	0.75	0.75
Export (FOB) price of Bangladesh rice in US\$	US\$/t	-	230	230	213	213
Exchange rate	Tk/\$	-	48.5	48.5	48.5	48.5
Export price FOB Bangladesh, in Taka	Tk/t		11,167	11,167	10,331	10,331
Port dues, storage, handling, transport etc from national/regional market to port (3)	Tk/t	0.9	1,752	1,577	1,752	1,577
Price of rice at national/regional market	Tk/t		9,415	9,590	8,579	8,754

Name of Data layer: **Export Parity Prices of Urea**

Metadata

Data Type	PDF file
Abstract	Present and projected Export parity prices of different crops estimated by NWMP.
Quality	The estimation is based on different parameters. Therefore, its quality depends on the base data and estimation method.
Completeness	The estimation has been done for urea.
History of the dataset	World Bank quoted the export prices from 1998 Commodity Price Projections given in 1990 constant price and adjusted by the MUV inflation index to convert it to 1997-98 price basis. Later NWMP estimated the prices based on the commodities forecast by World Bank and a updated Guideline for Project Assessment carried out by Dr Q Shahabuddin and Iqbal Ahmed and adjusted to 1998/99 prices on the basis of the BBS GDP Deflator.
Purpose of production	This data layer has been developed to analyze the social and economic setting of National Water Management Plan and to provide the data to various development agencies, research organizations and professionals for financial and economic feasibility studie
Process description	NWRD has stored the data as it was collected from NWMP.

Sample of Data

Item	Unit	SCF	Present		Projected	
			Financial	Economic	Financial	Economic
Bangladesh export price (taken as the same as the World Bank-quoted price, which is, bagged, FOB N W Europe) (1)	US\$/t	-	153	153	119	119
Exchange rate	Tk/\$	-	48.5	48.5	48.5	48.5
Bangladesh FOB price, in Taka	Tk/t	-	7,421	7,421	5,772	5,772
Port dues, storage, handling, transport etc between factory and FOB (2)	Tk/t	0.9	903	813	903	813
Price ex-factory	Tk/t		6,518	6,608	4,869	4,959
Transport and handling between local supplier and factory	Tk/t	0.9	500	450	500	450

Name of Data layer: **Foreign Exchange Rates**

Metadata

Data Type	PDF file
Abstract	The data layer presents historical foreign exchange rates (average value of US dollar in Taka) from 1971-72 to 2003-04.
Quality	The data layer has been stored by NWRD without any change.
Completeness	Data is available from 1971-72 to 2003-04.
History of the dataset	Bangladesh Bank produced the data.
Purpose of production	NWMP (National Water Management Plan) collected the data from Bangladesh Bank for studying the social and economic context of National Water Management Plan.
Process description	NWRD has collected the data from NWMP and organized it in an arranged way.

Sample of Data

Year	Taka -US\$ Average Exchange Rate
1971/72	7.30
1972/73	7.87
1973/74	7.96
1974/75	8.87
1975/76	15.05
1976/77	15.43
1977/78	15.12
1978/79	15.22
1979/80	15.49
1980/81	16.26

Name of Data layer: **Harvest-time Crop Prices**

Metadata

Data Type	PDF file
Abstract	Division wise average of 1994/95 to 1997/98 harvest time crop prices at current and constant prices.
Quality	The data quality depends on the base data and estimation method.
Completeness	Information is available for six divisions.
History of the dataset	The base data was collected by NWMP from Department of Agricultural Marketing. Later the crop price was estimated based on the 'Guidelines for Project Assessment ' of FPCO under Flood Action Plan, May1992. For the averages at constant 1997/98 prices, the prices in previous years have been inflated on the basis of the Wholesale Price Index for Agricultural Products, as a result of which the averages at current prices has been adjusted by a factor of 1.07 to convert them into the averages at constant 1997/98 prices.
Purpose of production	This data layer has been developed to analyze the social and economic setting of National Water Management Plan and to provide the data set to various development agencies, research organizations and professionals for financial and economic feasibility st
Process description	NWRD has stored the data as it was collected from NWMP.

Sample of Data

	DIVISIONS						AVERAGE at Current prices (1)	AVERAGE at Constant 1997/ 98 values (1)
	Dhaka	Rajshahi	Khulna	Barisal	Chittagong	Sylhet		
Paddy								
Local Aman	704	660	675	678	697	674	681	729
HYV Aman	715	666	687	667	707	699	690	738
Pajam Aman	783	723	745	NA	775	NA	756	809
Local Aus	568	568	577	551	568	NA	566	606
HYV Aus	595	576	585	566	577	NA	580	621
Local Boro	597	583	NA	NA	NA	577	586	627
HYV Boro	616	579	602	591	603	599	598	640

Name of Data layer: **Harvest-time Price at Current Prices**

Metadata

Data Type	PDF file
Abstract	This data layer contains the information of division wise average of 1994-95 to 1997 -98 harvest time crop prices at current and constant prices.
Quality	Quality of this data layer depends on the base data and the analysis method.
Completeness	The data layer covers some selected major crops.
History of the dataset	The data was collected from Department of Agricultural Marketing, NWMP has analyzed the data set following the 'Guidelines for project Assessment of FPCO,May,1992'
Purpose of production	This data layer has been developed to analyze the social and economic setting of National Water Management Plan and to provide the data set to various development agencies, research organizations and professionals.
Process description	NWRD has stored the data as it was collected from NWMP.

Sample of Data

Crop	Division	1994/95	1995/96	1996/97	1997/98	1998/99
Aman- (Local)	Dhaka	764	764	558	732	923
	Rajshahi	722	720	524	667	883
	Khulna	718	725	556	703	860
	Barisal	709	760	555	688	845
	Chittagong	742	744	569	744	816
	Sylhet	704	724	569	697	847
	Average	729	739	555	705	872

Name of Data layer: **Harvest-time Prices at Constant prices**

Metadata

Data Type	PDF file
Abstract	This data layer contains the information of harvest-time prices of some selected crops at local markets at constant prices from 1994-95 to 1998-99.
Quality	Quality of this data layer depends on the base data and the analysis method.
Completeness	The analysis was done for six division and some selected major crops.
History of the dataset	This data was collected from Department of Agricultural Marketing. NWMP analyzed the data set following the 'Guidelines for project Assessment of FPCO, May, 1992' and used the GDP deflators from BBS statistics to convert the current prices to 1998-99 constant prices.
Purpose of production	This data layer has been developed to analyze the social and economic setting of National Water Management Plan and to provide the data set to various development agencies, research organizations and professionals.
Process description	NWRD has stored the data as it was collected from NWMP.

Sample of Data

Crop	Division	1994/95	1995/96	1996/97	1997/98	1998/99	Average
Aman (Local)	Dhaka	923	874	627	788	923	827
	Rajshahi	872	824	589	718	883	777
	Khulna	867	830	625	757	860	788
	Barisal	857	870	624	741	845	787
	Chittagong	896	851	639	801	816	801
	Sylhet	851	829	639	750	847	783
	Average	881	846	624	759	872	796

Name of Data layer: **High Crop Yield and Input**

Metadata

Data Type	PDF file
Abstract	The data layer contains high crop yields and input assumption for cultivation.
Quality	Quality of this data layer depends on the approach and assumptions made to develop the data set.
Completeness	The assumption has been done for major crops.
History of the dataset	The data has been collected by NWMP from Agricultural Marketing Department and input assumption was done according to the updated 'Guidelines for Project Assessment' published in a report titled 'Estimation of Economic Prices of Selected Products for Use in Valuation of Water Management Projects of Bangladesh' in March by Dr Q Shahabuddin & Iqbal Ahmed Sayed.
Purpose of production	This data layer was developed to analyze the social and economic setting of National Water Management Plan and to provide the data set to various development agencies, research organizations and professionals for financial and economic feasibility studies
Process description	NWRD has stored the data as it was collected from NWMP.

Sample of Data

Crop	YIELD (t/ha)		Seed (kg)	Fertiliser (kg)			Manure (kg)	Agro-chemicals (kg)	Labour-days	Farm power (1) (ox-pair days)
	Main crop	By-product		Urea	TSP	MOP				
<u>Paddy:</u>										
B Aus	1.75	3.5	85	65	10	0	1,000	0	125	30
HYV T Aus (Irrig.)	3.5	3.5	30	140	70	15	1,000	1	185	30
B (DW) Aman	1.9	3.8	85	65	10	0	500	0	115	30
LT Aman	2.75	5.5	30	100	50	10	1,000	0.5	145	35
HYV T Aman:										
- Rainfed	4.25	4.25	30	200	85	30	1,000	1.5	190	35
- Irrigated	4.75	4.75	30	240	95	35	1,000	1.5	200	35
HYV Boro	5.5	5.5	30	295	125	50	1,000	1.5	220	32

Name of Data layer: **Human Development Index**

Metadata

Data Type	Tabular
Abstract	The data layer contains the information of 64 district wise ranking for standard of life; in terms of Human Development Index which has been calculated based on basic parameters like life expectancy, adult literacy rate, real GDP per capita etc.
Title	Human Development Index
Quality	The accuracy and consistency of this data layer depends on the base data and the indexing method of the source organization.
Completeness	The data layer presents information for 64 districts.
History of the dataset	United Nations Development Programme (UNDP) generated this data layer in 1997.
Purpose of production	To realize the living standards of the people of the country and to compare with other countries
Process description	NWRD has stored the data as it was collected from NWMP.

Sample of Data

Distname	Distcode	Lfexp	Adlirate	Meanyrsch	Gdp	Hdival	Hdirank
BAGERHAT	1	66	51	3.2	1427	0.44	2
BARGUNA	4	59	47	2.9	1406	0.39	9
BARISAL	6	54	49	3	1359	0.36	20
CHANDPUR	13	69	44	2.5	1287	0.43	4
CHITTAGONG	15	57	48	3.5	1455	0.39	10
COMILLA	19	63	39	2.4	1287	0.38	13
DHAKA	26	63	60	4.8	1418	0.45	1
FENI	30	65	47	2.6	1104	0.4	7
GOPALGANJ	35	64	44	2.5	1377	0.41	5
JHALOKATI	42	58	56	3.3	1359	0.4	6

Bundle Information (Data Field Description and Unit)

FIELD	FIELDNAME
Distname	District Name
Distcode	District Code
Lfexp	Life expectancy (Years) 1992
Adlirate	Adult Literacy Rate (%) 1994
Meanyrsch	Mean years of schooling 1991
Gdp	Real GDP per capita (PPP\$) 1994
Hdival	Human Development Index Value
Hdirank	Human Development Index Rank

Metadata

Data Type	PDF file
Abstract	Present (1994-1995) and projected (2005-2010) import parity prices of fertilizers at (1997/98) constant price.
Quality	The estimation is based on different sources and guidelines, therefore its quality depends on the base data and estimation method.
Completeness	The data layer includes information about Urea, TSP and Muriate of Potash.
History of the dataset	World Bank quoted the Commodity Price Projections from 1996 to 1998 in July 1999 at 1990 constant price and converted the prices onto 1998/99 basis. NWMP estimated the import parity prices of fertilizers using the commodity price projection following a guideline titled 'Estimation of Economic Prices of Selected Products for Use Valuation of Water Management Projects in Bangladesh,' published in March 1998 by Dr.Q Shahabuddin and Iqbal Ahmed and adjusted to 1998/99 on the basis of the BBS GDP Deflator.
Purpose of production	This data layer has been developed to analyse the social and economic setting of National Water Management Plan and to provide the dataset to various development agencies, research organisations and professionals for financial and economic feasibility stud
Process description	NWRD has stored the data as it was collected from NWMP.

Sample of Data

Item	Unit	SCF(2)	Present		Projected	
			Financial	Economic	Financial	Economic
World Bank estimated price (bagged, FOB N W Europe) (1)	US\$/t	-	150	150	119	119
Freight and insurance	US\$/t	-	30	30	30	30
Import price CIF Bangladesh, in US\$	US\$/t	-	180	180	149	149
Exchange rate	Tk/\$	-	48.5	48.5	48.5	48.5
Import price CIF Bangladesh, in Taka	Tk/t	-	8,730	8,730	7,227	7,227
Port dues, storage, handling, transport etc from port to regional distribution point (3)	Tk/t	0.9	903	813	903	813
Price at regional distribution point	Tk/t		9,633	9,543	8,130	8,039
Transport and handling between local supplier and regional distribution point	Tk/t	0.9	500	450	500	450

Name of Data layer: **Import Parity Prices of Foodgrains**

Metadata

Data Type	PDF file
Abstract	Present (1994-1995) and projected (2005-2010) import parity prices of food grains at (1998/99) constant price.
Quality	The estimation based is based on different sources and guidelines, therefore its quality depends on the base data and estimation method.
Completeness	The data layer includes information about paddy, wheat and sugarcane.
History of the dataset	World Bank quoted the Commodity Price Projections from 1996 to 1998 in July 1999 at 1990 constant price and converted the prices onto 1998/99 basis. NWMP estimated the import parity prices of foodgrains using the commodity price projection following a guideline titled 'Estimation of Economic Prices of Selected Products for Use Valuation of Water Management Projects in Bangladesh,' published in March 1998 by Dr.Q Shahabuddin and Iqbal Ahmed and adjusted to 1998/99 on the basis of the BBS GDP Deflator.
Purpose of production	This data layer has been developed to analyse the social and economic setting of National Water Management Plan and to provide the dataset to various development agencies, research organisations and professionals for financial and economic feasibility stud
Process description	NWRD has stored the data as it was collected from NWMP.

Sample of Data

Item	Unit	SCF(2)	Present		Projected	
			Financial	Economic	Financial	Economic
World Bank estimated price (US No.1Hard Red Winter, export price)(1)	US\$/t	-	163	163	145	145
Quality adjustment (see Section 3.2.2)		-	0.80	0.80	0.80	0.80
Adjusted FOB price	US\$/t	-	130	130	116	116
Freight and insurance (see Table 2)	US\$/t	-	43	43	43	43
Import price CIF Bangladesh, in US\$	US\$/t	-	173	173	159	159
Exchange rate	Tk/\$	-	48.5	48.5	48.5	48.5
Import price CIF Bangladesh, in Taka	Tk/t	-	8,410	8,410	7,712	7,712
Port dues, storage, handling, transport etc from port to national/regional market (3)	Tk/t	0.9	1,752	1,577	1,752	1,577
Price at national/regional market	Tk/t		10,162	9,987	9,464	9,288

Name of Data layer: **Import Parity Prices of Fuel**

Metadata

Data Type	PDF file
Abstract	This data layer contains present (1996 to 1998) and projected (2005-2010) import parity prices of diesel fuel (1998/99 constant prices) and import parity financial price of diesel fuel at different crude oil prices (1998/99 prices).
Quality	This estimation is based on different sources and guidelines, therefore its quality depends on the base data and estimation method.
Completeness	The data layer includes information about Diesel Fuel and Diesel Fuel at Different Crude Oil Prices.
History of the dataset	World Bank quoted the Commodity Price Projections from 1996 to 1998 in July 1999 at 1990 constant price and converted the prices onto 1998/99 basis. NWMP estimated the import parity prices of fuel using the commodity price projection following a guideline titled 'Estimation of Economic Prices of Selected Products for Use Valuation of Water Management Projects in Bangladesh,' published in March 1998 by Dr.Q Shahabuddin and Iqbal Ahmed and adjusted to 1998/99 on the basis of the BBS GDP Deflator.
Purpose of production	This data layer was developed to analyse the social and economic setting of National Water Management Plan and to provide the dataset to various development agencies, research organisations and professionals for financial and economic feasibility studies.
Process description	NWRD has stored the data as it was collected from NWMP.

Sample of Data

Item	Unit	SCF(2)	Present		Projected	
			Financial	Economic	Financial	Economic
World Bank estimated price of crude oil (average spot price FOB) (1)	US\$/barrel	-	17	17	15	15
Equivalent price per tonne (7.3 bbl/tonne)	US\$/t		124	124	110	110
Adjustment factor (ratio of diesel fuel price to crude oil price) (3)			1.5	1.5	1.5	1.5
Price per tonne of diesel fuel	US\$/t		186	186	164	164
Insurance and freight	US\$/t		25	25	25	25
Diesel fuel price CIF Bangladesh, in US\$	US\$/t	-	211	211	189	189
Exchange rate	Tk/\$	-	48.5	48.5	48.5	48.5
Import price CIF Bangladesh, in Taka	Tk/t	-	10,241	10,241	9,179	9,179
Port dues, storage, handling etc	Tk/t	0.9	500	450	500	450

Metadata

Data Type	PDF file
Abstract	The GDP deflators and inflation factors of different years have been presented in the data layer.
Quality	The data layer fully resembles with the source.
Completeness	The data layer presents information from 1972-73 to 1998-99.
History of the dataset	The data layer was compiled by Bangladesh Bureau of Statistics. GDP deflators are calculated accepting 1984 as base year, on the other hand Inflation factors on 1998-99 price.
Purpose of production	To give generalized information to the economists and researchers on GDP deflation and inflation factors in order to analyze the socio-economic context of Nation Water Management Plan.
Process description	NWRD has stored the data as it was collected from NWMP.

Sample of Data

Year	GDP Deflator (1984 base)	Inflation factor to 1998/99 prices
1972/73	0.19	12.21
1973/74	0.27	8.59
1974/75	0.46	5.04
1975/76	0.35	6.63
1976/77	0.34	6.82
1977/78	0.40	5.80
1978/79	0.51	4.55
1979/80	0.57	4.07
1980/81	0.63	3.68
1981/82	0.71	3.27
1982/83	0.75	3.09

Name of Data layer: **Input Conversion Factors of NWMP**

Metadata

Data Type	PDF file
Abstract	This data set contains project-input conversion factors adopted by the NWMP to be applied to to convert financial prices to economic costs.
Quality	This data layer fully complies with the source.
Completeness	The conversion factors are applicable for financial prices.
History of the dataset	The conversion factors have been adopted by NWMP based on the updated Guidelines for Project Assessment (GPA) published in a report titled 'Estimation of Economic Prices of Selected Products for Use in Evaluation of Water Management Projects in Bangladesh', by Quazi Shahabuddin and Iqbal Ahmed Syed, March 1998, and the FPCO Guidelines for Project Assessment, prepared for FAP in MAY 1992.
Purpose of production	This data layer has been developed to analyze the social and economic setting of National Water Management Plan and to provide the data set to various development agencies, research organizations and professionals for financial and economic feasibility st
Process description	NWRD has stored the data as it was collected from NWMP.

Sample of Data

Item	March 1998 Conversion Factors	1992 GPA Conversion Factors
1. Standard Conversion Factor (SCF)	0.90	0.87
2. Specific Project Inputs :		
Skilled labour	0.90	0.87
Unskilled labour		
- In agriculture	0.85	0.65
- In construction	0.84	0.65

Name of Data layer: **Low Crop Yield and Input**

Metadata

Data Type	PDF file
Abstract	The data layer contains information of crop yields and inputs assumption for cultivation of major crops.
Quality	Quality of this data layer depends on the assumptions those were done while preparing this data.
Completeness	The estimation has been done for major crops.
History of the dataset	The data layer has been collected by WARPO from Agricultural Marketing Department and input assumption was done according to the updated Guidelines for Project Assessment (GPA) report published in a report titled 'Estimation of Economic Prices of Selected Products for Use in Valuation of Water Management Projects of Bangladesh' in March by Dr Q Shahabuddin & Iqbal Ahmed Syed.
Purpose of production	This data layer has been developed to analyze the social and economic setting of National Water Management Plan and to provide the data to various development agencies, research organizations and professionals for financial and economic feasibility studie
Process description	NWRD has stored the data layer as it was collected from NWMP.

Sample of Data

Crop	YIELD (t/ha)		Seed (kg)	Fertiliser (kg)			Manure (kg)	Agro-chemicals (kg)	Labour-days	Farm power (1) (ox-pair days)
	Main crop	By-product		Urea	TSP	MOP				
<u>Paddy:</u>										
B Aus	0.75	1.5	85	0	0	0	500	0	85	30
HYV T Aus (Irrig.)	2	2	30	65	30	5	500	0	145	30
B (DW) Aman	0.8	1.6	85	0	0	0	150	0	75	30
LT Aman	1.6	3.2	30	50	25	5	250	0	110	35
HYV T Aman:										
- Rainfed	2.25	2.25	30	80	35	5	250	0	145	35
- Irrigated	2.75	2.75	30	100	50	10	250	0	160	35
HYV Boro	3	3	30	115	60	10	250	0	175	32

Name of Data layer: **MUV Index**

Metadata

Data Type	Tabular
Abstract	The data layer contains the index of international inflation (Manufacturers Unit value) from 1950 to 1998.
Quality	The data layer is not generated by NWRD. Quality and reliability of this data set depend on the data generation and compilation procedure of the source organization.
Completeness	Data exists from 1950-1998
History of the dataset	World Bank generated this index of international inflation.
Purpose of production	The inflation index was developed in order to use it in converting the prices of commodities to a particular year basis, and to use this dataset for different economic analysis purpose.
Process description	NWRD has stored the data layer in an arranged way.

Sample of Data

Year	Muvindex
1950	16.5
1955	19.1
1960	20.7
1965	21.6
1966	22.3
1967	22.6
1968	22.4
1969	23.6
1970	25.1
1971	26.4

Bundle Information (Data Field Description and Unit)

FIELD	UNIT	FIELDNAME
Year		Year
Muvindex		Manufacturers Unit value (Index of international Inflation)

Name of Data layer: **Net Returns from Crops**

Metadata

Data Type	PDF file
Abstract	This data layer related to the socio-economic condition of Bangladesh contains the information of net returns from crops at different yield levels at 1998/99 constant prices.
Quality	The data layer has been estimated based on different sources and guidelines, therefore, its quality depends on the source data and estimation method.
Completeness	The estimation has been done only for major crops.
History of the dataset	Net returns from crops at different yield level has been estimated by NWMP (National Water Management Plan) following the updated Guidelines for Project Assessment (GPA) published in a report titled 'Estimation of Economic Prices of Selected Products for Use in Evaluation of Water Management Projects in Bangladesh', by Quazi Shahabuddin and Iqbal Ahmed Syed, March 1998, and the FPCO Guidelines for Project Assessment, prepared for FAP (Flood Action Plan) in MAY 1992.
Purpose of production	This data layer has been developed to analyze the social and economic setting of National Water Management Plan and to provide the data set to various development agencies, research organizations and professionals for financial and economic feasibility st
Process description	NWRD has stored the data layer as it was collected from NWMP.

Sample of Data

Crop	Item	LOW YIELDS				AVERAGE YIELDS (the Base Case)				HIGH YIELDS			
		At Present Prices		At Projected Prices		At Present Prices		At Projected Prices		At Present Prices		At Projected Prices	
		Financial	Economic	Financial	Economic	Financial	Economic	Financial	Economic	Financial	Economic	Financial	Economic
Paddy: Broadcast (B) Aus	Yield (t/ha)	0.75	0.75	0.75	0.75	1.25	1.25	1.25	1.25	1.75	1.75	1.75	1.75
	Net return per hectare	3,103	- 485	2,788	- 800	6,619	1,806	6,172	1,379	10,511	4,935	9,909	4,389
	Net return per labour-day	37	37	33	33	60	59	56	55	84	82	79	77
HYV T Aus (Irrigated)	Yield (t/ha)	2	2	2	2	2.75	2.75	2.75	2.75	3.5	3.5	3.5	3.5
	Net return per hectare	11,045	4,798	10,365	4,146	15,219	7,846	14,330	7,000	19,649	11,541	18,560	10,512
	Net return per labour-day	76	67	66	67	90	89	84	84	106	105	100	99
Broadcast (B) Aman	Yield (t/ha)	0.8	0.8	0.8	0.8	1.5	1.5	1.5	1.5	1.9	1.9	1.9	1.9
	Net return per hectare	4,659	1,459	4,243	1,053	11,030	6,557	10,328	5,876	14,545	9,339	13,690	8,511
	Net return per labour-day	62	62	57	57	110	108	103	101	126	124	119	117
Local T Aman	Yield (t/ha)	1.6	1.6	1.6	1.6	2.2	2.2	2.2	2.2	2.75	2.75	2.75	2.75
	Net return per hectare	8,944	4,353	8,272	3,713	13,047	7,592	12,111	6,589	16,262	10,169	15,153	9,103
	Net return per labour-day	81	82	75	76	100	101	93	94	112	113	105	105

Name of Data layer: **Parameters of Disease and health 1994**

Metadata

Data Type	PDF file
Abstract	The data layer presents 64 district wise socio-economic parameters such as treatment condition of diarrhoeal disease, Immunization for DPT/Polio, measles, state of water and sanitation facilities and educational status etc for the year 1994.
Quality	The data layer fully complies with the source.
Completeness	This data layer covers 64 Districts of Bangladesh.
History of the dataset	The data layer is the output of 64-district wise sample survey conducted by UNICEF for the year 1994.
Purpose of production	To observe the actual condition of diarrhoea and other related health facilities, such as water supply, sanitation and education.
Process description	NWRD has collected the data layer from UNICEF, converted to digital format and stored it in an organized way.

Sample of Data

	INDICATOR/CATEGORY	
		METRO SLUM
1	Diarrhoea within last 15 days (among < 5 years child)	
	Boy	28.4
	Girl	20.0
2a	Amount of liquid given to that child (Boy) **	
	More	64.3
	Same	19.6
	Less	12.5
	No	3.6

Name of Data layer: **Parameters of Disease & Health 1995**

Metadata

Data Type	PDF file
Abstract	The data layer presents 64 district wise socio-economic parameters such as treatment condition of diarrhoeal disease, Immunization for DPT/Polio, measles, state of water and sanitation facilities and educational status etc for the year 1995.
Quality	The data layer fully complies with the source.
Completeness	This data layer covers 64 Districts of Bangladesh.
History of the dataset	The data layer is the output of 64-district wise sample survey conducted by UNICEF for the year 1995.
Purpose of production	To observe the actual condition of diarrhoea and other related health facilities, such as water supply, sanitation and education.
Process description	NWRD has collected the data layer from UNICEF, converted to digital format and stored it in an organized way.

Sample of Data

INDICATOR/ CATEGORY	CHITTAGONG			
	METRO SLUM	METRO NON-SLUM	OTHER MUNICIPALITIES	DIVISION RURAL
1 Diarrhoea within last 15 days (among < 5 years child)				
Boy	12.0	10.5	7.1	11.2
Girl	10.9	15.9	6.4	6.4
2a Amount of liquid given to that child (Boy) **				
More	68.0	62.5	46.2	49.6
Same	32.0	12.5	23.1	23.6
Less	0.0	25.0	30.0	21.2
No	0.0	0.0	0.0	5.6

Name of Data layer: **Parameters of Disease & Health 1996**

Metadata

Data Type	PDF file
Abstract	The data layer presents 64 district wise socio-economic parameters such as treatment condition of diarrhoeal disease, Immunization for DPT/Polio, measles, state of water and sanitation facilities and educational status etc for the year 1996.
Quality	The data layer fully complies with the source.
Completeness	This data layer covers 64 Districts of Bangladesh.
History of the dataset	The data layer is the output of 64-district wise sample survey conducted by UNICEF for the year 1996.
Purpose of production	To observe the actual condition of diarrhoea and other related health facilities, such as water supply, sanitation and education.
Process description	NWRD has collected the data layer from UNICEF, converted to digital format and stored it in an organized way.

Sample of Data

DIVISION	DISTRICT	AREA IN SQ. KMS	POPULATION	POPULATION DENSITY	HOUSE-HOLD	HOUSE-HOLD SIZE	THANA	UNION	MAUZA	ROOFING BRICK/TIN (%)
CHITTAGONG										
	BANDARBAN	4479	230569	51	45682	5.0	7	31	141	10.5
	BRAHMANBARIA	1927	2141745	1111	360265	5.9	7	101	1003	78.6
	CHANDPUR	1704	2032449	1192	355791	5.7	7	95	1086	94.5
	CHITTAGONG	5283	5296127	1002	919595	5.8	20	239	1111	55.6
	COMILLA	3085	4032666	1307	684205	5.9	12	180	2759	85.3
	COX'S BAZAR	2492	1419260	569	219937	6.5	7	60	208	30.5
	FENI	928	1095745	1181	186818	5.9	5	49	549	81.4
	HABIGANJ	2637	1526609	579	267250	5.7	8	80	1366	49.9
	KHAGRAHARI	2700	342488	127	70891	4.8	8	37	145	15.7
	LAKSHMIPUR	1456	1312337	901	239664	5.5	4	53	470	80.3
	MOUL VIBAZAR	2799	1376566	491	242831	5.7	6	72	1002	44.4

Name of Data layer: **Parameters of Disease & Health 1997**

Metadata

Data Type	PDF file
Abstract	The data layer presents 64 district wise socio-economic parameters such as treatment condition of diarrhoeal disease, Immunization for DPT/Polio, measles, state of water and sanitation facilities and educational status etc for the year 1997.
Quality	The data layer fully complies with the source.
Completeness	This data layer covers 64 Districts of Bangladesh.
History of the dataset	The data layer is the output of 64-district wise sample survey conducted by UNICEF for the year 1997.
Purpose of production	To observe the actual condition of diarrhoea and other related health facilities, such as water supply, sanitation and education.
Process description	NWRD has collected the data layer from UNICEF, converted to digital format and stored it in an organized way.

Sample of Data

District	Last Pregnancy Delivered by	
	Trained	Untrained
BANDARBAN	6.7	93.3
BRAHMANBARIA	15.4	84.6
CHANDPUR	12.8	87.2
CHITTAGONG	12.8	87.2
COMILLA	10.0	90.0
COX'S BAZAR	4.3	95.7

Name of Data layer: **Parameters of Disease & Health 1998**

Metadata

Data Type	PDF file
Abstract	The data layer presents 64-district wise socio-economic parameters such as treatment condition of diarrhoeal disease, Immunization for DPT/Polio, measles, state of water and sanitation facilities and educational status etc for the year 1998.
Quality	The data layer fully complies with the source.
Completeness	This data layer covers 64 Districts of Bangladesh.
History of the dataset	The data layer is the output of 64-district wise sample survey conducted by UNICEF for the year 1998.
Purpose of production	To observe the actual condition of diarrhea and other related health facilities, such as water supply, sanitation and education.
Process description	NWRD has collected the data layer from UNICEF, converted to digital format and stored it in an organized way.

Sample of Data

	INDICATOR/CATEGORY	CHIT DI
		RURAL
1	Diarrhoea within last 15 days among Under five years children	
	Boy	16.6
	Girl	14.5
2a	Type of treatment for the child during Diarrhoea (Boy : Under five years) (Multiple Responses)	
	ORS	55.2
	ORS/LG/HF	63.2
	ORT (Incr. fluid + Cont. feeding)	36.0
	Medicine	57.0
	None	13.3

Name of Data layer: **Parameters of Disease & Health 1999**

Metadata

Data Type	PDF file
Abstract	The data layer presents 64 district wise socio-economic parameters such as treatment condition of diarrhoeal disease, Immunization for DPT/Polio, measles, state of water and sanitation facilities and educational status etc for the year 1999.
Quality	The data layer fully complies with the source.
Completeness	This data layer covers 64 Districts of Bangladesh.
History of the dataset	The data layer is the output of 64-district wise sample survey conducted by UNICEF for the year 1999.
Purpose of production	To observe the actual condition of diarrhoea and other related health facilities, such as water supply, sanitation and education.
Process description	NWRD has collected the data layer from UNICEF, converted to digital format and stored it in an organized way.

Sample of Data

	INDICATOR/CATEGORY	CHITTAGONG DI	
		RURAL	URBAN
1	Diarrhoea within last 15 days among children Under five years		
	Boy	20.6	14.9
	Girl	18.7	14.9
2	ORT use rate (Increased fluid + Continued feeding) during diarrhoea		
	Boy	46.6	32.2
	Girl	41.8	31.1
	Both Sexes	44.0	31.8
3	Continued breastfeeding rate of children at two years		
	Both Sexes	83.2	81.8
4a	Duration of continued breastfeeding (Boy : 13-59 months)		
	0 Month	1.1	1.4
	1-6 Months	1.4	3.8
	7-12 Months	4.8	6.3
	12+ Months	92.6	88.5

Metadata

Data Type	PDF file
Abstract	The data layer presents 64 district wise socio-economic parameters such as treatment condition of diarrhoeal disease, Immunization for DPT/Polio, measles, state of water and sanitation facilities and educational status etc for the year 2000.
Quality	The data layer fully complies with the source.
Completeness	This data layer covers 64 Districts of Bangladesh.
History of the dataset	The data layer is the output of 64-district wise sample survey conducted by UNICEF for the year 2000.
Purpose of production	To observe the actual condition of diarrhoea and other related health facilities, such as water supply, sanitation and education.
Process description	NWRD has collected the data layer from UNICEF, converted to digital format and stored it in an organized way.

Sample of Data

INDICATOR/CATEGORY	
1	Diarrhoea within last 15 days among children Under five years
	Boy
	Girl
2a	Type of treatment for the child during diarrhoea (Boy:children aged under five years)(Multiple responses)
	ORS
	ORS/LG/HF
	ORT (Inc.Fluid+Cont.Feeding)
	Medicine
	None
2b	Type of treatment for the child during diarrhoea (Girl:children aged under five years)(Multiple responses)
	ORS
	ORS/LG/HF
	ORT (Inc.Fluid+Cont.Feeding)
	Medicine
	None

Name of Data layer: **Public Sector Investment**

Metadata

Data Type	PDF file
Abstract	The data layer contains allocation of investment in various public sectors like agriculture, water resources, energy, rural development etc in the third, fourth and fifth five year plans.
Title	Public Sector Investment
Quality	The data layer complies with the five year plans of Govt. of Bangladesh.
Completeness	The data layer comprises information of the whole country.
History of the dataset	This dataset is published in the documents of Third, Fourth and Fifth Five Year plan by Planning Commission, Govt. of Bangladesh.
Purpose of production	To provide the information to the planners regarding the sector-wise and total investment in the public affairs.
Process description	NWRD has collected this data layer from NWMP (National Water Management Plan) and has stored it in an arranged form.

Sample of Data

Sector	Third FYP	Fourth FYP (revised)	Fifth FYP
Pricing basis	1984 / 85	1989 / 90	1996 / 97
Total Public Sector allocation in Tk. Billion	250.00	347.00	858.9
Equivalent at 1996/97 prices (Tk Billion)	485.7	438.8	858.9
Public and private sector shares of total plan (%):			
-Public sector	64.8	56.0	43.8
-Private sector	35.2	44.0	56.2

Name of Data layer: **Variation of Harvest-time Crop Prices**

Metadata

Data Type	PDF file
Abstract	The dataset contains regional differences in harvest time major crop prices and mean variation in divisional averages for the period from 1994-95 to 1997-98.
Quality	The data layer is the result of an analysis of agricultural data collected from Department of Marketing. Therefore, its' quality depends on the base data and estimation method.
Completeness	The data layer was generated for major crops.
History of the dataset	NWMP collected the data layer from Department of Agricultural Marketing and analyzed the data set.
Purpose of production	This data layer was developed to analyse the social and economic setting of National Water Management Plan and to provide the data set to various development agencies for socio-economic studies.
Process description	NWRD has stored the data as it was collected from NWMP.

Sample of Data

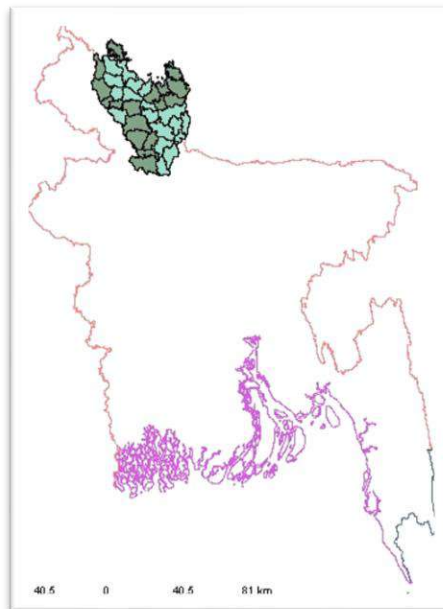
Crop	Mean of the Divisional averages in Table 5 (Tk / quintal)	Average absolute variation of Divisional averages, from this mean (%)	Maximum Divisional variation from this mean (% and Division)
Paddy			
Local Aman	796	2	+4 (Dhaka)
HYV Aman	805	2	+5 (Dhaka)
Pajam Aman	882	4	-8 (Rajshahi)
Local Aus	654	1	-2 (Barisal)
HYV Aus	675	1	+2 (Barisal)
HYV Boro	673	2	-3 (Rajshahi)
Local Boro	666	2	+2 (Dhaka)

Name of Data layer: **Location of Monga Affected Area**

Metadata

Data Type	Spatial
Abstract	The northern districts of Bangladesh are affected by a recurring crisis known as Monga. The spatial data layer represents monga severity area of the Northern Bangladesh.
Quality	Quality of this data layer totally depends on the data collection process of the source organization.
Completeness	This data layer covers five districts of North West Bangladesh.
History of the dataset	The dataset was produced by Disaster and Emergency Response (DER) group report on monga (DER-UNDP,2004).
Purpose of production	It can help to predict long term solutions to find the causes of monga. It can also be used in different type of socio-economic analysis at national and regional level.
Process description	It is collected as a hard copy format. It is converted into digital format and combined it with spatial data.

Sample of Data



Attribute Table

area	thacode	divname	distname	thaname	landtype	affmonga
314306406.1836	503221	Rajshahi	Gaibandha	Fulchhari	Land	Severely Affected
318373727.2949	503224	Rajshahi	Gaibandha	Gaibandha Sadar	Land	Severely Affected
467903712.9209	503230	Rajshahi	Gaibandha	Gobindaganj	Land	Moderately Affected
189701592.4464	503267	Rajshahi	Gaibandha	Palashbari	Land	Moderately Affected
233385673.6115	503282	Rajshahi	Gaibandha	Sadullapur	Land	Moderately Affected
226611605.4267	503288	Rajshahi	Gaibandha	Saghatta	Land	Severely Affected
414674132.6777	503291	Rajshahi	Gaibandha	Sundarganj	Land	Severely Affected

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area of Each Polygon	Sq. Meter
Thacode	Thana code (Division code + district code + thana code) is incorporated according to Geomaster database of BBS 2001	
Divname	Name of each division according to BBS geomaster database of 2001	
Distname	Name of each district according to BBS geomaster database of 2001	
Thaname	Name of each thana according to BBS geomaster database of 2001	
Affmonga	Severity Class	

Name of Data layer: **Peoples Participation and Consultation Process** (Restricted)

Metadata

Data Type	PDF file
Abstract	The data layer contains information of water resources, environmental and socio-economic condition of some areas selected on the basis of food security and poverty mapping prepared by the world food program.
Quality	Quality and reliability of this data set is good and depend on the data capturing procedures and compilation.
Completeness	
History of the dataset	This information has been generated from the output of the workshops conducted by WARPO, from November 1998 to January 1999 and from July 1999 to August 1999
Purpose of production	People participation is a major concern for any development projects. During the preparation of NWMP a series of PP consultation has been done in different parts of the country to understand the local needs, demands and other social parameters.
Process description	NWRD has stored this data in an organized way.

Sample of Data

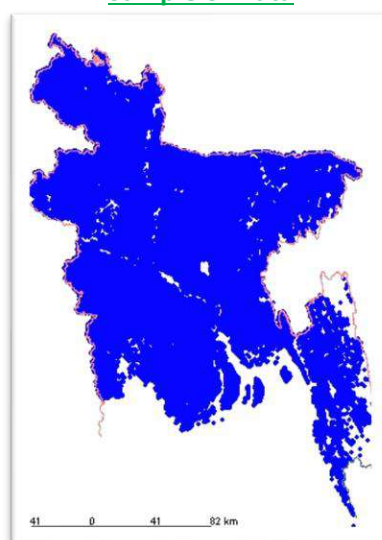
SLN	LEVEL	SESSION	OCCUG	GENDER	DIVCODE	DISTCODE	THANA	UNION
12	2	1	14	3	6	90	18	
13	3	1	14	3	6	90	18	22
14	4	1	14	1	6	90	18	22
15	5	1	14	2	6	90	18	22
22	2	1	14	3	6	58	56	
23	3	1	14	3	6	58	56	4
24	4	1	14	1	6	58	56	4
25	5	1	14	2	6	58	56	4
32	2	1	14	3	4	41	61	
33	3	1	14	3	4	41	61	16
34	4	1	14	1	4	41	61	16
35	5	1	14	2	4	41	61	16
42	2	1	14	3	2	30	14	
43	3	1	14	3	2	30	14	19

Name of Data layer: **Social Service Information**

Metadata

Data Type	Spatial
Abstract	A spatial data layer containing the locations of hospital, community clinic, family welfare center, graveyard, rural market by Local Government Engineering Department (LGED).
Quality	It is collected from LGED and stored it without any quality checking
Completeness	The data layer covers all social service location of Bangladesh identified by LGED.
History of the dataset	Local Government Engineering Department (LGED) generated this data layer
Purpose of production	To present and store the location distribution of the social service center and to use this data in any kind of socio-economic analysis and management purpose.
Process description	It has appended the district wise data layer to make it single data set covering whole Bangladesh and stored it in an arranged way.

Sample of Data



Attribute Table

type	st_name	remarks
80	Rural Market	
220	Primary School	
220	Primary School	
225	Madrasa	
110	Hospital	
220	Primary School	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Type	Structure Type	
St_name	Name of the Structure	
Remarks	Remarks	

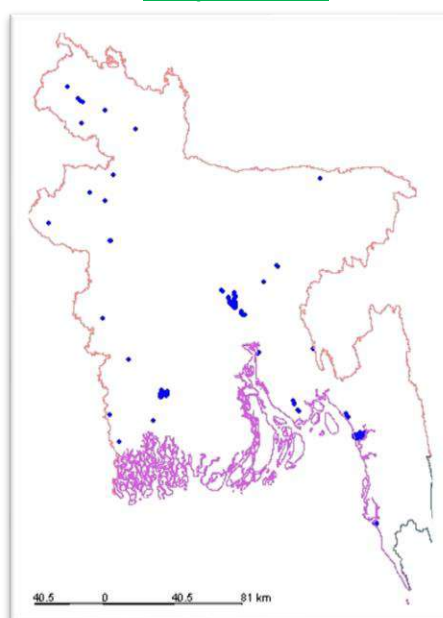
Soil and Agriculture

Name of Data layer: **Agro based industry**

Metadata

Data Type	Spatial
Abstract	This data layer containing the spatial distribution and attribute information of Agro based industries of Bangladesh.
Quality	Quality of this data layer totally depends on the data of the source organization.
Completeness	
History of the dataset	The data layer has been collected in hard copy format from BAPA and Hortex foundation
Purpose of production	It can help to develop agro business of different areas. It can also be used in different type of socio-economic analysis at national and regional level
Process description	The data about the agro processor has been taken from a report/Booklet published by BAPA and Hortex foundation. Agro processing industry locations have been captured from the above-mentioned report with the help of mauza and Thana database. Attribute data has been captured from the same report and combined it with GIS data.

Sample of Data



Attribute Table

sln0	thacode	thaname	assoname	company	natbuss	locindust	products	agropro
1	21322	Chandpur Sadar	BAPA	Patwary Potato Flakes Ltd.	Manufacturer Exporter	Ichalighat Bogdadi Road, Chandpur	Potato Flakes.	Horticulture
2	21322	Chandpur Sadar	BFFEA	Sea Food Corporation Ltd.	Frozen Foods Exporter	Bagadi Road, Chandpur-3600.	Frozen Foods	Frozen Foods
3	21506	Bayejid Bostami	BAPA	Abul Khair Consumer Products Ltd	Manufacturer Exporter	277 Baizid Bostami Road, 1/A, Chittagong	Snacks & Tea	Grains
4	21506	Bayejid Bostami	BAPA	Abul Khair Condensed Milk Beverage Ltd	Manufacturer Exporter	277 Baizid Bostami Road, 1/A, Chittagong	Beverage & Condensed Milk	Dairy And Livestock

Bundle Information (Data Field Description and Unit)

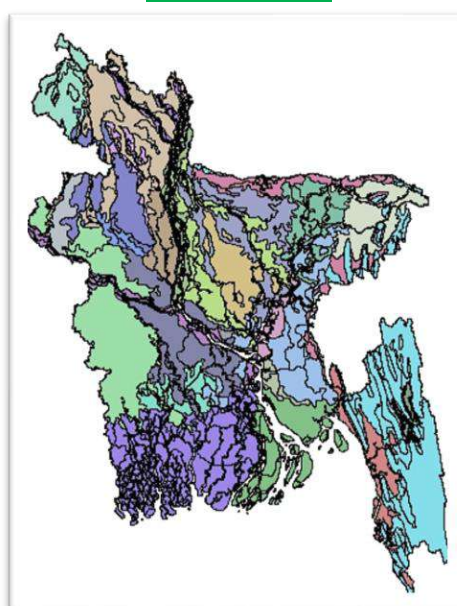
FIELD_NAME	FIELD_DESC	UNIT
Slno	Serial No	
Thacode	Geocode (Division code + district code + thana code) is incorporated according to Geomaster database of BBS 2001.	
Thaname	Upazila / Thana name	
Assoname	Association Name	
Company	Company Name	
Natbuss	Nature of Business	
Locindust	Location of Industry	
Products	Product Type	
Agropro	Agricultural Product Type	

Name of Data layer: **Agro-Ecological Regions and Sub-regions**

Metadata

Data Type	Spatial
Abstract	A spatial data layer, representing the distribution of the Agro-Ecological Zones and subzones of Bangladesh considering different parameters such as physiographic units, general soil types, inundation land type, moisture regime, thermal regime etc.
Quality	As the source was in a scale of 1:250,000 it is recommended that this data layer should be used in same scale or smaller than this for regional level.
Completeness	The data layer encompasses the whole country.
History of the dataset	Bangladesh Agricultural Research Council (BARC) under FAO/UNDP Agricultural Development Adviser Project (BGD/81/035) produced this data layer in December 1985. The map was digitized by Agricultural Sector Team (AST).
Purpose of production	To provide information to the researchers or planners, regarding agro-ecological zones considering different parameters.
Process description	AST under BARC produced the map using a GIS software, TYDAC SPANS at a scale of 1:250,000. ISPAN (Irrigation Support Project for Asia and Nearest) under FAP19 produced a software to convert these data into Arc/Info format and created this data layer. International boundary captured by ISPAN from topo sheet published by SoB at a scale of 1:50,000 was also incorporated into this data layer. NWRD has replaced the previous international and coastal boundary of the AEZ data layer with the updated version.

