Bangladesh Second Country Investment Plan

Nutrition-Sensitive Food Systems

(CIP2 2016-2020)

Monitoring Report 2020

July 2020

Food Planning and Monitoring Unit (FPMU)

Ministry of Food

Government of the People's Republic of Bangladesh

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Foreword

The number of people battling acute hunger and suffering from malnutrition is on the rise across the developing world, much of the Asian region and in Bangladesh. Amidst this situation, the Government of the People's Republic of Bangladesh remains fully determined towards attaining the goal of the Bangladesh Second Country Investment Plan 2016-2020 (CIP2) to achieve improved food security and nutrition for all by making food systems nutrition-sensitive and sustainable. Its multisectoral approach to tackle hunger and malnutrition and achieve the Sustainable Development Goals (SDGs) in particular SDG2, ending hunger, has emerged as a challenge in the wake of the COVID -19 pandemic.

Analysis of the data for the reporting period of the CIP2 has demonstrated continued progress in the main markers of hunger and malnutrition: the latest figure available for the prevalence of malnutrition, 14.7% in 2016-18, was expected to drop below 10% by 2030, the Government target, based on its recent declining trend. The prevalence of moderate and severe food insecurity also continued declining while overall progress in child undernutrition has been evident, even if some regions still lag behind.

Regrettably, the advent of the COVID-19 pandemic has put some of these improvements on the line and, at this moment in time, it is difficult to predict what the effects of this crisis on food and nutrition security will be, but it is likely to have long term impacts on morbidity, nutrition and health. The Government reacted promptly to ensure availability of food for the vulnerable population across the country, by distributing rice and other nutritious foods. It also guaranteed continuity in the production of food by introducing a BDT 5,000 crore stimulus package for farmers. The situation is closely monitored to track and minimise a setback on the progress made so far.

The Monitoring Report 2020 marks the fourth year of implementation of the CIP2 and focuses on the changes that have taken place over the financial year ending 30th June 2019. It reviews the progress in the country's food and nutrition security based on the CIP2 results framework indicators and on the mobilisation and utilisation of resources towards delivering the results. It has been prepared under the leadership and facilitation of the Food Planning and Monitoring Unit (FPMU) of the Ministry of Food, in collaboration with 19 partner ministries and divisions, with technical assistance from the Food and Agriculture Organization of the United Nations (FAO) and financial support of the United States Agency for International Development (USAID) and the European Union (EU).

As of 30th June 2019, the CIP2 cumulative budget stood at 19.2 billion USD or 12.2 billion when weighting projects according to their contribution to achieving proper nutrition for all. Out of this budget, 3.5 billion USD constitute the gap that remains to be financed for projects that are in the government's and the development partners' pipeline. I trust that this report will motivate stakeholders to meet their commitments but also stimulate new endeavours and funding towards strengthening nutrition sensitive food systems in line with the priorities established in the upcoming National Food and Nutrition Security Policy (NFNSP).

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Acronyms

7FYP	Seventh Five Year Plan
ADB	Asian Development Bank
ADP	Annual Development Programme
AIIB	Asian Infrastructure Investment Bank
APA	Annual Performance Agreement
ANC	Antenatal Care
ASF	Animal Source Foods
AVC	Agricultural Value Chain
BAB	Bangladesh Accreditation Board
BADC	Bangladesh Agricultural Development Corporation
BAEC	Bangladesh Atomic Energy Commission
BAPA	Bangladesh Agro-Processors' Association
BARC	Bangladesh Agricultural Research Council
BARI	Bangladesh Agricultural Research Institute
BAU	Bangladesh Agricultural University
BB	Bangladesh Bank
BBF	Bangladesh Breastfeeding Foundation
BBS	Bangladesh Bureau of Statistics
BCC	Behaviour Change Communication
BCIC	Bangladesh Chemical Industries Corporation
BFVAPEA	Bangladesh Fruits, Vegetables and Allied Products Exporting Association
BIHS	Bangladesh Integrated Household Survey
Brac BIGD	Brac Institute of Governance and Development
BDHS	Bangladesh Demographic and Health Survey
BDT	Bangladeshi Taka
BFD	Bangladesh Forest Department
BFRI	Bangladesh Fisheries Research Institute
BFSA	Bangladesh Food Safety Authority
BFoRI	Bangladesh Forest Research Institute
BINA	Bangladesh Institute of Nuclear Agriculture
BIRDEM	Bangladesh Institute of Research and Rehabilitation for Diabetes, Endocrine and Metabolic Disorders
BIRTAN	Bangladesh Institute of Research and Training on Applied Nutrition
BJRI	Bangladesh Jute Research Institute
BLRI	Bangladesh Livestock Research Institute
BMDA	Barind Multipurpose Development Authority
BMS	Breast-Milk Substitutes
BNNC	Bangladesh National Nutrition Council
BracU	Brac University
BRRI	Bangladesh Rice Research Institute
BSCIC	Bangladesh Small and Cottage Industries Corporation
BSRI	Bangladesh Sugar-crop Research Institute
BSTI	Bangladesh Standards and Testing Institution
BWDB	Bangladesh Water Development Board
CARS	Centre for Advanced Research in Sciences
CGAP	Consultative Group to Assist the Poor
CGE	Computable General Equilibrium
CIP	Country Investment Plan
CIP1	First Country Investment Plan
CIP2	Second Country Investment Plan
CPI	Consumer Price Index
CRA	Climate Resilient Agriculture
CSA	Climate Smart Agriculture
CSAIP	Climate Smart Agriculture Investment Plan
CSOs	Civil Society Organisations
DAE	Department of Agricultural Extension
DAM	Department of Agricultural Marketing
DANIDA	Danish International Development Agency
DAP	Diammonium phosphate
DDM	Department of Disaster Management
DEI	Dietary Energy Intake
DES	Dietary Energy Supply
DFID	Department for International Development
DG	Director-General
DGHS	Directorate General of Health Services
DLS	Department of Livestock Services
DoF	Department of Fisheries
DPs	Development Partners
DPHE	Department of Public Health Engineering
EBF	Exclusive Breastfeeding
EEZ	Exclusive Economic Zone
EGPP	Employment Generation Programme for the Poorest
ERD	Economic Relations Division
EU	European Union

FAO	Food and Agriculture Organization of the United Nations
FCTs	Food Composition Tables
FIES	Food Insecurity Experience Scale
FLI	Food Loss Index
FWI	Food Waste Index
FLW	Food Loss and Waste
FNS	Food and Nutrition Security
FPMC	Food Planning and Monitoring Committee
FPMU	Food Planning and Monitoring Unit
FPWG	Food Policy Working Group
FSC	Food Security Cluster
FSMS	Food Safety Management System
FSNIS	Food Security and Nutrition Information System
FSNSP	Food Security Nutritional Surveillance Project
FSS	Food Security Sector
FYP	Five Year Plan
G-K	Ganges-Kobadak
G2P	Government-to-Person
GAFSP	Global Agriculture & Food Security Program
GAIN	Global Alliance for Improved Nutrition
GAP	Good Agricultural Practices
GAqP	ASEAN Good Aquaculture Practices
GDP	Gross Domestic Product
GED	General Economics Division
GEF	Global Environmental Facility
GHG	Green House Gas
GHO	Global Health Observatory
GHP	Good Hygienic Practices
GIEWS	Global Information and Early Warning System on Food and Agriculture
GIS	Geographic Information System
GM	Genetically Modified
GMP	Good Manufacturing Practices
GoB	Government of Bangladesh
HACCP	Hazard Analysis and Critical Control Points
HKI	Helen Keller International.
HIES	Household Income and Expenditure Survey
HPNSP	Health, Population and Nutrition Sector Programme
IBRD	International Bank for Reconstruction and Development
ICN2	Second International Conference on Nutrition
ICT	Information and Communication Technology
ICVGD	Investment Component for Vulnerable Group Development
IDA	International Development Association
IDB	Inter-American Development Bank
IDF	International Diabetes Federation
IFAD	International Fund for Agriculture Development
IFC	International Finance Corporation
IFPA	Indicator of Food Price Anomalies
IFPRI	International Food Policy Research Institute
ILO	International Labour Organization
IMED	Implementation Monitoring and Evaluation Division
IMF	International Monetary Fund
INFS	Institute of Nutrition and Food Science
INGO	International Non-Governmental Organisation
IPC	Integrated Food Security Phase Classification
IPH	Institute of Public Health
IPHN	Institute of Public Health and Nutrition
IRRI	International Rice Research Institute
IYCF	Infant and Young Child Feeding
JICA	Japan International Cooperation Agency
LANSA	Leveraging Agriculture for Nutrition in South Asia
LCG	Local Consultative Group
LDDP	Livestock and Dairy Development Project
LCG ARDF	Local Consultative Group in Agriculture, Rural Development and Food Security
LGD	Local Government Division, Ministry of Local Government, Rural Development and Co-operatives
LGED	Local Government Engineering Department
LoA	Letter of Agreement
MAD	Minimum Acceptable Diet
MBM	Meat and Bone Meal
MDD	Minimum Dietary Diversity
MDD-W	Minimum Dietary Diversity for Women
MDER	Minimum Dietary Energy Requirements
MDG	Millennium Development Goal
MFSP	Modern Food Storage Facilities Project
MICS	Multiple Indicator Cluster Survey
MIS	Management Information System
MISM	Management Information System and Monitoring
MoEFCC	Ministry of Environment, Forest and Climate Change

MMF	Minimum Meal Frequency
MMT	Million Metric Tons
MoA	Ministry of Agriculture
MoDMR	Ministry of Disaster Management and Relief
MoF	Ministry of Finance
MoFood	Ministry of Food
MoFL	Ministry of Fisheries and Livestock
MoHFW	Ministry of Health and Family Welfare
MoI	Ministry of Industries
MoInfo	Ministry of Information
MoLGRDC	Ministry of Local Government, Rural Development and Cooperatives
MoP	Muriate of Potash
MoU	Memorandum of Understanding
MoWCA	Ministry of Women and Children Affairs
MoWR	Ministry of Water Resources
MPI	Multidimensional Poverty Index
MR19	CIP2 Monitoring Report 2019
MR20	CIP2 Monitoring Report 2020
MSMEs	Micro, Small and Medium Enterprises
MUCH	Meeting the Undernutrition Challenge
NAES	National Agriculture Extension System
NAP	National Agricultural Policy
NATP II	National Agriculture Technology Project – phase II
NARS	National Agricultural Research System
NBCC	Nutrition Behaviour Change Communication
NC	National Committee
NCDs	Non-Communicable diseases
NFPCSP	National Food Policy Capacity Strengthening Programme
NFNSP	National Food and Nutrition Security Policy
NFP	National Food Policy
NGOs	Non-Governmental Organizations
NIPN	National Information Platform for Nutrition
NIPU	Nutrition Information and Planning Unit
NMSS	National Micronutrient Status Survey
NPAN2	Second National Plan of Action for Nutrition
NNC	National Nutrition Council
NNP	National Nutrition Policy
NNS	National Nutrition Services
NNW	National Nutrition Week
NO	Nutritional Olympiad
NSA	Nutrition-Sensitive Agriculture
NSDS	National Strategy for the Development of Statistics
NSPCMD	National Strategy on Prevention and Control of Micronutrient Deficiencies
NSVC	Nutrition-Sensitive Value Chain
NWRD	National Water Resources Database
OPHI	Oxford Poverty and Human Development Initiative
PFDS	Public Food Distribution System
PKSF	Palli Karma-Sahayak Foundation
PNC	Post-natal Care
PoA	Plan of Action
PoU	Prevalence of Undernourishment
PPP	Public Private Partnership
ppm	Parts per million
PPRC	Power and Participation Research Centre
RAKUB	Rajshahi Krishi Unnayan Bank
REVA	Refugee influx Emergency Vulnerability Assessment
RMG	Ready-made garment
SAARC	South Asian Association of Regional Cooperation
SBN	SUN Business Network
SDC	Swiss Agency for Cooperation and Development
SDG	Sustainable Development Goal
SMART	Specific, Measurable, Achievable, Relevant and Time-bound
SME	Small and Medium Enterprise
SOFI	State of Food Insecurity in the World
SRDI	Soil Resource Development Institute
SSN	Social Safety Net
SSNP	Social Safety Net Programmes
SUN	Scaling Up Nutrition
TAT	Technical Assistance Team
TMRI	Transfer Modality Research Initiative
TSP	Triple Superphosphate
TT	Thematic Team
TWG	Technical Working Group
UDP	Urea Deep Placement
UNDP	United Nations Development Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNIDO	United Nations Industrial Development Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USD	US Dollar
VGD	Vulnerable Group Development
VGF	Vulnerable Group Feeding
VRA	Vulnerability Risk Assessment

WASH	Water, Sanitation and Hygiene
WFP	World Food Programme
WHO	World Health Organization
WIBCI	Weather Index-Based Crop Insurance

Executive Summary

Progress towards the CIP2 Results

The Bangladesh Second Country Investment Plan – Nutrition-Sensitive Food Systems (CIP2, 2016-2020) lays out a coherent set of nutrition-sensitive programmes. The Monitoring Report 2020 (MR20) analyses progress in the CIP2 up to June 30th 2019, three years into the implementation of the CIP2. Cross-sectoral resource mobilisation is assessed against national priorities as outlined in the Bangladesh Seventh Five Year Plan. This process is aligned with the related SDG 2 - Zero Hunger. Because the CIP2 is a living document, this monitoring report, to the extent possible, has tried to consider the likely impacts of COVID-19 pandemic against the CIP2 and SDG targets.

Progress towards the CIP2 Goal

Undernourishment is reducing slowly but steadily

The Food and Agriculture Organization of the United Nations (FAO) estimates suggest a slowly reducing trend in the prevalence of undernourishment in Bangladesh reaching 13.0% in 2017-2019. This reduction makes the General Economic Division (GED) target feasible although the COVID-19 crisis may dampen this progress. Indeed, it is expected that the crisis will reverse the gains made in nutrition improvement and impact the most vulnerable first and hardest. The COVID-19 crisis has made it clear that inequity is a maker and a marker of malnutrition.

Access to food is improving but may worsen due to COVID-19

The prevalence of severe food insecurity based on the Food Insecurity Experience Scale (FIES) improved, down to 10.6% in 2017-19 from 11.6% in 2016-18. Following a slight decline, the three-year average for 2016-18 and 2017-19 has stagnated at 31.5% for moderate food insecurity, however. These figures are noticeably below the South Asia averages, which stand at 16.0% for severe food insecurity and 33.4% for moderate food insecurity over 2017-19, respectively. Given the potential impact of the COVID-19 crisis on food security, it is advisable to conduct the FIES survey which has now been adapted to capture such effects. Food insecurity is likely to have worsened for the poorest, those on the brink of poverty, those heavily dependent on remittances, and daily rural labourers.

Progress in reducing child undernutrition has continued but high child stunting persists in some regions

Achievements in reducing child undernutrition have continued. Prevalence of stunting reduced to 30.8% in 2018 which makes the 25% target by 2025 of the Seventh Five Year Plan reachable. While the results for stunting are commendable at the national level, several regions lag behind, for instance, Sylhet, Mymensingh, and Barisal. Prevalence of wasting dropped to 8.4% in 2018 which is aligned with the Second National Plan of Action for Nutrition (NPAN2) 2025 target.

Agricultural value addition per worker is increasing, however, agricultural workers are becoming relatively poorer

Agricultural value addition per worker, a measure of agricultural productivity, increased over the period 2015-2018. The declining trend in the ratio between agricultural value added per worker and per capita GDP taking place since 2006 suggests that agricultural workers have become relatively poorer compared to other sectors' workers. The positive trend in agricultural value added per worker may be undermined by the economic slowdown caused by COVID-19. However, the real effect is still uncertain given that agricultural operations are essential, and all efforts will be made to allow them to continue amid the lockdown and prioritised afterwards.

Progress in the CIP2 Outcomes

Outcome I. Efforts towards diversification and climate-smart investments in agriculture should be continued

Agricultural GDP growth, a proxy indicator under Pillar I, performed well in 2018/19. The most dynamic subsectors continued to be the fishery and forestry sectors. Their shares in agricultural GDP increased over the reference period, which compensated for reduced shares of mainly crop and horticulture. Crop and horticulture, although contracting relative to other sub-sectors, remains the largest agricultural subsectors by far, generating more than half of the value addition in agriculture. This suggests that diversification continues to be slow. The predominance of the crop sector is still largely due to rice production which still covers a third of the total food value added. Meanwhile, rice import dependency slightly reduced due to improved domestic availability of rice.

Efforts towards diversification and climate-smart investments in agriculture should be pursued. To this end, the Bangladesh Climate Smart Agriculture Investment Plan (CSAIP) represents an essential opportunity to reorient agricultural systems towards climate change resilience, while maintaining a focus on productivity increases, and sustainable food and nutrition security. With regards to the FNS policy objective of diversifying consumption for improved nutritional outcomes, it is essential to rebalance the support given to producers to ensure that diversification in production is a viable and profitable choice. This process is already ongoing, for instance through the conversion of rice fields into shrimp farms prompted by the profitability of shrimp production. This type of initiative needs to be incentivised and tailored to smallholders' profile, i.e. more assistance-based for the 'farming for sustenance' category, while progressively more indirect and market-oriented for the more resilient and advanced farmers. To this end, it is essential to continue investing in indirect support to farmers with measures such as the provision of access to market information, financial inclusion, data-driven analysis and technology which can help optimise agricultural practices.

Outcome II. Real wages in agriculture only lightly improved and are still off target in a context of stable inflation

The annual price inflation measured by the Consumer Price Index (CPI)– the first proxy indicator under Pillar II remained stable at 5.5% in 2018/19, a value aligned with the 2020 target. The Indicator Food Price Anomalies (IFPA, SDG 2.c.1) registered a low-price alert for rice, due to the significant drop in the price of rice in 2018/19 compared to the previous two years. The agricultural wage rate - measuring the purchasing power of agricultural labour force in rice terms - slightly improved year-on-year due to enhanced rice availability, reduced prices and waning import demand. However, it remains far off target. This is a concerning trend when associated with farmers extracting lower profits compared to other agents along the food value chains (Programme II.1). To this end, farmers' access to services, information and markets is essential. Various initiatives have been taking place to improve market linkages and bargaining power of farmers through both public – with the Second Phase of the *National Agriculture Technology Programme (NATP II)* project implemented by the Department of Agricultural Marketing (DAM) – and private initiatives.

To preserve farmers' revenues and consumers' safety, in order to reduce price volatility and food and nutrient loss, investing in conservation of nutrients during post-harvest storage, transformation and distribution is essential. The various initiatives aimed at supporting investment in temperature-controlled warehouses and logistics, and resilience with, for example, the distribution by DG Food of 70-liter waterproof food-grade plastic silos to half a million households in disaster-prone districts for seed and foodstuff storage during natural disasters must be continued and expanded. Financial inclusion in rural

areas continues to represent an important bottleneck for farmers and Micro, Small and Medium Enterprises (MSMEs) with an estimated financing gap of 2.8 billion USD. While initiatives to support rural financial access for priority sectors have been taking place, a key enabler for rural inclusion is achieving 'Digital Bangladesh' through mobile money and digital payments platforms in rural areas.

Outcome III: Recent information on diversity, consumption and utilisation is scarce but there are indications of widespread micronutrient deficiencies especially among women and children

Monitoring of progress under Pillar III of the CIP2 is challenging due to the lack of annual data in *Diversity of diets, consumption and utilisation*. Dietary Energy Intake from cereals was on track to achieve the recommended 60% target until 2016, but consumption of protein and micronutrient-rich foods such as fruits and vegetables was far behind the recommended intakes. The assumption that the improving, albeit slowly, trends observed until 2016 will have continued into the year under review, may have been set back, at least temporarily, by the COVID-19 crisis. The Minimum Acceptable Diet (MAD), one of the eight core indicators for assessing infant and young child feeding (IYCF) practices for children aged 6-23 months recommended by WHO, showed good progress with Bangladesh on track to achieve the Second National Plan of Action for Nutrition (NPAN2) target of 40% by 2025. With regards to consumption of adequately iodised salt, only half of the population achieved this in 2015 and there is some evidence to suggest that Bangladesh is still far behind the NPAN2 recommendation. There is also a dearth of data with regards to anaemia among women of reproductive age and achievement of a Minimum Dietary Diversity for Women (MDD-W): all we know is that progress was limited for both up to 2016.

Long term planning is needed to estimate the gaps in availability, consumption and desirable intake, and to take remedial actions given how food systems, especially in urban areas, are evolving. Desirable dietary pattern and nutrient targets must be established for diversified food planning, demand for healthy food and enhanced food supply. Consumption of nutrient-dense foods needs to be encouraged and the intake of energy-dense and nutrient-poor foods must be reduced as per national requirements. Dietary diversity to enhance nutrient adequacy must continue to be promoted with specific emphasis on poorer households who tend to consume less diversified diets, and adolescent girls, pregnant and lactating women whose micronutrient needs are more pronounced. Consumption of fortified foods such as rice, salt and edible oil needs to be enhanced and monitored especially to identify barriers to equitable access. Finally, National Nutrition Services (NNS) delivery must be strengthened by paying particular attention to linkages with nutrition-sensitive interventions under the Ministry of Agriculture (MoA) and the Ministry of Fisheries and Livestock (MoFL).

Outcome IV: Poverty reduction was on-track for the SDG 1 national target but will likely be slowed by COVID-19

Poverty in 2018/19 is estimated to have declined but one-in-five remains in poverty and one-in-ten lives in extreme poverty. The lockdown due to the COVID-19 pandemic in 2020 has led to sharp increases, in poverty depth amongst the already poor, and in poverty prevalence when previously non-poor households fell into poverty.

This situation calls, under Pillar IV on *Enhanced access to social protection and safety nets and increased resilience*, for a well-financed and well-implemented safety net and social protection system to shield people from food and nutrition insecurity, support their efforts to work out of poverty, and break the intergenerational cycle of poverty. Non-economic dimensions of poverty also need to be considered in the way social protection is designed and targeted. 'Decent jobs' need to be created and marketable education and skills should be provided to low-income groups to allow them to fully share the economic growth and prevent a further rise in inequality. While urban poverty needs to be tackled as it has been

less responsive to anti-poverty programmes, rural industry and services need to be incentivised. The heterogeneity of poverty at national, regional but even household level must be considered to adapt programmes. Finally, more than half of the population, despite being considered non-poor, is vulnerable to poverty, as their levels of consumption are close to the poverty threshold. The COVID-19 pandemic has thus shown that escape from poverty is a fragile situation that can be reversed within weeks. Measures are needed not only to help people over the poverty line but also to ensure they are resilient to shocks. Particular attention needs to be paid to equity, to ensure that all forms of policy, action, and social protection support to cover the poorest and most vulnerable, leaving no one behind.

Outcome V: The institutional setup to monitor FNS is well established and functional

Institutions and platforms to monitor FNS progress are working effectively. The CIP2 monitoring occurs yearly and the new National Food and Nutrition Security Policy has been drafted and is currently under Cabinet approval. However, the policy landscape in FNS is fast evolving and new challenges are emerging all the time.

This calls for appropriate and versatile capacities to handle analyses of changes. Pillar V on *Strengthened enabling environment and cross-cutting programmes for achieving food and nutrition* endeavours to create the right environment for this to happen. In particular, it recommends that ensuring the existence of analytical and monitoring capacities within the government in the context of an ever-changing FNS context be institutionalized rather than rely on piecemeal capacity strengthening projects. Furthermore, it is key that the political commitment to ensuring FNS translates into concrete actions both for the government and for development partners to allow effective participation of all stakeholders in the processes in place and efficient processes. Achievement of the CIP2 goal and SDG 2 requires contributions from all the food system's stakeholders – from Civil Society Organisations (CSOs) to academia and the private sector. Creating an environment that encourages non-state actors to participate in FNS-related policy and strategy development is key. This should include the private sector whose role is paramount throughout the food value chain.

Some achievements may be slowed or setback by the effects of the COVID-19 crisis

At the time of preparing this report, after the GoB declared a lockdown to contain the spread of COVID-19 on the 26th March 2020, the measures had started affecting the food supply chain and agricultural production. Due to the restrictions in movement, smallholders and food producers, often women, were negatively impacted due to limited access to their land and markets to buy inputs and sell their produce. Prices increased by 20-30% within weeks, which had a negative impact on the real value of salaries and savings and in turn affected the quality of diets, with households increasingly spending on staples at the expense of micronutrient-rich foods. The food industry needs to be treated as an essential service provider to ensure continuity of operations along food value chains through the establishment of 'green channels' and providing both direct - through cash or in-kind transfers to sustain rural livelihood and indirect support through facilitated loan schemes and grants.

Gender and poverty focus

Ministries which have a role in FNS need to pursue their efforts in integrating women in their projects

Between 2011/12 to 2014/15, efforts were made to speed up the integration of women in the agricultural sector with increased spending both in absolute terms and relative to the total budget but since then, these levels have been sustained but have not risen further. In the rural development and the social security and welfare sectors, increases in gender-related spending have been registered lately, although

this is not reflected as a proportion of the total budget of each sector. The health and nutrition sector is the one with lowest gender spending in proportion to its total budget.

A greater focus is needed on poverty spending by ministries involved in FNS

Fighting poverty (SDG 1) is closely associated with the endeavour of ending hunger (SDG 2) and achieving one is unlikely to be possible without achieving the other. The four sectors considered clearly focus a large part of their efforts on projects that directly benefit and target the poor and which promote growth. However, the share of poverty spending in total budgets have been decreasing over the last ten years for all the sectors considered although, except health and nutrition in 2018/19, spending has increased in the last three years.

CIP2 financing

Development partners need to continue mobilising resources to ensure their commitments are translated into financed budget and faster delivery

As of 30th June 2019, the CIP2 cumulative budget over the period 1st July 2016 – 30th June 2020 was 19.2 billion USD. Weighting projects according to how nutrition-sensitive they are, reduces this total to 12.2 billion USD. Of the total budget, 15.7 billion USD (82%) was already financed in the form of ongoing projects or projects already completed since the beginning of the CIP2, mainly through government funding (75%). The remaining 18%, or 3.5 billion USD, represented the financial gap, i.e. pipeline projects which mainly consists of development partners' (DPs) financial commitments (82%) which needs to be translated into actual funding. DPs' financed resources have accelerated through the CIPs, from 13% in the first year of implementation (2016/17) to 39% in the third year (2018/19). This is an encouraging trend which would allow to translate the financial gap into actual resource mobilised.

Summary of CIP2 2020 budget (as of 30th June 2019, in million USD)

	Total CIP2			Financed			Pipeline		
Pillar	**Total**	**GoB**	**DP**	**Total**	**GoB**	**DP**	**Total**	**GoB**	**DP**
I: Primary production	6,833	3,008	3,826	3,849	2,635	1,214	2,984	372	2,612
II: Market & value chain	6,931	5,786	1,144	6,699	5,746	952	232	40	192
III: Diversified consumption	1,422	1,121	299	1,228	979	249	194	142	51
IV: Social protection	3,567	2,255	1,311	3,492	2,181	1,311	75	75	0
V: Cross-cutting	472	227	245	436	208	228	36	19	17
Total	**19,225**	**12,397**	**6,826**	**15,704**	**11,749**	**3,955**	**3,521**	**648**	**2,872**

However, the cumulative delivery stood at 6 billion USD and represents only 38% of total financed budget as of 30th June 2019. Out of the total delivery, the GoB and DPs shares are 79% and 21%, respectively. While yearly delivery has improved compared to the previous implementation year - except for Pillar II *Market & value chain*- it still needs to speed up, especially for DP-supported projects. Investments in FNS are due to continue beyond the life of the CIP2 after 30th June 2020, and currently stand at 11.7 billion USD.

Investments are urgently needed under the *Cross-cutting* Pillar V, especially in the programme aiming to reduce FWL

Despite consisting of four programmes and ten subprogrammes, the *Cross-cutting* Pillar only represented 2.5% of the total CIP2 budget as of 30th June 2019. Given the importance of the issues covered under this area of intervention in creating an environment that can enable other interventions to work towards achieving FNS, it is essential that the government and its private sector and development partners start

channelling investments towards these programmes. In particular, programme V.2 which aims to reduce FWL, remains to be populated with projects.

The amounts in the pipeline declined while post-CIP2 budget expanded

The overall pipeline totalled 3.5 billion USD (82% from DPs and 18% from GoB) as of 30th June 2019 and declined from the 3.92 billion USD in the baseline. As the CIP2 has an implementation period of four years and there is only one year left to the end of it, the bulk of recently financed and pipeline projects fall outside the CIP2, i.e. beyond 30th June 2020. This means that their financing is only marginally reflected in the CIP2 budget. The post-CIP2 budget totals 11.7 billion USD, which is financed for 47% by GoB and 53% by DPs.

Delivery of the *Market and value chains* Pillar needs to improve

As of 30th June 2019, cumulative delivery – the actual expenditure over the three years of CIP2 implementation- stood at about 6 billion USD, 61% of which was nutrition-sensitive. Both total and nutrition-sensitive delivery represented the 38% of the cumulative total financed and nutrition-sensitive budget respectively. Cumulative delivery in the total CIP2 financed budget improved for all Pillars compared to a year earlier – except for *Market & value chains.* An acceleration in delivery is thus needed, especially if all the financed budget is to be delivered within the CIP2 period.

1. Introduction

Nutrition-sensitive investments

Bangladesh has achieved unprecedented results in recent decades in terms of economic growth, poverty reduction and food and nutrition security (FNS). However, factors such as its population size and density, land degradation, climate change and the acceleration in the frequency of natural disasters, unbridled rural-to-urban migration leading to a concentration of poor and malnourished individuals in urban slums, and the so-called triple burden of malnutrition, leave no room for complacency. It is against this backdrop that the Government of Bangladesh's Second Country Investment Plan – Nutrition-Sensitive Food Systems (CIP2 2015-2021) was prepared. The goal of the CIP2 is 'to achieve improved food security and nutrition for all at all times by making food systems[1] nutrition-sensitive and sustainable. Its strategic objectives are to ensure: the availability, affordability and nutritional quality of foods; that all people have access to a variety of safe and nutritious foods; and the availability of knowledge to be able to make healthy diet choices'. It aims to improve nutrition outcomes and wellbeing with a focus on mothers and children, especially in their first 1,000 days of life, by shaping food systems through the promotion of nutrition-sensitive investments. The CIP2 comprises five investment Pillars (Figure 1):

I. Diversified and sustainable agriculture, fisheries and livestock for healthy diets
II. Efficient and nutrition-sensitive post-harvest transformation and value addition
III. Improved dietary diversity, consumption and utilisation
IV. Enhanced access to social protection and safety nets and increased resilience
V. Strengthened enabling environment and cross-cutting programmes for achieving food and nutrition security

The CIP2 is a flexible tool which can leverage financial resource allocation to fulfil the objectives of the Seventh Five Year Plan (7FYP, 2016-2020) and SDGs while coping with unexpected exigencies such as the likely impact of COVID-19 on FNS. The Monitoring Report 2020 (MR20) is the second yearly monitoring exercise of the CIP2. This monitoring exercise is a joint effort of 19 ministries/divisions' agencies and departments led by the Ministry of Food's Food Planning and Monitoring Unit (FPMU). It tracks FNS progress and assesses it against CIP2 and SDGs targets, and it monitors FNS-related investments, financial execution and commitments as of June 30th, 2019. The MR20 also analyses the current policy developments. These dimensions are addressed within their relevant investment Pillar, programme and sub-programme, with each achievement contributing to the final CIP2 goal (Figure 1).

Accordingly, the likely impacts of COVID-19 pandemic on FNS are considered in the MR20. This crisis adversely affected development, potentially slowing down, or even temporarily reversing, some of the gains made in FNS. When preparing this report, the full extent of the ongoing COVID-19 pandemic and its impact in Bangladesh were still largely unknown. As of April 2020, the IMF forecasted the global economy would contract by -3% in 2020, although in developing Asia, growth of 1% was still forecasted.[2] The South Asia region was expected to grow by 3% in 2020, its worst performance in 40 years.[3] Food and agriculture *supply* channels - primary production, processing, trade and logistics - and *demand* channels - exchange rates, energy and credit markets – were affected at both global and national level.[4] While it is difficult to

[1] Food systems include all the elements involved in bringing food to consumers from farm to fork, as well as all the processes and infrastructure involved: 'growing, harvesting, packing, processing, transforming, marketing, consuming and disposing of food'.

[2] IMF (2020). *World Economic Outlook, April 2020: The Great Lockdown*. Washington, DC. International Monetary Fund.

[3] World Bank (2020) Public Banks. *South Asia Economic Focus.* April. Washington, DC. World Bank.

[4] Schmidhuber, J., Pound, J. & Qiao, B. (2020) *COVID-19: Channels of transmission to food and agriculture*. Rome. FAO.

assess the depth and duration of the impact, in Bangladesh, poor people are likely to be the most affected. In light of this global health crisis unfolding as it is being prepared, the report has had to adjust some of its recommendations for further actions.

