Government of the People's Republic of Bangladesh

Operational Plan
For
"NATIONAL NUTRITION SERVICES"

July 2011 - June 2016

Health, Population and Nutrition Sector Development Program (HPNSDP)

DIRECTORATE GENERAL OF HEALTH SERVICES
Ministry of Health and Family Welfare

July 2011

Abbreviation:

ABCN	Area Based Community Nutrition
ADP	Annual Development Program
AIDS	Acquired Immune Deficiency Syndrome
ANC	Ante Natal Care
ARH	Adolescent Reproductive Health
ARI	Acute Respiratory Infection
BBS	Bangladesh Bureau of Statistics
BCC	Behavioral Change Communication
BDHS	Bangladesh Demography and Health Survey
BFHI	Baby Friendly Hospital Initiative
BHW	Bangladesh Health Workforce
BMA	Bangladesh Medical Association
BMI	Body Mass Index
BNNC	Bangladesh National Nutrition Council
BSTI	Bangladesh Standard and Testing Institution
DAAR	Disbursement of Accelerated Achievement of Results
CBO	Community Based Organization
CBN	Community Based Nutrition Service
CC	Community Clinic
CCMG	Community Clinic Management Group
CHCP	Community Health Care Provider
CHP	Community Health Provider
CHT	Chittagong Hill Tracts
CMSD	Centre for Medical Store Depot
CMAM	Community based Management of Acute Malnutrition
CNU	Child Nutrition Unit
CS	Civil Surgeon
CSBA	Community Skill Birth Attendant
DDFP	Deputy Director of Family Planning
DFID	Department for International Development
DGFP	Directorate General of Family Planning
DGHS	Directorate General of Health Services
DPs	Development Partners
EBF	Exclusive Breast Feeding
EC	Executive Committee
ECD	Early Childhood Development
ENC	Essential Newborn Care
EPI	Expanded Program on Immunization
ESD	Essential Service Delivery
FP	Family Planning
FWA	Family Welfare Assistant
FWV	Family Welfare Visitor
FYP	Five Year Plan
GMP	Growth Monitoring and Promotion
GOB	Government of Bangladesh
HA	Health Assistant
HEB	Health Education Bureau
HEP	Health Education Programme
HFWC	Health and Family Welfare Centre
HI	Health Inspector
HIS	Health Information System
HKI	Helen Killer International
HNPSP	Health , Nutrition and Population Sector Program
HPN	Health Population Nutrition

HPNSDP	Health, Population and Nutrition Sector Development Program
HPSP	Health and Population Sector Program
HR	Human Resource
HRM	Human Resources Management
HRD	Human Resources Development
ICDDR,B	International Centre for Diarrheal Diseases Research, Bangladesh
IDA	International Development Association
IDD	Iodine Deficiency Disorder
IEC	Information, Education and Communication
IMCI	Integrated Management of Childhood Illness
IMR	Infant Mortality Rate
IPH	Institute of Public Health
IPHN	Institute of Public Health Nutrition
IYCF	Infant and Young Child Feeding
LCMSMS	Liquid Chromatography - Mass Spectrometry
LDs	Line Directors
M&E	Monitoring and Evaluation
MCH	Maternal and Child Health
MDGs	Millennium Development Goals
MIS	Management Information System
MNCH	Maternal, Neonatal and Child Health
MNH	Maternal and Neonatal Health
MNP	Micro-Nutrient Powder
MOI	Ministry Of Information
MOU	Memorandum of Understanding
MTR	Mid Term Review
NCD	Non Communicable Diseases
NGO	Non Government Organization
NID	National Immunization Day
NNP	National Nutrition Program
NNS	National Nutrition Service
NU	Nutrition Unit
NVAC	National Vitamin A Plus Campaign
OP	Operational Plan
OPD	Out-door Patient Department
PHC	Primary Health Care
PIP	Program Implementation Plan
PNC	Post Natal Care
PPR	Public Procurement Rules
QA	Quality Assurance
RFW	Results Framework
RPA	Reimbursable Project Aid
SACMO	Sub -Assistant Community Medical Officer
SAM	Severe Acute Malnutrition
TA	Technical Assistance
TOR	Terms of Reference
TOT	Training Of Trainer
UHC	Upazila Health Complex
UHFWC	Union Health and Family Welfare Centre
UPHCP	Urban Primary Health Care Project
USI	Universal Salt Iodization
WB	World Bank
WHO	World Health Organization

Name of the Operational Plan (OP): National Nutrition Services (NNS)

1. **Name of the Sector Programme:** Health, Population and Nutrition Sector Development Program (HPNSDP)

2. **Sponsoring Ministry:** Ministry of Health and Family Welfare

3. **Implementing Agency:** Directorate General of Health Services

4. **Implementation Period:**

   a) **Commencement :** July 2011

   b) **Completion :** June 2016

5. Objectives of the OP:

General Objective:

To reduce the prevalence of malnutrition among the people of Bangladesh with special emphasis on the children, women, adolescents and underprivileged section of the society.

Specific Objectives:

- To implement a mainstreamed, comprehensive package of nutrition services to reduce maternal and child malnutrition and ensure universal access
- To develop and strengthen coordination mechanisms with key relevant sectors (especially Ministry of Food and Disaster Management, Ministry of Agriculture, Ministry of Women and Children Affairs, Ministry of Information, Ministry of Education, Ministry of Livestock and Fisheries, Ministry of Local Government and Rural Development and Cooperative, etc.) to ensure a multi-sectoral response to malnutrition
- To strengthen the human resource capacity to manage, supervise and deliver nutrition services at the different levels of the health &family planning services.
- To strengthen nutrition management information systems and operations research to ensure an evidence-based response and establish linkages to HIS.

6. Estimated Cost:

7.1 PIP OP Cost

(Taka in lakh)

Approved cost of the PIP (Development Budget)	Total	GOB	PA (RPA)	Source of PA
Approved cost of PIP (Development bugged)	2217666.21	860350.12	1357316.05 (869791.03)	Pool Fund, DPs & Co-financiers
Estimated Cost of the OP.	149009.38	28528.00	120481.38 (85055.38)	Pool Fund, UNICEF, USAID, WHO, JICA,CIDA, WFP, FAO, etc.
Cost of OP as % of PIP	6.72%	3.31%	8.88%	

7.2 Estimated Cost of OP (According to Financing Pattern):

(Taka in lakh)

Source	Financing Pattern	2011-12	2012-13	2013-14	2014-16	Total	Source of fund
GOB	GOB TAKA (Foreign Exchange)	5316.69	5970.03	5741.43	11199.85	28228	
	CD-VAT	60.00	60.00	60.00	120.00	300.00	
	Total GOB=	**5376.69**	**6030.03**	**5801.43**	**11319.85**	**28528.00**	
PA	RPA (Through GOB)	889.51	28003.08	27365.68	28797.11	85055.38	Pooled fund including JICA
	DPA	3760.00	7533.00	9240.00	14893.00	35426.00	
	Total PA=	**4649.51**	**35536.08**	**36605.68**	**43690.11**	**120481.38**	
Grand Total		**10026.20**	**41566.11**	**42407.11**	**55009.96**	**149009.38**	

8. OP Management Structure and Operational Plan Components :

(Attached Management set up at Annexure-I)

8.1 Line Director : Director, Institute of Public Health Nutrition

8.2 Major Components of OP and their Programme Managers / DPM

Program Manager (PM)	Major Activity	DPM
PM-DGHS (DD-IPHN)	a) Behaviour Change Communication (BCC)	DPM 2
	b) Control of Vitamin-A deficiency disorder	
	c) Control & prevention of Anaemia	
	d) Control of Iodine deficiency Disorder	
	e) Other Micronutrient problems of Public Health importance (zinc, vitamin 'D,' calcium etc.)	
	f) Community & facility based management of severe acute malnutrition(SAM)	DPM 1
	g) Protection, Promotion & Support of Breastfeeding/ Infant and Young Child Feeding (IYCF) including BFHI & BMS Code	
	h) Food fortification (Salt Iodization, fortification of oil/other food with Vitamin 'A', iron etc.)	
	i) School Nutritional education Program	DPM 3
	j) Food Quality and Food Safety	
	k) Monitoring, Evaluation, Operations Research, Survey	DPM 5
	l) Nutrition Surveillance Program	
	m) Establishment of nutrition unit (NU) and strengthening of existing NU	DPM 4
	n) Community based Nutrition (CBN) in selected area	
	o) Nutrition in emergency / NCD	
	p) Establishment of nutrition Service in CC & GMP	
PM-DGFP (DD-DGFP on deputation)	a) Behaviour Change Communication (BCC)	DPM 10
	b) Control of Vitamin-A deficiency disorder	DPM 9
	c) Control & prevention of Anaemia	
	d) Control of Iodine deficiency Disorder	DPM 8
	e) Other Micronutrient problems of Public Health importance (zinc, vitamin 'D,' calcium etc.)	DPM 9
	f) Community & facility based management of severe acute malnutrition (SAM)	DPM 8
	g) Protection, Promotion & Support of Breastfeeding/ Infant and Young Child Feeding (IYCF) including BFHI & BMS Code	
	h) Monitoring, Evaluation, Operations Research, Survey	
PM-Multisectoral	a) Behaviour Change Communication (BCC)	DPM 6
	b) Control of Vitamin-A deficiency disorder	DPM 7
	c) Control & prevention of Anaemia	
	d) Control of Iodine deficiency Disorder	
	e) Other Micronutrient problems of Public Health importance (zinc, vitamin 'D,' calcium etc.)	
	f) Community & facility based management of severe acute malnutrition (SAM)	DPM 6
	g) Protection, Promotion & Support of Breastfeeding/ Infant and Young Child Feeding (IYCF) including BFHI & BMS Code	
	h) Monitoring, Evaluation, Operations Research, Survey	

8.3. Proposed Manpower in the Development Budget (as per PIP)

(Pay in taka)

Sl. No.	Name of the Post	Number of post	Pay Scale	Grade	Consolidated Pay per Person/Month	Total Month	Total Pay	Remarks
1	Programming Officer	1	18500	6	29375	65	1909375.00	Carried over
2	Accounts Officer	1	11000	9	18200	65	1183000.00	Carried over
3	Personal Officer	2	8000	10	13500	65	1755000.00	Carried over
4	Programme Assistant	8	6400	11	11090	65	5766800.00	Carried over
5	Auditor	1	6400	11	11090	65	720850.00	Carried over
6	Data Entry Operator*	2	4700	16	8605	65	1118650.00	Carried over
7	Logistic Assistant	2	5900	12	10290	65	1337700.00	Carried over
8	Receptionist	1	5900	12	10290	65	668850.00	Carried over
9	Driver	9	4700	16	8605	65	5033925.00	Out sourcing
10	MLSS	15	4100	20	7750	65	7556250.00	Out sourcing
11	Finance Specialist (VGD-NNP)	1	12000	8	19300	65	1254500.00	Carried over
12	Reporter-cum-Computer Operator (VGD-NNP)	1	8000	10	13500	65	877500.00	Carried over
13	Accountant (VGD-NNP)	1	6400	11	11090	65	720850.00	Carried over
14	Driver (VGD-NNP)	1	4700	16	8605	65	559325.00	Out sourcing
15	MLSS (VGD-NNP)	1	4100	20	7750	65	503750.00	Out sourcing
	Total =	**47**					**31635175.00**	

* Note: According to the Finance Ministry/ECNEC decision under process

65 months is made by 60 months' salary and added 5 months other allowances included festival bonus

9. Description

9. a.1. Magnitude of the Problem of Malnutrition in Bangladesh

During the past 2 decades, Bangladesh has made considerable progress in development, sustaining high rates of economic growth and reducing poverty rates by 9% between 2000 and 2005 (from 49% to 40 %). The country is also on track to meet some of the Millennium Development Goals (MDGs) related to human development such as child mortality and combating HIV/AIDS, where it has outperformed other countries in the region. However, all these improvements have not translated into positive effects on maternal and child nutrition. The prevalence of malnutrition in Bangladesh is still one of the highest among the developing countries.

Although there has been a decline in rate of underweight children over the years, the rates of underweight, stunting and wasting are still all above the WHO's thresholds for very high levels, typically found in emergency situations. Around 7.8 million children suffer from under nutrition, which contributes to at least one third of child deaths; Percentage of underweight children (underweight for age) declined to 41% in 2006 from 48% in 2003. The percentage of wasted children (underweight for height) fluctuates, with very high levels in the pre-harvest season (17% in 2007) and lower levels in other seasons. Percentage of stunted

children (short for age) has not changed much over the years and was estimated at 43% in 2007 (BDHS). According to WHO health targets set in 1998, stunting rate in children should be less than 20% in all countries and in all specific sub-groups within the countries by the year 2020". Stunting is an indicator of chronic malnutrition and unlike stunting, underweight status is influenced by short term changes in health or food security situation. It is also noteworthy that large disparities in nutritional status exist across the socio-economic groups. Nearly 51% of under-fives in the lowest quintile are undernourished, compared to 26% in the highest quintile (BDHS 2007).). The causes of stunting are multifactorial and include among other factors, lack of exclusive breastfeeding, inappropriate complementary feeding, recurrent infections, etc.

Deficiencies in key micronutrients have been and still continue to be a public health challenge in Bangladesh. Vitamin A deficiency was identified as a public health problem since the 1960's and has been the single most important preventable cause of night blindness in children. More importantly, subclinical vitamin A deficiency among pre-school aged children was classified as a public health problem in rural Bangladesh where almost 75% had vitamin A values below the WHO cut-off of <1.05 µmol/ for mild vitamin A deficiency. More than 20% had serum retinol concentrations less than 0.70 µmol/l, the benchmark for a public health problem. Such high levels of mild vitamin A deficiency are associated with increased risk of mortality in children. Since the past 25 years, vitamin A supplementation program targeting children 9 - 59 months of age has been implemented by the IPHN, health services and NGOs with coverage reaching over 80%. This has contributed to a reduction in night blindness in children 12-59 months of age living in rural areas reduced from 3.5% (1983) to 0.62% (1998)4. To sustainably eliminate vitamin A deficiency in the population, supplementation needs to be complemented with more effective and sustainable improvements in dietary vitamin A. Fortification of edible oil and other foods is one of the means of achieving this. However, the long term solution through dietary diversity needs to be promoted for sustainable reduction in Vitamin A and other micronutrient deficiencies.

Although goiter is the most visible form of iodine deficiency, insufficient iodine at conception, during pregnancy and early childhood period causes varying degrees of irreversible brain damage. The median urinary iodine levels in children, an indicator is cub-clinical iodine deficiency, increased from 54 ug/L in 1993 to 163 ug/L in 2004/51. Furthermore, the total goiter rate declined from 49.9% to 6.2 % in school children and from 55.6% to 11.7% in women. Based on the urinary iodine rate in school children, the IDD problem in Bangladesh is classified as mild. However, despite these gains, the coverage of adequately iodized salt remains low and there are some areas where pregnant women and subsequently their newborn are not sufficiently protected from varying degrees of brain damage as a result of iodine deficiency. The 2004/5 National IDD and USI Survey found that only 51% of household salt is adequately iodized (≥15 ppm). The same survey showed only 45% of iodized factory salt samples contained ≥30 ppm of iodine, and 9% contained ≥100 ppm.

Unlike iodine and vitamin A deficiencies, over the years there has been very limited progress on anemia and in some cases an increase. Anemia is widespread across the different age groups, with 46% of pregnant women, 64% of children aged 6-23 months, 42% of children aged 24-59 months, 30% of adolescent girls and 33% of non-pregnant women (BBS/UNICEF, 2004). According to WHO criteria, the rates in children are considered a severe public health problem (above 40%). The problem in pregnant women is considered moderate (prevalence 20-39%). In the urban areas of Bangladesh, the

prevalence of anaemia in preschool children is strongly associated with the education level of his/her mother, an indicator of socio-economic status: 69% of children of illiterate mothers are anaemic compared with only 37% of children of mothers who have a Secondary School Certificate or higher level of education (BBS/UNICEF, 2004).

9.a.2. Policy and Program Response

The Government of Bangladesh has, for many years, employed many different strategies and programs to combat the problem of malnutrition in the country. In 1974 the Government established the Institute of Public Health Nutrition (IPHN) to assist it on formulating policy and strategy for nutrition related activities and programs and also to conduct research, training and surveillance. More specifically, some of the salient terms of references of IPHN were to investigate into the distribution, causes, nature and magnitude of the nutrition problem and provide guidelines for the development for national nutrition program, plans and projects as part of national development in order to propose effective treatment for the nutritional diseases, to develop appropriate interventions for the solution of the nutrition problems, to develop specific approaches in food technology, education to the public and delivery of services, to test current technology in pilot areas and to evaluate nutritional impact of different interventions, to develop appropriate norms and guidelines for all nutritional interventions, safety of food advertisement and training and education; to promote collaboration among different institutions working in the field of nutrition as to avoid unnecessary duplications and to promote full utilization of the human resources and to act as technical secretariat nutrition.

In 1975, the Bangladesh National Nutrition Council (BNNC) was established by order of the President of Bangladesh. Headed by the Prime Minister, the Council was constituted by concerned ministers, secretaries, senior administrators, policy makers, nutrition experts, journalists, heads of relevant organizations, and divisional women representatives. The management of the council was vested in an Executive Committee (EC), headed by the Minister for Health and Family Welfare. Secretaries of different ministries and heads of different agencies represent the other EC members. The BNNC also has a Standing Technical Committee consisting of technical experts on nutrition. The objectives of the BNNC are the formulation and updating of the National Food and Nutrition Policy; approval of nutrition programs for different ministries and institutes; and monitoring and evaluation of nutrition research programs. Other functions include- establishment of a nutrition information and documentation centre, preparation of a national plan for nutrition, organizing national and international conferences and training courses; publishing and disseminating technical and general information on nutrition; and providing financial support for nutrition related research projects. Although BNNC has been tasked with important responsibilities for nutrition in the country, it has unfortunately not been effective during the past decade.