Sample of Data



Attribute Table

area	aezregid	subreg	regnm	subregnm
510237664	101	1a	Old Himalayan Piedmont Plain	Northern
1217992	90	River		
341155968	301	3a	Tista Meander Floodplain	North-western
17138.926	90	River		
23250.037	90	River		
21860.824	90	River		
59493.203	90	River		
13708.04	90	River		

Bundle Information (Data Field Description and Unit)

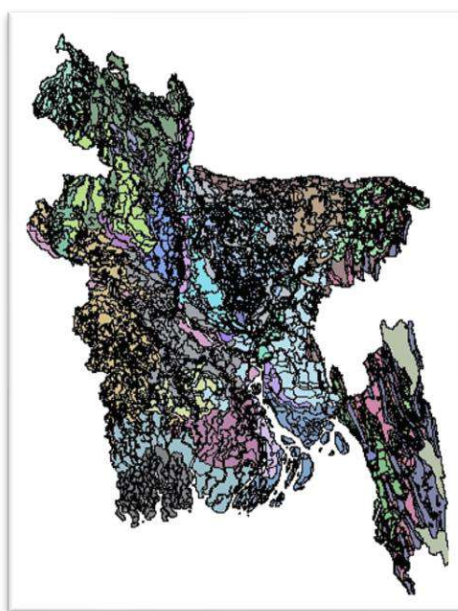
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of the polygon	
Aezregid	Region ID	
Subreg	Sub-Region Id	
Regnm	Name of the Region	
Subregnm	Name of the Sub-Region	

Name of Data layer: **Physiographic Units**

Metadata

Data Type	Spatial
Abstract	A spatial data layer related to soil type, showing the physiographic divisions of Bangladesh with other associated attribute information.
Quality	Source map was in 1:250,000 scale. Therefore, this data layer should be used in 1:250,000 or smaller than this scale. All the attribute information has been added according to the source map.
Completeness	The data layer covers whole Bangladesh.
History of the dataset	This data layer has been uploaded into NWRD from National Data Bank of EGIS. Source of this data set is Land Resource Inventory Maps produced by Bangladesh Agricultural Research Council (BARC) under FAO/UNDP Agricultural Development Adviser Project (BGD/81/035) Ministry of Agriculture Govt. of Bangladesh, December 1985, at 1:250,000 scale. ISPAN (Irrigation Support Project for Asia and Nearest) captured the data from the source maps under FAP19.
Purpose of production	To define the physiographic characteristics of Bangladesh and to delineate the boundary of each type of physiographic division.
Process description	The data layer has been uploaded to NWRD from National Data Bank of EGIS-II. Only the International boundary generated from the topographic map of Survey of Bangladesh (SoB) in 1:50,000 scale has been used to update this data layer.

Sample of Data



Attribute Table

area	perimeter	physio_	physio_id	solall_	solall_id	aezcode	physio	phy_unit	phy_nm	phy30_nm	areasqkm
96446176	64307.523	2	1	2	1002	PH9	PH	27	Old Himalayan Piedmont Plain	Old Himalayan Piedmont Plain	95.86
3680006.25	8268.281	3	2	3	1003	PH34	PH	27	Old Himalayan Piedmont Plain	Old Himalayan Piedmont Plain	3.71
29200676	26612.709	4	3	4	1004	PH1	PH	27	Old Himalayan Piedmont Plain	Old Himalayan Piedmont Plain	29.27
10198288	21098.451	5	5	6	1006	PH16	PH	27	Old Himalayan Piedmont Plain	Old Himalayan Piedmont Plain	10.13

Bundle Information (Data Field Description and Unit)

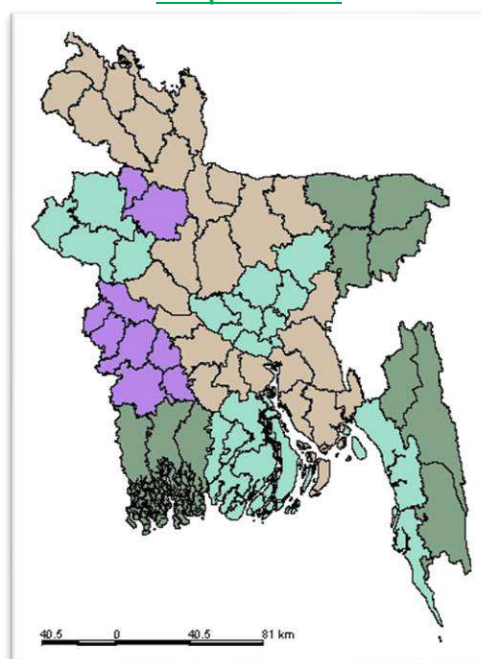
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygon	Square meter
Physio_	Internal ID	
Physio_id	External/User Id	
Solall_	Internal Id of SOIL Coverage	
Solall_id	External ID of SOIL Coverage	
Aezcode	Zone Each code is given to a particular type of agroecological zone and subzone according to the source	
Physio	Name of the physiographic units in brief.	
Phy_unit	Name of the physiographic units very briefly	
Phy_nm	Subclasses of the physiographic divisions	
Phy30_nm	Name of different physiographic classes according to Land Resource Inventory map of AEZ mapping	
Areasqkm	Area in square Kilometer	Sq. Kilometer

Name of Data layer: **Cropping Intensity**

Metadata

Data Type	Spatial
Abstract	Cropping intensity is the ratio of net cultivated area to the total cropped area. A spatial data layer presenting the cropping intensity of Bangladesh along with the attribute information derived from the Statistical Yearbook of Agricultural 2007-08. The data is for old 21 districts which is distributed among present 64 districts
Quality	The regional cropping intensity data generated with the calculation as $[(\text{Total Cropped Area} \times 100 / \text{Net Cropped Area})]$ and spatially distributed within the 64 districts as polygon data using standard GIS applications with WGS1984 datum.
Completeness	This data layer covers whole Bangladesh
History of the dataset	The source of this dataset is from Statistical Yearbook of Agricultural. Intensity of Cropping information has linked with present 64 district shape. The projection system of the data set is Bangladesh Transverse Mercator (BTM).
Purpose of production	This data layer is essential for the agricultural scientists and relevant planners to maximising cropping production land and patterns to ensure a better food security
Process description	The cropping intensity data collected as secondary data from the BBS. Joined with the 64 district GIS data of NWRD. Attribute information have been attached according to the BBS. The cropping intensity by district is polygon shape data, projected in BTM projection.

Sample of Data



Attribute Table

area	distcode	divname	distname	ci_2000_01	ci_01_02	ci_02_03	ci_03_04	ci_04_05	ci_05_06	cls05_06
1344607571.3833	1004	Barisal	Barguna	149.94	151.76	151.93	156.5	156.05	151.67	150 - 175
2239234986.1279	1006	Barisal	Barisal	170.94	170.99	170.51	168.87	166.26	165.82	150 - 175
1947241266.6145	1009	Barisal	Bhola	149.94	151.76	151.93	156.5	156.05	151.67	150 - 175
737674805.7592	1042	Barisal	Jhalokati	170.94	170.99	170.51	168.87	166.26	165.82	150 - 175

Bundle Information (Data Field Description and Unit)

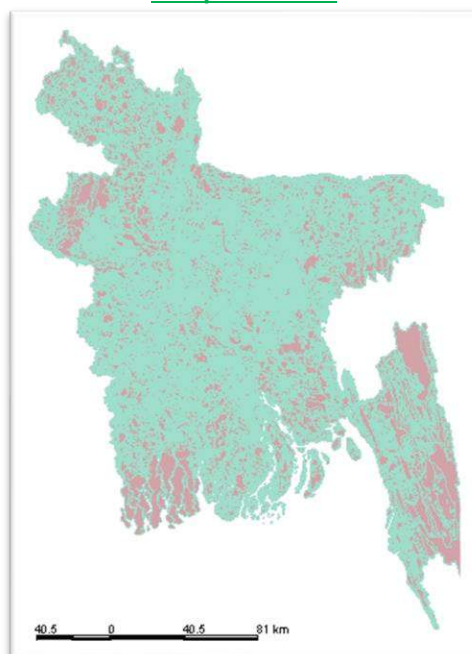
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygone	Sq Meter
Discode	Distcode given according to BBS geomaster database of 2001	
Divname	Division name	
Distname	District name	
Ci_2000-01	Cropping Intensity of the year 2000-01	Percentage
Ci_01-02	Cropping Intensity of the year 01-02	Percentage
Ci_02-03	Cropping Intensity of the year 02-03	Percentage
Ci_03-04	Cropping Intensity of the year 03-04	Percentage
Ci_04-05	Cropping Intensity of the year 04-05	Percentage
Ci_05-06	Cropping Intensity of the year 05-06	Percentage
Cls05_06	Cropping Intensity Class of the year 05-06	

Name of Data layer: **Crop Suitability**

Metadata

Data Type	Spatial
Abstract	A spatial data layer that represents the crop suitability classification considering 12 types of crops. Suitable areas are denoted for both irrigated and non-irrigated condition.
Quality	Quality of this data layer totally depends on the data collection process and analyses procedure adopted by the source organization.
Completeness	The data layer covers all over Bangladesh.
History of the dataset	The data layer has been collected in digital format from BARC. Huge amount of information generated through reconnaissance soil survey during the period 1963-75 provided comprehensive information on soil, seasonal inundation and landuse and interpretation in terms of land capability and crop suitability. During the period 1980 to 1987 a national Agroecological Zones (AEZ) based computerized land resources database system was successfully developed. The existing land capability and soil suitability classification, which are being used currently, may be considered as the first attempt towards quantitative land classification in Bangladesh.
Purpose of production	To present suitability of crops in Bangladesh which may indicate the diversification of crop in different region of the country. It will help the planners to take decision on agriculture based projects and future development goal in prioritizing areas.
Process description	This data layer has been uploaded into database from BARC. International boundary has been used in 1:50,000 scale created by Survey of Bangladesh (SoB) and coastline generated from IRS Liss 2005 image have been used to update this data layer. The crop suitability classes defined in the maps are very suitable, suitable, moderately suitable, marginally suitable and not suitable for different crops.

Sample of Data



Attribute Table

perimeter	id	ltsoil	value	kchili_sui	rchili_sui	potato_sui	jute_suit	juteo_suit	scane_suit
16054.75147	73130	No DEM	0	6	6	6	6	6	6
1124.83347	73125	3-CC927	37273	5	2	3	3	4	5
8993.48165	73127	4-CCB	36824	5	3	5	5	5	5
5481.45278	73128	1-CC927	37521	3	2	3	2	2	3
3355.55285	73123	No DEM	0	6	6	6	6	6	6

onigar_sui	gintur_sui	hyv_t_aman	hyv_boro_i	hyv_t_aus_	wheat_ir_s	mustard_i_r	mustard_rf	areasqkm
6	6	6	6	6	6	6	6	11.645
3	5	4	2	4	4	1	3	0.058
4	5	5	5	5	5	5	5	3.643
2	3	3	5	3	3	1	3	1.066
6	6	6	6	6	6	6	6	0.623

Bundle Information (Data Field Description and Unit)

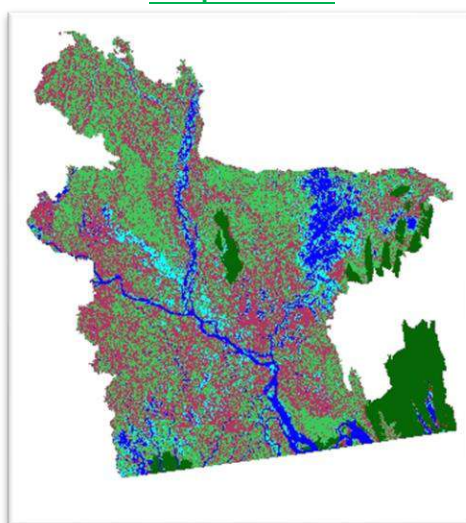
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of each polygone	Sq Meter
Discode	Distcode given according to BBS geomaster database of 2001	
Divname	Division name	
Distname	District name	
Ci_2000-01	Cropping Intensity of the year 2000-01	Percentage
Ci_01-02	Cropping Intensity of the year 01-02	Percentage
Ci_02-03	Cropping Intensity of the year 02-03	Percentage
Ci_03-04	Cropping Intensity of the year 03-04	Percentage
Ci_04-05	Cropping Intensity of the year 04-05	Percentage
Ci_05-06	Cropping Intensity of the year 05-06	Percentage
Cls05_06	Cropping Intensity Class of the year 05-06	

Name of Data layer: **Aman crop area (Tiff)**

Metadata

Data Type	Spatial
Abstract	A raster data layer (50 m X 50 m cell size) of Aman rice crop area of Bangladesh along with attributes derived from RADARSAT ScanSAR Wide Beam Images (100 m X 100 m) of 2003. The data covers whole Bangladesh except some portion of the coastal area and Chittagong hills.
Quality	The aman map, derived from 100 m RADARSAT ScanSAR Wide Beam images, should be used at national level application.
Completeness	This data layer covers whole Bangladesh except some portion of the coastal area and Chittagong hills.
History of the dataset	The aman area is derived from temporal analysis of RADARSAT Scansar Wided Beam images. The resolution of the images is 100 m X 100 m and acquired in monsoon season of 2003. The data covers almost whole Bangladesh except some portion of the coastal area and Chittagong hills. The projection system is Bangladesh Transverse Mercator (BTM).
Purpose of production	This data layer is essential for the agricultural scientists and relevant professionals to maximize the proper use of rice area to ensure a better food security
Process description	The image data were collected from RADARSAT International, Canada. The multitemporal images were classified using unsupervised classification method. Field data were used for supporting classification process and accuracy assessment. The images were processed using standard image processing software, ERDAS IMAGINE. Finally the layer was converted into GEOTIFFformat.

Sample of Data



Attribute Table

value	count	class_name	area
0	0		0
1	3824072	Permanent water	956018
2	3372758	Seasonal water	843189.5
3	17949302	Aman	4487325.5
4	18827906	Others	4706976.5
5	4302178	MAngroves	1075544.5

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Value	Cell value of grid	
Count	Total number of cell of each value	
Class_name	Cell description of grid	
Area	Area of total number of cell of each value	Sq Meter

Name of Data layer: **Aman crop coverage area**

[Metadata](#)

[Sample of Data](#)

Attribute Table

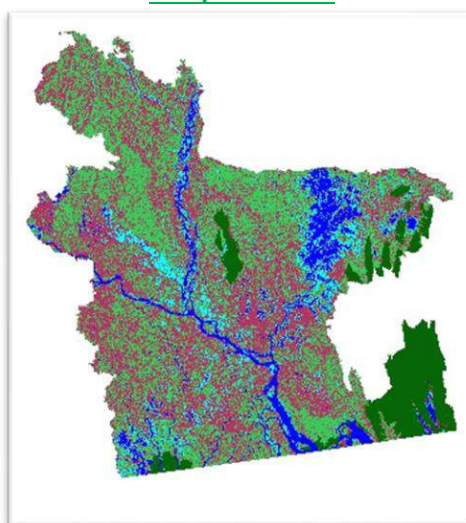
[Bundle Information \(Data Field Description and Unit\)](#)

Name of Data layer: **Boro crop area (Tiff)**

Metadata

Data Type	Spatial
Abstract	A raster data layer (250 m X 250 m cell size) of Boro season rice crop of Bangladesh along with the attribute information derived from Terra MODIS satellite image of 2008. The data covers whole Bangladesh except some portion of the coastal area and Chittagong hills except some portion of the coastal area and Chittagong hills.
Quality	The Boro map, derived from 250 m Terra MODIS satellite image, should be used at national level application.
Completeness	This data layer covers whole Bangladesh except some portion of the coastal area and Chittagong hills.
History of the dataset	The boro season rice area is derived from Terra MODIS satellite image. The resolution of the image is 250 m x 250 m and acquired in 7th April 2008. The data of the boro season rice crop area covers almost whole Bangladesh except some portion of the coastal area and Chittagong hills. The projection system is Bangladesh Transverse Mercator (BTM).
Purpose of production	This data layer is essential for the agricultural scientists and relevant professionals to maximize the proper use of rice area to ensure a better food security
Process description	The image data were collected from website of MODIS Rapid Response System. The multispectral image was classified using unsupervised classification method. Field data were used for supporting classification process and accuracy assessment. The image was processed using standard image processing software, ERDAS IMAGINE. Finally the layer was converted into GEOTIFFformat.

Sample of Data



Attribute Table

value	count	area
0	0	0
1	206254	1289087.5
2	668302	4176887.5
3	743551	4647193.75
4	251820	1573875
5	462722	2892012.5

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Value	Cell value of grid (1-Permanent water, 2-Others, 3- Boro, 4-Mangroves, 5-Settlement)	
Count	Total number of cell of each value	
Area	Area of total number of cell of each value	Sq Meter

Name of Data layer: **Boro crop coverage area**

[Metadata](#)

[Sample of Data](#)

Attribute Table

[Bundle Information \(Data Field Description and Unit\)](#)

Name of Data layer: **Crop Loss due to Natural Calamities**

Metadata

Abstract	The data layer contains the amount of yearly rice production loss due to different types of natural calamities from 1972 to 1988.
Quality	Quality of this data layer depends on the data collection and compilation procedure adopted by BBS. NWRD has stored it only checking with the source.
Completeness	Data is available from 1972 to 1988.
History of the dataset	This data layer has been compiled and published by Bangladesh Bureau of Statistics (BBS).
Purpose of production	To estimate agricultural production loss due to natural disasters in different years this data layer has been incorporated in NWRD. It can be used in agriculture related management and planning.
Process description	NWRD has converted the data layer in digital format, checked with the source agricultural census book and stored it in an ordered form.

Sample of Data

Name_of_crop	Year	Causes_of_loss	Prodlosslocal	Prodlosshyv	Totalloss
Aman	1972	Floods of August	171045	380	171425
Aman	1973	Floods of September, October and November an tidal wave October and December	591780	104275	696055
Aman	1974	Hailstorms of September	533360	28380	561740
Aman	1975	Floods of July and August	18608	6489	25097
Aman	1976	-	263553	0	263553
Aman	1977	Floods of August	166	0	166

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Name_of_crop	Name of affected crops	
Year	Year of occurrence of calamities	
Causes_of_loss	Causes of Loss	
Prodlosslocal	Local Product loss	Metric ton
Prodlosshyv	Product loss of High yield variety	Metric ton
Totalloss	Sum of the two losses	Metric ton

Name of Data layer: **Crop Statistics (21 Districts)**

Metadata

Data Type	Time Series Table
Abstract	A time series data layer containing crop statistics of 17 groups of crops for 21 district (third lowest administrative unit), according to Bangladesh Bureau of Statistics census 1981.
Quality	This crop statistics presents 87 types of crops in 17 groups. The data layer contains information (area and production) of 1947/48 to 1966/67, 1967/68 to 1976/77 and 1977/78 to 1998/99 for 7, 76 (on an average) and 87 crops respectively covering 21 old districts. Originally the data layer was based on 23 old districts but for better representation of the data 23 districts have been converted to 21.
Completeness	The data layer covers whole Bangladesh according to old districts.
History of the dataset	This data layer has been collected from the existing database of National Minor Irrigation Development Project (NMIDP). Originally Bangladesh Agricultural Research Council (BARC) developed the data layer.
Purpose of production	To present 21-district wise available agricultural area and production of various crops as time series
Process description	NWRD has collected this data layer from NMIDP and organized the data in a suitable form.

Sample of Data

Distcode	Distname	Cropid	Cropname	Cropcode	Year	Areaha	Prodmtion
6	BARISAL	3	Bajra	8	1947-48	-	-
10	BOGRA	3	Bajra	8	1947-48	-	-
15	CHITTAGONG	3	Bajra	8	1947-48	-	-
19	COMILLA	3	Bajra	8	1947-48	-	-
26	DHAKA	3	Bajra	8	1947-48	-	-
27	DINAJPUR	3	Bajra	8	1947-48	-	-
29	FARIDPUR	3	Bajra	8	1947-48	-	-
39	JAMALPUR	3	Bajra	8	1947-48	-	-

Bundle Information (Data Field Description and Unit)

CROPID	CROPTYPE	CROP CODE
1	Arhar	14
2	Arum	16
3	Bajra	8
4	Banana	17
5	Barbati	16
6	Barley/Job	8
7	Beans	16
8	Ber	17
9	Bhadoi Sunhemp	9
10	Broadcast Aman	5
11	Cabbage	16
12	Castor	13
13	Cauliflower	16
14	Chalkumra	16
15	Cheena and Kaon	8

CROPID	CROPTYPE	CROPCODE
16	Chichinga	16
17	Chillies (R+K)	15
18	Coconut	17
19	Coriander Seeds	15
20	Cotton (R+K)	9
21	Cucumber	16
22	Danta	16
23	Garikalai	14
24	Garlic	15
25	Ginger	15
26	Gram	14
27	Groundnut (R+K)	13
28	Guava	17
29	HYV Aman	4
30	HYV Aus	2
31	HYV Boro	7
32	Jack - fruit	17
33	Jhinga	16
34	Jower	8
35	Jute	9
36	Karala	16
37	Kharif Brinjal	16
38	Kharif Pumpkin	16
39	Kheshari	14
40	Lady's finger	16
41	Lime and Lemon	17
42	Linseed	13
43	Litchi	17
44	Local Aus	1
45	Local Boro	6
46	LT Aman	3
47	Maize	8
48	Mango	17
49	Mashkalai	14
50	Masur	14
51	Melon and water melon	17
52	Motor	14
53	Mung	14
54	Onion	15
55	Orange	17
56	Other Cereals (R+K)	8
57	Other citrus fruits	17
58	Other fruits	17
59	Other Kharif vegetables	16

CROPID	CROPTYPE	CROPCODE
60	Other Oilseeds	13
61	Other Pulses (R+K)	14
62	Other Rabi Fibres(Kapok)	9
63	Other winter vegetables	16
64	Pajam Aman	4
65	Pajam Aus	2
66	Pajam Boro	7
67	Palong Sak	16
68	Papaya	17
69	Patal	16
70	Pineapple	17
71	Pomelo	17
72	Potato	12
73	Pui Sak	16
74	Rabi Brinjal	16
75	Rabi Pumpkin	16
76	Rabi Sunhemp	9
77	Radish	16
78	Rape and Mustard	13
79	Sugarcane	11
80	Sweet Potato	16
81	Tea	17
82	Til (R+K)	13
83	Tobacco	10
84	Tomato	16
85	Turmeric	15
86	Water gourd	16
87	Wheat	8

Name of Data layer: **Crop Statistics (490 thana)**

Metadata

Data Type	Time Series Table
Abstract	A time series data layer containing crop statistics in 17 groups of crop in 466 out of 490 thana, according to Bangladesh Bureau of Statistics (BBS) census 1991.
Quality	This crop data layer was developed on the basis of 39 types of crop, dividing into 17 group. From 1974-75 to 89-90 this data layer covers 466 thana. From 1990-91 to 91-92 crop statistics is available for 372 thana. Data has not been checked.
Completeness	The data layer covers 466 thana from 1974-1975 to 1989-1990 and 372 thana from 90-91 to 91-92.
History of the dataset	This data layer has been collected from MPO. MPO processed this data from DAE/BBS.
Purpose of production	To present 490 thana wise available agricultural area and production of various crops from 1974-75 to 1991-92.
Process description	The data layer has been converted by NWRD from MPO's text database files and stored in data base format.

Sample of Data

Distname	Thananame	Mpocode	Geocode	Cropcode	Year	Areaha	Prodmtan
BAGERHAT	BAGERHAT SADAR	25	40108	1	86-87	713	762
BAGERHAT	BAGERHAT SADAR	25	40108	7	86-87	177	476
BAGERHAT	BAGERHAT SADAR	25	40108	16	86-87	408	3659
BAGERHAT	BAGERHAT SADAR	25	40108	15	86-87	47	84
BAGERHAT	BAGERHAT SADAR	25	40108	2	86-87	59	80
BAGERHAT	BAGERHAT SADAR	25	40108	3	86-87	14604	17385
BAGERHAT	BAGERHAT SADAR	25	40108	4	86-87	1012	1958
BAGERHAT	BAGERHAT SADAR	25	40108	5	86-87	1397	1227

Bundle Information (Data Field Description and Unit)

CROPID	CROPTYPE	CROP CODE
1	Arhar	14
2	Arum	16
3	Bajra	8
4	Banana	17
5	Barbati	16
6	Barley/Job	8
7	Beans	16
8	Ber	17
9	Bhadoi Sunhemp	9
10	Broadcast Aman	5
11	Cabbage	16
12	Castor	13
13	Cauliflower	16
14	Chalkumra	16
15	Cheena and Kaon	8
16	Chichinga	16

CROPID	CROPTYPE	CROPCODE
17	Chillies (R+K)	15
18	Coconut	17
19	Coriander Seeds	15
20	Cotton (R+K)	9
21	Cucumber	16
22	Danta	16
23	Garikalai	14
24	Garlic	15
25	Ginger	15
26	Gram	14
27	Groundnut (R+K)	13
28	Guava	17
29	HYV Aman	4
30	HYV Aus	2
31	HYV Boro	7
32	Jack - fruit	17
33	Jhinga	16
34	Jower	8
35	Jute	9
36	Karala	16
37	Kharif Brinjal	16
38	Kharif Pumpkin	16
39	Kheshari	14
40	Lady's finger	16
41	Lime and Lemon	17
42	Linseed	13
43	Litchi	17
44	Local Aus	1
45	Local Boro	6
46	LT Aman	3
47	Maize	8
48	Mango	17
49	Mashkalai	14
50	Masur	14
51	Melon and water melon	17
52	Motor	14
53	Mung	14
54	Onion	15
55	Orange	17
56	Other Cereals (R+K)	8
57	Other citrus fruits	17
58	Other fruits	17
59	Other Kharif vegetables	16
60	Other Oilseeds	13

CROPID	CROPTYPE	CROPCODE
61	Other Pulses (R+K)	14
62	Other Rabi Fibres(Kapok)	9
63	Other winter vegetables	16
64	Pajam Aman	4
65	Pajam Aus	2
66	Pajam Boro	7
67	Palong Sak	16
68	Papaya	17
69	Patal	16
70	Pineapple	17
71	Pomelo	17
72	Potato	12
73	Pui Sak	16
74	Rabi Brinjal	16
75	Rabi Pumpkin	16
76	Rabi Sunhemp	9
77	Radish	16
78	Rape and Mustard	13
79	Sugarcane	11
80	Sweet Potato	16
81	Tea	17
82	Til (R+K)	13
83	Tobacco	10
84	Tomato	16
85	Turmeric	15
86	Water gourd	16
87	Wheat	8

Name of Data layer: **Crop Statistics by Farm size 1996 (6 Division)**

Metadata

Data Type	Tabular
Abstract	The data layer reveals 6-division wise number of farm holdings with different areas producing specific type of crop out of 97 items in 1996.
Quality	The data layer is checked with the existing source and in comparison with the source its' quality is better. For some crop information is not available.
Completeness	The data layer covers 6 divisions of Bangladesh according to the population census 1991.
History of the dataset	The data layer was published in the Agricultural Statistical Yearbook 1996 by Bangladesh Bureau of Statistics (BBS).
Purpose of production	To provide total number of house-holdings with different size of area producing specific type of crop item
Process description	NWRD has collected it from Agricultural Statistical Yearbook, converted it to digital version and organized the data in an arranged way.

Sample of Data

Divcode	Itemcode	C1	C2	C3	C4	C5	C6	C7	C8
1	1	1025722	387319	166552	117729	140721	812321	184683	28717
1	2	684405.91	37454.88	46069.61	55332.25	108341.16	247197.9	302636.99	134571.02
1	3	542250.91	9845.81	26759.61	39263.05	85495.35	161363.82	259642.25	121244.84
1	4	952305.14	17654.8	50565.76	74224.2	159622.82	302067.58	458283.69	191953.86
1	5	176	179	189	189	187	187	177	158

Bundle Information (Data Field Description and Unit)

FIELD	FIELD_NAME
Distcode/divcode	District Code/Division Code
Itemcode	Item Code
C1	All Holdings
C2	NON-FARM HOUSEHOLDS With no operated area G2
C3	NON-FARM HOUSEHOLDS With no cultivated area
C4	NON-FARM HOUSEHOLDS With 01-04 cultivated area
C5	FARM HOLDINGS Small 0.05-0.49 acre
C6	FARM HOLDINGS Small 0.50-0.99 acre
C7	FARM HOLDINGS Small 1.00-1.49 acre
C8	FARM HOLDINGS Small 1.50-2.49 acre
C9	FARM HOLDINGS Small Total
C10	FARM HOLDINGS Medium 2.50-7.49 acre
C11	FARM HOLDINGS Large 7.50+ acre
C12	FARM HOLDINGS Total farm holdings

ITEMCODE	ITEMNAME	SEASON	REMARKS
1	Number		Household
2	Operated area		Area operated by household
3	Net temporary cropped area		Part of net sown area under crops with growing cycle length less than 1 year
4	Gross cropped area		
5	Cropping intensity		Equal to 4 divided by 3
6	Area Under Cereals		
7	Rice-local broadcast Aus	Monsoon	
8	Rice-local transplanted Aus	Monsoon	
9	Rice-HYV Aus	Monsoon	
10	Rice-Pajam Aus	Monsoon	
11	Total Aus		Sum 7 to 10
12	Rice-local broadcast Aman	Monsoon	
13	Rice-local transplanted Aman	Monsoon	
14	Rice-HYV transplanted Aman	Monsoon	
15	Rice-HYV broadcast Aman	Monsoon	
16	Rice-Pajam Aman	Monsoon	
17	Total Aman		Sum 12 to 16
18	Rice-local Boro	Dry	
19	Rice-HYV Boro	Dry	
20	Rice-Pajam Boro	Dry	
21	Total Boro	Dry	Sum 18 to 20
22	Wheat-local	Dry	
23	Wheat-HYV	Dry	
24	Total Wheat		Sum 22 to 23
25	Total Minor Cereals	Dry	
26	Area Under Pulses:		
27	Gram (chola)	Dry	
28	Pigeon pea (arhar)	Dry	
29	Green gram (mung)	Dry	
30	Lentil (musur)	Dry	
31	Black gram (mas kalai)	Dry	
32	Gari kalai	Dry	
33	Chickling vetch (khesari)	Dry	
34	Pea (matar)	Dry	
35	Other pulses	Dry	
36	Total Pulses	Dry	Sum 27 to 35
37	Area Under Oil Seeds		
38	Sesamum (til)	Dry	
39	Linseed (tishi)	Dry	
40	Rape & mustard (sarisa & rai)	Dry	
41	Ground-nut (cheena badam)	Dry	
42	Soyabean	Dry	
43	Sun-Flower (surjya mukhi)	Dry	

ITEMCODE	ITEMNAME	SEASON	REMARKS
44	Castor (arajo)	Dry	
45	Other oil seeds	Dry	
46	Total Oil Seeds		Sum 38 to 45
47	Area Under Cash Crops		
48	Jute	Monsoon	
49	Sugarcane	Permanent	
50	Tobacco	Permanent	
51	Mesta	Monsoon	
52	Total Cash Crops		Sum 48 to 50, plus other
53	Area Under Vegetables		
54	Patal	Monsoon	
55	Lobry (barbati)	Monsoon	
56	Cucumber(sasha/kheri)	Both	
57	Lady's finger (dherosh)	Monsoon	
58	Ribbed gourd (jhinga)	Monsoon	
59	Bitter gourd (karala)	Monsoon	
60	White gourd (chal kumra)	Monsoon	
61	Water gourd (lau)	Dry	
62	Pumpkin (misti kumra)	Both	
63	Arum (kachu)	Dry	
64	Lal shak/palong shak	Monsoon	
65	Amaranta (data shak)	Monsoon	
66	Indian spinach (pui shak)	Monsoon	
67	Water melon (tarmuj/kharmuj)	Monsoon	
68	Melon (bangi)	Monsoon	
69	Kakrol	Monsoon	
70	Potato (aloo)	Dry	
71	Sweet potato (misti aloo)	Dry	
72	Cabbage (bandha kopy)	Dry	
73	Cauliflower (phul kopy)	Dry	
74	Knolkhol (wol kopy)	Dry	
75	Binjal (behun)	Dry	
76	Raddish (mula)	Dry	
77	Carrot (gajar)	Dry	
78	Beans (shim)	Dry	
79	Tomato	Dry	
80	Turnip (shalgam)	Dry	
81	Chichinga	Dry	
82	Other Vegetables	Both	
83	Total Vegetables		
84	Area Under Spices		
85	Tumaric (halud)	Both	
86	Ginger (ada)	Dry	

ITEMCODE	ITEMNAME	SEASON	REMARKS
87	Chillies (marich)	Both	
88	Onion (peanj)	Dry	
89	Garlic (rashun)	Dry	
90	Corainder seed (dhaniya)	Dry	
91	Aniseed (mauri)	Dry	
92	Black cumin seed (kala zira)	Dry	
93	Other Spices	Dry	
94	Total Spices		
95	Fodder	Dry	
96	Dhaincha (fuel)	Dry	
97	Total Fodder		

Name of Data layer: **Crop Statistics by Farm size 1996 (64 District)**

Metadata

Data Type	Tabular
Abstract	The data layer reveals 64-district wise number of farm holdings with different areas producing specific type of crop out of 97 items in 1996.
Quality	The data layer is checked with the existing source. Information is not available for some crop.
Completeness	The data layer covers 64 districts of Bangladesh according to the population census 1991.
History of the dataset	The data layer was published in the Agricultural Statistical Yearbook 1996 by Bangladesh Bureau of Statistics (BBS).
Purpose of production	To provide total number of house holdings with different size of area producing specific type of crop item
Process description	NWRD has collected it from Agricultural Statistical Yearbook, converted it to digital version and organized the data in a suitable format.

Sample of Data

Distcode	Itemcode	C1	C2	C3	C4	C5	C6	C7	C8
1	1	192594	65042	32630	22548	27687	147906	37907	6781
1	2	141567.79	6202.75	8873.33	10563.33	21174.83	46814.25	62645.89	32107.65
1	3	108887.49	1472.68	4731.28	6983.41	15698.91	28886.28	51641.04	28360.18
1	4	131088.63	1889.52	6310.4	9026.31	20077.7	37303.93	62749.09	31035.61
1	5	120	128	133	129	128	129	122	109

Bundle Information (Data Field Description and Unit)

ITEMCODE	ITEMNAME	SEASON	REMARKS
1	Number		Household
2	Operated area		Area operated by household
3	Net temporary cropped area		Part of net sown area under crops with growing cycle length less than 1 year
4	Gross cropped area		
5	Cropping intensity		Equal to 4 divided by 3
6	Area Under Cereals		
7	Rice-local broadcast Aus	Monsoon	
8	Rice-local transplanted Aus	Monsoon	
9	Rice-HYV Aus	Monsoon	
10	Rice-Pajam Aus	Monsoon	
11	Total Aus		Sum 7 to 10
12	Rice-local broadcast Aman	Monsoon	
13	Rice-local transplanted Aman	Monsoon	
14	Rice-HYV transplanted Aman	Monsoon	
15	Rice-HYV broadcast Aman	Monsoon	
16	Rice-Pajam Aman	Monsoon	
17	Total Aman		Sum 12 to 16
18	Rice-local Boro	Dry	

ITEMCODE	ITEMNAME	SEASON	REMARKS
19	Rice-HYV Boro	Dry	
20	Rice-Pajam Boro	Dry	
21	Total Boro	Dry	Sum 18 to 20
22	Wheat-local	Dry	
23	Wheat-HYV	Dry	
24	Total Wheat		Sum 22 to 23
25	Total Minor Cereals	Dry	
26	Area Under Pulses:		
27	Gram (chola)	Dry	
28	Pigeon pea (arhar)	Dry	
29	Green gram (mung)	Dry	
30	Lentil (musur)	Dry	
31	Black gram (mas kalai)	Dry	
32	Gari kalai	Dry	
33	Chickling vetch (khesari)	Dry	
34	Pea (matar)	Dry	
35	Other pulses	Dry	
36	Total Pulses	Dry	Sum 27 to 35
37	Area Under Oil Seeds		
38	Sesamum (til)	Dry	
39	Linseed (tishi)	Dry	
40	Rape & mustard (sarisa & rai)	Dry	
41	Ground-nut (cheena badam)	Dry	
42	Soyabean	Dry	
43	Sun-Flower (surjya mukhi)	Dry	
44	Castor (arajo)	Dry	
45	Other oil seeds	Dry	
46	Total Oil Seeds		Sum 38 to 45
47	Area Under Cash Crops		
48	Jute	Monsoon	
49	Sugarcane	Permanent	
50	Tobacco	Permanent	
51	Mesta	Monsoon	
52	Total Cash Crops		Sum 48 to 50, plus other
53	Area Under Vegetables		
54	Patal	Monsoon	
55	Lobry (barbati)	Monsoon	
56	Cucumber(sasha/kheri)	Both	
57	Lady's finger (dherosh)	Monsoon	
58	Ribbed gourd (jhinga)	Monsoon	
59	Bitter gourd (karala)	Monsoon	
60	White gourd (chal kumra)	Monsoon	
61	Water gourd (lau)	Dry	
62	Pumpkin (misti kumra)	Both	

ITEMCODE	ITEMNAME	SEASON	REMARKS
63	Arum (kachu)	Dry	
64	Lal shak/palong shak	Monsoon	
65	Amaranta (data shak)	Monsoon	
66	Indian spinach (pui shak)	Monsoon	
67	Water melon (tarmuj/kharmuj)	Monsoon	
68	Melon (bangi)	Monsoon	
69	Kakrol	Monsoon	
70	Potato (aloo)	Dry	
71	Sweet potato (misti aloo)	Dry	
72	Cabbage (bandha kopy)	Dry	
73	Cauliflower (phul kopy)	Dry	
74	Knolkkhol (wol kopy)	Dry	
75	Binjal (behun)	Dry	
76	Raddish (mula)	Dry	
77	Carrot (gajar)	Dry	
78	Beans (shim)	Dry	
79	Tomato	Dry	
80	Turnip (shalgam)	Dry	
81	Chichinga	Dry	
82	Other Vegetables	Both	
83	Total Vegetables		
84	Area Under Spices		
85	Tumaric (halud)	Both	
86	Ginger (ada)	Dry	
87	Chillies (marich)	Both	
88	Onion (peanj)	Dry	
89	Garlic (rashun)	Dry	
90	Corainder seed (dhaniya)	Dry	
91	Aniseed (mauri)	Dry	
92	Black cumin seed (kala zira)	Dry	
93	Other Spices	Dry	
94	Total Spices		
95	Fodder	Dry	
96	Dhaincha (fuel)	Dry	
97	Total Fodder		

FIELD	FIELDNAME
Distcode	District Code
Itemcode	Item Code
C1	Total farm holding
C2	Small 0.02-0.2 ha
C3	Small 0.20-0.4 ha

FIELD	FIELDNAME
C4	Small 0.4-0.6 ha
C5	Small 0.6-1.0 ha
C6	Small Total small holdings
C7	Medium 1.0-3.0 ha
C8	Large 3.0 ha and above

Name of Data layer: **Cropped Areas**

Metadata

Data Type	PDF File
Abstract	The data layer presents year-wise total and net-cropped area of Bangladesh from 1975-76 to 1994-95.
Quality	The data layer fully complies with the Annual Statistical YearBook 1997 published by BBS.
Completeness	The data layer covers whole country.
History of the dataset	BBS (Bangladesh Bureau of Statistics) prepared this data layer and published in Annual Statistical YearBook of 1997.
Purpose of production	To estimate total cultivated area, net cultivated area, cropping intensity etc. This information can be used in different agriculture related studies.
Process description	NWRD has captured the data from Annual Statistical Yearbook and organized it maintaining a suitable order.

Sample of Data

Year	Net Cropped Area	Total Crop Area	Cropping intensity (%)	Area cropped more than once
1975 / 76	8.49	12.02	142	3.53
1976 / 77	8.28	11.73	142	3.45
1977 / 78	8.38	12.03	143	3.65
1978 / 79	8.42	12.89	153	4.47
1979 / 80	8.45	12.94	153	4.49
1980 / 81	8.57	13.17	154	4.60

Name of Data layer: **HYV Rice by Acreage**

Metadata

Data Type	PDF File
Abstract	The data layer contains HYV rice cultivated areas of Bangladesh from 1969-70 to 1997-98.
Quality	The data layer fully resembles with the cited source.
Completeness	The data layer covers whole country.
History of the dataset	Source of this data is the Statistical Yearbook of BBS and published information of IRRI. But this data layer has been collected from Department of Agricultural Extension.
Purpose of production	To calculate the total HYV rice cultivated area and to estimate the changes with respect to the previous years.
Process description	NWRD has stored it in an organised way.

Sample of Data

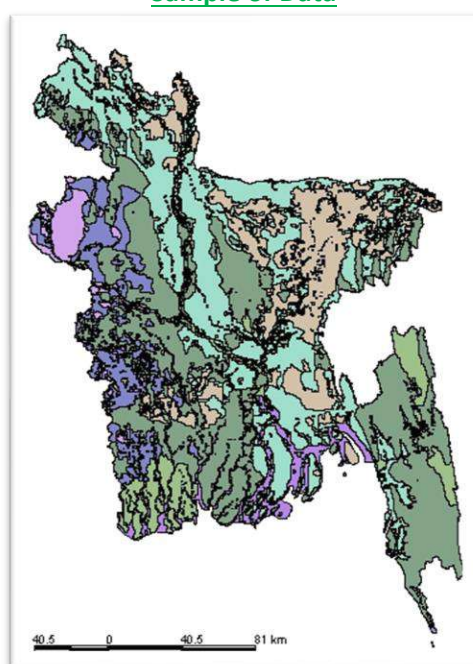
Year (2)	Aman HYV	Aus HYV	Boro HYV	TOTAL HYVs	Percentage change on previous year	Three year average percentage change
1969	29	43	580	652		
1970	200	80	857	1,137	74.4	
1971	626	121	795	1,542	35.6	
1972	1,379	164	1,088	2,631	70.6	60.2
1973	2,043	329	1,454	3,826	45.4	50.6
1974	1,239	699	1,629	3,567	-6.8	36.4
1975	1,376	872	1,587	3,835	7.5	15.4
1976	1,046	901	1,215	3,162	-17.5	-5.6
1977	567	953	1,455	2,975	-5.9	-5.3
1978	884	1,026	1,482	3,392	14.0	-3.1

Name of Data layer: **Drought Map (Kharif I)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer presenting the drought intensity of Kharif I (March - May) period of Bangladesh.
Quality	Quality of this data layer depends on the data collection and analysis process of the source organization. The analysis procedures are described in the report 'Updating of Edaphic and Agroclimatic Suitability Rules for Selected Crops of Bangladesh'.
Completeness	
History of the dataset	Source of the dataset was produced by Bangladesh Agricultural Research Council (BARC)
Purpose of production	To present drought intensity of Kharif I Season for all over Bangladesh and to use the dataset in various drought and agricultural research purposes.
Process description	This data layer has been uploaded into database from BARC. International boundary has been used in 1:50,000 scale created by Survey of Bangladesh (SoB) and coastline generated from IRS Liss 2005 image has been used to update this data layer. The drought severity classes defined in the maps are slight, Moderate, severe and Very severe related to the yield losses of 15-20%, 20-35%, 35-45%, and 45-70% respectively for different crops.

Sample of Data



Attribute Table

area	drou_class	drought_cl	subreg	regnm	subregnm	newid
102019808	4	Slight				4
24198058	3	Moderate				3
28907002	4	Slight				4
14741884	3	Moderate				3
19985602560	4	Slight				4
548546.813	4	Slight				4

Bundle Information (Data Field Description and Unit)

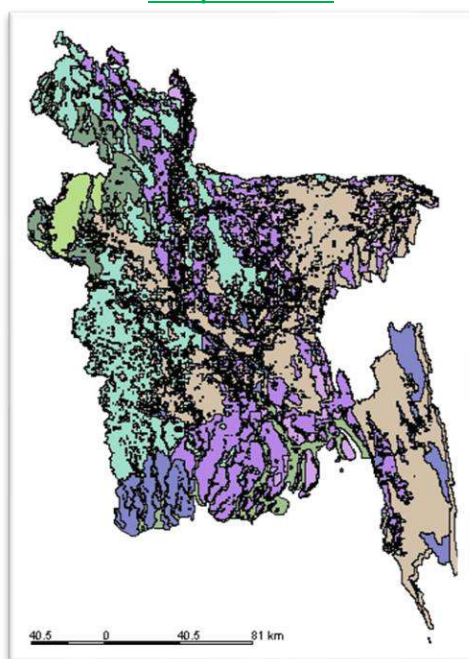
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of Each Polygon	Sq. Meter
Drou_class	Drought class Id	
Drought_cl	Name of the drought class unit	
Subreg	Sub-Region Id	
Regnm	Name of the Region	
Subregnm	Name of the Sub-Region	
Newid	Combination of drought class id and Sub- region id	

Name of Data layer: **Drought Map (Kharif II)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer presenting the drought intensity of Kharif II (May - January) period of Bangladesh.
Quality	Quality of this data layer totally depends on the data collection process of the source organization.
Completeness	
History of the dataset	Source of the dataset was produced by Bangladesh Agricultural Research Council (BARC)
Purpose of production	To present drought intensity of Kharif II season for all over Bangladesh and to use the dataset in various drought and agricultural research purposes.
Process description	This data layer has been uploaded into database from BARC. International boundary has been used in 1:50,000 scale created by Survey of Bangladesh (SoB) and coastline generated from IRS Liss 2005 image has been used to update this data layer. The drought severity classes defined in the maps are slight, Moderate, severe and Very severe related to the yield losses of 15-20%, 20-35%, 35-45%, and 45-70% respectively for different crops.