Structure of this report

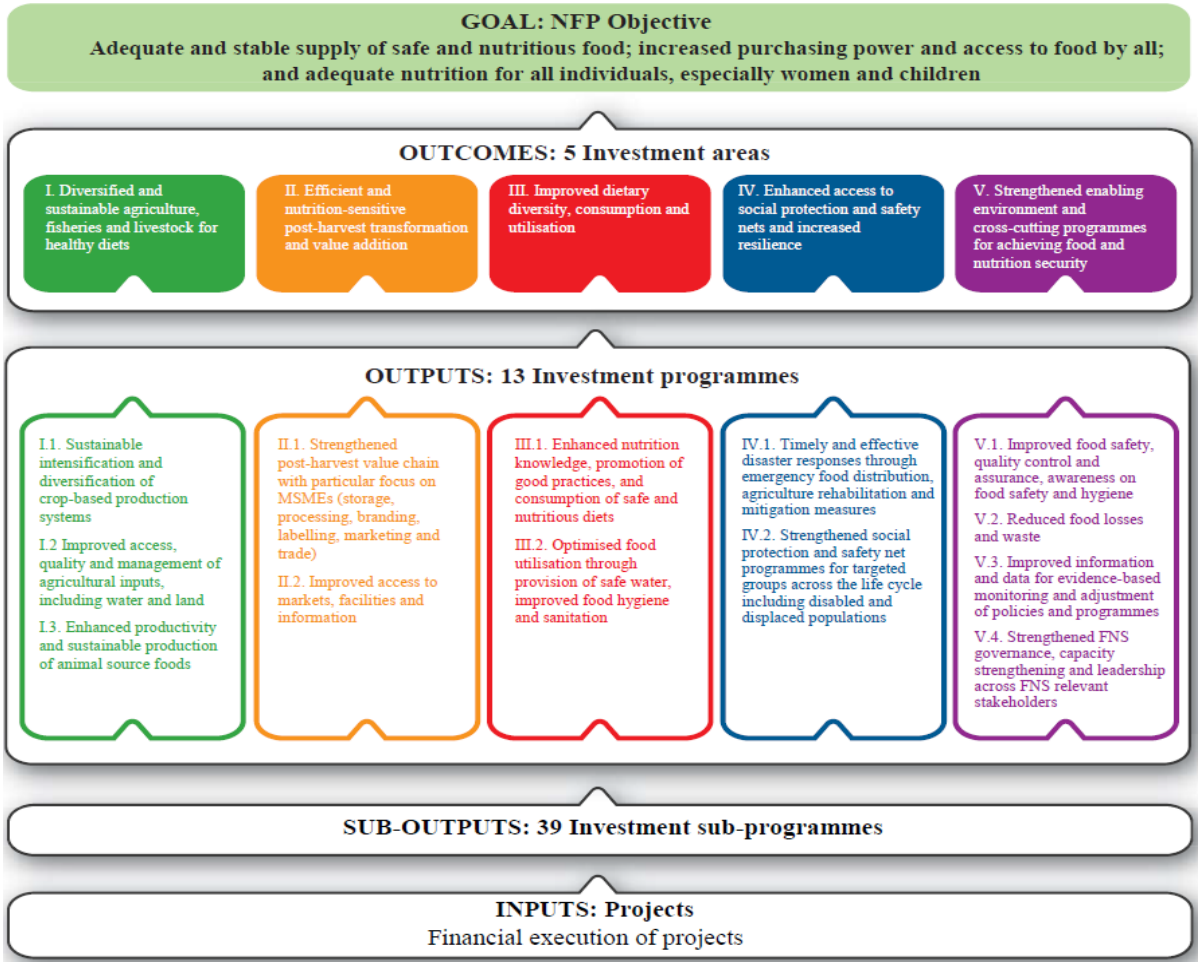
The methodological approach to the monitoring and its results framework are presented in Chapter 2. Goal and outcome level indicators are discussed in Chapter 3, while Chapter 4 to 8 discuss each of the five Pillars in turn, analysing their respective outcomes and related programmes. Chapter 9 presents the financial analysis of the resources invested in the CIP2. Chapter 10 summarizes the assessment of progress and recommendations.

2. Approach to monitoring

The methodological approach of this MR20 is based on the CIP2 results framework.[5] Project-level investments in the CIP2 count as inputs in its results framework and these inputs are expected to generate output-level results, that collectively contribute to outcome-level results, which ultimately lead to the CIP2 goal. The report monitors results at each of these four levels: input, output, outcome and goal (Figure 1):

- Goal level monitoring assesses progress towards CIP2 goals.
- Outcome level monitoring look at progress towards results to which projects in the investment plan are expected to contribute collectively, but not directly or individually – and for this, five expected outcomes are monitored corresponding to the five Pillars of the CIP2.
- Output level monitoring examines results expected from projects under the direct control of implementing agencies across 13 programmes that support the five Pillars of the CIP2.
- Input level monitoring tracks the financial execution of the 529 financed projects (both ongoing and completed)[6] and the unmet financial requirements of pipeline projects, across the entire investment plan.

Figure 1 - CIP2 Results Framework



Source: FPMU, Ministry of Food

[5] See Annex 1 for the list of results indicators and how they have evolved from the CIP2 in MR19 and MR20.

[6] See Annex 2 for more details.

Inputs in the results framework are monitored in terms of project finances. Outputs, outcomes and goal are monitored using proxy indicators identified as part of the CIP2 results framework.[7] All levels are monitored on a fiscal year basis, from 1st of July to 30th of June, starting from the CIP2 baseline: 2015/16. MR20 focuses on 2018/19.

The monitoring of CIP2 and SGD 2 -Zero Hunger: a unified institutional arrangement

The institutional arrangement for monitoring the CIP2 is the one set up for the National Food Policy 2006 and the first Bangladesh Country Investment Plan (CIP1, 2011-15). It serves to help monitor SDG 2 - Zero Hunger and other FNS-related SDG indicators[8] as well as the NPAN2 (2016-2025e) and to draft the new Bangladesh Food and Nutrition Security Policy (BFNSP). The institutional arrangement, depicted in Figure 2, includes five Thematic Teams (TTs)[9], eight Technical Working Groups (TWGs)[10], the Food Policy Working Group (FPWG), the National Committee (NC) and the Local Consultative Group on Agriculture, Rural Development and Food Security (LCG ARDFS), under the authority of the Food Planning and Monitoring Committee (FPMC) and with overall support from the Food Planning and Monitoring Unit (FPMU).[11]

- The Cabinet-level ***FPMC*** chaired by the Food Minister includes Ministers and Secretaries from FNS-related sectors. The FPMC delivers strategic guidance on FNS-related issues and establishes a high-level commitment to inter-sectoral collaboration. It provides leadership and oversight in the formulation of food policy strategic documents developed by the institutions it oversees.
- The ***NC***, chaired by the Food Minister, comprises the secretaries of key ministries and divisions, heads of universities/research institutions, Development Partners (DPs), private sector representatives and other non-governmental organisations (NGOs). The NC oversees the CIP implementation and monitoring processes.
- The ***FPWG***, chaired by the Food Secretary, performs the task of coordination and collaboration at both the technical and operational level. A particularly important role is played by the Ministry of Finance, and the Implementation Monitoring and Evaluation Division (IMED) of the Planning Commission (Ministry of Planning), and the Economic Relations Division (ERD) to provide information towards the CIP2 financial section.
- The ***TTs*** carry out the monitoring activities.
- The ***FPMU*** of the Ministry of Food provides technical, operational and secretarial support.
- The ***Local Consultative Group on Agriculture, Food Security and Rural Development (LCG ARDFS)*** participates in the CIP Annual Review process. The LCG ARDFS is the venue for dialogue between GoB and DPs. LCGs are designed to contribute towards effective and coordinated implementation of national policies, strategies, plans and programmes.

[7] See Chapter 10 of GoB (2016) *Bangladesh Second Country Investment Plan: Nutrition Sensitive Food Systems (2016-2020)*. Dhaka. FPMU. Ministry of Food.

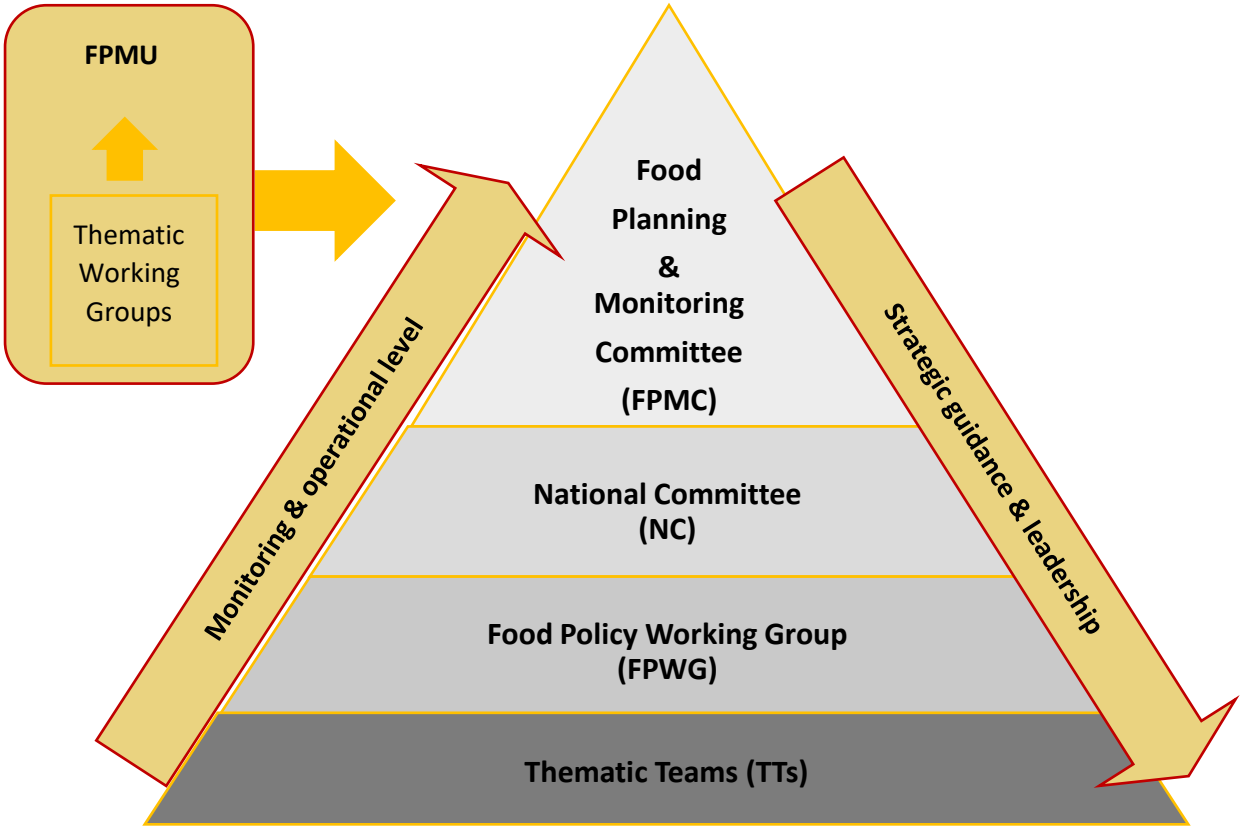
[8] CIP2 monitoring process analyses the following SDG indicators: 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1; 2.c.1, 1.2.1, 6.4.1, 6.4.2, 6.1.1, 6.2.1 and 1.3.1.

[9] See Annex 3 for their composition.

[10] In addition to the CIP1 institutional setup, eight TWGs - focal points from each relevant GoB sector- have been established by FPMU in partnership with 13 ministries. These TWGs assisted FPMU in developing the CIP2.

[11] See Chapter 9 of GoB (2016) *Bangladesh Second Country Investment Plan: Nutrition Sensitive Food Systems (2016-2020)* Dhaka. FPMU. Ministry of Food.

Figure 2 - Institutional set up for CIP2 preparation and Zero Hunger monitoring



Source: FPMU, Ministry of Food

3. Progress towards CIP2 goal and outcomes

3.1 CIP2 goal

The Sustainable Development Goal to '*End hunger, achieve food security and improved nutrition and promote sustainable agriculture by 2030'* (SDG 2 – Zero hunger) - provides an opportunity to rethink the way food is grown, accessed, shared and consumed. Hunger in the world is increasing to reach 690 million in 2019[12,13], a 1.4% rise from the previous year, and this is expected to be dramatically worsened, at least temporarily, by the COVID-19 pandemic. In some regions, natural resources to produce food are becoming scarce under competing uses and are threatened by natural calamities. It is measured through five proxy indicators (Table 1): Prevalence of Undernourishment (SDG 2.1.1); Food Insecurity Experience Scale (SDG 2.1.2); Prevalence of Stunting (SDG 2.2.1); Prevalence of Wasting (SDG 2.2.2); and Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size (SDG 2.3.1).

Table 1 - CIP2 goal and 7FYP indicators relating to food and nutrition security

CIP2 goal proxy indicators	2015/16 Baseline	2016/17	2017/18	2018/19	Target 2020	Source
SDG Indicator 2.1.1: Prevalence of Undernourishment (PoU)[14]	14.9% R (2014-16)	14.1% R (2015-17)	13.5% R (2016-18)	13.0% (2017-19)	<10% by 2030 (GED[15]) 🟡	FAO, SOFI and FAOSTAT
SDG 2.1.2: Prevalence of moderate and severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)[16]	32.2%/ 13.3% (2014-16)	31.9%/ 12.4% (2015-17)	31.5%/ 11.6% (2016-18)	31.5%/ 10.6% (2017-19)	Decreasing over time (FAO) 🟡	FAO, SOFI and FAOSTAT
SDG Indicator 2.2.1: Prevalence of stunting (height for age <-2 SD from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age	36.1% (2014)	…*	30.8% (2018)	…*	25% by 2020 (7FYP) 🟡	BDHS
SDG Indicator 2.2.2: Prevalence of wasting among children under 5 years of age (<-2 SD of weight for height)	14% (2014)	…*	8.4% (2018)	…*	<8% by 2025 (NPAN2) 🟢	BDHS
Agricultural value added per worker (USD) – Proxy of SDG 2.3.1[17]	899.4R (2015)	924.1R (2016)	944.46R (2017)	976.5 (2018)	Increase over time (FAO) 🟡	World Bank

**: Not available; R: revised*

The colour indicator shows the progress achieved: target reached 🟢; on track 🟡; off track 🔴 .

[12] FAO, IFAD, UNICEF, WFP and WHO (2020) *The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets*. Rome. FAO.

[13] A number of updates have been made in the data for several countries in this year's State of Food Security and Nutrition (SOFI) report in order to estimate world hunger with greater accuracy. This has resulted in a substantial downward shift of the number of undernourished series in the world, which explains the lower figures exposed here compared to MR19 for earlier years. The slow increasing trend in the number of people affected by hunger globally since 2014 is confirmed, however.

[14] Data for Bangladesh have also been updated in SOFI, explaining revised figures compared to MR19.

[15] GoB (2017) *Bangladesh Voluntary National Review (VNR) 2017 – Eradicating poverty and promoting prosperity in a changing world*. Dhaka. Planning commission. General Economics Division (GED).

[16] See footnote 14.

[17] Previous monitoring reports used FPMU's estimates of agricultural value added per worker, but this report uses World Bank estimates and had revised the data for previous years. Both series show that this indicator is increasing over time.

Undernourishment and access to food are improving

The Prevalence of Undernourishment (PoU, SDG indicator 2.1.1) is the main indicator used to monitor progress against hunger at a global level, and in the CIP2. It considers the mean food consumption and its variability and asymmetry against a normative requirement: the Minimum Dietary Energy Requirements (MDER) of the average individual in a given sex and age group[18,19]. The PoU in Bangladesh is estimated at 13.0% over 2017-19, following a declining - albeit a slow and decelerating trend since the CIP2 baseline. If this tendency is maintained, the 10% target set by the General Economics Division of the Planning Commission is still attainable (Table 1), although the COVID-19 pandemic may dampen the progress observed. Indeed, it is expected that the crisis will reverse the gains made in nutrition improvement and impact the most vulnerable first and hardest. The COVID-19 crisis has made it clear that inequity is a maker and a marker of malnutrition.[20]

The Prevalence of Moderate or Severe Food Insecurity based on the Food Insecurity Experience Scale (FIES) provides an alternative household-level perspective by assessing people's perceptions and challenges in accessing nutritious and sufficient food.[21] On this scale, severe food insecurity, for example, indicates no food for a day or more (Figure 3). Severe food insecurity, based on the FIES, has improved, falling steadily to 10.6% in 2017-19 from 13.3% in 2014-16. However, following a slight decline, the three-year average for 2016-18 and 2017-19 has stagnated at 31.5% for moderate food insecurity. These figures are noticeably below the South Asia averages, which stand at 16.0% for severe food insecurity and 33.4% for moderate food insecurity over 2017-19, respectively.[22] Given the potential impact of the COVID-19 crisis on food security, it is advisable to conduct the FIES survey which has now been adapted to capture such effects[23]. Food insecurity is likely to have worsened for the poorest, those on the brink of poverty, those heavily dependent on remittances, and daily rural labourers.

Figure 3 - Food Insecurity based on the FIES: what does it mean?

Source: FAO, 2020

[18] FAO (2014) *Refinements to the FAO methodology for estimating the Prevalence of Undernourishment indicator*. *FAO Statistics Division Working Paper Series.* ESS/14-05. September.

[19] Following the FAO methodological approach, normative requirements are based on the Basic Metabolism Rate (BMR) per kilogram of body mass, multiplied by the ideal weight of a healthy person given their height, and multiplied by a coefficient of Physical Activity Level which factors-in physical activity.

[20] Development Initiatives. *2020 Global Nutrition Report: Action on equity to end malnutrition*. Bristol. UK.

[21] During the last 12 months, was there a time when, because of lack of money or other resources: 1. You were worried you would not have enough food to eat? 2. You were unable to eat healthy and nutritious food? 3. You ate only a few kinds of foods? 4. You had to skip a meal? 5. You ate less than you thought you should? 6. Your household ran out of food? 7. You were hungry but did not eat? 8. You went without eating for a whole day?

[22] FAO, IFAD, UNICEF, WFP and WHO (2020) *The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets*. Rome, FAO.

[23] FAO (2020) *Using the Food Insecurity Experience Scale (FIES) to monitor the impact of COVID-19*. Rome.

Progress continues in the reduction of child undernutrition

Bangladesh's reduction in child undernutrition is among the most rapid worldwide.[24] Stunting (or low height for age, SDG indicator 2.2.1) is caused by inadequate nutrition (not eating enough or eating foods that lack growth-promoting nutrients) and recurrent infections or chronic diseases which cause poor nutrient intake, absorption or utilisation since and before birth. The indicator is a reflection of poor environmental conditions (e.g. lack of safe water, inadequate access to excreta disposal facilities, and general poor living conditions) and long-term restrictions of the growth potential[25], which in turn translate into reduced learning potential and productive capacity. Bangladesh's prevalence of stunting among children under 5 years of age reduced to 30.8% in 2018 from 36.1% in 2014 and from 60% in mid-1990s. The trend is confirmed by the Multiple Indicator Cluster Survey (MICS) 2019 data with stunting down to 28%.[26,27]

The prevalence of wasting (or low weight for height, SDG indicator 2.2.2) reflects acute weight loss, due to inadequate nutrition and infections and diseases (mainly diarrhoea). Wasting among children under 5 years of age has dropped to 8.4% in 2018 from 14% in 2014 and is aligned with the NPAN2 2025 target of 8%. In line with stunting rates, child wasting was the highest in Sylhet and the lowest in Chittagong and Dhaka divisions.[28]

Wealth accumulation and parental education drive nutritional outcomes

Studies on the determinants of child growth using the Bangladesh Demographic and Health Surveys (BDHS) from 1997 to 2014 found that household wealth accumulation and parental education were the key drivers of the rapid reduction of undernutrition - especially in severe child stunting. Health, sanitation and demographic factors played significant but secondary roles.[29] The determinants of wealth accumulation include pro-poor economic growth and rapid agricultural growth, off-farm diversification, labour-intensive manufacturing, and overseas workers' remittances (15.5 billion USD in 2018, up 15% from 2017), which is much higher than foreign direct investment (about 3 billion USD in 2018[30]). With regards to maternal education, the prevalence of stunting was 18% amongst children whose mother had secondary education compared to 47% whose mother had no formal education.[31] Paternal education appears to be as important as maternal education, for lower child undernutrition, higher food security, improved toilet facilities and better nutritional status and awareness of child's undernutrition status.[32]

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[24] Headey, D., Hoddinott, J., Ali, D., Tesfaye, R. & M. Dereje (2015) *The Other Asian Enigma: Explaining the Rapid Reduction of Undernutrition in Bangladesh*. *World Development*. Volume 66.

[25] WHO. *The Global Health Observatory*.

[26] While MICS data are not fully comparable with BDHS, they can be used as a proxy.

[27] BBS and UNICEF (2019) *Progotir Pathey, Bangladesh Multiple Indicator Cluster Survey 2019, Key Findings*. Dhaka.

[28] Mohsena, M., Goto, R. & Mascie-Taylor, C.G.N. (2015) *Regional variation in maternal and childhood undernutrition in Bangladesh: evidence from demographic and health surveys*. *WHO South-East Asia Journal of Public Health.* July–December.

[29] Headey, D., Hoddinott, J., Ali, D., Tesfaye, R. & Dereje M. (2015) The Other Asian Enigma: Explaining the Rapid Reduction of Undernutrition in Bangladesh. *World Development*. Volume 66. Saha, R. G. & Kayum Shikdar, Md. (2019) *Socio-economic Determinants Affecting Nutritional Outcomes of the Children in Bangladesh. IOSR Journal of Humanity and Social Sciences.* Volume 24. Issue 1; Sultana, P., Rahman, Md. M. & Akter, J. (2019) *Correlates of stunting among under-five children in Bangladesh: a multilevel approach*. *BMC Nutrition*. 5:41.

[30] World Bank Data.

[31] National Institute of Population Research and Training (NIPORT), Mitra and Associates & ICF International (2016) *Bangladesh Demographic and Health Survey 2014*. Dhaka, Bangladesh and Rockville, Maryland, USA: NIPORT, Mitra and Associates, and ICF International.

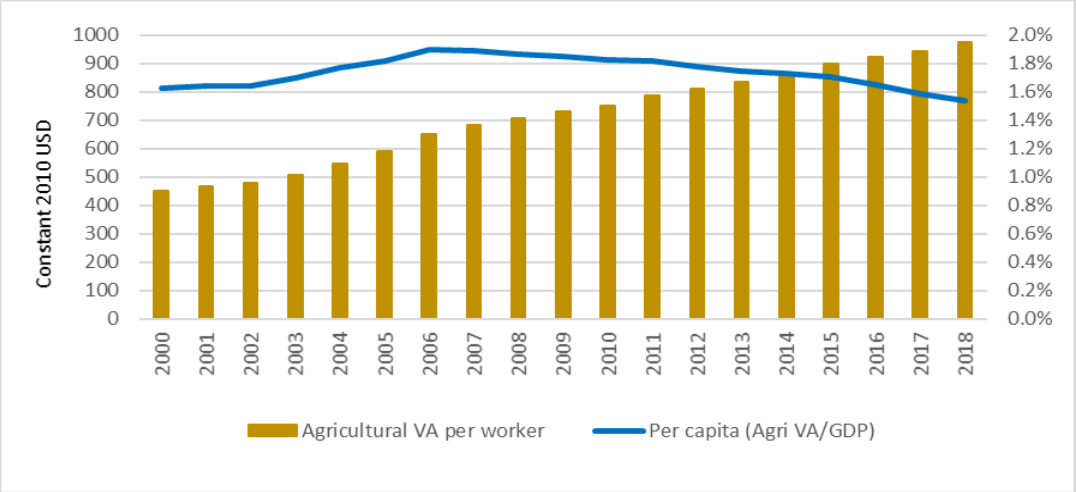
[32] Hossain, M.B. & Khan, Md. H.R. (2018) *Role of parental education in reduction of prevalence of childhood undernutrition in Bangladesh.* *Public Health Nutrition*. Volume 21. Issue 10. pp 1845-1854.

Thus, rapid and sustained nutritional improvements are achieved through a multidimensional and multisectoral approach, and not only through large nutrition-only programmes.[33] This multidimensionality needs to be translated into adequate sectoral investments into CIP2 programmes (see Chapter 9). Persistent disparities by region and socio-economic group prevent a faster and more inclusive reduction in undernutrition. As a consequence, the prevalence of undernutrition remains higher in rural compared to urban areas and in particular highest in Sylhet, Mymensingh and Barisal for prevalence of stunting (43%, 36% and 33%, respectively) and wasting (10%, 9% and 9%, respectively).[34] Women in Sylhet have an average lower body weight than women in Chittagong, Rajshahi and Khulna.[35]

Agricultural value addition per worker is increasing, however, agricultural workers are becoming relatively poorer

The agricultural value addition per worker is a measure of agricultural productivity. It is a proxy for the SDG indicator 2.3.1 'Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size' which is not yet available in Bangladesh. This indicator increased by 9% from 899 in 2015 to 976 USD in 2018. While this improved productivity is a positive signal, the declining trend in the ratio between agricultural value added per worker and per capita GDP taking place since 2006, suggests that agricultural workers, while more productive, have become relatively poorer (Figure 4).

Figure 4 - Agricultural value added and per capita agricultural value added/GPD



Source: BBS and the World Bank

COVID-19 pandemic might negatively impact progress towards the CIP2 goal

While the effects of the COVID-19 pandemic are still largely unknown, and at the time of writing this report it is hard to appreciate its scale and scope, it is likely that food and agriculture will be affected through both supply and demand channels.[36] On the supply side, while it is likely that longer-term impacts on agricultural production might be largely mitigated given the measures taken by the GoB, this will depend on the economic growth scenario and on the length of the lockdown to reduce the spread of the virus. It

[33] Headey, D., Hoddinott, J., Ali, D., Tesfaye, R. & M. Dereje (2015) *The Other Asian Enigma: Explaining the Rapid Reduction of Undernutrition in Bangladesh*. *World Development*. Volume 66.

[34] National Institute of Population Research and Training (NIPORT) & ICF (2019) *Bangladesh Demographic and Health Survey 2017-18: Key Indicators*. Dhaka, Bangladesh, and Rockville, Maryland, USA.

[35] Mohsena, M., Goto, R. & Mascie-Taylor, C.G.N. (2015) *Regional variation in maternal and childhood undernutrition in Bangladesh: evidence from demographic and health surveys*. *WHO South-East Asia Journal of Public Health.* July–December.

[36] Schmidhuber, J., Pound, J. & Qiao, B. (2020) *COVID-19: Channels of transmission to food and agriculture*. Rome. FAO.

is essential that the import of food and intermediate inputs and the mobility of farm labourers are maintained to guarantee food production and access to healthy diets by consumers. It is on the demand side that Bangladesh seems to be more vulnerable. A PPRC and Brac-BIGD Rapid Response Survey on the Poverty Impact of COVID-19 (April 2020) registered a reduction of more than 70% in the income of the extreme poor, vulnerable non-poor and moderate poor within the first week of lockdown (26 March 2020). This translated in a 40% and 35% per capita food expenditure reduction for the poor and vulnerable non-poor, respectively. A likely coping strategy will be to substitute more expensive and nutritious foods with staples, favouring caloric over micronutrient intake, which will undermine recent progress in diet diversification and nutrition outcomes. This, however, is likely to be transitory and could be mitigated by the availability of affordable protein-rich foods such as milk, chicken broilers and eggs. Thus, in responding to COVID-19, it will be essential to integrate nutrition considerations into emergency response and recovery and to prioritise the needs of the most vulnerable. To this end, social protection measures providing direct food support should be considered.

3.2 Progress towards Outcome I: Diversified and sustainable agriculture, fisheries and livestock for healthy diets

Outcome I of the CIP2 relates to interventions in crop and horticulture, fisheries and livestock productions in order to sustainably improve diets for enhancing nutritional outcomes. It is structured into three programmes on crop production, agricultural inputs, and animal source foods and these are comprised of 11 related sub-programmes. The indicators for monitoring Outcome 1 are shown in Table 2.

3.2.1 Assessment of progress towards achieving Outcome I

Table 2 – Outcome I: Selected performance indicators

CIP2 Outcome proxy indicators	2015/16 Baseline	2016/17	2017/18	2018/19	Target	Source
Rice import dependency (import/availability)	2.3%	2.0%	3.6%	3.5%	0% 🟡	FPMU/ MISM, BBS
Agricultural sector GDP[37] growth rate (%) **a) Crop and horticulture** **b) Fisheries** **c) Livestock** **d) Forestry**	2.8% a) 0.9% b) 6.1% c) 3.2% d) 5.1%	3.0% a) 1.0% b) 6.2% c) 3.3% d) 5.6%	4.2% a) 3.1% b) 6.4% c) 3.4% d) 5.5%	3.9% a) 2.0% b) 6.2% c) 3.5% d) 8.3%	3.9% 🟡 a) 1.4% b) 6.5%[38] c) 5.9% d) 5.3% by 2021 (7FYP)	BBS, DAE, DLS, DoF, BFD
Share of rice value added in total food value added in current price	33.83%	32.31%	33.48%	33.31%	Decrease over time 🟡	BBS
Wage differential between males and females in agriculture	32.08% R	30.03% R	28.98%	31.43%	Decrease over time 🟡	BBS

R: revised

The colour indicator shows the progress achieved: target reached 🟢; on track 🟡; off track 🔴 .

Rice import dependency declined slightly from the previous year

Rice import dependency is measured as the quantity-ratio between imports and national availability, on a three-year moving average basis. This has slightly improved, falling to 3.5% in 2018/19 from 3.6% last year due to a record domestic rice production of 36.39 MMT last year and a consequent waning of import demand which reduced to 0.21 MMT in 2018/19 (81% of which was private) from 3.89 MMT in 2017/18 (77.4% of which was private).

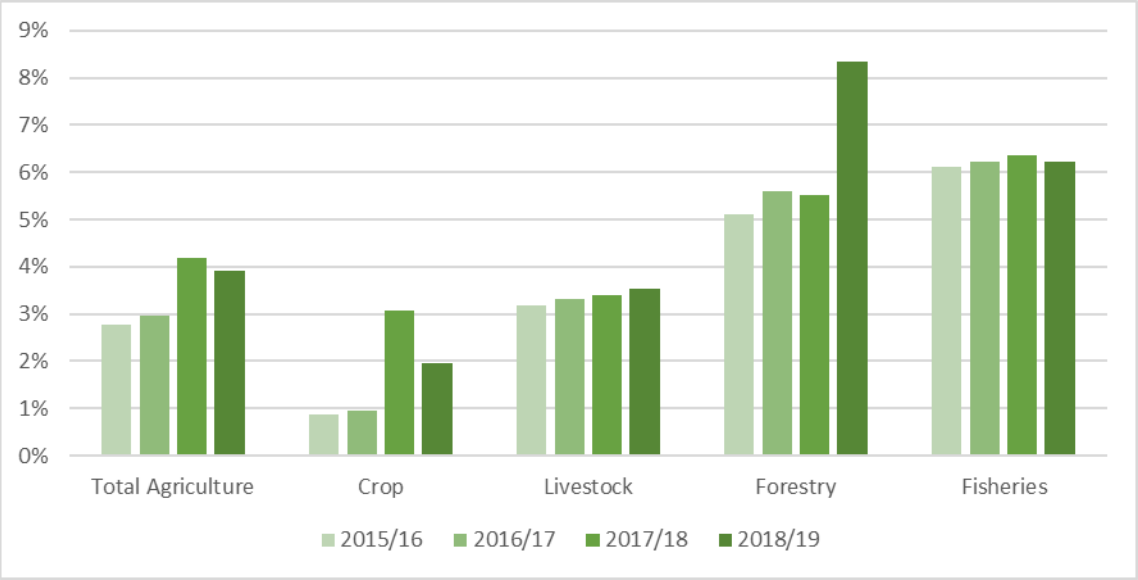
Diversification in production remained sluggish

As observed in Table 2, both the forestry and the crop and horticultural sectors have exceeded the 7FYP targets, the fisheries' sector is substantially aligned to it, while the livestock sector growth rate needs acceleration. Overall agricultural GDP growth has been sustained: from a 2.8% in the baseline year, it peaked at 4.2% in 2017/18 -reflecting a record rice production and the excellent performance of the fisheries sector- and only slightly dropped at 3.9% in the year under review, mainly driven by growth in the forestry and fisheries sectors and by a consistent albeit slow progress in the livestock sector (Figure 5).