The first major nutrition program in the country was the Bangladesh Integrated Nutrition Program (BINP), which was implemented from 1996 to 2002. The core component of BINP was the community based nutrition activities implemented through NGOs. The project covered 61 upazilas and approximately 16% of the rural population. BINP ended in 2002 and the same activities were continued under the National Nutrition Project (NNP). The NNP formulation was based on the success of BINP and was designed to cover about one fourth of the population. The project was implemented in 110 upazilas including BINP upazilas. Actual implementation was delayed by two years and in 2006 it was integrated into the Health, Nutrition and Population Sector Program (HNPSP).

9.a.3. National Nutrition Services (NNS): A Mainstreamed and Integrated Approach to Addressing Malnutrition

Under HNPSP, there were two OPs named National Nutrition Programme (NNP) and Micronutrient Supplementation (MNS). Facility based limited services were provided through MNS and community based services were undertaken through NNP-OP. There was evidence of lack of coordination and duplication activities among these two OPs. Moreover, the NNP interventions were contracted to several NGOs and had fragile or no links with the mainstream health system. Referral and intensive management for children with severe acute malnutrition was very inadequate. There are also several other nutrition related projects/ programme run by the different Ministries/Divisions supported by DPs but their activities were not well coordinated and monitored. Moreover, the total estimated cost of the NNP-OP (FY 2003 to 2011) for the interventions in 263 Upazila was Tk. 1,251 crore, whereas it was implemented in about 173 Upazilas in phases covering only 34% of the entire population. The Annual Program Review (APR) of HNPSP in 2009 recommended that to scale up the nutrition interventions the only option is to mainstream the critical nutrition interventions in the services provided through DGHS and DGFP. If the present model of NNP is continued country wide by contracting NGOs, the cost for NNS interventions will be about Tk. 5000.00 crore and it would not possible to achieve MDG target by 2015 with the implementation of the existing model.

In light of this situation, the Government of Bangladesh is planning to accelerate the progress in reducing the persistently high rates of maternal and child under nutrition by mainstreaming the implementation of nutrition interventions into health (DGHS) and family planning services (DGFP), scaling-up the provision area-based community nutrition, updating the National Plan of Action on Nutrition in the light of food and nutrition policies, amongst other important priority actions. To achieve this, nutrition has been made a priority for the proposed sector program and a variety of key strategies and actions will be pursued. The mainstreamed program will be guided by 2 main principles:

- The program will focus on those activities within its mandate and where it has the capacity as well as the comparative advantage to act. The key activities that lie outside the mandate of the health sector, NNS will play a coordination as well as advocacy role and ensure active engagement with other the key sectors (for example, Ministries of Agriculture, Food and Disaster Management, Ministry of Industry, etc)
- The nutrition program will seek to intervene at the different stages of the lifecycle – during pregnancy, at delivery/neonatal, post natal, childhood, adolescence, newly weds – but with a strong focus on the “window of opportunity”, that is, pregnancy through first two years of life.

Under the HPNSDP, the mainstreamed nutrition programme aims to deliver the nutrition services country wide through the existing DGHS and DGFP set up will costs only about 1490.00 crore TK, which will be cost-effective and more sustainable in future. Since MOHFW being implemented SWAp in a sustainable manner from 1998 which covers almost all HPN services, it will not be worthy to have a separate project for the nutrition services with only GOB resources, as because DPs will not fund for the parallel project outside the scope of HPNSDP.

i) Modalities of Institutional Arrangements

The strengthened nutrition service will be housed in the DGHS and implemented through an OP titled “National Nutrition Service (NNS)”. The overall leadership of NNS will be

provided by the Line Director, NNS, who will oversee the delivery of the program, manage the budget and maintain liaison with other LDs of DGHS and DGFP implementing nutrition activities. Director, Institute of Public Health Nutrition (IPHN) will carry out the responsibility of Line Director-NNS to ensure effective coordination. In addition to aforementioned responsibilities, the LD-NNS will also serve as the Member Secretary of the multisectoral Steering Committee chaired by the Secretary and Nutrition Implementation Coordination Committee chaired by the DGHS.

In order to implement nutrition services at the field level and coordinate among different entities dealing with service delivery, three (3) Program Managers (PM) will be working under the supervision of the LD-NNS. Deputy Director of IPHN will be the PM-DGHS, who will be responsible for programme implementation and tasked with overseeing activities of five (5) Deputy Program Managers (DPMs). The Program Manager – DGFP (deputed from DGFP) will be responsible for programme implementation in DGFP, and oversee three (3) DPMs. The third Program Manager PM- Multisectoral will oversee two (2) DPMs, one for Intrasectoral Coordination and the other for Intersectoral Coordination (The organogram of the proposed NNS structure is shown in Annex I). All PMs shall be located in the office of the LD-NNS. Expertise developed in NNP will be utilized in NNS (Annex).

Selection of the female community volunteers to provide community services in the selected areas would be carried out jointly by LD-NNS and respective UHFPOs/UFPOs. These community volunteers will work under the supervision of respective CHCPs and Community Management Group in phases. In each phase, 25% of the upazilas will be covered.

ii) Modalities of Implementation Arrangements (Nutrition Service Delivery)

Nutrition service delivery will be mainstreamed at the delivery levels of health and family planning services and the community clinics being the first contact point with the health system. However, where Community Clinic is not available and in hard to reach areas, special intervention modality would be implemented. Existing Child Nutrition Units (CNU) will be strengthened and one unit will be established in each health facilities including tertiary, district and upazila level.

ii).a. Nutrition Service Delivery at District Hospital/MCWC/Medical College Hospital/ Level

At the district hospital/MCWC/Medical College level, NNS will provide nutrition services including IYCF package, BCC services for pregnant and lactating mothers, SAM management with ongoing other nutrition services and facilitating nutrition activities at the upazila level and below.

ii).b. Nutrition Service Delivery at Upazila Health Complex Level

The Upazilla Health and Family Planning Officer (UHFPO) will have overall responsibility for the delivery of health and nutrition services in the UHC. One of the Medical Officers will be trained and tasked with the overall responsibility of overseeing the delivery of health centre-based nutrition services in the UHC as well as monitoring health centre-based nutrition interventions in all unions and CC's as a whole. The actual delivery of the specific interventions in UHCs will be done by Doctors, Nurses and FWVs based in those facilities. The UHFPO will be supervising NNS activities in UHC, CC and at community levels.

The main activities to be implemented at UHCs will include:

- Treatment of complicated cases of severe and acute malnutrition, provide feedback to facilities from where patients are referred.
- IYCF: counseling to all women with under two children who come to OPD (for example for Immunization, FP methods and at the ORT corner and IMCI Corner) for any reason, for exclusive breast feeding until 6 (180 days) months of age, proper complementary foods and advice on adequate nutrition after six months of age, weight and height measurements.
- Screening for malnutrition (MUAC, growth monitoring), nutrition advice for all children under five, classification and categorization of referred children by level of malnutrition, treatment of severe acute & moderate malnutrition, follow-up of referrals from the community , monitor & follow-up visits to children under treatment.
- Behaviour Change Communication (BCC): In addition to BCC messages on IYCF, nutrition education and counseling will be provided to adolescents, pregnant and lactating women on topics such as, personal hygiene and cleanliness especially during preparation of food and feeding of infants and young children, general nutrition, health and nutritional importance of deworming and consumption of micronutrient supplements (Vit. A, Iron, Folate etc)

Micronutrients: Provide advice guidance to households on iodine, iron, and vitamin A, advocacy and monitor follow-up and compliance of use of iron-folic acid by pregnant women, provision of zinc in addition to ORS during treatment of diarrhea, provision of de-worming medication and post-partum vitamin A supplementation.

ii).c. Nutrition Service Delivery at Union Facility Level

The MO assigned with public health and nutrition services at the UHC level will frequently visit union level UH&FWCs and provide nutrition services and supervise SACMO/MA and FWVs assigned in the UH&FWC to deliver the following nutrition-related services:

- IYCF: counseling all women with <2 children who visit UH&FWC for any reason (for example for immunization, family planning, etc.) for exclusive breast feeding until 6 months of age, proper complementary foods and advice on adequate nutrition after six months of age, and weight and height measurements of children.

- Behaviour Change Communication (BCC): In addition to BCC messages on IYCF nutrition education and counseling will be provided to adolescents, pregnant and lactating women visiting the UH&FWC on topics such as, personal hygiene and cleanliness especially during preparation of food and feeding of infants and young children, general nutrition, health and nutritional importance of deworming and consumption of micronutrient supplements (Vit. A, Iron, Folate etc)

- Micronutrients: Provide advice and guidance to adolescent females, pregnant women, and mothers of under-5 children on iodine, iron, and vitamin A, advocacy and monitor follow-up and compliance of use of iron-folic acid by pregnant women, provision of zinc in addition to ORS during treatment of diarrhea, provision of de-worming medication, and post-partum vitamin A supplementation. Service providers in UH&FWC will also provide micronutrients to their target groups (e.g. Iron folate to adolescents, etc.) and refer complicated cases to primary level (i.e. UHC) with appropriate follow up.

ii).c. Nutrition Service Delivery at Community Clinic Level

The delivery of nutrition services in community clinics will also be under the supervision of the Medical Officer (Public Health and Nutrition) who would have been trained and assigned the responsibility of overseeing the implementation of nutrition activities through the Community Management Group now called Community Group (CG) in their designated area. HAs, FWAs, and Community Health Care Providers (CHCP) and other relevant personnel working at that CC will have the responsibility of delivering the nutrition services. Two or three female Community Health Volunteers will be selected for each community clinic area.

The main activities to be implemented in CC will include:

- IYCF and BCC: counseling all women with children on exclusive breast feeding until 6 months of age including positioning and attachment, supporting for trouble-shooting for any breastfeeding problem, proper complementary foods and advice on adequate nutrition after six months of age, weight and height measurements. In addition, BCC messages on IYCF nutrition education and counseling will be provided to adolescents, pregnant and lactating women on topics such as, personal hygiene and cleanliness especially during preparation of food and feeding of infants and young children, general nutrition, health and nutritional importance of deworming and consumption of micronutrient supplements.

- Screening and Referral: Conduct screening for malnutrition (MUAC, growth monitoring), provide nutrition advice for all children, referral for complicated cases to primary level care facility (i.e. UHC), and follow-up of referrals from the community and monitor follow-up visits to children under treatment.

- Micronutrients: Provide advice guidance to households on iodine, iron, and vitamin A, advocacy and monitor follow-up and compliance of use of iron folic acid by pregnant women, ,provision of zinc in addition to ORS during treatment of diarrhea, provision of de-worming medication, iron-folic acid supplements, post-partum vitamin A supplementation. Service providers at the CC level (viz. CHP, HA, FWA) will also provide micronutrients like Iron folate tablets to target groups.

ii).d. Nutrition Service Delivery at Community Level

The community level will be the focus of all area based Community Nutrition activities/ interventions. At the community level, nutrition services will be delivered by Health Assistants, Family Welfare Assistants and CHCP in addition to their usual duties. These activities will be supervised by their respective supervisors and will be carried out through group counseling; one-to-one counseling during home visits to pregnant women, new mothers, growth falters (that is, pregnant women, infants and young children). The HAs, FWAs and CHCPs will receive supervision and guidance from Health/Family Planning Inspectors and Family Welfare Visitors (FWVs) to carry out nutrition services along with other health and family planning responsibilities. In addition, services of community volunteers will be availed wherever they are available and whenever necessary.

The key tasks at the Community level will include:

- Infant and Young Child Feeding Practices (IYCF): advocacy for the main IYCF practices as well as appropriate nutrition and health/nutrition behaviors for pregnant and lactating women, growth monitoring and promotion. Specific IYCF messages, behaviours and practices to be promoted and re-enforced will include: exclusive breastfeeding for 6

months, introduction of culturally appropriate complementary foods of adequate nutritional quality and quantity at the appropriate age with continued breastfeeding up to 2 years of age, appropriate infant and young child feeding practices during illness, etc.

- Behaviour Change Communication (BCC): In addition to BCC messages on IYCF nutrition education and counseling will be provided to adolescents, pregnant and lactating women on topics such as, personal hygiene and cleanliness especially during preparation of food and feeding of infants and young children, general nutrition, health and nutritional importance of deworming and consumption of micronutrient supplements (Vit. A, Iron, Folate etc)

- CMAM: screening for malnutrition (MUAC, growth monitoring), nutrition advice for all children, referral to appropriate facility for severe and moderate malnutrition, HAs, FWAs, and Community Health Providers provide follow-up visits to children under treatment.

- Micronutrients: Provide advice guidance to households on iodine, iron and vitamin A; advocacy and follow-up for use of iron/folic acid and calcium supplements, by pregnant women and post-partum vitamin A supplementation

- Coordination: HAs, FWAs, and Community Health Providers will play a key role in promoting and ensuring convergence and coordination during the implementation of nutrition sensitive interventions by other sectors in the communities that they will be working in. Examples of nutrition sensitive activities include, food security projects (including nutrition gardens and livestock/fisheries projects), livelihoods projects, water, sanitation/hygiene activities, etc.

9. b Related strategy in PIP

- Use the existing health and family planning infra structure to deliver nutrition services to the target groups
- Intensive community based support by Health, family planning and nutrition worker as peer counselor to ensure improved nutrition among women and children.
- Community clinics will be the main contact points for nutrition services and nutrition services will be provided in all community clinics in an integrated way with EPI, Satellite clinic and other health and family planning programs.
- All Health and Family Planning workers will be trained in nutrition to strengthen nutrition services
- Community based volunteers will be identified and support through training/orientation to perform essential nutrition services and achieve adequate coverage
- Advocacy at the national and community level to gain and maintain the commitment and support for nutrition activities
- Policy communication to create a supportive policy environment for nutrition strategies to address existing and emerging nutrition problems
- Inclusion of nutrition in curriculum of primary, secondary school, medical, nursing and paramedical institute to increase nutrition related knowledge among all levels of the society

- BCC at the community and household level to address maternal, infant, child and adolescent caring practices focusing on key behaviors impacting on nutritional status
- Supplementation of vitamin A, iron folate and other micronutrients to control night blindness, anaemia, IDD and other micronutrients deficiency diseases. Food based approach and food fortification will also be considered
- Deworming for <5 children and adolescent girls and boys to reduce worm load , prevention of aneamia and improve weight gain and growth
- Protection, promotion and support Infant and Young Child Feeding (IYCF) activities to promote early initiation of breast feeding , exclusive breast feeding for the first six months and appropriate complementary feeding on completion of six months
- Referral linkage will be strengthen between community based and higher level health and family planning services (IMCI, EPI, ANC, PNC services)
- Referral system will be established for management of severely malnourished children with complications following the national strategy for SAM
- Advocacy and support for formulation of legislation for food fortification and food safety will be undertaken
- Review and redesigning of community based nutrition services modality to implement in specific areas including hard to reach areas.
- Provide urban nutrition services in collaboration with MOLGRDC
- Establish an effective intra and inter sectoral mechanism at local level and national level to coordinate a wide variety of nutrition services (family planning, agriculture and food, sanitation, education programs etc.)
- Health, family planning and nutrition worker will be provided with training on nutrition in emergency, so that they can response timely during the period of any emergency (cyclone, flood etc.) and can ensure nutrition in infants, children and mothers
- For better coordination with other ministries and departments, program implementation/coordination committees will be formed at directorate and ministry level
- A Steering Committee, multisectoral in composition and headed by the Secretary , and a Nutrition Implementation Coordination Committee headed by the DGHS will be established with specific TOR
- Establish an effective linkage and coordination with government organizations, development partners, non-governmental organizations and private sector for interventions and monitor impact activities
- Effective nutrition surveillance will be undertaken from IPHN.

10. (A) Priority Interventions and Activities of the National Nutrition Services

10. A.1 Growth Monitoring and Promotion (GMP):

GMP, the regular measurement, recording and interpretation of a child's growth change in order to counsel act and follow-up on results, will be implemented to detect growth faltering of infants and young children early and enhance the transfer of nutrition information in order to take the preventive and curative actions needed.

GMP is an important process of assessing the nutritional state of a child. This process will also include the analysis of the cause of malnutrition or illness and action to be taken for improvement of the situation. There is also opportunity to re assess the child during follow up and take necessary steps.

GMP will be done in both facility and community levels. All facilities will be equipped weighing machine, calculator and growth charts and the capacity of health workers will be developed so that they can manage the GMP session efficiently. The child's well-being will be assessed by weighing the child, plotting the weight against his/her age on the growth chart indicating standard growth patterns for age. The health worker will help the mother to understand the curve of the growth chart indicating the nutritional status of the child and over the time, the trajectory. The child's mother and health worker will analyze the causes of not gaining adequate weight, growth retardation and discuss the next step to be taken to address the problem.
All children aged 0-24months living in the catchment area of a community clinic will be weighed once every 3 months up to the age of 2 years. Counseling of mothers will also focus on the appropriate message about child care, child nutrition etc. during GMP session.

To keep the number of children manageable and cover the target group, each community clinic area will be divided into three sub-area or cluster and children of each area will be assigned one day to attend community clinic for weight monitoring.
Health workers will follow up all children not attending the weighing session and weight at home and motivate to come at community clinic regularly. The growth chart will be kept with the mother of the child and brought while coming in GMP session.

The GMP session represent the most important regular contact between the health worker and the mother when an effective interpersonal communication can be achieved. The children not attending the required weight for successive two months or growth faltered or have any illness will be referred to the physician.

The birth weight of a newborn will be recorded by the health worker immediately or at least within 72 hours after birth. Along with, health workers will help parents for birth registration and take the opportunity to counsel the mother on breast feeding, colostrums feeding, child care, mother's nutrition, family planning etc. and also give a high dose vitamin A to the mother.

10.A.2 Behavior Change Communication to Promote Good Nutritional Practices:

BCC is the core strategy for achieving NNS objectives. The objectives of BCC for NNS are - a)to bring positive changes in maternal, infant and child caring practices, b) to increase demand and utilization of health services, c) to help to develop the capacity of the community to understand and address the malnutrition problems, d) to strengthen the capacity of the health service providers to train and support the community workers to perform their BCC activities, e) advocacy for policy support to provide nutrition service by motivating policy makers and opinion leaders.