Sample of Data



Attribute Table

area	drou_class	drought_cl	subreg	regnm	subregnm	newid
100497992	3	Moderate				3
24907082	2	Severe				2
1440000	10	Non T.Aman Areas (MLL, LL, VLL & Hills)	1a	Old Himalayan Piedmont Plain	Northern	101a
28276580	3	Moderate				3
14933714	2	Severe				2
2904766464	3	Moderate				3

Bundle Information (Data Field Description and Unit)

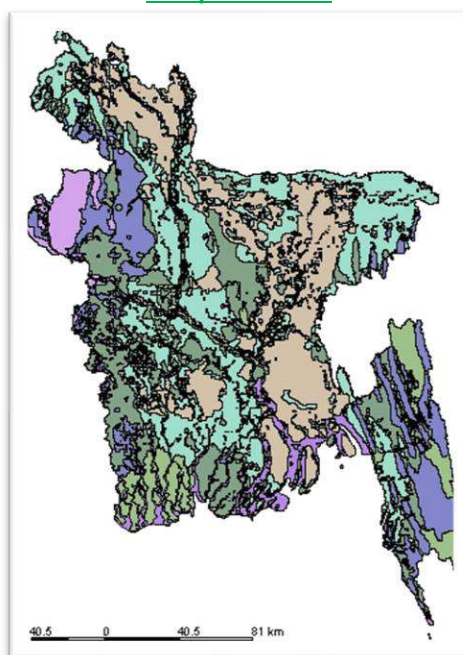
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of Each Polygon	Sq. Meter
Drou_class	Drought class Id	
Drought_cl	Name of the drought class unit	
Subreg	Sub-Region Id	
Regnm	Name of the Region	
Subregnm	Name of the Sub-Region	
Newid	Combination of drought class id and Sub- region id	

Name of Data layer: **Drought Map (Rabi Season)**

Metadata

Data Type	Spatial
Abstract	A spatial data layer presenting the drought intensity of Rabi (October & May) period of Bangladesh.
Quality	Quality of this data layer totally depends on the data collection process of the source organization.
Completeness	This data layer covers the entire national boundary of the country.
History of the dataset	Source of the dataset was produced by Bangladesh Agricultural Research Council (BARC)
Purpose of production	To present drought intensity of Rabi Season for all over Bangladesh and to use the dataset in various drought and agricultural research purposes.
Process description	This data layer has been uploaded into database from BARC. International boundary has been used in 1:50,000 scale created by Survey of Bangladesh (SoB) and coastline generated from IRS Liss 2005 image has been used to update this data layer. The drought severity classes defined in the maps are slight, Moderate, severe and Very severe related to the yield losses of 15-20%, 20-35%, 35-45%, and 45-70% respectively for different crops.

Sample of Data



Attribute Table

area	drou_class	drought_cl	subreg	regnm	subregnm	newid
101878864	4	Slight				4
26181794	3	Moderate				3
26730938	4	Slight				4
15117642	3	Moderate				3
356673440	4	Slight				4
215601760	5	No Drought				5

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area of Each Polygon	Sq. Meter
Drou_class	Drought class Id	
Drought_cl	Name of the drought class unit	
Subreg	Sub-Region Id	
Regnm	Name of the Region	
Subregnm	Name of the Sub-Region	
Newid	Combination of drought class id and Sub- region id	

Name of Data layer: **Fertilizer Sales Fertilizer Sales**

Metadata

Data Type	PDF File
Abstract	The data layer contains sales of major fertilizer
Quality	In comparison with the source, quality of this data layer is better.
Completeness	Data is available for 30 year.
History of the dataset	A portion (from 1980 - 1995) of data was published in Bangladesh Agricultural Inputs Supply Review, November 1997 by FAO and the rest of the data was published in Statistical Yearbook of BBS.
Purpose of production	To present the statistics of sales of major fertilizer from 1965 to 1995.
Process description	NWRD has converted the data in digital format and stored it in an arranged form.

Sample of Data

Year (2)	Urea	TSP	SSP	MOP	TOTAL SALES	Percentage change on previous year	Three year average percentage change
1965	83	21		4	104		
1966	121	34		8	155	49.0	
1967	152	48		11	200	29.0	
1968	160	53		12	213	6.5	28.2
1969	196	66		15	262	23.0	19.5
1970	212	75		17	287	9.5	13.0
1971	170	60		14	230	-19.9	4.2
1972	276	89		18	365	58.7	16.1
1973	268	74		18	342	-6.3	10.8
1974	176	76		18	252	-26.3	8.7

Name of Data layer: **Fertilizer Used by 21 District**

Metadata

Data Type	Tabular
Abstract	The data layer shows 21 old districts wise statistics of major fertilizer use for all over the country from 1987-88 to 1993-94.
Quality	The data layer fully resembles with the source.
Completeness	The data layer covers whole Bangladesh as 21 old districts.
History of the dataset	BBS collected, compiled and published the data.
Purpose of production	To estimate the total fertilizer used in 21 districts and to compare it with previous years.
Process description	NWRD has converted the data to digital format and stored it in an arranged form.

Sample of Data

Districtna	Year	Urea	Tsp	Dap	Mp	Hp	Npk	N	P205	K20	Nh3_co3	Gypsum	Zine	Unit_frt	Unit_chm
BARISAL	1987-88	28205	9969	0	685	0	0	12974	4586	411	0	28	61	6.7	3.11
BOGRA	1987-88	64010	26184	0	9959	0	0	29445	12045	5975	0	129	56	25.87	12.31
CHITTAGONG	1987-88	51938	11852	0	1161	216	0	23891	5452	697	0	5	197	9.93	4.61
CHITTAGONG HILL TRACTS	1987-88	8091	4715	0	257	4	0	3722	2169	154	0	0	0	0.99	0.46
COMILLA	1987-88	89789	48690	0	8800	0	0	41303	22397	5280	0	16	81	21.88	10.26
DHAKA	1987-88	99997	33145	0	8354	2	0	45999	15247	5012	0	41	107	19.01	8.92
DINAJPUR	1987-88	51410	29213	0	8269	245	0	23649	13438	4961	0	89	80	13.37	6.33
FARIDPUR	1987-88	25139	8808	0	2664	0	0	11564	4052	1598	0	25	26	5.16	2.43
JAMALPUR	1987-88	40196	11137	0	1755	0	0	18490	5123	1053	0	24	43	15.65	7.29
JESSORE	1987-88	51949	22544	0	4977	0	0	23897	10370	2986	0	99	248	12.27	5.8

Bundle Information (Data Field Description and Unit)

COLUMN_NAME	COLUMN_DESCRIPTION
Year	Hydrological Year
Urea	UREA
Tsp	Tripple Super Phosphate
Dap	Di Ammonium Phosphate
Mp	Muriate of Potash
Hp	Hypo Phosphate
Npk	Nitrogen Phosphorus Potassium
N	Nitrogen
P205	Phosphorus penta oxide
K20	Di potassium oxide
Nh3_co3	Ammonium carbonate
Gypsum	Gypsum
Zine	Zinc
Unit_frt	
Unit_chm	
Districtna	District Name

Name of Data layer: **Fertilizers for Nutrient Equivalents**

Metadata

Data Type	PDF File
Abstract	The dataset presents statistics of use of major fertilizers as nutrient equivalents from 1965/66 to 1995/96.
Quality	The dataset has been stored by NWRD with any checking or quality assessment.
Completeness	Data is available for 30 years.
History of the dataset	A part (from 1980 - 1995) of the dataset was published in Bangladesh Agricultural Inputs Supply Review, November 1997 by FAO and Bangladesh Bureau of Statistics (BBS) published the rest in Statistical Yearbook.
Purpose of production	To present the statistics of use of major fertilizers as nutrient from 1965 to 1995
Process description	NWRD has converted the data in digital format and stored it in an arranged form.

Sample of Data

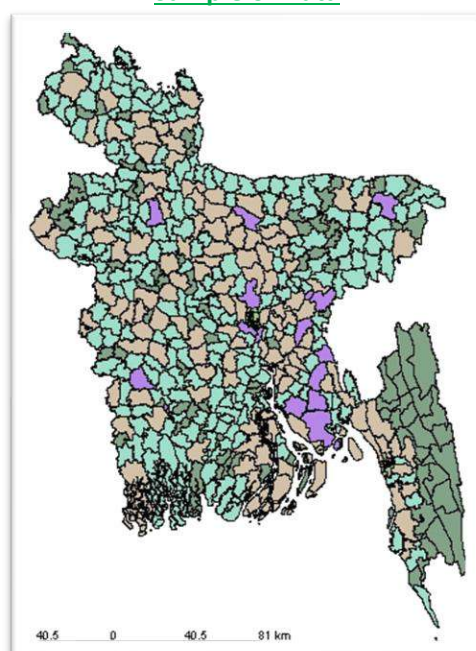
Year (2)	Urea (3)	TSP (3)	SSP (3)	MOP (3)	TOTAL SALES	Percentage change on previous year	Three year average percentage change
1965	38	10	0	2	48		
1966	56	16	0	5	71	49.0	
1967	70	22	0	7	92	29.0	
1968	74	24	0	7	98	6.5	28.2
1969	90	30	0	9	121	23.0	19.5
1970	98	35	0	10	132	9.5	13.0
1971	78	28	0	8	106	-19.9	4.2
1972	127	41	0	11	168	58.7	16.1
1973	123	34	0	11	157	-6.3	10.8
1974	81	35	0	11	116	-26.3	8.7

Name of Data layer: **Demand of Food Grain**

Metadata

Data Type	Spatial
Abstract	The demand of food grain is to determine how much food grain required in every upazila per year.
Quality	Quality of this data layer totally depends on the data collection process of the source organization.
Completeness	This data layer covers the entire national boundary of the country.
History of the dataset	The dataset has been collected from "Bangladesh Country Almanac" produced by BARC, SRDI, BRRI and CIMMYT.
Purpose of production	This is required for getting knowledge on the surplus or deficit of food grain of the year. It will show the food grain deficit areas with amount so that future demand can be assessed and mitigation measures can be adopted.
Process description	Data has been collected into digital format and combined it with spatial (508 upazila) data.

Sample of Data



Attribute Table

area	thaco de	divna me	distna me	thanam e	landty pe	thaco de	aus	am an	bor o	allric e	whe at	allfgra in	nfgrp ro	midyrp op	fgr eq	clfgr eq
51527361 5.9315	10409	Barisa l	Bargun a	Amtali	Land	10409	18. 19	43. 6	0	61.7 9	0.01	61.79	55.61	288	47.7 2	25 - 50
10098724 7.8818	10419	Barisa l	Bargun a	Bamna	Land	10419	5.5 5	12. 55	0	18.1	0	18.1	16.29	80	13.2 6	0 - 25
32472208 4.8277	10428	Barisa l	Bargun a	Bargun a Sadar	Land	10428	1.1 3	38. 8	0	39.9 4	0	39.94	35.94	259	42.9 2	25 - 50
16485533 7.9528	10447	Barisa l	Bargun a	Betagi	Land	10447	4.6 3	11. 58	0	16.2 1	0	16.21	14.59	131	21.7 1	0 - 25
23876928 4.7895	10485	Barisa l	Bargun a	Patharg hata	Land	10485	1.7 4	24. 26	0	26	0	26	23.4	159	26.3 5	25 - 50
15595072 9.7881	10602	Barisa l	Barisal	Agailjha ra	Land	10602	0.0 1	0.1 5	22. 95	23.1 1	0	23.11	20.8	174	28.8 3	25 - 50

Bundle Information (Data Field Description and Unit)

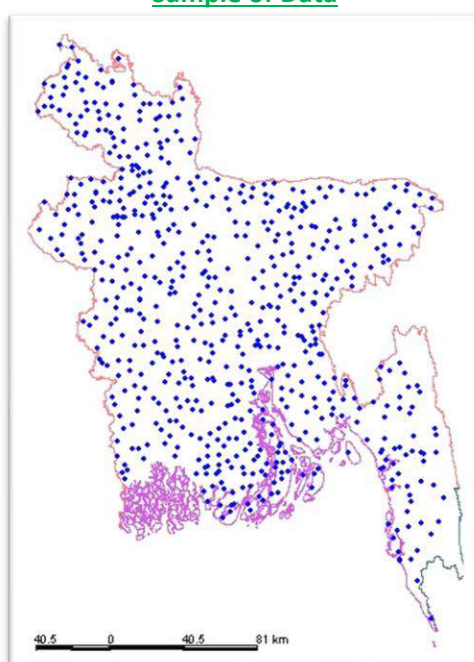
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of Each Polygon	Sq. Meter
Thacode	Thana code (Division code + district code + thana code) is incorporated according to Geomaster database of BBS 2001	
Divname	Name of each division according to BBS geomaster database of 2001	
Distname	Name of each district according to BBS geomaster database of 2001	
Thaname	Name of each thana according to BBS geomaster database of 2001	
Landtype	Land type	
Aus	Aus	Million Mton
Aman	Aman	Million Mton
Boro	Boro	Million Mton
Allrice	All rice	Million Mton
Wheat	Wheat	Million Mton
Allfgrain	All food grain	Million Mton
Nfgrpro	Net food production (Excludes 11.58% of total production for seed, feed, post harvest losses)	Million Mton
Midyrpop	Mid year population	1000
Fgrreq	Food requirement	Million Mton
Clfgreq	Food requirement class	

Name of Data layer: **Location of Food Godown**

Metadata

Data Type	Spatial
Abstract	A spatial data layer presenting 651 food godown location with other attribute information according to department of food (2002-2003).
Quality	Quality of this data layer totally depends on the data collection process of the source organization. Attempt is made to correct the data layer so that it can be checked upto mouza level accuracy.
Completeness	This data layer covers the entire national boundary of the country.
History of the dataset	The data layer has been collected in hard copy format from department of food. The data is being converted from the hard copy with GIS data layers. The tentative location of the godowns are presented by a arial distance from the Thana HQ.
Purpose of production	To present the location of the food godown and to use the data in different kinds of analysis in national or regional level. It will help in defining areas with existing food godown locations and potential areas for new godowns.
Process description	The data about the food godown has been taken from a report published by department of food in 2002-2003. Food godown locations have been captured from the above-mentioned report with the help of mauza, road, rail, waterbodies and river database. Attribute data has been captured from the same report and combined it with GIS data.

Sample of Data



Attribute Table

id	geocode	unioncode	divname	distname	thaname	unioname	mauzname	name	type	distance	cap500	cap750	cap1000	otherno	othermton	capsilo	totalno
2	5817271704	5817271	Rajshahi	Rajshahi	Paba	Noahata	Noahata	Noahata	LSD	8.000	2	0	0	0	0	0	2
4	5811299143	5811299	Rajshahi	Rajshahi	Baghmara	Bhawabani	Bhabaniganj	Bhabaniganj	LSD	1.000	2	0	0	0	0	0	2
6	5819440619	5819440	Rajshahi	Rajshahi	Tanore	Kamargan	Kamargan	Kamargan	LSD	10.000	1	0	0	0	0	0	1
5	581949976	5819499	Rajshahi	Rajshahi	Tanore	Paurashava	Tanore	Tanore	LSD	1.000	1	2	0	0	0	0	3

tcapacity	usecap	percap	turnover	perturn	rehab	rehabsur	rehabdate	comroad	comri	comrail	zdeficit	deficitmt	nca	area	unionno	popu	rem	ctcapacity	crehab
1000	1000	100	8340	834				Road			0	0	0	1.34	U-5	120		LSD: 500 - 1000	No Data
1000	1000	100	12410	1241	Yes	IDTS	17/04/2001	Road			0	0	0	1.02	U-16, P-2	283		LSD: 500 - 1000	Yes
500	500	100	4950	990				Road			0	0	0	1	U-2	44		LSD: 500 - 1000	No Data
2000	2000	100	6500	325		SIDA		Road			0	0	0	1.61	U-2, P-1	94		LSD: 1500 - 2000	No Data

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Id	Unique id of each point	
Geocode	Geocode is incorporated according to Geomaster database of BBS 2001.	
Unioncode	Union code is incorporated according to Geomaster database of BBS 2001.	
Divname	Name of each division according to BBS geomaster database of 2001	
Distname	Name of each district according to BBS geomaster database of 2001	
Thaname	Name of each Upazila according to BBS geomaster database of 2001	
Uniname	Name of each Union according to BBS geomaster database of 2001	
Mauzname	Name of each Mauza according to BBS geomaster database of 2001	
Name	Name of Godown	
Type	Type of Godown	
Distance	Distance of each LSD from upazila headquarter	Km
Cap500	Number of food godown total capacity 500 m.ton	Number
Cap750	Number of food godown total capacity 750 m.ton	Number
Cap1000	Number of food godown total capacity 1000 m.ton	Number
Otherno	Others godown	Number
Othermton	Total Capacity of Others Godown	M.Ton
Capsilo	Capacity of Silo	M.Ton

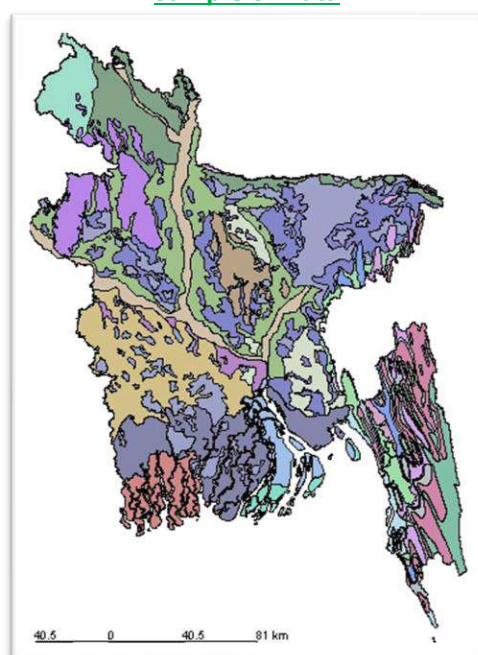
FIELD_NAME	FIELD_DESC	UNIT
Totalno	Total Godown	Number
Tcapacity	Total Capacity	M.Ton
Usecap	Useable capacity of food godown	M.Ton
Percap	Percentage of food godown capacity	
Turnover	Turnover of each godown	M.Ton
Perturn	Turnover of each godown in percentage	
Rehab	Rehabilitation Status	
Rehabsour	Rehabilitation Source	
Rehabdate	Rehabilitation Date	
Comroad	Communication by Road	
Comriver	Communication by River	
Comrail	Communication by Rail	
Zdeficit	Percentage of deficit	
Deficitmt	Deficit	M.Ton
Ncapamt	Net Capacity	M.Ton
Area	Area of godown	Acre
Unionno	Number of distribution union	
Popouthou	Number of population	Population ('000)
Remarks	Remarks	
Ctcapacity	Total Capacity Class	
Crehab	Rehabilitation Class	

Name of Data layer: **Geological Map of Bangladesh**

Metadata

Data Type	Spatial
Abstract	A spatial data layer containing the geological deposits of the country.
Quality	The source map was printed in a scale of 1:1,00,000. Therefore, it is recommended that not used above the mentioned scale.
Completeness	The data layer covers whole Bangladesh printed in 1990.
History of the dataset	The map was prepared by Geological Survey of Bangladesh (GSB) and United Geological Survey of Bangladesh (USGS) in 1990. The base was compiled from LANDSAT satellite mosaic of 1984 with SPARRSO and other available topographic maps. A number of documents,papers and maps were used as the source to derive the information.
Purpose of production	The map was prepared to present the overall geological formation of the country. It is classified in a number of map units describing the alluvial deposits and bed rock formation.
Process description	NWRD has captured the map from the Geological Map Bangladesh of 1990. The projection system of the source map was in Lambert Conformal Conic (LCC) projection system. It was transformed into Bangladesh Transverse Mercator (BTM) projection system. International boundary was incorporated from SOB TOPO map 1: 50,000 map and the coastal bounday was updated from Landsat 1997 image.

Sample of Data



Attribute Table

area	perimeter	class	areasqkm	geology_id	name
4106753792	622511.313	afo	4106.75	14	Old gravelly sand
1506104960	410238.969	afy	1506.1	13	Young gravelly
5233087488	843840.5	afy	5233.09	13	Young gravelly
18327412	30430	afy	18.33	13	Young gravelly
6748918272	1824120.625	asd	6748.92	9	Alluvial sand
589086720	241800.719	afy	589.09	13	Young gravelly

Bundle Information (Data Field Description and Unit)

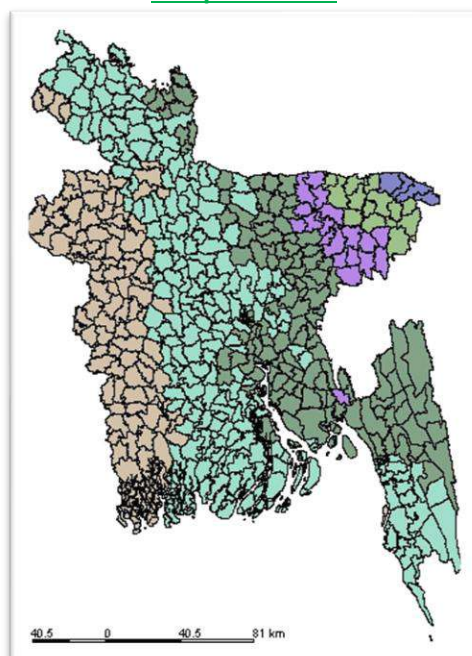
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of the polygon	Sq. Meter
Perimeter	Perimeter of the polygon	Meter
Class	Classification identification used by Geological Survey of Bangladesg (GSB)	
Areasqkm	Area of the polygon	Sq. Km
Geology_id	Identification used by Geological Survey of Bangladesg (GSB)	
Name	Elaborated name of class defined by Geological Survey of Bangladesh (GSB)	

Name of Data layer: **Irrigation Demand**

Metadata

Data Type	Spatial
Abstract	Irrigation water demand will help in designing the projects by utilizing the available resources. Water requirements for crops differ according to its characteristics, soil and climatic factor. Water demand varies for rice crops than non rice crop production. So assessment of crop water demand is needed to fulfill the healthy crop growth. The dry season rainfall is very low compare to the wet season rainfall. So to fulfill the demand of crop production, it is required to know how much water may be needed in excess of rainfall and possible irrigation measures will adopt.
Quality	Quality of this data layer depends on the data collection process of the source organization. The main sources for the analyzed data are based on BWDB rainfall and BMD meteorological parameters.
Completeness	The data layer covers all over Bangladesh.
History of the dataset	This data layer was generated by NWMP (National Water Management Plan). The data was prepared based on dry and average year rainfall distribution and crop evapotranspiration. The deficit or surplus areas are identified after subtracting the themes at upazila
Purpose of production	This is required for getting knowledge on the surplus or deficit of rainfall in different months of the year. It will show the rainfall deficit areas with amount so that future demand can be assessed and mitigation measures can be adopted.
Process description	Quality of this data layer depends on the data collection process of the source organization. The main sources for the analyzed data are based on BWDB rainfall and BMD meteorological parameters.

Sample of Data



Attribute Table

thacode	divname	distname	thaname	landtype	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	dry	wet	annual	dryirrd	parea
10409	Barisal	Barguna	Amtali	Land	-73	-82	-124	-82	62	341	419	373	227	89	-63	-71	-325	1588	1308	Deficit : 200 - 400	517830913.403
10419	Barisal	Barguna	Bamna	Land	-72	-74	-119	-85	-10	323	360	310	185	29	-57	-69	-376	1341	1045	Deficit : 200 - 400	100987248.753
10428	Barisal	Barguna	Barguna Sadar	Land	-73	-85	-126	-83	77	353	435	411	243	106	-70	-72	-356	1586	1265	Deficit : 200 - 400	324722085.709
10447	Barisal	Barguna	Betagi	Land	-71	-73	-117	-77	7	318	366	300	183	37	-58	-69	-356	1328	1019	Deficit : 200 - 400	164855337.661
10485	Barisal	Barguna	Patharghata	Land	-73	-80	-127	-87	86	310	418	424	235	109	-68	-72	-356	1624	1327	Deficit : 200 - 400	238769285.563

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Thacode	Thacode (Division code + district code + thana code) is incorporated according to Geomaster database of BBS 2001	
Divname	Name of each division according to BBS geomaster database of 2001	
Distname	Name of each district according to BBS geomaster database of 2001	
Thaname	Name of each thana according to BBS geomaster database of 2001	
Landtype	Classification of administrative unit by land and water	
Jan	Irrigation water demand (Positive value indicates surplus & Negative value indicates deficit) in January	mm
Feb	Irrigation water demand (Positive value indicates surplus & Negative value indicates deficit) in February	mm
Mar	Irrigation water demand (Positive value indicates surplus & Negative value indicates deficit) in March	mm
Apr	Irrigation water demand (Positive value indicates surplus & Negative value indicates deficit) in April	mm
May	Irrigation water demand (Positive value indicates surplus & Negative value indicates deficit) in May	mm
Jun	Irrigation water demand (Positive value indicates surplus & Negative value indicates deficit) in June	mm
Jul	Irrigation water demand (Positive value indicates surplus & Negative value indicates deficit) in July	mm
Aug	Irrigation water demand (Positive value indicates surplus & Negative value indicates deficit) in August	mm
Sep	Irrigation water demand (Positive value indicates surplus & Negative value indicates deficit) in September	mm
Oct	Irrigation water demand (Positive value indicates surplus & Negative value indicates deficit) in October	mm

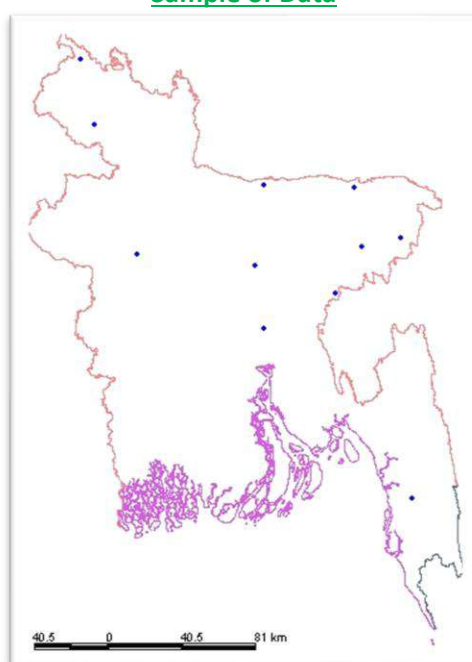
FIELD_NAME	FIELD_DESC	UNIT
Nov	Irrigation water demand (Positive value indicates surplus & Negative value indicates deficit) in November	mm
Dec	Irrigation water demand (Positive value indicates surplus & Negative value indicates deficit) in December	mm
Dry	Dry (November to May) season Irrigation water demand (Positive value indicates surplus & Negative value indicates deficit)	mm
Wet	Wet (June to October) season Irrigation water demand (Positive value indicates surplus & Negative value indicates deficit)	mm
Annual	Yearly total Irrigation water demand (Positive value indicates surplus & Negative value indicates deficit)	mm
Dryirrd	Class Value of Dry Period Irrigation water demand	mm
Parea	Area of Each Polygon	Meter

Name of Data layer: **Location of Rubber Dam**

Metadata

Data Type	Spatial
Abstract	A spatial data layer containing the locations of Rubber Dam by LGED. The rubber dam reserves water in the river and direct it to a channel without blocking navigation.
Quality	Quality of this data layer totally depends on the data collection process of the source organization. Some rivers does not go through the Mauza mentioned in the list and some Khal or river name are not found in NWRD database.
Completeness	The data layer covers rubber dam locations of Bangladesh identified by LGED.
History of the dataset	The data layer has been collected in hard copy format from LGED/Crop Wing (Agriculture Div.) The data is being converted from the hard copy with GIS data layers. The tentative location of the Rubber Dam are presented.
Purpose of production	To present the location of the Rubber Dam and to use the data in different kinds of analysis in national or regional level. This data layer is essential for any kind of socio-economic and agricultural analysis, planning and management purpose.
Process description	The data about the Rubber Dam has been taken from a list published by LGED. Dam locations have been captured from the above-mentioned list with the help of DLRS mauza and river database. Attribute data has been captured from the same list and combined it with GIS data.

Sample of Data



Attribute Table

id	district	mauza	c_a__ha_	river_name	upazila
6	Chittagong	Teelibila	600	Tankabati	Lohagara
1	Dinajpur	Purba Saintar	1000	Kakra	Chirirbandar
4	Gazipur	Kaoraid	790	Kowraid	Sreepur
8	Habiganj	Manoharpur	1000	Sonai	Madhabpur
11	Maulvibazar	Shahapur	1000	Konthinala	Kulaura
10	Maulvibazar	Kagabala	1000	Gopla	Maulvi Bazar Sadar

Bundle Information (Data Field Description and Unit)

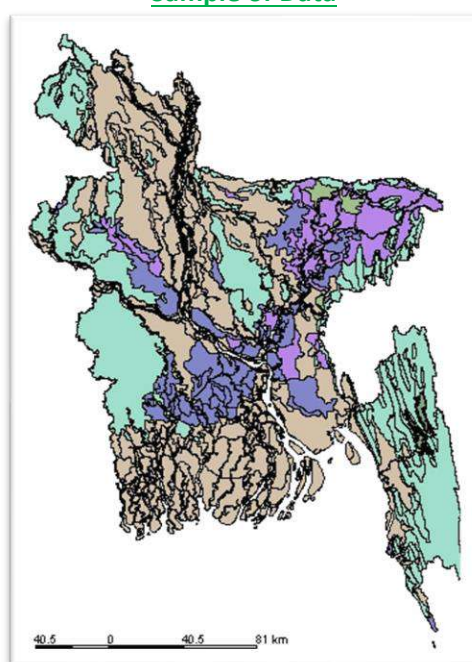
FIELD_NAME	FIELD_DESC	UNIT
Id	Rubber Dam Identification Number	
District	District Name	
Mauza	Mouza Name	
C_a__ha_	Commend area	Hectare
River_name	River name	
Upazila	Upazila Name	

Name of Data layer: **Flood Regime Land Type**

Metadata

Data Type	Spatial
Abstract	A spatial data layer showing average floods depth during the monsoon season. The data theme results from a GIS analysis involving topographic information and digital soil map.
Quality	Flood depths are based on general soil association map units and only average depth which occur during normal flood year have been prepared.
Completeness	This data layer covers whole country.
History of the dataset	UNDP-FAO Land Resource Appraisal of Bangladesh for agricultural development classified inundation depth according to landscape position in their AEZ mapping. FAP 19 used the inundation attribute data linked to the soil association map units. FAP 19 produced inundation land type map using the soils and topographic data layers.
Purpose of production	Flood depth map is needed for many practical applications especially in the design of flood control structures such as embankments, and it can be useful for other agronomic and environmental studies.
Process description	NWRD has updated the Flood Regime Land Type data using international boundary and coastal boundary generated by NWRD.

Sample of Data



Attribute Table

area	perimeter	aezcode	landcode	landtype
563989376	581339.563	1a	F0	HIGHLAND
1217992.75	19087.865	River		
341438464	234414.891	3a	F1	MEDIUM HIGHLAND
120192.75	2492.753			
114972.719	1614.825			
59475.828	1146.534			

Bundle Information (Data Field Description and Unit)

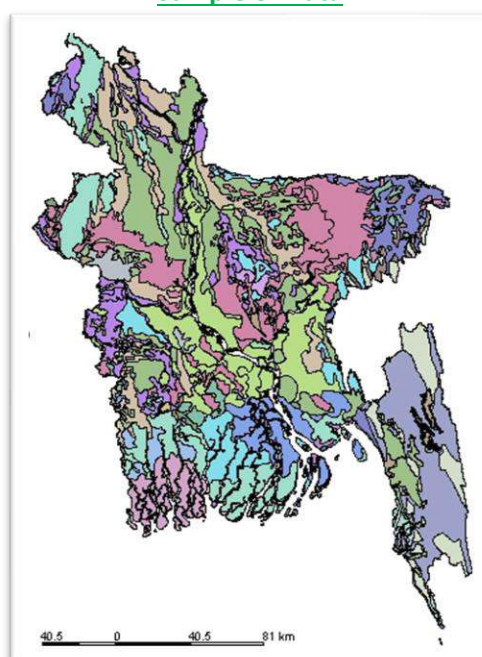
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of the polygon	Sq.Meter
Perimeter	Perimeter of the polygon	Meter
Aezcode	Each code is given to a particular type of agroecological zone and subzone.	
Landcode	Code that identifies the flood depth of the land in cm (F0 = 0-30, F1 = 30-90, F2 = 90-180, F3 = 180-300, F4 = >300)	
Landtype	Type of the land	

Name of Data layer: **Agriculture Land Use**

Metadata

Data Type	Spatial
Abstract	A generalized spatial data layer containing agricultural landuse covering the dominant crop and its rotation over the season.
Quality	Scale of the source data was 1:1,000,000. The map was generated from the SoB 1989 administrative units, forest coverage from 1994 cover map of Development of Forestry. It is recommended that in any kind of analysis the data layer should not be used exceeding above mentioned scale.
Completeness	The data layer covers whole of Bangladesh.
History of the dataset	Soil Resource Development Institute (SRDI) published the source map at a scale of 1,000,000. The base information was collected from SOB 1989, river course and island updated from landsat imageries 1990, forest data drawn from the forest cover map 1994 and updated from Landsat imageries 1984 and 1990.
Purpose of production	The data layer is prepared to observe the overall generalized agriculture landuse of the country. The map describe crop rotations over the year, which will help in planning the future agriculture expansion and development strategy.
Process description	NWRD has captured the data layer according to the agriculture land use map of 1996, which was published in 1997 by SRDI. The source map was in Lambert Conformal Conic (LCC) projection system. It was transformed into Bangladesh Transverse Mercator (BTM) projection system. International boundary was updated from SOB topo map of 1: 50,000 scale and coastal boundary was updated from Landsat 1997 image.

Sample of Data



Attribute Table

area	perimeter	unit	mainuse	subuse	unitname	areasqkm
21385414 40	451698.5	5a	TRANSPLANTED AMAN ROTATION	Fallow-Fallow- T.aman	Fallow-Fallow- T.aman	6005
11907528	18023.41 6	12a	PLANTATION CROP	Orchard	Orchard	516
21758523 2	163885.5 63	2a	TRANSPLANTED AMAN ROTATION	Rabi crop-Aus- T.aman	Rabi crop-B.aus- T.aman	11542
70512505 6	348138.7 81	1d	AUS ROTATION	Rabi crop-B.aus- Fallow	Rabi crop-B.aus- Fallow	1060
18327392	30423.67 4	2a	TRANSPLANTED AMAN ROTATION	Rabi crop-Aus- T.aman	Rabi crop-B.aus- T.aman	11542

Bundle Information (Data Field Description and Unit)

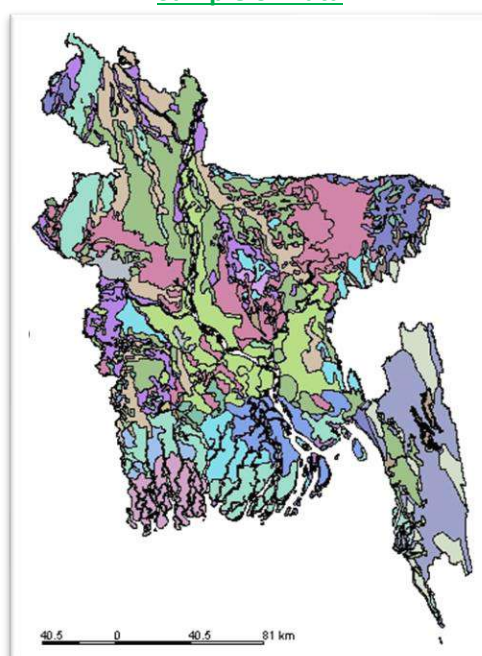
FIELD_NAME	FIELD_DESCRIPTION	UNIT
Area	Area of Each Polygon	Sq. Meter
Perimeter	Perimeter of Each polygon	Meter
Unit	Unit Number of Each Polygon	
Mainuse	Main Agricultural Land Use	
Subuse	Secondary Land Use	
Unitname	Land Use Pattern	
Areasqkm	Area of Polygon	Sq Km

Name of Data layer: **Information of Livestock**

Metadata

Data Type	Spatial
Abstract	This spatial data layer showing the thana level statistics of livestock information
Quality	Quality of this data layer totally depends on the data collection process of the source organization.
Completeness	
History of the dataset	The dataset was produced by Bangladesh Bureau of Statistics 1996
Purpose of production	To represent the basic statistical information of livestock. It can be used in different type of socio-economic and livestock analysis at national and regional level
Process description	It is collected as a hard copy format. It is converted into digital format and combined it with spatial data.

Sample of Data



Attribute Table

area	thaco de	divna me	distna me	thana me	landt ype	catt le	buff alo	go at	fow ls	duc ks	ca_lg nd	bu_lg nd	goat_l gnd	fowl_l gnd	duck_l gnd	parea
5152736 15.9315	1004 09	Baris al	Bargu na	Amtal i	Land	785 30	1686 9	29 89 5	407 135	222 052	7500 0 - 1000 00	> 5000	25000 - 50000	> 30000 0	> 75000	5178309 13.403
1009872 47.8818	1004 19	Baris al	Bargu na	Bamn a	Land	220 74	1135	50 72	106 621	447 79	100 - 2500 0	1000 - 2000	1 - 10000	10000 0 - 20000 0	25000 - 50000	1009872 48.753
3247220 84.8277	1004 28	Baris al	Bargu na	Bargu na Sadar	Land	635 20	4125	17 22 1	369 237	126 966	5000 0 - 7500 0	2000 - 5000	10000 - 25000	> 30000 0	> 75000	3247220 85.709

Bundle Information (Data Field Description and Unit)

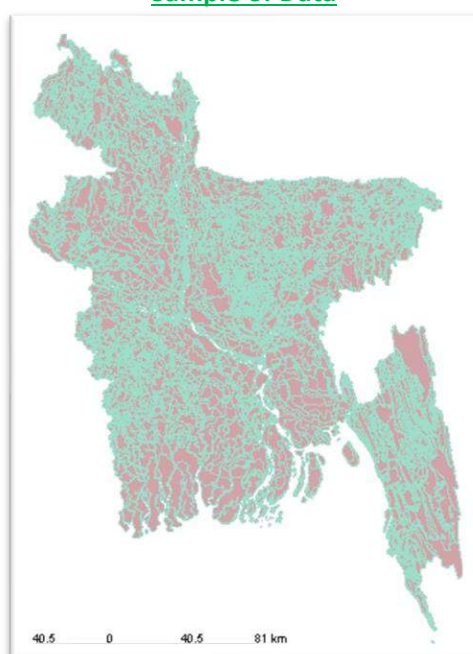
FIELD_NAME	FIELD_DESC	UNIT
Area	Area of Each Polygon	Sq. Meter
Thacode	Thacode (Division code + district code + thana code) is incorporated according to Geomaster database of BBS 2001	
Divname	Name of each division according to BBS geomaster database of 2001	
Distname	Name of each district according to BBS geomaster database of 2001	
Thaname	Name of each thana according to BBS geomaster database of 2001	
Cattle	Number of Cattle	
Buffalo	Number of Buffalo	
Goat	Number of Goat	
Fowls	Number of Fowls	
Ducks	Number of Duck	
Ca_lgnd	Cattle Class	
Bu_lgnd	Buffalo Class	
Goat_lgnd	Goat Class	
Fowl_lgnd	Fowls Class	
Duck_lgnd	Duck Class	

Name of Data layer: **Soil Association with SODAP Database**

Metadata

Data Type	Spatial
Abstract	A spatial data layer presenting the soil association information considering different parameters of soil i.e. permeability, relief, slopes, erosion status etc for the whole country.
Quality	Source map was in 1:250,000 scale. Therefore, this data layer should be used in 1:250,000 or smaller than this.
Completeness	The data layer covers whole country.
History of the dataset	The soil association data layer was uploaded to NWRD from National Data Bank of EGIS. This database was collected from AEZ (Agro Ecological Zones) Mapping of the Land Resources Appraisal Project (of BARC) digitized by the AST. The attribute information was collected from the soil survey reports published during 1968-77 by Soil Resource Development Institute (SRDI). SODAP is the name of the SRDI database that has been incorporated in this data layer.
Purpose of production	This database of soil parameters associated with the AEZ mapping includes information down to the level of variants of particular soil series. Therefore it can be used in agricultural and soil related studies.
Process description	The data layer was generated in AEZ (Agro Ecological Zones) Mapping of the Land Resources Appraisal Project of BARC (Bangladesh Agricultural Research Council) digitized by the AST (Agricultural Sector Team) using a GIS software, 'TYDAC SPANS'. The AEZ mapping was at a scale of 1:250,000. The attribute information collected from SRDI has been incorporated into the data layer. ISPAN (Irrigation Support Project for Asia and Nearest) has converted this data layer into ArcInfo Generated format. Besides, NWRD has used international boundary created by Survey of Bangladesh (SoB) in 1:50,000 scale and coastline generated by EGIS-II using 1997 LANDSAT image to update this data layer.

Sample of Data



Attribute Table

area	perimeter	soilasso_i	solall_id	aezcode	physio	phy_unit	ta_suit3	lunit1	lunit2	lunit
95862552	63562.445	1	1002	PH9	PH	27	2	1	1	1-1
3712197.5	8362.37	2	1003	PH34	PH	27	1	1	1	1-1
29273184	26638.289	3	1004	PH1	PH	27	2	1	1	1-1
10128200	20945.705	5	1006	PH16	PH	27	2	1	1	1-1
15254537	25386.748	4	1005	PH15	PH	27	2	1	1	1-1
14167130	21414.99	6	1007	PH1	PH	27	2	1	1	1-1

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Area	Area of the polygon	Sq.Meter
Perimeter	Perimeter of the polygon	Meter
Soilasso_	Internal ID	
Soilasso_i	External/User Id	
Solall_	Internal Id of SOIL Coverage	
Solall_id	External ID of SOIL Coverage	
Aezcode	Each code is given to a particular type of agroecological zone and subzone	
Physio	Code of the physiographic units	
Phy_unit	Physiographic Unit	
Ta_suit3	Not defined by the source	
Lunit1	Not defined by the source	
Lunit2	Not defined by the source	
Lunit	Not defined by the source	
Area_ha	Area of the polygon in hactare	Hactare
Tx0_p	Topsoil Texture(Mixed)	
Tx1_p	Topsoil Texture(Sand)	
Tx2_p	Topsoil Texture (LoamySand)	
Tx3_p	Topsoil Texture (Loamy fine Sand)	
Tx4_p	Topsoil Texture (sandy Loam)	
Tx5_p	Topsoil Texture (Fine Snady Loam)	
Tx6_p	Topsoil Texture(Very fine sandy loam)	
Tx7_p	Topsoil Texture Gravelly Sandy Clay Loam)	
Tx8_p	Topsoil Texture(Sandy Clay Loam)	
Tx9_p	Topsoil Texture(Loam)	
Tx10_p	Topsoil Texture(Silt)	
Tx11_p	Topsoil Texture(Silt Loam)	
Tx12_p	Topsoil Texture(Gravelly Clay Loam)	
Tx13_p	Topsoil Texture(Silty Clay Loam)	
Tx14_p	Topsoil Texture(Clay Loam)	
Tx15_p	Topsoil Texture(Silty Clay)	
Tx16_p	Topsoil Texture(Clay)	
Tx17_p	Topsoil Texture(Mucky Clay)	
Tx18_p	Topsoil Texture(Muck)	
Tx19_p	Topsoil Texture(Peaty Muck)	
Tx20_p	Topsoil Texture(Peat)	
Lt1	Land Type{Highland (Fo)}	

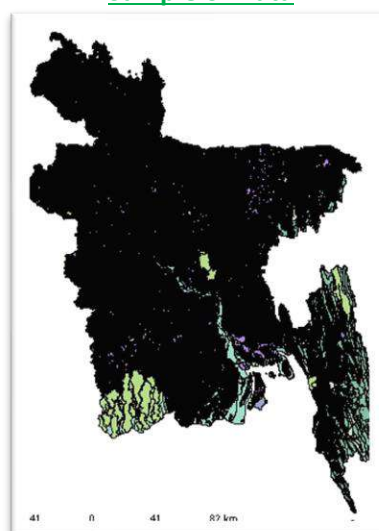
FIELD_NAME	FIELD_DESC	UNIT
Lt2	Land Type{Medium Highland 1 (Fo)}	
Lt3	Land Type{Medium Highland 1 & Bottomland (Fo)}	
Lt4	Land Type{Medium Highland 2 (F1)}	
Lt5	Land Type{Medium Highland 2-Bottomland (F1)}	
Lt6	Land Type{Medium Lowland (F2)}	
Lt7	Land Type{Medium Lowland-Bottomland (F2)}	
Lt8	Land Type{Lowland (F3)}	
Lt9	Land Type{Lowland-Bottomland (F3)}	
Lt10	Land Type{Very Lowland (F4)}	
Lt11	Land Type{Very Lowland-Bottomland (F4)}	
Sp1	Soil Permeabilty{Slowly permeable (<12 cm/day)}	
Sp2	Soil Permeabilty{Moderately permeable (12-305 cm/day)}	
Sp3	Soil Permeabilty{Rapidly permeable (>305 cm/day)}	
Sm1	Available Soil Moisture{Very low Available moisture-holding capacity (<100 mm)}	
Sm2	Available Soil Moisture{Low Available moisture-holding capacity (100-200 mm)}	
Sm3	Available Soil Moisture{Moderate Available moisture-holding capacity (200-300 mm)}	
Sm4	Available Soil Moisture{High Available moisture-holding capacity (300-400 mm)}	
Sm5	Available Soil Moisture{Very high Available moisture-holding capacity (>400 mm)}	
Sc1	Soil Consistancy/Workability(Mineral surface soil, not more than slightly firm, slightly sticky, slightly plastic,hard)	
Sc2	Soil Consistancy/Workability(Mineral surface soil, not more than slightly firm, slightly sticky, slightly plastic,hard)	
Sc3	Soil Consistancy/Workability(Mineral surface soil firm, very firm, sticky, plastic, hard, very hard).	
Sc4	Soil Consistancy/Workability(Mineral surface soil, extremely firm, very sticky, very plastic, extremely hard)	
Sc5	Soil Consistancy/Workability(Organic soil, organic material to at least 25 cm below the surface)	
Sl1	Soil Salinity{Non saline (<2 mmhos/cm)}	
Sl2	Soil Salinity{Very weakly saline (2-4 mmhos/cm)}	
Sl3	Soil Salinity{Weakly saline (4-8 mmhos/cm)}	
Sl4	Soil Salinity{Moderately saline (8-15 mmhos/cm)}	
Sl5	Soil Salinity{Strongly saline (>15 mmhos/cm)}	
Ph1	Soil Reaction{Extremely acid (<4.5)}	
Ph2	Soil Reaction{Strongly to very strongly acid (4.5-5.5)}	
Ph3	Soil Reaction{Neutral to moderately acid (5.5-7.3)}	
Ph4	Soil Reaction{Mildly to moderately alkaline (7.3-8.4)}	
Ph5	Soil Reaction{Strongly to very strongly alkaline (>8.4)}	
Dr1	Drainage(Well to excessively drained)	
Dr2	Drainage(Moderately well drained)	
Dr3	Drainage(Imperfectly drained)	
Dr4	Drainage{Poorly drained but surface drains early (before mid-November)}	
Dr5	Drainage{Poorly drained but surface drains late (after mid-November)}	
Dr6	Drainage(Very poorly drained)	

Name of Data layer: **Soil Resource Map**

Metadata

Data Type	Spatial
Abstract	A spatial data layer of soil resource map presenting the soil drainage, landform, landtype, soil surface recession, texture and drainage information of all over the Bangladesh
Quality	Quality of this data layer depends on the data analysis process of the source organization.
Completeness	The data layer covers all over area of Bangladesh.
History of the dataset	SRDI collected soil parameter data in all over Bangladesh through field survey.
Purpose of production	This is required for getting knowledge on soil parameters. Soil parameters show the different characteristic of soil all over the Bangladesh which will help the planners for agricultural development and environmental management.
Process description	NWRD has collected Upazilla Nirdeshika map by SRDI into digital format and organized it in an ordered form to prepare it as a NWRD data layer. International boundary has been used in 1:50,000 scale created by Survey of Bangladesh (SoB). Data layer also converted from LCC to BTM projection.