[37] The agricultural sector includes crop and horticulture, livestock and related products, forestry and related services, and fisheries. The forestry sector has been included in MR20 for the first time in recognition of its role in food security, sustainable development and preserving agrobiodiversity.

[38] The target for fisheries is according to FPMU estimations while the other targets are from the 7FYP.

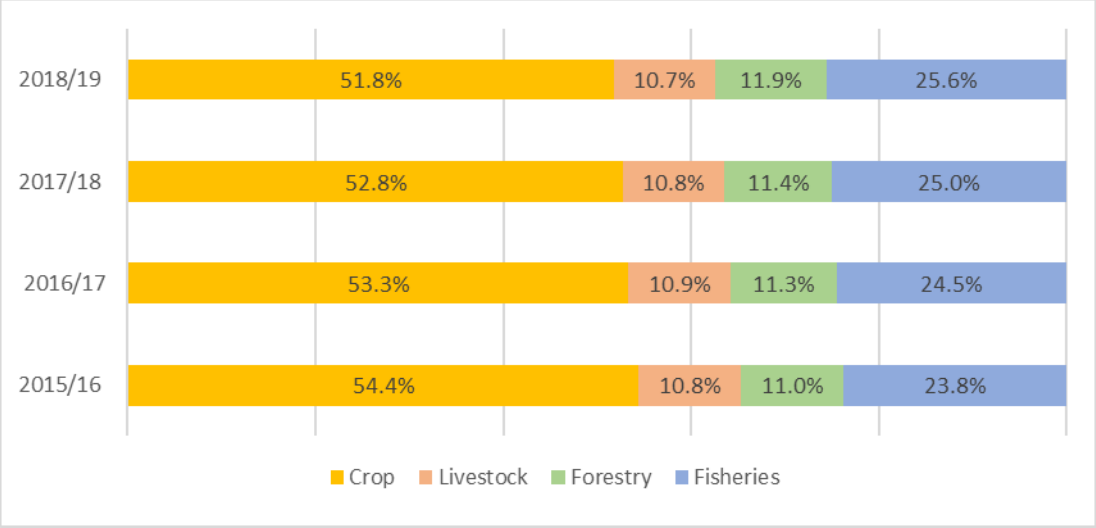
Figure 5 - Sectoral growth in agriculture over the reference period (2015/16 - 2018/19)



Source: BBS

Diversification in agriculture remained sluggish over the reference period, driven mostly by fisheries. Through their more dynamic performance, the fisheries and forestry sectors increased their shares in total agriculture GDP respectively by 1.8 and 0.9 percentage points. Meanwhile, the relative share of the livestock sector remained mostly unchanged and the crop and horticulture sectors slightly contracted (by 2.6 percentage points) with the non-cereal component lagging (Figure 6). The share of rice in both crop and horticulture sector, and total agriculture slightly reduced to 54.9% and 27.9% respectively.

Figure 6 - Evolution of the agricultural GDP composition by subsector



Source: BBS

The decline continued in the share of rice in the total food value added

The evolution of agricultural GDP composition of the crop and horticultural sector is consistent with the progressive, albeit slow, negative trend in the share of rice in total food value added. Between 2017/18 and 2018/19, this share declined by almost 0.2 percentage points (Table 2). This confirms the slow pace of diversification in food production.

The differential in wages between males and females in agriculture rebounded

According to ILO (2018)[39], Bangladesh has one of the lowest gender wage gaps in the world and first among South Asian countries.[40] This surprising result may in part be attributed to the garment sector where workers' organisations have contributed to reducing the gap. Concurrently, Bangladesh registered a 3.4% increase in wages over the period 2008-2017, against the South Asia average rise of 3.7%. In this context of record low gender wage gap and slow wage increases compared to other countries in South Asia, the agricultural wage differential[41] rebounded to 31.4% in 2018/19 from 29.0% in 2017/18 and from 32.1% in the baseline year (Table 2). This is due to a higher increase in agricultural male wages over female wages in the last financial year.

3.2.2 Policy challenges and recommendations for further actions

Accelerate agricultural growth and resilience through climate-smart investments

Over the past twenty years, agriculture has been one of the main contributors to poverty reduction in Bangladesh. It now needs to accelerate the shift towards high-value agriculture, including horticulture, livestock, and fisheries as well as greater value addition to improve farmers' income and household nutrition. More recently, the positive trend in agricultural GDP growth rate culminated in the attainment of rice self-sufficiency and allowed the start of a structural, but slow, transformation towards diversification in production -especially towards poultry, fisheries and aquaculture. This has partially translated into improved diets and nutritional outcomes. In spite of these past and current achievements, Bangladesh is increasingly facing the challenges of having to sustain agricultural productivity growth and to boost the production of nutrient-rich foods (both non-cereal crops, livestock and fish products) in a context of increased short-term climate variability (monsoon erratic patterns) and long-term climate change impacts (salinity intrusion, increasing temperatures), land scarcity and population pressure.

The FAO Climate-Smart Agriculture (CSA) approach is useful to reorient agriculture systems towards climate change resilience while maintaining the focus on productivity, sustainable food and nutrition security.[42] CSA interventions[43] ensure increased productivity, strengthened climate resilience and reduced greenhouse gas emissions from agriculture. To this end, in April 2018, the GoB and the World Bank launched the Bangladesh Climate-Smart Agriculture Investment Plan (CSAIP) which aims at identifying climate-smart investment opportunities and accordingly, mobilise resources.

According to the CSAIP, the transition to a climate-resilient growth path is the only option to ensure that long term key agriculture development targets are met. By 2040, the current degree of sea-level rise may reduce available cropland by 24% in coastal divisions across growing seasons. Greater economic activity is expected to trigger +2% of greenhouse gas (GHG) emissions over the period 2015-2040 and to increased water consumption by 0.8-1.7 million litres per year, exacerbating water scarcity. CSA offers growth potential of more than 50% over 2015 levels for non-rice crops, livestock and fisheries. This would allow to maintain rice self-sufficiency, double the production of non-rice crops and meet the national demand for livestock and fish thereby meeting nutritional requirements after post-harvest losses, decrease income

[39] ILO (2018) *Global Wage Report 2018/19 – What lies behind gender pay gaps*. Geneva. International Labour Office.

[40] World Economic Forum (2019) *Global Gender Gap Report 2020*. Geneva.

[41] The wage differential is calculated in terms of 'male premium': (male wage – female wage)/ female wage.

[42] More on Climate-Smart Agriculture can be found at http://www.fao.org/climate-smart-agriculture/en/.

[43] See for instance Programme I.2 on Urea Deep Placement.

dependency on rice, decrease water use in irrigation, reduce nitrogen dioxide and other (Nationally Determined Contribution) emissions and increase the use of organic fertilisers.[44]

A key factor in adequate CSA adoption is its mainstreaming into core policy frameworks, as various sectors in Bangladesh are affected by climate change. The Bangladesh Delta Plan 2100 approved in September 2018 represents the combination of long-term cross-sectoral strategies and subsequent interventions to ensure food and water security, economic growth and environmental sustainability while reducing vulnerability to natural disasters and building resilience to climate change. This, notwithstanding the effects of the COVID-19 crisis, should contribute to helping Bangladesh reach the upper-middle income country status by 2030 and the high-income country status by 2041, as stated in Vision 2041. While Bangladesh is not new to CSA and related interventions, it is essential that these are embedded in a more holistic approach in mid-term planning (the Eighth Five Year Plan for instance) to ensure CSA technological adoption. To this end, the CSAIP identifies Five CSA Investment Packages with a total volume of USD 809 million (USD 2 billion, PPP).[45,46] Synergies and cooperation at the regional level, especially with South and South-East Asian countries, and in close collaboration with CGIAR centres, must be reinforced. This also needs to involve the operationalisation of technological adoptions and learning from best practices in the region.

Rebalance agricultural support to ensure diversification is a viable option for farmers

Malnutrition remains a problem in Bangladesh with the consumption of vegetables and fruit and animal source foods (ASF) remaining inadequate and below international recommendations for a large part of the population. It is therefore essential to improve the availability of nutrition-dense foods, such as pulses, leafy vegetables, fruits, ASF (fish, milk and milk products, poultry and meat), high yielding rice varieties, biofortified grains and tubers, parboiled and unpolished brown rice. This can be achieved by supporting domestic production and facilitating imports along with behavioural communication campaigns to inform consumers of the nutritional value of these foods and enhance demand. A recent decline in the price of shrimp on international markets resulted in the reduction of shrimp export and its rise in domestic consumption, thus demonstrating the potential impact of such supportive measures. Similarly, as of June 2019, low domestic rice prices reinforced by international trends[47] directly correlate with higher consumption of this commodity relative to other foods. In addition, production incentives to farmers (e.g. through input provision and credit) discourage farmers from considering alternatives to rice.

The political economy of rice is complex and has direct implications on consumers (in choosing their optimal food basket composition) and producers (in choosing cultivars), and indirect ones on poverty reduction, improving nutritional outcomes, on public budget choices and allocation, and on inflation. It is paramount to balance the interests of producers and those of consumers while keeping in mind self-sufficiency, FNS policy objectives (i.e. diversification in consumption to improve nutritional outcomes) and initiatives to continue facilitating rice imports (e.g. the recent tendency to liberalise markets, allowing entry to private entities).

[44] IBRD and World Bank (2019) *Climate Smart Agriculture Investment Plan Bangladesh – Investment opportunities in the agriculture sector's transition to a climate resilient growth path*. Washington, DC.

[45] PPP here means purchasing power parity.

[46] IBRD and World Bank (2019) *Climate Smart Agriculture Investment Plan Bangladesh – Investment opportunities in the agriculture sector's transition to a climate resilient growth path*. Washington, DC.

[47] FAO (2018) *Food Outlook – Biannual Report on Global Food Markets- November 2018*. Rome. FAO (2019) *Food Outlook – Biannual Report on Global Food Markets – November 2019*. Rome.

In this context, rebalancing the support to producers is essential to ensure that diversification in production is a viable and profitable choice for farmers. This process is already ongoing, for instance through the conversion of rice fields into shrimp farms explained by the profitability of shrimp production.

This type of initiative should be incentivized. To this end, it is essential to continue investing in indirect support to farmers with measures such as the provision of access to market information, data-driven analysis and technology which can help optimise agricultural practices. This could include the creation of a database of farmers in specific value chains with their production, credit and transaction history accessible to relevant actors (insurance companies and banks for example), thereby supporting financial innovation. Switching to a high price regime for rice may also be envisaged as it might be beneficial both for producers -who would receive adequate income and allow some of them to switch to more profitable market crops- and for consumers -who may switch to more nutrient-dense foods. Box 1 provides an analysis of the COVID-19 impact on food production.

Box 1 - COVID-19 impact on food production

On the 26th March 2020, the GoB declared a lockdown to contain the spread of COVID-19. The national lockdown strategy included restrictive measures such as border closures, restrictions of movements, closures of restaurants and food markets, with likely effects on the food supply chain and agricultural production. Limitation on movements had a negative impact on farmers -smallholders in particular- due to limited access to their land and markets to buy essential inputs and sell their produce. Harvesting and transport bottlenecks led to losses for rural producers of perishable fruits, vegetables and dairy. Within weeks, staple food prices increased by 20-30%, eroding the real value of salaries and savings. As the reduced household spending focused increasingly on staples, producers of meat, poultry and fish were negatively affected. The situation was exacerbated by the structural scarcity of cold storage facilities and consequent risk of harvest spoilage, and by the exceptional shortage in agricultural workforce. The fisheries sector is also like to have suffered from a further decline in export demand of fish and shrimp from the EU leading to a fall in export earnings. Concurrently, poultry producers suffered from a fall in domestic demand due to health-related concerns amongst consumers.

In order to sustain food availability, a number of recommendations was set forth. For example, it was suggested to treat food production as an 'essential service' thus opening special procedures for food, trade and agricultural inputs to keep supply chains open and functional through the establishment of 'green channels'. Direct support to rural livelihoods - and indirect support for farmers – e.g. through facilitated loan schemes and grants and postponement of loan repayments- was also suggested. Trade flows of productive inputs were to be ensured: the 2020 boro season needed to go ahead by facilitating the import of improved seeds by lowering import tariffs for example.

Sources: Wardad, Y. (2020) *Vegetable growers in dire straits*. The Financial Express April 18; Khan, N. (2020) *Eat vegetables, save farmers!* Daily Star 19 April; FAO (2020) *Rapid Assessment on Potential Impact of COVID-19 Outbreak on Food and Agriculture System in Cox's Bazar*; The Financial Express (2020) *Poultry and dairy need immediate succor*. 17 April; Wardad, Y. (2020) *Chicken, Eggs, Meat Hit 12-yr Low at Farm Level*. The Financial Express. April 19; World Bank (2020) *Food Security and COVID-19*. Brief; FAO (2020) *Rapid assessment of Food and Nutrition Security in the Context of COVID-19 in Bangladesh*. Draft. April.

Improve support to smallholder farmers by adapting it to their specific profile

Smallholder farmers in Bangladesh have been profiled by the Consultative Group to Assist the Poor (CGAP) through a nationally representative survey, according to their level of education, socio-economic status, access to emergency funds, mobile phone ownership, their attitude towards the future, and encountering

unexpected life and farming events. The population of smallholder farmers is accordingly classified into four distinctive categories.[48]

- Farming for sustenance (27% of all farmers). Vulnerable smallholders, largely living below the extreme poverty line, relying on their farm for survival, low level of education and limited financial inclusion (29% of this group);
- Battling the elements (31% of all farmers). Limited level of education, nearly universal mobile phone ownership; more financially included (the case for 38% of this group), access to mobile money and savings' modalities;
- Options for growth (31% of all farmers). Stable and resilient to shocks; largely living above the poverty line; relying on agricultural income, with the possibility to turn to off-farm income opportunities; universal mobile phone ownership; more financially included (59% of this group);
- Strategic agricultural entrepreneurship (11% of all farmers). Diversified and thriving farms, with multiple sources of income and access to several financial tools; 69% of financial inclusion.

The different groups continuously face climate and animal health-related challenges - such as floods and drought events, crop pests and animal diseases; market-related risks –fragmentation of the value chain, high intermediation fees, consequent lack of traceability; access to/poor quality of productive inputs; post-harvest losses due to lack of post-harvest storage facilities and modern reliable transports (cold chain for instance), market fluctuations; and cash constraints. This profiling could be used to ensure that tailored support is provided to smallholder farmers.

Promote sustainable use of forests to ensure the livelihood of local communities and agrobiodiversity preservation

The importance of forests for the sustainability of food and agricultural systems is widely recognised.[49] Forests and trees in Bangladesh are a rich source of building materials, food, medicine, fuel and other products (such as honey, wax and herbs), thereby providing livelihoods to local communities. They perform important ecosystem functions such as carbon sequestration and soil and water protection. They also support resilience as forest products are often consumed during periods of food scarcity and provide livelihood safety nets. Foods from forests, notably, leaves, seeds, nuts, fruits, mushrooms, honey, insects and animals, are rich in micronutrients and can make important contributions to diet diversity and nutrition.

While the country's forests are heavily utilised, the ability to restore forests is limited. Forests and tree resources are under constant pressure from urbanisation and practices which leave forested landscapes degraded. For instance, the increased population due to the massive influx of displaced Rohingya people since 2015 has put pressure on natural resources in Cox's Bazar (Box 2). Although overall tree canopy coverage increased modestly from 2000 to 2014, the natural forest area declined[50], and there is a persistent widening gap between the demand and supply of forest products.[51] A major challenge faced by Bangladesh in the near future will be the balance between sustainable use and conservation of these resources, and economic growth. Forest cover in the country was only 12.8% in 2015 (14.1% excluding

[48] Anderson J., Moler A. & Kretchun N. (2016) *National Survey and Segmentation of Smallholder Household in Bangladesh – Understanding Their Demand for Financial, Agricultural and Digital Solution*. *CGAP Working Paper*. December.

[49] Powell, B., Ickowitz, A., McMullin, S., Jamnadass, R., Padoch, C., Pinedo-Vasquez, M. & Sunderland, T. (2013) *The Role of Forests, Trees and Wild Biodiversity for Nutrition-Sensitive Food Systems and Landscapes.* *ICN2 Second International Conference on Nutrition – better nutrition better lives.* FAO – WHO.

[50] Potapov, P., Siddiqui, B., Iqbal, Z., Aziz, T., Zaman, B., Islam, A., Pickens, A., Talero, Y., Tyukavina, A. & Turubanova, S. (2017) *Comprehensive monitoring of Bangladesh tree cover inside and outside of forests, 2000–2014*. *Environmental Research Letters.* 12(10).

[51] Rahman, L.M. (2016) *Bangladesh National Conservation Strategy- Forest Resources*. Dhaka. IUCN and Bangladesh Forest Department.

water bodies) but sustainable development targets are currently being set to increase it. Fortunately, newly available tools such as the Bangladesh Forest Inventory and Land Cover Map 2015, and data sharing policies, can help reach these targets. Further work is being carried out under a large World Bank funded project (*Sustainable Forests and Livelihoods- SUFAL*), which aims to improve collaborative forest management approaches and to support the next national forest inventory, tree planting, and other initiatives. Finally, evidence shows that research on ecosystem services valuation is still insufficient in Bangladesh[52]: a better assessment of the socio-economic and environmental contribution of forestry to agriculture and the rest of the economy would provide more evidence to guide sound policymaking such as setting up carbon emission permits or payment for environmental services.

Box 2 - Environmental degradation in Cox's Bazar

Bangladesh continues hosting more than a million displaced Rohingya individuals in Cox's Bazar. This large-scale protracted humanitarian crisis has brought both national and international attention to the nexus humanitarian development, FNS and natural resources' degradation. Ensuring FNS for these displaced people is increasingly putting pressure on the national food system, in a disaster-prone area where 38% of the host community is estimated to be food insecure. An FAO survey in Cox's Bazar showed that the lockdown to control COVID-19 was further exacerbating food consumption and nutritional status challenges.

The GoB has adopted a UN-style cluster system responsible for preparation, response and monitoring of disaster incidences, inclusive of a Food Security Cluster (FSC), which operates at the national-level and is responsible for ensuring preparedness for disaster-related food insecurity. The FSC has also established a Food Security Sector (FSS) within in the Interagency Sectoral Coordination Group, which coordinates food aid and food security activities in and around the camps. WFP and the FSS coordinate the Refugee influx Emergency Vulnerability Assessment (REVA), a regular survey that assesses food insecurity amongst the displaced population and host community populations. While the REVA 2019 (on 2018 data) showed a fragile but stabilised situation compared to the baseline (REVA 2018, on 2017 data), poor diets, lack of education and livelihood opportunities as well as precarious health and WASH conditions persisted.

In addition, the uncertainty surrounding the displaced people's presence increasingly affects the delicate ecosystem in and around Cox's Bazar. Severe deforestation (an estimated 820 tons per day of trees cut down to provide cooking fuel and makeshift shelters), pressure on fresh-water resources, accumulation of waste and water contamination are some of the prominent issues. Actions undertaken by the GoB with the support of international actors include: support programmes to provide Liquid Petroleum Gas as an alternative to firewood; reforestation initiatives; and the establishment of waste ecological treatment centres.

Bangladesh has set an example of humanitarian assistance to the world by supporting the displaced Rohingya population. However, the operations can only be maintained with financial and technical support of the international community. While food insecurity, lack of livelihood opportunities and education, poor health and WASH situation remain major issues, environmental degradation also needs to be addressed.

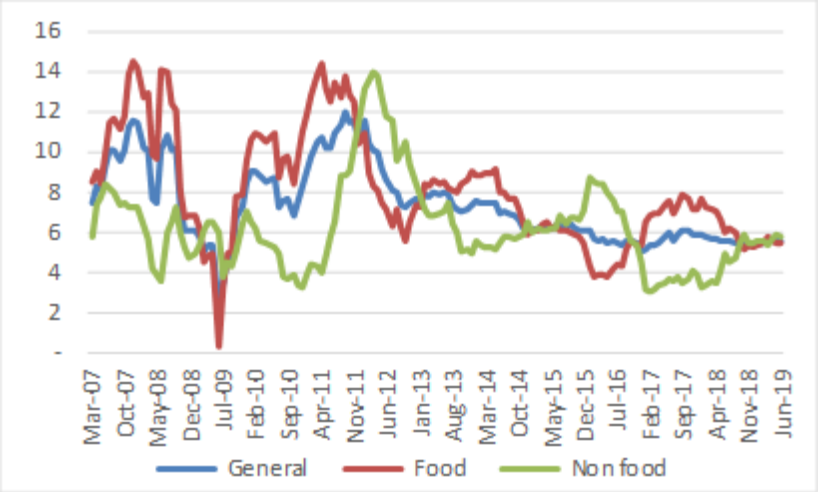
Source: WFP (2019) *Refugee influx Emergency Vulnerability Assessment (REVA), Cox's Bazar, Bangladesh*. May; WFP (2018) *Refugee influx Emergency Vulnerability Assessment (REVA) – Technical Report- Cox's Bazar*. August ; FAO, IFAD, UNICEF, WFP, WHO (2019) *Common Country Analysis Bangladesh – End Hunger, Achieve Food Security and Improved Nutrition and Promote Sustainable Agriculture* (mimeo); UN (2010) *UN Common Country Analysis for the United Nations Sustainable Development Cooperation Framework and the 2030 Agenda* (mimeo). FAO (2020) *Rapid Assessment on Potential Impact of COVID-19 Outbreak on Food and Agriculture System in Cox's Bazar.* Dhaka. May.

[52] Barua, S.K., Boscolo, M. & Animon, I. (2020) *Valuing forest-based ecosystem services in Bangladesh: Implication for research and policies*. *Ecosystem Services.* Volume 42. April.

3.3 Progress towards Outcome II: Efficient and nutrition-sensitive post-harvest transformation and value addition

Post-harvest transformation and value addition through nutrition-sensitive interventions aim to create Nutrition-Sensitive Value Chains (NSVC), to ensure that nutritious food is available to consumers and producers receive an adequate share of the value addition. Outcome II comprises two programmes: strengthened post-harvest value chain focusing on Micro, Small and Medium Enterprises (MSMEs), and improved access to market facilities and information. Each programme consists of three sub-programmes.

Figure 7 - General, food and non-food inflation



Source: BBS

3.3.1 Assessment of progress towards achieving Outcome II

Table 3 - Outcome II: Selected performance indicators

CIP2 outcome proxy indicators	2015/16 Baseline	2016/17	2017/18	2018/19	Target 2020	Source
Average annual CPI inflation rate	5.9%	5.4%	5.8%	5.5%	5.5% 🟢	Bangladesh Bank; National Account Statistics, BBS
Change in agricultural wage rate of male agricultural labourers (without food)	7.6%	5.3%	–0.2%	0.5%	7.2% (per capita real GDP growth rate + 0.5)[53] 🔴	Bangladesh Bank/DAM/ BBS
SDG 2.c.1: Change in Indicator of Food Price Anomalies (IFPA for rice)[54]	–0.9	2.3	0.2	-1.1	Stable 0.5 SD of mean 🔴	FAO

The colour indicator shows the progress achieved: target reached 🟢; on track 🟡; off track 🔴.

The Consumer Price Index remained stable and the target was achieved for 2020

The average annual Consumer Price Index (CPI) inflation rate measures the change in the price of a set of essential commodities over a base year. It maintained a steady trend over the period 2015/16 – 2018/19 and marginally decreased to 5.5% in 2018/19 – in line with the 2020 target - from 5.8% in 2017/18, and 5.9% in the base year (Figure 7). General inflation hit a record high in both 2007/08 and 2010/11 due to

[53] According to the 7FYP (page 48), the GDP growth rate is projected at 8% in 2020. Factoring in the population growth rate (1.34%), the target is computed as: 8 – 1.34 + 0.5 = 7.16%.

[54] Calculations based on the *FAO-GIEWS methodology*.

the upsurge in food prices triggered by the international food price hike (Figure 7). Food inflation remained higher than the non-food inflation - except in 2011/12 and 2015/16. Over the last decade, both food and non-food inflation have been volatile but converged in 2018/19. This is the result of year-on-year decline in food inflation and increase in non-food inflation.

The agricultural wage rate slightly improved but is still off target

The agricultural wage rate measures the purchasing power of the agricultural labour force in terms of rice. It is the ratio between the general wage index and the average wholesale rice price, calculated as a three-year moving average. It slightly improved, up to 0.5% year-on-year due to better rice availability, reduced prices and waning import demand. This indicator is still far off the target of 7.2% by 2020 which requires immediate attention. The negative trend of the index is due to the higher increase in rice price compared to that of the general wage index over the last two years.

There was a low rice price alert compared to the previous year

The Indicator Food Price Anomalies (IFPA, SDG 2.c.1) measures abnormal monthly and yearly changes in food prices, excluding seasonality and inflation effects.[55] The rice IFPA shows that the price of rice dropped significantly in 2018/19 compared to the previous two years (Table 4). The IFPA of rice dropped from 2.3 in 2016/17 (indicating a high price alert) to 0.2 in 2017/18 (normal) to -1.1 in 2018/19 (indicating a low price alert). This was caused by the reduction in the average coarse rice wholesale price to 30.7 BDT/kg in 2018/19 from 37.6 BDT/kg in 2017/18, due to sustained availability from both replenished stocks in 2018/19 and sustained production in both 2017/18 and 2018/19. Domestic rice production is generally enough to meet national demand.[56] However, production losses due to natural calamities put pressure on both availability and prices which are generally eased through import. The adequate management of buffer stocks is therefore essential to reduce price volatility during crises.

IFPA values for both rice and wheat followed a similar pattern between 2010/11 and 2012/13 but diverged thereafter (Table 4). In case of wheat, alert levels were mainly normal or low, except in 2017/18 when a high price alert was detected probably due to a sudden increase in the international price and a 2.11 lakh MT domestic production loss in 2017/18 only partially offset by a 0.78 lakh MT import increase.[57] As wheat is mainly an imported food commodity, its price fluctuations are highly correlated to the trend in international prices.[58]

Table 4: Indicator of Food Price Anomalies (IFPA) for Bangladesh for rice and wheat

Fiscal Year	Rice		Wheat	
	IFPA	Alert	IFPA	Alert
2010/11	-0.155	Normal	-0.467	Normal
2011/12	-6.324	Alert (Low Price)	-2.209	Alert (Low Price)
2012/13	-0.185	Normal	0.151	Normal
2013/14	0.944	Warning (High Price)	-0.662	Warning (Low Price)
2014/15	-0.648	Warning (Low Price)	-1.138	Alert (Low Price)
2015/16	-0.882	Warning (Low Price)	-0.869	Warning (Low Price)
2016/17	2.319	Alert (High Price)	0.295	Normal
2017/18	0.190	Normal	1.094	Alert (High Price)
2018/19	-1.116	Alert (Low Price)	0.243	Normal

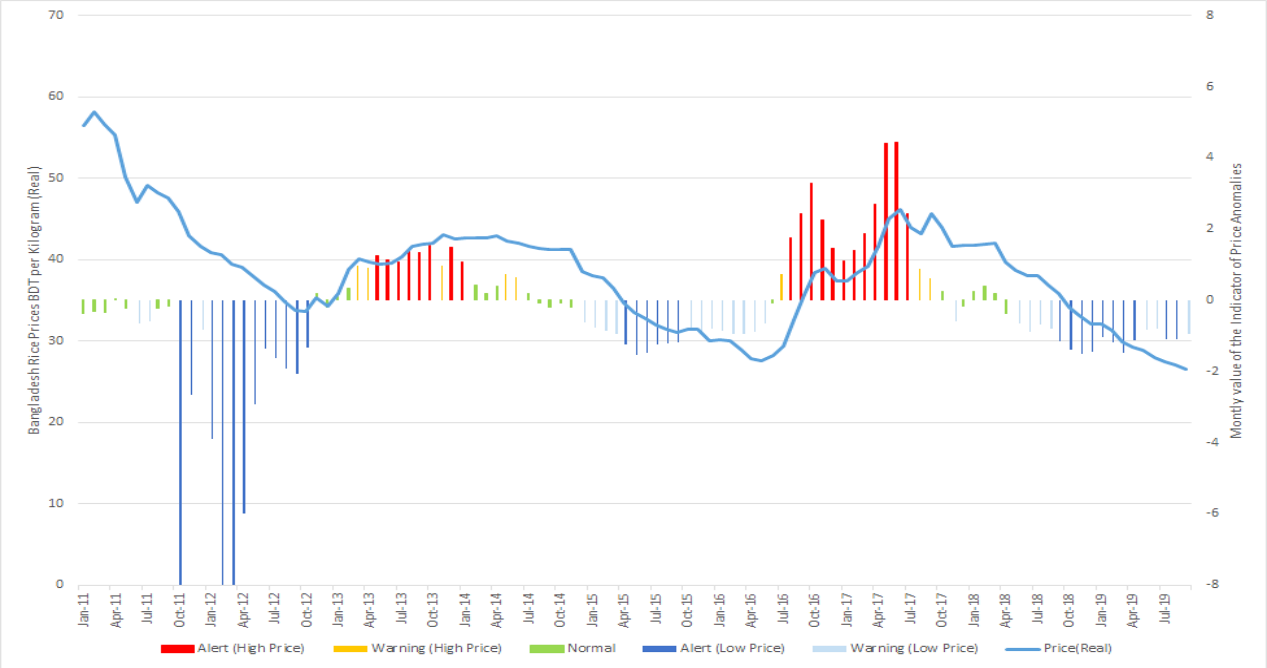
[55] More details on the IFPA can be found on the *FAO Food Price Monitoring Analysis website*.

[56] GoB (2019) *Monitoring Report 2019 of the Bangladesh Second Country Investment Plan*. Dhaka. FPMU. Ministry of Food.

[57] FPMU website.

[58] Hossain, M. & Yunus, M. (2016) *Estimates of Per Capita Consumption of Food Grains in Bangladesh*. *Bangladesh Development Studies.* 39(1–2). 103–116.

Figure 8 - Indicator of Food Price Anomalies (IFPA) for rice in Bangladesh



Source: Data from BBS and methodology from Baquedano F.G. (2015) Developing an indicator of price anomalies as an early warning tool: A compound growth approach. FAO. Rome.

3.3.2 Policy challenges and recommendations for further actions

Invest in conservation of nutrients during post-harvest storage, transformation and distribution

Nutrition-sensitive approaches to value chain development have emerged as a modality to reorient food systems (from farm to fork) for improved nutritional outcomes. NSVC comprise safe storage, processing and preservation technologies, labour-saving technologies and fortification, as well as cold chain and distribution mechanisms which help better retention of nutrients thereby preventing nutrient losses.[59] For better management of agriculture marketing, in the year under review, the GoB passed the 'Agricultural Marketing Bill 2018' to expedite improved management system, trading, production and marketing of agro-based products ensuring food safety and fair prices for growers and consumers.[60] In line with the Bill, in 2018/19 the Directorate General of Food (DG Food), under the *Modern Food Storage Facilities Project (MFSP)*, distributed 70-litre waterproof food-grade plastic silos among 500,000 households in 63 upazilas of 19 disaster-prone districts. This aimed at facilitating the storage of quality seeds and foodstuff during natural disasters.[61] DG-Food has been implementing a total of 162 food storages (48 storages each of 1,000 MT capacity and 114 storages with 500 MT capacity), of which 93 storages have already been completed (82% completion of the work).[62] Additionally, with World Bank support, the government continues to establish large-scale silos in Ashuganj, Madhupur, and Mymensingh

[59] De la Peña, I., Garrett, J. & Gelli, A. (2018) *Nutrition-sensitive value chain from a smallholder perspective – A framework for project design*. *IFAD Research Series* 30. September. Rome.

[60] GOB (2018) *Agriculture Marketing Bill 2018*. In Bangla.

[61] GoB (2019) *5,00,000 HH Silos Distributed As On November, 2019.* Modern Food Storage Facilities Project. Dhaka. Directorate General of Food. Ministry of Food.

[62] GoB (2019) *Annual Report 2018-2019*. Dhaka. Directorate General of Food. Ministry of Food.

which include six on-site food testing laboratories.[63] A new private sector initiative- Cold Chain Bangladesh Limited (CCBL)- jointly owned by Golden Harvest Ice Cream Limited and Golden Harvest Foods Limited, co-financed by International Finance Corporation (IFC) is to invest in a network of temperature-controlled warehouses and logistics assets in 12 storage locations across the country.[64]

Promote nutrition-sensitive value chain through quality and safety certifications

The number of agricultural MSMEs[65] in Bangladesh is estimated at more than 1.7 million, around 22% of all MSMEs, providing employment to about 40% of the population and contributing to the agro-processing sectoral turnover of 3.2 billion USD.[66] Agricultural MSMEs are essential service and product providers to farmers engaged with primary production. Strengthening improved practices and technology to preserve micronutrient content during harvesting and post-harvest operations -including sorting, grading, cleaning, packaging and storage; secondary processing (value addition); and marketing and distribution, is essential in ensuring that value chains are nutrition-sensitive.