BCC under NNS will include policy communication, advocacy and social mobilization, interpersonal communication in the community level program. A BCC strategy and operational plan will be developed for a national advocacy and policy development campaign with a technical support from health education bureau and BCC unit of DGFP. NNS will provide support for material development, and production to strengthen social mobilization approach. Mass media campaigns, social mobilization and behavioral change and communication activities at health facility and community levels will be implemented to

promote good health and nutrition practices. Consistent dissemination of key message to create social awareness will be ensured in mass media, printing media etc. Specific behaviors to be targeted will include: counseling pregnant women on adequate diet and care, promotion of exclusive breast feeding for 6 months and continued breastfeeding up to 2 years; introduction of complementary foods of adequate nutritional quality and quantity after the age of 6 months; improved hygiene practices including hand washing, and healthy practices among adolescents. Traditional methods as street theater, drama, jari-shari, courtyard drama etc. will also be considered. Other important strategies to implement BCC activities are –

1. Regular communication program with general population and stakeholders in nutrition field
2. Involvement of ministry of information in raising awareness about nutrition
3. Awareness creation about healthy eating habit to prevent under and over nutrition
4. Involving religion leaders on advocacy regarding nutrition issue.
5. Organizing nationwide nutrition day/week annually on important nutrition themes through nutrition fair, festival, folksongs, film show, debate, essay competition etc. at different level
6. Maximum utilization of mass media including television, radio, newspaper for nutrition advocacy and education
7. BCC message should include information on production and consumption of safe food, healthy dietary practices, food security etc.

NNS will be the national resource center for all nutrition related information. The materials, messages on nutrition issue developed in NNS will be used universally by the stakeholders working in nutrition field. Existing library of IPHN will be enriched and upgraded with latest information, books, journals, magazines etc. on health and nutrition. A media forum will be formed including different media personnel and enrich BCC program of NNS with the Ideas of new dimension for disseminating nutrition messages.

10.A.3 Micronutrient supplementation:

a) Vitamin A supplementation

Bangladesh has had much success in attaining as well as sustaining high coverage of Vitamin A supplementation. This high coverage has been attained through bi-annual Vitamin A campaigns for children 6-59 months. High dose (200000 IU/100,000 IU) vitamin A capsule are distributed among 6-59 months children during the national vitamin A campaign. Children aged 6-11 months will be provided with Vitamin A capsules (100000 IU) during vitamin A campaign. Vitamin A capsule is also given therapeutically to the children suffering from vitamin A deficiency (night blindness). Vitamin A should also be provided to all <5 years children in emergency situations (flood or cyclone) and to the children suffering from measles, diarrhea, severe malnutrition.

A high dose of vitamin A capsule will be given to a mother within 42 days of delivery. Field workers will ensure post partum vitamin A supplementation during their home visit. NNS will strive to increase further and strengthen coverage and ensure that areas or population groups that have not been reached are better targeted. NNS will facilitate modification in policies and guideline to encourage use of community based non-health personnel to help

with distribution in hard to reach areas and build capacity to improve the use of coverage data to detect low performing areas and help target resource to fill in gaps.

b) Iron folate supplementation

Bangladesh has one of the highest prevalence of maternal anemia in the world. The country has a policy of providing iron-folic acid supplements to pregnant women (during ANC) in order to reduce the incidence and prevalence of anemia. Three high risk groups have been identified for intervention name as children aged 6-23 months, Pregnant and lactating women, Adolescent girls and newlywed women. Groups at high risk of aneamia will be provided with iron supplements to prevent anaemia. NNS will support the coordinated nationwide effort for iron folate supplementation avoiding duplication. National strategy for anaemia prevention and control will be followed in the program and an action plan will be developed.

Iron folate tablet or multiple micronutrient supplements will be provided to the children aged 6-23 months, pregnant women, lactating mothers for first three months after delivery, adolescent girls and newlywed women in the recommended doses. Pregnant women and lactating women will be counseled on importance of taking iron folate regularly, so that increased compliance can be achieved. However, poor coverage, compliance and stock-outs have affected the effectiveness of this intervention. Therefore the program will; help set up systems to ensure adequate procurement and supply of IFA tablets at all levels of the health system and; train health workers including HAs, CHPs and FWAs to develop their skills to counsel women to enable full compliance.

For sustainable improvements, intake of iron rich food is important. Changes of food habit through changes of behavior can improve not only the anaemia status, but the nutrition in general. Breast feeding, appropriate complementary feeding, increased intake of animal food, green leafy vegetables etc. will be encouraged. Worm infestation, diarrhea, malaria are important causes of anaemia. The intervention programs will also be strengthened to control anaemia.

c) Iron Supplementation and Deworming of Adolescent Girls

NNS will endeavor to provide structures BCC sessions for adolescent girls to provide them with the necessary knowledge on reproductive and nutritional health through individual and group counseling. The girls will also be provided with deworming tablets and iron-folate tablets when they come into contact with the health system and though community based nutrition activities.

d) Zinc Supplementation during Treatment of Diarrhea

The incidence of diarrhea among Bangladeshi children is amongst the highest in the sub-continent, hence contributing to infant and young child malnutrition. Zinc supplementation during treatment of diarrhoea has been shown to have both curative (reduction in the severity of diarrhoea) as well as preventive (few future episodes). Therefore, NNS will promote and strengthen support that the provision (including procurement) of zinc supplements along with ORS is part of the protocol for the management of diarrhea as it has already started in the ongoing programme. The BCC component of the program will educate caregivers and other household decision makers on the importance and benefits of full compliance with taking zinc supplements for the full 10 days during treatment/ management of diarrhea.

e) Vitamin D, Calcium Supplementation

Calcium deficiency is a common problem among elderly or post menopausal women which leads to osteoporosis, osteoarthritis diseases. Calcium is also essential for pregnant women for growing foetus. Thus promotional program will be designed to advocate for consumption of calcium rich food and calcium supplementation during pregnancy and after 40 years of age. Very recently disability among children due to deficiency of calcium and/or vitamin D is also found in some pocket areas of Bangladesh which are suspected as Rickets cases. Special programs for Calcium and Vitamin D supplementation for specific cases will be undertaken.

10.A.4 Control of Iodine Deficiency Disorder (IDD) and Salt Iodization Program

BSCIC of Ministry of Industry is responsible for iodization of salt. NNS will facilitate and cooperate activities relating to salt iodization, including production, quality control. NNS will support BSCIC to undertake initiative for introduction of appropriate technology for salt production, improving salt iodization plants and enforcing salt iodization laws. The salt iodization programme will continue to be strengthened and expanded through advocacy at household and national level. The BCC component of the program, for example, will promote awareness of and increased use of iodized salt by households and help sustain consumer demand of the product.

10.A.5 Management of Severe Acute Malnutrition (SAM) and Community Management of Acute Malnutrition (CMAM)

Mainstreaming the implementation of nutrition interventions into health and family planning services will ensure more coordination in the treatment of moderate and severe acute malnutrition at the health facility as well as community level. At the health facility level, children having severe acute malnutrition with medical complications will be treated according to national guidelines and internationally recommended protocols.. In Bangladesh severely malnourished children are being managed at the facility level through inpatient therapeutic care. But still there are limited knowledge, skill and facilities at hospitals. Facility based in patient care is essential in case of severe acute malnutrition with complications. The service providers will be trained on management of severe acute malnutrition cases and establish SAM management centre in all hospitals from primary to tertiary level, so that severely malnourished children referred from the community can be successfully treated even in upazila or district hospitals with limited resources.

At the community level, the GOB will address community-based management of acute malnutrition through the community based IMCI program & community clinic services. If there is no medical complication, then the case can be effectively managed at community level, therefore, to get maximum coverage and access to care for severely malnourished children a combined facility based and community based approach has been adopted.

National guidelines for the management of severely malnourished children as well as Community Management of Acute Malnutrition (CMAM) in Bangladesh have been designed for Doctors, nurses, other senior health professionals, and IMCI providers.

10.A.6 Nutrition during Emergencies

Bangladesh is the most vulnerable to natural disasters and every year natural calamities upset people’s lives in some part of country. The major disaster are flood, cyclone, storm, drought, tornado, land slide etc, The extreme natural disasters adversely affect the whole

environment including human being, their shelters & resources essential for livelihoods following a disaster impacts on human and generally manifested in the form of injuries, deaths and diseases. Effect on nutritional status comes out as delayed impacts of disaster. Nutritional blindness and other deficiency diseases are common.

Health professional have precise responsibilities and opportunities in post disaster disease prevention and emergency management. Pregnant women, children, people with illness, persons over 60 years are the most nutritionally vulnerable during disaster. Health workers should be trained sufficiently to take care of these vulnerable groups during and after disaster to prevent malnutrition. NNS will provide technical support and work with other relevant ministries to ensure that nutrition situation is monitored and the most vulnerable groups are properly targeted. Relief distributing agencies should be careful in selecting food as relief particularly for the infants and young children. It must correspond to the nutritional need and food habit, legislation (BMS code), sufficient in quality and quantities, ready to eat. Ration should be given to the high risk groups on a priority basis. Include supplementation of micronutrients particularly iron, vitamin-A, zinc should be in ration. NNS will have a functional coordination system with MOA and MOF&DM to remain prepared for emergency situations and mobilize its workforce specifically to provide essential nutrition services (e.g. food and micronutrient supplementation in the affected areas, management of severe and acute malnutrition among women and children, etc.) in the affected areas.

In collaboration with the Ministry of Food & Disaster management, a guideline for disaster preparedness to prevent malnutrition after disaster will be developed and all health workers will be trained, so that they will be able to respond to the nutritional needs of the population during any emergency condition. Health Workers must promote, protect and support breastfeeding among under two children.

10.A.7 Community based nutrition services

Each community clinic will be equipped sufficiently to provide adequate nutrition services along with other health and family planning services. HA, FWA, CHCP and community volunteers will be trained on nutrition, thus they will be able to bring about changes in the nutritional situation of the area. Female community volunteers will be selected from the community level and work under the supervision of respective CHCPs. This service provision involving community volunteers will be rolled out across the country in phases, with 25% of the upazilas covering in each phase. The CBN services under NNS include -

1. Regular growth monitoring for children under 2 years of age.
2. Nutrition education for mothers, adolescent girls, newlywed women
3. Individual counseling of parents for concerning child growth & development, child care, immunization etc.
4. Pregnant women counseling for self care, well-being and healthy factors, food etc.
5. Improved supplementary food (*Pushti Packet*) for selective and targeted population groups.
6. Micronutrient supplementation (Vit. A, Iron Folate)
7. Deworming for children and adolescent girl
8. Referral for SAM and other illness of children and pregnant women ANC, PNC.

10.A.8 Nutrition interventions in hard to reach areas, *chars*, hill-tracts:

NGOs will be assigned to partner nutrition intervention in hard to reach areas, *chars*, hill tracts and the areas where CC is not available. A package of services will be prepared which will be provided to the population resided in remote areas through selected NGO workers. The mode of NGO selection will be decided upon by MOHFW. Flexible & diversifies program design to accommodation with realities will be undertaken in these areas.

10.A.9 Early Childhood Development (ECD)

Early Childhood Development refers to the many skills and milestones that children are expected to reach by the time they reach the age of five. The development of a child starts from the mother's womb and it includes both physical and mental development of the child. Thus it is important to take necessary steps for healthy development of the child within the age 0-5 years. NNS in close coordination with the ECD project of UNICEF under Ministry of Women and Children affair, will disseminate important messages related to ECD to the families and community, campaign for awareness, ensure ANC and nutrition for pregnant women. Health worker will also give technical support and nutrition related information to school management committee for early childhood development of school children.

10.A.10 Coordination with IMCI program:

NNS will ensure maternal and child's health through necessary support to implement IMCI program. NNS will participate in the planning, review and sharing meetings at various levels and carry out monitoring and supervision of activities along with their own responsibilities. NNS personnel will undertake relevant CMAM, C-IMCI, and MNCH/IMCI training and provide technical support for conducting TOT and oversight the technical interventions under IMCI. Necessary maternal and child nutrition related issues, messages will be incorporated in the training module of IMCI. Exclusive breast feeding, early initiation of breast feeding, immunization, zinc therapy during diarrhea, vitamin A supplementation, deworming of children, control of anaemia, consumption of iodized salt, referral for ANC and PNC under NNS program will be considered as priority activities to facilitate IMCI activities.

10.A.11 Climate change:

Climate change is likely to alter the geographical locations from food source which may affect nutritional status. Agriculture adaption to climate change will lead to the development of new crop breeds to survive in difficult climatic conditions or in new geographic areas. It is important to ensure that crop breeding should focus on maintenance of nutrient content. Changes in how foods are grown, processed, stored, prepared and cooked may affect nutritional content of the food.

The safety of food varies by food type and where it is produced. Climate change may also lead to alter chemical and pathogenic characteristic of food. Climate change may increase the demand for irrigation of water, increasing pathogen risks. Flooding is one way for transporting pathogens and chemicals on to agricultural land. Elevated temperature may increase food borne pathogen. Food transport, storage and processing affect food safety risks, but there is insufficient information on how these will alter under climate change.

Through coordination with relevant ministries (agriculture, disaster management, water resources, environment etc.) following measures can be undertaken to reduce the effects of climate change:

- Consumption of healthy diets e.g. reducing intake of meat, sugary food and drinks and take more seasonal and locally produced fruit and vegetable. Ensuring adequate years-round consumption of a variety of fruit and vegetable is important.
- Enhance monitoring of food source.
- Provide dietary guidelines to individuals.
- Mechanisms that may be effective in some circumstances include legislation, mass media campaign, social marketing, and community programs.
- Train stuff to help people change their behavior.
- Imposing rules, regulations and market structure supporting the provision of safe and nutrition food.
- Policy to support pro-environmental behavior and provision of information to modify attitudes and knowledge.

10.A.12 Geriatric nutrition:

Changes associated with normal aging increases nutritional risks for old and adults. Nutritional needs of the older individuals are determined by multiple factors, including specific health problem, level of activity, energy expenditure, caloric requirement and personal food preference. Micronutrient deficiency is common problem in elderly people due to number of factors: reduced food intake, lack of variety of foods they eat, medications that interfere nutrient(s) absorption and create side-effect, food choices. They may suffer from anorexia due to aging leading suppressed hunger, which may cause caloric deficit and malnutrition. A number of changes may occur in the aging person's social and psychological status, potentially affecting appetite of nutrition status, depression, memory impairment, social isolation. Efforts will be undertaken to create a nutrient guideline to address the nutritional need of increasing elderly population.

10.A.13 Non-Communicable Disease (NCD):

Diet related NCDs like obesity, diabetes mellitus, hypertension, and coronary heart diseases are becoming common due to epidemiologic transition and have been emerged as double burden of disease in the developing countries. Obesity in childhood is shifted to adult obesity in almost 70% cases. Dietary modification can play strong role in the prevention of NCDs and NNS will assist relevant line directorates in promoting healthy lifestyle as well as nutrition during the sector program.

Other NNS Core Activities:

10.A.14 Training/Capacity Building:

Capacity building and various forms of training and orientation will be a major priority for NNS because of two main reasons: firstly, the weak capacity to sufficiently and effectively supervise and monitor the implementation of the NNP has been identified as a key hindrance to effectiveness of the current program. Secondly, the mainstreaming process will require health and family planning service personnel (from Upazila through Community Levels) to perform duties and responsibilities for which they had not received any or sufficient training. Therefore, NNS will develop and implement a capacity building strategy

to enhance the capacities (human as well as institutional) of NNS as well as that of other line directorates with the responsibilities for delivering nutrition service/intervention. Trainings will be in the form of: special courses for experts (Nurses and Medical Officers) on specialized topics such as IYCF counseling, Management of Acute Malnutrition, Nutrition Counseling, etc; inclusion of core nutrition modules for pre- and in-service training of HAs, FWVs. and CHCPs; refresher training of HAs, FWVs and CHCPs. Orientation training for government and non- government personnel at district level and below, which will help in facilitating and updating their knowledge, change of attitudes and help them in delivering and coordinating nutrition services.

NNS will follow the strategies mentioned below to achieve the training objectives:

1. **Capacity development of individuals-** different focal personnel working for NNS at national and sub-national levels needs capacity enhancement in order to effectively implement the interventions.
2. **Job training**- A pre service training for newly recruited or involved as nutrition service provider will be given to increase technical knowledge, communication and management skill etc.
3. **In service training**- Regular in service training for field functionaries will be arranged to re-enforce the skill developed in job training and providing continuous community interaction in feedback.
4. **Orientation**- Because of multisectoral involvement in nutrition services, a number of personnel from various departments of GOB and NGOs will be oriented on nutrition activities.
5. **Joint training**- To ensure synergy among health, family planning, and field workers of other departments that deliver nutrition activities; develop understanding and team spirit for delivery of good services, joint training will be organized.
6. **Specific program and theme based training**- training on IYCF, management of malnutrition, adolescent nutrition, nutrition counseling, micronutrients, emerging problems etc will be given to the program managers who will subsequently train the staffs of their working areas.
7. **Workshop/ seminars/conferences**-Advocacy workshop, program related seminars and conferences will be arranged for developing and strengthening program related skills among policy and decision makers and field functionaries. Dissemination of academic and technical advances and program performances to the policy planners and decision makers will be organized.
8. **Overseas training for doctors and nurses**- To strengthen capacity and update knowledge on modern technology of the service providers, opportunity for overseas training or courses in the field of nutrition will be explored.