Sample of Data



Attribute Table

Bundle Information (Data Field Description and Unit)

Surface Water



Name of Data layer: **Discharge (daily Non-Tidal)**

Metadata

Dataset type	Time Series Table
Abstract	A time series data layer containing the daily non-tidal discharge data for 125 stations collected by Bangladesh Water Development Board (BWDB).
Quality	This discharge data layer can be used in hydrological and other relevant analysis purposes. In this data layer information is available from 1934 to 2007. But this time range of data availability is not applicable to all stations. Besides there are missing of data at some stations within the specified range of data availability.
Completeness	The data layer covers about 70 years and 126 non-tidal discharge stations of BWDB.
History of the dataset	BWDB accumulated the data by collecting from different non-tidal discharge stations throughout the country for a long period of time.
Purpose of production	Daily non-tidal discharge data is an essential parameter in hydrological analysis and modelling and it is also important in environment related studies. Therefore, to support the above mentioned type of works this data layer has been included in NWRD.
Process description	NWRD has collected the data from BWDB as soft copy and stored it in an organized database format after performing an initial check.

Sample of Data

Stationid	Datetime	Tsvalue_old	Tsvalue_updated
10	01/04/1973	7.5	7.5
10	02/04/1973	7.5	7.5
10	03/04/1973	7.22	7.22
10	04/04/1973	7.22	7.22
10	05/04/1973	6.93	6.93
10	06/04/1973	6.62	6.62
10	07/04/1973	6.51	6.51
10	08/04/1973	6.31	6.31
10	09/04/1973	6	6
10	10/04/1973	5.86	5.86
10	11/04/1973	5.66	5.66
10	12/04/1973	5.55	5.55

Bundle Information (Data Field Description and Unit)

FIELD	FIELD_NAME	UNIT
Stationid	ID of Each Station	
Datetime	Data Capturing Date	
Tsvalue_old	Original Value Collected from Source	Cubic Meter per Second (m3/sec)
Tsvalue_updated	Value updated (all negative values and other obvious error are deleted)	Cubic Meter per Second (m3/sec)

Name of Data layer: **Discharge (daily tidal)**

Metadata

Dataset type	Time Series Table
Abstract	A time series data layer containing the daily tidal discharge data for 12 stations collected by Bangladesh Water Development Board (BWDB).
Quality	This discharge data layer can be used in hydrological and other kind of analysis purposes. In this data layer information is available from 1964 to 2000. But this time range of data availability is not applicable to all stations. Besides there are missing of data at some stations within the specified range of data availability.
Completeness	Data is available for about 37 years and 12 tidal discharge stations of BWDB.
History of the dataset	Bangladesh Water Development Board (BWDB) accumulated this data by collecting the information from different tidal discharge stations throughout the country for a long period of time.
Purpose of production	Daily tidal discharge data is an essential parameter in hydrological analysis and modelling and it is also important in environment related studies. Therefore, to support the above mentioned type of works this data layer has been included in NWRD.
Process description	BWDB accumulated this data by collecting from different tidal discharge stations throughout the country for a long period of time.

Sample of Data

Stationid	Datetime	Tsvalue_old	Tsvalue_updated
10	01/04/1973	7.5	7.5
10	02/04/1973	7.5	7.5
10	03/04/1973	7.22	7.22
10	04/04/1973	7.22	7.22
10	05/04/1973	6.93	6.93
10	06/04/1973	6.62	6.62
10	07/04/1973	6.51	6.51
10	08/04/1973	6.31	6.31
10	09/04/1973	6	6
10	10/04/1973	5.86	5.86
10	11/04/1973	5.66	5.66
10	12/04/1973	5.55	5.55

Bundle Information (Data Field Description and Unit)

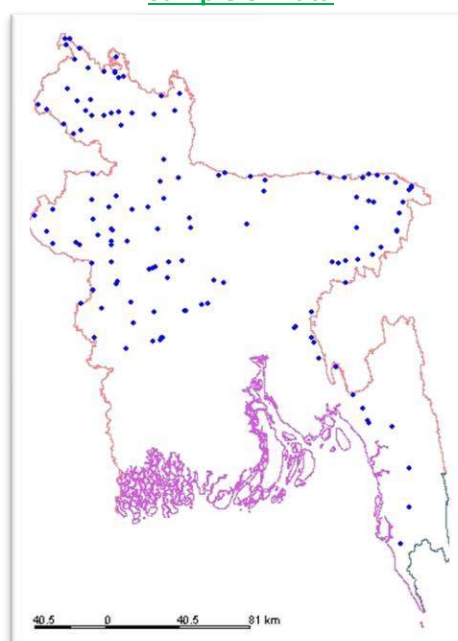
FIELD	FIELD_NAME	UNIT
Stationid	ID of Each Station	
Datetime	Data Capturing Date	
Tsvalue_old	Original Value Collected from Source	Cubic Meter per Second (m3/sec)
Tsvalue_updated	Value updated (all negative values and other obvious error are deleted)	Cubic Meter per Second (m3/sec)

Name of Data layer: **Discharge Stations of BWDB (Non Tidal)**

Metadata

Dataset type	Spatial
Abstract	The spatial data layer shows the non-tidal discharge measuring stations those are set up and maintained by Bangladesh Water Development Board (BWDB)
Quality	The point locations have been checked using the cited book of BWDB. The data layer fully complies with the book.
Completeness	The data layer covers 134 non-tidal discharge stations of BWDB.
History of the dataset	The source of the data layer was a published map titled 'Hydrological Network Map' prepared by Bangladesh Water Development Board (BWDB). The source map was in 1:750,000 scale.
Purpose of production	The dataset has been incorporated to NWRD for presenting the spatial distribution of the non-tidal discharge stations along with time series discharge values and to use it as the base data layer in different analysis.
Process description	NWRD has captured the point data from the cited published 'Hydrological Network map'. Other associated attribute information have been attached according to the source map. Some point locations have also been generated according to the location information collected from a book titled 'Index of Surface Water Hydrological Observation Stations in Bangladesh' published by BWDB, in March 1982.

Sample of Data



Attribute Table

Stnid	Stnname	Rivname	Longbtm	Latbtm	Longdd	Latdd	Obstype	Statobs	Insttype	Statinst	Subdivid	Instaldate	Discondate	Bm	Remarks
10	Simubari	Bangali	454100.91	758023.69	89.55	24.94	GD	GD	M	M	RS	31.5.45	-	60.62	-
110	Comilla	Gumti-Burinadi	623019.44	595889	91.21	23.47	GDS	GDS	A	A	CO	1895	-	35.58	-
117	Narayanhat	Halda	676750.25	522964.66	91.72	22.81	GD	G	M	M	CT	01.6.46	15.9.79	52.25	-
119.1	Panchapukuria	Halda	683167.5	506151.47	91.78	22.65	GDS	GDS	A	A	CT	Feb-65	-	31.40	-
124	Thandachari	Ichamati (Tributary)	709314.75	502648.75	92.04	22.62	GDS	GDS	M	M	CT	Jun-56	-	TBM	-
140	Panchagarh	Karatoa-Atrai-GGH	355002.72	912744.06	88.55	26.33	GD	GD	M	M	DP	31.7.52	-	242.84	-
145	Mohadebpur	Koratoa-Atrai-Gur-Gumanikoratoa-Atrai-Gu	373476.22	755982.38	88.75	24.92	GD	GD	M	M	RS	18.1.58	-	63.35	-
16.1	Malanchi	Baral	395132.09	686561.19	88.97	24.29	GD	GD	M	M	PB	16.7.64	-	TBM	-

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stnid	Station ID	
Stnname	Station Name	
Rivname	River Name	
Longbtm	Longitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meters
Latbtm	Latitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meters
Longdd	Longitude In Degree Decimal	In Degree Decimal
Latdd	Latitude In Degree Decimal	In Degree Decimal
Obstype	Observation Type (G=Water Level, D=Discharge, S=Sediment)	
Insttype	Installation Type (A=Automatic, M=Manual)	
Statinst	Installation State (A=Automatic, M=Manual)	
Subdivid	Sub Division ID	
Instaldate	Installation Date	
Disconddate	Discontinuation Date	
Bm	Bench Mark	feet
Remarks	Remarks	

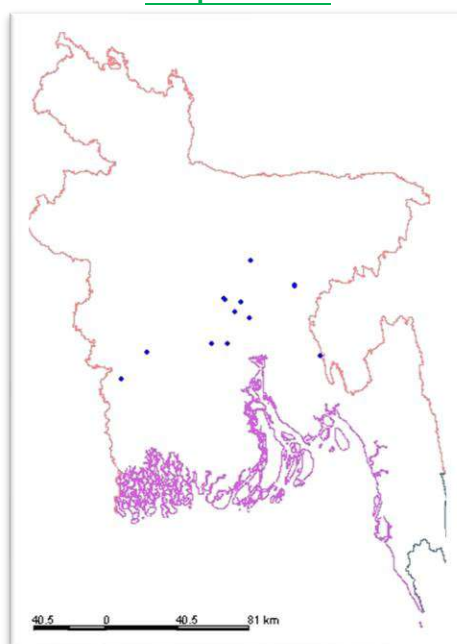
SUBDIVID	SUBDIVNAME
Nmd	Northern Measurement Division, Pabna.
Dp	Dinajpur Hydrological Sub-division.
Rs	Rajshahi Hydrological Sub-division.
Pb	Pabna Hydrological Sub-division.
Nem	North-eastern Measurement Division, Dhaka.
Da	Dhaka Hydrological Sub-division.
My	Mymensingh Hydrological Sub-division.
Sy	Sylhet Hydrological Sub-division.
Swm	South-western Measurement Division, Faridpur.
Js	Jessore Hydrological Sub-division
Fp	Faridpur Hydrological Sub-division.
Kh	Khulna Hydrological Sub-division.
Ba	Barisal Hydrological Sub-division.
Sem	South-eastern Measurement Division, Comilla.
Co	Comilla Hydrological Sub-division.
Bb	Brahmanbaria Hydrological Sub-division.
Ct	Chittagong Hydrological Sub-division.

Name of Data layer: **Discharge Stations of BWDB (Tidal)**

Metadata

Dataset type	Spatial
Abstract	The spatial data layer shows the tidal discharge measuring stations those are set up and maintained by Bangladesh Water Development Board (BWDB)
Quality	Point locations have been checked using the cited book collected from BWDB.
Completeness	The data layer covers 16 tidal discharge stations of BWDB.
History of the dataset	The source of this data layer was a published map titled 'Hydrological Network Map' prepared by Bangladesh Water Development Board (BWDB). The source map was in 1:750,000 scale.
Purpose of production	The dataset has been incorporated to NWRD for presenting the spatial distribution of the tidal discharge stations along with time series discharge values and to use it as the base data layer in different analysis.
Process description	NWRD has captured the point data from the cited published 'Hydrological Network map'. Other associated attribute information have been attached according to the source map. Some point locations have also been generated according to the location information collected from a book titled 'Index of Surface Water Hydrological Observation Stations in Bangladesh' published by BWDB, in March 1982.

Sample of Data



Attribute Table

Stnid	Stnname	Rivname	Longbtm	Latbtm	Longdd	Latdd	Obstype	Statobs	Insttype	Statinst	Subdivid	Instaldate	Discondate	Bm	Remarks
14.5	Nayarhat	Bangshi	523723.63	644109.19	90.23	23.91	GD	GD	M	M	DA	11.6.63	-	31.32	-
162	Jhikargacha	Kobadak	407820.47	554778.75	89.1	23.1	GD	GD	M	M	JS	25.1.57	-	26.10	Possibly Closed
179	Demra	Lakhya	551476.69	623388.81	90.51	23.72	GD	GD	M	M	DA	18.5.45	-	19.64	-
18	Barisal	Barisal-Burishwar	-	-	90.38	22.7	-	-	-	-	-	-	-	-	-
181A	Gunabati Rly. Bridge	Little Feni Dakatia	630621.19	581501	91.28	23.34	GD	-	M	-	CO	06.6.57	Apr-77	26.35	Presently Selonia
21	Arpara	Begabati	436229.94	585007.5	89.38	23.38	GD	G	M	M	JS	03.2.56	Sep-77	21.35	Data not Available

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stnid	Station ID	
Stnname	Station Name	
Rivname	River Name	
Longbtm	Longitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meters
Latbtm	Latitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meters
Longdd	Longitude In Degree Decimal	In Degree Decimal
Latdd	Latitude In Degree Decimal	In Degree Decimal
Obstype	Observation Type (G=Water Level, D=Discharge, S=Sediment)	
Insttype	Installation Type (A=Automatic, M=Manual)	
Statinst	Installation State (A=Automatic, M=Manual)	
Subdivid	Sub Division ID	
Instaldate	Installation Date	
Disconddate	Discontinuation Date	
Bm	Bench Mark	feet
Remarks	Remarks	

SUBDIVID	SUBDIVNAME
Nmd	Northern Measurement Division, Pabna.
Dp	Dinajpur Hydrological Sub-division.
Rs	Rajshahi Hydrological Sub-division.
Pb	Pabna Hydrological Sub-division.
Nem	North-eastern Measurement Division, Dhaka.
Da	Dhaka Hydrological Sub-division.
My	Mymensingh Hydrological Sub-division.
Sy	Sylhet Hydrological Sub-division.
Swm	South-western Measurement Division, Faridpur.
Js	Jessore Hydrological Sub-division
Fp	Faridpur Hydrological Sub-division.
Kh	Khulna Hydrological Sub-division.
Ba	Barisal Hydrological Sub-division.
Sem	South-eastern Measurement Division, Comilla.
Co	Comilla Hydrological Sub-division.
Bb	Brahmanbaria Hydrological Sub-division.
Ct	Chittagong Hydrological Sub-division.

Name of Data layer: **Frequency Analysis of Discharge for Dry Period of GM**

Metadata

Dataset type	Tabular
Abstract	Discharge data analyzed for average year and 1 in 5 dry year situation for each computed node, which are calculated within the midpoint of available cross-sections.
Title	Frequency Analysis of Discharge for Dry Period of GM
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	Hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5
256028175	1	256	28.18	3674.24	3240.55
256034225	1	256	34.23	3676.14	3241.42
256038250	1	256	38.25	3676.21	3241.8
256041825	1	256	41.83	3828.68	3376.6
256047100	1	256	47.1	3828.16	3375.69
256052800	1	256	52.8	3828.65	3375.73
256059475	1	256	59.48	3828.97	3375.54
256067250	1	256	67.25	3829.05	3375.47
256073825	1	256	73.83	3826.81	3376.79
256079075	1	256	79.08	3826.51	3376.76

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Discharge for 2 year return period	m3/sec
Yr_5	Discharge for 5 year return period	m3/sec

Name of Data layer: **Frequency Analysis of Discharge for Dry Period of NC**

Metadata

Dataset type	Tabular
Abstract	Discharge data analyzed for average year and 1 in 5 dry year situation for each computed node, which are calculated within the midpoint of available cross-sections.
Title	Frequency Analysis of Discharge for Dry Period of NC
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the North Central region (covers the region bounded by the Jamuna, the Ganges, the Meghna, the Old Brahmaputra, and includes the national capital Dhaka).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5
43002000	3	43	2	0.09	-5.98
43006250	3	43	6.25	0.55	-4.7
43008750	3	43	8.75	0.39	-2.96
43011500	3	43	11.5	0.17	-3.22
43016250	3	43	16.25	-0.13	-3.62
43020250	3	43	20.25	-2.26	-9.74
43024250	3	43	24.25	-4.04	-14.69
43028250	3	43	28.25	-5.18	-17.65
46041000	3	46	41	0.25	-2.2
46048250	3	46	48.25	0.51	-1.43

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Discharge for 2 year return period	m3/sec
Yr_5	Discharge for 5 year return period	m3/sec

Name of Data layer: **Frequency Analysis of Discharge for Dry Period of NE**

Metadata

Dataset type	Tabular
Abstract	Discharge data analyzed for average year and 1 in 5 dry year situation for each computed node, which are calculated within the midpoint of available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the North East region (covers the entire north east of the country i.e. east of the Old Brahmaputra and north of the upper Meghna at Bhairab Bazar).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5
1000500	4	1	0.5	2.77	2.21
1003625	4	1	3.63	2.49	1.92
1008875	4	1	8.88	2.51	1.93
1014450	4	1	14.45	2.52	1.94
1020350	4	1	20.35	2.53	1.94
1025413	4	1	25.41	2.53	1.94
1029638	4	1	29.64	2.53	1.95
1035063	4	1	35.06	3.7	3.15
1041688	4	1	41.69	3.54	2.9
1046250	4	1	46.25	3.77	3.06

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Discharge for 2 year return period	m3/sec
Yr_5	Discharge for 5 year return period	m3/sec

Name of Data layer: **Frequency Analysis of Discharge for Dry Period of NW**

Metadata

Dataset type	Tabular
Abstract	Discharge data analyzed for average year and 1 in 5 dry year situation for each computed node, which are calculated within the midpoint of available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for North West region (bounded by the Brahmaputra river to the east, the Ganges to the south, and the international border to the north and west).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5
35005000	2	35	5	6.73	3.38
35015000	2	35	15	6.7	3.37
35025000	2	35	25	6.68	3.36
35035000	2	35	35	6.66	3.35
35045000	2	35	45	6.64	3.34
35055000	2	35	55	6.62	3.34
35065000	2	35	65	6.6	3.33
35075000	2	35	75	6.57	3.33

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Discharge for 2 year return period	m3/sec
Yr_5	Discharge for 5 year return period	m3/sec

Name of Data layer: **Frequency Analysis of Discharge for Dry Period of SE**

Metadata

Dataset type	Tabular
Abstract	Discharge data analyzed for average year and 1 in 5 dry year situation for each computed node, which are calculated within the midpoint of available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the South East region (covers the area lying to the south and east of Meghna River and Estuary and north of the Bay of Bengal).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5
12041700	6	12	41.7	-45.01	-63.24
212023625	6	212	23.63	-16.63	-28.97
541008417	6	541	8.42	-10.38	-20.64
541017750	6	541	17.75	-4.64	-11.25
541027083	6	541	27.08	-11.87	-20.06
541033750	6	541	33.75	-4.44	-9.07
541039751	6	541	39.75	-4.61	-9.19
541046126	6	541	46.13	-12.45	-21.26

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Discharge for 2 year return period	m3/sec
Yr_5	Discharge for 5 year return period	m3/sec

Name of Data layer: **Frequency Analysis of Discharge for Wet Period of GM**

Metadata

Dataset type	Tabular
Abstract	Discharge data analyzed for average year and 1 in 5, 10, 25, 50, 100 wet year situation for each computed node, which are calculated within the midpoint of available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5	Yr_10	Yr_25	Yr_50	Yr_100
256028175	1	256	28.18	64720.8	72543.71	77558.13	83711.84	88149.29	92449.23
256034225	1	256	34.23	64686.35	72517.53	77526.22	83660.77	88075.89	92347.22
256038250	1	256	38.25	64698.14	72542.36	77557.01	83696.27	88112.95	92384.28
256041825	1	256	41.83	67763.37	76305.47	82035.26	89360.48	94857.21	100366.5
256047100	1	256	47.1	67799.98	76362.24	82119.13	89494.72	95040.71	100609.2
256052800	1	256	52.8	67768.35	76325.76	82082.27	89460.67	95011.22	100586.3
256059475	1	256	59.48	67759.02	76326.45	82080.48	89445.08	94977.46	100527.7
256067250	1	256	67.25	67752.57	76345.29	82110.66	89483.26	95016.9	100564.4

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Discharge for 2 year return period	m3/sec
Yr_5	Discharge for 5 year return period	m3/sec
Yr_10	Discharge for 10 year return period	m3/sec
Yr_25	Discharge for 25 year return period	m3/sec
Yr_50	Discharge for 50 year return period	m3/sec
Yr_100	Discharge for 100 year return period	m3/sec

Name of Data layer: **Frequency Analysis of Discharge for Wet Period of NC**

Metadata

Dataset type	Tabular
Abstract	Discharge data analyzed for average year and 1 in 5, 10, 25, 50, 100 wet year situation for each computed node, which are calculated within the midpoint of available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the North Central region (covers the region bounded by the Jamuna, the Ganges, the Meghna, the Old Brahmaputra, and includes the national capital Dhaka).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5	Yr_10	Yr_25	Yr_50	Yr_100
43002000	3	43	2	399.69	515.04	582.73	659.49	710.73	757.23
43006250	3	43	6.25	391.28	507.2	577.74	660.36	717.29	770.37
43008750	3	43	8.75	318.77	414.75	482.68	573.84	645.54	720.34
43011500	3	43	11.5	320.29	415.82	483.99	576.18	649.22	725.88
43016250	3	43	16.25	321.81	417.42	485.72	578.16	651.47	728.48
43020250	3	43	20.25	327.56	421.58	489.68	583.03	657.96	737.49
43024250	3	43	24.25	333.05	426.36	494.29	587.81	663.21	743.53
43028250	3	43	28.25	339.12	431.99	499.3	591.58	665.69	744.38
46041000	3	46	41	122.81	183.05	229.03	295.16	350.75	412.13
46048250	3	46	48.25	124.29	184.65	230.3	295.38	349.64	409.13

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Discharge for 2 year return period	m3/sec
Yr_5	Discharge for 5 year return period	m3/sec
Yr_10	Discharge for 10 year return period	m3/sec
Yr_25	Discharge for 25 year return period	m3/sec
Yr_50	Discharge for 50 year return period	m3/sec
Yr_100	Discharge for 100 year return period	m3/sec

Name of Data layer: **Frequency Analysis of Discharge for Wet Period of NE**

Metadata

Dataset type	Tabular
Abstract	Discharge data analyzed for average year and 1 in 5, 10, 25, 50, 100 wet year situation for each computed node, which are calculated within the midpoint of available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the North East region (covers the entire north east of the country east of the Old Brahmaputra and north of the upper Meghna at Bhairab Bazar).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5	Yr_10	Yr_25	Yr_50	Yr_100
59019750	4	59	19.75	1564.01	1645.96	1689.14	1733.66	1760.7	1783.38
59024500	4	59	24.5	1562.8	1644.5	1687.39	1731.46	1758.16	1780.48
59030500	4	59	30.5	1579.3	1687.96	1759.03	1847.84	1913.03	1977.15
59038376	4	59	38.38	1673.52	1790.34	1879.69	2008.41	2116.8	2236.66
59045938	4	59	45.94	1493.37	1585.62	1646.51	1723.23	1780.01	1836.23
59054313	4	59	54.31	1484.86	1575.42	1634.07	1706.73	1759.61	1811.25
59063500	4	59	63.5	1475.13	1563.46	1619.36	1687.18	1735.55	1781.97
59072750	4	59	72.75	1411.4	1517.47	1596.04	1705.98	1795.98	1893.15

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Discharge for 2 year return period	m3/sec
Yr_5	Discharge for 5 year return period	m3/sec
Yr_10	Discharge for 10 year return period	m3/sec
Yr_25	Discharge for 25 year return period	m3/sec
Yr_50	Discharge for 50 year return period	m3/sec
Yr_100	Discharge for 100 year return period	m3/sec

Name of Data layer: **Frequency Analysis of Discharge for Wet Period of NW**

Metadata

Dataset type	Tabular
Abstract	Discharge data analyzed for average year and 1 in 5, 10, 25, 50, 100 wet year situation for each computed node, which are calculated within the midpoint of available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created North West region (bounded by the Brahmaputra river to the east, the Ganges to the south, and the international border to the north and west).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5	Yr_10	Yr_25	Yr_50	Yr_100
59019750	4	59	19.75	1564.01	1645.96	1689.14	1733.66	1760.7	1783.38
59024500	4	59	24.5	1562.8	1644.5	1687.39	1731.46	1758.16	1780.48
59030500	4	59	30.5	1579.3	1687.96	1759.03	1847.84	1913.03	1977.15
59038376	4	59	38.38	1673.52	1790.34	1879.69	2008.41	2116.8	2236.66
59045938	4	59	45.94	1493.37	1585.62	1646.51	1723.23	1780.01	1836.23
59054313	4	59	54.31	1484.86	1575.42	1634.07	1706.73	1759.61	1811.25
59063500	4	59	63.5	1475.13	1563.46	1619.36	1687.18	1735.55	1781.97
59072750	4	59	72.75	1411.4	1517.47	1596.04	1705.98	1795.98	1893.15

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Discharge for 2 year return period	m3/sec
Yr_5	Discharge for 5 year return period	m3/sec
Yr_10	Discharge for 10 year return period	m3/sec
Yr_25	Discharge for 25 year return period	m3/sec
Yr_50	Discharge for 50 year return period	m3/sec
Yr_100	Discharge for 100 year return period	m3/sec

Name of Data layer: **Frequency Analysis of Discharge for Wet Period of SE**

Metadata

Dataset type	Tabular
Abstract	Discharge data analyzed for average year and 1 in 5, 10, 25, 50, 100 wet year situation for each computed node, which are calculated within the midpoint of available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the South East region (covers the area lying to the south and east of the Meghna River and Estuary and north of the Bay of Bengal).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5	Yr_10	Yr_25	Yr_50	Yr_100
12041700	6	12	41.7	552.48	764.49	932.82	1183.75	1402.13	1650.48
212023625	6	212	23.63	374.15	473.96	558.82	693.53	818.05	967.14
541008417	6	541	8.42	189.25	242.23	292.62	381.42	472.04	590.2
541017750	6	541	17.75	168.64	220.68	271.11	361.54	455.36	579.45
541027083	6	541	27.08	173.93	223.22	273.77	369.4	473.74	617.86
541033750	6	541	33.75	476.31	621.26	750.06	963.12	1167.89	1421.45
541039751	6	541	39.75	255.98	365.46	443.84	550.12	634.55	723.39
541046126	6	541	46.13	95.63	137.51	173.77	232.33	287.34	354.14

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Discharge for 2 year return period	m3/sec
Yr_5	Discharge for 5 year return period	m3/sec
Yr_10	Discharge for 10 year return period	m3/sec
Yr_25	Discharge for 25 year return period	m3/sec
Yr_50	Discharge for 50 year return period	m3/sec
Yr_100	Discharge for 100 year return period	m3/sec

Name of Data layer: **Frequency Analysis of Discharge for Wet Period of SW**

Metadata

Dataset type	Tabular
Abstract	Discharge data analyzed for average year and 1 in 5, 10, 25, 50, 100 wet year situation for each computed node, which are calculated within the midpoint of available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the South West region (covers the area lying to the south of the Ganges and west of the Meghna estuary).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5	Yr_10	Yr_25	Yr_50	Yr_100
111008000	5	111	8	7.19	9.96	11.83	14.21	16	17.8
113001875	5	113	1.88	2.21	3.09	3.71	4.52	5.16	5.82
113005625	5	113	5.63	5.68	7.76	9.09	10.72	11.9	13.03
237002250	5	237	2.25	1.76	2.26	2.57	2.93	3.18	3.42
237006750	5	237	6.75	5	6.42	7.27	8.25	8.92	9.53
237011250	5	237	11.25	7.54	9.69	10.97	12.42	13.39	14.28
237015750	5	237	15.75	9.44	12.2	13.88	15.83	17.16	18.4
237020250	5	237	20.25	11.09	14.65	16.94	19.74	21.77	23.73

Bundle Information (Data Field Description and Unit)

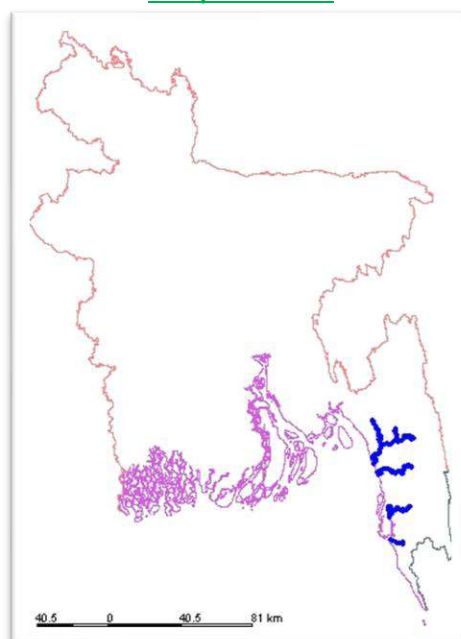
FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Discharge for 2 year return period	m3/sec
Yr_5	Discharge for 5 year return period	m3/sec
Yr_10	Discharge for 10 year return period	m3/sec
Yr_25	Discharge for 25 year return period	m3/sec
Yr_50	Discharge for 50 year return period	m3/sec
Yr_100	Discharge for 100 year return period	m3/sec

Name of Data layer: **Grid Points for Simulation of Dry Season Discharge of EHRM**

Metadata

Dataset type	Spatial
Abstract	Grid points to simulate dry season discharge of Eastern Hill region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	This data layer covers Eastern Hill region.
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analyzed information have been created by using MIKE-11, a one dimensional mathematical model to compute the discharge values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
246001000	7	246	ICHAMATI	1
246003000	7	246	ICHAMATI	3
246005000	7	246	ICHAMATI	5
246006833	7	246	ICHAMATI	6.833
246008500	7	246	ICHAMATI	8.5

Bundle Information (Data Field Description and Unit)

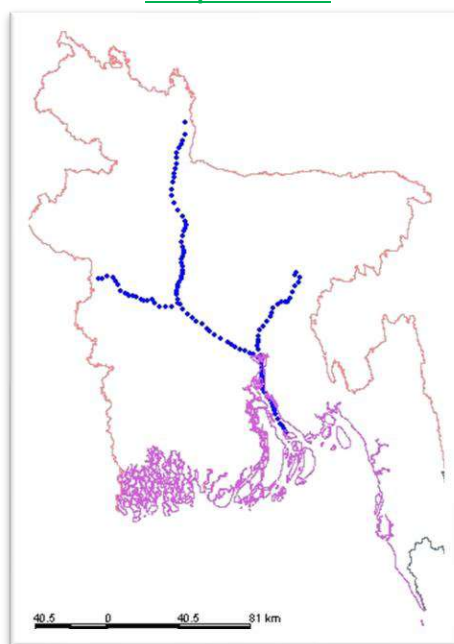
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid Points for Simulation of Dry Season Discharge of GM**

Metadata

Dataset type	Spatial
Abstract	Grid points to simulate dry season discharge of General Model area for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	This data layer covers General Model area.
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model to compute the discharge values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
197002438	1	197	GANGES	2.438
197006938	1	197	GANGES	6.938
197012063	1	197	GANGES	12.063
197019875	1	197	GANGES	19.875
197027281	1	197	GANGES	27.281
197032594	1	197	GANGES	32.594
197039625	1	197	GANGES	39.625
197046500	1	197	GANGES	46.5

Bundle Information (Data Field Description and Unit)

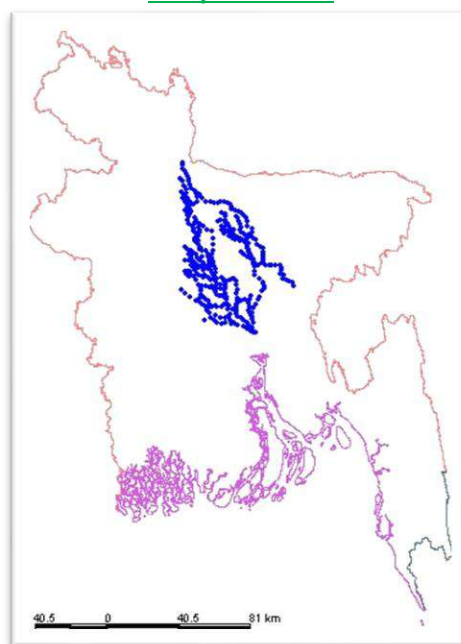
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid Points for Simulation of Dry Season Discharge of NCRM**

Metadata

Dataset type	Spatial
Abstract	Grid points to simulate dry season discharge of North Central region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	This data layer covers North Central region.
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model to compute the discharge values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
43002000	3	43	BALU	2
43006250	3	43	BALU	6.25
43008750	3	43	BALU	8.75
43011500	3	43	BALU	11.5
43016250	3	43	BALU	16.25
43020250	3	43	BALU	20.25

Bundle Information (Data Field Description and Unit)

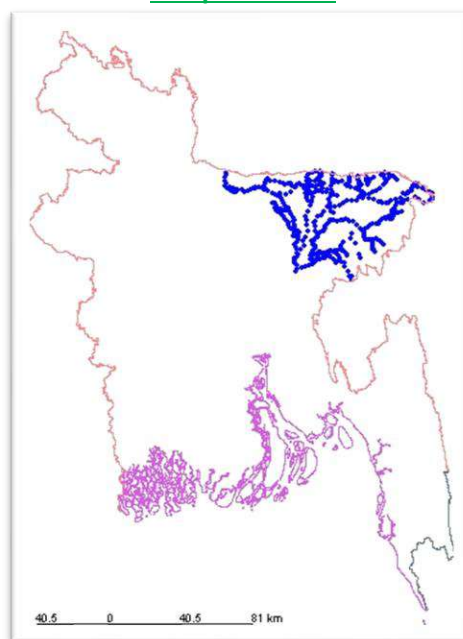
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid Points for Simulation of Dry Season Discharge of NERM**

Metadata

Dataset type	Spatial
Abstract	Grid points to simulate dry season discharge of North East region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	This data layer covers the North East region.
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model to compute the discharge values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
1003625	4	1	A PIYAN	3.625
1008875	4	1	A PIYAN	8.875
1014450	4	1	A PIYAN	14.45
1020350	4	1	A PIYAN	20.35
1025413	4	1	A PIYAN	25.413
1029638	4	1	A PIYAN	29.638
1035063	4	1	A PIYAN	35.063

Bundle Information (Data Field Description and Unit)

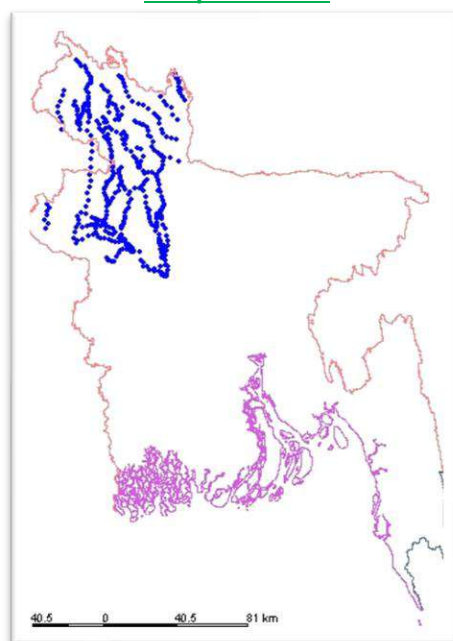
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid Points for Simulation of Dry Season Discharge of NWRM**

Metadata

Dataset type	Spatial
Abstract	Grid points to simulate dry season discharge of North West region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	This data layer covers North West region.
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model to compute the discharge values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
7004125	2	7	AKHIRA	4.125
7012375	2	7	AKHIRA	12.375
7020333	2	7	AKHIRA	20.333
7028000	2	7	AKHIRA	28
7035667	2	7	AKHIRA	35.667
9005313	2	9	ALAI-MOD	5.313
9011938	2	9	ALAI-MOD	11.938

Bundle Information (Data Field Description and Unit)

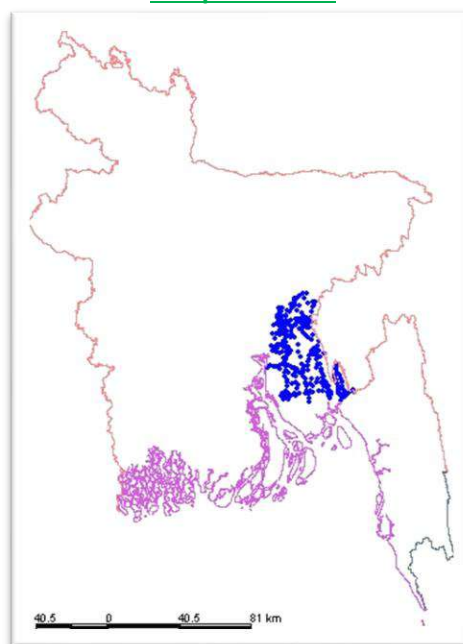
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid Points for Simulation of Dry Season Discharge of SERM**

Metadata

Dataset type	Spatial
Abstract	Grid points to simulate dry season discharge of South East region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	This data layer covers South East region.
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model to compute the discharge values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
12041700	6	12	ANDERSON	41.7
542018825	6	542	TITAS UPPER	18.825
542024275	6	542	TITAS UPPER	24.275
542031200	6	542	TITAS UPPER	31.2
542039600	6	542	TITAS UPPER	39.6
542045700	6	542	TITAS UPPER	45.7
542050500	6	542	TITAS UPPER	50.5

Bundle Information (Data Field Description and Unit)

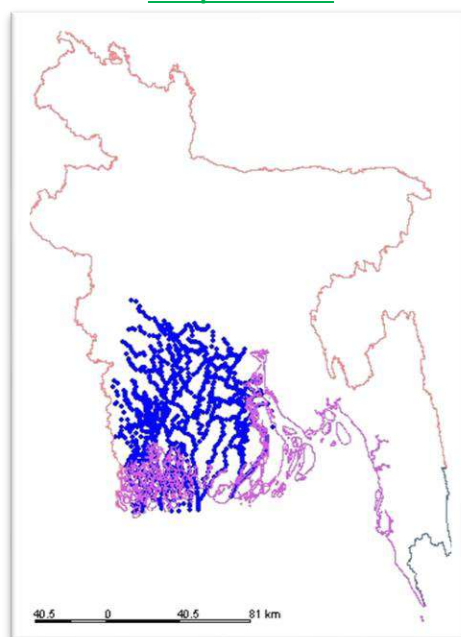
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid Points for Simulation of Dry Season Discharge of SWRM**

Metadata

Dataset type	Spatial
Abstract	Grid points to simulate dry season discharge of South West region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	This data layer covers South West region.
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model to compute the discharge values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
5002800	5	5	AFRAKHAL	2.8
5007917	5	5	AFRAKHAL	7.917
5012550	5	5	AFRAKHAL	12.55
5017183	5	5	AFRAKHAL	17.183
5020750	5	5	AFRAKHAL	20.75
5023628	5	5	AFRAKHAL	23.628
5026883	5	5	AFRAKHAL	26.883

Bundle Information (Data Field Description and Unit)

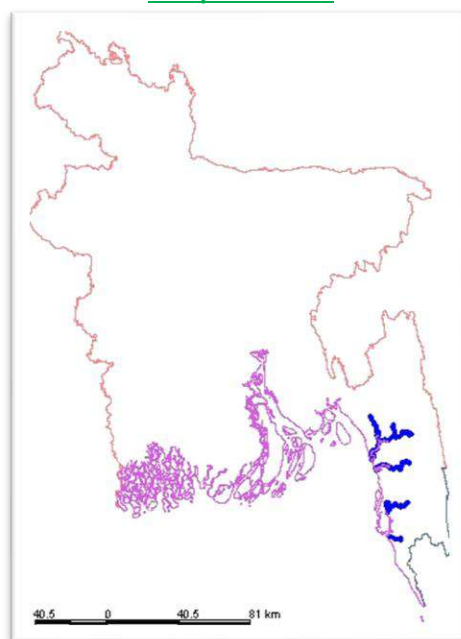
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Wet Season Discharge of EHRM**

Metadata

Dataset type	Spatial
Abstract	Grid points to simulate wet season discharge of Eastern Hill region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	This data layer covers Eastern Hill region.
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model to compute the discharge values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
246001000	7	246	ICHAMATI	1
246003000	7	246	ICHAMATI	3
246005000	7	246	ICHAMATI	5
246006833	7	246	ICHAMATI	6.833
246008500	7	246	ICHAMATI	8.5
246010167	7	246	ICHAMATI	10.167
246011833	7	246	ICHAMATI	11.833

Bundle Information (Data Field Description and Unit)

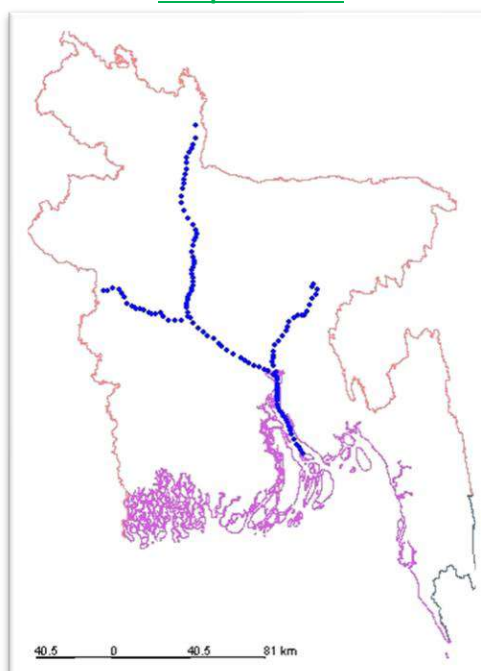
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Wet Season Discharge of GM**

Metadata

Dataset type	Spatial
Abstract	Grid points to simulate discharge for the period 1965 to 1989 using mathematical model for monsoon season of General Model area.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	This data layer covers General Model area.
History of the dataset	This model is established on 1990's data and then calibrated for 7 years, which was verified for 2 years. This analyzed information has been created for National Water Management Plan of Bangladesh.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model to compute the discharge values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result for specific requirement of National Water Management Plan. NWRD has collected the data from SWMC and organized in an arranged form.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
197002438	1	197	GANGES	2.438
197006938	1	197	GANGES	6.938
197012063	1	197	GANGES	12.063
197019875	1	197	GANGES	19.875
197027281	1	197	GANGES	27.281
197032594	1	197	GANGES	32.594
197039625	1	197	GANGES	39.625
197046500	1	197	GANGES	46.5

Bundle Information (Data Field Description and Unit)

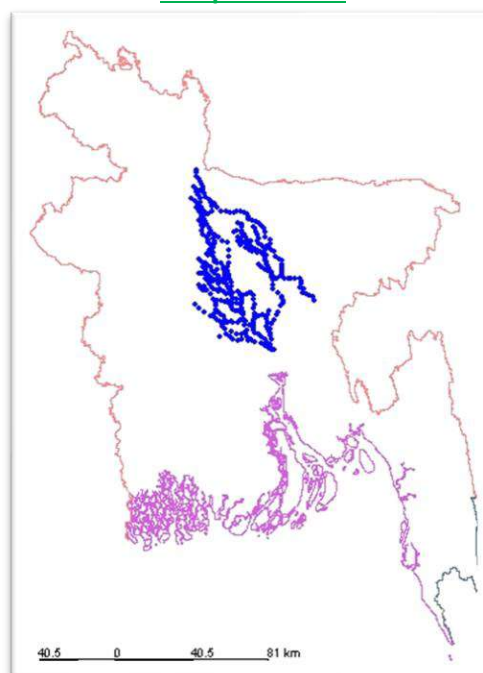
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Wet Season Discharge of NCRM**

Metadata

Dataset type	Spatial
Abstract	Grid points to simulate wet season discharge of North Central region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	This data layer covers North Central region.
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model to compute the discharge values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage	presel
43002000	3	43	BALU	2	1
43006250	3	43	BALU	6.25	0
43008750	3	43	BALU	8.75	0
43011500	3	43	BALU	11.5	0
43016250	3	43	BALU	16.25	0
43020250	3	43	BALU	20.25	0

Bundle Information (Data Field Description and Unit)

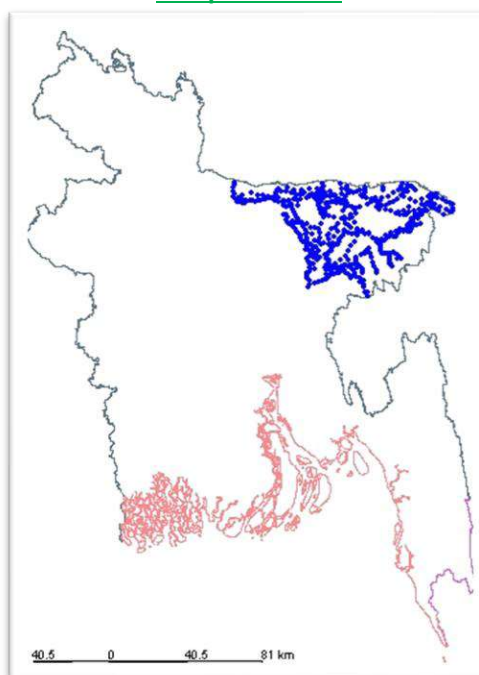
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Wet Season Discharge of NERM**

Metadata

Dataset type	Spatial
Abstract	Grid points to simulate wet season discharge of North East region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	This data layer covers North East region.
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model to compute the discharge values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage	presel
59019750	4	59	BAULAI	19.75	0
59024500	4	59	BAULAI	24.5	1
59030500	4	59	BAULAI	30.5	1
59038376	4	59	BAULAI	38.376	1
59045938	4	59	BAULAI	45.938	0
59054313	4	59	BAULAI	54.313	1
59063500	4	59	BAULAI	63.5	0