Both primary producers and MSMEs could benefit from obtaining quality and safety certifications. The GLOBALG.A.P. is a trademark and sets voluntary standards for Good Agricultural Practices (GAP) worldwide. In this context, the Bangladesh-USAID *Agriculture Value Chain (AVC)* Project (2013-18) - in collaboration with the Dhaka Chamber of Commerce and Industry and the GLOBALG.A.P. - supported large agribusiness industries such as Banglafresh (NAAFCO), Gardenfresh (Ispahani), and Shuddho (Shwapno) in delivering fresh and quality product to consumers.[67] However, nutrient composition and food safety information are often not visible on the product which means that certifications need to be complemented with nutrition labelling and nutrition awareness campaigns (see Programme V.1 and Programme III.1), which would, in turn, allow MSMEs and producers to obtain a premium price for quality and safety of supplied food.

Promote financial inclusion to support the resilience of agro-food MSMEs in rural areas

Improving MSMEs' financial inclusion is a fundamental challenge at the heart of a country's financial and economic development. Access to formal finance by MSMEs in Bangladesh is limited compared to the average for the South Asia region, with an estimated financing gap of BDT 237 billion (USD 2.8 billion). As of 2018, 47% of adults were financially included mainly through microfinance institutions, mobile money accounts, banks or non-banks financial institutions. Rural users show a preference for non-banks financial institutions over banks.[68] Informal lenders are predominant in the agro-food sector. They are mostly actors involved in these value-chains whose core business is not finance-related but who have promptly responded to a growing demand for financial products in rural areas, exploiting, information advantages, lower transaction costs, and closer proximity with rural clientele compared to the formal and institutional counterparts.[69] A key driver of financial inclusion is achieving 'Digital Bangladesh' through mobile money and digital payments platforms in rural areas. The agro-processing sector has been declared as an important sector by the government and to facilitate that the Bangladesh Krishi Bank provides finance for

[63] *Ibid.*

[64] CCBL (2019) *Golden Harvest Joins Hands with IFC for Integrated Cold Chain Network*. Cold Chain Bangladesh Limited.

[65] Defined as enterprises with 100 employees or less.

[66] Feed the Future (2019) *Pathways to prosperity -Rural and Agricultural Finance – State of the Sector Report*. November.

[67] USAID (2019) *Bangladesh USAID Agriculture Value Chain Project*.

[68] Financial Inclusion Insights (FII) Program website.

[69] FAO (2017) *Innovative risk management strategies in rural and agriculture finance- The Asian experience* by Emilio Hernández (ed.). Rome.

seven priority sectors.[70] Similarly, the Rajshahi Krishi Unnayan Bank (RAKUB) has also introduced a special credit programme titled *RAKUB-Small Enterprise Credit Programme (SECP)* to promote the entrepreneurship in small agro-enterprises.[71] Several innovative and alternative financing options can be further explored, including risk-sharing facilities, factoring, warehouse receipt finance, and/or start-up capital policies.[72] Mainstreaming rural financial inclusion is essential for resilient rural economies which are undermined by a structural lack of cash and liquidity which has been exacerbated by the COVID-19 pandemic (Box 3).

Box 3 – Post-harvest loss has increased due to COVID-19

Food loss and waste dramatically increased during the COVID-19 pandemic due to restrictions imposed on transport and access to markets. The marketing channels for perishables required special government support with suggested measures such as: procurement from the growers or assembly markets; establishment of private-public partnerships to increase food delivery by retailers; inclusion of fruits and vegetables in the government-supported food relief for those whose FNS was affected by the crisis. The Ministry of Agriculture arranged special rail service for carrying perishables. Vegetables were also distributed among those in distress by some government department along with the daily essential. A 50 billion BDT Stimulus Package for Agriculture was announced by the honourable Prime Minister to address the impact of the COVID-19 pandemic. Harvest and postharvest operations of foods such as fruits, vegetables, milk and meat products, due to their perishable nature, have been affected the most. Proper planning (short, medium and long-term) and allocation of adequate resources are crucial to ensure postharvest infrastructural development, including low temperature storage and transportation facilities, and to promote food processing to improve shelf life, conserve nutrients and reduce loss and waste.

Sources: FAO (2020) *Coronavirus Disease 2019 (COVID-19)- Addressing the Impacts of COVID-19 in Food Crises April-December 2020;* GoB (2020) *Directive for Continued Agricultural Production and marketing due to Corona virus-Related Situation (in Bangla)*; Ministry of Agriculture. 6 April; *News Bulletin, Independent TV Channel, Bangladesh*; 5 April 2020.

Improve access to service, information and markets across food chains

The government is committed to using technology to eliminate poverty by ensuring digital inclusion for all, in line with Vision 2021 of a 'Digital Bangladesh' and with the a2i programme (see Programme IV.2). This initiative can create an enabling environment that will improve smallholder farmers' integration into value chains and markets. In addition, the *National Agriculture Technology Programme – Phase II Project* (NATP-2) aims to improve market access by strengthening value chains. Marketing arrangements allowed to market 8,025 MT through collaboration between the Project Implementing Unit - DAE and Hortex Foundation. The project reached more than one million beneficiaries organised in 40,514 common interest groups, which contributed to the development of micro plans subsequently aggregated into Union extension plans, as an approach to strengthen the responsiveness of extension services towards beneficiary needs. Key elements to speed up the implementation status are accelerating extension services' support for common interest groups and filling the gap between technology generation and adoption to ensure technology reaches farmers more rapidly.[73]

[70] Crop, Fisheries, Livestock, Farm and Irrigation Equipment, Agro based Industrial Project, SME, Continuous Loan (Working Capital and Cash Credit), Micro Credit (Small Loan).

[71] Innovision and Katalyst (2016) *Study on the Roles and Opportunities for Private Sector in Agro-food Processing Industry of Bangladesh*.

[72] World Bank Group (2019) *Financing Solutions for Micro Small and Medium Enterprises in Bangladesh. Washington, DC*

[73] World Bank (2019) *Implementation Status and Results Report - Bangladesh NATP-2: National Agricultural Technology Program – Phase II Project (P149553)*. December.

Also, to avoid distress crop sales by farmers, the Department of Agricultural Marketing (DAM) provided crop warehouse loans to 4,019 farmers in 2018/19.[74] Under the USAID-funded *Agricultural Value Chain (AVC) Project*, to increase sales up to 60%, several partners such as Ispahani, Partex, and NAAFCO Pharma provided training on input management to some 39,000 lead farmers.[75] Joikko Agro Ltd is a social enterprise with the goal of supporting farmers to improve their livelihoods by connecting them with a variety of local and international service providers -such as agronomic training, crop advisory, access to quality inputs, farm machinery rental, agri-loans - and by improving market access through crop aggregation and contract farming.[76] Joikko works with over 10,000 farmers and its cornerstone component is six for-profit farmer centres which provide services and facilitate contracts with national and international buyers. By growing and selling together, farmers have improved their yields and are able to negotiate better prices for their collective crops. The project's objective is to form a social franchise that holds a growing network of farmer centres to account through a standard catalogue of fee and no fee-based service provision.[77]

The government needs to support such demand-driven initiatives by making rural Bangladesh thoroughly digital, by creating an enabling business environment that appeals to the younger sections of the population, in rural areas with improved physical infrastructure and communication networks to guarantee connectivity, an essential enabler to these farmers' networks.

[74] GoB (2019) Annual Report 2018-2019. Dhaka. Department of Agricultural Marketing, Ministry of Agriculture.

[75] *Ibid.*

[76] https://www.joikko.com/

[77] Iles, R. (2019). *The Future of Technology for Smallholder Farming in Poor Rural Conditions Bangladesh JOIKKO Social Franchise Case Study Report.* Report commissioned by VSO International. August.

3.4 Progress towards Outcome III Improved diversity, consumption and utilisation

The objective of Outcome III is to improve diet quality and diversity as well as utilisation through integrated short- and long-term interventions for better nutrition and health. These interventions include promoting healthy diets, dietary diversity and food safety through evidence-based Nutrition Behaviour Change Communication (NBCC) and ensuring safe water, improved hygiene and sanitation (WASH) to prevent the risk of infections including foodborne illness that can affect food utilisation and nutrient absorption. Outcome III comprises of two programmes namely (III.1) Enhanced nutrition knowledge, promotion of good practices and consumption of safe and nutritious diets and (III.2) Optimised food utilisation through the provision of safe water, improved food hygiene and sanitation along with six associated sub-programmes. Table 5 presents the progress towards achieving Outcome III.

3.4.1 Assessment of progress towards achieving Outcome III

Table 5 - Outcome III: Selected performance indicators

CIP2 outcome proxy indicators	2015/16 Baseline	2016/17	2017/18	2018/19	Target 2020	Source
National dietary energy intake (DEI) from cereals	70% (2010)	64% (2016)	…*	…*	60% recommended 🟡	HIES, BBS
Proportion of children receiving minimum acceptable diet at 6-23 months of age	23% (2014)	…*	33.7%	…*	More than 40% by 2025 (NPAN2) 🟡	BDHS
Proportion of households consuming adequately iodised salt (i.e. containing at least 15 ppm)	50.5% (National Salt Iodisation Survey, Bangladesh 2015)	…*	…*	…*	90% by 2025 (NPAN2) 🟡	BDHS, NMSS
Prevalence of anaemia among women of reproductive age (15-49)	39.7% (2015)	39.9% (2016)	…*	…*	Less than 25% by 2025 (NPAN2) 🔴	WHO, GHO and FAOSTAT
Minimum dietary diversity for women (using Minimum Dietary Diversity for Women (MDD-W)	46% (5 out of 9 food groups, 2015)**	…*	…*	…*	75% by 2030 (MoHFW) 🔴	FSNSP (BracU, BBS/ HKI)

**not available, ** Women Dietary Diversity Score*
The colour indicator shows the progress achieved: target reached 🟢; on track 🟡; off track 🔴 .

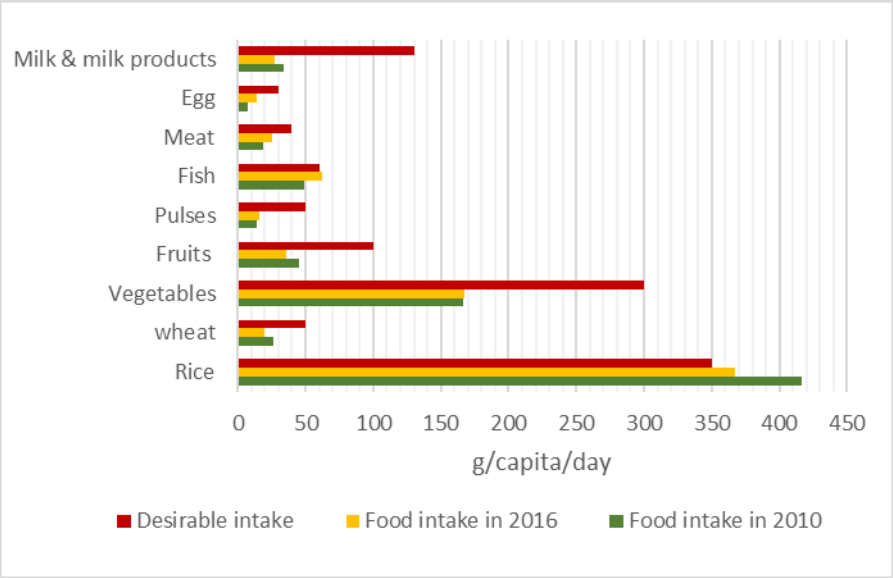
The target of dietary energy intake (DEI) from cereals was on track until 2016, but recent data are unavailable

In Bangladesh, cereals and rice in particular, continue to be the main source of dietary energy, even though the proportion of cereal energy in the diet is gradually declining. The proportion of dietary energy from cereals fell from 70% in 2010 to 64% in 2016, closer to the recommended 60% target.[78] The daily per capita intake of rice decreased from 416 g in 2010 to 367 g in 2016, still too high but in the right direction to reach the desirable norm of 350 g (Figure 9). Consumption of protein and micronutrient rich foods, including animal source foods and pulses, remained low. Animal source foods are rich in good quality protein and bioavailable micronutrients, especially iron, zinc and calcium. Even though the intake of these foods slightly increased between 2010 and 2016, it was below the desirable intake for meat, egg and milk. Fish consumption increased by almost a third from 43.8g to 62.6g while that of pulses remained

[78] Based on the BBS Household Income and Expenditure Surveys.

unchanged at close to 15g per capita daily, still less than a third of the desirable intake. Similarly, over the same time period, vegetable consumption remained steady and fruit consumption slightly dropped, both remaining significantly lower than the recommended intakes. In 2016, vegetable intake was only 167 g, just above half of the recommended intake of 300 g. Similarly, in 2016, fruit intake was only 36g, about a third of the desirable intake of 100g. Significant gaps between actual consumption and the Desirable Dietary Pattern[79] call for urgent attention to be given to promoting dietary guidelines for enhancing the demand for healthy food choices and diets. Issues related to the nutrient density of foods and total diet studies need to be given the highest policy attention. The supply and affordability of nutrient-dense[80] foods need to be enhanced in order to bridge the nutrient gap that prevails in consumption.

Figure 9: Consumption of major food groups in 2010 and 2016 compared to desirable intake (g/capita/day)



Source: HIES, 2016

While data is needed to assess the changes in dietary intake that have occurred since the 2016 Household Income Expenditure Survey (HIES), it is likely that any progress made will have been reversed, at least temporarily by the COVID-19 crisis. In Bangladesh, where most families' ability to eat depends on daily wages and where 87% of employment is generated by the informal sector, access to diversity of foods and healthy diets will be markedly reduced. Street vendors and food sellers, especially in urban areas, face huge losses as panic-stricken city dwellers stayed at home and foods remained unsold during the lockdown phase.

Minimum Acceptable Diets for children aged 6-23 months improved until 2017-18, with no information available thereafter

The Minimum Acceptable Diet (MAD) is one of the eight core indicators for assessing infant and young child feeding (IYCF) practices for children aged 6-23 months recommended by WHO[81] and UNICEF.[82] BDHS surveys show clear progress in children receiving MAD between 2011 and 2017/18 (Figure 10) although

[79] Quamrun, N., Choudhury,S., Faruque, Md. O., Saliheen Sultana, S.S. & Siddiquee, M.A. (2013) *Desirable Dietary Pattern for Bangladesh.* Final Research Results. NFPCSP Research Grant Initiative. Dhaka. FAO.

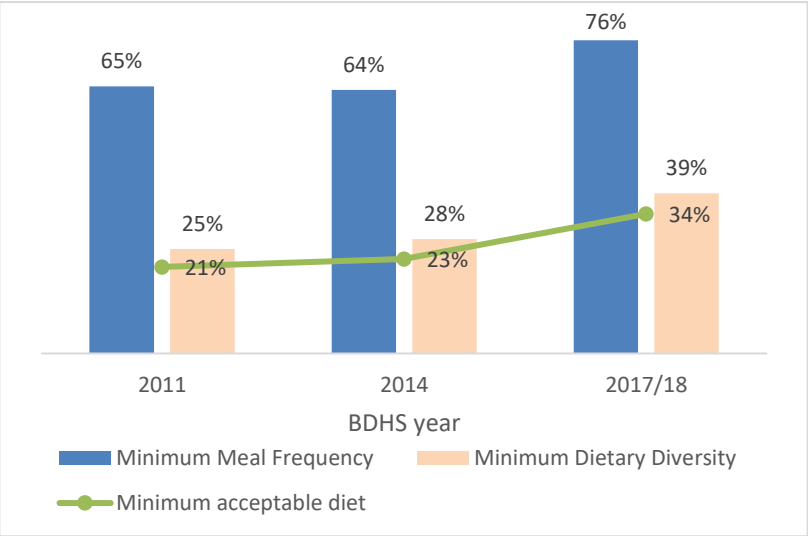
[80] Nutrient density is defined as the amount of different nutrients per 100 kcal of preparation.

[81] WHO/UNICEF (2017) *Global Nutrition Monitoring Framework. Operational Guidance for tracking progress in meeting targets for 2025.* Geneva: World Health Organization.

[82] UNICEF (2020) *Improving Young Children's Diets During the Complementary Feeding Period.* UNICEF Programming Guidance. New York. UNICEF.

most of the progress occurred between 2014 and 2017/18 from 23% to 34%. Bangladesh is thus on track to achieve the NPAN2 target of 40% by 2025.

Figure 10 - Trend in minimum acceptable diet for children 6-23 months



Source: BDHS 2011, 2014 and 2017/18

The MAD is a composite indicator of the Minimum Dietary Diversity (MDD) and the Minimum Meal Frequency (MMF). The MDD is a proxy indicator for nutrient density and micronutrient adequacy, while the MMF is a proxy indicator for the energy density in a child's diet. Despite improvements for both MDD and MMF in children's diets between 2011 and 2017, only 39% of the children aged 6-23 months received four or more food groups to meet the Minimum Dietary Diversity, while over three-quarters of them had the Minimum Meal Frequency (Figure 10). Poor IYCF leads to growth retardation and micronutrient deficiencies among children, especially when linked to low diet diversification and nutrient inadequacy in complementary feeding. Appropriate complementary feeding guidelines and improved nutrient-dense recipes through National Nutrition Services (NNS) should be promoted to enhance the quality, quantity, diversity and safety of complementary foods to improve child nutrition in the first 1000 days of life.

Adequately iodised salt consumption remains a challenge

Salt is adequately iodised when it is fortified with potassium iodate for at least 15 parts per million (ppm). A National Salt Iodization Survey shows that only half of the population consumed adequately iodised salt in 2015, far-below the NPAN2 recommended target for 90% of the population. More recent estimates of consumption of adequately iodised salt are not available but data from MICS 2019[83] show 76% of households consuming *some* iodised salt (i.e. including less than the required 15 ppm). Bangladesh is thus still far behind the NPAN2 recommendation. Quality assurance at the production level, along with routine chemical analysis in laboratories and on markets are essential to assess iodine adequacy in salt. Nutrition messaging for appropriate cooking and storage practices of iodised salt is also important. Actions to further promote the consumption of adequately iodised salt need to be scaled-up.

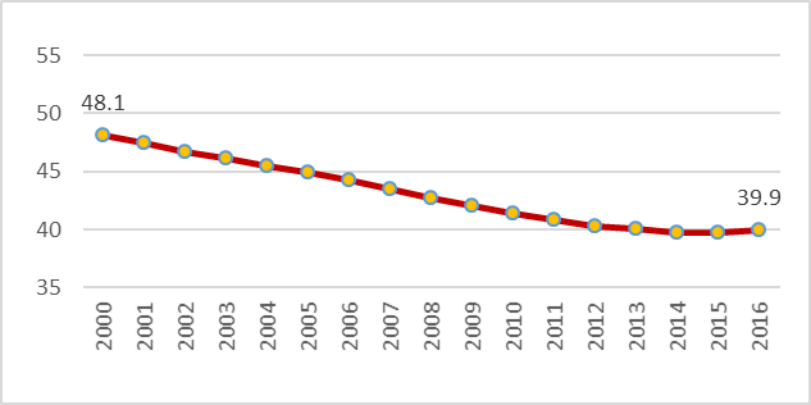
There was limited progress in reducing anaemia among women of reproductive age up to 2016, after which there are no data

Women of reproductive age (15-49 years) are at high risk of anaemia, especially during pregnancy. Anaemia impairs health and quality of life and increases the risk of maternal and neonatal adverse outcomes. Severe anaemia during pregnancy can increase the risk of maternal mortality, premature delivery, and can cause low birth weight and increase the probability of neonatal mortality. Although the prevalence of anaemia among women of reproductive age reduced from 48.1% in 2000 to 39.9% in 2016,

[83] Carried by UNICEF and BBS.

the rate remained almost stagnant between 2012 and 2016 (Figure 11). In 2012, the World Health Assembly endorsed the comprehensive implementation plan on maternal, infant and young child nutrition and set the global target for reducing anaemia in women of reproductive age by 50% by 2025. Following the NNP (2015) and other policy goals and targets, NPAN2 recommended the target for reducing the rate of anaemia among pregnant women to less than 25% by 2025. If this sluggish progress continues, neither the global nor the national targets for anaemia in women of reproductive age or pregnant will be achieved. Recent nationally representative data are not available, so adequate measurements to estimate the current prevalence of anaemia needs to be scaled up. At the same time, the national deworming programme needs to be strengthened and vitamin C consumption increased to reach the target 25% by 2025. In general, acute infections, either viral or bacterial, can cause anaemia through other mechanisms. Given the vulnerability and risks of malnutrition in the COVID -19 situation, there is need to promote access to and the consumption of a healthy diet that contains protein and micronutrient rich foods (zinc, vitamin A, D and C) among others for ensuring immunity.

Figure 11 - Prevalence of anaemia (in %) among women of reproductive age (15 – 49 years)



Source: FAOSTAT, 2018

Minimum Dietary Diversity for Women (MDD-W) was inadequate as of 2015/16 but more recent numbers are needed

The minimum dietary diversity for women (MDD-W) is a proxy indicator of micronutrient adequacy in their diet indicating the consumption of at least five or more out of ten food groups. The CIP2 has a target of 75% for MDD-W by 2030. Yet, less than half (46%) of the women had a minimum dietary diversity in 2015 (which at the time was out of nine food groups). Although current data on MDD-W are not available, nationally representative food consumption and dietary assessment in 2017-2018 showed that 53.3 % of women in the reproductive age had a MDD-W mean score of 5 out of 10 food groups.[84] These findings corroborate earlier findings of FSNSP and highlight the need to accelerate the diversification of diets for women. Scaling up the use of dietary guidelines for improved food diversity is essential to achieve this objective. Diet diversity tools validated with biomarkers of intake and micronutrient adequacy[85] need to be produced through the evidence to inform policy. Use of the updated 2015 Food Composition Tables (FCT) as an essential tool to food and agricultural planning can serve to orient and set nutrient targets in food production and guide diet planning for meeting consumption requirements and nutrient needs.

[84] INFS /MUCH FAO (2018) *Food Consumption and Dietary Assessment Survey*. Dhaka.

[85] Nair, M.K., Augustine, L.F. & Konapur, A. (2015) *Food-Based Interventions to Modify Diet Quality and Diversity to Address Multiple Micronutrient Deficiency*. *Front Public Health.* 3: 277.

3.4.2 Policy challenges and recommendations for further actions

Develop long-term national food planning to ensure nutritious and healthy diets

Long term planning for ensuring nutritious and healthy diets from a sustainable food system is an immediate need considering Bangladesh's population growth, demographic composition, and changes in dietary patterns induced by urbanization and income growth. This is important to estimate the gaps in availability, consumption and desirable intake and to take remedial actions through increased production, processing or trade. Food systems, especially in urban areas, are evolving to adapt to evolving food demands and transforming from traditional to modern with the increasing consumption of convenience/fast food. Desirable dietary pattern and nutrient targets should be used for diversified food planning, sensitise demand for healthy food and enhanced food supply. It is also important to establish the per capita energy and nutrient requirement for healthy diets of population groups with varying ages, body size, physical activity levels and occupations, and physiological status. This planning will ensure balanced nutrition at minimal cost, developing diets and food lists based on local menus and support actions for achieving healthy and sustainable food systems.

Promote dietary diversity to enhance nutrient adequacy

Women during pregnancy, lactation and menstruation, and adolescent girls, who experience rapid physiological changes, require diets that are diversified, safe, adequate and rich in micronutrients. Government and non-government agencies have carried out numerous advocacy and awareness programmes on the promotion of dietary diversity. But targeted programmes must be implemented to especially improve the diets of adolescent girls. It is also important to pay special attention to pregnant and lactating women during their antenatal care (ANC) and post-natal care (PNC) sessions. Food intake diversification varies according to socioeconomic factors, with poorer households eating less diverse foods. However, higher incomes also do not automatically translate into a healthier diet. Contextual drivers that shape food systems also influence food choices, preferences and consumption behaviour. Implementation of dietary guidelines, nutrition education programmes and behaviour change communications (BCC) need to be integrated to every step of the food system including in nutrition-sensitive interventions to inform and influence food demand and promote healthy dietary behaviour and consumption.

Improve the consumption of fortified foods and its monitoring

Fortification of staple foods with essential micronutrients is a cost-effective intervention. This has been prioritised in the National Strategy on Prevention and Control of Micronutrient Deficiencies (NSPCMD 2015-2024). However, outreach, coverage and access to fortified foods by the targeted populations remain inadequate. The effectiveness of fortified rice in addressing anaemia and zinc deficiency was demonstrated among Vulnerable Group Development (VGD) beneficiaries in five districts of Bangladesh before and after 12 months of fortified rice distribution.[86] Particular attention needs to be given to identifying potential barriers to equitable access for all population groups needing adequately iodine-fortified salt. Strengthening the existing monitoring system, in line with the NSPCMD, is fundamental to track the consumption of adequately fortified foods to inform policy and programmes. It is also important to regularly assess the distribution of key micronutrient deficiencies such as iodine, vitamin A and zinc across regions and population groups to inform policy update. To this purpose, a National Micronutrient Survey and a specific National Iodine Deficiency Disorders Survey are indispensable.

[86] Ara G., Khanam M., Rahman A., Ahmed T. *et al* (2019) *Effectiveness of micronutrient-fortified rice consumption on anaemia and zinc status among vulnerable women in Bangladesh*. Plos ONE 14 (1): e0210501.

Strengthen National Nutrition Services delivery through community clinics

The NNS is an operational plan under the Health Population and Nutrition Sector Development Program, implemented by the Institute of Public Health and Nutrition (IPHN) and includes several programmes to control micronutrient deficiencies. NNS promotes food-based approaches through BCC to control anaemia and enhance the production of bioavailable micronutrient-rich foods to enhance diets and improve nutritional status in general. Other interventions including breastfeeding, appropriate complementary feeding, increased intake of animal food, green leafy vegetables are being encouraged. Anti-helminths are procured routinely and distributed nationwide by NNS to control worm infestation. Lack of coordination in implementing multiple interventions using public health curative care facilities, limited preventive outreach platforms, inadequate logistics and supplies for nutrition-related services, inadequate training coverage of service providers at community clinics (i.e. Community Health Care Promoter) and poor outreach of services (i.e. Health Assistant) have been identified as the major challenges for NNS.[87] Despite the availability of ANC services at the community and outreach level, the rate of compliance to iron folic acid supplements is very low with only one-fourth of the pregnant and lactating women attending these services. It is recommended to strengthen the implementation of ANC, PNC, growth monitoring and promotion, NNS delivery involving community clinics targeted to children and women suffering from anaemia and micronutrient deficiencies. Within the multi-sectoral nature of NNS, linkages with nutrition-sensitive interventions under the Ministry of Agriculture (MoA) and the Ministry of Fisheries and Livestock (MoFL) also need to be strengthened.

[87] Shaha K.K., Billah M., Menon P., Arefin, S.E. & Mbuya, N.V.N. (2015) *Bangladesh National Nutrition Services: assessment of improvement status*. *World Bank Technical Report.*

3.5 Progress towards Outcome IV: Enhanced access to social protection and safety nets and increased resilience

Outcome IV of the CIP2 covers interventions to expand access to social protection and safety nets for vulnerable groups to protect their food and nutrition security before, during and after disasters. It includes two programmes: 1/ timely and effective disaster preparedness and responses through emergency food distribution and agricultural sector rehabilitation and mitigation measures, through three associated sub-programmes; and 2/ strengthened social protection and safety net programmes for targeted groups across the life cycle, including disabled and displaced populations, also through three associated sub-programmes.

3.5.1 Assessment of progress towards Outcome IV

Table 6 - Outcome IV: Selected performance indicators

CIP2 outcome proxy indicators	2015/16 Baseline	2016/17	2017/18	2018/19	Target 2020	Source
Proportion of population living below national poverty line, differentiated by urban and rural (SDG 1.2.1)	National: 24.3% Rural: 26.4% Urban: 18.9%	National: 23.1%E[88]	National: 21.8%E	National: 20.5%E	7FYP: National: 18.6% by 2020 🟡	HIES reports, BBS, GED
Proportion of population under national extreme poverty line (a) Rural and (b) Urban	National: 12.9% Rural: 14.9% Urban: 7.6%	National: 12.1%E	National: 11.3%E	National: 10.5%E	National: 8% by 2020 🟡	HIES reports, BBS, GED

E: estimated
The colour indicator shows the progress achieved: target reached 🟢; on track 🟡; off track 🔴.

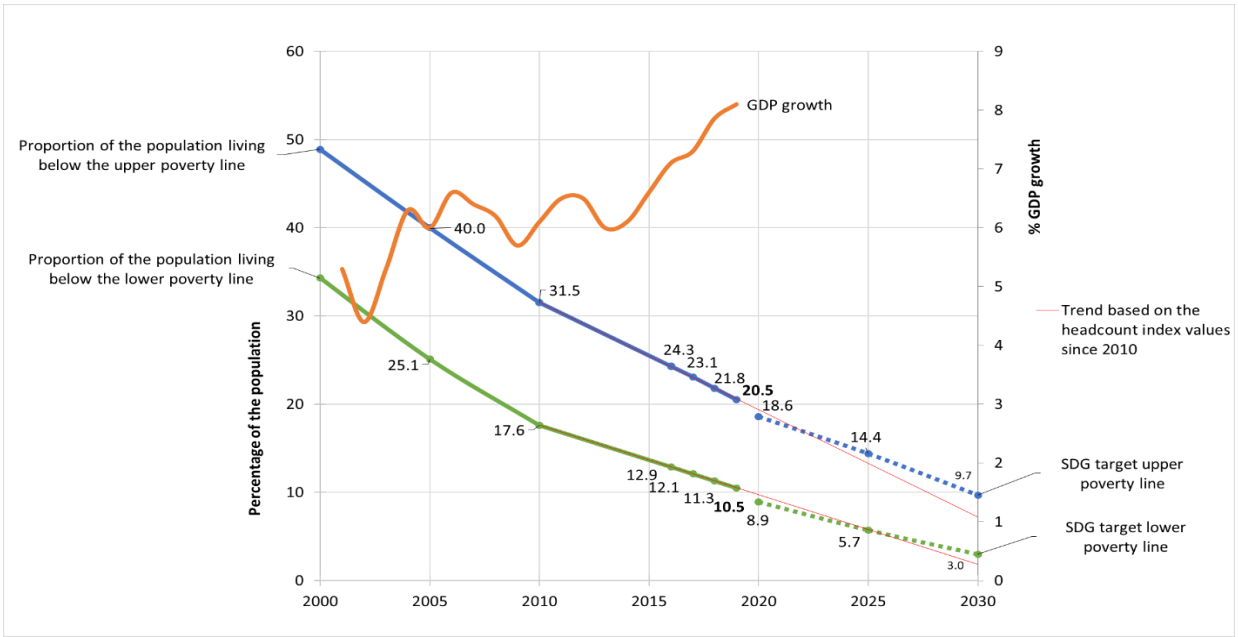
Poverty reduction was on-track for the SDG 1 national target, but will likely be slowed by COVID-19

Poverty in 2018/19 was estimated by the Bangladesh Bureau of Statistics (BBS) to have further declined to 20.5% nationally, from 21.8% in the previous year. These figures are 10.5% and 11.3%, respectively, for the proportion of people under the extreme poverty line. Poverty estimates after the baseline are model-based, rather than survey-based, by extrapolating a linear trend between survey-based estimates in 2010 and 2015/16 (Figure 12). Even with a somewhat slower rate of decline after 2010, Bangladesh was still on-track to achieve before 2030, the SDG 1 Target 1.2.1 of reducing at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions - as indicated by the red line in Figure 12.

The lockdown resulting from the COVID-19 pandemic in 2020 led to sharp increases, in poverty depth amongst the already poor, and in poverty prevalence when previously non-poor households fell into poverty. The transitory shock turned into a longer-term crisis in poor households when the lockdown perdured. Many of the poor would rebound with the resumption of economic activity, but some would remain poor because they sold productive assets, accumulated unmanageable debts, were unable to re-finance migrant work, and even for some, their breadwinner died.

[88] Data on urban and rural disaggregation of poverty will be available only in the next Household Income and Expenditure Survey, planned in 2020/21.