Nutrition Training Plan: Major Topics to be covered:

- Mainstreaming nutrition
- Maternal nutrition
- Infant and Young Child Feeding (IYCF)
- Severe Acute Malnutrition (SAM) and Community Management of Acute Malnutrition (CMAM)

Sl. No,	Category of personnel/Level	No of Days	Topics	Type	Responsibility
1	Policy level (National Level)	1	Mainstreaming nutrition, BMS code	Orientation	NNS
2	Directors, Program Managers, Administrators, CS, DDFP (Divisional Level), Managers of urban health programs	1	Mainstreaming nutrition	Orientation	NNS, DGHS, DGFP
3	Doctors from hospitals GO/NGO	2,5 days	Mainstreaming nutrition, SAM	Training	DGHS,DGFP,
4.	Doctors from Pediatric and Obstetric Department of hospitals at district level and above	2 , 5 days	IYCF, SAM, Maternal nutrition, BMS Code, Maternal nutrition	Training	DGHS, IST, HSM
5	Nurses (District and Upzilla Level)	3-5 days	Mainstreaming nutrition, IYCF, BMS Code, SAM, Maternal nutrition, Maternal nutrition	Training	DGHS, NNS
6	Medical Officers (UHC)	3 days	IYCF, BMS Code, CMAM, Maternal nutrition	Training	DGHS, NNS
7	One Medical Officer from each UHC (Upazila Nutrition Focal point)	15 days	Mainstreaming nutrition, IYCF, Anaemia Micronutrients, CMAM, Maternal nutrition	Training	NNS
8	FWVs and HI (Upazila/Union level)	2 days	IYCF, CMAM, Maternal nutrition	Training	DGFP, NNS
9	CHCP, FWA, HA (Community Level	5days	IYCF, CMAM, Maternal nutrition	Training	DGFP, DGHS, Community clinic project
10	Community Clinic management group	1 day	IYCF, CMAM, Maternal nutrition	Orientation	Community clinic project

10.A.15 School nutrition education Program:

NNS will provide children and adult of all age with nutrition education materials on how to improve their diets and their lives. NNS will also provide training and technical assistance for nutrition education, including on school gardening, for school children and their caregivers and school and community support for healthy eating and physical activities. NNS will develop nutrition messages and supporting contents and guideline for healthy diets for children.

Obesity is an emerging problem in Bangladesh. Many children in urban school are overweight. NNS will work to formulate diets which with exercise can keep a person's weight under control allowing them to enjoy healthy and active lifestyle.

10.A.16 Food quality & food safety

Each year millions of citizens suffer from food insecurity & bouts of illness following the consumption of unsafe food. Aside from acute effects arising from food contaminated by microbial pathogens, long term health impacts may result from consumption of food tainted by chemical substances and toxins. By minimizing consumer's exposure to unhygienic, contaminated and adulterated food it is possible to significantly reduce the morbidity and mortality associated with unsafe food.

There are various ministries (MOFDM, MOA & MOWCA) that oversee sectors of the food security, food supply chain, and it is important they continue to work together (through regular meetings of the National Food Safety Advisory Council) to eliminate gaps in food control, as well as duplication of effort and result in improved public health and nutrition. Further enhancement of the roles and responsibilities of the DGHS is essential so it takes a strategic role in managing food safety in collaboration with the city corporations and municipal authorities. Measures which raise awareness of food security & safety will lead to reductions in food contamination and reduce the burden of food borne illness.

Activities:

- Raising awareness on food safety, hygienic practices, hand washing etc.
- Developing an action plan for implementation of food safety policy with existing policy/policies of the country. Activities of this action plan would include building linkages with ongoing initiatives like “Improving food safety, quality and Food Control in Bangladesh”.
- Up gradation of exiting laboratory of IPHN in collaboration with IPH.
- Ensure quality of baby food as per BMS act 1984.

10.A.16 Coordination of Nutrition Activities across Different Sectors:

Malnutrition is intrinsically multi-sectoral, and hence achieving sustainable nutrition security is fundamentally a multi-sectoral cross-cutting challenge requiring a coordination of policies and strategies of different sectors/ministries on a sustained basis. Therefore, the NNS will develop mechanisms for effective coordination of nutrition and nutrition-related activities in other sectors and that are capable of synergistic impact on nutrition, for example, food security, food safety, fortification of staple foods, livelihoods programs including income generation initiatives, etc.

This will be achieved with the guidance of the multi-sectoral Steering Committee headed by the Secretary, MOHFW. The Steering Committee will be entrusted with overall guidance, policy direction, stock-taking and coordination of nutrition activities. The committee will have representation from all relevant ministries at appropriate level (not below the level of Joint Secretary), development partners, technical organizations, civil society organizations and others. Line Director –NNS will be the Member Secretary of the Committee.

Further, a Nutrition Implementation Coordination Committee headed by the DGHS and with membership from relevant LDs (ESD, MNCH, NNS, CBHC, NCD, MIS, MRAH-DGFP and others) will be established. The committee will especially monitor mainstreaming of nutrition activities. The LD-NNS will be the Member-Secretary of the Committee.

NNS will coordinate with development partners and other stakeholders including NGOs to develop a comprehensive mapping as well as rollout plan to document nutrition interventions in Bangladesh with the provision of regular (annual) updates.

Moreover, in collaboration with ministry of information, nutrition key messages will be disseminated by using all possible channels of information. To prevent illness and diseases and environmental sustainability, linkage will be established with development program, sanitation program, and appropriate technology for improving sources and forms of food

etc. Establish linkage with agricultural programs which can assists small farming household in producing their food requirements. On the other hand NNS will provide health education and orientation to the workers of agriculture sectors to promote nutritious food production, safe food production with minimum use of insecticides. For increased availability and access to protein rich food, promotion for fish culture, poultry rearing and dairy among beneficiaries will be encouraged along with the relevant program under ministry of fisheries and live stock. On the assumption that malnutrition is caused by lack of knowledge about food needs at various stages of life, the nutrition value of different foods etc. introduction of nutrition into the curriculum of formal and non-formal education is essential. NNS will work in this issue along with ministry of education. LGED is responsible for implementing the urban health projects in the city and municipality areas. Keeping liaison with Ministry of LGED, NNS will ensure and provide technical support to implement nutrition activities in urban areas. NNS will also assist to find out the way for improving nutrition services in urban areas.

10.A.17 Procurement of equipments, micronutrients, and deworming tablets:

Whilst the nutrition services will be provided at the facility and community levels by a number of line directorates, NNS will be ensuring the supply of vitamin A supplements (for mothers and children), iron/folic acid supplements, calcium, deworming tablets, and measuring equipments to establish SAM/nutrition corners at the Upazila Health Complex level and GMP/nutrition education corner at the Community Clinics. NNS will also be procuring equipments and re-agents to functionalize the Food Safety Laboratory at IPHN.

10.A.18 Monitoring, Surveillance, Research and Evaluation

The availability and use of quality data is essential for evidence-based decision making to improve nutrition programming. The lack of accurate and timely data can be an impediment to progress in implementation. The monitoring and evaluation component of the program will provide important data on the cope, coverage and effectiveness on the nutrition program's activities. The M&E data will be used to monitor progress in key nutritional outcomes (anthropometric indicators) as well as provide data on inputs, outputs (coverage).

The program monitoring & evaluation system will provide information that serves as a basis for keeping the project on track in relation to goals and objectives. Monitoring involves the process of assessing the operational aspects of project implementation, particularly, the assessment of delivery, coverage, and the use of project resources. Evaluation covers the assessment of inputs into process, output, outcome, effects and impact of project intervention based on information gathered during the course of monitoring. This will be carried out by an independent entity. Further, impact evaluations on nutrition will be obtained from the national sector wide surveys.

10.A.19 Management Information System (MIS):

An internal management information system (MIS) based on service records and reports at the community level will enable the management to monitor the progress of activities undertaken according to target, monitor if the objectives are being achieved or scope of opportunity for improvement and to assess the improvements of the target groups as a result of interventions. The data generated from field need to be analyzed, processed and synthesized to transform it into information, to provide management with appropriate information at the appropriate time for their decision making needs. Monitoring of nutritional status will also provide feedback to the communities, program manager and policy makers.

Coverage and effectives of national level nutrition intervention will also continue to be monitored through periodic survey, nutrition surveillance etc, Activities leading to development of MIS and software, capacity development of personnel, networking and linkage with MIS of bureau of Health education. Linkage will be established to existing HMIS tools and systems of the GOB and other stakeholders.

a. Operations research :

Operations research and special studies will be undertaken to reveal cost effectiveness and efficiency to current strategies and to explore new one.

b. Website development :

Existing website of IPHN will be upgraded and updated with current development of nutrition situation and program.

c. Nutrition Surveillance:

Continues monitoring of nutritional status will be undertaken through nutrition surveillance with technical support from non government organization. Surveillance of nutritional status of the population should go hand in hand with the formulation and execution of policy. It is a continuous process and provides on-going information about nutritional condition of the population and factors that influence them. This information will serve as the basis for decision related to policy making, planning and management of nutrition program.

Further technical and financial cooperation with other government, development partners, research and academic organizations and non-government organizations in terms of research, survey, special study etc. will be established.

10.A.20 Referral

An effective referral system will be established for malnourished children with complications and children who fail to gain desired weight. These children will be referred to appropriate health facility. Each hospital from primary to tertiary level will be equipped and trained so they will be able to manage the severe acute malnutrition cases.

10.A.21 Food fortification

NNS will provide technical support for food fortification, which entails adding nutrients to universally consumed foods to serve as vehicle or carrier for certain minerals or nutrients. Salt Iodization to prevent IDD in Bangladesh is a successful program in reducing IDD. Addition of Vitamin A, Iron etc to oil, flour, sugar, fruit juice etc may be considered.

10.A.22 Mainstreaming Gender into Nutrition Programming

Gender and nutrition are closely associated in Bangladesh, and there are strong linkages between a woman's status and both her health and her children's nutritional outcomes. Therefore, both the health facility and the community-based nutrition interventions will involve all community and household members who are responsible for decision making and those who can influence maternal, infant and young child feeding practices as well as other nutrition behaviors. Such an approach will ensure that the concerns of men and women, when it comes to household food and nutrition security, are considered as the joint responsibilities for the nutritional well-being of all household members of men, women and the community as a whole, with an emphasis on nutritional status of adolescent girls in the country.

10.A.23. Institutional Development

Institutional Capacity Development will entail identifying and selecting core institutions and provide support for institutional capacity development, viz. curriculum review and/or update to include nutrition for Med Coll, MATS, Nursing, IST, etc., strengthening linkages between tertiary facilities and outreach services, strengthening IPHN and relevant agricultural institutions, collaboration with other ministries, and support to IPH for food safety & quality (including laboratory) activities.

Attitude and perception in developing countries about food and nutrition problems have changed over the years. Malnutrition is not health problem but recognized as a development problem, which can be overcome by the inclusion of nutrition objectives in national development plan. Improving nutrition via national development program will need for directing adequate attention to effective planning, implementation and programming as well as the creation of appropriate organization, support facilities and services at all levels of administration. The main concern of management of nutrition program will be to direct different activities in order to maximize contribution to improvement of nutrition using available resources, personnel and fund.

The Line Director, NNS must recognize the various components, tasks, and resources needed for accomplishing tasks and for achieving objectives set for specified implementation period. In designating specific person to undertake various activities, expertise to perform assigned tasks should be considered. Clearly defined tasks, operating procedures, adequate training of workers and availability of tools and equipments are to be facilitated to accomplish the assigned tasks. Internal coordination in between different unit is important. An implementation plan will be prepared for smooth implementation of activities within the fiscal period.

Coordination of other program and sectors is essential for multi sectoral program like nutrition. Political commitment stresses the need to integrate nutrition issue in the national and local level development plans. Orientation and training on food and nutrition will be given to political leaders, religious leaders, policy makers, field level service providers of Health, Agriculture, Livestock, Cooperatives etc. Volunteers and private sectors will also need some task oriented and practical training.

20.A.24. Complementary feeding (*Pushti Packet*) to address MAM

The NNS will explore options to develop and provide supplementary food (*pushti packet*) through evidence and research in respect to its form, content, recipe and distribution modality to efficiently address CMAM among children and pregnant women. The target group for supplementary feeding will include undernourished children and women in vulnerable areas or communities particularly during the lean seasons. The services will be carried out by community volunteers under the supervision of respective CHCPs in phases. In each phase, 25% of the upazilas will be covered. The *pushti packets* will be prepared by outsourcing.

The following table summarizes the key NNS activities with responsibilities at different level of services in the health sector program:

Activity	Responsibility/Service delivery and supervision/monitoring			
	District level (DH/MCWC)	**Upazila Health Complex**	**Union Heath Facility**	**Community Clinics /Community**
Growth Monitoring and Promotion (GMP)	*Delivery and supervision: CS/DDFP Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery: LD-CC Supervision:* LD-CC *TS & Logistics:* LD-NNS
Maternal nutrition and IYCF Services	*Delivery and supervision: CS/DDFP Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery: LD-CC Supervision:* LD-CC *TS & Logistics:* LD-NNS
BCC	*Delivery and supervision: CS/DDFP Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery: LD-CC Supervision:* LD-CC *TS & Logistics:* LD-NNS
Vitamin A supplementation of children 6-59 months	*Delivery and supervision: CS/DDFP Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery: LD-CC Supervision:* LD-CC *TS & Logistics:* LD-NNS
Iron-Folic Acid supplementation for pregnant and lactating women, and adolescent girls	*Delivery and supervision: CS/DDFP Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFO Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFO Technical Support & Logistics:* LD-NNS	*Delivery: LD-CC Supervision:* LD-CC *TS & Logistics:* LD-NNS
Prevention and control of anemia in children under 5	*Delivery and supervision: CS/DDFP Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFO Technical Support & Logistics:* LD-NNS	*Delivery: LD-CC Supervision:* LD-CC *TS & Logistics:* LD-NNS
Deworming of children (1-5 yrs) and adolescent girls	*Delivery and supervision: CS/DDFP Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery: LD-CC Supervision:* LD-CC *TS & Logistics:* LD-NNS
Other Micronutrients supplementation of public health importance (Zn,Ca etc.)	*Delivery and supervision: CS/DDFP Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery: LD-CC Supervision:* LD-CC *TS & Logistics:* LD-NNS
Management of severe and moderate acute malnutrition (facility and community)	*Delivery and supervision: CS/DDFP Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery: LD-CC Supervision:* LD-CC *TS & Logistics:* LD-NNS

Activity	Responsibility/Service delivery and supervision/monitoring			
	District level (DH/MCWC)	**Upazila Health Complex**	**Union Heath Facility**	**Community Clinics /Community**
Promotion of use of Iodized salt	*Delivery and supervision: CS/DDFP Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery:* LD-CC *Supervision:* LD-CC *Logistics:* LD-NNS
Nutrition during Emergencies	*Delivery and supervision: CS/DDFP Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery: LD-CC Supervision:* LD-CC *TS & Logistics:* LD-NNS
Training and Capacity Building	*Delivery and supervision: CS/DDFP Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery: LD-CC Supervision:* LD-CC *TS & Logistics:* LD-NNS
M&E/Nutrition Surveillance	*Delivery and supervision: CS/DDFP Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery:* LD-HIS, LD-NNS *Supervision:* LD-HIS, LD-NNS *Logistics:* LD-HIS, LD-NNS
Mainstreaming Gender	*Delivery and supervision: CS/DDFP Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery and supervision: UHFPO/UFPO Technical Support & Logistics:* LD-NNS	*Delivery: LD-CC Supervision:* LD-CC *TS & Logistics:* LD-NNS

10 (B) Priority activities of the OP

Sl. No.	Name of the components
1	Behaviour Change Communication (BCC)
2	Human resource development (HRD)
3	Control of Vitamin-A deficiency disorder
4	Control & prevention of Anaemia
5	Control of Iodine deficiency Disorder
6	Other Micronutrient problems of Public Health importance (zinc, vitamin 'D,' calcium etc.)
7	Community & facility based management of severe acute malnutrition (SAM & CMAM)
8	Institutional Capacity Development a) Orientation / Advocacy of Division, District, Upazila managers.
9	Protection, Promotion & Support of Breastfeeding/ Infant and Young Child Feeding (IYCF) including BFHI & BMS Code
10	Technical Support on Food fortification (Salt Iodization, fortification of oil/other food with Vitamin 'A', iron etc.)
11	School Nutritional Education Program
12	Food Quality and Food Safety
13	Monitoring, Evaluation, Operations Research, Survey
14	Nutrition Surveillance Program
15	Establishment of nutrition unit (NU) and strengthening of existing NU
16	Community based Nutrition (CBN) in selected area
17	Multi sectoral collaboration
18	Nutrition in emergency / NCD
19	Nutrition related chronic diseases
20	Establishment of nutrition Service in CC & GMP

11. Relevant Results Framework Indicators (RFW) and OP Level Indicators

11.1 Relevant RFW/PIP Indicators

The activities under this OP contribute to ensuring the quality and equitable health, population & nutrition care for all citizens of Bangladesh. They will help to achieve Result 1.1, increased utilization of essential HPN services; Result 1.3 improved awareness of healthy behavior, and Result 1.4, and improved PHC-CC.

Indicators(s)	Unit of Measurement	Baseline with source	Projected Target	
			(Mid-2014)	(Mid-2016)
RFW Indicators				
Prevalence of underweight among children under 5 years of age	Percentage	41.0% BDHS 2007	-	33%
Prevalence of stunting among children under 5 years of age	Percentage	43.2% BDHS 2007	-	38%
% of children (6-59 months) receiving Vitamin A supplementation in the last 6 months	Percentage	88.3 % BDHS 2007	-	90%
Rate of exclusive breastfeeding in infants up to 6 months	Percentage	43% BDHS 2007	-	50%
% of children 6-23 months fed with appropriate infant and young child feeding (IYCF) practices	Percentage	41.5 % BDHS 2007	-	52%
PIP Indicators				
Number of Vitamin A Capsule distribution among 6-59 months children	Percentage	90 % +	90 % +	90 % +
Number of CC workers trained in nutrition services delivery	Number of people	NA	27,000 (60 %)	40,500 (100%)
Percentage of UHCs having a functional Nutrition Corner established	Percentage	21	120 (60%)	200 (100%)
Number of Health service providers trained in nutrition services delivery	Number of people	NA	6,000	10,000
% of Tertiary Hosp, DHs, MCWC, UHCs, UHFWC, Union Health Sub-Center having a functional Nutrition unit.	Percentage	NA	60 %	90 %
Observance of National Breastfeeding week, Campaign promoting breastfeeding conducted during National BF week	Percentage	50 % unit of DGHS, DGFP & Urban health	75 % unit of DGHS, DGFP & Urban health	90 % unit of DGHS, DGFP & Urban health
Exclusive Breast Feeding (EBF) for 6 months	Percentage	43%	46 %	>50 %
Complementary Feeding (CF) for 6 months	Percentage	42 %	46 %	>50 %
Number of school/madrasa teachers received orientation on Nutrition education	Number of people	NA	40 %	>50 %
Number/batches of media personnel oriented on Nutrition issues (for dissemination)	Number of people	NA	60 %	80 %
Management of SAM& MAM	Percentage	NA	60 % of tertiary, District, certain UZ hospital	60 % of tertiary, District, certain UZ level hospital
Reduction in the prevalence of anaemia in < 5 years children, adolescents and in pregnant women	Percentage	Children <5 Y: 48%, Adolescent girl: 30% Pregnant women-46% (National Anemia survey 2001-3)	Children <5Y: 32%, Adolescent girl-23% Pregnant women-35%	Reduction in the prevalence of anaemia in < 5 Y children, adolescents and in pregnant women
Training of HI/AHI on IDD	Number of people	NA	50 %	70 %
DAAR Indicator				
Nutrition implementation committee headed by DGHS established and meetings held to monitor nutrition activities in the concerned LDs		NA	2 meeting/ year	60% CC staffed with trained HA, FWA, CHCPs on nutrition services.