Bundle Information (Data Field Description and Unit)

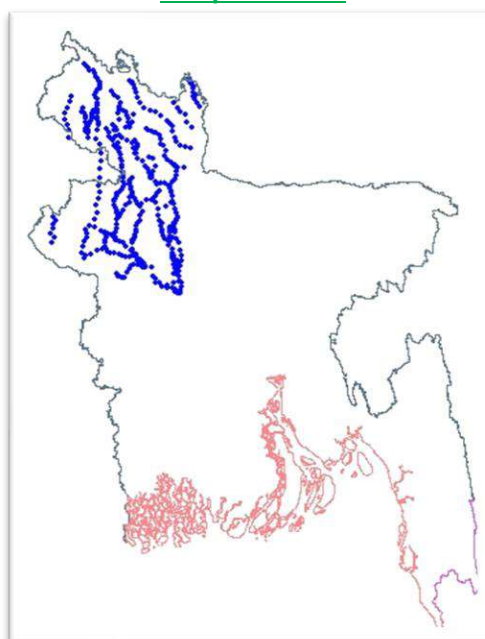
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Wet Season Discharge of NWRM**

Metadata

Dataset type	Spatial
Abstract	Grid points to simulate wet season discharge of North East region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	This data layer covers North East region.
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model to compute the discharge values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage	presel
59019750	4	59	BAULAI	19.75	0
59024500	4	59	BAULAI	24.5	1
59030500	4	59	BAULAI	30.5	1
59038376	4	59	BAULAI	38.376	1
59045938	4	59	BAULAI	45.938	0
59054313	4	59	BAULAI	54.313	1
59063500	4	59	BAULAI	63.5	0

Bundle Information (Data Field Description and Unit)

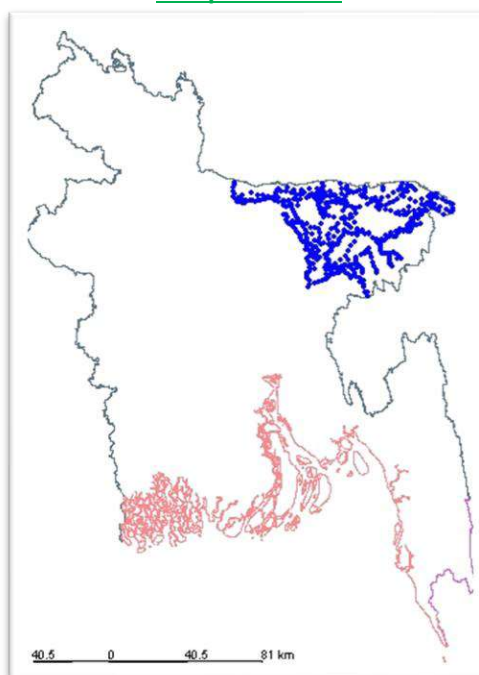
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Wet Season Discharge of SERM**

Metadata

Dataset type	Spatial
Abstract	Grid points to simulate wet season discharge of North East region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	This data layer covers North East region.
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model to compute the discharge values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage	presel
59019750	4	59	BAULAI	19.75	0
59024500	4	59	BAULAI	24.5	1
59030500	4	59	BAULAI	30.5	1
59038376	4	59	BAULAI	38.376	1
59045938	4	59	BAULAI	45.938	0
59054313	4	59	BAULAI	54.313	1
59063500	4	59	BAULAI	63.5	0

Bundle Information (Data Field Description and Unit)

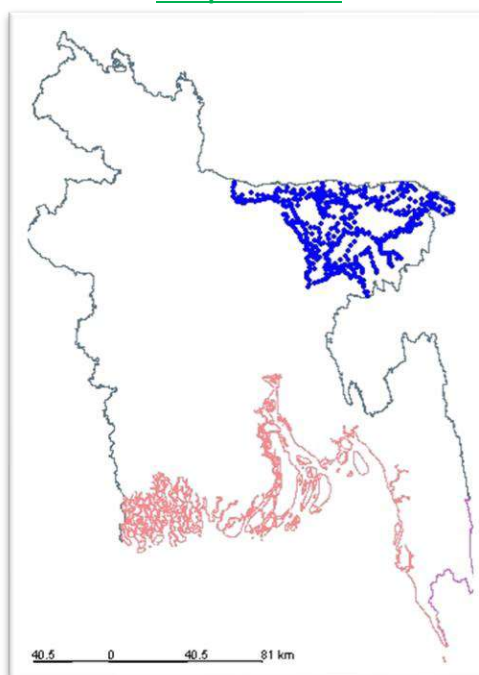
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Wet Season Discharge of SWRM**

Metadata

Dataset type	Spatial
Abstract	Grid points to simulate wet season discharge of North East region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	This data layer covers North East region.
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model to compute the discharge values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage	presel
59019750	4	59	BAULAI	19.75	0
59024500	4	59	BAULAI	24.5	1
59030500	4	59	BAULAI	30.5	1
59038376	4	59	BAULAI	38.376	1
59045938	4	59	BAULAI	45.938	0
59054313	4	59	BAULAI	54.313	1
59063500	4	59	BAULAI	63.5	0

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Statistical Analysis of Discharge for Dry of EH**

Metadata

Dataset type	Tabular
Abstract	The dataset contains decadal discharge data (of EH region for dry period) computed for each node, which is generated at the mid-point of available cross-sections of rivers.
Quality	The quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The data layer has been created for the Eastern Hill region.
History of the dataset	Computed results cover decade wise discharge values of the mid-points of available cross-sections for each dry period. NWRD has stored the dataset in an organised way.
Purpose of production	This analysed information are created by using MIKE-11, a one dimensional mathematical model, to interpret the discharge values where the observed values are not available.
Process description	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
54025802	7	564	25.8	1989-90	21.39	12.24	9.43	6.32	4.35	3.4	3.44	2.73	2.64	1.25	0.55	2.18	16.62	2.86	1.14	3.91	2.1
54025802	7	564	25.8	1990-91	62.18	29.87	14.49	9.95	7.03	5.71	4.95	4.21	4.01	4.81	1.72	1.62	3.53	3.11	3.11	99999.99	99999.99
54029237	7	564	29.24	1989-90	21.57	12.32	9.46	6.33	4.38	3.36	3.44	2.65	2.58	1.27	0.5	2.09	16.61	2.91	1.09	3.82	2.05
54029237	7	564	29.24	1990-91	62.18	29.96	14.36	10.1	6.82	5.79	5.1	4.06	3.89	4.95	1.63	1.51	3.69	2.96	3	99999.99	99999.99

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
Nov01	Average discharge for the first decade of November	Cumec
Nov02	Average discharge for the second decade of November	Cumec
Nov03	Average discharge for the last decade of November	Cumec
Dec01	Average discharge for the first decade of December	Cumec
Dec02	Average discharge for the second decade of December	Cumec
Dec03	Average discharge for the last decade of December	Cumec
Jan01	Average discharge for the first decade of January	Cumec
Jan02	Average discharge for the second decade of January	Cumec
Jan03	Average discharge for the last decade of January	Cumec
Feb01	Average discharge for the first decade of February	Cumec
Feb02	Average discharge for the second decade of February	Cumec
Feb03	Average discharge for the last decade of February	Cumec
Mar01	Average discharge for the first decade of March	Cumec

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Mar02	Average discharge for the second decade of March	Cumec
Mar03	Average discharge for the last decade of March	Cumec
Apr01	Average discharge for the first decade of April	Cumec
Apr02	Average discharge for the second decade of April	Cumec
Apr03	Average discharge for the last decade of April	Cumec
Minq	Minimum discharge	Cumec

Name of Data layer: **Statistical Analysis of Discharge for Dry of GM**

Metadata

Dataset type	Tabular
Abstract	The dataset contains decadal discharge data (of GM area for dry period) computed for each node, which is generated at the mid-point of available cross-sections of rivers.
Quality	The quality of the model information depends on the input data,calibration and verification of the model.
Completeness	The data has been has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analysed information are created by using MIKE-11, a one-dimensional mathematical model, to interpret the discharge values where the observed values are not available.
Process description	Computed results cover decade wise discharge values of the mid-points of available cross-sections for each dry period. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
54025802	7	564	25.8	1989-90	21.39	12.24	9.43	6.32	4.35	3.4	3.44	2.73	2.64	1.25	0.55	2.18	16.62	2.86	1.14	3.91	2.1
54025802	7	564	25.8	1990-91	62.18	29.87	14.49	9.95	7.03	5.71	4.95	4.21	4.01	4.81	1.72	1.62	3.53	3.11	3.11	99999.99	99999.99
54029237	7	564	29.24	1989-90	21.57	12.32	9.46	6.33	4.38	3.36	3.44	2.65	2.58	1.27	0.5	2.09	16.61	2.91	1.09	3.82	2.05
54029237	7	564	29.24	1990-91	62.18	29.96	14.36	10.1	6.82	5.79	5.1	4.06	3.89	4.95	1.63	1.51	3.69	2.96	3	99999.99	99999.99

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
Nov01	Average discharge for the first decade of November	Cumec
Nov02	Average discharge for the second decade of November	Cumec
Nov03	Average discharge for the last decade of November	Cumec
Dec01	Average discharge for the first decade of December	Cumec
Dec02	Average discharge for the second decade of December	Cumec
Dec03	Average discharge for the last decade of December	Cumec
Jan01	Average discharge for the first decade of January	Cumec
Jan02	Average discharge for the second decade of January	Cumec
Jan03	Average discharge for the last decade of January	Cumec
Feb01	Average discharge for the first decade of February	Cumec
Feb02	Average discharge for the second decade of February	Cumec
Feb03	Average discharge for the last decade of February	Cumec

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Mar01	Average discharge for the first decade of March	Cumec
Mar02	Average discharge for the second decade of March	Cumec
Mar03	Average discharge for the last decade of March	Cumec
Apr01	Average discharge for the first decade of April	Cumec
Apr02	Average discharge for the second decade of April	Cumec
Apr03	Average discharge for the last decade of April	Cumec
Minq	Minimum discharge	Cumec

Name of Data layer: **Statistical Analysis of Discharge for Dry of NC**

Metadata

Dataset type	Tabular
Abstract	The dataset contains decadal discharge data (of GM area for dry period) computed for each node, which is generated at the mid-point of available cross-sections of rivers.
Quality	The quality of the model information depends on the input data,calibration and verification of the model.
Completeness	The data has been has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analysed information are created by using MIKE-11, a one-dimensional mathematical model, to interpret the discharge values where the observed values are not available.
Process description	Computed results cover decade wise discharge values of the mid-points of available cross-sections for each dry period. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
54025802	7	564	25.8	1989-90	21.39	12.24	9.43	6.32	4.35	3.4	3.44	2.73	2.64	1.25	0.55	2.18	16.62	2.86	1.14	3.91	2.1
54025802	7	564	25.8	1990-91	62.18	29.87	14.49	9.95	7.03	5.71	4.95	4.21	4.01	4.81	1.72	1.62	3.53	3.11	3.11	99999.99	99999.99
54029237	7	564	29.24	1989-90	21.57	12.32	9.46	6.33	4.38	3.36	3.44	2.65	2.58	1.27	0.5	2.09	16.61	2.91	1.09	3.82	2.05
54029237	7	564	29.24	1990-91	62.18	29.96	14.36	10.1	6.82	5.79	5.1	4.06	3.89	4.95	1.63	1.51	3.69	2.96	3	99999.99	99999.99

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
Nov01	Average discharge for the first decade of November	Cumec
Nov02	Average discharge for the second decade of November	Cumec
Nov03	Average discharge for the last decade of November	Cumec
Dec01	Average discharge for the first decade of December	Cumec
Dec02	Average discharge for the second decade of December	Cumec
Dec03	Average discharge for the last decade of December	Cumec
Jan01	Average discharge for the first decade of January	Cumec
Jan02	Average discharge for the second decade of January	Cumec
Jan03	Average discharge for the last decade of January	Cumec
Feb01	Average discharge for the first decade of February	Cumec
Feb02	Average discharge for the second decade of February	Cumec

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Feb03	Average discharge for the last decade of February	Cumec
Mar01	Average discharge for the first decade of March	Cumec
Mar02	Average discharge for the second decade of March	Cumec
Mar03	Average discharge for the last decade of March	Cumec
Apr01	Average discharge for the first decade of April	Cumec
Apr02	Average discharge for the second decade of April	Cumec
Apr03	Average discharge for the last decade of April	Cumec
Minq	Minimum discharge	Cumec

Name of Data layer: **Statistical Analysis of Discharge for Dry of NE**

Metadata

Dataset type	Tabular
Abstract	The dataset contains decadal discharge data (of GM area for dry period) computed for each node, which is generated at the mid-point of available cross-sections of rivers.
Quality	The quality of the model information depends on the input data,calibration and verification of the model.
Completeness	The data has been has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analysed information are created by using MIKE-11, a one-dimensional mathematical model, to interpret the discharge values where the observed values are not available.
Process description	Computed results cover decade wise discharge values of the mid-points of available cross-sections for each dry period. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
54025802	7	564	25.8	1989-90	21.39	12.24	9.43	6.32	4.35	3.4	3.44	2.73	2.64	1.25	0.55	2.18	16.62	2.86	1.14	3.91	2.1
54025802	7	564	25.8	1990-91	62.18	29.87	14.49	9.95	7.03	5.71	4.95	4.21	4.01	4.81	1.72	1.62	3.53	3.11	3.11	99999.99	99999.99
54029237	7	564	29.24	1989-90	21.57	12.32	9.46	6.33	4.38	3.36	3.44	2.65	2.58	1.27	0.5	2.09	16.61	2.91	1.09	3.82	2.05
54029237	7	564	29.24	1990-91	62.18	29.96	14.36	10.1	6.82	5.79	5.1	4.06	3.89	4.95	1.63	1.51	3.69	2.96	3	99999.99	99999.99

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
Nov01	Average discharge for the first decade of November	Cumec
Nov02	Average discharge for the second decade of November	Cumec
Nov03	Average discharge for the last decade of November	Cumec
Dec01	Average discharge for the first decade of December	Cumec
Dec02	Average discharge for the second decade of December	Cumec
Dec03	Average discharge for the last decade of December	Cumec
Jan01	Average discharge for the first decade of January	Cumec
Jan02	Average discharge for the second decade of January	Cumec
Jan03	Average discharge for the last decade of January	Cumec
Feb01	Average discharge for the first decade of February	Cumec
Feb02	Average discharge for the second decade of February	Cumec

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Feb03	Average discharge for the last decade of February	Cumec
Mar01	Average discharge for the first decade of March	Cumec
Mar02	Average discharge for the second decade of March	Cumec
Mar03	Average discharge for the last decade of March	Cumec
Apr01	Average discharge for the first decade of April	Cumec
Apr02	Average discharge for the second decade of April	Cumec
Apr03	Average discharge for the last decade of April	Cumec
Minq	Minimum discharge	Cumec

Name of Data layer: **Statistical Analysis of Discharge for Dry of NW**

Metadata

Dataset type	Tabular
Abstract	The dataset contains decadal discharge data (of GM area for dry period) computed for each node, which is generated at the mid-point of available cross-sections of rivers.
Quality	The quality of the model information depends on the input data,calibration and verification of the model.
Completeness	The data has been has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analysed information are created by using MIKE-11, a one-dimensional mathematical model, to interpret the discharge values where the observed values are not available.
Process description	Computed results cover decade wise discharge values of the mid-points of available cross-sections for each dry period. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
54025802	7	564	25.8	1989-90	21.39	12.24	9.43	6.32	4.35	3.4	3.44	2.73	2.64	1.25	0.55	2.18	16.62	2.86	1.14	3.91	2.1
54025802	7	564	25.8	1990-91	62.18	29.87	14.49	9.95	7.03	5.71	4.95	4.21	4.01	4.81	1.72	1.62	3.53	3.11	3.11	99999.99	99999.99
54029237	7	564	29.24	1989-90	21.57	12.32	9.46	6.33	4.38	3.36	3.44	2.65	2.58	1.27	0.5	2.09	16.61	2.91	1.09	3.82	2.05
54029237	7	564	29.24	1990-91	62.18	29.96	14.36	10.1	6.82	5.79	5.1	4.06	3.89	4.95	1.63	1.51	3.69	2.96	3	99999.99	99999.99

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
Nov01	Average discharge for the first decade of November	Cumec
Nov02	Average discharge for the second decade of November	Cumec
Nov03	Average discharge for the last decade of November	Cumec
Dec01	Average discharge for the first decade of December	Cumec
Dec02	Average discharge for the second decade of December	Cumec
Dec03	Average discharge for the last decade of December	Cumec
Jan01	Average discharge for the first decade of January	Cumec
Jan02	Average discharge for the second decade of January	Cumec
Jan03	Average discharge for the last decade of January	Cumec
Feb01	Average discharge for the first decade of February	Cumec
Feb02	Average discharge for the second decade of February	Cumec

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Feb03	Average discharge for the last decade of February	Cumec
Mar01	Average discharge for the first decade of March	Cumec
Mar02	Average discharge for the second decade of March	Cumec
Mar03	Average discharge for the last decade of March	Cumec
Apr01	Average discharge for the first decade of April	Cumec
Apr02	Average discharge for the second decade of April	Cumec
Apr03	Average discharge for the last decade of April	Cumec
Minq	Minimum discharge	Cumec

Name of Data layer: **Statistical Analysis of Discharge for Dry of SE**

Metadata

Dataset type	Tabular
Abstract	The dataset contains decadal discharge data (of GM area for dry period) computed for each node, which is generated at the mid-point of available cross-sections of rivers.
Quality	The quality of the model information depends on the input data,calibration and verification of the model.
Completeness	The data has been has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analysed information are created by using MIKE-11, a one-dimensional mathematical model, to interpret the discharge values where the observed values are not available.
Process description	Computed results cover decade wise discharge values of the mid-points of available cross-sections for each dry period. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
54025802	7	564	25.8	1989-90	21.39	12.24	9.43	6.32	4.35	3.4	3.44	2.73	2.64	1.25	0.55	2.18	16.62	2.86	1.14	3.91	2.1
54025802	7	564	25.8	1990-91	62.18	29.87	14.49	9.95	7.03	5.71	4.95	4.21	4.01	4.81	1.72	1.62	3.53	3.11	3.11	99999.99	99999.99
54029237	7	564	29.24	1989-90	21.57	12.32	9.46	6.33	4.38	3.36	3.44	2.65	2.58	1.27	0.5	2.09	16.61	2.91	1.09	3.82	2.05
54029237	7	564	29.24	1990-91	62.18	29.96	14.36	10.1	6.82	5.79	5.1	4.06	3.89	4.95	1.63	1.51	3.69	2.96	3	99999.99	99999.99

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
Nov01	Average discharge for the first decade of November	Cumec
Nov02	Average discharge for the second decade of November	Cumec
Nov03	Average discharge for the last decade of November	Cumec
Dec01	Average discharge for the first decade of December	Cumec
Dec02	Average discharge for the second decade of December	Cumec
Dec03	Average discharge for the last decade of December	Cumec
Jan01	Average discharge for the first decade of January	Cumec
Jan02	Average discharge for the second decade of January	Cumec
Jan03	Average discharge for the last decade of January	Cumec
Feb01	Average discharge for the first decade of February	Cumec
Feb02	Average discharge for the second decade of February	Cumec

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Feb03	Average discharge for the last decade of February	Cumec
Mar01	Average discharge for the first decade of March	Cumec
Mar02	Average discharge for the second decade of March	Cumec
Mar03	Average discharge for the last decade of March	Cumec
Apr01	Average discharge for the first decade of April	Cumec
Apr02	Average discharge for the second decade of April	Cumec
Apr03	Average discharge for the last decade of April	Cumec
Minq	Minimum discharge	Cumec

Name of Data layer: **Statistical Analysis of Discharge for Dry of SW**

Metadata

Dataset type	Tabular
Abstract	Discharge data (for dry period of SW region) computed for each node, which are generated at the mid-point of available cross-sections.
Quality	The quality of the model information depends on the input data and calibration & verification of the model
Completeness	The data layer has been created for the South West region (covers the area lying to the south of the Ganges and west of the Meghna estuary).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model, to interpret the discharge values where the observed values are not available.
Process description	Computed results cover decade wise discharge value for dry period of a year for the mid-point of available cross-sections.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
54025802	7	564	25.8	1989-90	21.39	12.24	9.43	6.32	4.35	3.4	3.44	2.73	2.64	1.25	0.55	2.18	16.62	2.86	1.14	3.91	2.1
54025802	7	564	25.8	1990-91	62.18	29.87	14.49	9.95	7.03	5.71	4.95	4.21	4.01	4.81	1.72	1.62	3.53	3.11	3.11	99999.99	99999.99
54029237	7	564	29.24	1989-90	21.57	12.32	9.46	6.33	4.38	3.36	3.44	2.65	2.58	1.27	0.5	2.09	16.61	2.91	1.09	3.82	2.05
54029237	7	564	29.24	1990-91	62.18	29.96	14.36	10.1	6.82	5.79	5.1	4.06	3.89	4.95	1.63	1.51	3.69	2.96	3	99999.99	99999.99

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
Nov01	Average discharge for the first decade of November	Cumec
Nov02	Average discharge for the second decade of November	Cumec
Nov03	Average discharge for the last decade of November	Cumec
Dec01	Average discharge for the first decade of December	Cumec
Dec02	Average discharge for the second decade of December	Cumec
Dec03	Average discharge for the last decade of December	Cumec
Jan01	Average discharge for the first decade of January	Cumec
Jan02	Average discharge for the second decade of January	Cumec
Jan03	Average discharge for the last decade of January	Cumec
Feb01	Average discharge for the first decade of February	Cumec
Feb02	Average discharge for the second decade of February	Cumec
Feb03	Average discharge for the last decade of February	Cumec

Mar01	Average discharge for the first decade of March	Cumec
Mar02	Average discharge for the second decade of March	Cumec
Mar03	Average discharge for the last decade of March	Cumec
Apr01	Average discharge for the first decade of April	Cumec
Apr02	Average discharge for the second decade of April	Cumec
Apr03	Average discharge for the last decade of April	Cumec
Minq	Minimum discharge	Cumec

Name of Data layer: **Statistical Analysis of Discharge for Wet of EH**

Metadata

Dataset type	Tabular
Abstract	The dataset contains decadal discharge data (of EH region for monsoon period) computed for each node, which is generated at the mid-point of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The data layer has been created for the Eastern Hill region.
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information is created by using MIKE-11, a one dimensional mathematical model, to interpret the discharge values where the observed values are not available.
Process description	Computed results cover decade wise discharge values of the mid-points of available cross-sections for each monsoon period. NWRD has stored the dataset in an organised way.

Sample of Data

irid_id	Region_id	River_id	Chainage	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03
8000750	7	568	0.75	1996-97	274.22	305.64	470.25	188.79	276.18	465.19	1078.02	900.4	546.11	865.53	964.36	969.96	783.7	634.46	442.52	475.2	591.88	51
8000750	7	568	0.75	1997-98	179.57	59.74	197.95	335.13	258.36	203.09	591.52	1024.85	906.93	1050.57	1028.69	1010.55	908.13	640.99	650.01	726.1	493.24	39
8002025	7	568	2.03	1996-97	273.75	308.71	471.03	188.42	277.08	466.33	1080.09	900.29	548.97	870.15	965.94	971.65	784.12	634.88	443.96	476.98	592.06	51
8002025	7	568	2.03	1997-98	179.72	59.37	198.86	335.77	258.66	203.97	596.52	1031.39	912.46	1053.58	1030.31	1011.03	912.12	643.26	652.8	727.02	493.68	39

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
May01	Average discharge for the first decade of May	Cumec
May02	Average discharge for the second decade of May	Cumec
May03	Average discharge for the last decade of May	Cumec
Jun01	Average discharge for the first decade of June	Cumec
Jun02	Average discharge for the second decade of June	Cumec
Jun03	Average discharge for the last decade of June	Cumec
Jul01	Average discharge for the first decade of July	Cumec
Jul02	Average discharge for the second decade of July	Cumec
Jul03	Average discharge for the last decade of July	Cumec
Aug01	Average discharge for the first decade of August	Cumec
Aug02	Average discharge for the second decade of August	Cumec
Aug03	Average discharge for the last decade of August	Cumec
Sep01	Average discharge for the first decade of September	Cumec

Sep02	Average discharge for the second decade of September	Cumec
Sep03	Average discharge for the last decade of September	Cumec
Oct01	Average discharge for the first decade of October	Cumec
Oct02	Average discharge for the second decade of October	Cumec
Oct03	Average discharge for the last decade of October	Cumec
Maxq	Maximum discharge	Cumec

Name of Data layer: **Statistical Analysis of Discharge for Wet of NE**

Metadata

Data type	Tabular
Abstract	The dataset contains decadal discharge data (of EH region for monsoon period) computed for each node, which is generated at the mid-point of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and varification of the model.
Completeness	The data layer has been created for the Eastern Hill region.
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model, to interpret the discharge values where the observed values are not available.
Process description	Computed results cover decade wise discharge values of the mid-points of available cross-sections for each monsoon period. NWRD has stored the dataset in an organised way.

Sample of Data

irid_id	Region_id	River_id	Chainage	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03
8000750	7	568	0.75	1996-97	274.22	305.64	470.25	188.79	276.18	465.19	1078.02	900.4	546.11	865.53	964.36	969.96	783.7	634.46	442.52	475.2	591.88	51
8000750	7	568	0.75	1997-98	179.57	59.74	197.95	335.13	258.36	203.09	591.52	1024.85	906.93	1050.57	1028.69	1010.55	908.13	640.99	650.01	726.1	493.24	39
8002025	7	568	2.03	1996-97	273.75	308.71	471.03	188.42	277.08	466.33	1080.09	900.29	548.97	870.15	965.94	971.65	784.12	634.88	443.96	476.98	592.06	51
8002025	7	568	2.03	1997-98	179.72	59.37	198.86	335.77	258.66	203.97	596.52	1031.39	912.46	1053.58	1030.31	1011.03	912.12	643.26	652.8	727.02	493.68	39

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
May01	Average discharge for the first decade of May	Cumec
May02	Average discharge for the second decade of May	Cumec
May03	Average discharge for the last decade of May	Cumec
Jun01	Average discharge for the first decade of June	Cumec
Jun02	Average discharge for the second decade of June	Cumec
Jun03	Average discharge for the last decade of June	Cumec
Jul01	Average discharge for the first decade of July	Cumec
Jul02	Average discharge for the second decade of July	Cumec
Jul03	Average discharge for the last decade of July	Cumec
Aug01	Average discharge for the first decade of August	Cumec
Aug02	Average discharge for the second decade of August	Cumec
Aug03	Average discharge for the last decade of August	Cumec
Sep01	Average discharge for the first decade of September	Cumec

Sep02	Average discharge for the second decade of September	Cumec
Sep03	Average discharge for the last decade of September	Cumec
Oct01	Average discharge for the first decade of October	Cumec
Oct02	Average discharge for the second decade of October	Cumec
Oct03	Average discharge for the last decade of October	Cumec
Maxq	Maximum discharge	Cumec

Name of Data layer: **Statistical Analysis of Discharge for Wet of NW**

Metadata

Dataset type	Tabular
Abstract	The dataset contains decadal discharge data (of EH region for monsoon period) computed for each node, which is generated at the mid-point of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and varification of the model.
Completeness	The data layer has been created for the Eastern Hill region.
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model, to interpret the discharge values where the observed values are not available.
Process description	Computed results cover decade wise discharge values of the mid-points of available cross-sections for each monsoon period. NWRD has stored the dataset in an organised way.

Sample of Data

irid_id	Region_id	River_id	Chainage	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03
8000750	7	568	0.75	1996-97	274.22	305.64	470.25	188.79	276.18	465.19	1078.02	900.4	546.11	865.53	964.36	969.96	783.7	634.46	442.52	475.2	591.88	51
8000750	7	568	0.75	1997-98	179.57	59.74	197.95	335.13	258.36	203.09	591.52	1024.85	906.93	1050.57	1028.69	1010.55	908.13	640.99	650.01	726.1	493.24	39
8002025	7	568	2.03	1996-97	273.75	308.71	471.03	188.42	277.08	466.33	1080.09	900.29	548.97	870.15	965.94	971.65	784.12	634.88	443.96	476.98	592.06	51
8002025	7	568	2.03	1997-98	179.72	59.37	198.86	335.77	258.66	203.97	596.52	1031.39	912.46	1053.58	1030.31	1011.03	912.12	643.26	652.8	727.02	493.68	39

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
May01	Average discharge for the first decade of May	Cumec
May02	Average discharge for the second decade of May	Cumec
May03	Average discharge for the last decade of May	Cumec
Jun01	Average discharge for the first decade of June	Cumec
Jun02	Average discharge for the second decade of June	Cumec
Jun03	Average discharge for the last decade of June	Cumec
Jul01	Average discharge for the first decade of July	Cumec
Jul02	Average discharge for the second decade of July	Cumec
Jul03	Average discharge for the last decade of July	Cumec
Aug01	Average discharge for the first decade of August	Cumec
Aug02	Average discharge for the second decade of August	Cumec
Aug03	Average discharge for the last decade of August	Cumec
Sep01	Average discharge for the first decade of September	Cumec

Sep02	Average discharge for the second decade of September	Cumec
Sep03	Average discharge for the last decade of September	Cumec
Oct01	Average discharge for the first decade of October	Cumec
Oct02	Average discharge for the second decade of October	Cumec
Oct03	Average discharge for the last decade of October	Cumec
Maxq	Maximum discharge	Cumec

Name of Data layer: **Statistical Analysis of Discharge for Wet of SE**

Metadata

Dataset type	Tabular
Abstract	The dataset contains decadal discharge data (of EH region for monsoon period) computed for each node, which is generated at the mid-point of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and varification of the model.
Completeness	The data layer has been created for the Eastern Hill region.
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model, to interpret the discharge values where the observed values are not available.
Process description	Computed results cover decade wise discharge values of the mid-points of available cross-sections for each monsoon period. NWRD has stored the dataset in an organised way.

Sample of Data

irid_id	Region_id	River_id	Chainage	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03
8000750	7	568	0.75	1996-97	274.22	305.64	470.25	188.79	276.18	465.19	1078.02	900.4	546.11	865.53	964.36	969.96	783.7	634.46	442.52	475.2	591.88	51
8000750	7	568	0.75	1997-98	179.57	59.74	197.95	335.13	258.36	203.09	591.52	1024.85	906.93	1050.57	1028.69	1010.55	908.13	640.99	650.01	726.1	493.24	39
8002025	7	568	2.03	1996-97	273.75	308.71	471.03	188.42	277.08	466.33	1080.09	900.29	548.97	870.15	965.94	971.65	784.12	634.88	443.96	476.98	592.06	51
8002025	7	568	2.03	1997-98	179.72	59.37	198.86	335.77	258.66	203.97	596.52	1031.39	912.46	1053.58	1030.31	1011.03	912.12	643.26	652.8	727.02	493.68	39

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
May01	Average discharge for the first decade of May	Cumec
May02	Average discharge for the second decade of May	Cumec
May03	Average discharge for the last decade of May	Cumec
Jun01	Average discharge for the first decade of June	Cumec
Jun02	Average discharge for the second decade of June	Cumec
Jun03	Average discharge for the last decade of June	Cumec
Jul01	Average discharge for the first decade of July	Cumec
Jul02	Average discharge for the second decade of July	Cumec
Jul03	Average discharge for the last decade of July	Cumec
Aug01	Average discharge for the first decade of August	Cumec
Aug02	Average discharge for the second decade of August	Cumec
Aug03	Average discharge for the last decade of August	Cumec
Sep01	Average discharge for the first decade of September	Cumec

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Sep02	Average discharge for the second decade of September	Cumec
Sep03	Average discharge for the last decade of September	Cumec
Oct01	Average discharge for the first decade of October	Cumec
Oct02	Average discharge for the second decade of October	Cumec
Oct03	Average discharge for the last decade of October	Cumec
Maxq	Maximum discharge	Cumec

Name of Data layer: **Statistical Analysis of Discharge for Wet of SW**

Metadata

Dataset type	Tabular
Abstract	The dataset contains decadal discharge data (of EH region for monsoon period) computed for each node, which is generated at the mid-point of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and varification of the model.
Completeness	The data layer has been created for the Eastern Hill region.
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model, to interpret the discharge values where the observed values are not available.
Process description	Computed results cover decade wise discharge values of the mid-points of available cross-sections for each monsoon period. NWRD has stored the dataset in an organised way.

Sample of Data

irid_id	Region_id	River_id	Chainage	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03
8000750	7	568	0.75	1996-97	274.22	305.64	470.25	188.79	276.18	465.19	1078.02	900.4	546.11	865.53	964.36	969.96	783.7	634.46	442.52	475.2	591.88	51
8000750	7	568	0.75	1997-98	179.57	59.74	197.95	335.13	258.36	203.09	591.52	1024.85	906.93	1050.57	1028.69	1010.55	908.13	640.99	650.01	726.1	493.24	39
8002025	7	568	2.03	1996-97	273.75	308.71	471.03	188.42	277.08	466.33	1080.09	900.29	548.97	870.15	965.94	971.65	784.12	634.88	443.96	476.98	592.06	51
8002025	7	568	2.03	1997-98	179.72	59.37	198.86	335.77	258.66	203.97	596.52	1031.39	912.46	1053.58	1030.31	1011.03	912.12	643.26	652.8	727.02	493.68	39

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
May01	Average discharge for the first decade of May	Cumec
May02	Average discharge for the second decade of May	Cumec
May03	Average discharge for the last decade of May	Cumec
Jun01	Average discharge for the first decade of June	Cumec
Jun02	Average discharge for the second decade of June	Cumec
Jun03	Average discharge for the last decade of June	Cumec
Jul01	Average discharge for the first decade of July	Cumec
Jul02	Average discharge for the second decade of July	Cumec
Jul03	Average discharge for the last decade of July	Cumec
Aug01	Average discharge for the first decade of August	Cumec
Aug02	Average discharge for the second decade of August	Cumec
Aug03	Average discharge for the last decade of August	Cumec
Sep01	Average discharge for the first decade of September	Cumec

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Sep02	Average discharge for the second decade of September	Cumec
Sep03	Average discharge for the last decade of September	Cumec
Oct01	Average discharge for the first decade of October	Cumec
Oct02	Average discharge for the second decade of October	Cumec
Oct03	Average discharge for the last decade of October	Cumec
Maxq	Maximum discharge	Cumec

Name of Data layer: **Hydraulic Properties of Cross Section of EH**

Metadata

Dataset type	Tabular
Abstract	The data layer contains the hydraulic properties of cross-section of rivers for Eastern Hill region. These properties include top width, height, cross-sectional area and hydraulic radius for each incremental height.
Quality	This cross section information is reliable and successfully used in different hydrological modelling purposes.
Completeness	It covers Eastern Hill region.
History of the dataset	Cross section data are collected from Morphology Department of Bangladesh Water Development Board. The Cross Section Survey was made by BWDB in different years.
Purpose of production	To provide the cross sectional properties used for mathematical modelling in the respective region by Surface Water Modelling Center.
Process description	The cross section data was entered into MIKE-11, a one dimensional Mathematical model, which provides this analyzed information. The hydraulic properties of river cross-section are generated for all the available sections. Properties of the sections are generated at each incremental height considering 10 classes of depth.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Levelname	Xsarea	Hydrad	Width
564000000	7	564	0	2.23	0	0	0
564000000	7	564	0	2.46	3.96	0.15	30.65
564000000	7	564	0	2.57	7.37	0.24	33.61
564000000	7	564	0	2.83	18.31	0.45	48.83
564000000	7	564	0	2.94	25.98	0.48	78.61
564000000	7	564	0	3.07	37.35	0.55	91.42
564000000	7	564	0	6.21	351.46	3.46	106.56
564000000	7	564	0	6.32	363.42	3.55	119.89

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Level	Level of water at a specific chainage	meter
Xsarea	Cross Sectional Area	Square Meter
Hydrad	Hydraulic Radius	Meter
Width	Width	Meter

Name of Data layer: **Hydraulic Properties of Cross Section of GM**

Metadata

Dataset type	Tabular
Abstract	The data layer contains the hydraulic properties of cross-section of rivers for Eastern Hill region. These properties include top width, height, cross-sectional area and hydraulic radius for each incremental height.
Quality	This cross section information is reliable and successfully used in different hydrological modelling purposes.
Completeness	It covers Eastern Hill region.
History of the dataset	Cross section data are collected from Morphology Department of Bangladesh Water Development Board. The Cross Section Survey was made by BWDB in different years.
Purpose of production	To provide the cross sectional properties used for mathematical modelling in the respective region by Surface Water Modelling Center.
Process description	The cross section data was entered into MIKE-11, a one dimensional Mathematical model, which provides this analyzed information. The hydraulic properties of river cross-section are generated for all the available sections. Properties of the sections are generated at each incremental height considering 10 classes of depth.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Levelname	Xsarea	Hydrad	Width
564000000	7	564	0	2.23	0	0	0
564000000	7	564	0	2.46	3.96	0.15	30.65
564000000	7	564	0	2.57	7.37	0.24	33.61
564000000	7	564	0	2.83	18.31	0.45	48.83
564000000	7	564	0	2.94	25.98	0.48	78.61
564000000	7	564	0	3.07	37.35	0.55	91.42
564000000	7	564	0	6.21	351.46	3.46	106.56
564000000	7	564	0	6.32	363.42	3.55	119.89

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Level	Level of water at a specific chainage	meter
Xsarea	Cross Sectional Area	Square Meter
Hydrad	Hydraulic Radius	Meter
Width	Width	Meter

Name of Data layer: **Hydraulic Properties of Cross Section of NC**

Metadata

Dataset type	Tabular
Abstract	The data layer contains the hydraulic properties of cross-section of rivers for Eastern Hill region. These properties include top width, height, cross-sectional area and hydraulic radius for each incremental height.
Quality	This cross section information is reliable and successfully used in different hydrological modelling purposes.
Completeness	It covers Eastern Hill region.
History of the dataset	Cross section data are collected from Morphology Department of Bangladesh Water Development Board. The Cross Section Survey was made by BWDB in different years.
Purpose of production	To provide the cross sectional properties used for mathematical modelling in the respective region by Surface Water Modelling Center.
Process description	The cross section data was entered into MIKE-11, a one dimensional Mathematical model, which provides this analyzed information. The hydraulic properties of river cross-section are generated for all the available sections. Properties of the sections are generated at each incremental height considering 10 classes of depth.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Levelname	Xsarea	Hydrad	Width
564000000	7	564	0	2.23	0	0	0
564000000	7	564	0	2.46	3.96	0.15	30.65
564000000	7	564	0	2.57	7.37	0.24	33.61
564000000	7	564	0	2.83	18.31	0.45	48.83
564000000	7	564	0	2.94	25.98	0.48	78.61
564000000	7	564	0	3.07	37.35	0.55	91.42
564000000	7	564	0	6.21	351.46	3.46	106.56
564000000	7	564	0	6.32	363.42	3.55	119.89

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Level	Level of water at a specific chainage	meter
Xsarea	Cross Sectional Area	Square Meter
Hydrad	Hydraulic Radius	Meter
Width	Width	Meter

Name of Data layer: **Hydraulic Properties of Cross Section of NE**

Metadata

Dataset type	Tabular
Abstract	The data layer contains the hydraulic properties of cross-section of rivers for Eastern Hill region. These properties include top width, height, cross-sectional area and hydraulic radius for each incremental height.
Quality	This cross section information is reliable and successfully used in different hydrological modelling purposes.
Completeness	It covers Eastern Hill region.
History of the dataset	Cross section data are collected from Morphology Department of Bangladesh Water Development Board. The Cross Section Survey was made by BWDB in different years.
Purpose of production	To provide the cross sectional properties used for mathematical modelling in the respective region by Surface Water Modelling Center.
Process description	The cross section data was entered into MIKE-11, a one dimensional Mathematical model, which provides this analyzed information. The hydraulic properties of river cross-section are generated for all the available sections. Properties of the sections are generated at each incremental height considering 10 classes of depth.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Levelname	Xsarea	Hydrad	Width
564000000	7	564	0	2.23	0	0	0
564000000	7	564	0	2.46	3.96	0.15	30.65
564000000	7	564	0	2.57	7.37	0.24	33.61
564000000	7	564	0	2.83	18.31	0.45	48.83
564000000	7	564	0	2.94	25.98	0.48	78.61
564000000	7	564	0	3.07	37.35	0.55	91.42
564000000	7	564	0	6.21	351.46	3.46	106.56
564000000	7	564	0	6.32	363.42	3.55	119.89

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Level	Level of water at a specific chainage	meter
Xsarea	Cross Sectional Area	Square Meter
Hydrad	Hydraulic Radius	Meter
Width	Width	Meter

Name of Data layer: **Hydraulic Properties of Cross Section of NW**

Metadata

Dataset type	Tabular
Abstract	The data layer contains the hydraulic properties of cross-section of rivers for Eastern Hill region. These properties include top width, height, cross-sectional area and hydraulic radius for each incremental height.
Quality	This cross section information is reliable and successfully used in different hydrological modelling purposes.
Completeness	It covers Eastern Hill region.
History of the dataset	Cross section data are collected from Morphology Department of Bangladesh Water Development Board. The Cross Section Survey was made by BWDB in different years.
Purpose of production	To provide the cross sectional properties used for mathematical modelling in the respective region by Surface Water Modelling Center.
Process description	The cross section data was entered into MIKE-11, a one dimensional Mathematical model, which provides this analyzed information. The hydraulic properties of river cross-section are generated for all the available sections. Properties of the sections are generated at each incremental height considering 10 classes of depth.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Levelname	Xsarea	Hydrad	Width
7000000	2	7	0	20.02	0	0	0
7000000	2	7	0	20.11	0.38	0.06	7.17
7000000	2	7	0	20.2	1.16	0.14	9.82
7000000	2	7	0	20.29	2.22	0.2	13.98
7000000	2	7	0	20.52	6.17	0.37	20
7000000	2	7	0	21.91	46.27	1.49	35.66
7000000	2	7	0	22.15	55.48	1.67	41.07
7000000	2	7	0	23.59	117.82	2.86	45.51

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Level	Level of water at a specific chainage	meter
Xsarea	Cross Sectional Area	Square Meter
Hydrad	Hydraulic Radius	Meter
Width	Width	Meter

Name of Data layer: **Hydraulic Properties of Cross Section of SE**

Metadata

Dataset type	Tabular
Abstract	The data layer contains the hydraulic properties of cross-section of rivers for Eastern Hill region. These properties include top width, height, cross-sectional area and hydraulic radius for each incremental height.
Quality	This cross section information is reliable and successfully used in different hydrological modelling purposes.
Completeness	It covers Eastern Hill region.
History of the dataset	Cross section data are collected from Morphology Department of Bangladesh Water Development Board. The Cross Section Survey was made by BWDB in different years.
Purpose of production	To provide the cross sectional properties used for mathematical modelling in the respective region by Surface Water Modelling Center.
Process description	The cross section data was entered into MIKE-11, a one dimensional Mathematical model, which provides this analyzed information. The hydraulic properties of river cross-section are generated for all the available sections. Properties of the sections are generated at each incremental height considering 10 classes of depth.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Levelname	Xsarea	Hydrad	Width
7000000	2	7	0	20.02	0	0	0
7000000	2	7	0	20.11	0.38	0.06	7.17
7000000	2	7	0	20.2	1.16	0.14	9.82
7000000	2	7	0	20.29	2.22	0.2	13.98
7000000	2	7	0	20.52	6.17	0.37	20
7000000	2	7	0	21.91	46.27	1.49	35.66
7000000	2	7	0	22.15	55.48	1.67	41.07
7000000	2	7	0	23.59	117.82	2.86	45.51

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Level	Level of water at a specific chainage	meter
Xsarea	Cross Sectional Area	Square Meter
Hydrad	Hydraulic Radius	Meter
Width	Width	Meter

Name of Data layer: **Hydraulic Properties of Cross Section of SW**

Metadata

Dataset type	Tabular
Abstract	The data layer contains the hydraulic properties of cross-section of rivers for Eastern Hill region. These properties include top width, height, cross-sectional area and hydraulic radius for each incremental height.
Quality	This cross section information is reliable and successfully used in different hydrological modelling purposes.
Completeness	It covers Eastern Hill region.
History of the dataset	Cross section data are collected from Morphology Department of Bangladesh Water Development Board. The Cross Section Survey was made by BWDB in different years.
Purpose of production	To provide the cross sectional properties used for mathematical modelling in the respective region by Surface Water Modelling Center.
Process description	The cross section data was entered into MIKE-11, a one dimensional Mathematical model, which provides this analyzed information. The hydraulic properties of river cross-section are generated for all the available sections. Properties of the sections are generated at each incremental height considering 10 classes of depth.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Levelname	Xsarea	Hydrad	Width
7000000	2	7	0	20.02	0	0	0
7000000	2	7	0	20.11	0.38	0.06	7.17
7000000	2	7	0	20.2	1.16	0.14	9.82
7000000	2	7	0	20.29	2.22	0.2	13.98
7000000	2	7	0	20.52	6.17	0.37	20
7000000	2	7	0	21.91	46.27	1.49	35.66
7000000	2	7	0	22.15	55.48	1.67	41.07
7000000	2	7	0	23.59	117.82	2.86	45.51

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Level	Level of water at a specific chainage	meter
Xsarea	Cross Sectional Area	Square Meter
Hydrad	Hydraulic Radius	Meter
Width	Width	Meter

Name of Data layer: **ADCP Data of MES**

[Metadata](#)

[Sample of Data](#)

[Bundle Information \(Data Field Description and Unit\)](#)

Name of Data layer: **Bathymetry Data of FAP24 (CD18)**

Metadata

These are text files stored in CD

Sample of Data

Bundle Information (Data Field Description and Unit)

Name of Data layer: **Bathymetry Data of FAP24 (CD19)**

Metadata

These are text files stored in CD

Sample of Data

Bundle Information (Data Field Description and Unit)

Name of Data layer: **Bathymetry Data of FAP24 (CD20)**

Metadata

These are text files stored in CD

Sample of Data

Bundle Information (Data Field Description and Unit)

Name of Data layer: **Bathymetry Data of MES**

Metadata

These are text files stored in CD

Sample of Data

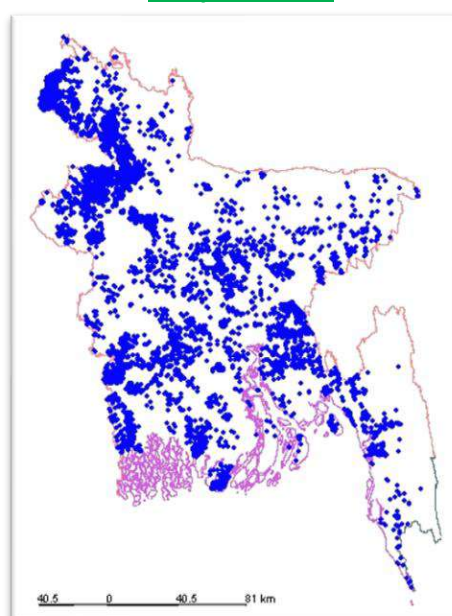
Bundle Information (Data Field Description and Unit)

Name of Data layer: **Pond Location**

Metadata

Dataset type	Spatial
Abstract	Our recommendations are inter-related and focused on data resources and a process for governing the free flow of that data. As with many organizations, data and information is the currency of USAID's operations. The recommendations offered here focus on a structured group within ANE whose charter includes governing information processes, a template for system architecture, tools for collecting self-describing data, and system compliance. These recommendations, if implemented, will boost the ANE Bureau's data handling capabilities and enable the Agency to distribute more usable information across the organization.
Quality	The pond data collected as LCC projected point data which was changed into BTM projection system using standard GIS application tools in respect to WGS1984 datum.
Completeness	This data layer covers whole Bangladesh along with the smallest administrative unit (mouza).
History of the dataset	The source of this dataset is Local Government Engineering Department. The data of pond is a spatial data covers whole Bangladesh with mouza level information. the projection system is Bangladesh Transverse Mercator (BTM). Attribute information are distributed according to the source.
Purpose of production	To present the spatial distribution of pond location of Bangladesh and to use the data layer for fishery resource assessment, management and other kinds of environmental monitoring, conservation purposes.
Process description	The pond data collected as secondary data from the LGED. Attribute information have been attached according to the mouza level administrative unit along with JL No. The pond is point shape data, projected in BTM projection.