Figure 12 - Poverty prevalence, SDG targets and GDP growth



Source: Data from BBS

3.5.2 Policy challenges and recommendations for further actions

Ensure proper financing and implementation of safety nets and social protection systems to tackle the large numbers that remain in poverty

The prognosis that Bangladesh will achieve the SDG poverty target leaves no room for complacency since even before the impact of COVID-19, one-in-five lived in poverty and one-in-ten lived in extreme poverty. This calls for well-financed and well-implemented safety nets and social protection system to shield people from food and nutrition insecurity, support their efforts to work out of poverty, and break the intergenerational cycle of poverty. Special inclusion measures are required to adapt these systems for the most deprived and marginalised as often poverty programmes have been found not to cater well to their situations.[89]

Recognise the non-economic dimensions of poverty

In the official poverty headcount index, many are not counted as poor although their lack of basic education and healthcare services, safe drinking water, sanitation and electricity, means they are deprived. Lack of access to such basic human development needs exacerbates income poverty and generates intergenerational poverty persistence.[90] The 2019 Global Multidimensional Poverty Index (MPI) developed by UNDP and the Oxford Poverty and Human Development Initiative (OPHI), which defines poverty based on 10 indicators in health, education and standard of living, categorised 41.7% of the population in Bangladesh as poor in 2016, much higher than the 24.3% based on expenditure, as estimated by BBS. The substantial gap between the two types of measures calls for reviewing the way social protection is designed and targeted.

[89] Ali, Z., Mujeri M.K. & Nessa A.B. (2014) *Extreme poverty and marginality in Bangladesh: Review of extreme poverty focused innovative programmes*. *ZEF Working Paper Series* No. 131.

[90] Nuruzzaman, A.K.M. (2019) *Poverty in Bangladesh: Where to focus and how?* *The Daily Star.* 18 October.

Promote a more inclusive growth

In 2018/19, GDP growth at 8.1% was the highest it has been since 2000 (Figure 12). Exports grew by 4.5% in 2018 and possibly 10.1% in 2019. Bangladesh is now amongst the world's top five producers of rice, jute, mango, vegetables and inland fish. Bangladeshi apparels exports grew because of a weaker taka; imposition of tariffs on Vietnamese apparel, Bangladesh's closest competitor, after the cancellation of the Trans-Pacific Partnership; and remedial measures taken by the industry in Bangladesh after the Rana Plaza disaster. Remittances grew by 9.8% in 2018/19, reaching a record USD 16.4 billion. Yet despite this auspicious economic situation, poverty declined slower than the pre-2010 rate. From 2010 to 2016, consumption growth for the poorest 40% was slower than for the whole population, while the reverse was true in previous periods.[91] Job creation was not on the scale required, and underemployment and informal sector work still characterised the labour market.[92] There needs to be a stronger investment for 'decent job' creation, providing low-income groups with marketable education and skills to share fully in economic growth. Bangladesh ranked 78th out of 82 countries in the Global Social Mobility Index.[93]

Combat growing inequality with adapted measures

In Bangladesh, inequality has been substantial and on the rise with a Gini income distribution of 48% in 2016 compared to 46% in 2010.[94] Inequality figures have not been computed for the year under review but this joint trend of record-breaking GDP growth with relatively limited poverty decline is likely to have translated in continued growth in income inequality as experienced since 2010. Tracking of the progress of the bottom 20% of the population compared with that of the total population (SDG target 10.1) – identified as 'shared prosperity' by the World Bank - shows that while growth in Bangladesh has not been equalizing by monetary indicators, it has, when using the Multidimensional Poverty Index: the bottom 40% are improving MPI attainments faster than the total population based on 2004 to 2014 data. Thus, no single measure is found to be sufficient to guide to policy measures and all contribute important and distinctive information for policy action.[95] Particular attention needs to be paid to equity, to ensure that all forms of policy, action and social protection support cover the poorest and most vulnerable, leaving no one behind.

Focus on urban poverty

The World Bank[96] estimates that 90% of the poverty decline in Bangladesh between 2010 and 2016 occurred in rural areas. Urban poverty reduction was relatively slow largely because of jobless growth in manufacturing, which also hampered female labour force participation. As things stand, more than half of Bangladesh's poor households will live in urban areas by 2030. Measures such as the 34% increase in the minimum salary of garment workers, up to BDT 8,000, in December 2018, are likely to help decrease the wealth gap.

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[91] World Bank (2019) *Bangladesh Poverty Assessment: Assessing progress from 2010 to 2016/17.* Washington, DC. International Bank for Reconstruction and Development/ World Bank.

[92] Khatun, F. & Saadat S.Y. (2018) *Towards a Social Protection Strategy for Bangladesh*. *Working Paper* 117. Dhaka. Centre for Policy Dialogue (CPD).

[93] World Economic Forum (2020) *Global Social Mobility Report 2020*. Switzerland.

[94] Chowdhury, M.N.M. & Hossain, M.M. (2019) *Poverty, Income Inequality and Growth in Bangladesh: Revisited Karl-MarxPoverty, Income Inequality and Growth in Bangladesh: Revisited Karl-Marx* *American Finance & Banking Review* 4(2). 1-10.

[95] UNDP, Oxford Poverty, Human Development Initiative (2019) *Global Multidimensional Poverty Index 2019 – Illuminating Inequalities*.

[96] World Bank (2019) *Bangladesh Poverty Assessment: Assessing progress from 2010 to 2016/17.* Washington, DC. International Bank for Reconstruction and Development/ World Bank.

Incentivise rural industry and services

Poverty reduction between 2010 and 2016 in rural areas was driven to a large extent by rural industry and rural services rather than agriculture, as the rural economy diversified.[97] Incentivising these economic sectors in local rural economies could contribute to further poverty declines and might also discourage rural-urban migration.

Consider the heterogeneity of the poor in designing anti-poverty measures

The poor are not a homogeneous group and require approaches suited to their different needs. In 2016, Sylhet's poverty incidence was 16.2% whereas Rangpur's was 47.3%.[98] In Dhaka division, the 10 poorest upazilas had a poverty incidence of 55% or higher, while the 10 richest upazilas had 4% or less. Pockets of poverty can be attributed to low connectivity with growth centres, political tensions, and ecological disadvantages.[99] Within households, women, children and the elderly are more likely to be poor, even when household per-capita expenditure is above the poverty line, so the poverty incidence might be almost double once intra-household inequality is accounted for.[100] At the same time, using the MPI, OPHI and UNDP[101] have found that child poverty has been falling faster than adult poverty. Context-specific cost-benefit analyses may be necessary to assess which programmes may best tackle poverty in terms of their effect and efficiency.

Improve the resilience to shocks and vulnerability to falling back into poverty

More than half of the population, despite being considered non-poor, is vulnerable to poverty, as their levels of consumption are close to the poverty threshold.[102] The COVID-19 pandemic showed that for many people, escape from poverty is still a fragile situation that can be reversed within days (see Box 4). Shocks affect the poor too, by making them even poorer and increasing their depth of poverty. Households can easily be pushed back into poverty by all manner of shocks, such as illness, accidents, job loss, floods, salinization, and land erosion. In particular, climate-related shocks in coastal areas are likely to drive substantial numbers of agricultural workers inland, pushing agricultural labour wages down and adding to the urban poor. UNESCAP[103] simulations show that with no disaster shocks, the projected extreme poverty rates will fall by 54% by 2030 against 33% if disaster shocks and their impacts go unmitigated (Figure 13). Measures are needed not only to help people over the poverty line but also to ensure they are resilient to shocks (see Programme IV.1).

IFPRI poverty analyses in Bangladesh found that education, savings, assets, non-farm employment, substantial safety net transfers, and women's empowerment are key factors for breaking persistent poverty; and savings, non-farm engagement, and substantial safety net transfers prevent households from falling into poverty. An IFPRI study found

[97] *Ibid.*

[98] *Ibid.*

[99] *Ibid.*

[100] Brown, C., Calvi, R. & Penglase, J. (2018) *Sharing the Pie: Undernutrition, Intra-Household Allocation, and Poverty*. October.

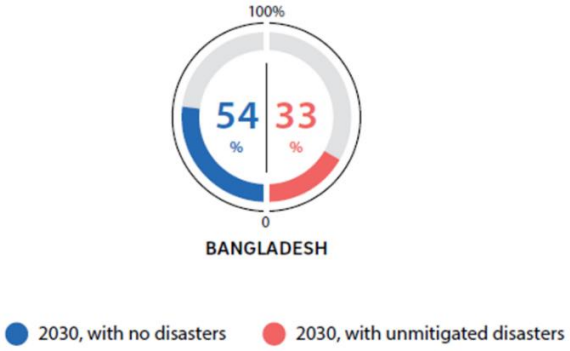
[101] UNDP, Oxford Poverty, Human Development Initiative (2019) *Global Multidimensional Poverty Index 2019 – Illuminating Inequalities*.

[102] World Bank (2019) *Bangladesh Poverty Assessment: Assessing progress from 2010 to 2016/17.* Washington, DC. International Bank for Reconstruction and Development/ World Bank.

[103] United Nations, Economic and Social Commission for Asia and the Pacific (ESCAP) (2020). *The Disaster Riskscape across South-East Asia: Key Takeaways for Stakeholders*. ST/ESCAP/2885.

a statistically significant reduction in persistent and transitory poverty only when a household receives a safety net transfer of at least Taka 1,500 per month, as of 2018, which may be considered for safety net programme designs.[104]

Figure 13 - Percent reduction in extreme poverty rates in Bangladesh in 2030 with and without disasters (baseline poverty rate=2016)



Source: United Nations, Economic and Social Commission for Asia and the Pacific (ESCAP) (2020). The Disaster Riskscape across South and South-West Asia: Key Takeaways for Stakeholders. ST/ESCAP/2879.
Calculations based a comparative static computable general equilibrium model (CGE) to project the impact of disaster shocks on poverty.

[104] Ahmed, A.U. & Tauseef, S. (2018) Climbing up the ladder and watching out for the fall: Poverty dynamics in rural Bangladesh. IFPRI Discussion Paper 1791. Washington, DC: International Food Policy Research Institute (IFPRI).

Box 4 - COVID-19 and social protection in Bangladesh

COVID-19 and its prolonged impact exacerbated pre-existing needs for social protection and created new ones, some predictable and some less so. Social protection needed to be upscaled in three dimensions: the headcount of beneficiaries (incidence of need), the amount of benefits (depth of need), and the duration of benefits (chronic-ness of need). The magnitude of need was unprecedented.

Earnings in the informal sector, involving over 52 million workers[a], largely vanished with the 'stay-at-home' order on 26 March.[b] Fewer than 13 million workers had a monthly salary they could depend on, and the remainder had daily or weekly wages, including many white collar and service sector workers.[c] Blue-collar workers, previously not poor, such as in the garments sector, were suddenly unpaid or laid off.[d] Urban migrants and overseas migrants were unable to send remittances, slashing the incomes of the poor and nearly-poor, and at least 10 million returned home thus increasing the rural dependency ratio.[e] Harvesting and transport bottlenecks led to losses for rural producers of perishable fruits, vegetables and dairy.[f] Within weeks, staple food prices increased by 20-30%, eroding the real value of salaries and savings. As household spending focused on staples, producers of meat, poultry and fish lost incomes.[g]

Private transfers to the needy sprang up, but were localised, and Bangladesh's usually vibrant NGO sector was itself hamstrung by the lockdown, especially in the first weeks.[h] The onus on the Government's social protection system was ever more vital, and as the lockdown persisted, poverty depth, as well as its incidence, increased. One rapid survey covering 2,675 respondents reported household income drops of 75%, and a poverty incidence of nearly 90% by early-April 2020.[i] The government swiftly promised cash and food transfers. Untargeted Open Market Sales from public rice stocks started quickly by 6 April at 10 taka per kg, a quarter of the market price, with an allocation of 0.74 MMT for three months of operations.[j] The GoB's foodgrain stock was 1.43 MMT on 31 December 2019[k], a significant reserve. The MoDRR and MoHFW, in consultation with a government-instituted Technical Committee, formulated essential food baskets that were calculated to meet the energy and protein requirements for emergency rations. Accordingly, as part of targeted safety net programmes, packages of fortified rice, rice flakes, lentils, molasses, fortified biscuits, and oil were distributed to bridge the nutrient gaps. This was complemented with nutrition messages to include eggs, animal source foods, fruits and vegetables for protein and micronutrients to help build/sustain immunity. The baskets and cash were rolled out to displaced/disaster affected groups, pregnant and lactating women and young children, and households affected by COVID-19. OMS was suspended on April 13 because of operational difficulties due to mass demand and the need for social distancing. The government switched to subsidised rice sales based on ration cards, increasing the number of cards from 5 to 10 million.[l]

A large telephone survey found that 14% of the urban poor and 5% of the rural poor had received Government assistance by mid-April, and that roughly as many asked for food transfers as cash transfers.[m] Broader access to safety net programmes was slow to appear. Even by mid-May, the expansion of coverage of cash transfers was still being developed; school-feeding was only just resumed; and Save the Children's telephone-survey found that 64% of poor rural and urban children reported their families were still facing significant food access problems and 87% had received no government support.[n]

Sources: a) BBS (2017) Quarterly Labour Force Survey 2015-16 estimated that 82% of male employment and 95% for female employment was in the informal sector; b) Prothom Alo (2020) *COVID-19 may Drive 5m to Poverty*. 15 April; Daily Star (2020) *Food relief should be distributed at the doorsteps*. 8 April; Islam, S.T. & Divadkar, Y.N. (2020) *How Bangladesh's leaders should respond to the economic threats of COVID-19* *World Economic Forum*, 13 Apr; c) BBS (2017) *Quarterly Labour Force Survey 2015-16*; d) Daily Star (2020) *370 RMG factories didn't pay workers*. 19 April; e) According to the National Telecom Monitoring Centre, after lockdown was announced on March 26, 10 million mobile phone subscribers left Dhaka, nearly half the city's population (Rashid, S. & Bin Khaled, N. (2020) *COVID-19 and public actions for the urban poor*. *The Financial Express.* 19 April); f) Wardad, Y. (2020) *Vegetable growers in dire straits*. *The Financial Express* April 18; Khan, N. (2020) *Eat vegetables, save farmers!.* *Daily Star* 19 April; g) FAO (2020) *Rapid Assessment on Potential Impact of COVID-19 Outbreak on Food and Agriculture System in Cox's Bazar*; Financial Express (2020) *Poultry and dairy need immediate succor*. 17 April; Wardad, Y. (2020) *Chicken, Eggs, Meat Hit 12-yr Low at Farm Level*. *The Financial Express*. 19 April; h) For example, the Red Cross Red Crescent started distribution of 41,000 food parcels in late-April, some four weeks after the nationwide lockdown (*COVID-19 Red Cross Red Crescent Situation Report* 1, dated 8 April 2020); i) BRAC (2020) *Rapid perception survey on COVID19 Awareness and Economic Impact; j)* Rashid, R. & Bin Khaled, N. (2020) *COVID-19 and public actions for the urban poor*. *The Financial Express*. 19 April; k) GoB (2020) *Bangladesh Food Situation Report 119: October - December 2019*. Ministry of Food; l) Daily Star (2020) *Don't despair, tackle crisis courageously*. 19 April; m) Rahman, Z.H. & Matin, I. (2020) *PPRC-BIGD Rapid Response Survey: Poverty Impact of COVID-19*. 16 April; n) Daily Star (2020) *Cash Aid to Poor: Govt initiative runs into snag over database*. 13 May; Daily Star (2020) *School Feeding Finally Resumes*. 13 May; Save the Children (2020) *Child Perception Survey on COVID19: Impact on Children*.

3.6 Progress towards Outcome V: Strengthened enabling environment and cross-cutting programmes for achieving food and nutrition security

Outcome V of the CIP2 comprises programmes to create an enabling environment for other Pillars; and programmes cutting across all Pillars and that have been singled out to ensure they are given adequate attention. The enabling programmes are: improving information and data for evidence-based monitoring and adjustment of policies and programmes; and strengthening FNS governance, capacity strengthening and leadership development across relevant stakeholders. The cross-cutting programmes are improving food safety, quality control and assurance, and awareness development on food safety and hygiene; and reducing food loss and waste.

3.6.1 Assessment of progress towards achieving Outcome V

Table 7 - Outcome V: Selected performance indicators

CIP2 outcome proxy indicators	2015/16 Baseline	2016/17	2017/18	2018/19	Target 2020	Source
GoB financial commitments to CIP2 (billion USD)	4.5R (30th June 2016)	6R (30th June 2017)	8.6R (30th June 2018	11.7 (30th June 2019)	9.03 billion USD 🟢	CIP2 Monitoring Report, FPMU
Establishment of high-level FNS focal points across core ministries	TT: 4 TWG: 8	TT: 4 TWG: 8	TT: 5 TWG: 5	TT: 5 TWG: 5	5 functioning teams 🟢	FPMU
Process of establishment of FNS focal points engaged in policy monitoring is ongoing through regular TT and TWG meetings	32 (8 groups met 4 times)	10 local consultations involving TWG and TT	30 (5 groups met 6 times)	30 (5 groups met 6 times)	30 interactions 🟢	FPMU
Annual high-level FNS policy reports produced	1	1	2	2	1 🟢	BNNC, CIP2, SUN annual reports

R: Revised

The colour indicator shows the progress achieved: target reached 🟢 ; on track 🟡 ; off track 🔴.

The GoB financial commitments to CIP2 substantially increased

GoB financial commitment stood at 11.7 billion USD with a 36% increase compared to a year earlier which compares with 43% and 33% yearly growth in 2017/18 and 2016/17. This sustained growth in GoB financial commitments allowed the 9 billion USD target to be reached.

High-level FNS focal points across core ministries continued to actively engage in policy monitoring

The five Thematic Teams (TTs) -one for each CIP2 Pillar- continued to be a platform for FNS policy discussion and essential data gathering, thereby supporting the CIP2 monitoring process and the drafting of the national food and nutrition security policy of Bangladesh. These teams have continued to meet regularly in 2018/19, providing technical and operational supports towards the production of the MR19. The Technical Working Groups (TWGs), originally established to assist FPMU in developing the CIP2 in 2016, also met in May 2019 in the last stages of the MR19 preparation to scrutinize the report and provide further inputs as necessary. As in 2017/18, in the year under review, the target number of interactions through TT and TWG meetings and workshops, 30, was achieved. This active engagement in the CIP2 monitoring process by these focal points located across the Government ensures effective communications among the FNS stakeholders.

High-level FNS policy reports continue to be regularly produced

The official publication of the CIP2 at the beginning of 2018/19 was followed by the production of the first Monitoring Report of CIP2 (MR19) in June 2019. The CIP monitoring exercise has now become an established process that mobilises FPMU and the TTs for six months every year, starting from December, with an inception workshop where a roadmap towards the production of the report is finalized, , monthly meetings with the TTs, and ending in June with its launch after the Food Minister's endorsement. This unique process is a shining example of fruitful coordination between 19 ministries/agencies towards coordinated nutrition-sensitive actions to improve nutritional outcomes. The CIP2 results framework, with a total of 109 indicators at goal, outcome and output levels, brings together a wealth of information on the country's FNS status and progress towards SDGs that relies on arduous efforts by FPMU and the TTs to obtain yearly official data and information to monitor the evolution compared to baseline and previous years. The CIP2 monitoring process and methodology are now being successfully replicated and followed in the Bangladesh National Nutrition Council (BNNC) for monitoring the NPAN2 report, demonstrating a good example of cross-fertilisation of policy monitoring practices. Monitoring the degree of completion and implementation of the CIP2 financial objectives also requires the cooperation of different government agencies as well as development partners to check and complement the information provided in the IMED Annual Performance Monitoring Report of the Annual Development Programme (ADP) programme.

3.6.2 Policy challenges and recommendations for further actions

Institutionalise FNS capacity strengthening to respond to an ever-changing policy landscape

Several policy-level documents were prepared and disseminated in the year under review such as the Climate Smart Agriculture Investment Plan (CSAIP) in December 2019 which includes the Bangladesh Delta Plan 2100[105] (see Outcome I), where the reduction of food loss and waste and assurance of quality and safety of agro-produce, including livestock and fisheries, have been identified as priority investment areas. The drafting of the National Food and Nutrition Security Policy of Bangladesh (NFNSP) was initiated. The formulation of the Eighth Five Year Plan (2020-2025) also began. The Bangladesh Food Safety Authority (BFSA) produced two important regulations: Food Safety (Food Contact Materials) Regulations 2019[106] and Food Safety (Food Hygiene) Regulations 2018[107] promulgated under the Food Safety Act 2013. The National Agriculture Policy 2018 (NAP 2018) was published in August 2018 with the clear aim of making agriculture safe and profitable achieving sustainable FNS with among others, particular emphasis on the reduction of postharvest loss, agro-processing activities and extension of postharvest technology to end-users. Nutrition-sensitive guidelines for use in the implementation of this policy were prepared by a technical committee of nutrition, agriculture and health experts under the leadership of the Additional Secretary, MoA in February 2020. Finally, the Export Policy Order 2018-2021[108] was approved in November 2018, with clear directions about the adoption of good practices to produce and export safe food.

FPMU, as well as all the ministries and government agencies that contribute to the production of FNS-related policy documents and their monitoring, require constant updating of their capacities, especially in light of the continually evolving policy landscape. New challenges to the achievement of FNS also keep emerging such as those associated with the effects of COVID-19 pandemic, the climate change impacts or

[105] GoB (2018) *Bangladesh Delta Plan 2100- Baseline Studies: Volume 4- Agriculture Food Security and Nutrition.* Eds. Alam, S., de Heer, J. & Choudhury, G. Dhaka. General Economic Division. Bangladesh Planning Commission.

[106] Bangladesh Food Safety Authority (2019) *Food Safety (Food Contact Materials) Regulation 2018.* In Bangla.

[107] Bangladesh Food Safety Authority (2018) *Food Safety (Food Hygiene) Regulation 2018.* In Bangla.

[108] GoB (2018) *Export Policy 2018-2021.* Dhaka. Ministry of Commerce.

with the displaced Rohingya population crisis. This calls for appropriate and versatile capacities to handle analyses of changes, for example in the results and budget of the five Pillars of the CIP2. For FPMU in particular, capacities to flexibly coordinate, plan, communicate and lead need to be able to provide operational and secretarial support to the many institutions (FPWGs, NC, FPMC) involved in the production and monitoring of the CIP2. The fact that the CIP2 is about nutrition-sensitive food systems means that it includes projects that are often implemented by ministries not traditionally associated with FNS. For example, the Local Government Engineering Department (LGED) under the Ministry of Local Government, Rural Development and Co-operatives is heavily involved in the CIP2 through nutrition-supportive projects to develop and maintain roads, which give access to markets to both producers and consumers: 14.9% of the nutrition-weighted CIP2 budget is thus dedicated to rural roads, bridges and culverts. The role of TT members from such ministries is paramount and they must be fully equipped to undertake their duties as TT members with adapted analytical skills. To this effect, Programme V.4. (Improved FNS governance, capacity strengthening and leadership across FNS relevant stakeholders) is essential to create the enabling environment required to implement and monitor the CIP2. Achieving FNS is a long-term endeavour for which the training that is needed to strengthen, upkeep, and adapt the capacities that are needed by FPMU, the TTs and TWGs should thus be institutionalised, rather than rely on projects.

Translate government and development partners' political commitment into concrete actions

The implementation of the CIP2 involves a number of stakeholders. The many GoB agencies contributing to the country's FNS are brought together through the institutional setup put in place to monitor and implement the CIP2 in the form of the TTs, TWGs and the FPWG. But while, as described above, the mechanism by which they meet regularly and organize their work is now well established, there is room for improvement. The continuous turnover in TT members due to regular officials' transfers means that institutional memory of the MR process and methodology is limited. Yet, experience has shown that members who have worked as TT members for several MR cycles can contribute much more efficiently. This allows their capacities to be built both through learning-by-doing but also through more traditional means i.e. short term/long term training in Bangladesh or abroad. The role of DPs is also crucial in implementing the CIP2 given their participation in project funding. Their continued engagement in the monitoring process is essential to ensure that ongoing and future investments are steered towards the prioritised needs of the country. For this, DPs must provide timely information on investments and share experiences of outcomes of projects.

Encourage non-state actors to participate in FNS-related policy and strategy development

The achievement of the CIP2 goal and SDG 2 requires contributions from all the food system's stakeholders – from Civil Society Organisations (CSOs) to academia and the private sector- and for this, an enabling environment needs to be created. Dialogue between these entities and the Government needs to be encouraged, and their participation in the development of regulations, national strategies and policies promoted, so that different perspectives, needs and constraints are taken into account. Coordination among the different actors will also help avoid duplications, help share resources including information and expertise, and exploit potential synergies. Creating an environment that enables the participation of all food system actors is required which also includes building capacities of those actors based on their profile and actual needs (see Outcome II).

Acknowledge and help enhance the role of the private sector in achieving FNS

The private sector is often referred to as the 'silver bullet' to finance Agenda 2030.[109] The private sector handles all trade of agricultural commodities and food -except for the government's Public Food Distribution System (PFDS)[110]- as well as the majority of its processing and marketing. Despite increasing recognition of the benefits of a more diverse diet for nutrition, the approach for private sector investments largely emphasizes the availability of food aspect of food security, putting less emphasis on improving people's access to a diverse diet.[111] The government needs to use the instruments it has on hands, such as incentives and regulations, to guide and mobilise them toward responsible investments for improving diets and nutrition of the poor. This needs to happen within a strong and well-regulated public policy framework that can guarantee clear development added value and ensure that investments are in line with development objectives. The operationalisation of a private umbrella that can bring together the multitude of private actors is also needed, hence the importance of associations such as the Federation of Bangladesh Chambers of Commerce and Industries, the Metropolitan Chamber of Commerce & Industry, Dhaka, and the Dhaka Chamber of Commerce and Industry.

[109] Global Health Advocates (2018) *Ending malnutrition: what role for the private sector? From prevention to treatment*

[110] de Brauw, A. , Waid, J. , Meisner, C. A., Akter, F. , Khan, B. F., Bhattacharjee, L., Alam, Md. N., Sultana, S., Uddin, Md. N., Himel, F.B., Byrd, K., Bari, M. L., Chowdhury, S., Thilsted, S. & Khondker, R. (2020) *Food systems for healthier diets in Bangladesh: Towards a research agenda*. *IFPRI Discussion Paper*. Volume 1902.

[111] IPES-Food (2016) *From uniformity to diversity: a paradigm shift from industrial agriculture to diversified agroecological systems*. International Panel of Experts on Sustainable Food systems.

4. Progress towards Outputs for Outcome I

4.1 Programme I.1. Sustainable and diversified agriculture through integrated research & extension

Programme I.1 includes projects dealing with the sustainable production of both crop and non-crop based high value, diversified and nutritious food. It comprises three sub-programmes: research and technology development for nutrition-sensitive agriculture; development of technologies for climate change adaptation; and nutrition-sensitive extension programmes.

4.1.1 Progress towards achievements of Programme I.1

Table 8 - Progress towards achievement of Programme I.1

CIP2 output proxy indicators	Commodity / Item	2015/16 Baseline	2016/17	2017/18	2018/19	Source
Annual change in major crops' production	Rice	0.0%	-2.6%	7.3%	0.3%	BBS (Statistical Yearbook)
	Wheat	0.0%	-2.7%	0.0%	-7.5%	
	Maize	7.6%	23.7%	8.7%	8.6%	
	Potato	2.4%	7.8%	0.1%	-0.9%	
	Pulses	-0.2%	2.3%	0.7%	-0.5%	
	Brinjal	5.5%	6.9%	1.7%	2.8%	
	Pumpkin	4.5%	1.3%	2.9%	2.6%	
	Beans	5.4%	6.9%	-1.9%	6.8%	
	Lal Shak	3.0%	4.0%	10.0%	12.8%	
	Edible Oilseeds	1.8%	1.2%	-1.4%	-6.0%	
	Banana	2.6%	1.1%	0.4%	2.8%	
	Guava	3.8%	7.0%	5.3%	-1.9%	
	Mango	14.1%	10.9%	-9.5%	4.6%	
	Pineapple	1.6%	5.5%	-1.6%	4.3%	
	Jackfruit	-2.8%	1.8%	2.4%	-3.5%	
	Tomatoes	-11.1%	5.6%	-0.9%	0.7%	
	Carrots	10.8%	4.0%	14.5%	3.1%	
	Lemon	-5.5%	6.0%	-3.0%	0.0%	
	Sweet potato	1.7%	1.3%	-6.0%	-4.4%	
Number of improved new varieties released	Rice	10	6	11	8	BRRI, BINA, MoA
	Wheat	0	3	1	1	BARI & BINA, MoA
	Maize	2	2	1	0	
	Potato	10	6	2	2	
	Pulses	6	5	4	1	
	Vegetables	7	8	5	10	
	Edible Oilseeds	2	1	2	3	
	Fruits	1	5	4	4	
% of agriculture budget allocated to agricultural research		4.2%	6.3%	6.4%	4.2%	NARS
Direct gender budgeting as % of MoA revised budget		3.90%	4.98%	0.73%	3.35%	MoF
Production of seeds tolerant (MT)	Drought	1,623	3,504	2,649	4,130	MoA APA Indicator 2.5
	Submergence	7,730	12,110	12,624	15,010	
	Salinity	7,524	6,792	6,177	7,090	
Number of farmers trained on sustainable agriculture practices by DAE		1,577,000	1,545,000	1,630,000	1,810,000	DAE, MOA
Number of institutions delivering nutrition training across core ministries		5	5	5	5	BIRTAN, IPHN, BIRDEM, BARC, DAE

The production of different crops showed mixed trends

Rice production grew year-on-year only marginally in 2018/19 (+0.3%) in contrast to the record witnessed in the previous year (+7.3%), but only slightly higher than in base year (2015/16). The production of maize continued rising at a similar rate: 8.6%. Concurrently, the production of wheat significantly declined, by 7.5%, confirming a negative trend over the reference period due to recurrent wheat blasts since February 2016, unfavourable weather and consequent reduced yields.[112] (Table 8). The average growth of maize since the start of the CIP2 (2015/16 – 2018/19) was distinctively higher than in the period corresponding to the CIP1 (2007/08 - 2014/15) (Table 9). These trends suggest that maize is gradually replacing wheat which is explained by its higher yield, profitability and adaptability to Bangladesh's ecosystems.[113,114]

Consistently with these production trends, the area under maize cultivation continued increasing, while for wheat, it reduced over the reference period (Table 10). Potato and pulses' production decelerated slightly, while that of oilseeds and sweet potato considerably declined by 6% and 4.4% respectively, in 2018/19 year-on-year - reinforcing the negative trend of the previous year. The areas under cultivation of oilseeds, pulses and sugarcane have been reducing since the start of the CIP2 which may be explained by the rapid expansion in the cereal production.[115] The decline in production of pulses and oilseeds represents a worrying signal given their importance as a source of protein and micronutrients and will have an adverse impact on micronutrient intake, especially for the poor.

Table 9 - Average crop production growth rates

Crops	2007/08-2014/15 (%)	2015/16-18/19 (%)
Rice	2.31*	2.14
Wheat	7.96*	-9.72*
Maize	10.69*	12.95*
Potato	6.37*	0.10
Pulses	8.53*	0.73
Brinjal	3.44*	3.56*
Pumpkin	4.20*	2.29*
Beans	4.81*	3.20*
Lal shak	2.02*	8.86*
Oilseeds	5.87*	-2.03
Banana	-1.78*	1.33*
Guava	4.50*	3.68
Mango	3.67*	0.50
Pineapple	-2.37*	2.59
Jackfruit	0.70	0.45

*Significant at 10% level

Table 10 - Average crop area growth rates

Crops	2007/08-2014/15 (%)	2015/16-18/19 (%)
Rice	0.70*	0.90
Wheat	1.82*	-1.05*
Maize	10.30*	9.20*
Oilseeds	3.05*	-4.11
Spices	4.81*	-4.88
Pulses	8.22*	-2.18*
Potato	2.22*	-0.90
Sugarcane	-3.05*	-4.88*
Fruits	-1.88*	49.33*
Vegetables	0.70	2.94
Jute	8.44*	1.51

*Significant at 10% level

The production of vegetables reported in Table 8 rose in the year under review, in particular that of *lal shak* (+12.8%). Fruit production, except for jackfruit and guava, also accelerated, especially mango and pineapple which both bounced back up after a negative figure in 2017/18.

The production growth rate of all selected vegetables continued to grow on average over the period since the beginning of the CIP2 compared to the CIP1 period. For fruits, however, only the production of bananas witnessed significant

[112] Mottaleb, K.A., Singh P.K., He X., Hossain A., Kruseman G. & Erenstein O. (2019) *Alternative use of wheat land to implement a potential wheat holiday as wheat blast control: In search of feasible crops in Bangladesh*. *Land Use Policy.* Volume 82. March. 1-12.

[113] Islam, Md. S., Abid-Ul-Kabir, Md., Chakraborty, B. & Hossain, M. (2017) *Review of Agri-Food Chain Interventions Aimed at Enhancing Consumption of Nutritious Food by the Poor: Bangladesh*. *LANSA Working Paper Series*, Volume 2017 No 12.

[114] Lightcastle Analytics Wing (2019) *Bangladesh Wheat Sector: Struggling with Demand-Supply Mismatch*.