11.2 OP level indicators (Output/Process)

Sl.	Indicators	Unit of Measurement	Baseline with source	Projected Target	
				Mid- 2014	Mid 2016
1	Coverage of Vitamin A Capsule administration among 6-59 months children	Percentage	90 % (CES)	90 % +	90 % +
2	Number of CC workers trained in nutrition services delivery	Number of people	NA (NNS Training Report/Adminst rative Record)	27,000 (60 %)	40,500 (100%)
3	Number of MOs trained in nutrition services delivery	Number of people	0	482	964
4	Percentage of UHCs having a functional Nutrition Corner established	Percentage	5%	60%	100%
5	Observance of National Breastfeeding week (Campaign promoting breastfeeding conducted during National BF week)	Milestone	Yes, by DGHS	Yes, all stakeholders under MoHFW	Yes, MoHFW and other stakeholders across relevant ministries
6	Number of school/madrasa with teachers receiving orientation on Nutrition education	Number of people	NA	10%	50%
7	Management of SAM by establishing SAM management system	Milestone	NA	30% of tertiary and district hospitals, selected UHC	60% of tertiary, District, certain UZ level hospital
8	Training of HI/AHI on IDD	Number of people	NA	50%	90%
11	% of pregnant women at the community clinics counseled on exclusive breast feeding up to 6 month followed by appropriate complementary feeding at 6 month	Percentage	0% (2011, Community Clinic Program's Monitoring Report)	50%	90%
12	% of community clinics having stock of a) vitamin A capsules and b) iron folate tablets	Percentage	0% (2011, Community Clinic Program's Monitoring Report)	40%	70%
13	% of upazilas providing monthly progress report on nutrition services according to data quality assessment protocol	Percentage	0% (HIS)	100%	100%
9	Nutrition implementation committee headed by DGHS established and meetings held to monitor nutrition activities in the concerned LDs (DAAR Indicator)	Milestone	NA	2 meeting/ year	60% CC staffed with trained HA, FWA, CHCPs on nutrition services.

11.3 Source and methodology of data collection

Through routine MIS (service data), survey, and nutrition surveillance, required information will be collected. Annual progress report will be prepared and published based the collected data and information through survey and regular nutrition surveillance.

12. Estimated budget

12.1 Estimated summary of development budget:

Name of the Components	Economic Code	GOB	Project Aid			Total	% of the total cost
			RPA		DPA		
			Through GOB	Others			
1	2	3	4	5	6	7	8
a) Revenue component							
Salary of officers	4500	66.00	0.00	0.00	0.00	66.00	
Salary of staff	4600	140.00	0.00	0.00	0.00	140.00	
Allowances*	4700	355.50	180.00	0.00	0.00	535.50	
Supply & services	4800	25388.62	82383.54	0.00	34626.00	142398.16	
Repair & Maintenance	4900	129.50	956.50	0.00	0.00	1086.00	
Subtotal (Revenue component)		26079.62	83520.04	0.00	34626.00	144225.66	96.72
b)Capital component							
Acquisition & Purchase of Assets	6800	656.38	1535.34	0.00	800.00	2991.72	
Refurbishment works	7000	1000.00	0.00	0.00	0.00	1000.00	
CD/VAT	7900	792.00	0.00	0.00	0.00	792.00	
Subtotal(capital component)		2448.38	1535.34	0.00	800.00	4783.72	3.28
Grand total		**28528.00**	**85055.38**	**0.00**	**35426**	**149009.38**	100

*These allowances comprise costs associated with training, travel, etc., which fall outside the salary and festival allowances

12. 2 Estimated Detailed Budget (Input Wise)

13. Year wise physical and financial target during OP period

No. of Comp.	Name of Sub-components	Total Physical and financial target			FY 2011-2012			FY 2012-2013			FY 2013-2014			FY 2014-2016		
		Physical Qty/ unit	Total cost	Weight	Financial	Physical		Financial	Physical		Financial	Physical		Financial	Physical	
						% of item	% of Project		% of item	% of Project		% of item	% of Project		% of item	% of Project
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	**Behavior Change Communication (BCC):** (BCC material for nutrition, healthy eating/feeding for all age group would be developed and incorporated through mass media and other different channels. BCC - Package for policy maker, managers/implementers, service provider, beneficiary)	Nationwide (LS)	7000	0.05	1200	11.97%	0.56%	1700	4.09%	0.19%	1700	4.01%	0.19%	2400	4.36%	0.20%
2	**Human resource development (HRD):**(Preparation of capacity building guideline, training module in relevant cases, formation of master and core trainer team, training of relevant service providers at home & abroad)	Nationwide (LS)	8930	0.06	1000	9.97%	0.60%	2408.06	5.79%	0.35%	2521.94	5.95%	0.36%	3000	5.45%	0.33%
3	**Control of Vitamin-A deficiency disorder:** (Awareness creation about food based approach, training of service provider, supplementation in routine service & in NID among two(2) crore children)	Nationwide (LS)	13700	0.09	1444.66	14.41%	1.32%	3075	7.40%	0.68%	3075	7.25%	0.67%	6105.34	11.10%	1.02%
4	**Control & prevention of Anemia:** (Awareness creation about food based approach, training of service provider, supplementation to pregnant women, lactating mother, children, adolescent)	Nationwide (LS)	7800	0.05	468	4.67%	0.24%	2712.15	6.52%	0.34%	2619.85	6.18%	0.32%	2000	3.64%	0.19%
5	**Control of Iodine deficiency Disorder:** (Awareness creation about food source & consumption of Iodized salt, training of service provider)	Nationwide (LS)	2920	0.02	175.2	1.75%	0.03%	844.07	2.03%	0.04%	831.01	1.96%	0.04%	1069.72	1.94%	0.04%

6	**Other Micronutrient problems of Public Health importance (zinc, vitamin 'D,' calcium etc.):** (Awareness creation about food based approach, training of service provider, supplementation to vulnerable group)	Nationwide (LS)	1700	0.01	165	1.65%	0.02%	395	0.95%	0.01%	395	0.93%	0.01%	745	1.35%	0.02%
7	**Community & facility based management of severe & Moderate acute malnutrition (SAM/MAM):** (Development of guideline, training module, manpower trained for SAM & MAM management at all facilities and community)	Nationwide (LS)	4500	0.03	348	3.47%	0.10%	1038	2.50%	0.08%	1038	2.45%	0.07%	2076	3.77%	0.11%
8	**Institutional Capacity Development (including Pay & Allowances):** (Organogram development, deployment of skill manpower, training of deployed manpower in both technical & managerial aspect, establishment of nutrition unit at tertiary, district and Upazila level.)	47 Persons L/S	8658	0.06	519.48	5.18%	0.30%	3102.72	7.46%	0.43%	2864.01	6.75%	0.39%	2171.79	3.95%	0.23%
9	**Infant and Young Child Feeding (IYCF) including BFHI & BMS Code**: (Establishing Nutrition corner in facilities from tertiary level to UHC, Campaign for IYCF up to community clinic & community, breast feeding week and through Mass media campaign)	Nationwide (LS)	3911	0.03	234.66	2.34%	0.06%	1130.53	2.72%	0.07%	1113.04	2.62%	0.07%	1432.77	2.60%	0.07%
10	**Food fortification:** (Salt Iodization, fortification of oil/other food with Vitamin 'A', iron etc.)	Nationwide (LS)	1400	0.01	144	1.44%	0.01%	314	0.76%	0.01%	314	0.74%	0.01%	628	1.14%	0.01%
11	**School Nutritional education Program:** (Awareness development campaign for teachers, TOT for selected teachers, Small fund allocation for school/madras's)	Nationwide (LS)	6416	0.04	450	4.49%	0.19%	2474.5	5.95%	0.26%	2491.5	5.88%	0.25%	1000	1.82%	0.08%
12	**Food Quality and Food Safety:** (Raising awareness on food safety, hygienic practices, hand washing etc., developing an action plan, Support to Food Safety Laboratory of IPH and strenthen collaboration with other food safety laboratories.)	IPH, BSTI, INS etc.	2500	0.02	132	1.32%	0.02%	676	1.63%	0.03%	692	1.63%	0.03%	1000	1.82%	0.03%

13	**Monitoring, Evaluation, Operations Research, Survey:**(Development of Monitoring tool , Establish linkage with central MIS, Establishment of a national resource centre for nutrition, Survey as per program need)	MIS of NNS-01	2300	0.02	180	1.80%	0.03%	530	1.28%	0.02%	530	1.25%	0.02%	1060	1.93%	0.03%
14	**Nutrition Surveillance Program (NSP):** (Baseline Survey, mid-term & end evaluation)	Urban slum 60U, Under served180 U, HTR 180 U	4100	0.03	246	2.45%	0.07%	1502	3.61%	0.10%	1766.83	4.17%	0.11%	585.17	1.06%	0.03%
15	**Establishment of nutrition unit (NU) and strengthening of existing NU:** (Planning of nutrition unit at UHC, Functioning of NU)	Tertiary-25, District-59, UHC-427	4494	0.03	452	4.51%	0.14%	1410.5	3.39%	0.10%	1610.5	3.80%	0.11%	1021	1.86%	0.06%
16	**Community based Nutrition (CBN) as selected area:** (CC would be equipped for nutrition service delivery, introduce growth monitoring, mapping of targeted areas for CBN, review and update CBN package, implementation of package in targeted areas through outsourcing)	Nationwide (LS)	49157	0.33	672	6.70%	2.21%	12121.25	29.16%	9.62%	12121.25	28.58%	9.43%	24242.5	44.07%	14.54%
17	**Consultancy Service:** (Implementation specialist, nutrition expert, finance expert)	54 MM	2154.38	0.01	69.2	0.69%	0.01%	921.58	2.22%	0.03%	1121.2	2.64%	0.04%	42.4	0.08%	0.00%
18	**Multi -sectoral Collaboration:** (Formation of National Nutrition Coordination Committee for coordination among ministries, GO-NGOs, DPs and all relevant organization)	With other ministries	2012	0.01	120	1.20%	0.02%	873	2.10%	0.03%	973	2.29%	0.03%	46	0.08%	0.00%
19	Nutrition of Emergency	Nationwide	2736	0.02	164	1.64%	0.03%	1143	2.75%	0.05%	1343	3.17%	0.06%	86	0.16%	0.00%
20	Establishment of Nutrition Service and GMP in CC	LS	12621	0.08	1842	18.37%	1.56%	3194.75	7.69%	0.65%	3285.98	7.75%	0.66%	4298.27	7.81%	0.66%
	Total		**149009.38**		**10026.2**			**41566.11**			**42407.11**			**55009.96**		

Formula:

$$\text{Weight of each item} = \frac{\text{Est. cost of each respective item}}{\text{Total cost of all physical item}}$$

$$\text{Physical percentage of item} = \frac{\text{Quantity/ number targeted in each year}}{\text{Total quantity/number of respective item for whole OP}} \times 100$$

Physical percentage of total OP= Weight of each item x % of item.

14. Location-wise break-up of the component (Attached Annexure)

(Taka in lakh)

Name of the components	National	Estimated cost	Name of Division	Estimated cost	Name of District	Estimated cost	Name of Upazilla	Estimated cost
All components	National	29801	7 Div.	1509	64 Dist.	13796	482 Upazilla	103903.38
a) Behaviour Change Communication (BCC)	√		all		all		all	20200
b) Human resource development (HRD)	√		"		"		"	17530
c) Control of Vitamin A deficiency disorder	√		"		"		"	23700
d) Control & prevention of Aneamia including deworming	√		"		"		"	7800
e) Control of Iodine deficiency Disorder	√		"		"		"	2920
f) Other Micronutrient problems of Public Health importance (zinc, vitamin 'D,' calcium etc.)	√		"		"		"	2000
g) Community & facility based management of severe acute malnutrition (SAM)			all		all		all	5800
h) Institutional Capacity Development	√		"		"		"	8658
i) Protection, Promotion & Support of Breastfeeding/ Infant and Young Child Feeding (IYCF) including BFHI & BMS Code	√		"		"		"	3911
j) Food fortification (Salt Iodization, fortification of oil/other food with Vitamin 'A', iron etc.)	√		"		"		"	2400
k) School Nutritional education Program	√		"		"		"	7516
l) Food Quality and Food Safety	√		"		"		"	2200
m) Monitoring, Evaluation ,Operations Research, Survey	√		"		"		"	3000
n) Nutrition Surveillance Program	√		"		"		"	4100
o) Establishment of nutrition unit (NU) and strengthening of existing NU			all		all		all	7548
p) Community Nutrition (CBN) Component (Urban & Rural)			all		all		all	11203
q) Consultancy Service	√		"		"		"	1154
r) Multi sectoral collaboration	√		"		"		"	2012
s) Nutrition in emergency / NCD								1154.38
t) Establishment of nutrition Service and GMP in CC								2012

15. Organogram of National Nutrition Services (NNS): Attached as Annexure I

16. Log Frame: Attached as Annexure II

17. Annual Procurement Plan for Goods, Works, Services (Separate table for a. Goods, b. Works, c. Services): Attached as Annexure- III a, b, c

18. List of Machinery, Equipment, Attached as Annexure-IV

19. Furniture-Fixture & Vehicle: Attached as Annexure- V

20. Vehicle: Attached as Annexure-VI

21. List of Training and Estimated Cost (Training Plan)

Taka in Lakhs

Sl. No.	Subject	Participants	No. of trainee	Batch	Duration	Level	Est. cost
1.	Orientation for master trainer	IPHN personnel, doctors of medical college, DPs, ministry personnel.	40	2	5 days	Central	10
2.	Training of trainers (TOT)	District-CS, MOCS, doctors of district hospital, DD (FP),ADCC, MO (clinic), MO (MC) MO (MC), Upazilla- TH&FPO, RMO, MO (Nutrition)	640 1452	26 59	07 days	Central	300
3.	Basic training for field service providers	HA, FWA, CHCP Supervisor group- (i) HI, AHI, FPI, FWV, SnFWV (ii) MO, MA, SACMO	65500	2620	3 days 1 days 1 days	Upazilla	4000
4.	Management training for program managers	LD,PM, DPM of NNS	30	1	28 days	Central	5
5.	Orientation for committees	Members of community clinic management committee and members of upazilla development committee/Upazila health committee	140000 14520	5000 484	1 day	Upazilla	1000
6.	Training for capacity development	a. Computer training – personnel of IPHN b. Procurement – personnel of IPHN c. Financial Management - personnel of IPHN d. Data Management - personnel of IPHN	10	-	21 days	Central	10
7.	Orientation training for professionals	Pediatrician, Gynecologist, Nurses, Teachers, (2 from each Medical college/ District hospital/upazila/ school)	1500	60	2 days	Central District	120
8.	Joint training	DD, AD of DGA, DGLS, DGF, DGFP, DGHS, DGEd, DG Disaster, DG Food Field workers of DGA, DGLS, DGF, DGFP, DGHS, DGEd, DG Disaster, DG Food	30 14500	1 484	2 days 2 Days	Cetral Upazila	1000
9.	Workshop/ seminar	Personnel from different ministry/ departments/ division	1000	20	1 day	Central	500
10.	Overseas study/training: Long course (PhD # 3, master 22) Short course (diploma) Experience sharing for policy maker and implementers/Study tour international conference//seminar/workshop	Personnel related to NNS/doctors/nurses/ nutritionist Do Personnel of IPHN/ NNS / ministry/ Planning Commission/ directorate/ field officers/ ERD	 25 30 100	 10	 1-4 y 3-6 m 7-14 days		585
11.	Training for internee doctors	Internee doctor	12500	50	3 days	Central	1000
12.	**Total**						**8530**

22. Related Supporting Documents (if any):

Annexure VIII-A: Action Plan for Mainstreaming Nutrition services

Annexure VIII-B: Components and estimated cost summary

Annexure VIII-C: Implementation of specific nutrition interventions

Annexure VIII-D: Estimated Detailed Budget (Input Wise)

Annexure VIII-E: Stakeholder mapping for nutrition interventions in Bangladesh

23. Name & Designation of officers responsible for the preparation of this OP:

a. Professor Dr. Fatima Parveen Chowdhury, Director, IPHN
b. Dr. Ashraf Hossain Sarkar, Junior Clinician, IPHN
c. Dr. Tahmina Hossain Talukder, Assistant Director, NNP
d. Dr. SM Mustafizur Rahman, Member, PPC
e. Abdur Razzak Mollah, Assistant Director (Accounts), NNP

_____

Professor Dr. Fatima Parveen Chowdhury
Director,
Institute of Public Health Nutrition

24. Recommendation and Signature of the Head of the Implementing Agency with seal & date:

_____

Director General of Health Services
Directorate General of Health Services
Ministry of Health and Family Welfare