Sample of Data



Attribute Table

id	divname	distname	thaname	uniname	mauzname	jl_no	geocode
1	Chittagong	Cox'S Bazar	Teknaf	Sabrang	Shahpra Dwip	11	2229047663
2	Chittagong	Cox'S Bazar	Teknaf	Sabrang	Sabrang	10	2229047580
3	Chittagong	Cox'S Bazar	Teknaf	Teknaf	Teknaf	9	2229063829
4	Chittagong	Cox'S Bazar	Teknaf	Teknaf	Teknaf R.F.	6	2229063414
5	Chittagong	Cox'S Bazar	Teknaf	Nhilla	Dakshin Nhilla	5	2229031165

Bundle Information (Data Field Description and Unit)

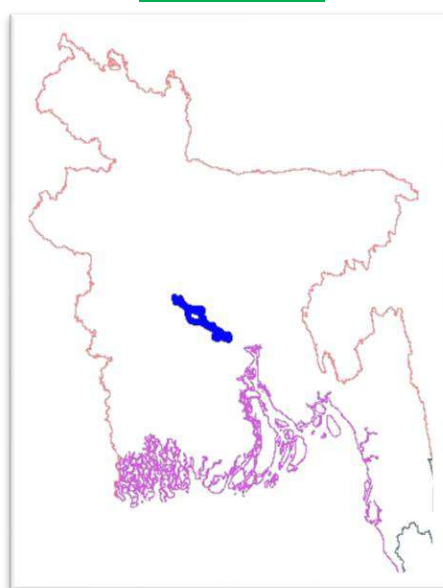
FIELD_NAME	FIELD_DESC	UNIT
Divname	Name of Division	
Distname	Name of District	
Thaname	Name of Thana/Upazila	
Uniname	Name of Union	
Mauzname	Name of Mouza	
Jl_no	Jurisdiction number	
Geocode	Geocode (Division code + district code + thana code+uion code+mauza code) is incorporated according to Geomaster database of BBS 2001.	
Id	Internal Code	

Name of Data layer: **Bathymetry of Main River**

Metadata

Dataset type	Spatial
Abstract	A spatial data layer containing the bathymetry chart points of different major rivers, mainly Padma and Jamuna surveyed by BIWTA in different time period. Bathymetry is the study of underwater depth of river, lake or ocean floors. Bathymetric charts are typically produced to support safety of surface or sub-surface navigation, and usually show floor relief or terrain and typically also provide surface navigational information.
Quality	Bathymetry data generated as point data using standard GIS applications with WGS1984 datum.
Completeness	This data layer covers main rivers like Padma and Jamuna of Bangladesh
History of the dataset	The source of this dataset is BIWTA. The projection system is Bangladesh Transverse Mercator (BTM). Attribute information were attached according to the source map. The value converted in mPWD has calculated by deducting spot values from average LLW of the survey area
Purpose of production	Bathymetric data can be used in river depth terrain analysis for river morphology, surface navigation, various environmental, and engineering planning purposes. Further it can be used for river erosion modeling study and decision supports on dredging, navigation routes and many other purposes.
Process description	The Bathymetry data collected as secondary data from the source map. Other attribute information have been attached according to the source map. Bathymetry as point data projected in BTM projection.

Sample of Data



Attribute Table

z_mpwd	fname	spot_unit	spot_value	llw_value	llw_unit	sdate
-1.402	Arc_107_2003_a_spot	Feet	8	3.4	Feet	3/31/2003
-2.469	Arc_107_2003_a_spot	Feet	11.5	3.4	Feet	3/31/2003
-2.012	Arc_107_2003_a_spot	Feet	10	3.4	Feet	3/31/2003
-0.945	Arc_107_2003_a_spot	Feet	6.5	3.4	Feet	3/31/2003
-0.03	Arc_107_2003_a_spot	Feet	3.5	3.4	Feet	3/31/2003
-0.335	Arc_107_2003_a_spot	Feet	4.5	3.4	Feet	3/31/2003

Bundle Information (Data Field Description and Unit)

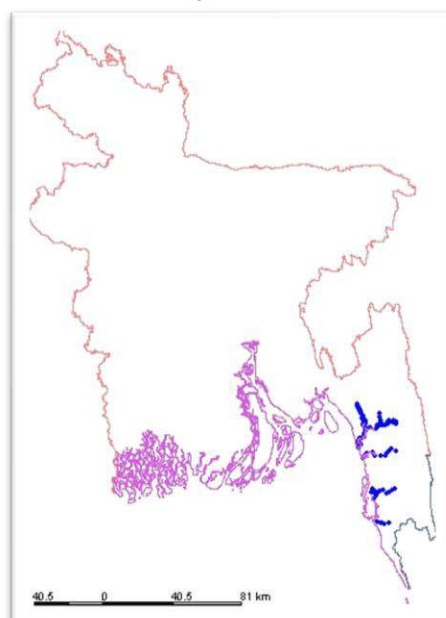
FIELD_NAME	FIELD_DESC	UNIT
Fname	Source Map from BIWTA	
Spot_unit	Unit of the spot value from source	Feet, Meter
Spot_value	Sounding value from source	Meter/feet
Llw_value	Value of mean lower low water	Feet, Meter
Llw_unit	Unit of mean lower low water	Feet, Meter
Z_mpwd	Depth of the spot	meter
Sdate	Survey date	

Name of Data layer: **Cross Section of EHRM**

Metadata

Dataset type	Spatial
Abstract	Processed cross section location information of Eastern Hill region generated by Surface Water Modelling Center.
Quality	This cross section information is reliable and successfully used in different hydrological modelling purposes.
Completeness	The cross section dataset covers the Eastern Hill region identified by Surface Water Simulation modelling Programme.
History of the dataset	Cross section data has been collected from Morphology Department of Bangladesh Water Development Board. The Cross Section Survey was made by BWDB in different years.
Purpose of production	The cross section data layer can be used for various purposes such as to assess the hydraulic properties of a river section, to calculate stream flows, river characteristic study, navigational study, morphological study, trend analysis, and surface water
Process description	NWRD has stored the data layer in database format.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
246000000	7	246	ICHAMATI	0
246006000	7	246	ICHAMATI	6
246011000	7	246	ICHAMATI	11
246016000	7	246	ICHAMATI	16
246021500	7	246	ICHAMATI	21.5

Bundle Information (Data Field Description and Unit)

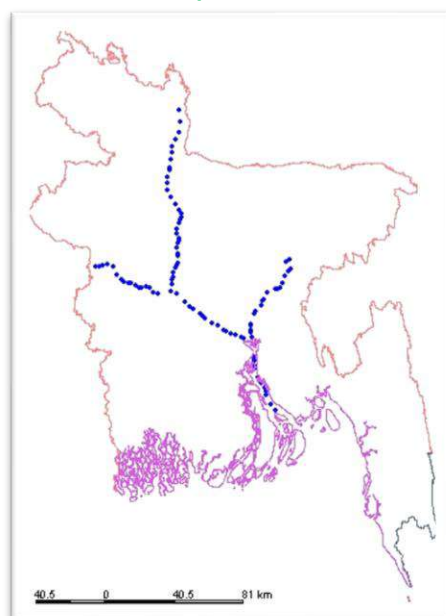
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Cross Section of GM**

Metadata

Dataset type	Spatial
Abstract	Processed cross section location information of Eastern Hill region generated by Surface Water Modelling Center.
Quality	This cross section information is reliable and successfully used in different hydrological modelling purposes.
Completeness	The cross section dataset covers the Eastern Hill region identified by Surface Water Simulation modelling Programme.
History of the dataset	Cross section data has been collected from Morphology Department of Bangladesh Water Development Board. The Cross Section Survey was made by BWDB in different years.
Purpose of production	The cross section data layer can be used for various purposes such as to assess the hydraulic properties of a river section, to calculate stream flows, river characteristic study, navigational study, morphological study, trend analysis, and surface water
Process description	NWRD has stored the data layer in database format.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
197000000	1	197	GANGES	0
197004875	1	197	GANGES	4.875
197009000	1	197	GANGES	9
197015125	1	197	GANGES	15.125
197024625	1	197	GANGES	24.625
197035250	1	197	GANGES	35.25
197044000	1	197	GANGES	44
197049000	1	197	GANGES	49
197054000	1	197	GANGES	54
197057000	1	197	GANGES	57

Bundle Information (Data Field Description and Unit)

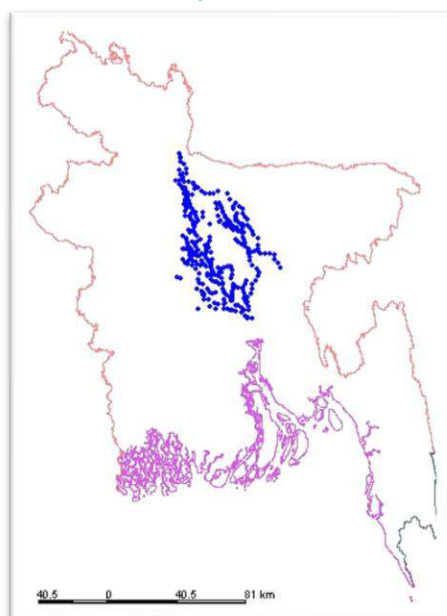
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Cross Section of NCRM**

Metadata

Dataset type	Spatial
Abstract	Processed cross section location information of North Central region generated by Surface Water Modelling Center.
Quality	This cross section information is reliable and successfully used in different hydrological modelling purposes.
Completeness	The cross section data layer covers the North Central region identified by Surface Water Simulation modelling Programme.
History of the dataset	Cross section data has been collected from Morphology Department of Bangladesh Water Development Board. The Cross Section Survey was made by BWDB in different years.
Purpose of production	The cross section data layer can be used for various purposes such as to assess the hydraulic properties of a river section, to calculate stream flows, river characteristic study, navigational study, morphological study, trend analysis, and surface water
Process description	NWRD stored the data layer in database format.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
43000000	3	43	BALU	0
43004000	3	43	BALU	4
43009000	3	43	BALU	9
43014000	3	43	BALU	14
43018500	3	43	BALU	18.5

Bundle Information (Data Field Description and Unit)

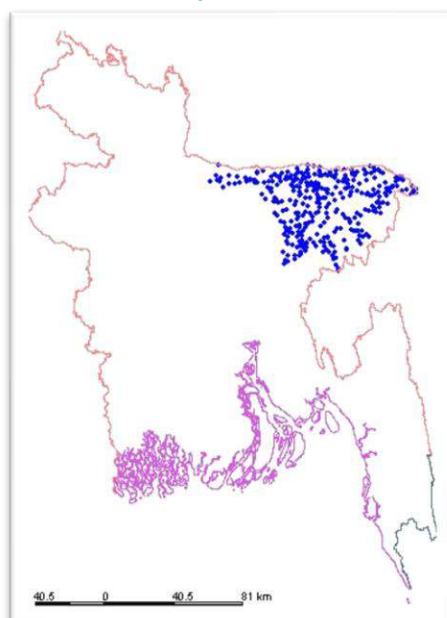
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Cross Section of NERM**

Metadata

Dataset type	Spatial
Abstract	Processed cross section location information of North Central region generated by Surface Water Modelling Center.
Quality	This cross section information is reliable and successfully used in different hydrological modelling purposes.
Completeness	The cross section data layer covers the North Central region identified by Surface Water Simulation modelling Programme.
History of the dataset	Cross section data has been collected from Morphology Department of Bangladesh Water Development Board. The Cross Section Survey was made by BWDB in different years.
Purpose of production	The cross section data layer can be used for various purposes such as to assess the hydraulic properties of a river section, to calculate stream flows, river characteristic study, navigational study, morphological study, trend analysis, and surface water
Process description	NWRD stored the data layer in database format.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
43000000	3	43	BALU	0
43004000	3	43	BALU	4
43009000	3	43	BALU	9
43014000	3	43	BALU	14
43018500	3	43	BALU	18.5

Bundle Information (Data Field Description and Unit)

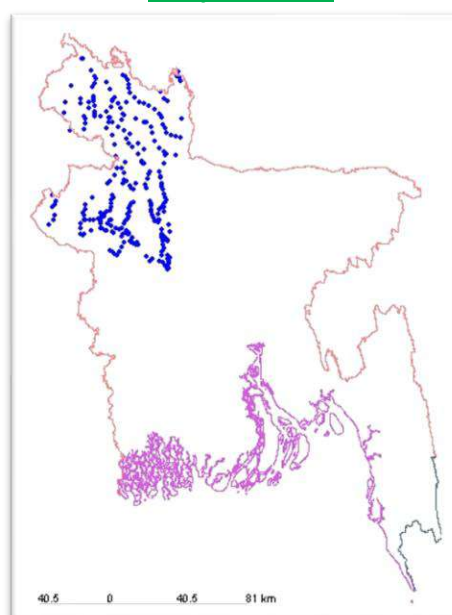
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Cross Section of NWRM**

Metadata

Dataset type	Spatial
Abstract	Processed cross section location information of North Central region generated by Surface Water Modelling Center.
Quality	This cross section information is reliable and successfully used in different hydrological modelling purposes.
Completeness	The cross section data layer covers the North Central region identified by Surface Water Simulation modelling Programme.
History of the dataset	Cross section data has been collected from Morphology Department of Bangladesh Water Development Board. The Cross Section Survey was made by BWDB in different years.
Purpose of production	The cross section data layer can be used for various purposes such as to assess the hydraulic properties of a river section, to calculate stream flows, river characteristic study, navigational study, morphological study, trend analysis, and surface water
Process description	NWRD stored the data layer in database format.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
43000000	3	43	BALU	0
43004000	3	43	BALU	4
43009000	3	43	BALU	9
43014000	3	43	BALU	14
43018500	3	43	BALU	18.5

Bundle Information (Data Field Description and Unit)

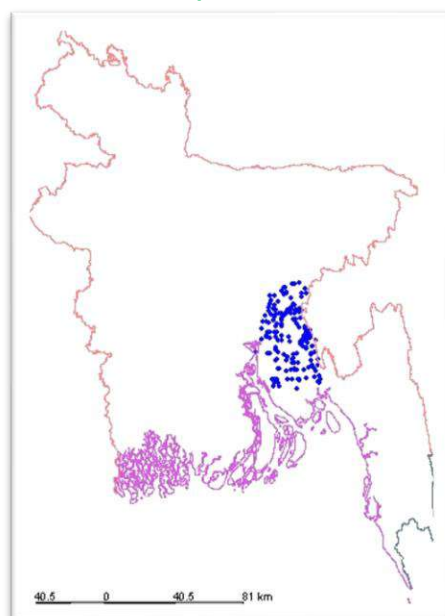
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Cross Section of NWRM**

Metadata

Dataset type	Spatial
Abstract	Processed cross section location information of North Central region generated by Surface Water Modelling Center.
Quality	This cross section information is reliable and successfully used in different hydrological modelling purposes.
Completeness	The cross section data layer covers the North Central region identified by Surface Water Simulation modelling Programme.
History of the dataset	Cross section data has been collected from Morphology Department of Bangladesh Water Development Board. The Cross Section Survey was made by BWDB in different years.
Purpose of production	The cross section data layer can be used for various purposes such as to assess the hydraulic properties of a river section, to calculate stream flows, river characteristic study, navigational study, morphological study, trend analysis, and surface water
Process description	NWRD stored the data layer in database format.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
12039800	6	12	ANDERSON	39.8
12043600	6	12	ANDERSON	43.6
18000000	6	18	ART-L_FENI1	0
18010000	6	18	ART-L_FENI1	10
19000000	6	19	ART-L_FENI2	0
19010000	6	19	ART-L_FENI2	10

Bundle Information (Data Field Description and Unit)

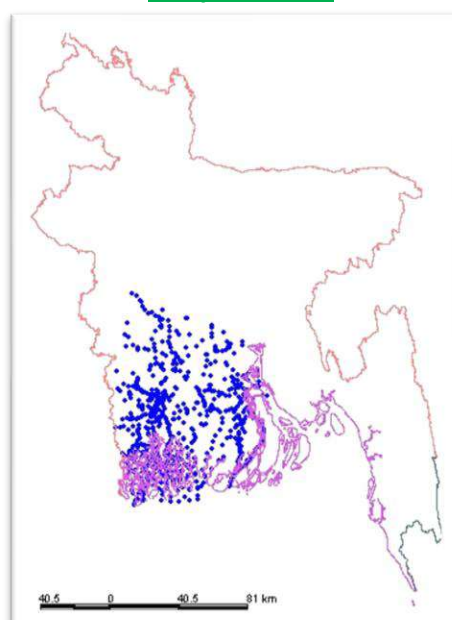
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Cross Section of SWRM**

Metadata

Dataset type	Spatial
Abstract	Processed cross section location information of North Central region generated by Surface Water Modelling Center.
Quality	This cross section information is reliable and successfully used in different hydrological modelling purposes.
Completeness	The cross section data layer covers the North Central region identified by Surface Water Simulation modelling Programme.
History of the dataset	Cross section data has been collected from Morphology Department of Bangladesh Water Development Board. The Cross Section Survey was made by BWDB in different years.
Purpose of production	The cross section data layer can be used for various purposes such as to assess the hydraulic properties of a river section, to calculate stream flows, river characteristic study, navigational study, morphological study, trend analysis, and surface water
Process description	NWRD stored the data layer in database format.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
12039800	6	12	ANDERSON	39.8
12043600	6	12	ANDERSON	43.6
18000000	6	18	ART-L_FENI1	0
18010000	6	18	ART-L_FENI1	10
19000000	6	19	ART-L_FENI2	0
19010000	6	19	ART-L_FENI2	10

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Cross-Section Data of BWDB/SWMC (raw)**

Metadata

Data type	Time Series
Abstract	This data layer contains distance and depth of the riverbed across the river from an arbitrary reference point located outside or on the bank.
Quality	As the cross section data was collected from different organizations its' quality depends on the data generation process of the source organizations.
Completeness	The data layer covers 366,317 cross sections.
History of the dataset	Bangladesh Water Development Board, Surface Water Modelling Centre and Flood Action Plan generated the cross section data layer.
Purpose of production	The cross section data can be used for various purposes such as to assess the hydraulic properties of a river section, to calculate stream flows and in river characteristic study, navigational study, morphological study, trend analysis, and surface water
Process description	NWRD has stored this data layer in an arranged way.

Sample of Data

Gridid	Regionid	Topo_id	Rivername	Chainage	Latitude	Longitude	Xvalue	Yvalue	Sortorder	Bank
1008	SW+SC	SWMC 94-95	FIRINGI	1.67	414880	435388	546.17	0.5	128	0.5
1009	SW+SC	SWMC 94-95	FIRINGI	5.24	417159.7	433404.8	0	1.5	1	1.5
1009	SW+SC	SWMC 94-95	FIRINGI	5.24	417159.7	433404.8	3	-2.9	2	-
1009	SW+SC	SWMC 94-95	FIRINGI	5.24	417159.7	433404.8	8.31	-3.2	3	-
1009	SW+SC	SWMC 94-95	FIRINGI	5.24	417159.7	433404.8	12.87	-6.7	4	-
1009	SW+SC	SWMC 94-95	FIRINGI	5.24	417159.7	433404.8	15.63	-9.8	5	-
1009	SW+SC	SWMC 94-95	FIRINGI	5.24	417159.7	433404.8	20.14	-12.2	6	-
1009	SW+SC	SWMC 94-95	FIRINGI	5.24	417159.7	433404.8	23.27	-15.8	7	-
1009	SW+SC	SWMC 94-95	FIRINGI	5.24	417159.7	433404.8	29.41	-16.8	8	-
1009	SW+SC	SWMC 94-95	FIRINGI	5.24	417159.7	433404.8	40.07	-17.7	9	-
1009	SW+SC	SWMC 94-95	FIRINGI	5.24	417159.7	433404.8	48.33	-18.3	10	-
1009	SW+SC	SWMC 94-95	FIRINGI	5.24	417159.7	433404.8	52.95	-16.3	11	-
1009	SW+SC	SWMC 94-95	FIRINGI	5.24	417159.7	433404.8	54.73	-15.1	12	-
1009	SW+SC	SWMC 94-95	FIRINGI	5.24	417159.7	433404.8	59.07	-18.2	13	-
1009	SW+SC	SWMC 94-95	FIRINGI	5.24	417159.7	433404.8	65.41	-19.3	14	-
1009	SW+SC	SWMC 94-95	FIRINGI	5.24	417159.7	433404.8	71.25	-20.2	15	-

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Gridid	Unique id of each cross section generated by the modelling software	
Regionid	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
Topo_id		
Rivername	Name of the River	
Chainage	Distance of each cross section from a known point along the river length	
Latitude	X-Coordinate	
Longitude	Y-Coordinate	
Xvalue	Distance from the starting point(Bank) along cross section	
Yvalue	Depth of the river	
Sortorder	Pint sorted from left to right	
Bank	Bank elevation	

Name of Data layer: **Cross-Section Data of BWDB (raw)**

Metadata

Data type	Time Series
Abstract	This data layer contains distance and depth of the riverbed across the river from an arbitrary reference point located outside or on the bank.
Quality	The cross section data was collected from BWDB. its' quality depends on the data generation process of the source organizations.
Completeness	
History of the dataset	The data layer has been collected in digital format from BWDB.
Purpose of production	The cross section data can be used for various purposes such as to assess the hydraulic properties of a river section. It is required to generates the stream flows and in morphological study, navigational requirements and others studies.
Process description	NWRD has stored this data layer in an arranged way.

Sample of Data

Rivername	Stationid	Year	Startdate	Sino	Distance	Rlvalue	Note
Dubaldia	RMAK1	1992	12/4/1992	108	1357	0.72	-
Dubaldia	RMAK1	1992	12/4/1992	127	1553.9	4.66	SLOPE
Dubaldia	RMAK1	1992	12/4/1992	110	1367	0.7	-
Dubaldia	RMAK1	1992	12/4/1992	111	1370	1.02	-
Dubaldia	RMAK1	1992	12/4/1992	112	1371.5	1.17	-
Dubaldia	RMAK1	1992	12/4/1992	113	1386	1.57	RWE
Dubaldia	RMAK1	1992	12/4/1992	114	1400	3.25	-
Dubaldia	RMAK1	1992	12/4/1992	115	1400	3.56	-
Dubaldia	RMAK1	1992	12/4/1992	116	1415	3.7	-
Dubaldia	RMAK1	1992	12/4/1992	117	1430	3.72	-
Dubaldia	RMAK1	1992	12/4/1992	118	1448.5	4.26	RFB
Dubaldia	RMAK1	1992	12/4/1992	119	1460	4.69	-
Dubaldia	RMAK1	1992	12/4/1992	120	1475	3.92	-
Dubaldia	RMAK1	1992	12/4/1992	121	1490	3.75	-
Dubaldia	RMAK1	1992	12/4/1992	122	1500	4.67	-
Dubaldia	RMAK1	1992	12/4/1992	123	1505	4.64	-
Dubaldia	RMAK1	1992	12/4/1992	124	1520	4.47	-
Dubaldia	RMAK1	1992	12/4/1992	125	1535	4.48	-

Bundle Information (Data Field Description and Unit)

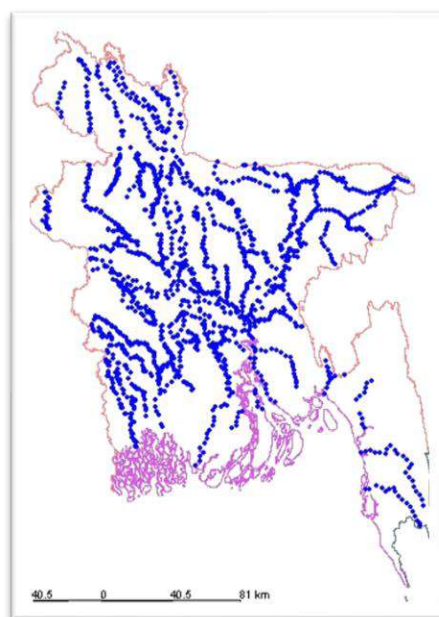
FIELDNAME	FLDDESCRIPTION	UNIT
Rivername	Name of the River	
Stationid	Cross section id given by BWRD	
Year	Year	
Startdate	Survey date	
Sino	Distance from the left bank starting point along cross section	
Distance	Distance from the left bank	meter
Rlvalue	RL of the river cross section points	m PWD
Note	Additional information	

Name of Data layer: **Cross-Section Location of BWDB**

Metadata

Data type	Spatial
Abstract	A spatial data layer that represents the river cross section pillars of BWDB
Quality	BWDB maintains a database on nation wide coverage of morphological information of the river system and observe the changes over time. The locations of the cross section pillars were not properly geo-referenced earlier and its attribute were not documented properly. Using the GPS system the co-ordinates of the pillars are recorded. The hand held GPS system which has been used gives a minimum accuracy level of ± 6 meter.
Completeness	The data layer covers 366,317 cross sections.
History of the dataset	The data layer has been collected in digital format from BWDB. BWDB and IWM has jointly conducted the survey work to 759 numbers of river cross section in 31 rivers during December 2001 to May 2002. The data has been captured from the detailed survey on physical address, elevation values position using GPS system.
Purpose of production	Cross section data plays an important role in the hydro- morphological study of the rivers including erosion, deposition, bank line shifting and char movement.
Process description	NWRD has stored this data layer in an arranged way.

Sample of Data



Attribute Table

hr	rivername	oldid	newid	latdd	longdd	longbtm	latbtm	remarks
South West	Kobadak	RMKBD18.1	KBD18.1_LB01	22.21875	89.30975	428870.2494	456999.9936	From BWDB
South West	Kobadak	RMKBD18.1	KBD18.1_RB02	22.22022	89.30247	428120.7734	457166.1362	From BWDB
South West	Kobadak	RMKBD18	KBD18_LB01	22.22128	89.31314	429220.868	457278.4382	From BWDB
South West	Kobadak	RMKBD18	KBD18_RB02	22.22778	89.30633	428522.3855	458001.0874	From BWDB
South West	Kobadak	RMKBD17.1	KBD17.1_LB01	22.26814	89.31364	429295.9158	462464.9046	From BWDB

Bundle Information (Data Field Description and Unit)

FIELDNAME	FIELDDESCRIPTION	UNIT
Hr	Hydrological Region	
Rivername	River Name	
Oldid	Cross Section id given by BWDB	
Newid	Cross Section id given by NWRD	
Latdd	Latitude In Degree Decimal	Degree Decimal
Longdd	Longitude In Degree Decimal	Degree Decimal
Longbtm	X Coordinate	Meter
Latbtm	Y Coordinate	Meter

Name of Data layer: **Salinity (Monthly) Data of BWDB**

Metadata

Data type	Tabular
Abstract	A simple data layer containing the monthly highest salinity value collected from 88 salinity measuring stations throughout the country installed and maintained by Bangladesh Water Development Board (BWDB) from 1964-65 to 1997-98.
Quality	Monthly salinity data is available for 88 out of 92 BWDB stations.
Completeness	The data layer contains information of 34 years, from 1964 to 1998. There are some missing years within this time period.
History of the dataset	Bangladesh Water Development Board has compiled this data layer by collecting the information from different salinity stations throughout the country.
Purpose of production	To observe the monthly highest salinity of the stations and to use this data layer in hydrological and environmental analyses.
Process description	NWRD has collected this data from BWDB and has organized them in an ordered form to prepare it as a NWRD data layer.

Sample of Data

Stationname	Stnid	Wateryear	Year	Month	Tsvalue
ABHAYNAGAR	30.5	1980-81	1980	Dec	460
ABHAYNAGAR	30.5	1980-81	1980	Nov	330
ABHAYNAGAR	30.5	1980-81	1981	Jan	540
ABHAYNAGAR	30.5	1980-81	1981	Jun	380
ABHAYNAGAR	30.5	1980-81	1981	Mar	750
ABHAYNAGAR	30.5	1980-81	1981	May	380
ABHAYNAGAR	30.5	1981-82	1981	Dec	400
ABHAYNAGAR	30.5	1980-81	1981	Feb	560

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stationname	Station Name	
Stnid	Station ID	
District	District Name	
Wateryear	Water Year	
Year	Year	
Month	Month	
Tsvalue	Monthly salinity value	micro mhos

Name of Data layer: **Salinity Data of BWDB**

Metadata

Data type	Tabular
Abstract	A time series data layer containing daily salinity data collected from different stations of BWDB (Bangladesh Water Development Board) throughout the salinity affected area of Bangladesh.
Quality	The data layer contains data from 19-11-68 to 3-7-89 of 10 salinity stations of BWDB. But this time range of data availability is not for all stations. Besides there are missing of data in some stations within the specified range of data availability.
Completeness	The data layer contains about 21-year's information.
History of the dataset	Bangladesh Water Development Board has been collecting this data from different salinity stations in south-west region of the country since 1968.
Purpose of production	This data layer has been created to get the information regarding conductivity and chlorinity at highest and lowest water levels of some stations that are essential for hydrological and environmental studies.
Process description	NWRD has collected this data from BWDB and has organized them in an ordered form to prepare it as a NWRD data layer.

Sample of Data

Reccode	Stationid	Datetime	Conductivityhw	Conductivitylw	Chlorinityhw	Chlorinitylw
ds	164	22/11/1976	8200	700	2640	2180
ds	164	23/11/1976	8200	7200	2600	2300
ds	164	24/11/1976	8400	7000	2640	2040
ds	164	25/11/1976	-	7200	-	2200
ds	164	26/11/1976	8200	7000	2600	2040
ds	164	27/11/1976	8300	6900	2680	2040
ds	164	28/11/1976	8400	7500	2640	2280
ds	164	29/11/1976	80	-	2250	2200

Bundle Information (Data Field Description and Unit)

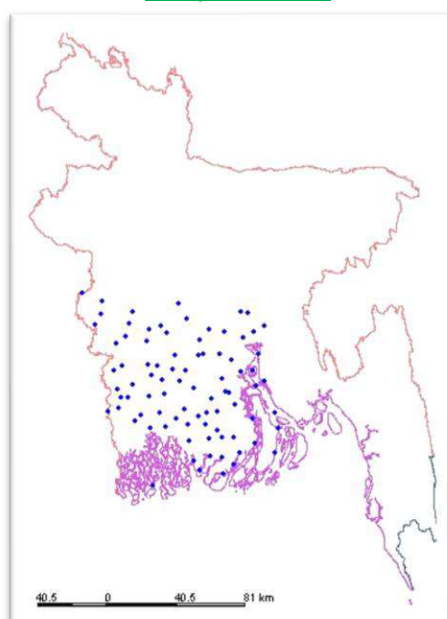
FIELD	FIELD_NAME	UNIT
Reccode	Record Code	
Stationid	ID of Each Stations	
Datetime	Data Capturing Date	
Conductivityhw	Conductivity at Highest Water Level	micro mhos
Conductivitylw	Conductivity at Lowest Water Level	micro mhos
Chlorinityhw	Chlorinity at Highest Water Level	Parts Per Million (ppm)
Chlorinitylw	Chlorinity at Lowest Water Level	Parts Per Million (ppm)

Name of Data layer: **Salinity Stations of BWDB**

Metadata

Data type	Spatial
Abstract	This data layer contains information about the location of the salinity measuring stations of Bangladesh Water Development Board (BWDB).
Quality	The point locations have been checked using the published book of BWDB. The data layer fully complies with that book.
Completeness	This data layer covers all the 70 salinity measurement stations of BWDB.
History of the dataset	Source of this data layer is a published map titled 'Hydrological network map' prepared by Bangladesh Water Development Board (BWDB). Source map was in 1:750,000 scale.
Purpose of production	The dataset has been incorporated to NWRD for presenting the spatial distribution of the salinity stations as well as to link the time series values of salinity with the stations and further to use it as the base data layer in different salinity related an
Process description	NWRD has captured the locations of the stations as point coverage from the 'Hydrological network Map'. Other associated attribute information has also been incorporated according to the source map. Some missing station locations have been generated according to the book titled 'Index of Surface Water Hydrological Observation Stations in Bangladesh' published by BWDB, in March 1982.

Sample of Data



Attribute Table

Stnid	Stnname	District	Rivname	Btm-long	Btm-lat	Ddlong	Ddlat	Obstype	Statobs	Insttype	Statinst	Subdivid	Instaldate	Discondate	Bm
1	Bagerhat	KHULNA	Alaipur Khal Daratana Ghasiakhali	480133.59	504338.97	89.81	22.65	G	G	M	M	KH	Jan-31	-	7.50
1.5	Morreiganj	KHULNA	-	483986.59	487010.5	89.84	22.49	-	-	-	-	-	-	-	-
101	Kamarkhali	FARIDPUR	Gorai-Madhumoti	453328.59	602213.25	89.54	23.53	GDS	GDS	M	M	FP	19.8.57	-	29.13
101A	Amalsar	FARIDPUR	-	459473.38	593236.63	89.6	23.45	-	-	-	-	-	-	-	-

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stnid	Station ID	
Stnname	Station Name	
Btmlong	Longitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meters
Btmlat	Latitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meters
Ddlong	Longitude In Degree Decimal	In Degree Decimal
Ddlat	Latitude In Degree Decimal	In Degree Decimal

Name of Data layer: **Sediment Data of BWDB**

Metadata

Data type	Tabular
Abstract	A time series data layer containing weekly sediment data of different stations throughout the country installed and maintained by Bangladesh Water Development Board (BWDB).
Quality	The data layer contains data from 1966 to 1993 of 17 stations throughout the country. But this time range of data availability is not for all stations. Besides there are missing of data in some stations within the specified range of data availability.
Completeness	The data layer contains about 27-year's information.
History of the dataset	BWDB has been collecting this data from different sediment stations throughout the country since 1966.
Purpose of production	This data layer has been created to get the information regarding suspended sand, fine discharge and maximum sand concentration of some rivers that are essential for hydrological and environmental studies.
Process description	NWRD has collected this data from BWDB and has organized them in an ordered form to prepare it as a NWRD data layer.

Sample of Data

Stationid	Datetime	Sussanddis	Finedis	Maxsandcon
101	06/07/1985	21.3	12.9	-
101	10/07/1985	31.6	27.2	-
101	19/07/1985	107	736	-
101	24/07/1985	245	472	-
101	31/07/1985	634	1090	-
101	07/08/1985	602	1970	-
101	14/08/1985	343	2060	-
101	21/08/1985	342	2540	-

Bundle Information (Data Field Description and Unit)

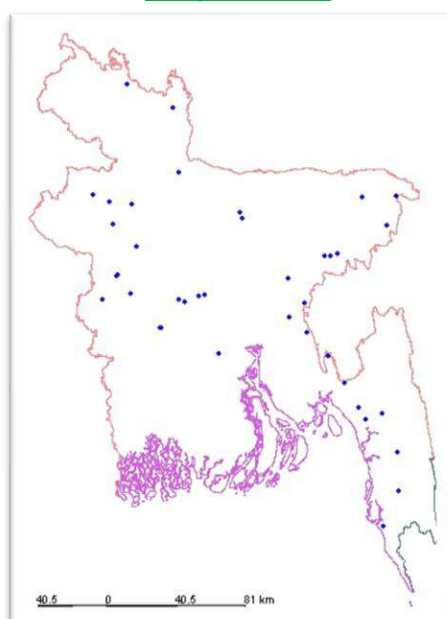
FIELD	FIELD_NAME	UNIT
Stationid	ID of Each Station	
Datetime	Data Capturing Date	
Sussanddis	Suspended Sand Discharge	Kilogram per Second (kg/sec)
Finedis	Fine Discharge	Parts Per Million (ppm)
Maxsandcon	Maximum Sand Concentration	Kilogram per Second (kg/sec)

Name of Data layer: **Sediment Stations of BWDB**

Metadata

Data type	Spatial
Abstract	This data layer contains information about the location of the sediment measuring stations of Bangladesh Water Development Board (BWDB) throughout the country.
Quality	The point locations have been checked using the cited book of BWDB. The data layer fully complies with that book.
Completeness	This data layer covers 39 sediment measurement stations of BWDB.
History of the dataset	Source of this data layer is a published map titled 'Hydrological network map' prepared by Bangladesh Water Development Board (BWDB). Source map was in 1:750,000 scale.
Purpose of production	The dataset has been incorporated to NWRD for presenting the spatial distribution of the sediment stations as well as to link the time series values of weekly sediment with the stations and further to use it as the base data layer in different sediment re
Process description	NWRD has captured the locations of the stations as point coverage from the 'Hydrological network Map'. Other associated attribute information has also been incorporated according to the source map. Some missing station locations have been generated according to the book titled 'Index of Surface Water Hydrological Observation Stations in Bangladesh' published by BWDB, in March 1982.

Sample of Data



Attribute Table

Stnid	Stnname	Rivname	Longdd	Latdd	Btm-long	Btm-lat	Obstype	Statobs	Insttype	Statinst	Subdivid	Instaldate	Discondate	Bm
101	Kamarkhali	Gorai-Madhumoti	89.54	23.53	453328.75	602213.31	GDS	GDS	M	M	FP	19.8.57	-	29.13
101.5	Kamarkhali Transit	Gorai-Madhumoti	89.53	23.53	451519.19	601727.13	GD	-	M	-	FP	30.10.66	-	TBM
110	Comilla	Gumti-Burinadi	91.2	23.47	622674.13	595887.63	GDS	GDS	A	A	CO	1895	-	35.58
114	Jibanpur (Gumti Br)	Gumti-Burinadi	90.99	23.63	601270.94	613715.5	GDS	GDS	M	M	CO	01.1.53	-	TBM
119.1	Panchapukuria	Halda	91.85	22.56	690139.5	495789.72	GDS	GDS	A	A	CT	Feb-65	-	31.40
119A	South Sundarpur	Halda	91.78	22.68	682520.75	508767.72	GDS	-	M	-	CT	Feb-65	01.12.80	34.40

Bundle Information (Data Field Description and Unit)

FIELD	SAMPLE_DATA	DESCRIPTION	UNIT
Stnid	101	Station ID	
Stnname	Kamarkhali	Station Name	
Rivname	Gorai-Madhumoti	River Name	
Longdd	89.5427	Longitude In Degree Decimal	Degree Decimal
Latdd	23.5315	Latitude In Degree Decimal	Degree Decimal
Btmlong	453328.75	Longitude With BTM (Bangladesh Transverse Mercator) Correction In Meter	Meter
Btmlat	602213.3125	Latitude With BTM (Bangladesh Transverse Mercator) Correction In Meter	Meter

Name of Data layer: **Suspended Sediment**

Metadata

Data type	Tabular
Abstract	The data layer reveals average suspended sediment concentration and other parameters collected by Bangladesh Water Development Board in 1998.
Quality	Quality of this data layer depends on the data collection process of the source organization.
Completeness	The data layer presents data for 16 stations maintained by BWDB.
History of the dataset	Bangladesh Water Development Board has collected this data.
Purpose of production	Suspended sediment concentration is an important hydrological parameter. This data layer can be useful in different hydro-geomorphologic analysis.
Process description	NWRD has collected this data layer from BWDB and archived in an organized form.

Sample of Data

Stationid	Stationname	Rivername	Samplingdate	WL_mpwd_	Positionmeter	Depthmeter	Depthrem	Velocity_m_sec_	Velocityrem	Discharge_cumecs_	Concenppm	Avgconc
247	BANDARBAN	SANGU	1/8/1998	4.81 68 LEW		0.24 -		0.62 Mean		7.71	18 -	
247	BANDARBAN	SANGU	1/22/1998	4.83 37 LEW		0.54 -		0.61 Mean		9.68	28 -	
247	BANDARBAN	SANGU	2/5/1998	4.72 38 LEW		0.48 -		0.6 Mean		8.25	55 -	
247	BANDARBAN	SANGU	2/19/1998	4.69 38 LEW		0.48 -		0.62 Mean		7.84	28 -	
247	BANDARBAN	SANGU	3/5/1998	4.81 36 LEW		0.54 -		0.55 Mean		7.45	43 -	
247	BANDARBAN	SANGU	3/19/1998	4.77 37 LEW		0.54 -		0.5 Mean		6.19	31 -	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stationid	Station ID	
Stationname	Station Name	
Rivername	River Name	
Samplingdate	Date of Sampling	
WL_mpwd_	Water level (in PWD datum)	meter
Positionmeter	Position of meter (LEW - Left Edge Water)	meter
Depthmeter	Depth of Meter	meter
Depthrem	Depth Remark	
Velocity_m_sec_	Velocity	m/sec
Velocityrem	Velocity Remark	
Discharge_cumecs_	Discharge	cumecs
Concenppm	Concentration	Ppm
Avgconcenppm	Aqverage Concentration	Ppm

Name of Data layer: **Surface Water Parameters, MPO**

Metadata

Data type	Tabular
Abstract	This data layer contains 16-surface water parameter value e. g. rainfall, evapotranspiration, runoff, cropping intensity, ground water abstraction etc. The data have been presented monthly with respect to MPO catchment and planning area.
Quality	Quality of the data layer largely depends on the accuracy of the source data collection and processing.
Completeness	The data layer covers all the MPO identified planning areas.
History of the dataset	This data layer is the Surface Water Model output by MPO. Input data for the model were collected from BWDB, BMD and other organizations.
Purpose of production	The data layer provides catchment wise water balance parameters including surface storage, surface runoff, infiltration, evaporation, ground water recharge etc. Therefore it can be used in hydrological planning purposes.
Process description	NWRD has organized and stored this data layer in an ordered form.

Sample of Data

Pa_ca	Pa	Ca	Fn	Nm	Parameter	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Mean	Cmean	Diff
P1C14	1	14	4	M	Rainfall	16.3	41.9	72.5	78.4	61.1	56.7	18.4	1.7	0.6	0.8	1.4	4	29.5	29.5	0
P1C14	1	14	6	M	ET	15.4	14.4	14.5	15.4	20.6	14.5	13	8.1	4.5	5.9	7.7	10.6	12.0	12.1	-0.1
P1C14	1	14	8	M	Inflow-50	158.6	268.3	617.9	1383.6	1349.2	1177.5	657.8	273.4	185.7	145.6	129	117.7	538.7	538.7	0
P1C14	1	14	9	M	Inflow-80	90.1	159.8	299	616.7	685.5	732.7	404.3	209.9	136.9	99.4	93.2	79.1	300.5	300.6	-0.1
P1C14	1	14	10	M	Runoff-50	1.3	10.2	37.9	47.1	40.5	38	11.3	4.9	3.3	1.7	0.3	0	16.4	16.4	0
P1C14	1	14	11	M	Runoff-80	-0.1	3.8	15.7	24.8	14.3	13.1	6.1	4.7	2.8	1.4	0	-0.4	7.2	7.2	0

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Pa	Planning Area No	
Ca	Catchment No	
Fn	Parameter Code	
Nm	Modeled (M), Nonmodeled (N)	
Parameter	Delstorage - Change in flow storage, CI - Cropping Intensity, CWR - Crop water requirement, Irr - Irrigation, SWAbstr - Surface water abstraction, GW Abstr - Ground water Abstraction	
Apr	Value of the parameter for the month of April	Cubic meter/sec
May	Value of the parameter for the month of May	Cubic meter/sec
Jun	Value of the parameter for the month of June	Cubic meter/sec
Jul	Value of the parameter for the month of July	Cubic meter/sec
Aug	Value of the parameter for the month of August	Cubic meter/sec
Sep	Value of the parameter for the month of September	Cubic meter/sec
Oct	Value of the parameter for the month of October	Cubic meter/sec
Nov	Value of the parameter for the month of November	Cubic meter/sec
Dec	Value of the parameter for the month of December	Cubic meter/sec
Jan	Value of the parameter for the month of January	Cubic meter/sec
Feb	Value of the parameter for the month of February	Cubic meter/sec
Mar	Value of the parameter for the month of March	Cubic meter/sec

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Mean	Monthly average value of the parameter given in MPO report	Cubic meter/sec
Cmean	Mean Calculated of the parameter	Cubic meter/sec
Diff	Difference between mean and Calculated Mean	Cubic meter/sec

Name of Data layer: **Surface Water Storage Potential of MPO**

Metadata

Data type	Tabular
Abstract	The data layer contains MPO catchment and planning area wise surface water storage potential.
Quality	This data layer is an output of MPO Surface Water Simulation Model therefore its quality depends on the quality of input data, model calibration and verification etc.
Completeness	The data layer covers MPO identified planning area but data is not available for some region.
History of the dataset	MPO generated this data layer through Surface Water Simulation Modelling Programme that started in 1983.
Purpose of production	This data layer was prepared for Water Balance Modelling. Planning area and catchments area wise surface water storage potential data can be required in different water related modelling and planning purposes.
Process description	NWRD has organized and stored this data layer in an ordered form.