[115] *Ibid.*

growth. Others exhibited non-significant growth rates, meaning that their production either remained essentially unchanged or widely fluctuated. In terms of areas under cultivation, the amount of land dedicated to fruit grew yearly, on average, at a considerable rate since the beginning of the CIP2 (+49.33%), in contrast to the slight decline witnessed during the CIP1 period (-1.88%).

Production of most crops in the following seasons will most likely be affected by the COVID-19 crisis through disruption of normal planting, cultivating and harvesting activities during the extended lockdown, and the difficulties encountered in procuring inputs as required, although these effects will be mitigated by the measures promptly taken by the GoB to sustain food production. At the time of writing this report, five billion BDT had been announced to support agriculture.[116]

The release of new vegetables and oilseeds varieties accelerated

A total of eight new rice varieties were released in 2018/19, five of which by the Bangladesh Rice Research Institute (BRRI), two by the Bangladesh Institute of Nuclear Agriculture (BINA) and one by Rajshahi University. This number compares to 11 rice varieties released in 2017/18 and six in 2016/17. BRRI's new varieties are: *BRRI dhan 88, 89, 90, 91* (submergence-tolerant) and *92*. The varieties released from BINA are: *BINA dhan 21* and *22* (saline- and submergence-tolerant). Additionally, Rajshahi University released one variety named *Rabi dhan* 1. Since the beginning of the CIP2, a total of 35 new rice varieties have been released. As of 30th June 2019, and since its inception, BRRI released 97 new varieties (91 inbred and six hybrid). By the first quarter of the following financial year, the seed certification agency had already approved five new varieties, namely *BIRRI dhan 93, 94* and *95*; *BINA dhan 23;* and *BAU 3*, which looks promising for 2019/20.

In 2018/19, the Bangladesh Agricultural Research Institute (BARI) released 18 new improved crop varieties: two for potato, one for pulse, 10 for vegetables, one for edible oilseeds and four for fruits; BINA released two new varieties of edible oilseeds. Furthermore, the Bangladesh Wheat and Maize Research Institute established in 2017, released one wheat variety named *WMRI gom 1*. Research activities for edible oilseeds and vegetables accelerated and 13 new varieties were released from this group, almost double the seven released in 2017/18. The release of vegetable varieties doubled up to 10 in the year under review. Overall, 21 improved non-rice new varieties were released in 2018/19 against 19 in 2017/18, 30 in 2016/17 and 28 in 2015/16.

While no new zinc enriched rice varieties were produced in 2018/19, biofortification of rice with zinc is being promoted (Box 5).

Box 5 - Development and promotion of zinc-biofortified rice

Zinc-biofortified rice varieties are key to improving zinc intake by young children. Their consumption can contribute to reducing instances of diarrhoea, pneumonia and other childhood and pregnancy infections which is pivotal in ensuring normal human growth and development. HarvestPlus, together with BRRI and IRRI have worked to release seven zinc-biofortified rice varieties so far, with high yield and beneficial agronomic characteristics. Over 30 partners from the public, private and civil society sectors, including the DAE, BRRI, Bangladesh Agricultural University, local and international NGOs have contributed to the promotion of this rice, and have helped deliver the seeds of four zinc rice varieties to almost half a million farming households across 62 of the 64 districts in the country. As of November 2018, the total number of zinc rice growing and consuming households reached about 1.5 million with 120,000 bags of seeds distributed annually. PRAN, the largest food distribution company in Bangladesh, agreed to purchase zinc rice directly from farmers in northern Bangladesh and following a pilot, entered into a formal partnership with HarvestPlus to expand the project to 120,000 farmers and to sell zinc rice through their distribution.

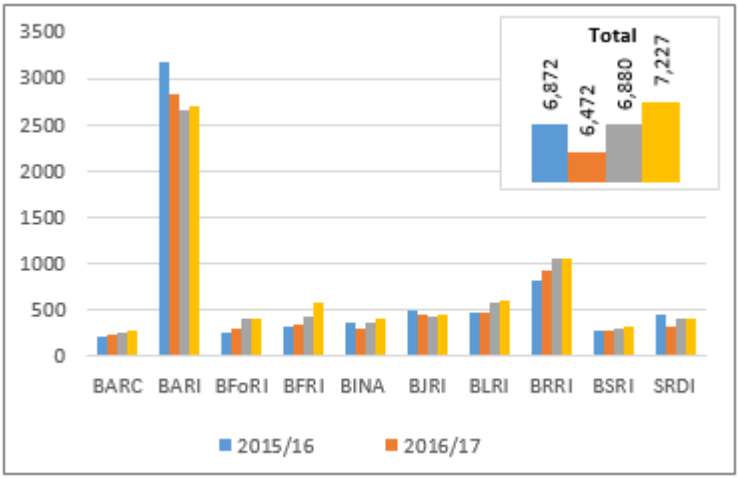
Source: Harvestplus

[116] BBSnews.net (2020) *PM announces Tk 5,000cr package for agriculture over COVID-19*. 28 April.

The share of agricultural budget allocated to research institutes declined

The budget for agricultural research as a share of total agriculture budget dropped significantly to 4.22% in 2018/19 from 6.41% in the previous year, returning to its 2015/16 level. However, the annual budget of all research institutes rose in the year under review -BARC by 15%, BARI by 1%, BINA by 16%, BJRI by 4%, BRRI by 1%, BSRI by 6%, SRDI by 2%, BFRI by 34%, BLRI by 1% and BFoRI by 1%- except for the two largest crop research institutes, BARI and BRRI, whose budget remained unchanged (Figure 14). Since the onset of the CIP2 in 2015/16, the budgets of following institutes rose: BARC (+32%), BRRI (+31%), BINA (+16%), BSRI (+11%), BFRI (+75%), BLRI (+25%) and BFoRI (+68%). For the rest, it declined: BARI (-15%), BJRI (-11%) and SRDI (-10%). The total budget of these institutions rose by 5%.

Figure 14 - NARS institutions' annual budget (Million BDT)



Source: Data from Ministry of Finance

The share of gender budget in the total MoA budget substantially improved

Gender budgeting, or gender-responsive budgeting, promotes gender equity by allocating specific budgets to women and men beneficiaries in projects/programmes. Bangladesh ranked 48 in the Global Gender Gap Report 2018, leading by far the South Asian region where other countries' rank is beyond one hundred. The share of direct gender budget in the total MoA revised budget substantially increased to 3.35% in 2018/19 from 0.73% only in 2017/18 as direct gender budget shot up to BDT 4,290 million from BDT 750 million. Thus, several activities specifically targeted at recognizing and enhancing the role of women in agriculture was undertaken in the year under review. For example, credit facilities were provided to female farmers under the *Second Crop Diversification Project*. Concurrently, these beneficiaries were trained on how to manage their loan and become entrepreneurs. Under this same project, community groups were created comprising at least 30% of women and given the training to understand issues such as the functioning of commodity prices, to facilitate the marketing of their agricultural produce. The Department of Agricultural Extension (DAE) also trained over 300,000 women in technology of crop production, comprehensive pest management, post-harvest preservation and management of crops and marketing.[117]

The production of stress-tolerant seed accelerated

The increased frequency and erratic nature of crop submergence, saltwater intrusion and drought events are major causes of crop failure, consequent income volatility and persistent poverty among the small and marginal farmers in Bangladesh. Recent research findings from a field study[118] revealed that on average, a 1% increase in drought-affected area reduces *aman* and *aus* annual rice production per household by 1,382 and 693 kgs, respectively. To avoid this, submergence, drought-tolerant and short

[117] GoB (2020) *Budget 2020.* Dhaka. Ministry of Finance.

[118] Mottaleb, K.A., Gumma, M.K., Mishra, A.K. & Mohanty, S. (2015) *Quantifying production losses due to drought and submergence of rainfed rice at the household level using remotely sensed MODIS data*. *Agricultural Systems*. Vol. 137.

duration rice varieties must be developed and disseminated.[119] In 2018/19, the production of stress-tolerant seeds rose, by 56% for drought tolerant, 19% for submergence-tolerance and by 15% for salinity-tolerant seeds. In 2018/19, DAE successfully popularized the cultivation of saline-tolerant rice varieties (*BRRI dhan 47, 53, 61, BINA dhan 8,* and *10*) in the coastal area; of submergence-tolerant varieties (*BRRI dhan 51, 52*) in flood-prone areas; and of drought-tolerant varieties (*BRRI dhan 33, 39, 56, 57* and *BINA dhan 7*) in drought-prone areas. Moreover, wheat yields increased thanks to the expansion of heat-tolerant varieties (*BARI gom 26, 27, 28,* and *30*) and saline-tolerant varieties (*BARI gom 25*) by DAE.[120]

The number of farmers trained on sustainable agricultural practices continued to grow

The operations of DAE - the largest provider of extension services - spreads over all 64 districts of Bangladesh. In 2018/19, farmers trained by this agency on sustainable practices rose for the third year in a row, by 11% to 1,81 million individuals from 1,63 million in the previous financial year. It also trained 0.78 million farmers on modern technologies, of which 28% were female.[121]

The number of institutions delivering nutrition-related training remained unchanged

There have been no additions to the number of institutions across ministries delivering nutrition-related training since the beginning of the CIP2. They are the Bangladesh Institute on Research and Training on Applied Nutrition (BIRTAN), the Bangladesh Agricultural Research Council (BARC) and DAE, under the MoA; and IPHN and the Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders (BIRDEM), under the Ministry of Health and Family Welfare (MoHFW).

4.1.2 Policy development, programmes and initiatives underway

Programme I.1 had a total cumulative budget of 676.5 million USD over the CIP2 period, corresponding to 4% of total CIP2 budget in 2018/19, of which 573.7 million USD (85%) was financed as of 30th June 2019. When 75% nutrition weight is applied to projects included in this programme, its budget is 507.4 million USD. The programme's budget dropped by 8% from the baseline. This was due to a strong reduction in the financial gap which did not fully translate into financed projects. However, when factoring in the 472 million USD of the programme's budget falling beyond the CIP2 period, the budget gap is more than offset. Seventy percent of the financed budget is from the GoB, with this share reduced to 59% in the post-CIP2 period.

Providing incentives for expanding *aus* rice cultivation

To counter the shift by farmers from *aus* rice cultivation to high yielding irrigated *boro* cultivation, the GoB has launched an incentive programme to revive *aus* rice cultivation. In doing so, it wants to minimize farmers' dependency on underground water thus arresting the fall in the water level in the aquifer since *aus* rice requires less irrigation. There are encouraging results with evidence of improved cropping intensity as well as profitability and productivity of *aus* rice through this programme.[122] In 2018/19, BDT 375.5 million was distributed to 429 thousand farmers as an incentive to cultivate *aus* paddy in kharif-1 season.[123] The GoB has recently announced that it will provide seed and input support to farmers producing rice in the *aus* season in 2019/20. This BDT 41.8 million (USD 0.5 million) support package is expected to benefit close to half a million farmers across the country. Each farmer will receive a sum

[119] *Ibid.*

[120] DAE (2019) *Annual report 2018/19.* In Bangla.

[121] *Ibid.*

[122] Uddin, T.M. & A.R. Dhar (2018) *Government input on Aus rice production in Bangladesh: impact on farmers' food security and poverty situation*. *Agriculture and Food Security 7:14.*

[123] GoB (2019) *Ministry of Agriculture Annual Report 2018/19*. Dhaka. Ministry of Agriculture.

enabling him/her to buy five kilograms of seeds, 15 kg of DAP (diammonium phosphate) fertiliser, 10 kg of MoP (muriate of potash) fertiliser, BDT 90 for transportation, and BDT 20 for incidental expenses, for a maximum of 0.33 acre (one bigha) of land. It is estimated that this incentive will lead to the production of 156,452 MT of rice.[124]

New agriculture extension policy drafted for approval

The final draft of the National Agricultural Extension Policy, prepared in 2018, is now waiting for approval. This policy aims to ensure the production of safe, nutritious and profitable crops through providing demand-based technology and information services to the farmers and entrepreneurs. This policy endeavours to provide integrated agricultural extension service of DAE, Department of Fisheries, Department of Livestock and Department of Forestry under one umbrella through a 'National Agriculture Extension System (NAES)'. Some of the strategies included in this document are to develop a decentralised response mechanism to region-wise demand for extension services. The different characteristics of farmers should also determine the type of extension response. Innovations such as e-agriculture and the use of agricultural input assistance card will also be promoted.

Project launched to strengthen capacity to fight fall armyworm

Fall armyworm is a fast-reproducing species that devastates crops. While the level of infestation in Bangladesh is still relatively minor, more than 80 varieties of crops have already been attacked in 22 districts within just a few months.[125] This pest's preferred host is maize whose acreage, as seen above, is fast expanding. It is in this context that the *Fighting Back Against Fall Armyworm Project* which is supported by USAID and the University of Michigan has been launched[126], to train and support agricultural professionals on fall armyworm management strategies. As part of the project, the spread of the pest was mapped. The project engages members of the private sector including pesticide and seed companies, as well as agricultural dealers to ensure they are able to best advise farmers and suggest sustainable and long-term solutions. The project has advised over 755 agricultural dealers operating in impacted areas of Bangladesh, with another 1,000 being trained in January 2020.

New ways to disseminate nutrition-sensitive agricultural technology innovations

New ways to convey information on new agricultural technologies and nutrition to farmers are being explored. For example, in April 2019, *Farming Future Bangladesh (FFB)*, with technical assistance from the Islamic Foundation, organized a training of trainers session on agricultural innovations and their applications of agri-biotechnology for sustainable food security for imams.[127] Because religious leaders are powerful influencers, their role in social mobilisation can be very effective.

Expansion and popularisation of floating agriculture

As part of its climate change adaptation, the GoB is promoting the expansion of floating agriculture, and various NGOs have set up projects to this end. The floating garden hydroponics system was recognized in December 2014 by FAO as a Globally Important Agricultural Heritage System (GIAHS) for innovation, sustainability, and adaptability. BARI assists farmers in cultivating vegetables in abandoned ponds and water bodies to make floating beds. Fertilisers and pesticides are not needed with this method which lowers production costs and increases profit since organic produce is sold to consumers at a higher price.

[124] USDA (2019) *Gain report- Bangladesh Grain and Feed Annual 2019.* BG 1903. USDA Foreign Agricultural Service.

[125] CIMMYT (2019) *Bangladesh increases efforts to fight fall armyworm.* 30 May.

[126] CIMMYT (2020) *New project strengthens capacity to fight fall armyworm in Bangladesh.* 22 January.

[127] Dhaka Tribune (2019) *Imams can play role in disseminating agricultural innovations.* 27 April.

The jointly implemented by DAE and BARI *Research, Extension and Popularization of Vegetables and Spices Cultivation on Floating Beds Project* has been developing and disseminating floating bed agricultural technologies.[128] In 2018/19, the GoB distributed BDT 10.72 million to 4,105 farmers in 46 districts as incentive under seed distribution, preparation of floating seedbeds and harvesting and distribution of seedlings programmes during the *aman* season.[129] Despite some limitations and challenges, floating gardening and subsequent winter vegetable cultivation have been useful for improving nutritional security and household income.[130]

4.1.3 Needs for further actions under this programme

Exploit all-year-round production of fruits for nutritional improvement

Bangladesh, with its diverse soils, provides an ample opportunity to grow a variety of fruits throughout the entire year. To promote this, since 2014, DAE has been implementing the *Year-Round Fruit Production for Nutrition Improvement* project. Its objective is to make chemical-free and safe fruits available all year round so that the nutritional demands of the population are met. Since the inception of the project, more than one lakh farmers have been given training on fruit cultivation through the horticulture centres. In addition, 21-22 lakh fruit trees were planted across the country during the period. Following the launch of the project, various fruits have become available most of the year. The cultivation of nutritious varieties such as dragon fruit, avocado, pomelo, watermelon, muskmelon, Burmese grapes or *lotkon*, jujube, hog plum, and Indian gooseberry or *amlaki* has largely increased in the last five years. These fruit trees are suitable socio-ecologically and nutritionally important. Sufficient daily intake of fruit[131] can potentially help alleviate micronutrient deficiencies and reduce the risks of a number of associated diseases. DAE is now planning to help to produce mango round the year and expand the production of persimmon and high-yielding oranges. It is important that this initiative continues but also, that measures are taken to ensure that these newly produced fruits are kept free from chemicals during and after production.

Speed up the establishment of farmer service centres at the union level

DAE is setting up *Farmer Service Centres* at union level to provide agricultural services for farmers under the pilot project *Farmer Service Centre and Transfer of Technology* in 24 unions of 21 districts. This facilitates farmers' access to such services as these were previously only available at upazila headquarters' level. The centres will also provide farmers with modern agricultural technological services. The establishment of such centres needs to be rolled out to all unions of the country so that all farmers can benefit from them.

Promote and expand crop insurance programme

In its latest Budget Speech, the GoB announced the introduction of crop insurance to save farmers from the financial losses caused by natural calamities.[132] In 2014, the testing of a Weather Index-Based Crop Insurance (WIBCI) through a pilot project implemented by the State-owned Shadharan Bima Corporation began. In 2015, the IFC, Green Delta Insurance and Business Finance for the Poor in Bangladesh (BFPB) also started a pilot project aimed at assessing the viability of WIBCI products.[133] The project has covered

[128] GoB (2019) *Ministry of Agriculture Annual Report 2018/19.* Dhaka. Ministry of Agriculture.

[129] *Ibid*.

[130] Irfanullah, Md. H., Azad, Md. A.K., Kamruzzaman K. A.K.M., & Ahsanul, Md. W. (2011) *Floating Gardening in Bangladesh: A means to rebuild lives after devastating flood* *Indian journal of traditional knowledge* 10(1):31-38.

[131] 100g/day.

[132] GoB (2019) *Budget speech 2019/20.* Dhaka. Ministry of Finance.

[133] Ahmed, W. (2019) *Crop insurance for farmers*. *The Financial Express.* 14 May.

so far more than 15,000 farmers who possess 5,000 acres of land and 3,200 farmers settled claims to date which amounted to 40% of the premium.[134] The Asian Development Bank (ADB) has also piloted WIBCI for rice farmers in three areas of Bangladesh, including drought-prone Rajshahi. Because of the substantial financial exposure associated with correlated losses, the limited experience of insurers in this field and the lack of access to reinsurance on competitive terms, the feasibility of expanding agriculture insurance is still uncertain. Public-private partnerships could offer a workable format for scaling up.[135] Investments in weather forecasting and early warning system is vital for the development of risk financing products. Bundling agricultural insurance with farm credit and farm inputs should be considered to protect farmers in the event of crop failure. It will also help to stabilise farm incomes by restoring the credit eligibility of any given farmer for the following season.

Involve the private sector to increase resilience to the effects of climate change

The private sector can play a key role in increasing resilience to the effects of climate change. For example, the U.S. State Department-funded *Private Investment for Enhanced Resilience (PIER) Project* which is to last until 2020 creates pathways for private sector investment to strengthen resilience to climate change by demonstrating viable resilience investment opportunities. Examples of this include developing enabling legal frameworks; conducting a cost-benefit analysis for resilience investments in climate-vulnerable commodities; mainstreaming climate risk considerations into decision-making in local financial institutions; and promoting increased investment in resilience solutions in sectors such as agriculture, watershed protection, and insurance. Lessons from this project may inform government strategies to try and involve the private sector in building the resilience of the agriculture sector.

[134] Rashid, M. (2019) *Implementing crop insurance*. *Daily Sun.* 29 May.

[135] Chatterjee, A.K. (2019) *The state of crop insurance in Bangladesh*. *The Financial Express.* 30 August.

4.2 Programme I.2. Improved access, quality and management of crop agricultural inputs, including water and land

Programme I.2 covers the utilisation of productive inputs, including land and water, more sustainably and efficiently, in the context of an increasing demand of those productive inputs It consists of four sub-programmes on: quality inputs (seeds, fertilisers and pesticides); land fertility and land rights; surface water; and saline water intrusion.

4.2.1 Progress towards achievements

Table 11 - Progress towards achievement of Programme I.2

CIP2 output proxy indicators	Commodity /Item	2015/16 Baseline	2016/17	2017/18	2018/19	Source
Annual change in improved rice, wheat and maize seeds production		-0.3%	15.6%	10.1%	-1.0%	MoA
Improved seeds supply (BADC, DAE & private companies) as % of agronomic requirements	Rice	41.5%	57.2%	60.8%	52.0%	MoA
	Wheat	58.2%	37.5%	53.7%	61.5%	
	Maize	27.1%	92.2%	97.1%	70.2%	
	Potato	7.7%	11.8%	13.1%	16.3%	
	Pulses	10.9%	6.5%	10.5%	10.4%	
	Vegetables	50.7%	83.1%	84.1%	60.9%	
	Edible Oilseeds	13.4%	15.5%	16.3%	8.4%	
Number of soil samples analysed at upazila and union levels		17,200	18,200	18,500	18,850	
Increased arable land under surface irrigation coverage (thousand ha)[136]		88.29R	45.76R	118.31R	28.29	MoA
Direct gender budgeting as % of MoWR revised budget		17.3%	22.7%	4.9%	46.1%	MoF
Supply as % of estimated demand[137]	Urea	81.7%R	94.6%R	96.7%R	101.6%	MoA
	MoP	97.5%R	97.5%R	92.9%R	85.1%	
	TSP	101.2%R	96.5%R	108.8% R	111.9%	
	DAP	95.1%R	77.6%R	81.2%R	84.8%	
Agricultural credit disbursement in billion BDT		176.46	209.99	213.94	236.16	Bangladesh Bank
Number of samples of fish feed tested for quality assurance		2,000	1,074	1,085	1,107	MoFL
Area of land affected by salinisation (hectare)		1,056,260 (2009)	…*	…*	…*	SRDI
Area of land under organic farming under DAE initiative (hectare)		…*	90	120	235	DAE
Water-use efficiency (USD/m³) – Proxy for SDG 6.4.1		…*	3.0 (2017)	…*	…*	UN-Water
SDG 6.4.2 Level of water stress: freshwater withdrawal as a proportion of available freshwater resources		…*	4%	…*	…*	AQUASTAT

*Notes: R=revised; *=Not available*

[136] The figures are recalculated as: surface water irrigation land in a year minus that of previous year, based on data obtained from BADC.

[137] For MR20, MoA made available the estimated demand for fertilisers which has replaced consumption previously used in MR19 as a proxy for requirements. Also, the change in stocks has been added to the calculation of supply for greater precision: production + import + change in stock (last-year minus current-year closing stock).

The production of improved seeds for rice, wheat, and maize slightly dropped

In 2018/19, the production of improved cereal seeds dropped by 1% year-on-year, following two consecutive years of substantial increases: 10.1% in 2017/18 and 15.6% in 2016/17 (Table 11). This number, however, conceals important variations as seen in Table 12. The supply of formal rice seeds, the Bangladesh's staple, did decline by 4.5% in 2018/19 but it grew by a sizeable 20.0% for wheat and 14.8% for maize. Other notable changes have been the decline in the supply of pulses, oilseeds and vegetables seeds by 19.5%, 25.7% and 27.1%, respectively.

Table 12 - Supply of formal seeds for selected crops ('000 MT)

Year	2017/18	2018/19	Change 17/18-18/19
Rice	171.68	164.05	-4.5%
Potato	112.65	125.77	11.7%
Wheat	23.60	28.33	20.0%
Maize	6.51	7.47	14.8%
Pulses	3.73	3.00	-19.5%
Oilseeds	2.20	1.64	-25.7%
Vegetables	1.93	1.40	-27.1%

Table 13 - Contribution of different actors to seed production in 2018/19

Crops	Contribution to total requirement (%)		
	Public	Private	Self
Rice	37.4	8.6	54.0
Wheat	60.6	0.9	38.5
Maize	7.7	62.5	29.8
Pulses	10.2	0.2	89.6
Oilseeds	7.9	0.5	91.6
Vegetables	4.5	56.4	39.1
Potato	5.5	10.7	83.8

In 2018/19, the supply of seeds through the formal system (provided by DAE, BADC and the private sector) increased for wheat, potato and maize, while it declined for rice, pulses, oilseeds and vegetables (Table 12). The public sector concentrated on responding to the requirements of wheat seeds: 61% of needs were fulfilled by this sector. On the other hand, the private sector met 63% of the needs in maize seeds and 56% of the needs in vegetable seeds (Table 13). The lion's share of total seed requirements - in particular for rice (54%), pulses (89.6%), oilseeds (91.6%), and potato (83.8%) - continued to be met by farmers themselves.

The supply of improved seeds to agronomic requirements dropped except for wheat, potato and pulses

The supply of improved rice seed declined to 52% of agronomic requirements in 2018/19 from 61% in 2017/18. For maize, there was also a marked dropped of 26.9 percentage points to 70.2%. This is likely due to a substantial increase in requirements as farmers are turning to maize and seeds and production is not being able to keep up with demand. For wheat seeds, on the other hand, the supply as a percentage of agronomic requirements increased by 7.8 percentage points to 61.5% over the same period. This was also the case for potatoes whose supply as a percentage of agronomic requirements increased to 16.3% of their respective requirements, up by 3.2 percentage point over 2017/18. For other non-cereal crops, the situation remained one of substantially low coverage of their agronomic requirements: this figure declined by 23.1 and 7.9 percentage points, respectively for vegetables and edible oilseeds between 2017/18 and 2018/19 (Table 11).

Soil testing slightly intensified, but remains low

Testing farm soil is essential to assess soil nutrient content and pH which allows optimising the use of fertilisers, consequently maximising the production of healthy crops and prevents the contamination of soil by runoff and leaching of excess fertiliser. The Soil Resource Development Institute (SRDI) provides soil testing services to farmers and different organisations through its 16 permanent and 10 mobile laboratories across districts. Through soil testing and crop requirement-based balanced fertiliser

application, yields can increase by about 20-25% for rice and by 15-20 percent for other crops.[138] In order to provide farmers with a location-specific quick, smart and efficient fertiliser recommendation service, SRDI has developed an online advisory system through which farmers can obtain advice directly through mobile phones. While the number of soil samples tested at both upazila and union level rose by 2% to 18,850 in 2018/19, it remains low compared to national needs.

The expansion of land under surface water irrigation slumped

If irrigation is to meet future crop water requirements, surface irrigation needs to be expanded to counter the problems associated with groundwater use such as declining water tables, deteriorating water quality, and increasing energy costs and carbon emissions. Yet, the annual increase in arable land under surface irrigation coverage reduced significantly to 28.29 thousand hectares in 2018/19, from 118.31 in 2017/18, 45.76 in 2016/17 and 88.29 in 2015/16 (baseline of the CIP2). Surface water irrigation represented 26.6% of the total irrigated area in 2017/18 -from 23.9% in 2015/16- leaving scope for expansion.[139] In 2018/19, BADC re-excavated 560 km of canals, set up one rubber and one hydraulic elevator dam, and fielded 231 low lift pumps in order to make more surface water available for irrigation. Over the same period, the Barind Multipurpose Development Authority (BMDA) re-excavated 21.2 km of canals, constructed two cross dams and set up 202 low lift pumps.[140]

The share of direct gender budget increased sharply in the Ministry of Water Resources' budget

The share of direct gender budget in the total budget of the Ministry of Water Resources (MoWR) shot up to 46.1% in 2018/19, up 41.2 percentage points over the previous year. MoWR has taken various initiatives for women empowerment which includes increasing rural women's access and participation to irrigation schemes and water management initiatives which are proved to be determinants of improved household livelihood, nutrition and health.[141] It is also providing job opportunities for women in the excavation/re-excavation of canals and rivers and in the execution of about 25% of earthwork under Bangladesh Water Development Board (BWDB) projects; and distributing 45-50% of reclaimed *khas* land in different irrigation projects and in houses constructed in the island and wetland areas to destitute women.[142]

Urea and TSP supply was satisfactory, supported by increased fertiliser subsidies

In 2018/19, while the supply of urea and TSP (Triple Super Phosphate) was higher, that of MoP and DAP was lower than their respective estimated demand. In particular, urea supply[143] reached 110.6% of its estimated demand after growing steadily from 81.7% in 2015/16, at the beginning of the CIP2 (Table 11). Over the same period, for MoP, this figure decreased to 85.1%, from 92.9% in the previous year and 97.5% in the first two years of the CIP2, while TSP supply rose to 111.9% of its demand from 108.8% in the previous year. The supply as a percentage of estimated demand of DAP slightly increased by 3.6 percentage points over the previous year to 84.8%, but is still lower than the baseline value of 95.1%.

Fertiliser subsidies soared by 53% in 2018/19, up to BDT 74.73 billion, with those for urea growing the most: by 95%. While the share of fertiliser subsidies in the national budget rose to 1.6% in 2018/19 from

[138] Agro and Farming Blog (2013) *About Services from SRDI – Soil Resource Development Institute, Bangladesh.* March 16.

[139] Calculated based on data obtained from BADC. Data up to 2017/18 are available.

[140] GoB (2019) *Ministry of Agriculture Annual Report 2018/19*. Dhaka. Ministry of Agriculture.

[141] Bryan, E. & El Didi, H. (2019) *Guest Commentary - Considering Gender in Irrigation: Technology Adoption for Women Farmers.* Chicago Council on Global Affairs.

[142] GoB (2019) *Medium-Term-Budget-Framework- Ministry of Water Resources 2019/20.* Dhaka. Ministry of Finance.

[143] Supply includes production, import and change in stock.

1.2% in the earlier year, it remained lower than 2.1% in the CIP2 baseline (Table 14). Sales of urea, TSP and DAP rose year-on-year by 6.9%, 10.5% and 10.7% respectively, while MoP sales declined by 8.2% in 2018/19. The GoB is encouraging DAP use which is a mixed fertiliser that includes MoP and urea. Thus, in December 2019, the government went on to lower the DAP price to BDT 16 per kg from BDT 25 per kg to reduce production costs. Accordingly, it budgeted BDT 8,000 million to subsidise DAP utilisation. In the same month, it also launched a *Fertiliser Recommendation Guide (2018)* aiming to ensure proper and balanced use of fertiliser in cropland to enhance crop productivity and protect soil quality.

Table 14 - Urea and non-urea fertilisers' subsidies over the reference period

Year	Subsidies (billion BDT)			Change from previous year			% of fertilizer subsidies in national budget	% of urea subsidies in fertilizer budget
	Urea	Non-urea	Total	Urea	Non-urea	Total		
2015-16	23.37	39.29	62.66	-13.7%	-7.0%	-9.6%	2.1%	37%
2016-17	11.82	22.59	34.41	-49.4%	-42.5%	-45.1%	1.0%	34%
2017-18	16.95	31.91	48.86	43.4%	41.3%	42.0%	1.2%	35%
2018-19	32.99	41.74	74.73	94.7%	30.8%	53.0%	1.6%	44%

The rising trend in agricultural credit disbursement continued

Agricultural credit disbursement rose by 10% in the year under review, and by 34% compared to the baseline, up to 236.2 billion BDT. It exceeded the target set by Bangladesh Bank (BB) by 8.35% in 2018/19 up from 4.85% of a year earlier. Credit disbursement increased the most for irrigation equipment (+19%), up to 3.2 billion BDT in 2018/19 followed by crop loans (+15%) up to 118.8 billion BDT, signalling increased support to agriculture mechanisation.[144] Major policy changes in BB credit disbursement contributed to the provision of more credit to farmers and include a 10%-share of credit reserved to the fishery sector; extension of the credit scheme to innovative and market-oriented systems such as floating agriculture, integrated farming, turkey rearing, and pen fish farming; and increased credit limit per acre of cultivated crops.[145] In the year under review, out of the 3.88 million people received agricultural and rural credit, 41% were women who received an average BDT 44,938 each, against the average BDT 72,061 for each male farmer. Around three million small and marginal farmers received 163.23 billion BDT credit. Moreover, 3.16 billion BDT were disbursed to 9,950 farmers living in less developed areas, such as *haor* and *char* areas.[146]

Quality assurance for fish feed continues far behind the level witnessed at the beginning of the CIP2

The only way to ensure fish feed has the required balance of nutrients and no unwanted ingredients is to test the contents of a representative sample. Yet, the number of samples of fish feed tested rose only slightly, by 2% to 1,107 in 2018/19 which is still 45% lower than in the baseline. More efforts are needed to boost these tests especially in light of the existing issues with the quality of animal feed such as heavy metal contamination (see Programme V.1.). In January 2019, BFSA and the MoFL banned imports and sale of meat and bone meal (MBM) for fish and animal feed. Indeed, the latter may contain toxic chemicals

[144] Bangladesh Bank (2019) *Annual Report 2018-2019*. Dhaka.

[145] Bangladesh Bank (2019) *Agricultural and Rural Credit Policy Program for the FY 2018-2019 - Press Release*. Dhaka.

[146] *Ibid.*

such as chromium which can lead to cancer in humans. But a few months later, there was evidence of MBM in some imported fish and animal feed[147] which can only be detected through testing.