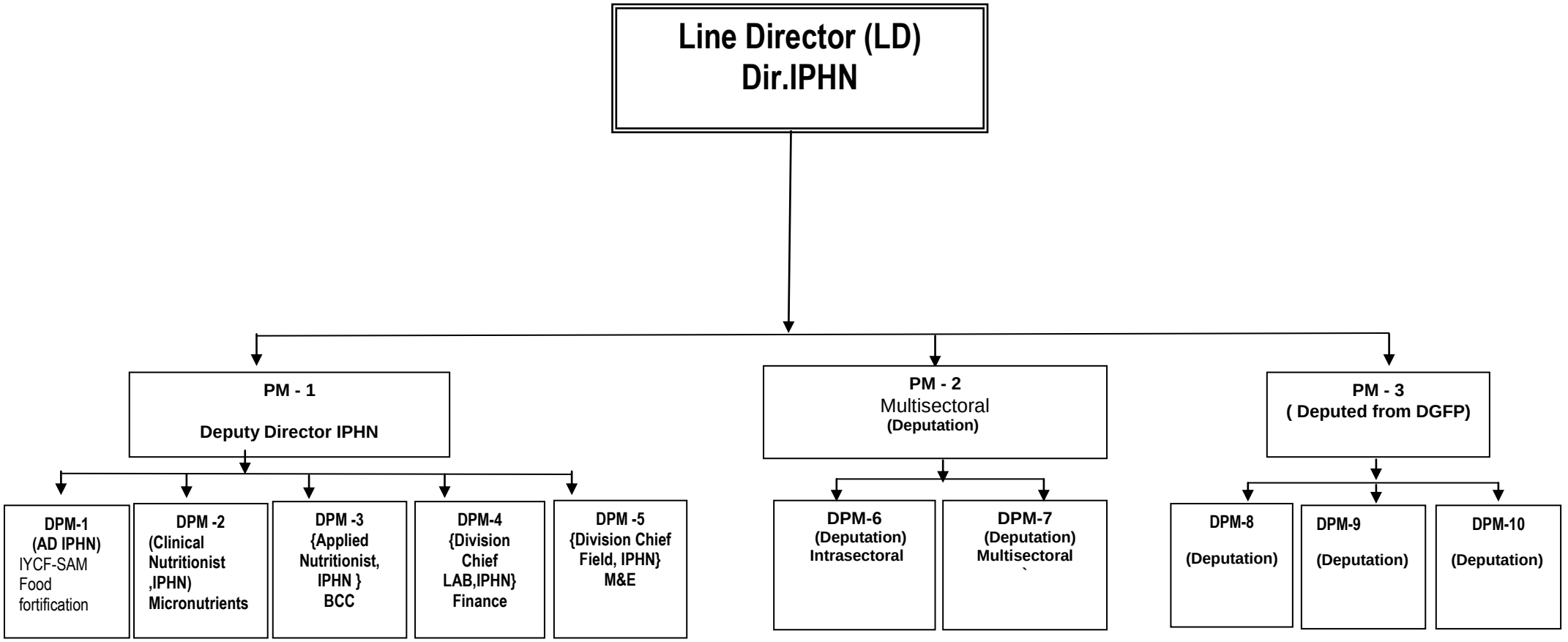
25. Recommendation of the Signature of the Secretary of the sponsoring Ministry with seal & date:

_____

Secretary
Ministry of Health and Family Welfare

Organogram for NNS

(Annexure I)



Logical Frame

Narrative summary	Objectively verifiable Indicators	Means of verification	Important Assumption
GOAL: Nutritional status of women and children improved in Bangladesh	1. Reduced prevalence of underweight children from 41% to 34% by 2016 2. Reduced prevalence of stunted children from 43.2% to 38 % by 2016 3. Reduced incidence of low birth weight to 12% by 2016 4. Prevalence of aneamia among pregnant women, adolescent girl and children reduced by 1/3rd 5. Prevalence of night blindness among children <5 sustained <1% 6. Prevalence of iodine deficiency (urinary iodine excretion <30µg/dl) reduced by 1/3	Nutrition surveillance, BDHS Special study IDD survey Night Blindness survey	Improved nutritional status will ultimately contribute improving productivity, better health and educational performance
PURPOSE: Sustainable improvements in birth weight and nutritional status of women and children achieved by behavior change through community participation and public private partnership.	1) 60% of all children are exclusively breastfed 2) Appropriate complementary feeding initiated for 65% of all infants by 6 months of age and maintain until age 2 years 3) 75% of pregnant women report more food intake during pregnancy 4) 50% of pregnant women have had three or more antenatal contact	BDHS Anemea Survey Nutrition surveillance Quarterly OP report	Ensured sustainable support from MOHFW and DPs Pregnancy weight gain will be improved Incidence of LBW will be reduced
OUTPUTS: 1. Main streaming nutrition and community based nutrition services implemented in all upazilas 1.1 Social mobilization and infrastructure development achieved 1.2 Nutrition services addressing caring practices implemented	1.1.1) 80% of community committees annually reporting at least two management by exception actions. 1.1.2) 90% of observed health worker provide counseling during weighing and feeding session and conducting home visit as appropriate 1.1.3) 90% of supervisors present at weighing session 1.1.4) 100% of women group providing supplementary food as per center need 1.1.5) 80% of unmarried adolescent girls in community participating in monthly forum 1.2.1) GMP coverage would be at least 80% of the country 1.2.2) 95% of birth weight recorded with 72 hours and 95% of infants identified as LBW receive special care 1.2.3) 90% of mother in feeding responding that food intake should increase during pregnancy and that the food should be additional to regular diet 1.2.4) 90% of health worker deliver key messages on exclusive breast feeding up to 6 month followed by appropriate complementary feeding at 6 month	Program monitoring Performance budget, procurement and disbursement plan Monthly/quarterly/annual progress review Periodic participatory (client and provider) program constraints assessment	New behavior will be practiced Interest of the communities will be grown up and share program responsibility Nutritional change will be sustainable Institutional arrangement will be effective Trained staff will be utilized properly Supportive supervision ensured Coordination with community people and other local government agencies established
2. National level nutrition services 2.1.IYCF 2.2. Availability of vitamin A capsul and iron folate tablet ensured	2.1.1) An effective system to monitor BFHI status of hospital/health facilities and adherence to BMS code 2.1.2) Legal action taken against 80% of BMS code violation identified through monitoring 2.1.3) UNSAID/WHO/ Unicef guideline on breastfeeding and HIV adapted and disseminated	Monthly performance report Nutrition surveillance Performance budget,	HPN service providers at all level health facilities will be trained on IYCF Use of infant formula will be reduced

according to national guideline 2.3. Iodine fortification of non-commercial salt support 2.4. Micronutrient fortification of edible oil. Wheat flour and other appropriate foods 2.5. Food quality and safety	2.2.1)Vitamin A capsules procured and distributed in adequate amount for twice annual preventive supplementation and therapeutic use for children and postnatal supplementation 2.2.2) Iron-folate tablets procured and distributed in adequate amounts for IDA prophylaxis among pregnant and lactating women 2.3.1) 80% of salt mills using improved drying technology 2.3.2) 80% of iodized facilities monitored 2.4.1) MOHFW guideline and draft legislation allowing fortification according to MOHFW guideline prepared 2.5.1) 80% of population aware of unsafe food 2.5.2) Awareness developed among 80% of food producer, processor and food handler. 2.5.3) IPHN laboratory capacity improved	procurement and disbursement plan Periodic Food inspection report	Increase awareness of food safety will lead to reduction in food contamination and reduce food borne illness
3. Key nutrition related behavior change messages understood and correctly recalled by target audiences	3.1) 60% of infants are exclusively breastfed for first 6 months 3.2) Appropriate complement initiated for 65% of all infants by 6 months of age and maintained until age 2 years 3.3) 75% of pregnant women report more food intake during pregnancy 3.4) 50% of pregnant women have had three or more antenatal contact 3.5) Hygienic behavior focusing on prevention of diarrhea and worm infestation practiced by 50% of target group 3.6) 90% of children are fully immunized 3.7) >90% of children aged 12-59 months have received vitamin A cap 3.8) 90% of newly delivered women received Vitamin A cap 3.9) 80% of severely malnourished children with complication and failing to respond referred to appropriate place 3.10) 80% of referred cases properly managed as per protocol	Monthly performance report Nutrition surveillance Survey	Improved nutrition status of children increases children's active learning capacity Improved maternal nutrition will ensure birth of a healthy child Reduced child mortality and morbidity
4. An effective program management system in place 4.1.IPHN will be strengthen with clear responsibility, adequate authority and high caliber staffing 4.2. Effective linkage of nutrition service delivery and management system with those of HPNSSP and other ministries 4.3. Capacities of communities and local govt. units for management of area-based community nutrition services strengthen	4.1.1) 100% existing manpower of NNP along with IPHN transferred to NNS as per organogram 4.1.2) 80% procurement made within first year of program starting 4.1.3) Satisfactory performance per SOP on annual audit 4.2.1) 80% of severely malnourished children with complication and failing to respond referred to appropriate place 4.2.2) 80% of referred cases properly managed as per protocol 4.3.1) 50% of communities monitor the coverage and quality of CBN services in their areas 4.3.2) 80% of management committees oriented on management by exception	Program monitoring Monthly/quarterly/annual progress review Periodic participatory (client and provider) program constraints assessment	Technical people and system in place
5. NNS activities and strategies further develop and adapted on the basis of a learning process, integrated management information, operations research and evaluations 5.1. NNS monitored by a performance improvement oriented MIS system 5.2. Independent monitoring performed special assessment/ studies, nutritional surveillance	5.1.1) An MIS system meeting defined monitoring/feedback and decision making requirements of program clients, communities and program manager at central and field level developed and fully operational 5.1.2) 100% upazilas assessed monthly/ quarterly according to data quality assessment protocol 5.2.1) Independent nutritional surveillance functioning 5.2.2) 80% of local level decision making informed by data 5.3.1) 80% of identified OR projects completed on time 5.4.1) Mid-term and end of program surveys complete with comprehensive evaluation report		Information generated by program learning activities and MIS will be used for planning and management

5.3. Operations research conducted to strengthen NNS operations 5.4. Impact of NNS interventions evaluated			
6. Sectoral human resources developed to meet NNS program requirements	100% of nutrition managers, community level health, FP and nutrition service providers trained as per training plan		Trained staff will be utilized properly and ensure effective implementation of the program
INPUTS/ACTIVITIES			
Input/ Activities(Component wise) a) NNS mainstreaming and program management	- IPHN will be strengthen with clear responsibility, adequate authority and appropriate staffing - Establish effective linkage of nutrition service delivery with HPNSDP and other ministries - 100% existing manpower of NNP along with IPHN transferred to NNS as per organogram - 80% procurement made within first year of program starting - Satisfactory performance per SOP on annual audit done - Nutrition education for mothers, adolescent girls, newly wed women - Individual counseling for concerning child growth & development, child care, immunization etc. - Pregnant women counseling for self care, well-being and healthy factors, food etc. - Pushti packet distribution to targeted population - BCC for nutrition education	Monthly performance report Procurement and disbursement plan Organogram Job aids	Nutrition services successfully mainstreamed Support received from Health, Family Planning and Community clinics for nutrition services
b) Growth Monitoring and Promotion (GMP)	- Introduce growth monitoring to all health service facilities including community clinic - Introduce monthly growth monitoring for children up to 2 yrs of age - 80% of management committees oriented on NNS management	Quarterly OP report	Staff trained on GM GM card printed and supplied
c) Vitamin A supplementation of children 6-59 months	- Procurement of VAC and ensure distribution through clinics and health services (EPI) - BCC for VAC Supplementation	Quarterly OP report	
d) Iron-Folic Acid supplementation for pregnant and lactating women, and adolescent girls	- Iron-folate tablets procured and distributed in adequate amounts for IDA prophylaxis among pregnant and lactating women - Ensure distribution and use of iron-folate tablets - BCC for use of iron-folate tablets to prevent anemia	Quarterly OP report	Procurement done in time
e) De-worming of children (1-5 yrs) and adolescent girls	- Ensure supply of anti-helminthes tablet to all clinics, community clinics and satellite clinics BCC for VAC de-worming	Quarterly OP report	Procurement done in time
f) Management of severe acute malnutrition (facility and community)	- Referral for SAM and other illness of children and pregnant women ANC, PNC	Quarterly OP report	Referral system established
g) Promotion of use of Iodized salt	- Supervision of salt mills to ensure appropriate use of potassium-iodate BCC for use of iodized salt to prevent both visible and invisible (palpate) goiter	Quarterly OP report	
h) Other Micronutrients supplementation of public health importance	- Prepare plan for other micro-nutrient supplementation in coordination with Ministry of Industry - Initiate micronutrient fortification of edible oil, wheat, flour and other appropriate foods	Quarterly OP report	Support received from MOI

i) Training and Capacity Building	- 100% of nutrition managers, community level health, FP and nutrition service providers trained as per plan - Sectoral human resources developed to meet NNS program requirements	Quarterly OP report	Staff trained on NNS
j) M&E/Nutrition Surveillance and communication	- An MIS system developed and fully operational - 100% upazilas assessed monthly/quarterly according to data quality assessment protocol - Independent nutritional surveillance functioning - Mid-term and end of program surveys complete with comprehensive evaluation report - Operations research conducted to strengthen NNS operations - Development of website	Quarterly OP report	Technical people and system in place

Annexure- III

PROCUREMENT PLAN FOR DEVELOPMENT PFROJECT/PROGRAMME

Ministry/Division	Ministry of Health and Family Welfare
Agency	CMSD
Procuring Entity Name & Code	IPHN
Project/Programme Name & Code	National Nutrition Services (NNS)

Project Cost (in lakh Taka)	
149009.38	Total
28528.00	GOB
120481.38	PA

Package No.	Description of procurement package as per PP/TAPP **GOODS**	Unit	Quantity	Procurement method & (Type)	Contract Approving Authority	Source of funds	Estd. cost in Lakh Taka	Indicative Dates			
								Not used in Goods	Invitation for Tender	Signing of Contract	Completion of Contract
1	2	3	4	5	6	7	8	9	10	11	12
GD1	Iron & Folic Acid Tablet	Tab		NCB	LD	RPA/ GOB		No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD2	Deworming Tablet	Tab		NCB	LD	RPA/ GOB		No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD3	Vitamin A Capsule	cap		ICB	LD	RPA/ GOB		No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD4	Communication/BCC materials		Lot	NCB	LD	RPA/ GOB		No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD5	MIS materials		Lot	NCB	LD	RPA/ GOB		No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD6	Weighing Scale	scale	200000	ICB/ NCB	LD	RPA/ GOB	40000.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD7	MUAC Tape	Tape	200000	NCB	LD	RPA	400.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD8	Computer & accessories, printer, UPS	pc	30	NCB	LD	RPA/ GOB	30.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD9	Photocopier, Fax machine	pc	12	NCB	LD	RPA/ GOB	24.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD10	Air Conditioner	pc	22	NCB	LD	RPA/ GOB	19.60	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD11	Telephone	pc	30	NCB	LD	RPA	6.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD12	Telephone (PABX+40 line)	pc	1	NCB	LD	RPA	1.50	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD 13	Vehicle	pc	15	NCB	LD	RPA/ GOB	600.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD14	LCMSMS	pc	1	NCB	LD	RPA	250.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16

GD15	Lab Equipments		Lot	NCB	LD	RPA	81.10	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD16	Microphone (hand set)	set	1	NCB	LD	RPA	2.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD17	Microphone (fixed set)	Set	1	NCB	LD	RPA	3.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD18	Note book computer	Pc	20	NCB	LD	RPA	12.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD19	Desk calculator	Pc	100	NCB	LD	RPA	0.20	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD20	CD riter	Pc	30	NCB	LD	RPA	1.50	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD21	Scanner	Pc	2	NCB	LD	RPA	2.40	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD22	Laser printer	Pc	30	NCB	LD	RPA	15.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD23	Color Laser Printer	Pc	5	NCB	LD	RPA	5.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD24	Video Camera (digital)	Pc	2	NCB	LD	RPA	1.20	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD25	Digital camera	Pc	2	NCB	LD	RPA	0.80	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD26	Multiedia panel (LCI)	Pc	2	NCB	LD	RPA	4.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD27	Slide Projector	Pc	2	NCB	LD	RPA	3.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD28	Screen	Pc	2	NCB	LD	RPA	0.40	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD29	Audio Cassette Player	Pc	2	NCB	LD	RPA	0.10	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD30	TV	Pc	4	NCB	LD	RPA	2.40	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD31	VCR/VCD/DVD player	Pc	2	NCB	LD	RPA	0.40	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD32	FAX machine	Pc	4	NCB	LD	RPA	2.40	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
GD33	Motor cycle	Pc	10	NCB	LD	RPA/GOB	18.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16

Annexure- III (b)

PROCUREMENT PLAN FOR DEVELOPMENT PFROJECT/PROGRAMME

Ministry/Division	Ministry of Health and Family Welfare
Agency	
Procuring Entity Name & Code	
Project/Programme Name & Code	

Project Cost (in lakh Taka)	
149009.38	Total
28528.00	GOB
120481.38	PA

Package No.	Description of procurement package as per PP/TAPP **Works**	Unit	Quantity	Procurement method & (Type)	Contract Approving Authority	Source of funds	Estd. cost in Lakh Taka	Indicative Dates			
								Not used in Goods	Invitation for Tender	Signing of Contract	Completion of Contract
1	2	3	4	5	6	7	8	9	10	11	12
WP-1											
WP-2											
WP-3											
WP-4											

Annexure- III (c)

PROCUREMENT PLAN FOR DEVELOPMENT PFROJECT/PROGRAMME

Ministry/Division	Ministry of Health and Family Welfare
Agency	CMSD
Procuring Entity Name & Code	IPHN
Project/Programme Name & Code	

Project Cost (In lakh Taka)