Sample of Data

Pa_ca	Pa	Ca	Nm	Region	Gross_area	Cultivable_area	Static	Storage	Storage2	Notes
P48C45	48	45	M	SW	707	595	0	0	0	-
P49C55	49	55	N	SW	4640	-	0.3	63	0	-
P50C53	50	53	N	SC	1449	-	0	19.7	0	-
P51C44	51	44	M	SW	1612	1440	0	0	0	-
P52C56	52	56	N	SC	660	-	0	9	0	-
P52C57	52	57	N	SC	646	-	0	0.8	0	-

Bundle Information (Data Field Description and Unit)

COLUMN_NAME	COLUMN_DESCRIPTION
Pa	Planning Area
Ca	Catchment No
Nm	Modelled (M),Nonmodelled (N)
Region	Region Name
Gross_area	Total Area
Cultivable_area	Cultivable Area
Static	Static Water
Storage	In stream Storage Potential
Storage2	Storage Potential of rivers having width <= 100m
Notes	Remarks

Name of Data layer: **Cross-Section Location Attribute of BWDB**

Metadata

Data type	Tabular
Abstract	An attribute data layer of river cross section pillars of BWDB with related information.
Quality	BWDB maintains a database on nation wide coverage of morphological information of the river system and observe the changes over time. The location of the cross section pillars were not properly geo-referenced earlier and its attribute were not documented properly. Using the GPS system the co-ordinates of the pillars are recorded. The hand held GPS system which has been used gives a minimum accuracy level of ± 6 meter.
Completeness	The data layer covers 366,317 cross sections.
History of the dataset	The data layer has been collected in digital format from BWDB. BWDB and IWM has jointly conducted the survey work to 759 numbers of river cross section in 31 rivers during December 2001 to May 2002. The data has been captured from the detailed survey on physical address, elevation values, position using GPS system.
Purpose of production	The data layer has been generated to archive all related information of river cross section pillars for the hydro- morphological study of the rivers including erosion, deposition, bank line shifting and char movement.
Process description	NWRD has stored this data layer in an arranged way and generates a new ID to link it spatially with the shape files.

Sample of Data

Hr	Newid	Pillno	Sdate	RI	Addowner	Remarks
North Central	BGA1_RB01	R.C.C. Pillar No-01 (RB)	05.12.01 to 09.12.01		Fazar Ali & Sayed Miah S/o. Bolak Chand (About 150m south side from old pacca house of Abu Sikder) of Vill. Jajera , P.O. Kanda, Dist. Dhaka.	Said to be lost
North Central	BGA1_RB03	Wooden peg No-03 (RB)	05.12.01 to 09.12.01		- Siddique Bepari of Vill: Dharmagonj, Dist: Dhaka.	Said to be lost
North Central	BGA2_LB03	R.C.C Pillar No-03 (LB)	05.12.01 to 09.12.01		Narayan Mondal of Vill: Dafa (near the Ice factory) P.O: Fatullah, Dist: Dhaka.	Said to be lost
North Central	BGA2_RB01	R.C.C. Pillar No-01 (RB)	05.12.01 to 09.12.01		Batu Miah of Vill: Kandapara and Akbar Ali of Vill: Kawtai, P.O: Kanda, Dist: Dhaka.	Said to be lost

Bundle Information (Data Field Description and Unit)

FIELDNAME	FLDDESCRIPTION	UNIT
Hr	Hydrological region	
Newid	Id given by NWRD	
Pillno	Pillar number given BWDB	
Sdate	Survey date	Date
RI	Reduced level on top of pillar	Meter pwd
Addowner	Address of land owner	
Remarks	Remarks	

Name of Data layer: **Water Level (Tidal) of BIWTA**

Metadata

Data type	Tabular
Abstract	Hourly time series observations of tide levels collected by BIWTA.
Quality	Hourly water level data of 8 stations of BIWTA is available. Data range years are different for different stations. There are some missing data in some stations. Quality of the data set depends on the quality of collection and storing process of data collecting agency.
Completeness	
History of the dataset	The data layer has been collected in digital format from BIWTA. BIWTA has collected this data for 43 stations of 36 rivers in Bangladesh for long period of time. Hourly water level data are available from 1977-2003.
Purpose of production	Hourly water level (tidal) data is collected for for different hydrological and Environmental analysis.
Process description	NWRD has stored this data layer in an arranged way. Raw data has been converted to database format and the values are divided by 100 to generates the TS value in meter with respect to Chart Datum.

Sample of Data

Stationid	Datetime	Tsvalue_old	Tsvalue_updated
110	01/01/1977	1.28	1.28
110	01/01/1977 01:00:00	1.09	1.09
110	01/01/1977 02:00:00	1.03	1.03
110	01/01/1977 03:00:00	1.09	1.09
110	01/01/1977 04:00:00	1.25	1.25
110	01/01/1977 05:00:00	1.49	1.49
110	01/01/1977 06:00:00	1.67	1.67
110	01/01/1977 07:00:00	1.78	1.78

Bundle Information (Data Field Description and Unit)

FIELDNAME	FILEDESCRIPTION	UNIT
Stationid	Station ID given by BIWTA	
Datetime	Observation time on hourly basis	dd/mm/yyyy hh:mm
Tsvalue_old	Water level values	meter Chart Datum
Tsvalue_updated	Water level values	meter Chart Datum

Name of Data layer: **Depth Duration Frequency (IFCDR)**

Metadata

Data type	Tabular
Abstract	Analyzed results of water levels at 92 BWDB stations for 6 duration (1 to 60 days) and 7 frequencies (1:1 year to 1:100 year) by IFCDR, BUET.
Quality	Quality of the analyzed information depends on the input data and analysis method applied.
Completeness	This analysis has been done for 92 BWDB water level stations.
History of the dataset	Institute of Flood Control and Drainage Research (IFCDR) conducted the analysis and published in a report titled "Flood Frequency Analysis", February 1995 (UNDP Project BGD/88/054).
Purpose of production	This analyzed information has been generated by frequency analysis. It can be used in National Water Management Plan as well as in other planning purposes.
Process description	NWRD has stored the data layer in an arranged way.

Sample of Data

Stref	Stationname	Rivername	Period	N	Wn	Trend	Percent80ci	D1yr1	D1yr2	D1yr5	D1yr10	D1yr20	D1yr50	D1yr100	D3yr1	D3yr2	D3yr5	D3yr10
101	Kamarkhali	Gorai	1965-92	24	1	-	-	8.8	8.8	9.09	9.25	9.38	9.53	9.63	8.77	8.77	9.07	9.23
14	Mirzapur	Bangshi	1977-92	11	1	-	-	9.09	9.02	10.02	10.59	11.09	11.67	12.08	9.07	9	10	10.56
14.5	Nayarhat	Bangshi	1977-92	16	1	-	-	7.18	7.11	8.04	8.58	9.06	9.62	10.01	7.16	7.08	8.01	8.54
15J	Mathurapur-Milanpur	Jamuna	1982-92	11	1	-	-	17.76	17.75	18.35	18.67	18.94	19.25	19.46	17.68	17.67	18.27	18.59
179	Demra	Lakhya	1977-92	16	1	-	-	5.72	5.71	6.09	6.3	6.47	6.68	6.82	5.64	5.62	6.08	6.3
18	Barisal	Burishwar	1982-92	11	1	-	-	2.56	2.56	2.65	2.71	2.75	2.8	2.84	2.45	2.45	2.51	2.54

D15yr20	D15yr50	D15yr100	D30yr1	D30yr2	D30yr5	D30yr10	D30yr20	D30yr50	D30yr100	D60yr1	D60yr2	D60yr5	D60yr10	D60yr20	D60yr50	D60yr100
9.24	9.42	9.54	8.34	8.33	8.74	8.96	9.14	9.36	9.5	7.71	7.68	8.27	8.6	8.86	9.15	9.32
10.29	10.74	11.04	8.39	8.36	9.03	9.4	9.72	10.09	10.35	8.05	8.02	8.6	8.92	9.2	9.52	9.74
8.26	8.67	8.96	6.48	6.45	6.95	7.23	7.47	7.75	7.94	6.15	6.13	6.55	6.77	6.97	7.2	7.35
18.27	18.54	18.72	16.98	16.97	17.42	17.66	17.86	18.09	18.24	16.55	16.55	16.93	17.13	17.3	17.49	17.62
6.26	6.49	6.65	5.25	5.23	5.57	5.75	5.9	6.08	6.21	5	4.99	5.27	5.43	5.56	5.72	5.82
2.38	2.41	2.44	2.16	2.16	2.2	2.22	2.24	2.27	2.28	2.01	2.01	2.04	2.06	2.07	2.09	2.1

Bundle Information (Data Field Description and Unit)

FIELD_NAME	DESCRIPTION
Stref	BWDB Station Code
Station code	BWBD Station Name
Period	Period of Record on which analysis based
N	Number of years used in analysis
Wn	Group of record
Trend	Annual upwards trend in record (m/year)
80% ci	80% confidence interval for trend
1d:1yr	Level exceed for 1 day in an average year
1d:2yr	Level exceed for 1 day once in 2 years
1d:5yr	Level exceed for 1 day once in 5 years
1d:10yr	Level exceed for 1 day once in 10 years
1d:20yr	Level exceed for 1 day once in 20 years
1d:50yr	Level exceed for 1 day once in 100 years
1d:100yr	Level exceed for 1 day once in 1 years
3d:1yr	Level exceed for 3 days in an average year
3d:2yr	Level exceed for 3 days once in 5 years

FIELD_NAME	DESCRIPTION
3d:5yr	Level exceed for 3 days once in 10 years
3d:10yr	Level exceed for 3 days once in 20 years
3d:20yr	Level exceed for 3 days once in 100 years
3d:50yr	Level exceed for 3 days once in 1 years
3d:100yr	Level exceed for 3 days once in 2 years
7d:1yr	Level exceed for 7 days in an average year
7d:2yr	Level exceed for 7 days once in 10 years
7d:5yr	Level exceed for 7 days once in 20 years
7d:10yr	Level exceed for 7 days once in 100 years
7d:20yr	Level exceed for 7 days once in 1 years
7d:50yr	Level exceed for 7 days once in 2 years
7d:100yr	Level exceed for 7 days once in 5 years
15d:1yr	Level exceed for 15 days in an average year
15d:2yr	Level exceed for 15 days once in 20 years
15d:5yr	Level exceed for 15 days once in 100 years
15d:10yr	Level exceed for 15 days once in 1 years
15d:20yr	Level exceed for 15 days once in 2 years
15d:50yr	Level exceed for 15 days once in 5 years
15d:100yr	Level exceed for 15 days once in 10 years
30d:1yr	Level exceed for 30 days in an average year
30d:2yr	Level exceed for 30 days once in 100 years
30d:5yr	Level exceed for 30 days once in 1 years
30d:10yr	Level exceed for 30 days once in 2 years
30d:20yr	Level exceed for 30 days once in 5 years
30d:50yr	Level exceed for 30 days once in 10 years
30d:100yr	Level exceed for 30 days once in 20 years
60d:1yr	Level exceed for 60 days in an average year
60d:2yr	Level exceed for 60 days once in 1 years
60d:5yr	Level exceed for 60 days once in 2 years
60d:10yr	Level exceed for 60 days once in 5 years
60d:20yr	Level exceed for 60days once in 10 years
60d:50yr	Level exceed for 60 days once in 20 years
60d:100yr	Level exceed for 60 days once in 100 years

Name of Data layer: **Frequency Analysis of Water Level for Dry Period of GM**

Metadata

Data type	Tabular
Abstract	Water-Level data analyzed for average year and 1 in 5 dry year situation for each computed grid node, which are calculated at available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989-90 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5
373004350	1	373	4.35	1.19	1.06
373008700	1	373	8.7	1	0.87
373013050	1	373	13.05	0.88	0.76
373017400	1	373	17.4	0.81	0.68
373021750	1	373	21.75	0.75	0.63
440024000	1	440	24	2.16	1.99
440029000	1	440	29	2.09	1.91
440037750	1	440	37.75	1.96	1.79
440041500	1	440	41.5	1.9	1.71
440045500	1	440	45.5	1.88	1.7

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Water level for 2 year return period	meter
Yr_5	Water level for 5 year return period	meter

Name of Data layer: **Frequency Analysis of Water Level for Dry Period of NC**

Metadata

Data type	Tabular
Abstract	Water-Level data analyzed for average year and 1 in 5 dry year situation for each computed grid node, which are calculated at available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989-90 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5
373004350	1	373	4.35	1.19	1.06
373008700	1	373	8.7	1	0.87
373013050	1	373	13.05	0.88	0.76
373017400	1	373	17.4	0.81	0.68
373021750	1	373	21.75	0.75	0.63
440024000	1	440	24	2.16	1.99
440029000	1	440	29	2.09	1.91
440037750	1	440	37.75	1.96	1.79
440041500	1	440	41.5	1.9	1.71
440045500	1	440	45.5	1.88	1.7

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Water level for 2 year return period	meter
Yr_5	Water level for 5 year return period	meter

Name of Data layer: **Frequency Analysis of Water Level for Dry Period of NE**

Metadata

Data type	Tabular
Abstract	Water-Level data analyzed for average year and 1 in 5 dry year situation for each computed grid node, which are calculated at available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989-90 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5
373004350	1	373	4.35	1.19	1.06
373008700	1	373	8.7	1	0.87
373013050	1	373	13.05	0.88	0.76
373017400	1	373	17.4	0.81	0.68
373021750	1	373	21.75	0.75	0.63
440024000	1	440	24	2.16	1.99
440029000	1	440	29	2.09	1.91
440037750	1	440	37.75	1.96	1.79
440041500	1	440	41.5	1.9	1.71
440045500	1	440	45.5	1.88	1.7

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Water level for 2 year return period	meter
Yr_5	Water level for 5 year return period	meter

Name of Data layer: **Frequency Analysis of Water Level for Dry Period of NW**

Metadata

Data type	Tabular
Abstract	Water-Level data analyzed for average year and 1 in 5 dry year situation for each computed grid node, which are calculated at available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989-90 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5
35000000	2	35	0	34.15	33.99
35010000	2	35	10	32.39	32.24
35020000	2	35	20	30.64	30.49
35030000	2	35	30	28.88	28.73
35040000	2	35	40	27.14	26.99
35050000	2	35	50	25.37	25.22
35060000	2	35	60	23.64	23.49
35070000	2	35	70	21.86	21.71
35080000	2	35	80	20.15	20.01
35090000	2	35	90	18.41	18.26

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Water level for 2 year return period	meter
Yr_5	Water level for 5 year return period	meter

Name of Data layer: **Frequency Analysis of Water Level for Dry Period of SE**

Metadata

Data type	Tabular
Abstract	Water-Level data analyzed for average year and 1 in 5 dry year situation for each computed grid node, which are calculated at available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989-90 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5
35000000	2	35	0	34.15	33.99
35010000	2	35	10	32.39	32.24
35020000	2	35	20	30.64	30.49
35030000	2	35	30	28.88	28.73
35040000	2	35	40	27.14	26.99
35050000	2	35	50	25.37	25.22
35060000	2	35	60	23.64	23.49
35070000	2	35	70	21.86	21.71
35080000	2	35	80	20.15	20.01
35090000	2	35	90	18.41	18.26

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Water level for 2 year return period	meter
Yr_5	Water level for 5 year return period	meter

Name of Data layer: **Frequency Analysis of Water Level for Dry Period of SW**

Metadata

Data type	Tabular
Abstract	Water-Level data analyzed for average year and 1 in 5 dry year situation for each computed grid node, which are calculated at available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989-90 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5
35000000	2	35	0	34.15	33.99
35010000	2	35	10	32.39	32.24
35020000	2	35	20	30.64	30.49
35030000	2	35	30	28.88	28.73
35040000	2	35	40	27.14	26.99
35050000	2	35	50	25.37	25.22
35060000	2	35	60	23.64	23.49
35070000	2	35	70	21.86	21.71
35080000	2	35	80	20.15	20.01
35090000	2	35	90	18.41	18.26

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Water level for 2 year return period	meter
Yr_5	Water level for 5 year return period	meter

Name of Data layer: **Frequency Analysis of Water Level for Wet Period of GM**

Metadata

Data type	Tabular
Abstract	Water-Level data analyzed for average year and 1 in 5, 10, 25, 50, 100 wet year situation for each computed grid node, which are calculated at available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989-90 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5	Yr_10	Yr_25	Yr_50	Yr_100
256025000	1	256	25	25.54	25.8	25.93	26.07	26.15	26.22
256031350	1	256	31.35	24.78	25.05	25.17	25.27	25.33	25.38
256037100	1	256	37.1	24.16	24.43	24.55	24.67	24.73	24.78
256039400	1	256	39.4	23.91	24.2	24.33	24.46	24.53	24.58
256044250	1	256	44.25	23.26	23.58	23.74	23.9	23.99	24.06
256049950	1	256	49.95	22.53	22.87	23.04	23.21	23.32	23.4

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Water level for 2 year return period	meter
Yr_5	Water level for 5 year return period	meter
Yr_10	Water level for 10 year return period	meter
Yr_25	Water level for 25 year return period	meter
Yr_50	Water level for 50 year return period	meter
Yr_100	Water level for 100 year return period	meter

Name of Data layer: **Frequency Analysis of Water Level for Wet Period of NC**

Metadata

Data type	Tabular
Abstract	Water-Level data analyzed for average year and 1 in 5, 10, 25, 50, 100 wet year situation for each computed grid node, which are calculated at available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989-90 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5	Yr_10	Yr_25	Yr_50	Yr_100
256025000	1	256	25	25.54	25.8	25.93	26.07	26.15	26.22
256031350	1	256	31.35	24.78	25.05	25.17	25.27	25.33	25.38
256037100	1	256	37.1	24.16	24.43	24.55	24.67	24.73	24.78
256039400	1	256	39.4	23.91	24.2	24.33	24.46	24.53	24.58
256044250	1	256	44.25	23.26	23.58	23.74	23.9	23.99	24.06
256049950	1	256	49.95	22.53	22.87	23.04	23.21	23.32	23.4

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Water level for 2 year return period	meter
Yr_5	Water level for 5 year return period	meter
Yr_10	Water level for 10 year return period	meter
Yr_25	Water level for 25 year return period	meter
Yr_50	Water level for 50 year return period	meter
Yr_100	Water level for 100 year return period	meter

Name of Data layer: **Frequency Analysis of Water Level for Wet Period of NE**

Metadata

Data type	Tabular
Abstract	Water-Level data analyzed for average year and 1 in 5, 10, 25, 50, 100 wet year situation for each computed grid node, which are calculated at available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989-90 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5	Yr_10	Yr_25	Yr_50	Yr_100
256025000	1	256	25	25.54	25.8	25.93	26.07	26.15	26.22
256031350	1	256	31.35	24.78	25.05	25.17	25.27	25.33	25.38
256037100	1	256	37.1	24.16	24.43	24.55	24.67	24.73	24.78
256039400	1	256	39.4	23.91	24.2	24.33	24.46	24.53	24.58
256044250	1	256	44.25	23.26	23.58	23.74	23.9	23.99	24.06
256049950	1	256	49.95	22.53	22.87	23.04	23.21	23.32	23.4

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Water level for 2 year return period	meter
Yr_5	Water level for 5 year return period	meter
Yr_10	Water level for 10 year return period	meter
Yr_25	Water level for 25 year return period	meter
Yr_50	Water level for 50 year return period	meter
Yr_100	Water level for 100 year return period	meter

Name of Data layer: **Frequency Analysis of Water Level for Wet Period of NW**

Metadata

Data type	Tabular
Abstract	Water-Level data analyzed for average year and 1 in 5, 10, 25, 50, 100 wet year situation for each computed grid node, which are calculated at available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989-90 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5	Yr_10	Yr_25	Yr_50	Yr_100
256025000	1	256	25	25.54	25.8	25.93	26.07	26.15	26.22
256031350	1	256	31.35	24.78	25.05	25.17	25.27	25.33	25.38
256037100	1	256	37.1	24.16	24.43	24.55	24.67	24.73	24.78
256039400	1	256	39.4	23.91	24.2	24.33	24.46	24.53	24.58
256044250	1	256	44.25	23.26	23.58	23.74	23.9	23.99	24.06
256049950	1	256	49.95	22.53	22.87	23.04	23.21	23.32	23.4

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Water level for 2 year return period	meter
Yr_5	Water level for 5 year return period	meter
Yr_10	Water level for 10 year return period	meter
Yr_25	Water level for 25 year return period	meter
Yr_50	Water level for 50 year return period	meter
Yr_100	Water level for 100 year return period	meter

Name of Data layer: **Frequency Analysis of Water Level for Wet Period of SE**

Metadata

Data type	Tabular
Abstract	Water-Level data analyzed for average year and 1 in 5, 10, 25, 50, 100 wet year situation for each computed grid node, which are calculated at available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989-90 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5	Yr_10	Yr_25	Yr_50	Yr_100
256025000	1	256	25	25.54	25.8	25.93	26.07	26.15	26.22
256031350	1	256	31.35	24.78	25.05	25.17	25.27	25.33	25.38
256037100	1	256	37.1	24.16	24.43	24.55	24.67	24.73	24.78
256039400	1	256	39.4	23.91	24.2	24.33	24.46	24.53	24.58
256044250	1	256	44.25	23.26	23.58	23.74	23.9	23.99	24.06
256049950	1	256	49.95	22.53	22.87	23.04	23.21	23.32	23.4

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Water level for 2 year return period	meter
Yr_5	Water level for 5 year return period	meter
Yr_10	Water level for 10 year return period	meter
Yr_25	Water level for 25 year return period	meter
Yr_50	Water level for 50 year return period	meter
Yr_100	Water level for 100 year return period	meter

Name of Data layer: **Frequency Analysis of Water Level for Wet Period of SW**

Metadata

Data type	Tabular
Abstract	Water-Level data analyzed for average year and 1 in 5, 10, 25, 50, 100 wet year situation for each computed grid node, which are calculated at available cross-sections.
Quality	Quality of the model information depends on the input data and calibration & verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and are regularly validated by SWMC. The model results for the period from 1965 to 1989-90 at all computational grid points have been used for this frequency analysis for different return period. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This frequency analysis for different return period has been done using mathematical model result. This data can be used in different engineering planning purposes and in the national water management plan.
Process description	The model results of 25-year have been post processed for frequency analysis of different return period using Generalized Extreme Value (GEV) distribution.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Yr_2	Yr_5	Yr_10	Yr_25	Yr_50	Yr_100
256025000	1	256	25	25.54	25.8	25.93	26.07	26.15	26.22
256031350	1	256	31.35	24.78	25.05	25.17	25.27	25.33	25.38
256037100	1	256	37.1	24.16	24.43	24.55	24.67	24.73	24.78
256039400	1	256	39.4	23.91	24.2	24.33	24.46	24.53	24.58
256044250	1	256	44.25	23.26	23.58	23.74	23.9	23.99	24.06
256049950	1	256	49.95	22.53	22.87	23.04	23.21	23.32	23.4

Bundle Information (Data Field Description and Unit)

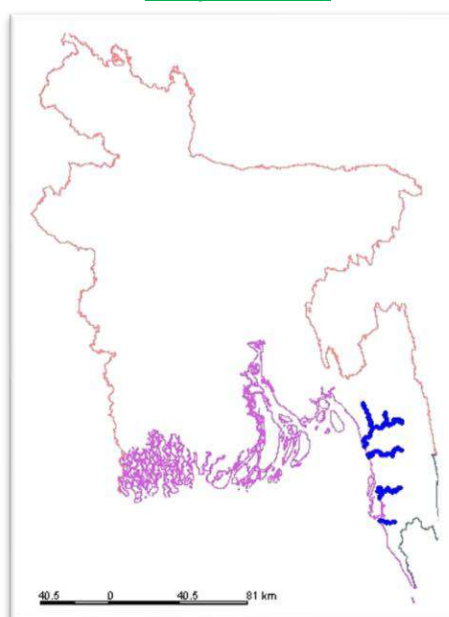
FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River Id	
Chainage	Cumulative distance of the measuring point	meter
Yr_2	Water level for 2 year return period	meter
Yr_5	Water level for 5 year return period	meter
Yr_10	Water level for 10 year return period	meter
Yr_25	Water level for 25 year return period	meter
Yr_50	Water level for 50 year return period	meter
Yr_100	Water level for 100 year return period	meter

Name of Data layer: **Grid points for Simulation of Dry Season Waterlevel of EHRM**

Metadata

Data type	Spatial
Abstract	Grid points to simulate dry season waterlevel of Eastern Hill region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The dataset is created for the Eastern Hill region
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analysed information are created by using MIKE-II a one dimensional mathematical model to compute the water level values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
246000000	7	246	ICHAMATI	0
246002000	7	246	ICHAMATI	2
246004000	7	246	ICHAMATI	4
246006000	7	246	ICHAMATI	6
246007667	7	246	ICHAMATI	7.667
246009333	7	246	ICHAMATI	9.333

Bundle Information (Data Field Description and Unit)

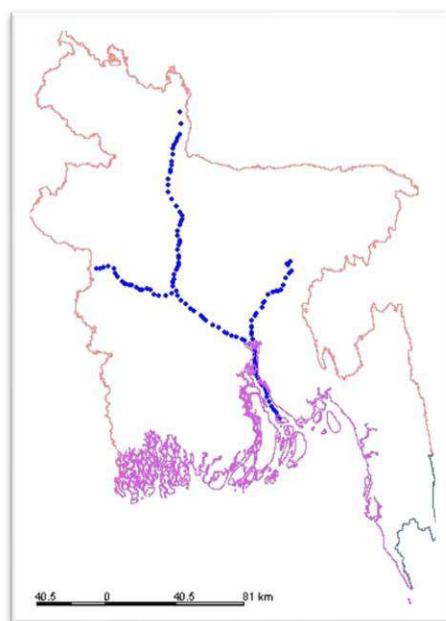
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Dry Season Waterlevel of GM**

Metadata

Data type	Spatial
Abstract	Grid points to simulate dry season waterlevel of General Model area for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The data set is created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analysed information are created by using MIKE-II a one dimensional mathematical model to compute the water level values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
246000000	7	246	ICHAMATI	0
246002000	7	246	ICHAMATI	2
246004000	7	246	ICHAMATI	4
246006000	7	246	ICHAMATI	6
246007667	7	246	ICHAMATI	7.667
246009333	7	246	ICHAMATI	9.333

Bundle Information (Data Field Description and Unit)

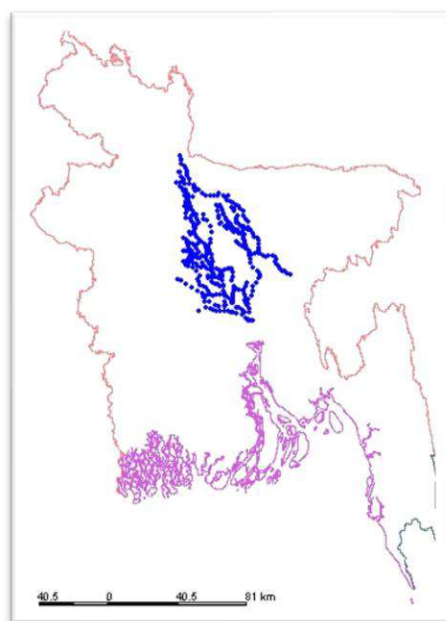
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Dry Season Waterlevel of NCRM**

Metadata

Data type	Spatial
Abstract	Grid points to simulate dry season waterlevel of North Central region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The data set is created for the North Central region (covers the region bounded by the Jamuna, Ganges, Meghna, Old Brahmaputra, and includes the national capital Dhaka).
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analysed information are created by using MIKE-II a one dimensional mathematical model to compute the water level values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
246000000	7	246	ICHAMATI	0
246002000	7	246	ICHAMATI	2
246004000	7	246	ICHAMATI	4
246006000	7	246	ICHAMATI	6
246007667	7	246	ICHAMATI	7.667
246009333	7	246	ICHAMATI	9.333

Bundle Information (Data Field Description and Unit)

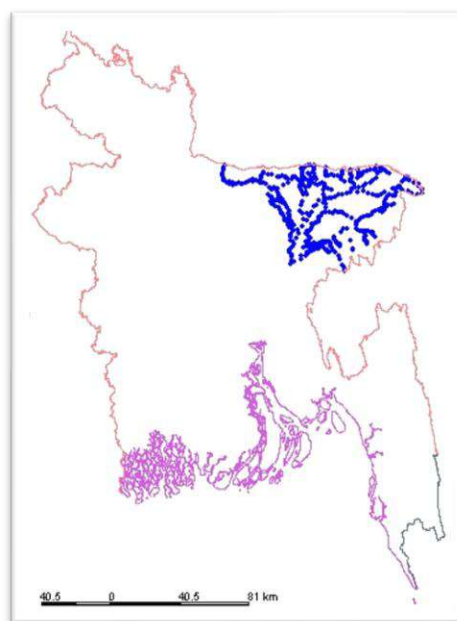
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Dry Season Waterlevel of NERM**

Metadata

Data type	Spatial
Abstract	Grid points to simulate dry season waterlevel of North East region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The data set is created for the North East region (covers the entire north east of the country east of the Old Brahmaputra and north of the upper Meghna at Bhairab Bazar).
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analysed information are created by using MIKE-II a one dimensional mathematical model to compute the water level values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
1001000	4	1	A PIYAN	1
1006250	4	1	A PIYAN	6.25
1011500	4	1	A PIYAN	11.5
1017400	4	1	A PIYAN	17.4
1023300	4	1	A PIYAN	23.3

Bundle Information (Data Field Description and Unit)

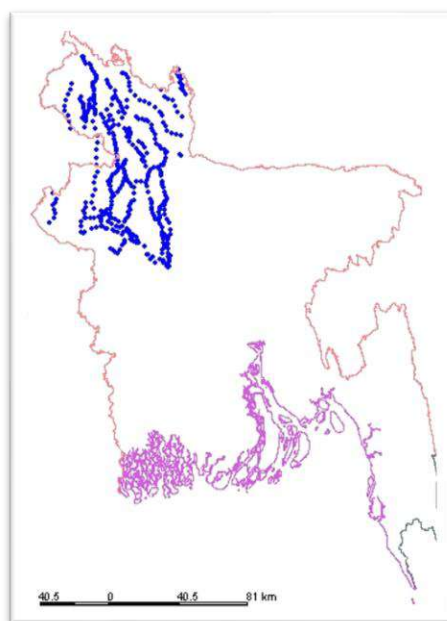
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Dry Season Waterlevel of NWRM**

Metadata

Data type	Spatial
Abstract	Grid points to simulate dry season waterlevel of North East region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The data set is created for the North East region (covers the entire north east of the country east of the Old Brahmaputra and north of the upper Meghna at Bhairab Bazar).
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analysed information are created by using MIKE-II a one dimensional mathematical model to compute the water level values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
1001000	4	1	A PIYAN	1
1006250	4	1	A PIYAN	6.25
1011500	4	1	A PIYAN	11.5
1017400	4	1	A PIYAN	17.4
1023300	4	1	A PIYAN	23.3

Bundle Information (Data Field Description and Unit)

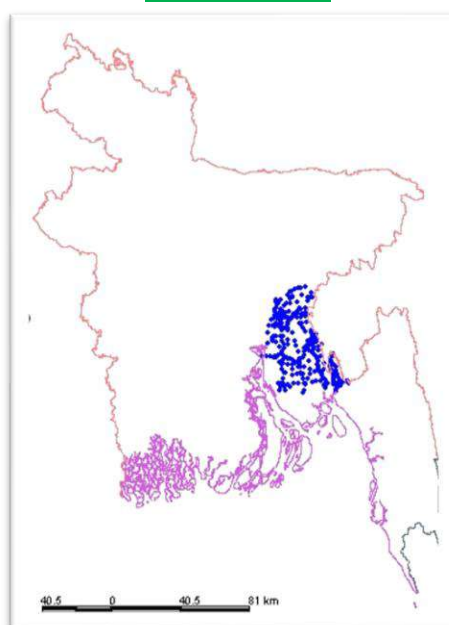
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Dry Season Waterlevel of SERM**

Metadata

Data type	Spatial
Abstract	Grid points to simulate dry season waterlevel of North East region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The data set is created for the North East region (covers the entire north east of the country east of the Old Brahmaputra and north of the upper Meghna at Bhairab Bazar).
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analysed information are created by using MIKE-II a one dimensional mathematical model to compute the water level values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
1001000	4	1	A PIYAN	1
1006250	4	1	A PIYAN	6.25
1011500	4	1	A PIYAN	11.5
1017400	4	1	A PIYAN	17.4
1023300	4	1	A PIYAN	23.3

Bundle Information (Data Field Description and Unit)

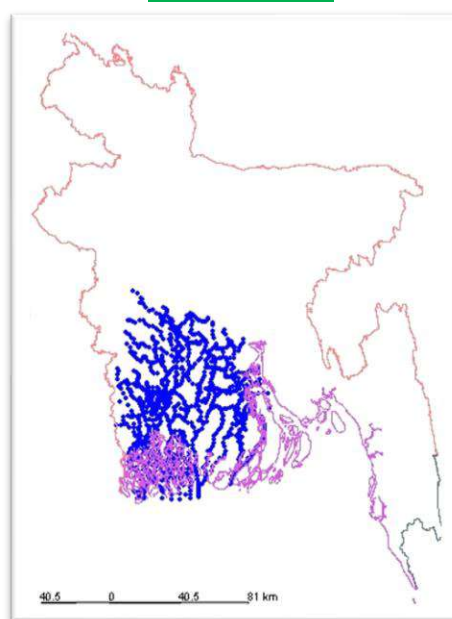
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Dry Season Waterlevel of SWRM**

Metadata

Data type	Spatial
Abstract	Grid points to simulate dry season waterlevel of North East region for the period of 1965 to 1989 using a mathematical model.
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The data set is created for the North East region (covers the entire north east of the country east of the Old Brahmaputra and north of the upper Meghna at Bhairab Bazar).
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analysed information are created by using MIKE-II a one dimensional mathematical model to compute the water level values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
1001000	4	1	A PIYAN	1
1006250	4	1	A PIYAN	6.25
1011500	4	1	A PIYAN	11.5
1017400	4	1	A PIYAN	17.4
1023300	4	1	A PIYAN	23.3

Bundle Information (Data Field Description and Unit)

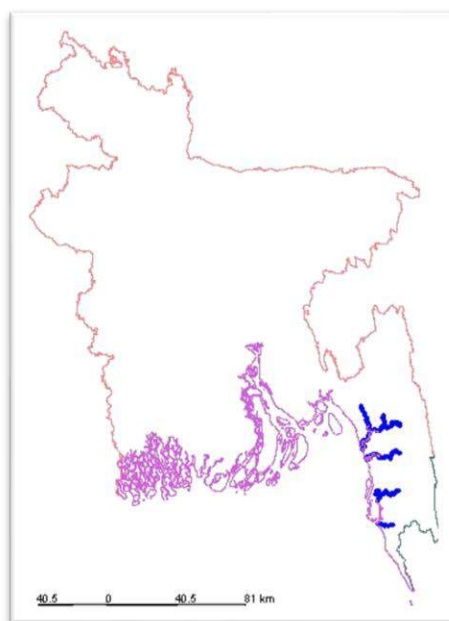
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Wet Season Waterlevel of EHRM**

Metadata

Data type	Spatial
Abstract	Interpolated new cross section locations of EHRM by analyzing the water level for monsoon season using MIKE-11, a one-dimensional mathematical model by SWMC (Surface Water Modelling Centre).
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The dataset is created for the Eastern Hill region
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analysed information are created by using MIKE-II a one dimensional mathematical model to compute the water level values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
246000000	7	246	ICHAMATI	0
246002000	7	246	ICHAMATI	2
246004000	7	246	ICHAMATI	4
246006000	7	246	ICHAMATI	6
246007667	7	246	ICHAMATI	7.667

Bundle Information (Data Field Description and Unit)

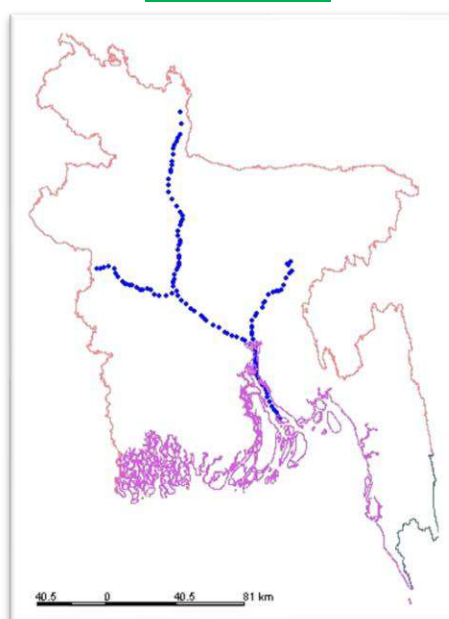
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Wet Season Waterlevel of GM**

Metadata

Data type	Spatial
Abstract	Interpolated new cross section locations of EHRM by analyzing the water level for monsoon season using MIKE-11, a one-dimensional mathematical model by SWMC (Surface Water Modelling Centre).
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The dataset is created for the Eastern Hill region
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analysed information are created by using MIKE-II a one dimensional mathematical model to compute the water level values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
246000000	7	246	ICHAMATI	0
246002000	7	246	ICHAMATI	2
246004000	7	246	ICHAMATI	4
246006000	7	246	ICHAMATI	6
246007667	7	246	ICHAMATI	7.667

Bundle Information (Data Field Description and Unit)

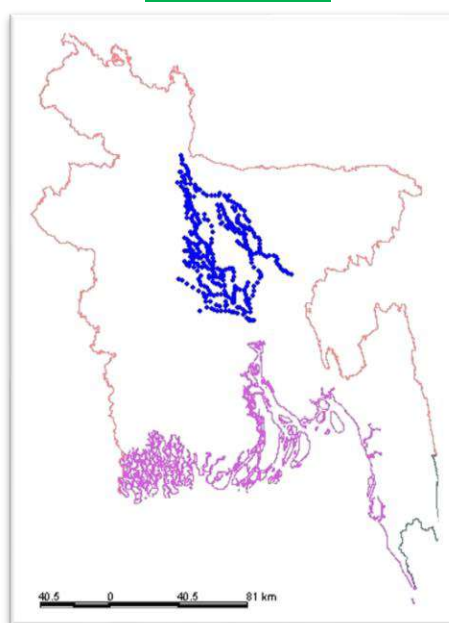
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Wet Season Waterlevel of NCRM**

Metadata

Data type	Spatial
Abstract	Interpolated new cross section locations of EHRM by analyzing the water level for monsoon season using MIKE-11, a one-dimensional mathematical model by SWMC (Surface Water Modelling Centre).
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The dataset is created for the Eastern Hill region
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analysed information are created by using MIKE-II a one dimensional mathematical model to compute the water level values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
246000000	7	246	ICHAMATI	0
246002000	7	246	ICHAMATI	2
246004000	7	246	ICHAMATI	4
246006000	7	246	ICHAMATI	6
246007667	7	246	ICHAMATI	7.667

Bundle Information (Data Field Description and Unit)

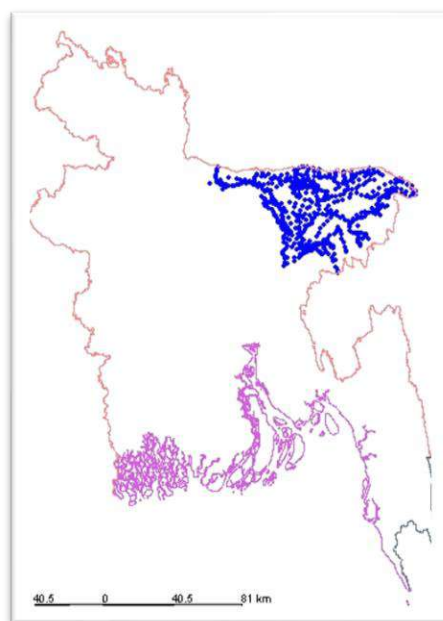
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Wet Season Waterlevel of NERM**

Metadata

Data type	Spatial
Abstract	Interpolated new cross section locations of EHRM by analyzing the water level for monsoon season using MIKE-11, a one-dimensional mathematical model by SWMC (Surface Water Modelling Centre).
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The dataset is created for the Eastern Hill region
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analysed information are created by using MIKE-II a one dimensional mathematical model to compute the water level values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
246000000	7	246	ICHAMATI	0
246002000	7	246	ICHAMATI	2
246004000	7	246	ICHAMATI	4
246006000	7	246	ICHAMATI	6
246007667	7	246	ICHAMATI	7.667

Bundle Information (Data Field Description and Unit)

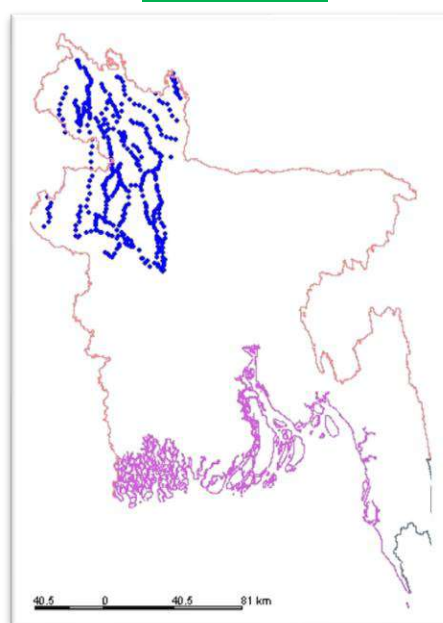
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Wet Season Waterlevel of NWRM**

Metadata

Data type	Spatial
Abstract	Interpolated new cross section locations of EHRM by analyzing the water level for monsoon season using MIKE-11, a one-dimensional mathematical model by SWMC (Surface Water Modelling Centre).
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The dataset is created for the Eastern Hill region
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analysed information are created by using MIKE-II a one dimensional mathematical model to compute the water level values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
246000000	7	246	ICHAMATI	0
246002000	7	246	ICHAMATI	2
246004000	7	246	ICHAMATI	4
246006000	7	246	ICHAMATI	6
246007667	7	246	ICHAMATI	7.667

Bundle Information (Data Field Description and Unit)

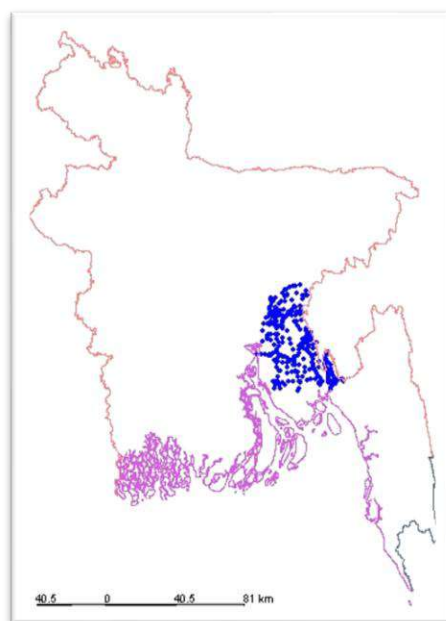
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Wet Season Waterlevel of NWRM**

Metadata

Data type	Spatial
Abstract	Interpolated new cross section locations of EHRM by analyzing the water level for monsoon season using MIKE-11, a one-dimensional mathematical model by SWMC (Surface Water Modelling Centre).
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The dataset is created for the Eastern Hill region
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analysed information are created by using MIKE-II a one dimensional mathematical model to compute the water level values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
12039800	6	12	ANDERSON	39.8
12043600	6	12	ANDERSON	43.6
542016100	6	542	TITAS UPPER	16.1
542021550	6	542	TITAS UPPER	21.55
542027000	6	542	TITAS UPPER	27

Bundle Information (Data Field Description and Unit)

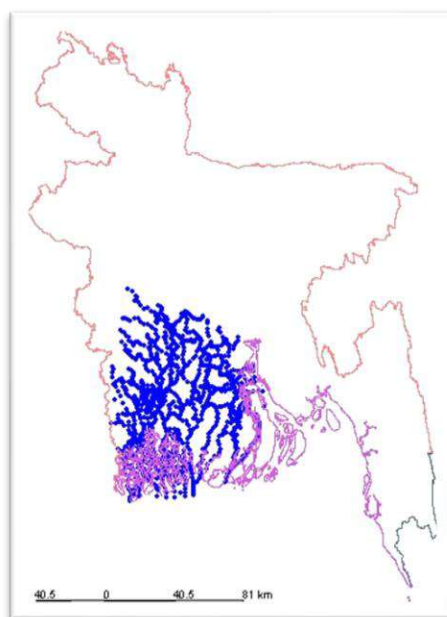
FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Grid points for Simulation of Wet Season Waterlevel of SWRM**

Metadata

Data type	Spatial
Abstract	Interpolated new cross section locations of EHRM by analyzing the water level for monsoon season using MIKE-11, a one-dimensional mathematical model by SWMC (Surface Water Modelling Centre).
Quality	Quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The dataset is created for the Eastern Hill region
History of the dataset	The model has been developed by SWMC under National Water Management Plan (NWMP) based on MIKE-11 software system. The model is established on 1990's data and then calibrated for 1 year, which was verified for 3 years.
Purpose of production	This analysed information are created by using MIKE-II a one dimensional mathematical model to compute the water level values where the observed values are not available and to present the location of the interpreted values.
Process description	The data layer is the model result, which has been evolved to fulfil some specific requirements of NWMP. NWRD has collected the dataset and stored in a well-ordered way.