The area under DAE organic farming doubled

Organic farming[148] is becoming more popular, especially for vegetables, due to the growing evidence on the potentially toxic effects of pesticides directly on agricultural workers, and indirectly on consumers through residues in food and water. In addition, synthetic fertilisers may have a negative impact on water contamination, increased air pollution, soil acidification and mineral depletion. Media contact, attitude towards organic farming, profit and agricultural training significantly affect the adoption of organic vegetable farming in Bangladesh.[149] Moreover, the production of organic vegetables is proving to be profitable. BARI has been involved in organic farming through the *Asian Food and Agriculture Cooperation Initiative (AFACI)*. Also, several NGOs[150] are currently promoting organic farming through training, demonstrations and awareness building. DAE continues to support organic farming and the area under organic farming under its purview rose sharply -by 96%- to a still low 235 hectares in 2018/19.

4.2.2 Policy development, programmes and initiatives underway

As of 30th June 2019, cumulative investments to improve access, quality and management of agricultural inputs totalled 5,475 million USD which corresponds to 28% of the total CIP2 in 2018/19 and makes it its second largest programme. Its nutrition weighted budget was 4,106 million USD or 75% of its non-weighted budget. The largest part of the financed budget is mainly from the GoB (69%) and residually from DPs (31%), with these proportions reversed when considering the pipeline of 2,823 million USD mainly committed by DPs (91%). The programme channels 2,805 million USD beyond CIP2 period mainly through DPs commitments (71%). Notably, the Ghorasal Polash Urea Fertiliser alone represents 23% of the financed budget of this programme.

Supporting the availability of farmer-friendly machinery

Farmers in Bangladesh use machinery/implements for land preparation, crop protection and threshing on all cultivated land. A study found that tillage, irrigation, threshing, weeding and pesticide applications have been mechanised by 90%, 63%, 80% and 70%, respectively.[151] But for seed sowing, transplanting and harvesting crops, farm mechanisation appears to be a forgotten chapter. Only 1% of seeding and just 2% of harvesting are done using machines. As labourers have been increasingly becoming more expensive to hire, farmers experienced challenges in harvesting the ripened crops from their fields. Against this backdrop, the Cabinet-approved draft of the National Agriculture Mechanization Policy, 2019 aims to support the availability of farmer-friendly machinery through low-cost credit and machinery sub-contracting. The policy recommends a rationalized tariff structure for import and domestic manufacturing

[147] Ovi, I.H. & Hussain, A. (2019) *Pork product detected in protein imported for use in fish and poultry feed. Dhaka Tribune*. 10 September.

[148] FAO/WHO Codex Alimentarius Commission define organic agriculture as 'a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity […] This is accomplished by using, where possible, agronomic, biological, and mechanical methods, as opposed to using synthetic materials, to fulfil any specific function within the system'.

[149] Parvez, M., Hossain, K.Z., & Kabir, M.H. (2018) *Adoption extent of organic vegetable farming in Bogra district, Bangladesh*. *International Journal of Science and Business. 2*(1). 61-72.

[150] Hunger Free World, Unnyan Dhara, Action in Development, Friends In Village Development Bangladesh, Association for Land Reform and Development (ALRD), CARITAS, Action Aid, *Unnayan Bikalper Nitinirdharoni Gobeshona* (UBINIG), Community Development Association (CDA), Bangladesh Resource Center for Indigenous Knowledge (BARCIK), Concern International, B-Safe, Fukuoka Foundation, Voluntary Consumers Training & awareness Society (VOCTA).

[151] Gurung, T.R., Kabir, W., & Bokhtiar, S.M. (eds.) (2017) *Mechanization for Sustainable Agricultural Intensification in SAARC Region*. Dhaka. SAARC Agriculture Centre. p. 302.

of farm machinery. To ensure optimum use of machines, it favours block-based cultivation by organizing growers for tilling, planting and harvesting. The draft policy proposes incentives to encourage the establishment of assembling industry. The use of renewable energy in mechanised farming is to be promoted and steps will be taken to encourage conservation agriculture. In addition, the expansion of mechanisation should be fast-tracked in preferential areas, such as *haor* areas, coastal zones, *barind* and hilly regions. Accordingly, the GoB has decided to mobilise BDT 30 billion to subsidise farmers in the purchase of machinery and has formed a committee to provide recommendations in order to speed up mechanisation. It will provide 70 % subsidies in *haor* and coastal areas and 50% in other areas for purchasing agricultural machinery. Moreover, under a farm mechanisation project of DAE, 1,045 power threshers, 1,769 reapers, 100-foot pumps, 361 seeders, 769 combined harvesters and 114 rice transplanters have been distributed to farmers in 2018/19.[152] Finally, a three days Agro Machinery Fair was organised at the Krishibid Institution Bangladesh (KIB) in April 2019, to create a venue for mechanisation demand and supply to meet.

Expanding Urea Deep Placement technology

Urea Deep Placement (UDP) has a positive impact on the reduction of GHG emissions and farmers' income through both increased yields and reduced fertiliser costs. UDP is currently utilized by 28% of rice growers and on more than one million hectares of paddy rice throughout the various seasons. UDP usage estimates show a 30% decline in fertiliser use and increase in yields by up to 20%, which more than offsets the additional costs associated with the application of briquettes, leading to enhanced profitability.[153] Furthermore, UDP technology contributes to creating off-farm income opportunities as small enterprises have been created locally, often by women, to make the briquettes used to apply the urea.[154]

Setting up energy-efficient and environmental-friendly fertiliser factory

As part of GoB strategy to increase the domestic production of chemical fertiliser, Bangladesh Chemical Industries Corporation (BCIC) has planned to build the Ghorasal Polash Urea Fertiliser Plant. On February 26, 2020, the Multilateral Investment Guarantee Agency (MIGA) issued a guarantee for $357 million to BCIC to cover a non-shareholder loan from The Hongkong and Shanghai Banking Corporation Limited of Hong Kong, SAR, China and MUFG Bank, Ltd. of Japan.[155] This new, modern, energy-efficient and higher capacity granular urea fertiliser factory to replace the existing urea fertiliser and polash urea fertiliser factories in Narsingdi, which are both less efficient in gas consumption and productive than the new one would be, with an expected production of granular urea and ammonia at 2,800 MT and 1,600 MT per day, respectively. This fertiliser factory uniquely features a recycling system for CO_2 emissions that will contribute to further increase - by about l0%- the production of urea fertiliser.[156]

Bangladesh Water Rules approved

The Bangladesh Water Rules (2018) have been formulated under the Bangladesh Water Act (2013) and approved in the reference year. This document provides details about enforcement mechanisms, such as compliance, protection and removal orders, imprisonment and fines/compensation, surface and ground

[152] DAE (2019) *Annual Report 2018/19.* Dhaka. Department of Agricultural Extension. Ministry of Agriculture.

[153] International Fertilizer Development Center (2017) *Rapid introduction and market development for urea deep placement technology for lowland transplanted rice : a reference guide.*

[154] FAO (2017) *Success stories on Climate-Smart Agriculture.*

[155] https://www.miga.org/project/ghorasal-polash-urea-fertilizer-project

[156] BCIC (2019) *Ghorasal Polash Urea Fertilizer Project (GPUFP) Invitation for expression of interest*

-water withdrawal thresholds for individuals and organisations, clearance certificates required from an executive committee in order to be able to implement any water related projects[157].

Construction of a subsidiary pump house under the *Ganges-Kobadak Irrigation Project*

The *Ganges-Kobadak Irrigation Project* (known as the G-K project and started in 1954-55) is a large irrigation system set up by the BWDB whereby water is lifted from the Ganges (Padma) and distributed by gravity canals. Lately, water extraction from the Ganges has become difficult in the dry season as water levels drop well below the level for which the pumps were designed. As a result, the irrigable area is not fully covered. Moreover, there is no arrangement for dredging the one million cubic meters of silt which deposit every year in the canal connecting the Ganges to the pump house. In order to address this issue a new project for the construction of a subsidiary pump house in Kushtia has recently started aiming at expanding the *G-K Project*'s command area.

4.2.3 Needs for further actions under this programme

Promote on-farm production and preservation of quality seeds for pulses, oils and spices

As the lion's share of the total seed requirement -particularly for pulses, oilseeds (see Table 13 above) and spices is still provided by farmers themselves, emphasis should be given to the production and preservation of quality seeds at farm level. Farmers' home-grown seeds are typically of poor quality in terms of purity, germination capacity, vigour, disease and insect resistance because knowledge about seed production technology, processing and storage is very limited. DAE has implemented a project titled *Farmers' level Quality Seed of Pulse, Oilseed and Spice Production, Preservation and Distribution* but more needs to be done to provide training to farmers, especially for the enhancement of quality seeds of high-value crops, such as pulses, oilseeds and spices. Following the COVID-19 pandemic, however, it is likely that own seed production by farmers will have been severely affected and the focus may need to be on urgently supplying seeds to farmers to safeguard future production. In fact, at the time of writing this report, some 1.5 billion BDT had been allocated for the distribution of seeds and seedlings.[158] To this end, there is a need to promote healthy seeds to enhance the yield and nutritional quality of the produce.

Accelerate the use of organic fertiliser through better manure management

Bangladesh has the highest density of livestock in the world with 35.53 million households owning 48.15 million cattle[159] which results in a high concentration of livestock manure, responsible for methane and nitrous oxide GHGs emissions. Dried manure utilized for cooking and heating contributes to air pollution through carbon monoxide emissions and the discharge of both solid and liquid manure into water is responsible for the increase the occurrence of illnesses such as diarrhoea.[160] Accordingly, the Integrated Livestock Manure Management (ILMM) Policy and Action Plan (2016-2030) aims to encourage livestock farmers to adopt improved manure management practices, such as the use of biodigesters and the creation of value-added manure products, and to facilitate the development of a manure market. The policy encourages farmers to set up societies and to build 'community' biodigester plants and/or environment-friendly manure storage and treatment facilities.[161] Biodigesters create conditions for the

[157] GoB (2018) *Bangladesh Water Rules 2018*. Dhaka. Ministry of Water Resources.

[158] BBSnews.net (2020) *PM announces Tk 5,000cr package for agriculture over COVID-19*. 28 April.

[159] BBS (2019) *Preliminary report of agricultural census 2019.* Dhaka. Ministry of Planning.

[160] GoB (2016) *Draft National Integrated Livestock Manure Management (ILMM) Policy.* Dhaka. Ministry of Fisheries and Livestock.

[161] Biskupska, N., Pravalprukskul, P. & Osborne, M. (2019) *Why Do Farmers Take up Biodigesters? An Assessment from Bangladesh*. *SEI Discussion Brief*. Stockholm Environment Institute. Stockholm.

anaerobic decomposition of organic material such as cow dung and poultry litter and produce biogas and bio-slurry. The use of biogas reduces the burning of solid manure and other biomass fuels while the use of bio-slurry as fertiliser can increase crop yields and reduce costs. While financing options for the installation of biodigesters do exist through RDA under Ministry of Local Government, Rural Development and Cooperatives (MoLGRD), the BRAC and Grameen Shakti microfinance programmes and a government-owned financing agency, IDCOL (Infrastructure Development Company Limited) and Bangladesh Council of Scientific and Industrial Research (BCSIR), no digesters are collectively owned or managed by small-scale or landless farmers for lack of access to finance, technical knowledge, livestock and/or manure, and sufficient land.[162] Thus, the government, with assistance from local NGOs, should look into measures that may encourage farmers to install biodigesters. Likewise, the usage of other organic fertilisers to improve soil health and land productivity should be encouraged. To this end, the government has provided registration to eight companies for marketing organic/ bio-fertilisers in 2018/19.

Expand the usage of bio-pesticides

Bio-pesticides are pest management agents based on living micro-organisms or natural products and their usage can contribute to preserving the safety and nutritional content of the food. The GoB has taken initiatives to develop and spread on-farm bio-pesticides usage under the project *Development and Dissemination of Bio-pesticides Technologies for Vegetables, Fruits and Pan Crops*. However, research and extension activities on bio-pesticide-based integrated pest management technologies remain limited and need to be developed and disseminated with a focus on effective and cheap bio-pesticides. The government needs to develop a legal framework for commercialization of bio-pesticide in order to make quality bio-pesticides available at a reasonable price. Involvement of the private sector may be also be encouraged in the commercial production and distribution of bio-pesticides with strict quality control measures in place.[163] In the medium term, however, the GoB may need to focus its efforts on guaranteeing the availability of more traditional pesticides for farmers in cases where supply chains will have been affected by the measures taken to counter the COVID-19 pandemic.

Improve reservoirs system for rainwater harvesting

Groundwater extraction is increasingly higher than its recharge, thus depleting the groundwater table. For instance, groundwater in the Rajshahi district receded at a rate of 0.23 m/year over the period 2000 – 2014.[164] An alternative to groundwater extraction is rainwater harvesting in ponds and other reservoirs which may contribute cheaply and sustainably to improved water availability during the dry season. Furthermore, rainwater is free from arsenic contamination, salinity and other harmful infectious organisms and pathogens. Bangladesh is characterised by abundant rainfall averaging about 2,200 mm per year, 75% of which occurs between May and September, making this an appealing option. Under several projects, the government has constructed new reservoirs and repaired old ones for the conservation of rainwater but this has been limited in scale and may be expanded throughout the country.

[162] *Ibid.*

[163] SAARC Agriculture Centre (2013) *Extent and potential use of bio-pesticides for crop protection in SAARC countries*. Dhaka.

[164] Aziz, M.A, Majumder, Md. A.K., Kabir, Md. S., Hossain, Md. I., Rahman, Niaz Md. F., Rahman, F. & Hosen, S. (2015) *Groundwater depletion with expansion of irrigation in Barind tract: a case study of Rajshahi district of Bangladesh*. *Int. J. Geol. Agric. Environ. Sci.* 3:32–38.

4.3 Programme I.3. Enhanced productivity and sustainable production of animal source foods

Programme I.3 aims at improving the availability of animal source foods to meet dietary needs while considering sustainability, by boosting production of meat, fish, milk and eggs through the development of profitable value chains and the promotion of responsible and sustainable livestock and fisheries. Animal source foods, which are rich in quality proteins and essential micronutrients, contribute to dietary diversity and nutrient adequacy for good nutrition and health.

4.3.1 Progress towards achievements

Table 15 - Progress towards achievement of Programme I.3

CIP2 output proxy indicators	Item	2015/16 Baseline	2016/17	2017/18	2018/19	Source
Percentage of areas protected	Coastal areas	1.2% (2013/14)	…*	…*	…*	DoF, MoFL
	Marine areas	0% (2013/14)	2.05%R	2.05%	4.73%	DoF, MoFL
Percentage of wetland and natural sanctuaries maintained		1.7% (2014/15)	…*	…*	1.9%	MoFL
Annual change in quantity of fish production		5.2%	6.7%	3.5%	2.5%	DoF, MoFL
Fishery exports value as % of total export value		1.97%	1.51%	1.39%	1.23%	DoF
Shrimp share in fishery exports (%)		84.0%	85.9%	81.8%	73.0%	DoF
GDP from fishery sector as % of agriculture GDP, at constant prices 2005/06		23.78%	24.53%	25.04%	25.59%	BBS
GDP from livestock sector as % of agriculture GDP, at constant prices 2005/06		10.83%	10.87%	10.79%	10.75%	BBS
Growth rate of livestock GDP		3.19%	3.31%	3.40%	3.54%	DLS
Production of	Eggs (million)	11,912	14,933	15,520	17,110	MoFL, BBS
	Milk (million MT)	7.27	9.28	9.41	9.92	MoFL, BBS
	Meat (million MT)	6.15	7.15	7.26	7.51	MoFL, BBS
Number of doses of vaccines produced (million)		236.39	253.73	246.26	274.86	DLS
Annual change in artificial insemination		6.27%	6.20%	4.85%	7.36%	DLS, MoFL
Number of farmers (in thousands) trained by	DoF	136.66	178.71	200.47	397.25	MoFL
	DLS	1,270	1,440	190	176	
Direct gender budgeting as % of MoFL revised budget		12.37%	12.67%	13.17%	26.58%	MoF
Number of commercial registered farm	Poultry	80,421	81,263	80,812 R	81,324	MoFL, BBS
	Livestock	66,080	66,269	66,219 R	67,003	MoFL, BBS
	Fish and shrimp	…*	…*	216,651	216,651	MoFL, BBS
Number of ponds		2,167,103	2,240,719	2,477,883	2,480,883	Fisheries Statistical Report

**: Not available; R: revised*

The extent of coastal and marine area protection remains minimal

While relatively less developed than other regions of Bangladesh, disaster-prone coastal areas hold great potential in the access they have to marine and mangrove natural resources.[165] This could play a major role in supporting the livelihoods and food security of the relatively poorer local communities. Coastal areas' socio-economic systems are centred around fisheries. However, the scarcity of large-scale vessels restricts industrial fishing in the deep-sea area, consequently increasing the pressure of artisanal fishing

[165] IUCN (2015) *National Framework for Establishing and Managing Marine Protected Areas (MPAs) in Bangladesh*. International Union for Conservation of Nature. Dhaka. Bangladesh Country Office.

operations in the continental near shore within 40m depth.[166] This has contributed to the deterioration of marine habitats, migratory routes, fish spawning and nurseries.

Out of the total 47,291 km^2 of the *coastal* zone in Bangladesh - or 32% of the country[167] - only 1.3% was a protected area as of 2013/14. This is still too low, as increased protection could contribute to sustainable coastal development which is essential to avoid over-exploitation of coastal ecosystems. As of 2018/19, out of the 118.8 thousand km^2 of *marine* areas of Bangladesh, only 4.7% was protected[168] despite a 2.05% rise from the previous year. The limited coastal and marine area protection reflects the emphasis on preserving the livelihoods of poor local fishermen communities over environmental conservation. However, protection of these areas falls within the preservation of the Bay of Bengal marine ecosystem and as such needs to be strengthened within a regional and transboundary perspective. To this end, the approval of the USD 15 million grant for the *Bay of Bengal Large Marine Ecosystem (BOBLME)* project by the Global Environmental Facility (GEF) and led by FAO (2018) is a positive achievement.[169] While the first phase of the project revealed the challenges of a joint management plan among countries with often conflicting agendas, it certainly contributed to foster transboundary cooperation. As a result, Bangladesh, India and Myanmar have agreed on an Exclusive Economic Zone (EEZ) system in the Bay of Bengal. However, its implementation remains very challenging: overfishing remains a problem and in Bangladesh, fisherman often do not comply with the 65-days annual ban to protect spawning fish and rejuvenate fish stocks.[170]

Wetland and natural sanctuaries are also rare

Wetland areas and natural sanctuaries provide an ideal habitat for native species of animals and plants, and thereby contribute to preserving wildlife, biodiversity and the protection of endangered species. The limited expansion of such sanctuaries since before the CIP2 - by a mere 0.20 percentage points, to 1.9% of all waterbodies- calls for renewed efforts in this regard.

Fish production growth slowed down for two consecutive years

Fish production remains mainly driven by aquaculture (56%), followed by capture (28%) and marine fishing (15%) with these proportions remaining substantially unchanged year-on-year. Fish production increased by 1.3 times since 2001/02 up to 4.4 MMT in 2018/19, by 2.4% year-on-year (Figure 15). However, the growth trend has recently slowed down to 2.4% in 2018/19 from 3.5% in 2017/18 and 5.2% in the baseline (Table 15), mainly due to increased feed price, higher interest rate of institutional credit[171], low domestic market price[172] and partially owing to reduced export opportunities in 2019, due to worsened global demand and prices of fish over the previous two years.[173] Nevertheless, per-capita

[166] *Ibid*.

[167] Ahmad, H. (2019) *Bangladesh Coastal Zone Management Status and Future Trends*. *Journal of Coastal Zone Management.*

[168] Chowdhury, H.A., Humayun, N.U.M. & Mondal, M.K. (2019) *Blue Economy: Department of Fisheries Initiatives in the Management of Marine Fisheries Resources*. National Fish Week 2019.

[169] thethirdpole.net (2018) *Eight countries come together to protect Bay of Bengal*. 4 July.

[170] thethirdpole.net (2020) *Lines on water cannot save Bay of Bengal fisheries*. 15 May.

[171] Mitra, S., Akhtaruzzaman Khan, Md. & Nielsen, R. (2019) *Credit constraints and aquaculture productivity.* *Aquaculture Economics & Management*. 23:4. 410-427.

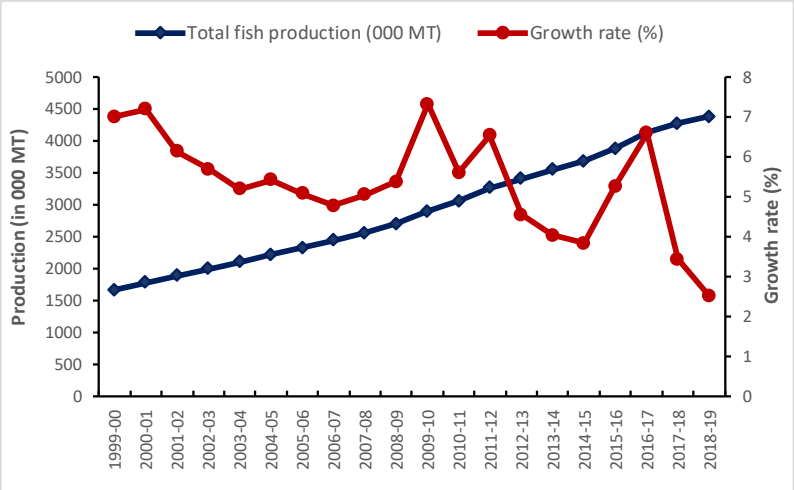
[172] Rashid, S. & Zhang, X. (2019) *The making of a blue revolution in Bangladesh: Enablers, impacts, and the path ahead for aquaculture*. Washington, DC. IFPRI.

[173] FAO (2019) *Food Outlook – Biannual Report on Global Food Markets*. May and November 2019. Rome.

consumption has increased by 1.5 times over the last two decades, from 14.1 kg per year in 2000[174] to 22 kg per year in 2019[175], which was lower than that of the base year 2015-16 (22.8 kg per capita).[176]

Production is likely to have been severely affected by COVID-19 as fish spawn, fingerling, shrimp and post larvae were either unsold or sold at very low prices during the lockdown. Government hatcheries tried their best to maintain fish seed production but an extended disruption in the supply of raw materials was likely to close down private hatcheries[177].

Figure 15 - Total fish production and growth rate



Source: Data from DoF (2000 to 2019) Yearbooks of Fisheries Statistics of Bangladesh

The value of fisheries in total export value declined

Fisheries export value in total exports reduced to 1.23% in 2018/19 continuing the gradual yearly decline since the 1.97% observed in 2015/16, at the onset of the CIP2. The share of shrimp in total fishery export value declined to 73% from 84%, over the same reference period. This trend has several explanations: the ban on imports of fish treated with certain antibiotics by a number of countries (Southern Shrimp Alliance, 2018)[178]; the low competitiveness of Bangladeshi Tiger and Galda shrimp against the cheaper Vannamei variety in a context of weaker prices; and an abundant international supply associated with a slower demand and global reduced economic growth.[179] This is worrying in that Tiger and Galda shrimp constitute Bangladesh's most important agriculture-based export, accounting for more than 70% of total overseas earnings.[180]

Fisheries' contribution to agricultural GDP slightly increased

Fisheries are the second largest sub-sector of agriculture worth BDT 748,280 million.[181] The contribution of fisheries to agricultural GDP slightly increased to 25.59% from 23.78% over the reference period (2015/16 – 2018/19) and remained the main driver of production diversification. This increase is mainly due to improved aquaculture productivity, stemming from improved pond aquaculture productivity to 4,964 kg/ha in 2018/19 from 4332 kg/ha in 2015/16 and consequently improved production to 1.97

[174] Toufique, K.A. (2015) *Analysis of fish consumption and poverty in Bangladesh*. Dhaka. Bangladesh Institute of Development Studies.

[175] GoB (2019) *Yearbook of Fisheries Statistics of Bangladesh 2019*. Dhaka. Department of Fisheries. Ministry of Fisheries and Livestock.

[176] GoB (2016) *Preliminary report on Household Income and Expenditure Survey (HIES)*. Dhaka. Bangladesh Bureau of Statistics.

[177] FAO (2020) *FAO COVID-19 Rapid Assessment of Food and Nutrition Security in Bangladesh*. Dhaka.

[178] Southern Shrimp Alliance (2018) *2018 Begins with Bangladeshi Shrimp Refused Entry for Banned Antibiotics and Indian Shrimp Refused Entry for Salmonella*. 5 February.

[179] FAO (2019) *Food Outlook – Biannual Report on Global Food Markets.* May and November 2019. Rome.

[180] Holland, J. (2019) *Bangladesh seeks more buck for its bagda*. Global Aquaculture Alliance.

[181] GoB (2019) *Bangladesh Economic Review 2019*. Dhaka. Ministry of Finance.

million MT in 2018/19 over the same period[182]. Among the pond species, production of major carps and exotic species increased from 1.19 million MT in 2015/16 to 1.42 million MT in 2018/19, which has been dominating fish production.[183] However, the slower growth in total production partly attributed to the 4.77% reduction in the production of pangas and tilapia after 2016-17.[184]

Livestock's contribution to agricultural GDP hardly varied but livestock growth rate progressed

Livestock's contribution to agricultural GDP was 10.75% in 2018/19, similar to that of the previous year. Since the beginning of the CIP2, the contribution of this sector has scarcely changed (Table 15). However, the livestock GDP increased by 8% to BDT 432,118 million in 2018/19[185] which shows that this sector has been growing, but at a slower pace than other agricultural subsectors such as fisheries and forestry (see Figure 5 in Outcome I on shares of GDP sectoral growth rate). The livestock GDP growth rate consistently rose, reaching 3.5% in 2018/19 from 3.2% in the baseline. The slower growth rate witnessed is likely to be explained by several factors: the drop in production of small-scale commercial poultry farms - accounting for 81% of commercial poultry farms - which were particularly affected by recurrent outbreaks of Highly Pathogenic Avian Influenza over the last 10 years[186]; and increase in feed prices which translated into higher production cost. For example, the cost of maize, which constitutes 55-60 % of poultry feed, rose from BDT 16.11 per kg in 2006 to BDT 19.46 per kg in 2018, although a 10% tax exemption in maize and soybean meal import helped dampen this rise in costs.[187] The 500 million USD World Bank *Livestock and Dairy Development Project (LDDP, 2019-2023)* is likely to contribute to improving the productivity and sectoral value addition for this sector, especially for dairy and beef production.[188].

Egg, milk and meat production improved but the latter remains largely insufficient

In line with the trend witnessed since the beginning of the CIP2, in 2018/19, the production of egg, milk and meat moderately increased by 4% to 15.5 billion, by 1.4% to 9.4 MMT, and by 1.5% to 7.26 MMT, respectively (Table 15). Egg production covered an estimated 98.8% of domestic demand (Table 16), while milk production covered only 66% of estimated domestic demand.[189] The Bangladesh Bank dairy loan scheme at a 5% interest rate has been contributing to the positive progress of the livestock sector since 2015. This USD 23.53 million refinancing fund is to encourage dairy farming and cut malnutrition and milk powder import bills.[190]

[182] GoB (2002 and 2019) *Yearbook of Fisheries Statistics of Bangladesh.* Dhaka. Department of Fisheries. Ministry of Fisheries and Livestock.

[183] Ahmed, M. F., Kabir, M. A., Kari, J. A., *et al*. (2019) Limnoecology and carp fish species peak spawning, timing in haor basin of Bangladesh. *Malaysian Applied Biology 48(3).*

[184] GoB (2017 and 2018) *Yearbook of Fisheries Statistics of Bangladesh.* Dhaka. Department of Fisheries. Ministry of Fisheries and Livestock.

[185] GoB (2019) *Annual Report 2018-19.* Dhaka. Ministry of Fisheries and Livestock. In Bangla.

[186] Rimi, N.A., Hassan, M.Z., Chowdhury, S., Rahman, M., Sultana, R., Biswan, P.K., Debnath, N.C., Islam, S.K.S. & Ross, A.G. (2019) A Decade of Avian Influenza in Bangladesh: Where Are We Now? *Tropical Medicine and Infectious Disease.* 11.

[187] The Financial Express (2018) *Poultry Feed Ingredients See Cut in Import Duty.* 8 June.

[188] World Bank (2018) *Project Appraisal Document Livestock and Dairy Development Project.* Report No: PAD2500.

[189] GoB (2019) *Livestock Economy at a Glance 2018/19.* Dhaka. Department of Fisheries. Ministry of Fisheries and Livestock.

[190] Bangladesh Bank (2019) *Re-financing scheme*. Dhaka. In Bangla.

Table 16 - Eggs, milk and meat production, demand and per capita availability, demand and supply coverage in 2018/19

Products	Production	Demand	Coverage (%)
Egg	17.11 billion (103.89/year/head)	17,33 billion (104/year/head)	98.8%
Milk	9.92 MMT (165.07 ml/day/head)	15.2 MMT (250 ml/day/head)	66.0%
Meat	7.51 MMT (124.99 gm/day/head)	7.297 MMT (120 gm/day/head)	104.2%

**Estimated population: 16 crore 66 lakhs (30 June 2019)*

The introduction of world-renowned improved breeds of broiler and layer strains has played a vital role in increasing poultry productivity.[191] While, before the onset of the COVID-19 crisis, it was likely that egg self-sufficiency would be reached within the next financial year, milk production needs further improvement to bridge the 34% gap between domestic production and demand. In particular, the growing modern dairy production value chain which currently covers only 15% of the dairy sector has a strong potential for adding value to the dairy industry.[192] According to World's Poultry Science Association Bangladesh Branch, the poultry sector is expected to start exporting eggs and poultry meat by 2024, especially to the Middle East which is a sizeable market for halal meat.[193]

These encouraging trends are likely to be stopped in their tracks following the COVID-19 pandemic. At the time of writing this report, about 50% of broiler farms were already out of business. The demand and price for eggs and poultry had plummeted, translating in the closure of numerous layer and poultry farms. The government announced financial stimuli for both large entrepreneurs and smallholder farms, but huge efforts will be needed to bring smallholders back into business.[194] As for milk, in the same period, the Bangladesh Dairy Farmers Association (BDFA) estimated that around 90% of milk was unsold due to lower demand by milk vendors and sweetmeat sellers. One explanation would have been the impossibility of transporting these commodities to the consumers. One government response was for MoFL to speed up input quality certification to reduce import dependence, but this industry will also require extensive help to recover.[195]

Livestock and poultry vaccine production rebounded

In 2018/19, the production of vaccine increased to 274.86 million doses by 11.6% from 2017/18 - which had registered the lowest level over since the launch of the CIP2 – and by 16.3% from the baseline. The boost in the production of vaccines both by government and private companies responds to increased demand from farmers who are becoming more aware of the importance of vaccination for their livestock and poultry. A total of 15 poultry vaccines and eight small- and large animals' vaccines are currently available in Bangladesh.[196]

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[191] Rahman, M. S., Jang, D. & Jum Y. C. (2017) *Poultry industry of Bangladesh: entering a new phase*. *Korean Journal of Agricultural Science*. Volume 44 Issue 2.

[192] FAO & UNIDO (2019) *The Dairy and Beef Value Chain in Bangladesh*. Draft Report. May.

[193] WPSA-BB (2019) *Bangladesh Heading Towards Safe Poultry Production & Export*. Dhaka. World's Poultry Science Association – Bangladesh Branch

[194] FAO (2020) *FAO COVID-19 Rapid Assessment of Food and Nutrition Security in Bangladesh*. Dhaka.

[195] *Ibid.*

[196] GoB (2018) *Guidelines on Animal Vaccine*. Dhaka. Directorate General of Drug Administration. Ministry of Health and Family Welfare.

The rate of artificial inseminations accelerated over the last year

The growth in the rate of artificial insemination picked up at 7.36% in 2018/19 after registering its slowest progress at 4.85% in the previous year. Production of liquid and frozen semen also went up to 4.5 million doses in the reference year from 4.3 million doses in 2017/18. In 2018/19, the number of inseminated cows and crossbred calves increased by 19.5% and 10.7% from the CIP2 baseline, up to 4.1 and 1.3 million, respectively.[197] A number of private companies such as American Dairy Limited, BRAC and Lal Teer are producing raw and frozen semen in addition to the public sector.[198] The acceleration in semen production along with the increased rate of artificial insemination suggest that the number of high yielding crossbred animals is likely to rise.

Number of farmers trained by DoF increased while those trained by DLS decreased

In 2018/19, while the number of farmers trained by the Department of Fisheries (DoF) increased up to 397.25 thousand from 200.47 in the previous year, those trained by the Department of Livestock Services (DLS) reduced to 176 thousand from 190 (Table 15). This confirmed an ongoing diverging trend – increasing numbers for DoF and decreasing for DLS especially after a big drop in 2017/18 for the latter - over the reference period. The increased training of fisheries' farmers seems positively correlated with fish production. To ensure new technological uptake and adoption by farmers, training programmes need to be strengthened.