Total-149009.38	Total
GOB-28528.00	GOB
PA-120481.38	PA

Taka in lakh

Package No.	Description of procurement package as per PP/TAPP **Services**	Unit	Quantity	Procurement method & (Type)	Contract Approving Authority	National Nutrition Services (NNS)	Estd. cost in Lakh Taka	Indicative Dates			
								Not used in Goods	Invitation for Tender	Signing of Contract	Completion of Contract
1	2	3	4	5	6	7	8	9	10	11	12
SP-1	Training			NCB	LD	RPA/DPA /GOB	8530.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
SP-2	Operations Research/Special study			NCB	LD	RPA/DPA	2800.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
SP-3	CBN activities (selected area)			NCB	LD	RPA/DPA /GOB	71202.55	Yes	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
SP-4	BCC			NCB	LD	RPA/DPA /GOB	8200.00	Yes	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
SP5	IYCF			NCB	LD	RPA/DPA /GOB	15984.00	Yes	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
SP6	Nutrition Surveillance			NCB	LD	RPA/DPA	2800.00	No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16
SP7	National & International Consultant (need based)			NCB	LD	RPA/DPA		No	Dec 2011 July 2012-15	Mar 2012 Dec 2012-15	June 2012 Jun 2013-16

Annexure-IV

List of Equipments

(Taka in Lakh)

Sl No	Name of the Equipments	Unit Price (Taka)	Quantity	Estimated Cost
1.	Weighing Scale	2000	97500 pieces	1950
2.	MUAC taps	200	1 (lakh)	200
3.	Air conditioner (window type)	80000	12 pieces	9.6
4.	Air Conditioner (split type)	100000	10 pieces	10
5.	Microphone (hand set)		1 set	2
6.	Microphone (fixed set)		1 set	3
7.	Computer (including networking cost)	1000000	30 pieces	30
8.	Note book Computer	60000	20 pieces	12
9.	Desk calculator	200	100 pieces	0.2
10.	CD writer	5000	30 pieces	1.5
11.	Scanner	120000	2 pieces	2.4
12.	Laser Printer	50000	30 pieces	15
13.	Colour Laser Printer	100000	5 pieces	5
14.	Video Camera (Digital)	60000	2 pieces	1.2
15.	Digital Camera	40000	2 pieces	0.8
16.	Photocopier	200000	12 pieces	24
17.	Multimedia Panel (LCI)	200000	2 pieces	4
18.	Slide Projector	150000	2 pieces	3
19.	Screen	20000	2 pieces	0.4
20.	Audio Cassette Player	5000	2	0.1
21.	TV	60000	4	2.4
22.	VCR/ VCD/ DVD Player	20000	2	0.4
23.	Fax machine	60000	4	2.4
24.	Telephone (Direct line for office /residence)	15000	30 pieces	4.5
25.	Mobile phone	10000	15 pieces	1.5
26.	Telephone (PABX + 40 line)	150000.00	1	1.5
27.	Overhead Projector	20000	2 pieces	0.4
28.	Motor cycle	180000	10 unit	18
29.	Vehicle	4000000	15 unit	600
30.	Lab equipment			86.42
Total				**2991.72**

Annexure-V

List of Furniture and Fixtures

(Taka in Lakh)

Sl No	Name of the Furniture	Unit Price	Quantity	Estimated Cost
1	Visitor Chair	3000	40	1.20
2	Conference Chair	4000	50	2.00
3	Revolving Chair	6000	20	1.20
4	Computer chair	3000	30	.90
5	Book shelf	15000	20	3.00
6	File Cabinet	15000	20	3.00
7	Steel Almirah	22000	15	3.30
8	Curtain		LOT	1.29
9	Sofa Set	100000	5	5.00
	Total			20.89

Annexure-VI (a)

List of Assets (Carried over)

SL No.	Name of Goods	Quantity	Present condition
01	Jeep	05	In working condition
02	Pick Up	01	In working condition
03	Micro Bus	01	Not in working condition
04	Computer HP-Brand CPU	08	In working condition
05	Computer HP-Brand Monitor 15”	03	In working condition
06	LCD HP-Brand Monitor 15”	05	In working condition
07	Monitor Gateway Brand 17”	02	In working condition
08	Laser Printer Epson 6200	01	In working condition
09	HP Laser Jet Printer	03	In working condition
09	Photocopier Toshiba 2030	02	In working condition
10	Photocopier Sharp 3025	01	In working condition
11	Photocopier Konica Minolta Bizhub	01	In working condition
12	Fax Machine	02	In working condition
13	Scanner HP	01	In working condition
14	Laptop	01	In working condition
15	Multimedia Projector	02	In working condition
16	Overhead Projector	02	In working condition
17	TV Sony	02	In working condition

Annexure-VI (b)

List of Damaged Assets

SL No.	Name of Goods	Damaged
01	Jeep	03
02	Micro Bus	01
03	Computer CPU	42
04	Computer Monitor	37
05	Laser Printer Epson 6200	03
06	HP Laser Jet Printer	01
07	Laser Printer HP 4200	03
08	Laser Printer HP 4250	00
09	Laser Printer HP 4050	05
10	Printer HP LaserJet -5	01
11	Printer HP LaserJet -1100	04
12	Color Printer Epson-600	01
13	Laser Printer NEC-860	01
14	Dot Printer Epson LQ-2170	01
15	Dot Printer Epson LQ-100	03
16	Canon Printer BJC-1000	01
17	Laser Printer Canon LDP-810	01
18	Canon Printer Cum Photocopier-1210	02
19	Photocopier Toshiba 2030	01
20	Photocopier Sharp 1118	01
21	Photocopier Sharp SF-2030	01
22	Photocopier Nashuatec 3322S	01
23	Photocopier Selex GR-1650	02
24	Photocopier Toshiba-1310	01
25	Photocopier Xerox-5855	01
26	Photocopier GESTETNER-2715Z	01
27	Fax Machine Panasonic	01
28	Fax Machine Toshiba	01
29	Fax Machine Nashuatec P-396	01
30	Scanner HP	01
31	Laptop HP Compac NX-9010	01
32	Laptop Toshiba Sattelite-P1	01
33	Multimedia Projector Infocus	01

Annexure VIII-A

Action Plan for Mainstreaming Nutrition services

Sl	Activity	Service delivery		Responsibility	
		Existing	Proposed	Current	Proposed
a) Child Nutrition					
1	Exclusive breast feeding	ANC, PNC, BCC, Safe Delivery, ABCN	ANC, PNC, BCC, Safe Delivery, IMCI, CC,	DGHS, DGFP, NNP	DGHS, DGFP
2	Complementary Feeding	-do-	-do-	-do-	-do-
3	Supplementary Feeding	-do-	-do-	-do-	-do-
4	Growth Monitoring and Promotion (GMP)	ABCN	IMCI (facility & community based), EPI, CC	DGHS,NNP	DGHS,
5	Vitamin A supplementation	EPI (<1 yr) EPI/NVAC (12-59M)	EPI (<1 yr) EPI/NVAC (12-59M), IMCI	DGHS, IPHN	DGHS,
6	Iron supplementation (Micronutrient powder)	ABCN, ICDP	Community-IMCI, CC	DGHS,DGFP	DGHS, DGFP
7	Zinc supplementation with ORS	Community & F-IMCI	Community & F–IMCI, CC	-do-	-do-
8	Other Micronutrients (Vit D, Calcium etc.)	Nil	-do-	-do-	-do-
9	Deworming	Filariasis/NVAC	Filariasis/NVAC	DGHS	DGHS,
10	Immunization	EPI	EPI	DGHS	DGHS,
11	BCC (Personal hygiene, hand wash, school health, other BCC)	BCC (HEB)	BCC (HEB) and sector programs	DGHS, DGFP	DGHS, DGFP
12	Therapeutic management of severe acute malnutrition (facility and community)	Pilot intervention is ongoing in selective districts through NGOs	Community & F-IMCI, ESD, CC	DGHS, DGFP	DGHS, DGFP
b) Maternal and Newborn Nutrition					
1	Iron-Folic Acid supplementation for pregnant and lactating women	ANC, PNC, ABCN	ANC, PNC, CC	DGHS, DGFP,NNP	DGHS, DGFP
2	Early initiation of breastfeeding	ANC, ENC, PNC, SBA, CSBA, IMCI	ANC, ENC, PNC, SBA, CSBA, IMCI, CC	DGHS, DGFP	DGHS, DGFP
3	Personal hygiene	BCC	BCC (HEB) and sector programs	DGHS, DGFP	DGHS, DGFP
4	Vitamin A –post partum	RH, MCRH, PNC, ABCN	RH, MCRH, PNC, CC,	DGHS, DGFP,NNP	DGHS, DGFP
5	Identification and management of Low Birth Weight (LBW)	PNC, ENC, IMCI, ABCN	PNC, ENC, IMCI, CC,	DGHS, DGFP,NNP	DGHS, DGFP
6	Weight monitoring of pregnant women	ANC, ABCN	ANC, CC	DGHS, DGFP, NNP	DGHS, DGFP,
7	Food intake (quantity and	BCC, ABCN	BCC, ANC	DGHS, DGFP,NNP	DGHS, DGFP

Sl	Activity	Service delivery		Responsibility	
		Existing	Proposed	Current	Proposed
	quality)				
s8	BCC	BCC	BCC (HEB) and sector programs	DGHS, DGFP	DGHS, DGFP
c) Adolescent Nutrition					
1	Anemia (Iron and Folic Acid)	ABCN, ICDP	School Health, CC, sector adolescent forum, ICDP	DGHS, DGFP,NNP	DGHS, DGFP
2	Strengthening nutrition component of school health and nutrition	School Health	School Health	DGHS	DGHS
3	Personal hygiene	BCC	BCC (HEB) and sector programs	DGHS, DGFP	DGHS, DGFP
4	Deworming	ABCN, Filariasis, School Health, MCRH	ICDP, School Health, CC, Filariasis, MCRH,	DGHS, DGFP	DGHS, DGFP
5	BCC (Nutrition education and counseling)	BCC,ABCN	BCC (HEB) and sector programs	DGHS, DGFP,NNP	DGHS, DGFP
d) General Population					
1	Food Fortification (iodized salt, edible oil with vit. A etc)	Ministry of Industries, MoH&FW	Ministry of Industries (project implementation), MoH&FW (Coordination, policy formulation, monitoring)	DGHS, MOHFW	DGHS, MOHFW
2	Food hygiene and safety	IPHN/BSTI	IPHN	DGHS, MOHFW	DGHS
3	Dietary guidelines	IPHN, INFS, BNNC	IPHN	BNNC	BNNC
4	Inter-ministerial coordination with MOFDM, Agriculture, Industries, Fishery &Livestock, Education, MOWCA, LGRD, Social Welfare, Information	MoH&FW	MoH&FW	BNNC, MOHFW	BNNC, MOHFW
5	Legislation & policy formulation	MoH&FW	MoH&FW	IPHN,MOHFW	IPHN, MOHFW

ANNEXURE VIII-B

Components and Estimated cost summary

Taka in Lakh)

Sl. No.	Name of the components	GOB	Project Aid			Grand Total	% of the total cost
			RPA		DPA		
			Through GOB	Others			
1	Behaviour Change Communication (BCC)	1000	4000		2000	7000	13.56
2	Human resource development (HRD)	3130	4000		1800	17530	11.76
3	Control of Vitamin-A deficiency disorder	5200	16500		2000	23700	15.91
4	Control & prevention of Anaemia	1800	4000		2000	7800	5.23
5	Control of Iodine deficiency Disorder	720	1200		1000	2920	1.96
6	Other Micronutrient problems of Public Health importance (zinc, vitamin 'D,' calcium etc.)	180	1204		616	2000	1.34
7	Community & facility based management of severe acute malnutrition (SAM)	1500	3300		1000	5800	3.89
8	Institutional Capacity Development a) Orientation / Advocacy of Division,District,Upozila managers.	6446	1200		1012	8658	5.81
9	Protection, Promotion & Support of Breastfeeding/ Infant and Young Child Feeding (IYCF) including BFHI & BMS Code	570	2000		1341	3911	2.62
10	Food fortification (Salt Iodization, fortification of oil/other food with Vitamin 'A', iron etc.)	100	1125		1175	2400	1.61
11	School Nutritional education Program	480	2036		5000	7516	5.04
12	Food Quality and Food Safety	240	250		1710	2200	1.48
13	Monitoring, Evaluation, Operations Research, Survey	200	1800		1000	3000	2.01
14	Nutrition Surveillance Program	1300	1800		1000	4100	2.75
15	Establishment of nutrition unit (NU) and strengthening of existing NU	2628	3920		1000	7548	5.07
16	Community based Nutrition (CBN) in selected area	1440	3648		6115	11203	7.52
17	Consultancy Service	154	.38		1000	1154.38	0.77
18	Multi sectoral collaboration	140	872		1000	2012	1.35
19	Nutrition in emergency / NCD	200	1000		1536	2736	1.84
20	Establishment of nutrition Service in CC & GMP	500	10000		2121	12621	8.47
	Total	**28528.00**	**85055.38**		**35426**	**149009.38**	**100**

Note :

GOB = 28528.00 (Taka in lakh)

RPA 85055.38 (Taka in lakh)

DPA = 35426.00 (Taka in lakh)

Total = 1490069.38(Taka in lakh)

ANNEXURE VIII-C

Implementation of specific nutrition interventions

Nutrition Intervention	Responsibility	Line Directorate (OP)	Responsible Health Workforce	Core Activities
Infant and Young Child Feeding	Implementation	HSM, ESD, CBHC, MNCAH MC-RAH, FPFSD NNS, CBHC	MO, Nurses, MA (in facilities) HA, CHCP (in CC and community) FWV, SACHMO, FWA Community Volunteers	IYCF counseling during ANC, PNC consultations; Baby Friendly Hospital Initiative; Nutrition Corners; IYCF counseling during implementation of community-based nutrition activities Implementation of domiciliary GMP activities in hard-to-reach areas (and those yet to have a functional CC) and in Urban areas
	Support Services	NNS	LD, PM	Technical support; Policy Directives and Guidelines; Capacity development of concerned service providers
Growth Monitoring and Promotion (GMP)	Implementation	MNCAH,ESD, CBHC, HSM MC-RAH, FPFSD NNS, CBHC, UPHCP	MO, Nurses, MA (in facilities) HA (in CC and community) FWV, SACHMO, FWA HA, FWA, CHCP Community Volunteers	Regular weight and height measurements of children 0-59 months during facility-based service contacts (MOs ,SACHMO/ MAs, Nurses and FWV) and during community-based nutrition activities (FWA, HA, CHCP) Implementation of domiciliary GMP activities in hard-to-reach areas (and those yet to have a functional CC) and in Urban areas
	Support Services	NNS	LD, Program Manager	Procurement of weight and height measurement equipment (scales, MUAC tapes etc); Development of GM tools; Policy Directives and Guidelines. Capacity development of concerned service providers and introduction of a structured referral system.
BCC to Promote Good Nutritional Practices	Implementation	HEP, IEC, NNS MNCAH, ESD,CBHC, HSM, MC-RAH, FPFSD	Directorate level Field level (MO, FWV, SACHMO, FWA, HA, FWA, CHCP)	Collaborative development of BCC materials Promotion of good nutritional practices through nutrition education during facility-based service contacts (MOs ,SACHMO/ MAs, Nurses and FWV) and during community-based nutrition activities (FWA, HA, CHCP)

Nutrition Intervention	Responsibility	Line Directorate (OP)	Responsible Health Workforce	Core Activities
		NNS, CBHC	Community Volunteers	Implementation of domiciliary nutrition activities in hard-to-reach areas (and those yet to have a functional CC) and in Urban areas
	Support Services	NNS	LD, PM	Development and procurement of BCC materials; Mass Media Campaigns and organizing national events (eg, breastfeeding and nutrition weeks; Technical Inputs to other OPs (eg in development of BCC materials); Policy Directives and Guidelines Coordination with NGOs and other Stakeholders involved in the implementation of BCC activities Other Mass Media Campaigns as well as IPC in collaboration with NNS
		HEP, IEC	Director Level as well as in Upazila Health System(UHS)	
Iron/Folate Supplementation for pregnant and lactating women (including MNPs)	Implementation	MNCAH, MC-RAH, CBHC	MO, Nurses, HA, SACHMO/MA, FWV, FWA, HA, CHCP	Provision of Fe/Folate supplementation during ANC, PNC, PAC and other facility-based service contacts (MOs ,SACHMO/ MAs, Nurses and FWV) and during community-based nutrition activities (FWA, HA, CHCP)
	Support Services	NNS		Policy Directives and Guidelines; Coordination with the concerned LDs to ensure availability of Fe/folate tablets at all levels; Develop National Guidelines for Fe/Folate Supplementation Procurement of Iron/Folate tablets
		MNCAH, MC-RAH		
Vitamin A supplementation – preventive and curative	Implementation	NNS	HA ,CHCP ,CHP ,Health & FP.Work force	Distribution and administration of VA capsules for prevention and cure of VAD related complications
	Support Services	NNS		Procurement of VA capsules; Mass media campaigns (in collaboration with ESD, HSM); Distribution of capsules up to Upazila level; Compilation of Stats; Policy Directives and Guidelines