Sample of Data



Attribute Table

grid_id	region_id	river_id	river_name	chainage
12039800	6	12	ANDERSON	39.8
12043600	6	12	ANDERSON	43.6
542016100	6	542	TITAS UPPER	16.1
542021550	6	542	TITAS UPPER	21.55
542027000	6	542	TITAS UPPER	27

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESC	UNIT
Grid_id	Unique id of each cross section generated by the modelling software	
Region_id	Unique id given to a particular region by Surface Water Simulation Modelling Programme	
River_id	Identification number given to a particular river by Surface Water Simulation Modelling Programme	
River_name	Name of the rivers demarked by Surface Water Simulation Modelling Programme	
Chainage	Distance of each cross section from a known point	

Name of Data layer: **Statistical Analysis of Water Level for Dry of EH**

Metadata

Data type	Tabular
Abstract	The dataset contains decadal water level data (of Eastern Hill region for dry period), computed for each node, which is generated at the mid-points of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The data layer has been created for the Eastern Hill region.
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model, to interpret the water level values where the observed values are not available.
Process description	Computed results cover decade wise water level values of the mid-points of available cross-sections for each dry period. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
568000000	7	568	0	1996-97	4.15	4.02	3.71	3.79	3.39	3.25	3.17	3.56	3.78	4.26	3.56	4.15	4.39	3.77	3.97	3.15	
568007250	7	568	7.25	1996-97	3.96	3.86	3.57	3.6	3.27	3.15	3.04	3.38	3.57	4	3.35	3.91	4.1	3.58	3.81	3.05	
568007250	7	568	7.25	1997-98	3.35	3.94	3.63	3.15	3.14	3.16	3.88	4.12	2.92	2.74	4.71	5.18	4.33	3.69	4.11	99999.99	999
568008350	7	568	8.35	1996-97	3.94	3.85	3.56	3.58	3.25	3.14	3.03	3.36	3.55	3.97	3.33	3.89	4.07	3.56	3.8	3.04	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
Nov01	Average water level for the first decade of November	meter
Nov02	Average water level for the second decade of November	meter
Nov03	Average water level for the last decade of November	meter
Dec01	Average water level for the first decade of December	meter
Dec02	Average water level for the second decade of December	meter
Dec03	Average water level for the last decade of December	meter
Jan01	Average water level for the first decade of January	meter
Jan02	Average water level for the second decade of January	meter
Jan03	Average water level for the last decade of January	meter
Feb01	Average water level for the first decade of February	meter
Feb02	Average water level for the second decade of February	meter
Feb03	Average water level for the last decade of February	meter
Mar01	Average water level for the first decade of March	meter
Mar02	Average water level for the second decade of March	meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Mar03	Average water level for the last decade of March	meter
Apr01	Average water level for the first decade of April	meter
Apr02	Average water level for the second decade of April	meter
Apr03	Average water level for the last decade of April	meter
Minwl	Minimum water level	meter

Name of Data layer: **Statistical Analysis of Water Level for Dry of GM**

Metadata

Data type	Tabular
Abstract	The dataset contains decadal water level data (of General Model area for dry period), computed for each node, which is generated at the mid-points of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model, to interpret the water level values where the observed values are not available.
Process description	Computed results cover decade wise water level values of the mid-points of available cross-sections for each dry period. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
568000000	7	568	0	1996-97	4.15	4.02	3.71	3.79	3.39	3.25	3.17	3.56	3.78	4.26	3.56	4.15	4.39	3.77	3.97	3.15	
568007250	7	568	7.25	1996-97	3.96	3.86	3.57	3.6	3.27	3.15	3.04	3.38	3.57	4	3.35	3.91	4.1	3.58	3.81	3.05	
568007250	7	568	7.25	1997-98	3.35	3.94	3.63	3.15	3.14	3.16	3.88	4.12	2.92	2.74	4.71	5.18	4.33	3.69	4.11	99999.99 999	
568008350	7	568	8.35	1996-97	3.94	3.85	3.56	3.58	3.25	3.14	3.03	3.36	3.55	3.97	3.33	3.89	4.07	3.56	3.8	3.04	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
Nov01	Average water level for the first decade of November	meter
Nov02	Average water level for the second decade of November	meter
Nov03	Average water level for the last decade of November	meter
Dec01	Average water level for the first decade of December	meter
Dec02	Average water level for the second decade of December	meter
Dec03	Average water level for the last decade of December	meter
Jan01	Average water level for the first decade of January	meter
Jan02	Average water level for the second decade of January	meter
Jan03	Average water level for the last decade of January	meter
Feb01	Average water level for the first decade of February	meter
Feb02	Average water level for the second decade of February	meter
Feb03	Average water level for the last decade of February	meter
Mar01	Average water level for the first decade of March	meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Mar02	Average water level for the second decade of March	meter
Mar03	Average water level for the last decade of March	meter
Apr01	Average water level for the first decade of April	meter
Apr02	Average water level for the second decade of April	meter
Apr03	Average water level for the last decade of April	meter
Minwl	Minimum water level	meter

Name of Data layer: **Statistical Analysis of Water Level for Dry of NC**

Metadata

Data type	Tabular
Abstract	The dataset contains decadal water level data (of General Model area for dry period), computed for each node, which is generated at the mid-points of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model, to interpret the water level values where the observed values are not available.
Process description	Computed results cover decade wise water level values of the mid-points of available cross-sections for each dry period. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
568000000	7	568	0	1996-97	4.15	4.02	3.71	3.79	3.39	3.25	3.17	3.56	3.78	4.26	3.56	4.15	4.39	3.77	3.97	3.15	
568007250	7	568	7.25	1996-97	3.96	3.86	3.57	3.6	3.27	3.15	3.04	3.38	3.57	4	3.35	3.91	4.1	3.58	3.81	3.05	
568007250	7	568	7.25	1997-98	3.35	3.94	3.63	3.15	3.14	3.16	3.88	4.12	2.92	2.74	4.71	5.18	4.33	3.69	4.11	99999.99	999
568008350	7	568	8.35	1996-97	3.94	3.85	3.56	3.58	3.25	3.14	3.03	3.36	3.55	3.97	3.33	3.89	4.07	3.56	3.8	3.04	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
Nov01	Average water level for the first decade of November	meter
Nov02	Average water level for the second decade of November	meter
Nov03	Average water level for the last decade of November	meter
Dec01	Average water level for the first decade of December	meter
Dec02	Average water level for the second decade of December	meter
Dec03	Average water level for the last decade of December	meter
Jan01	Average water level for the first decade of January	meter
Jan02	Average water level for the second decade of January	meter
Jan03	Average water level for the last decade of January	meter
Feb01	Average water level for the first decade of February	meter
Feb02	Average water level for the second decade of February	meter
Feb03	Average water level for the last decade of February	meter
Mar01	Average water level for the first decade of March	meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Mar02	Average water level for the second decade of March	meter
Mar03	Average water level for the last decade of March	meter
Apr01	Average water level for the first decade of April	meter
Apr02	Average water level for the second decade of April	meter
Apr03	Average water level for the last decade of April	meter
Minwl	Minimum water level	meter

Name of Data layer: **Statistical Analysis of Water Level for Dry of NE**

Metadata

Data type	Tabular
Abstract	The dataset contains decadal water level data (of General Model area for dry period), computed for each node, which is generated at the mid-points of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model, to interpret the water level values where the observed values are not available.
Process description	Computed results cover decade wise water level values of the mid-points of available cross-sections for each dry period. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
568000000	7	568	0	1996-97	4.15	4.02	3.71	3.79	3.39	3.25	3.17	3.56	3.78	4.26	3.56	4.15	4.39	3.77	3.97	3.15	
568007250	7	568	7.25	1996-97	3.96	3.86	3.57	3.6	3.27	3.15	3.04	3.38	3.57	4	3.35	3.91	4.1	3.58	3.81	3.05	
568007250	7	568	7.25	1997-98	3.35	3.94	3.63	3.15	3.14	3.16	3.88	4.12	2.92	2.74	4.71	5.18	4.33	3.69	4.11	99999.99	999
568008350	7	568	8.35	1996-97	3.94	3.85	3.56	3.58	3.25	3.14	3.03	3.36	3.55	3.97	3.33	3.89	4.07	3.56	3.8	3.04	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
Nov01	Average water level for the first decade of November	meter
Nov02	Average water level for the second decade of November	meter
Nov03	Average water level for the last decade of November	meter
Dec01	Average water level for the first decade of December	meter
Dec02	Average water level for the second decade of December	meter
Dec03	Average water level for the last decade of December	meter
Jan01	Average water level for the first decade of January	meter
Jan02	Average water level for the second decade of January	meter
Jan03	Average water level for the last decade of January	meter
Feb01	Average water level for the first decade of February	meter
Feb02	Average water level for the second decade of February	meter
Feb03	Average water level for the last decade of February	meter
Mar01	Average water level for the first decade of March	meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Mar02	Average water level for the second decade of March	meter
Mar03	Average water level for the last decade of March	meter
Apr01	Average water level for the first decade of April	meter
Apr02	Average water level for the second decade of April	meter
Apr03	Average water level for the last decade of April	meter
Minwl	Minimum water level	meter

Name of Data layer: **Statistical Analysis of Water Level for Dry of NW**

Metadata

Data type	Tabular
Abstract	The dataset contains decadal water level data (of General Model area for dry period), computed for each node, which is generated at the mid-points of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model, to interpret the water level values where the observed values are not available.
Process description	Computed results cover decade wise water level values of the mid-points of available cross-sections for each dry period. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
568000000	7	568	0	1996-97	4.15	4.02	3.71	3.79	3.39	3.25	3.17	3.56	3.78	4.26	3.56	4.15	4.39	3.77	3.97	3.15	
568007250	7	568	7.25	1996-97	3.96	3.86	3.57	3.6	3.27	3.15	3.04	3.38	3.57	4	3.35	3.91	4.1	3.58	3.81	3.05	
568007250	7	568	7.25	1997-98	3.35	3.94	3.63	3.15	3.14	3.16	3.88	4.12	2.92	2.74	4.71	5.18	4.33	3.69	4.11	99999.99	999
568008350	7	568	8.35	1996-97	3.94	3.85	3.56	3.58	3.25	3.14	3.03	3.36	3.55	3.97	3.33	3.89	4.07	3.56	3.8	3.04	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
Nov01	Average water level for the first decade of November	meter
Nov02	Average water level for the second decade of November	meter
Nov03	Average water level for the last decade of November	meter
Dec01	Average water level for the first decade of December	meter
Dec02	Average water level for the second decade of December	meter
Dec03	Average water level for the last decade of December	meter
Jan01	Average water level for the first decade of January	meter
Jan02	Average water level for the second decade of January	meter
Jan03	Average water level for the last decade of January	meter
Feb01	Average water level for the first decade of February	meter
Feb02	Average water level for the second decade of February	meter
Feb03	Average water level for the last decade of February	meter
Mar01	Average water level for the first decade of March	meter
Mar02	Average water level for the second decade of March	meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Mar03	Average water level for the last decade of March	meter
Apr01	Average water level for the first decade of April	meter
Apr02	Average water level for the second decade of April	meter
Apr03	Average water level for the last decade of April	meter
Minwl	Minimum water level	meter

Name of Data layer: **Statistical Analysis of Water Level for Dry of SE**

Metadata

Data type	Tabular
Abstract	The dataset contains decadal water level data (of General Model area for dry period), computed for each node, which is generated at the mid-points of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model, to interpret the water level values where the observed values are not available.
Process description	Computed results cover decade wise water level values of the mid-points of available cross-sections for each dry period. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
568000000	7	568	0	1996-97	4.15	4.02	3.71	3.79	3.39	3.25	3.17	3.56	3.78	4.26	3.56	4.15	4.39	3.77	3.97	3.15	
568007250	7	568	7.25	1996-97	3.96	3.86	3.57	3.6	3.27	3.15	3.04	3.38	3.57	4	3.35	3.91	4.1	3.58	3.81	3.05	
568007250	7	568	7.25	1997-98	3.35	3.94	3.63	3.15	3.14	3.16	3.88	4.12	2.92	2.74	4.71	5.18	4.33	3.69	4.11	99999.99	999
568008350	7	568	8.35	1996-97	3.94	3.85	3.56	3.58	3.25	3.14	3.03	3.36	3.55	3.97	3.33	3.89	4.07	3.56	3.8	3.04	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
Nov01	Average water level for the first decade of November	meter
Nov02	Average water level for the second decade of November	meter
Nov03	Average water level for the last decade of November	meter
Dec01	Average water level for the first decade of December	meter
Dec02	Average water level for the second decade of December	meter
Dec03	Average water level for the last decade of December	meter
Jan01	Average water level for the first decade of January	meter
Jan02	Average water level for the second decade of January	meter
Jan03	Average water level for the last decade of January	meter
Feb01	Average water level for the first decade of February	meter
Feb02	Average water level for the second decade of February	meter
Feb03	Average water level for the last decade of February	meter
Mar01	Average water level for the first decade of March	meter
Mar02	Average water level for the second decade of March	meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Mar03	Average water level for the last decade of March	meter
Apr01	Average water level for the first decade of April	meter
Apr02	Average water level for the second decade of April	meter
Apr03	Average water level for the last decade of April	meter
Minwl	Minimum water level	meter

Name of Data layer: **Statistical Analysis of Water Level for Dry of SW**

Metadata

Data type	Tabular
Abstract	The dataset contains decadal water level data (of General Model area for dry period), computed for each node, which is generated at the mid-points of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and verification of the model.
Completeness	The data layer has been created for the General Model Area (covers major river networks of the country except the Chittagong area).
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model, to interpret the water level values where the observed values are not available.
Process description	Computed results cover decade wise water level values of the mid-points of available cross-sections for each dry period. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	Nov01	Nov02	Nov03	Dec01	Dec02	Dec03	Jan01	Jan02	Jan03	Feb01	Feb02	Feb03	Mar01	Mar02	Mar03	Apr01	Apr02
568000000	7	568	0	1996-97	4.15	4.02	3.71	3.79	3.39	3.25	3.17	3.56	3.78	4.26	3.56	4.15	4.39	3.77	3.97	3.15	
568007250	7	568	7.25	1996-97	3.96	3.86	3.57	3.6	3.27	3.15	3.04	3.38	3.57	4	3.35	3.91	4.1	3.58	3.81	3.05	
568007250	7	568	7.25	1997-98	3.35	3.94	3.63	3.15	3.14	3.16	3.88	4.12	2.92	2.74	4.71	5.18	4.33	3.69	4.11	99999.99	999
568008350	7	568	8.35	1996-97	3.94	3.85	3.56	3.58	3.25	3.14	3.03	3.36	3.55	3.97	3.33	3.89	4.07	3.56	3.8	3.04	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
Nov01	Average water level for the first decade of November	meter
Nov02	Average water level for the second decade of November	meter
Nov03	Average water level for the last decade of November	meter
Dec01	Average water level for the first decade of December	meter
Dec02	Average water level for the second decade of December	meter
Dec03	Average water level for the last decade of December	meter
Jan01	Average water level for the first decade of January	meter
Jan02	Average water level for the second decade of January	meter
Jan03	Average water level for the last decade of January	meter
Feb01	Average water level for the first decade of February	meter
Feb02	Average water level for the second decade of February	meter
Feb03	Average water level for the last decade of February	meter
Mar01	Average water level for the first decade of March	meter
Mar02	Average water level for the second decade of March	meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Mar03	Average water level for the last decade of March	meter
Apr01	Average water level for the first decade of April	meter
Apr02	Average water level for the second decade of April	meter
Apr03	Average water level for the last decade of April	meter
Minwl	Minimum water level	meter

Name of Data layer: **Statistical Analysis of Water Level for Wet of EH**

Metadata

Data type	Tabular
Abstract	The dataset contains decadal water level data (of Eastern Hill region for monsoon period), computed for each node, which is generated at the mid-points of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and verification of the model
Completeness	The data layer has been created for the Eastern Hill region
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information is created by using MIKE-11, a one dimensional mathematical model, to interpret the water level values where the observed values are not available.
Process description	Computed results cover decade wise water level values of the mid-points of available cross-sections for each monsoon season. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03
68000000	7	568	0	1996-97	3.66	3.92	4.04	3.27	3.7	4.34	5.98	5.34	4.75	5.63	5.64	5.67	4.96	4.74	4.32	4.14	4.4	
68000000	7	568	0	1997-98	2.96	2.44	3.52	3.78	3.34	3.47	4.84	6.18	5.69	5.95	5.77	5.63	5.54	4.77	4.75	4.81	4.11	
68001500	7	568	1.5	1996-97	3.64	3.9	4	3.25	3.68	4.31	5.9	5.27	4.71	5.58	5.57	5.6	4.9	4.69	4.29	4.11	4.35	
68001500	7	568	1.5	1997-98	2.94	2.43	3.5	3.76	3.33	3.46	4.8	6.11	5.63	5.88	5.69	5.55	5.47	4.72	4.7	4.76	4.07	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
May01	Average water level for the first decade of May	meter
May02	Average water level for the second decade of May	meter
May03	Average water level for the last decade of May	meter
Jun01	Average water level for the first decade of June	meter
Jun02	Average water level for the second decade of June	meter
Jun03	Average water level for the last decade of June	meter
Jul01	Average water level for the first decade of July	meter
Jul02	Average water level for the second decade of July	meter
Jul03	Average water level for the last decade of July	meter
Aug01	Average water level for the first decade of August	meter
Aug02	Average water level for the second decade of August	meter
Aug03	Average water level for the last decade of August	meter
Sep01	Average water level for the first decade of September	meter
Sep02	Average water level for the second decade of September	meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Sep03	Average water level for the last decade of September	meter
Oct01	Average water level for the first decade of October	meter
Oct02	Average water level for the second decade of October	meter
Oct03	Average water level for the last decade of October	meter
Maxwl	Maximum water level	meter

Name of Data layer: **Statistical Analysis of Water Level for Wet of GM**

Metadata

Data type	Tabular
Abstract	The dataset contains decadal water level data (of Eastern Hill region for monsoon period), computed for each node, which is generated at the mid-points of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and verification of the model
Completeness	The data layer has been created for the Eastern Hill region
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information are created by using MIKE-11, a one dimensional mathematical model, to interpret the water level values where the observed values are not available.
Process description	Computed results cover decade wise water level values of the mid-points of available cross-sections for each monsoon season. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03
68000000	7	568	0	1996-97	3.66	3.92	4.04	3.27	3.7	4.34	5.98	5.34	4.75	5.63	5.64	5.67	4.96	4.74	4.32	4.14	4.4	
68000000	7	568	0	1997-98	2.96	2.44	3.52	3.78	3.34	3.47	4.84	6.18	5.69	5.95	5.77	5.63	5.54	4.77	4.75	4.81	4.11	
68001500	7	568	1.5	1996-97	3.64	3.9	4	3.25	3.68	4.31	5.9	5.27	4.71	5.58	5.57	5.6	4.9	4.69	4.29	4.11	4.35	
68001500	7	568	1.5	1997-98	2.94	2.43	3.5	3.76	3.33	3.46	4.8	6.11	5.63	5.88	5.69	5.55	5.47	4.72	4.7	4.76	4.07	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
May01	Average water level for the first decade of May	meter
May02	Average water level for the second decade of May	meter
May03	Average water level for the last decade of May	meter
Jun01	Average water level for the first decade of June	meter
Jun02	Average water level for the second decade of June	meter
Jun03	Average water level for the last decade of June	meter
Jul01	Average water level for the first decade of July	meter
Jul02	Average water level for the second decade of July	meter
Jul03	Average water level for the last decade of July	meter
Aug01	Average water level for the first decade of August	meter
Aug02	Average water level for the second decade of August	meter
Aug03	Average water level for the last decade of August	meter
Sep01	Average water level for the first decade of September	meter
Sep02	Average water level for the second decade of September	meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Sep03	Average water level for the last decade of September	meter
Oct01	Average water level for the first decade of October	meter
Oct02	Average water level for the second decade of October	meter
Oct03	Average water level for the last decade of October	meter
Maxwl	Maximum water level	meter

Name of Data layer: **Statistical Analysis of Water Level for Wet of NC**

Metadata

Data type	Tabular
Abstract	The dataset contains decadal water level data (of Eastern Hill region for monsoon period), computed for each node, which is generated at the mid-points of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and verification of the model
Completeness	The data layer has been created for the Eastern Hill region
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information is created by using MIKE-11, a one dimensional mathematical model, to interpret the water level values where the observed values are not available.
Process description	Computed results cover decade wise water level values of the mid-points of available cross-sections for each monsoon season. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03
68000000	7	568	0	1996-97	3.66	3.92	4.04	3.27	3.7	4.34	5.98	5.34	4.75	5.63	5.64	5.67	4.96	4.74	4.32	4.14	4.4	
68000000	7	568	0	1997-98	2.96	2.44	3.52	3.78	3.34	3.47	4.84	6.18	5.69	5.95	5.77	5.63	5.54	4.77	4.75	4.81	4.11	
68001500	7	568	1.5	1996-97	3.64	3.9	4	3.25	3.68	4.31	5.9	5.27	4.71	5.58	5.57	5.6	4.9	4.69	4.29	4.11	4.35	
68001500	7	568	1.5	1997-98	2.94	2.43	3.5	3.76	3.33	3.46	4.8	6.11	5.63	5.88	5.69	5.55	5.47	4.72	4.7	4.76	4.07	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
May01	Average water level for the first decade of May	meter
May02	Average water level for the second decade of May	meter
May03	Average water level for the last decade of May	meter
Jun01	Average water level for the first decade of June	meter
Jun02	Average water level for the second decade of June	meter
Jun03	Average water level for the last decade of June	meter
Jul01	Average water level for the first decade of July	meter
Jul02	Average water level for the second decade of July	meter
Jul03	Average water level for the last decade of July	meter
Aug01	Average water level for the first decade of August	meter
Aug02	Average water level for the second decade of August	meter
Aug03	Average water level for the last decade of August	meter
Sep01	Average water level for the first decade of September	meter
Sep02	Average water level for the second decade of September	meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Sep03	Average water level for the last decade of September	meter
Oct01	Average water level for the first decade of October	meter
Oct02	Average water level for the second decade of October	meter
Oct03	Average water level for the last decade of October	meter
Maxwl	Maximum water level	meter

Name of Data layer: **Statistical Analysis of Water Level for Wet of NE**

Metadata

Data type	Tabular
Abstract	The dataset contains decadal water level data (of Eastern Hill region for monsoon period), computed for each node, which is generated at the mid-points of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and verification of the model
Completeness	The data layer has been created for the Eastern Hill region
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information is created by using MIKE-11, a one dimensional mathematical model, to interpret the water level values where the observed values are not available.
Process description	Computed results cover decade wise water level values of the mid-points of available cross-sections for each monsoon season. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03
68000000	7	568	0	1996-97	3.66	3.92	4.04	3.27	3.7	4.34	5.98	5.34	4.75	5.63	5.64	5.67	4.96	4.74	4.32	4.14	4.4	
68000000	7	568	0	1997-98	2.96	2.44	3.52	3.78	3.34	3.47	4.84	6.18	5.69	5.95	5.77	5.63	5.54	4.77	4.75	4.81	4.11	
68001500	7	568	1.5	1996-97	3.64	3.9	4	3.25	3.68	4.31	5.9	5.27	4.71	5.58	5.57	5.6	4.9	4.69	4.29	4.11	4.35	
68001500	7	568	1.5	1997-98	2.94	2.43	3.5	3.76	3.33	3.46	4.8	6.11	5.63	5.88	5.69	5.55	5.47	4.72	4.7	4.76	4.07	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
May01	Average water level for the first decade of May	meter
May02	Average water level for the second decade of May	meter
May03	Average water level for the last decade of May	meter
Jun01	Average water level for the first decade of June	meter
Jun02	Average water level for the second decade of June	meter
Jun03	Average water level for the last decade of June	meter
Jul01	Average water level for the first decade of July	meter
Jul02	Average water level for the second decade of July	meter
Jul03	Average water level for the last decade of July	meter
Aug01	Average water level for the first decade of August	meter
Aug02	Average water level for the second decade of August	meter
Aug03	Average water level for the last decade of August	meter
Sep01	Average water level for the first decade of September	meter
Sep02	Average water level for the second decade of September	meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Sep03	Average water level for the last decade of September	meter
Oct01	Average water level for the first decade of October	meter
Oct02	Average water level for the second decade of October	meter
Oct03	Average water level for the last decade of October	meter
Maxwl	Maximum water level	meter

Name of Data layer: **Statistical Analysis of Water Level for Wet of NW**

Metadata

Data type	Tabular
Abstract	The dataset contains decadal water level data (of Eastern Hill region for monsoon period), computed for each node, which is generated at the mid-points of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and verification of the model
Completeness	The data layer has been created for the Eastern Hill region
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information is created by using MIKE-11, a one dimensional mathematical model, to interpret the water level values where the observed values are not available.
Process description	Computed results cover decade wise water level values of the mid-points of available cross-sections for each monsoon season. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03
68000000	7	568	0	1996-97	3.66	3.92	4.04	3.27	3.7	4.34	5.98	5.34	4.75	5.63	5.64	5.67	4.96	4.74	4.32	4.14	4.4	
68000000	7	568	0	1997-98	2.96	2.44	3.52	3.78	3.34	3.47	4.84	6.18	5.69	5.95	5.77	5.63	5.54	4.77	4.75	4.81	4.11	
68001500	7	568	1.5	1996-97	3.64	3.9	4	3.25	3.68	4.31	5.9	5.27	4.71	5.58	5.57	5.6	4.9	4.69	4.29	4.11	4.35	
68001500	7	568	1.5	1997-98	2.94	2.43	3.5	3.76	3.33	3.46	4.8	6.11	5.63	5.88	5.69	5.55	5.47	4.72	4.7	4.76	4.07	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
May01	Average water level for the first decade of May	meter
May02	Average water level for the second decade of May	meter
May03	Average water level for the last decade of May	meter
Jun01	Average water level for the first decade of June	meter
Jun02	Average water level for the second decade of June	meter
Jun03	Average water level for the last decade of June	meter
Jul01	Average water level for the first decade of July	meter
Jul02	Average water level for the second decade of July	meter
Jul03	Average water level for the last decade of July	meter
Aug01	Average water level for the first decade of August	meter
Aug02	Average water level for the second decade of August	meter
Aug03	Average water level for the last decade of August	meter
Sep01	Average water level for the first decade of September	meter
Sep02	Average water level for the second decade of September	meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Sep03	Average water level for the last decade of September	meter
Oct01	Average water level for the first decade of October	meter
Oct02	Average water level for the second decade of October	meter
Oct03	Average water level for the last decade of October	meter
Maxwl	Maximum water level	meter

Name of Data layer: **Statistical Analysis of Water Level for Wet of SE**

Metadata

Data type	Tabular
Abstract	The dataset contains decadal water level data (of Eastern Hill region for monsoon period), computed for each node, which is generated at the mid-points of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and verification of the model
Completeness	The data layer has been created for the Eastern Hill region
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information is created by using MIKE-11, a one dimensional mathematical model, to interpret the water level values where the observed values are not available.
Process description	Computed results cover decade wise water level values of the mid-points of available cross-sections for each monsoon season. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03
68000000	7	568	0	1996-97	3.66	3.92	4.04	3.27	3.7	4.34	5.98	5.34	4.75	5.63	5.64	5.67	4.96	4.74	4.32	4.14	4.4	
68000000	7	568	0	1997-98	2.96	2.44	3.52	3.78	3.34	3.47	4.84	6.18	5.69	5.95	5.77	5.63	5.54	4.77	4.75	4.81	4.11	
68001500	7	568	1.5	1996-97	3.64	3.9	4	3.25	3.68	4.31	5.9	5.27	4.71	5.58	5.57	5.6	4.9	4.69	4.29	4.11	4.35	
68001500	7	568	1.5	1997-98	2.94	2.43	3.5	3.76	3.33	3.46	4.8	6.11	5.63	5.88	5.69	5.55	5.47	4.72	4.7	4.76	4.07	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
May01	Average water level for the first decade of May	meter
May02	Average water level for the second decade of May	meter
May03	Average water level for the last decade of May	meter
Jun01	Average water level for the first decade of June	meter
Jun02	Average water level for the second decade of June	meter
Jun03	Average water level for the last decade of June	meter
Jul01	Average water level for the first decade of July	meter
Jul02	Average water level for the second decade of July	meter
Jul03	Average water level for the last decade of July	meter
Aug01	Average water level for the first decade of August	meter
Aug02	Average water level for the second decade of August	meter
Aug03	Average water level for the last decade of August	meter
Sep01	Average water level for the first decade of September	meter
Sep02	Average water level for the second decade of September	meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Sep03	Average water level for the last decade of September	meter
Oct01	Average water level for the first decade of October	meter
Oct02	Average water level for the second decade of October	meter
Oct03	Average water level for the last decade of October	meter
Maxwl	Maximum water level	meter

Name of Data layer: **Statistical Analysis of Water Level for Wet of SW**

Metadata

Data type	Tabular
Abstract	The dataset contains decadal water level data (of Eastern Hill region for monsoon period), computed for each node, which is generated at the mid-points of available cross-sections.
Quality	The quality of the model information depends on the input data, calibration and verification of the model
Completeness	The data layer has been created for the Eastern Hill region
History of the dataset	The hydrodynamic models have been developed over the years during SWSMP (Surface Water Simulation Modelling Programme) I, II and III and regularly validated by SWMC. The model results for the period from 1965-66 to 1989-90 at all computational grid points have been used for this statistical analysis. This post processing of model results have been done by SWMC as a requirement of NWMP for the assessment of surface water availability.
Purpose of production	This analyzed information is created by using MIKE-11, a one dimensional mathematical model, to interpret the water level values where the observed values are not available.
Process description	Computed results cover decade wise water level values of the mid-points of available cross-sections for each monsoon season. NWRD has stored the dataset in an organised way.

Sample of Data

Grid_id	Region_id	River_id	Chainage	Year	May01	May02	May03	Jun01	Jun02	Jun03	Jul01	Jul02	Jul03	Aug01	Aug02	Aug03	Sep01	Sep02	Sep03	Oct01	Oct02	Oct03
68000000	7	568	0	1996-97	3.66	3.92	4.04	3.27	3.7	4.34	5.98	5.34	4.75	5.63	5.64	5.67	4.96	4.74	4.32	4.14	4.4	
68000000	7	568	0	1997-98	2.96	2.44	3.52	3.78	3.34	3.47	4.84	6.18	5.69	5.95	5.77	5.63	5.54	4.77	4.75	4.81	4.11	
68001500	7	568	1.5	1996-97	3.64	3.9	4	3.25	3.68	4.31	5.9	5.27	4.71	5.58	5.57	5.6	4.9	4.69	4.29	4.11	4.35	
68001500	7	568	1.5	1997-98	2.94	2.43	3.5	3.76	3.33	3.46	4.8	6.11	5.63	5.88	5.69	5.55	5.47	4.72	4.7	4.76	4.07	

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Grid_id	Grid ID	
Region_id	Region Id	
River_id	River id	
Chainage	Cumulative distance of the measuring point	meter
Year	Year	
May01	Average water level for the first decade of May	meter
May02	Average water level for the second decade of May	meter
May03	Average water level for the last decade of May	meter
Jun01	Average water level for the first decade of June	meter
Jun02	Average water level for the second decade of June	meter
Jun03	Average water level for the last decade of June	meter
Jul01	Average water level for the first decade of July	meter
Jul02	Average water level for the second decade of July	meter
Jul03	Average water level for the last decade of July	meter
Aug01	Average water level for the first decade of August	meter
Aug02	Average water level for the second decade of August	meter
Aug03	Average water level for the last decade of August	meter
Sep01	Average water level for the first decade of September	meter
Sep02	Average water level for the second decade of September	meter

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Sep03	Average water level for the last decade of September	meter
Oct01	Average water level for the first decade of October	meter
Oct02	Average water level for the second decade of October	meter
Oct03	Average water level for the last decade of October	meter
Maxwl	Maximum water level	meter

Name of Data layer: **Water Level (Non Tidal) of BWDB**

Metadata

Data type	Time Series Table
Abstract	This data layer contains daily non-tidal water level data collected at 281 non-tidal water level stations of Bangladesh Water Development Board (BWDB).
Quality	Data is available for all non-tidal water level stations (281) of BWDB (from 1-4-1910 to 31-3-2010). But extent of data availability varies from station to station. Some data are missing at some stations. The data those are to be obviously errors, have been excluded by NWRD. .
Completeness	The data layer covers all non-tidal water level stations of BWDB.
History of the dataset	Bangladesh Water Development Board collected and stored this daily water level data from different non-tidal water level stations throughout the country for a long period of time.
Purpose of production	The non-tidal water level dataset has been incorporated to NWRD to use it in different Hydrological and Environmental analysis.
Process description	Collecting this data layer from BWDB, NWRD has checked the obvious errors and stored in an ordered format.

Sample of Data

Stationid	Datetime	Tsvalue_old	Tsvalue_updated
15J	02/10/2003	15.51	15.51
15J	03/10/2003	15.47	15.47
15J	04/10/2003	15.51	15.51
15J	05/10/2003	15.59	15.59
15J	06/10/2003	15.63	15.63
15J	07/10/2003	15.67	15.67
15J	08/10/2003	15.72	15.72
15J	09/10/2003	15.87	15.87
15J	10/10/2003	16.04	16.04
15J	11/10/2003	16.12	16.12

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stationid	Station Identification Number Given By BWDB	
Datetime	The Date of Data Collection.	
Tsvalue_old	Raw Water level data collected from source	meter
Tsvalue_updated	Water level data checked for obvious errors	meter

Name of Data layer: **Water Level (Tidal) of BWDB**

Metadata

Data type	Time Series Table
Abstract	This data layer contains the records of daily tidal water level collected by BWDB (Bangladesh Water Development Board) at 193 tidal water level stations.
Quality	Daily tidal water level data is available from 1-4-1909 to 30-11-2009 at 181 stations of BWDB. There are some missing of data in some stations within the specified period of data availability. Quality of this data set depends on the quality of collection and storing process of data collecting agency. Obvious errors have been deleted by NWRD.
Completeness	The data layer covers all tidal stations of BWDB.
History of the dataset	Bangladesh Water Development Board has collected and stored this daily water level data from different tidal water level stations throughout the country for a long period of time.
Purpose of production	Daily water level (Tidal) data is collected for different Hydrological and Environmental analysis.
Process description	Collecting this data layer from BWDB, NWRD has checked the obvious errors and stored in an ordered format.

Sample of Data

Stationid	Datetime	Tsvalhigh_old	Tsvalhigh_updated	Tsvallow_old	Tsvallow_updated
1	01/04/1959	1.07	1.07	-0.46	-0.46
1	02/04/1959	0.98	0.98	-0.34	-0.34
1	03/04/1959	0.94	0.94	-0.09	-0.09
1	04/04/1959	0.98	0.98	-0.52	-0.52
1	05/04/1959	0.88	0.88	-0.55	-0.55
1	06/04/1959	1.01	1.01	-0.37	-0.37
1	07/04/1959	1.04	1.04	-0.09	-0.09
1	08/04/1959	1.07	1.07	-0.58	-0.58

Bundle Information (Data Field Description and Unit)

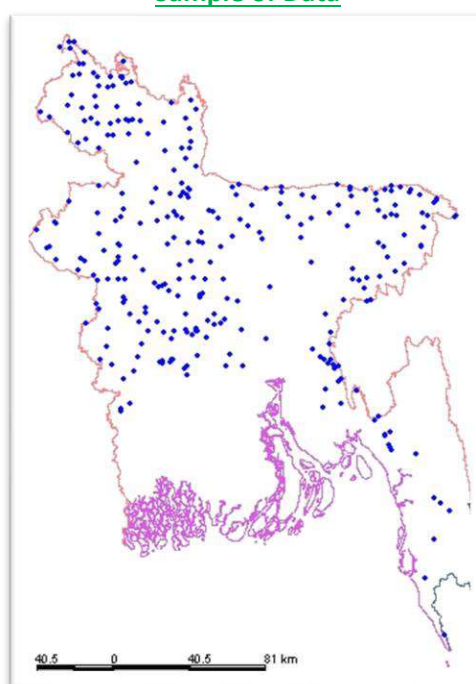
FIELD	FIELD_NAME	UNIT
Stationid	ID of Each Station	
Datetime	Data Capturing Date	
Tsvalhigh_old	Original Time Series High Tide Level collected from Source	Meter
Tsvalhigh_updated	Updated High Tide Level (excluding all 99999 values, Values both high and low are 0 and other obvious errors)	Meter
Tsvallow_old	Original Time Series Low Tide Level collected from Source	Meter
Tsvallow_updated	Updated Low Tide Level (All 99999 values, Values both high and low are 0 and other obvious errors are deleted)	Meter

Name of Data layer: **Water Level Stations (Non Tidal) of BWDB**

Metadata

Dataset type	Spatial
Abstract	A spatial data layer of the 296 non-tidal water level stations maintained by Bangladesh Water Development Board.
Quality	Point locations have been checked using the published book of BWDB and other attribute information is reliable in comparison with the source book.
Completeness	The data layer encompasses all the non-tidal water level stations of BWDB.
History of the dataset	Source of the dataset is a hard copy map titled 'Hydrological Network Map' published by Bangladesh Water Development Board (BWDB) in 1:750,000 scale.
Purpose of production	This data layer is essential to get the information of station locations of BWDB at which non-tidal water level data are collected.
Process description	NWRD has captured the point data layer from the 'Hydrological Network Map' of BWDB and attached other associated attribute information according to the source map. Some missing stations have been generated according to the locational information collected from a book titled 'Index of Surface Water Hydrological Observation Stations in Bangladesh' published by BWDB, in March 1982.

Sample of Data



Attribute Table

Stnid	Stnname	Rivname	Longbtm	Latbtm	Longdd	Latdd	Obstype	Statobs	Insttype	Statinst	Subdivid	Instaldate	Disconddate	Bm	Remarks
10	Simulbari	Bangali	454100.91	758023.69	89.55	24.94	GD	GD	M	M	RS	31.5.45	-	60.62	-
100	Janipur	Gorai-Madhumoti	426920.09	631806.31	89.28	23.8	G	G	M	M	PB	01.7.59	-	TBM	-
101	Kamarkhali	Gorai-Madhumoti	453113	602249.25	89.54	23.53	GDS	GDS	M	M	FP	19.8.57	-	29.13	-
101.5	Kamarkhali Transit	Gorai-Madhumoti	451525.32	601815	89.53	23.53	GD	-	M	-	FP	30.10.66	-	TBM	-

Bundle Information (Data Field Description and Unit)

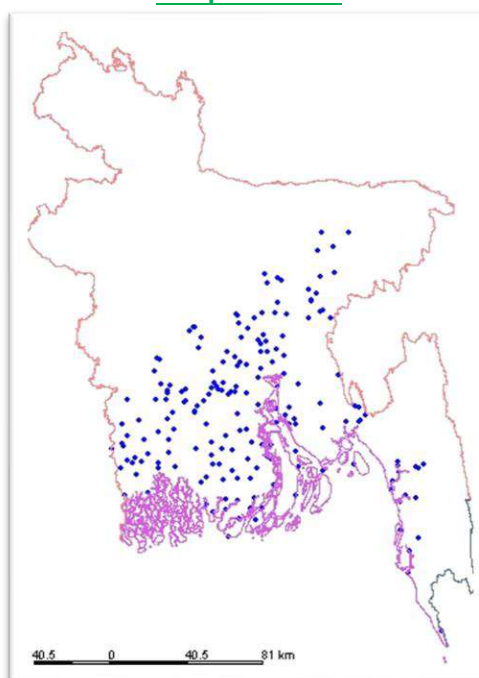
FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stnid	Station ID	
Stnname	Station Name	
Rivname	River Name	
Longbtm	Longitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meters
Latbtm	Latitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meters
Longdd	Longitude In Degree Decimal	In Degree Decimal
Latdd	Latitude In Degree Decimal	In Degree Decimal
Obstype	Observation Type (G=Water Level, D=Discharge, S=Sediment)	
Insttype	Installation Type (A=Automatic, M=Manual)	
Statinst	Installation State (A=Automatic, M=Manual)	
Subdivid	Sub Division ID	
Instaldate	Installation Date	
Disconddate	Discontinuation Date	
Bm	Bench Mark	feet
Remarks	Remarks	

Name of Data layer: **Water Level Stations (Tidal) of BWDB**

Metadata

Dataset type	Spatial
Abstract	A spatial data layer of the 296 non-tidal water level stations maintained by Bangladesh Water Development Board.
Quality	Point locations have been checked using the published book of BWDB and other attribute information is reliable in comparison with the source book.
Completeness	The data layer encompasses all the non-tidal water level stations of BWDB.
History of the dataset	Source of the dataset is a hard copy map titled 'Hydrological Network Map' published by Bangladesh Water Development Board (BWDB) in 1:750,000 scale.
Purpose of production	This data layer is essential to get the information of station locations of BWDB at which non-tidal water level data are collected.
Process description	NWRD has captured the point data layer from the 'Hydrological Network Map' of BWDB and attached other associated attribute information according to the source map. Some missing stations have been generated according to the locational information collected from a book titled 'Index of Surface Water Hydrological Observation Stations in Bangladesh' published by BWDB, in March 1982.

Sample of Data



Attribute Table

Stnid	Stnname	Rivname	Longbtm	Latbtm	Longdd	Latdd	Obstype	Statobs	Insttype	Statinst	Subdivid	Instaldate	Disconddate	Bm	Remarks
10	Simulbari	Bangali	454100.91	758023.69	89.55	24.94	GD	GD	M	M	RS	31.5.45	-	60.62	-
100	Janipur	Gorai-Madhumoti	426920.09	631806.31	89.28	23.8	G	G	M	M	PB	01.7.59	-	TBM	-
101	Kamarkhali	Gorai-Madhumoti	453113	602249.25	89.54	23.53	GDS	GDS	M	M	FP	19.8.57	-	29.13	-
101.5	Kamarkhali Transit	Gorai-Madhumoti	451525.32	601815	89.53	23.53	GD	-	M	-	FP	30.10.66	-	TBM	-

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stnid	Station ID	
Stnname	Station Name	
Rivname	River Name	
Longbtm	Longitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meters
Latbtm	Latitude in BTM (Bangladesh Transverse Mercator) Coordinate	Meters
Longdd	Longitude In Degree Decimal	In Degree Decimal
Latdd	Latitude In Degree Decimal	In Degree Decimal
Obstype	Observation Type (G=Water Level, D=Discharge, S=Sediment)	
Insttype	Installation Type (A=Automatic, M=Manual)	
Statinst	Installation State (A=Automatic, M=Manual)	
Subdivid	Sub Division ID	
Instaldate	Installation Date	
Disconddate	Discontinuation Date	
Bm	Bench Mark	feet
Remarks	Remarks	

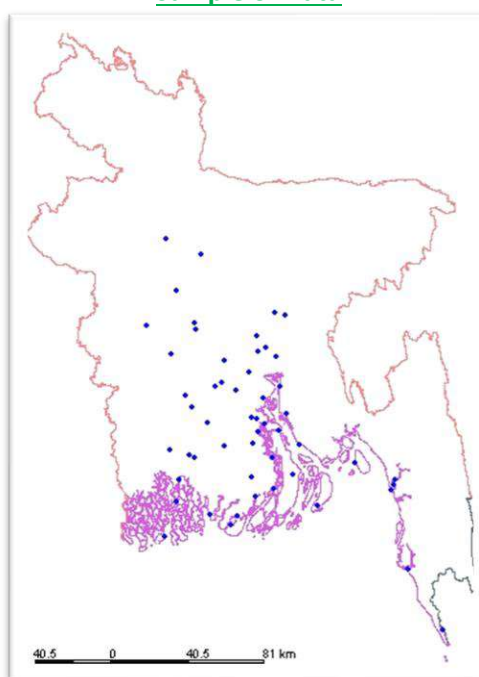
SUBDIVID	SUBDIVNAME
Nmd	Northern Measurement Division, Pabna.
Dp	Dinajpur Hydrological Sub-division.
Rs	Rajshahi Hydrological Sub-division.
Pb	Pabna Hydrological Sub-division.
Nem	North-eastern Measurement Division, Dhaka.
Da	Dhaka Hydrological Sub-division.
My	Mymensingh Hydrological Sub-division.
Sy	Sylhet Hydrological Sub-division.
Swm	South-western Measurement Division, Faridpur.
Js	Jessore Hydrological Sub-division
Fp	Faridpur Hydrological Sub-division.
Kh	Khulna Hydrological Sub-division.
Ba	Barisal Hydrological Sub-division.
Sem	South-eastern Measurement Division, Comilla.
Co	Comilla Hydrological Sub-division.
Bb	Brahmanbaria Hydrological Sub-division.
Ct	Chittagong Hydrological Sub-division.

Name of Data layer: **Water Level Stations of BIWTA**

Metadata

Data type	Spatial
Abstract	This data set contains tidal and non-tidal water level data collected at 47 stations of Bangladesh Inland Water Transport Authority which applied to measure standard low water and standard high water levels in Bangladesh.
Quality	The location of the stations are approximated from the attribute information. Some points are generated from the available latitude and longitude information of BIWTA.
Completeness	The data layer encompasses all the tidal water level stations of BIWTA.
History of the dataset	Bangladesh Inland Water Transport Authority maintained these station's data as chart data
Purpose of production	The tidal and non-tidal water level dataset has been incorporated to NWRD to use it in different Hydrological and Environmental analysis.
Process description	This data layer was generated from the draft final report of "Determination of standard low water and standard high water levels in Bangladesh, volume II and some attribute information from BIWTA.
Additional information source for the dataset	Drafted final report Volume I and II for the project "Determination of Standard Low Water and Standard High Water Levels in Bangladesh".

Sample of Data



Attribute Table

Stnid	Longdd	Latdd	Longbtm	Latbtm	Stnname	Rivname	Authority	Type	Bm_mpwd	Bm_cd	Remark
0	0	0	426920.09	631806.31	Janipur	Gorai-Madhumoti	BIWTA	-	0	0	-
0	0	0	447370.12	723777.18	Khanpur	Bangali	BIWTA	-	0	0	-
0	0	0	453112.99	602249.25	Kamarkhali	Gorai-Madhumoti	BIWTA	-	0	0	-
0	0	0	457937.53	668576.68	Bagabari	Koratoya-Atrai-Gur-	BIWTA	-	0	0	-

Bundle Information (Data Field Description and Unit)

FIELD_NAME	FIELD_DESCRIPTION	UNIT
Stnid	Station ID given by BIWTA	
Longdd	Longitude In Degree Decimal	degree decimal
Latdd	Latitude In Degree Decimal	degree decimal
Longbtm	Longitude in BTM (Bangladesh Transverse Mercator) Coordinate	meter
Latbtm	Latitude in BTM (Bangladesh Transverse Mercator) Coordinate	meter
Stnname	Station name	
Rivname	River name	
Authority	The authority maintained the gauge (Chittagong port authority (CPA), Bangladesh Inland Water Transport Authority (BIWTA), Monglaport authority (MPA))	
Type	Station Type	
Bm_mpwd	Bench mark in PWD	meter
Bm_cd	Bench mark of chart datum	
Remarks		