Nutrition Intervention	Responsibility	Line Directorate (OP)	Responsible Health Workforce	Core Activities
Control of IDD and Salt Iodization	Implementation	Ministry of Industries		Salt Iodization, Regulations
	Support Services	NNS	LD, PM, (in collaboration with Sanitary Inspectors/Health Inspector)	Development of BCC materials; Monitoring; quality assurance/field testing of salt; Policy Directives and Guidelines Coordination with the Ministry of Commerce Implement special interventions for pocket areas at high risk of IDDs
Zinc Supplementation during treatment of Diarhhoea	Implementation	MNCAH, ESD, HSM,	MO, MA, Nurses	Provide the Zinc supplement during treatment of diarrhea
	Support Services	NNS MNCAH, ESD, HSM	LD, PM LD level	Procurement of Zinc supplements Coordination with other LDs to ensure Zinc supplements are available in health facilities at all levels; Policy Directives and Guidelines Procurement of zinc supplements
Prevention and control of Fe deficiency/anemia in children under-5's	Implementation	MNCAH, ESD, CBHC, MC-RAH , HSM	MO, Nurse, SACHMO/MA, HA, FWV, FWA, CHCP	Iron Supplementation during facility-based service contacts (MOs ,SACHMO/ MAs, Nurses and FWV) and during community-based nutrition activities (FWA, HA, CHCP)
	Support Services	NNS MNCAH, ESD, CBHC, MC-RAH	LD. PM LD level	Procurement of Iron tablets and Iron syrup; Policy Directives and Guidelines Procurement of Iron tablets
Iron Supplementation and Deworming of Adolescent Girls(and children)	Implementation	ESD in collaboration with MOE	Health Professionals involved in NIDs	Provision of deworming tablets during NIDs School Health Program
	Support Services	NNS	LD, PM	National campaign for deworming (NVAC+); Policy Directives and Guidelines
Ensuring Food Safety and Food Quality	Implementation	NCD (IPH), DGHS	Sanitary Inspectors	Sample Collection, Food testing, Capacity Development
	Support Services	NNS	LD, PM	Policy Directives and Guidelines; Regulatory Support and Monitoring; Awareness campaigns
Treatment of Severe Acute Malnutrition (Including CMAM)	Implementation	MNCAH, ESD, HSM	MO, Specialists, Nurses	Structured Referral, Treatment and Rehabilitation
	Support Services	NNS	LD, PM	Policy Directives and Guidelines; Institutional and Human Capacity Development; Procurement of drugs and ensuring that logistics as per

Nutrition Intervention	Responsibility	Line Directorate (OP)	Responsible Health Workforce	Core Activities
				management of SAM are in place
Training and Capacity Development	Implementation	NNS IST, CBHC, TRD (NIPORT)	LD	Training of Doctors, Paramedics, Nurses, HAs, FWVs, CHCP and NGO workers
	Support Services	NNS	LD, PM	Technical Support for development of training modules; Training of Master trainers (at district level) for CC workers on nutrition service delivery; Develop and implement a nutrition capacity building strategy;
Monitoring and Evaluation/Nutrition Surveillance/Research	Implementation	NNS HIS-EH, MIS-FP	LD, PM LD level	Establish a national resource center on nutrition; Establish a national nutrition surveillance system; Conduct regular nutrition surveys/research Collect routine information on nutrition service contacts and anthropometric measurements.
	Support Services	NNS, HIS-EH and MIS-FP	LD level	Establish linkages with routine data sources to get periodic MIS information by NNS
Urban Nutrition	Implementation	NNS, ESD, FPFSD,Ministry of Local Government and Urban Development	LD, PM, LD-ESD, LD-FPFSD, PD-UPHCP	Providing technical support to, and coordinating with the Ministry of Local Government in implementing nutrition interventions in urban areas.
	Support Service	NNS	LD, PM	Supervising NGOs that are engaged to implement nutrition activities; Policy directives and Guidelines

ANNEXURE VIII-D

Estimated Detailed Budget (Input Wise)

(Taka in Lakh)

No. of Comp.	Name of components/ Major activities	Total Physical and financial target					FY 2011-2012		FY 2012-2013		FY 2013-2014		FY 2014-2016	
		Physical Qty/ unit	Financial			Total cost	Physical		Physical		Physical		Physical	
			GOB	RPA	DPA		Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial
1	2	3	4	5	6	7	8	9	10	11	12	12	14	15
1	**Behavior Change Communication (BCC):** (BCC material for nutrition, healthy eating/feeding for all age group would be developed and incorporated through mass media and other different channels. BCC -Package for policy maker, managers/implementers, service provider, beneficiary)	Nationwide (LS)	1000.00	4000	2000.00	7000	Nationwide (LS)	1200	Nationwide (LS)	1700	Nationwide (LS)	1700	Nationwide (LS)	2400
2	**Human resource development (HRD):**(Preparation of capacity building guideline, training module in relevant cases, formation of master and core trainer team, training of relevant service providers at home & abroad)	Nationwide (LS)	3130.00	4000	1800.00	8930	Nationwide (LS)	1000	Nationwide (LS)	2408.06	Nationwide (LS)	2521.94	Nationwide (LS)	3000
3	**Control of Vitamin-A deficiency disorder:** (Awareness creation about food based approach, training of service provider, supplementation in routine service & in NID among two(2) crore children)	Nationwide (LS)	5200.00	6500.0	2000.00	13700	Nationwide (LS)	1444.66	Nationwide (LS)	3075	Nationwide (LS)	3075	Nationwide (LS)	6105.34
4	**Control & prevention of Anemia:** (Awareness creation about food based approach, training of service provider, supplementation to pregnant women, lactating mother, children, adolescent)	Nationwide (LS)	1800.00	4000.00	2000.00	7800	Nationwide (LS)	468	Nationwide (LS)	2712.15	Nationwide (LS)	2619.85	Nationwide (LS)	2000
5	**Control of Iodine deficiency Disorder:** (Awareness creation about food source & consumption of Iodized salt, training of service provider)	Nationwide (LS)	720.00	1200.00	1000.00	2920	Nationwide (LS)	175.2	Nationwide (LS)	844.07	Nationwide (LS)	831.01	Nationwide (LS)	1069.72
6	**Other Micronutrient problems of Public Health importance (zinc, vitamin 'D,' calcium etc.):** (Awareness creation about food based approach, training of service provider, supplementation to vulnerable group)	Nationwide (LS)	180.00	904.00	616.00	1700	Nationwide (LS)	165	Nationwide (LS)	395	Nationwide (LS)	395	Nationwide (LS)	745
7	**Community & facility based management of severe & Moderate acute malnutrition (SAM/MAM):** (Development of guideline, training module, manpower trained for SAM & MAM management at all facilities and community)	Nationwide (LS)	1500.00	2000.00	1000.00	4500	Nationwide (LS)	348	Nationwide (LS)	1038	Nationwide (LS)	1038	Nationwide (LS)	2076
8	**Institutional Capacity Development (including Pay & Allowances):** (Organogram development, deployment of skill manpower, training of deployed manpower in both technical & managerial aspect, establishment of nutrition unit at tertiary, district and Upazila level.)	47 Persons L/S	6446.00	1200.00	1012.00	8658	47 Persons L/S	519.48	47 Persons L/S	3102.72	47 Persons L/S	2864.01	47 Persons L/S	2171.79
9	**Infant and Young Child Feeding (IYCF) including BFHI & BMS Code**: (Establishing Nutrition corner in facilities from tertiary level to UzHC, Campaign for IYCF up to	Nationwide (LS)	570.00	2000.00	1341.00	3911	Nationwide (LS)	234.66	Nationwide (LS)	1130.53	Nationwide (LS)	1113.04	Nationwide (LS)	1432.77

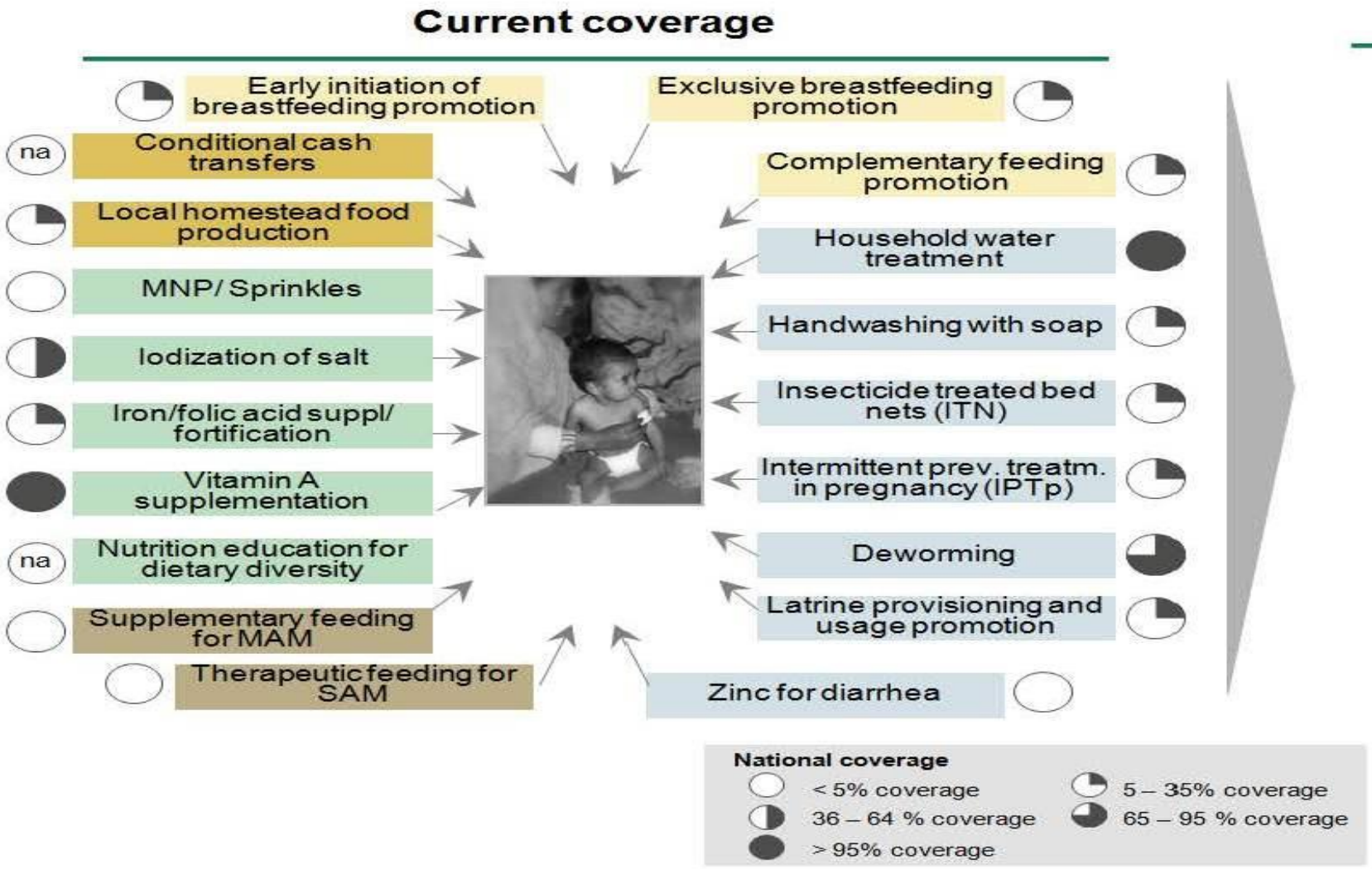
	community clinic & community, breast feeding week and through Mass media campaign)													
10	**Food fortification:** (Salt Iodization, fortification of oil/other food with Vitamin 'A', iron etc.)	Nationwide (LS)	100.00	125.00	1175.00	1400	Nationwide (LS)	144	Nationwide (LS)	314	Nationwide (LS)	314	Nationwide (LS)	628
11	**School Nutritional education Program:** (Awareness development campaign for teachers, TOT for selected teachers, Small fund allocation for school/madras's)	Nationwide (LS)	480.00	936.00	5000.00	6416	Nationwide (LS)	450	Nationwide (LS)	2474.5	Nationwide (LS)	2491.5	Nationwide (LS)	1000
12	**Food Quality and Food Safety:** (Raising awareness on food safety, hygienic practices, hand washing etc., developing an action plan, Support to Food Safety Laboratory of IPH and strenthen collaboration with other food safety laboratories.)	IPH, BSTI, INS etc.	540.00	250.00	1710.00	2500	IPH, BSTI, INS etc.	132	IPH, BSTI, INS etc.	676	IPH, BSTI, INS etc.	692	IPH, BSTI, INS etc.	1000
13	**Monitoring, Evaluation, Operations Research, Survey:**(Development of Monitoring tool , Establish linkage with central MIS, Establishment of a national resource centre for nutrition, Survey as per program need)	MIS of NNS-01	500.00	800.00	1000.00	2300	MIS of NNS-01	180	MIS of NNS-01	530	MIS of NNS-01	530	MIS of NNS-01	1060
14	**Nutrition Surveillance Program (NSP):** (Baseline Survey, mid-term & end evaluation)	Urban slum 60U, Under served180 U, HTR 180 U	1300.00	1800.00	1000.00	4100	Urban slum 60U, Under servedm-180 U, HTR180 U	246	Urban slum 60U, Under served180 U, HTR180 U	1502	Urban slum 60U, Under served180 U, HTR180 U	1766.83	Urban slum 60U, Under served180 U, HTR180 U	585.17
15	**Establishment of nutrition unit (NU) and strengthening of existing NU:** (Planning of nutrition unit at UHC, Functioning of NU)	Tertiary-25, District-59, UHC-427	2628.00	866.00	1000.00	4494	Tertiary-25, District-59, UHC-427	452	Tertiary-25, District-59, UHC-427	1410.5	Tertiary-25, District-59, UHC-427	1610.5	Tertiary-25, District-59, UHC-427	1021
16	**Community based Nutrition (CBN) as selected area:** (CC would be equipped for nutrition service delivery, introduce growth monitoring, mapping of targeted areas for CBN, review and update CBN package, implementation of package in targeted areas through outsourcing)	Nationwide (LS)	1440.00	41602.00	6115.00	49157	Nationwide (LS)	672	Nationwide (LS)	12121.25	Nationwide (LS)	12121.25	Nationwide (LS)	24242.5
17	**Consultancy Service:** (Implementation specialist, nutrition expert, finance expert)	54 MM	154.00	1000.38	1000.00	2154.38	54 MM	69.2	54 MM	921.58	54 MM	1121.2	54 MM	42.4
18	**Multi -sectoral Collaboration:** (Formation of National Nutrition Coordination Committee for coordination among ministries, GO- NGOs, DPs and all relevant organization)	With other ministries	140.00	872.00	1000.00	2012	LS	120	LS	873	LS	973	LS	46
19	Nutrition of Emergency	Nationwide	200.00	1000.00	1536.00	2736	Nationwide	164	Nationwide	1143	Nationwide	1343	Nationwide	86
20	Establishment of Nutrition Service and GMP in CC	LS	500.00	10000.00	2121.00	12621	LS	1842	LS	3194.75	LS	3285.98	LS	4298.27
	Total		**28528.00**	**85055.38**	**35426.00**	**149009.38**		**10026.20**		**41566.11**		**42407.11**		**55009.96**

ANNEXURE VIII-E

Stakeholder mapping for nutrition interventions in Bangladesh

	Treatment Interventions			Preventative Interventions							
	Supplementary feeding	Therapeutic feeding	Zinc	ITN IPTp	Breastfeeding/ complementary feeding	De-worming / Vitamin A	Micronutrient supplem.[2]	Hand-washing with Soap	Household water treatment	Conditional Cash transfer	Homestead food production
Donor[4]	USAID WB	USAID	CIDA USAID	GFATM[5]	USAID, WB	Gov. of Japan-Hashimoto initiative; Gates Foundation	DFID EC Spanish MDG Fund	USAID	WB CIDA DFID USAID	Norwegian Emb.; USAID	AusAID, DANIDA, USAID, DFID, NOVIB, WB
Catalyst[6]	UNICEF WFP, HKI[9]	UNICEF UNHCR SC USA, Concern;	UNICEF WV GAIN	WHO	UNICEF WFP, WHO; HKI; BRAC	WFP[14], UNICEF Alive & Thrive GAIN, CARE, StC, HKI[8], ACF; MI[8]	UNICEF WFP, BRAC FAO[10]; MI WV; GAIN	UNICEF; WFP; StC.; HKI ; Care; Plan	UNICEF WHO	WFP FAO HKI	FAO, WFP HKI, Concern, WV
Government and its programs	NNP	MoH , IPHN	MHFW[11]	MHFW[11] (DG Health)	MHFW[11] IPHN NNP	MHFW[11]; EPI-Campaign	MHFW[11] NNP	MHFW[11] Dept. of PH Engin. FPMC[3]	Ministry of Agriculture MHFW[11]	Min. of prim. & Mass Educ.; Min. of Finance	DAE, RDA, FPMC[3]
Implementer[7]	TDH, ACF	ICCDR, B; ACF; TDH; IFRC MSF; SC	MSF	BRAC, MSF; VARD	BBF; ACF, MSF, TDG, StC, HKI, Plan; BRAC	DSK, MSF, TDH[8]; StC; Plan	MSF, StC; HKI; Plan; BRAC ICDDR, B; ACF, TDH	BRAC; MSF; ACF; TDH, DSK; StC; Plan	BRAC; NGO Forum[12]; DSK; TDH	BRAC, TMSS Grameen; DSK	ACF; local NGOs; DSK; TDH; StC
Private sector			SMC Grameen Danone	BASF Grameen		Standard Chart. Bank	Renata, Grameen-Danone, BASF, SMC	Unilever, Reckitt	Grameen Veolia	Grameen	Grameen
Touch point/ Delivery Channel	Field-worker; health clinics	Health centers; hospitals pilot-projects; camps	Health centers, EPI	Comm. volunteers/ health centers	Volunteers training centers; clinics, mother-support-groups; door-to-door	Awareness campaign/ EPI, health centres, house visits	Para center/ workers; pilots, house visits, EPI	Group teaching; door-to-door; volunteers	Domestic visits; trainings in CBOs[1]	VO's[13]; MC branches; local banks credit worker/ posts	Field workers; workshops, community centers

1. Community Based Organizations (in Slums, Villages) 2. Iron or Iodine or Sprinkles/MNP 3. Food Planning and Monitoring Committee, Ministry of food and disaster mgmt. 4. Advocacy and Funding 5. Global Fund for AIDS, Tuberculosis and Malaria 6. Coordination/management/sub-contracting, technical support; development of programs and policies 7. Implementation, monitoring & evaluation; education, training / capacity building 8. Only vitamin A 9. Additionally WorldVision, Care, Caritas 10. Only food-based approach 11. Ministry of Health and Family Welfare 12. NGO Forum for Drinking Water Supply & Sanitation 13. Village Organizations 14. Fortified flour Note: Additionally, research institutions, such as ICCDR, B or Eminence strong advocates/policy maker; Note: Missing interventions on this slide: latrines, nutrition education.



Source: Stakeholder technical questionnaires, BCG analysis: REACH Stakeholder Analysis 2010

Number of interventions by district