The share of gender budget allocation over MoFL total budget doubled

Gender budget allocation in 2018/19 more than doubled compared to previous years, at 26.58% of the total MoFL budget. This reflects the efforts made by this ministry to recognize the role and potential of women in this field of agriculture. For example, the provision has been made in the national budget specific to this ministry to include at least a quarter of women as beneficiaries in various development projects as part of gender mainstreaming in fish cultivation and management.[199]

The number of registered poultry and livestock farms rallied

In the year under review, the number of registered farms for poultry and livestock rebounded to 81,324 and 67,003 from 80,812 and 66,219 in 2017/18 respectively, to values similar to previous years. For shrimp and fish, there was no change (Table 15). However, it is worth noting that only the relatively larger size farms are counted. For example, the farms having below nine cows, 19 goats or sheep and 1000 broilers or layers or ducks need no registration. Thus, there seems to be a gradual increase in the size of poultry and livestock farms.

The number of ponds continues to rise

The number of ponds rose to 2,480,883 units in 2018/19 compared to 2,167,103 at the beginning of the CIP2 although the increase was of a mere 0.1% in the year under review. This slow but steady expansion in the number of ponds is likely to have contributed to the observed increase in aquaculture production.

4.3.2 Policy development, programmes and initiatives underway

Cumulative investments to improve the availability of ASF reached 682 million USD, 4% of the CIP2, out of which 91% was already financed, as of 30th June 2019. The largest share accrued from GoB (64%), the

[197] GoB (2019) *Annual Report 2018-19*. Dhaka. Ministry of Fisheries and Livestock. In Bangla.

[198] GoB (2015) *Bangladesh Delta Plan 2100 Formulation Project, Livestock Baseline Study*. Dhaka. General Economic Division. Planning Commission.

[199] GoB (2019) *Chapter 10: Ministry of Fisheries and Livestock*. Bangladesh Budget. Dhaka. Ministry of Finance.

rest (36%), from DPs. The two largest projects under Programme I.3 are the *Sustainable coastal and marine fisheries in Bangladesh* and the *Livestock Development based dairy and meat production project.* Both projects cover 23% of the programme 's financed budget. The pipeline shrank to a mere 51.3 million USD which is likely to be financed over the next and last CIP2 financial year. The post-CIP2 budget, falling beyond the 30th June 2020, stands at 487 million USD, spilt between GoB and DPs by 46% and 54% respectively.

Fisheries sector

Action plan to develop the Blue Economy

The MoFL has adopted an action plan and implementation strategy for the development of marine fisheries resources which is to cover the years until 2023.[200] Some of their major targets are to identify major breeding areas and commercially viable sea fish species; to build capacity through the inclusion of marine science in university curricula; to arrange research and training on marine ecosystem; and to establish new marine reserve areas.

Assessment of current fish stocks and aquatic resources

The marine research vessel, Dr Fridtjof Nansen, carried out a survey in Bangladesh from 2 to 17 August 2018 to gather information on the current stock of fish and other aquatic resources which are feared to be overexploited. This supports the establishment of the maximum sustainable yield, the highest level at which a natural resource can be utilised up to its regeneration capacity. This vessel is a unique platform for knowledge generation and capacity development: it houses seven different laboratories packed with high tech equipment. This work was carried out as part of the EAF-Nansen programme titled *Supporting the Application of the Ecosystem Approach to Fisheries Management Considering Climate and Pollution Impacts* which is implemented by ERD, FAO and the Norwegian Institute for Marine Research (IMR).

Enhancing marine and coastal fisheries

The World Bank- funded *Bangladesh Sustainable Coastal and Marine Fisheries Project (2019-2023),* with a total budget of USD 281.60 million, aims to increase coastal and marine fisheries' contribution to the economy, poverty reduction, and environmental stability. It will achieve its target by enabling activities for sustainable fisheries sector investment and growth, improving infrastructure and production practices, empowering communities and developing livelihoods in 75 upazilas of 16 coastal districts spread over a geographical area of 43,291 km^2 inhabited by a total population of 33.77 million.[201] This piloting phase (2017-18) of this project successfully worked on enabling sustainable fisheries investment and growth and improvement of infrastructure and fisheries production practices.

Incentivizing fish culture and capture

A 20-year master plan on *haor* development was approved in 2012, where 22 fishery projects were proposed accounting USD 594 million to increase the culture and capture of fish production.[202] To accelerate the achievement under this master plan, various ancillary initiatives have been taking place including the establishment of the *Haor* and *Char* Development Institute in 2018 to improve the individual capacities and thereby sustain *haor* agriculture development.[203] To promote the production of capture

[200] GoB (2018) *Marine Resource Management of Bangladesh: Action Plan and Implementation Strategy*. Dhaka. Ministry of Fisheries and Livestock. In Bangla.

[201] GoB (2018) *Sustainable Coastal and Marine Fisheries Program (SCMFP).* Dhaka. Ministry of Fisheries and Livestock. In Bangla.

[202] DBHWD (2012) *Master Plan for Haor.* Bangladesh *Haor* and Wetland Development Board. Bangladesh.

[203] *Haor* Institute, Bangladesh Agricultural University. Website under construction.

fisheries, specially hilsa and shrimp, the government provides food incentives to around 0.4 million fishermen during the of 65 days fish harvesting ban. In addition, the government is continuing the waterbody re-excavation project accounting USD 34.37 million in 229 *upazilas* under 53 districts to remove 7.66 million m^3 soil. Further, the proposal for extension of this project until 2021 with an additional USD 51.56 million budget is underway in the Ministry of Planning.[204]

Promoting non-traditional aquaculture for export markets

Non-traditional forms of aquaculture are being developed in different parts of Bangladesh. For instance, the project on the *Adoption of Innovative Technology: Seed to fattening of mud crab (Scylla olivacea) and health management in Bangladesh condition (2018-2021)* explores the export market potential of crabs which offer good micronutrient density. Bangladesh Fisheries Research Institute (BFRI) also started the *Conservation, Propagation and Culture of Mussels and Snails (2017-2021) Project* aimed at developing an economically viable technology towards the culture of oysters and snails. A pearl culture development and extension project was conducted between 2012 and 2019, aiming to expand the technology to rural women, farmers and entrepreneurs. To promote emerging sectors with export potential including non-traditional aquaculture product such as eel and crab, since 2019, the GoB has started providing 10% cash incentive on selected items, in accordance with the export-led economic growth strategy of the country.[205]

Developing cluster models of shrimp farms

The Bangladesh Shrimp National Action Plan (BSNAP), which is underway, will enable DoF to promote modern production capabilities for black tiger shrimps (*bagda*) and advocate measures to ensure that export markets' safety and traceability requirements are met. To reach these objectives, this document proposes the introduction of a cluster farming model which consists in grouping shrimp farms who use common land resources for farming. By acting collectively, these clusters of farmers can receive a better price for their produce without the involvement of middlemen. DoF has planned three phases, the first ending in 2020 by which time 1,050 clusters comprising 26,250 farmers should be formed. By 2030, the end of the third phase, the number of clusters should be 2,075 clusters, with 51,875 farmers involved and 20,750 hectares of production sites.[206]

Development of low-cost aquaculture feeding approaches

Keeping the price of fish feed low is a key challenge for cultured fish production in Bangladesh. Over the last decade, efforts have been made to develop a new low-cost feeding system that would allow farmers to profit while still guaranteeing consumer safety. The Wageningen University and WorldFish have been trialling in Bangladesh (and Vietnam) a novel aquaculture feeding concept under the *Nutrition Pond Project (2014-2019)* that exploits pond ecosystems to encourage farmed fish and shrimp to ingest naturally occurring food (such as phytoplankton) alongside feed. While still a pilot, this system has the potential to reduce both production costs and environmental impacts.[207] The rice-fish system which is promoted by some as a way around the scarcity of land and water resources, also allows farmers to use home waste and homemade feed such as waste rice as fish feed which can reduce the cost.[208]

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[204] GoB (2019) জলাশয় সংস্কারের মাধ্যমে মৎস্য উৎপাদন বৃদ্ধি প্রকল্প

[205] Dhaka Tribune (2019) *What is cash incentives on exports*. 17 June.

[206] Holland, J. (2019) *Bangladesh seeks more buck for its 'bagda'*. Global Aquaculture Alliance.

[207] Layzell, C. (2019) Aquaculture in action: reducing the need for feed. *The Fish Site*. 24 January.

[208] Hayat, A. and Md. S. Islam (2017) Integrated Rice-Fish Farming System in Bangladesh: An Ex-ante Value Chain Evaluation Framework. Integrated Rice-Fish Farming. In: Gatzweiler F., von Braun J. (eds) *Technological and Institutional Innovations for Marginalized Smallholders in Agricultural Development*. Springer, Cham.

Livestock sector

Registration of farmers and feed sellers

The feed industry has steadily grown because of increasing consumption of meat, eggs, and fish. Over 400 domestic mills are meeting up to 96% of annual poultry feed demand with the rest being met by imported feed or homemade feed-mix.[209] Half of these mills operate without registration which renders quality checks challenging. The DLS has therefore taken the initiative to bring all poultry farmers and feed sellers under registration to try and ensure safe and good poultry farming practices for sound public health.[210]

Launching the largest livestock project in Bangladesh

The World Bank *Livestock and Dairy Development Project (LDDP)* was officially launched in December 2019 with the aim to improve climate-resilient productivity growth, enhance market access, and improve risk management among smallholder farmers and agro-entrepreneurs, by providing support for climate-smart production systems, farmer empowerment and commercialization.[211] Other than the LDDP, a total of USD 39.21 million was allocated to 17 development projects under the DLS in 2018/19.[212]

Conservation and improvement of livestock breeds

To enhance the climate resilience and sustainability in the livestock sector, a number of projects on the improvement of indigenous genetic stock (buffalo, goat and native cattle) were underway during 2018/19. In continuation with the first phase of *Buffalo Development Project (2010-2017),* the second phase of the project (2019-2020) is ongoing with a total estimated budget of 19.2 million USD to develop a highly productive and reproductive potential buffalo breed through insemination to increase milk and meat production. A 4.9 million USD project was also initiated in 2018 to improve and extend the native Black Bengal goat breed throughout the country. As for the large ruminant sector, improvement of native cattle has been promoted through the *Breed Upgradation through Progeny Test Project* since 2003 till 2019.

Livestock development in coastal areas

To increase the productivity of livestock in coastal and *char* areas bypassing the negative impacts of climate and utilizing the local genetic and feed resources, the government launched several development projects including the *Integrated Livestock Development Project in Char Land and the South-West region livestock development Project*.

4.3.3 Needs for further actions under this programme

Fisheries sector

Regulate fish-farming

Bangladesh is now the fifth-largest aquaculture producer in the world after the success in the introduction through state-run agricultural extension projects of intensive fish-farming in the early 1980s. This, however, has come at a price, and some blame intensive fish-farming such as the monoculture of tilapia or other carp species for the collapse of freshwater aquatic systems. Uncontrolled and extensive use of non-organic nutrients in agriculture and aquaculture threatens the quality of land and now also the Bay

[209] USDA (2019) *Gain report- Bangladesh Grain and Feed Annual 2019.* BG 1903. USDA Foreign Agricultural Service.

[210] The Independent (2019) Steps taken to bring poultry farmers under registration. *The Independent.* 26 January.

[211] World Bank (2018) *Livestock and Dairy Development Project*.

[212] GoB (2019) *Annual Report 2018-19*. Dhaka. Department of Livestock Service. Ministry of Fisheries and Livestock.

of Bengal, parts of which suffer from eutrophication[213] leaving 'dead zones' that affect marine fisheries too.[214] In addition to monitoring farming practices and the utilisation of land for fish farming, due attention needs to be paid on the assurance of the competitive quality of fish and feed, value addition and traceability of supply chain through updating the acts and rules in existing legislative documents.

Promote intensive aquaculture production

Average pond aquaculture productivity is 4.9 ton/ha in Bangladesh[215], while Vietnam produces 20 ton/ha and 30 ton/ha without and with aeration, respectively.[216] There is, therefore, plenty of room for improving productivity in Bangladesh through mechanisation, for example, the use of RAS (Recirculating Aquaculture System), or biofloc technique of enhancing water quality through balancing carbon and nitrogen in the system. Intensive farming can further be promoted by ensuring low-cost and quality feed through increased domestic production of raw materials and/or bilateral import negotiations.

Finalise the policy framework for cage culture

Cage farming is gaining popularity with rui, pangas, boal, magur, *pholi,* butter catfish and koi now being farmed in nearly 10,000 cages in rivers. This is a recent phenomenon and there is much scope for further promoting cage culture in inland open and marine water in order to expand aquaculture production. However, in the absence of a legal framework defining user rights, this will be complicated. Thus, the DoF is drafting a policy to this effect which needs to be finalised.

Bring nutrient-dense and indigenous fish species into commercial culture

Conventional culture fisheries mostly grow the exotic (Indian carps, pangas, tilapia, etc.). and crossbred fishes. The preference for these fish species varies according to consumers, but the demand for nutrient-dense and indigenous species of fishes such as *gulsha, tengra, shing, koi, pabda, taki, shol,* eel, *mola, dhela, batasi, kachki, gutom* is constant and yields a premium price. These species are naturally rich in good quality protein, micronutrients and essential fatty acids, adaptive to local ecological conditions and respond to consumer preference with their traditional taste and flavour. Scaling up the production of these species and bringing them into processed and frozen form could substantially boost the country's aquaculture production.

Harness the opportunity of the Blue Economy

The verdict of the International Tribunal for the Law of the Sea on the Bangladesh-India-Myanmar maritime dispute in 2015 opened opportunities for the Blue Economy of Bangladesh with new rights of access on 200 nautical miles of deep-sea in the Bay of Bengal. Unfortunately, existing artisanal fishing is already over-exploited[217] with a presence of 68 thousand boats.[218] Marine fishing in the artisanal area needs to be rationalised and the deep-sea area exploited to its full potential. Along with marine fishing, mariculture of seaweed and other macro algae, mussels, oysters, marine pearls and sea cucumber are subsectors with potential for both growth and value addition. This can be achieved through due

[213] Excessive richness of nutrients.

[214] Arju, Md. (2019) *Bangladesh's polluting fish farms.* thethirdpole.net.

[215] GoB (2019) *Yearbook of Fisheries Statistical of Bangladesh*. Dhaka. Department of Fisheries. Ministry of Fisheries and Livestock.

[216] Seafood Trade (2014) *Intensive pond farming.*

[217] Islam, M.M, Shamsuzzaman, M.M., Mozumder, M.M.H., *et al.* (2017) *Exploitation and conservation of coastal and marine fisheries in Bangladesh: Do the fishery laws matter? Marine Policy*. Volume 76.

[218] GoB (2019) *Yearbook of Fisheries Statistical of Bangladesh 2019*. Dhaka. Department of Fisheries. Ministry of Fisheries and Livestock.

partnerships between the public and private sectors. Extending good practices is needed for the promotion of sustainable use of resources. The Blue Economy is a concept for the sustainable development of the ocean economy which requires a cross-sectoral approach for economic and sustainable development of the coastal region of Bangladesh. As such, the various ocean industries involved (tourism, ship breaking, fishing, marine agriculture, energy production) need to develop a holistic approach and common strategy for coastal and marine development.

Livestock sector

Reduce feed and health management costs in intensive farming

Low profit margins prevail in intensive livestock farming in Bangladesh. This can be attributed mainly to high feed costs (60-70% of total production cost) and herd health management costs.[219] Import dependency for feed ingredients contributes to feed price hikes, and the occurrence of emerging and re-emerging diseases including transboundary diseases gives rise to important treatment costs, especially in high yielding livestock farms because of poor adaptability. Policies to pre-negotiate imports and increase the production of local feed ingredients, to develop local vaccines and medicines, and to boost disease control capacities may contribute to the transformation of existing family farms into commercial farming. In the wake of the COVID-19 pandemic, guaranteeing affordable feed will be paramount especially as many farmers will need to recover from important losses and rebuild their business. Indeed, shortages in imported feed or medical supplies such as vaccines for example or limited services from veterinaries will have set back the industry on a large scale.[220] Collateral free loan with low interest rates may have to be adopted for several years, requiring a 'specially subsidised input support allocation' in annual government budgets.

Enabling the cooperative and farmer centre systems

Bangladesh Milk Producers' Cooperative Union Limited (Milk Vita) has been a successful model of dairy producer's cooperative since 1965. Further expansion of this model throughout the country has the potential to sustain the livelihood of milk producers and to boost the country's dairy production towards self-sufficiency. Alternatively, farmer centre systems could be a viable option for dairy farmers to rent a space for their cows, cold chain storage facilities, access to inputs, veterinary services, machinery, market, price information and other services. To successfully support the establishment of these models it would be essential to ensure reaching out to successful cases applied globally of farmers organisations and farmers' social networks, for instance, WeFarm and Producers Direct.

Support the development of livestock sector value chain

Vertical integration among different stakeholders of the livestock sector (input, production and distribution) could help enhance the production capacity, mitigate risks and enhance market competitiveness of small-scale farms. Integration may enable small-scale farms to use mechanisation, improve livestock breeds and establish climate-resilient livestock housing and management. Also, high yielding feed and fodder production could be promoted along with its processing and storage to support the sustainability of LDDP. Use of fallow lands and promotion of floating aquaponics for fodder production in *haor* and *char* areas and the introduction of fodder as inter-crops may be viable options. In addition, adoption of livestock insurance may reduce stakeholders' risk with reinforced production capacity.

[219] UNIDO (2019) *The dairy and beef value chain in Bangladesh*. Draft Report.

[220] FAO (2020) *FAO COVID-19 Rapid Assessment of Food and Nutrition Security in Bangladesh.* Dhaka.

5 Progress towards Outputs for Outcome II

5.1 Programme II.1. Strengthened post-harvest value chain with particular focus on MSMEs

Programme II.1 aims to develop and strengthen food value chains thereby supporting improved access to safe and nutritious food, and rural incomes generation. It focuses on post-harvest issues and the role of MSMEs, namely: storage, processing, branding, labelling, marketing and trade. It comprises three sub-programmes: II.1.1. Develop skills and strengthen capacity to process and supply safe and nutrient-rich foods with an emphasis on quality standards and nutrient labelling information; II.1.2. Adopt appropriate technology and strengthen infrastructure to allow quality improvement, value addition and fortification of foods; and II.1.3. Mobilise and promote producer and marketing groups for improved market access and bargaining power, especially for women and smallholders.

5.1.1 Assessment of progress

Table 17 - Progress towards achievement of Programme II.1

CIP2 output proxy indicators	Commodity /Item	2015/16 Baseline	2016/17	2017/18	2018/19	Source
Quantum index of medium and large-scale manufacturing industry for food[221]		385.1	410.4	501.2	562.7	BBS Statistical Yearbook
Difference between farmgate and retail price of selected goods	**Coarse rice**	10%	5.80%	8%	9.17%	DAM, MoA
	Lentil	55.2%	70.6%	18%	18.6%	
	Onion	23.6%	24.1%	22%	30.21%	
	Brinjal	51.7%	44.6%	48%	35.47%	
	Potato	29.1%	31.4%	32%	34.09%	
	Green chili	105%	52%	153%	66%	
Food and beverages exported in million BDT		69,020	80,712	93,584	112,119	BBS Statistical Yearbook/ Bangladesh Bank
Coverage of agrobusiness entrepreneurship training by the MoA and the MoI (BSCIC)		7,620	11,271	12,199	10,057	MoA, MoI

Production of medium and large-scale food manufacturing industries continued increasing

The quantum index for both private and public medium and large -scale food manufacturing industries summarizes the sectoral production trends. In 2018/19, It rose to 562.7 by 12% year-on-year and by 46% from the baseline (Table 17). The indicator shows that food processing is expanding slightly more slowly than the previous year but in continuity with a robust growth trend. The major food and beverage industries in Bangladesh includes Transcom Beverages Ltd., Square Food & Beverage Ltd., Acme Food & Beverage Co., Akij Food and Beverage Ltd., Partex Beverage Ltd. and PRAN Foods Ltd. As of December 2019, the Bangladesh Agro-Processors' Association (BAPA) already enlisted 282 food manufacturers mostly involved in exporting dry and processed food, seeds, pickles, potato chips and flakes, puffed rice, frozen vegetables, spices, juice, candy and other snacks.[222]

[221] The quantum index of medium and large-scale manufacturing industry for food is a proxy variable for the CIP2 indicators:- 'Number of large establishments for manufacturing food' and 'Number of medium, small and micro establishments manufacturing food'. It is calculated based on the total production for manufacturing food from the selected medium and large manufacturing industries from both the private and public sector.

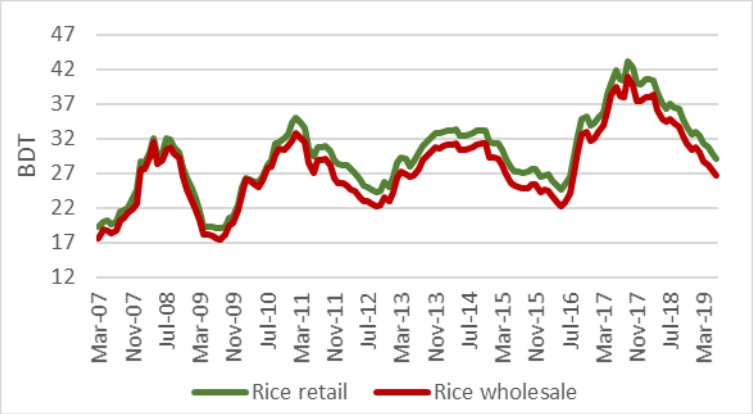
[222] BAPA (2020) List of active members of BAPA.

Farm gate-retail price differences widened, except for brinjal and green chilli

The difference between farm gate and retail prices is a measure of the value addition which farmers are able to capture from the value chain in relation to the other agents operating along the value chains. In 2018/19, it increased for all the monitored food commodities except for brinjal and green chilli (Table 17) which registered 35.5% and 66% in 2018/19 from 48% and 153% in 2017/18, respectively. Year-on-year differences between farm gate-retail prices widened only slightly for coarse rice (+1.2 percentage points), lentils (+0.8 percentage points), and potato (+2.1 percentage points). Onion registered a more sustained increase by 8.2 percentage points which was probably due to the surge in its domestic price transmitted from India (increasing since the end of 2018/19 financial year).[223]

Farm gate-retail price difference for lentils remained on a similar level compared to the previous year due to low import price. In case of potato, the increasing trend over the reference period suggests that farmers progressively lower margins compared to other agents, exacerbated by some inefficiencies in the marketing systems, such as growers' illiteracy and lack of information on price, and syndicate system of middlemen.[224] The average difference between retail and wholesale rice prices in the first half of 2019 was 2.43 BDT/kg. A harvest fall due to bad weather and private imports contributed to the divergence in retail and wholesale prices (Figure 16).

Figure 16 - Retail and wholesale rice price (nominal)



Source: Data from DAM

Table 18 presents the price transmission dynamics in the value chains of brinjal, potato and tomato. Among the various agents, farmers obtain the lowest profit while retailers receive the highest. In 2018 Tomato value chain has been producing the largest margins, closely followed by brinjal with potato lagging behind.

The production cost of some agricultural commodities is calculated by DAE based on one acre of land of production (Figure 17). While the production cost of garlic is the highest among the selected crops at BDT 31.66 per kg, with its retail price fluctuates between BDT 80 and 100, garlic's cultivation shows the highest overall margin of at least 48.34 BDT per kg, over 2019 harvesting season.[225] The production cost of onion is BDT 17 per kg and the seasonal retail price varies between BDT 40 per kg and 60 per kg. The production cost of *boro* rice is amongst the highest (BDT 24.5 per kg) and its retail price is the most stable oscillating from BDT 34 per kg to 36 per kg. Both The production cost of potato BDT 7.6 per kg and its retail price (ranging from BDT 18 per kg to 22 per kg) are the lowest among those analysed.

[223] Due to reduced harvest induced by excessive rainfall, the price of onion in India increased up to a record 111 rupees/kg on December 17. The export of onion from India was therefore temporarily banned in September 2019 and until 15 March 2020. This contributed to the surge in domestic price and reduced availability in Bangladesh.

[224] Singha, U. & Maezawa, S. (2019) *Production, Marketing System, Storage and Future Aspect of Potato in Bangladesh*. *Reviews in Agricultural Science.* Volume 7. pages 29-40.

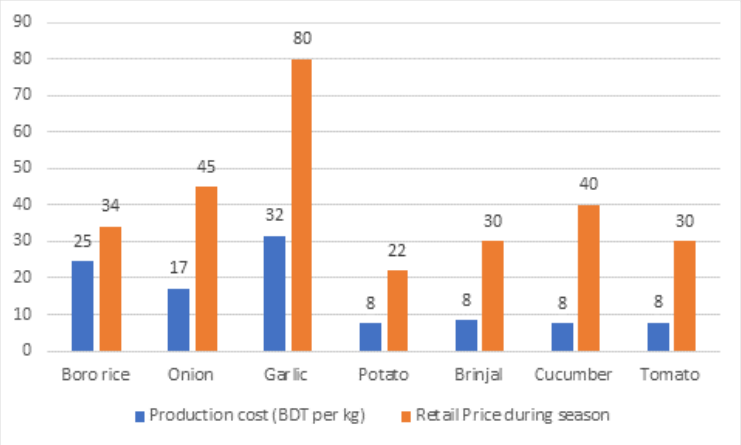
[225] DAM price on 3rd March 2019.

Table 18 - Price transmission (in BDT) in the value chain of brinjal, potato and tomato

Agent	Brinjal			Potato			Tomato		
	Production cost / Purchase price	Sale price	Gross profit	Production cost / Purchase price	Sale price	Gross Profit	Production cost / Purchase price	Sale price	Gross profit
Farmer	8.36	10.25	1.89	7.6	8.85	1.25	7.66	9.76	2.10
Local trader	10.25	13.85	2.5	8.85	12.2	2.25	9.76	13.67	3.05
Wholesale	13.85	19.25	4.13	12.2	17.15	3.35	13.67	21.47	6.60
Retailer	19.25	30	9.36	17.15	22	3.95	21.47	30	7.28
Consumer	30	-	-	22	-	-	30	-	-

Source: DAM Annual Report 2018 (October 2018)

Figure 17 - Production cost (BDT per kg) and retail price of selected crops



Source: Data from DAM Annual Report 2018 (October 2018) and DAM website accessed on 24th March 2019

Increased and more diversified food and beverage exports

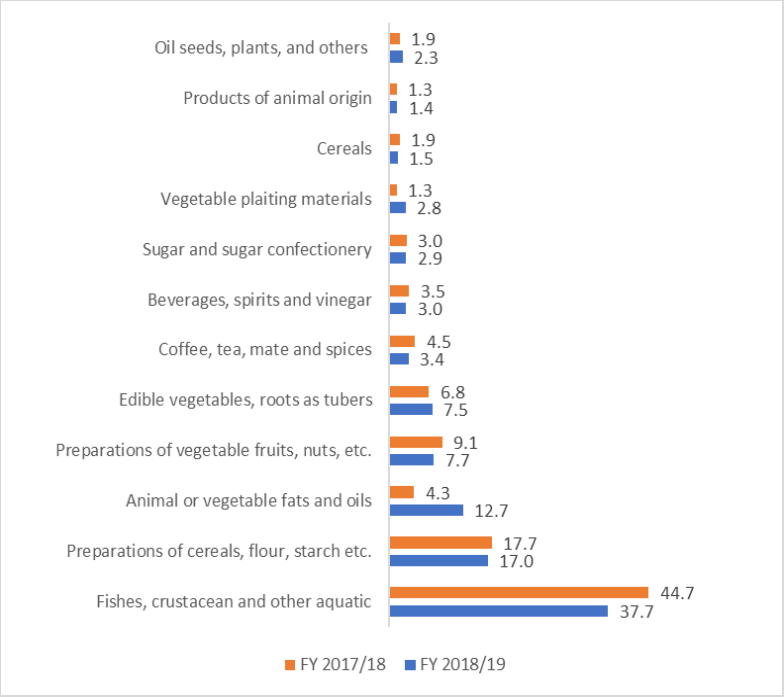
Food and beverage exports increased by 62% over the reference period (2015/16 – 2018/19), and by about 20% to BDT 112,119 million (Table 17), accounting for 3.29% of total exports in 2018/19 only. Fish, crustacean and other aquatic products continued to be the largest food group at 38% of total food and beverage exports down from 45% of the previous year (Figure 18). This was partially due to the waning international prices of shrimp and the weak competitive pricing of black shrimp – which registered a -13% in export earnings to USD 365 million (33,362 MT) in 2018/19, against the Vietnam shrimp.[226]

In 2018/19, cereals, flour, and starch products represented the second largest exported food group (17%), followed by vegetables, fruits, and nuts (BDT 8,622 million, 7.7%), which slightly contracted their share (from 9.12%) while increased in absolute value (up from BDT 8,533 million). The decline in the shares of the previous food groups was offset by an increased share of cereals (1.5%), animal and vegetable fat (13%), and sugar (3%) (Figure 18). The GoB plans to increase agro-processing exports to BDT 170 billion (5% of the total export value) by 2021 by creating a conducive environment of agro-processing exporters.[227] However, reaching this target may be hampered as a result of the COVID-19 pandemic.

[226] Rahman, S. (2019) *Drastic fall in shrimp export earnings*. *The Financial Times.* 31 August.

[227] Dhaka Tribune (2019) *Export earnings from processed food to exceed $1b by 2021*. *Dhaka Tribune.* 19 November.

Figure 18 – Components of food and beverage exports in % of total value



Source: Data from BBS Foreign Trade Statistics.

Agrobusiness entrepreneurship training and capacity building programmes continued

The Ministry of Agriculture and the Bangladesh Small and Cottage Industries Corporation (BSCIC) of the Ministry of Industries (MoI) imparted entrepreneurship training and capacity building to 10,057 farmers and entrepreneurs in 2018/19. This number compares with 7,620 farmers and entrepreneurs in the baseline, and with 12,199 of the previous year.

5.1.2 Policy development, programmes and initiatives underway

Cumulative investments in strengthened post-harvest value chain over the CIP2 period totalled 234 million USD, 1% of CIP2, 78% of which was already financed by GoB (54%) and DPs (46%). Almost half of the financed budget is channelled through the following two projects: the 2nd phase of the *Rural livelihood project (RLP)* and the *Livestock development-based diary meat production project (LDDMPP).* The pipeline budget stood at 58.6 million USD with an additional 203 million USD planned beyond the life of the CIP2. The nutrition-weighted budget stood at 117 million USD, 75% of the total programme's budget, as the projects included were assessed as nutrition-sensitive.

Establishing a favourable policy and technical support to food processing

An agro-food processing promotion policy 2019 is being developed by the MoI. The 20% cash incentives and tax exemption for the export of selected fresh and processed food items continued. The National Agriculture Policy 2018 (NAP 2018)[228] developed aiming to make agriculture safe and profitable, achieving sustainable FNS with among others, emphasis on reducing postharvest loss, enhancing agro-processing activities and extending postharvest technology to end-users. The Export Policy 2018-21[229] provides a clear rationale for the adoption of good practices to produce and export safe food. The Hortex Foundation

[228] GoB (2018) *National Agriculture Policy (NAP) 2018*. Dhaka. Ministry of Agriculture.

[229] GoB (2018) *Export Policy 2018-2021.* Dhaka. Ministry of Commerce.

of MoA and Bangladesh Fruits, Vegetables and Allied Products Exporting Association (BFVAPEA) provide primary producers and exporters with support for compliance with regulatory standards of the importing countries. Hortex Foundation also partnered with BAPA and provided technical supports to the association working for fostering food processing industry in the country. The BFVAPEA facilitates the production of high quality and safe fruits and vegetables through contract growers for export purposes.

Modernised quality and safety standards and monitoring and surveillance by the regulatory authority

BFSA produced two important regulations: Food Safety (Food Hygiene) Regulations 2018[230]; and Food Safety (Food Contact Materials) Regulations 2019, under the Food Safety Act 2013.[231] BFSA also increased its analytical capacity by installing a modern Mobile Food Testing Laboratory. The Bangladesh Standards and Testing Institution (BSTI) has increased monitoring and surveillance in storage, processing industries and the market for quality control of mandatory processed food products (cereal products, oilseed products, dairy products, fruits and vegetable products, spices and condiments, etc.). BSTI also revised Bangladesh Standards (BDS) on pasteurized milk, poultry feed, chip-crackers*, lachcha-semai* with up-to-date scientific information.

Private sector initiatives on safe production and postharvest practices

Within the agro-industry, Bio-Tech Mushroom, a button mushroom production company, recently started the production and marketing in Bangladesh. It is registered under Bangladesh Investment Development Authority (BIDA), Prime Minister's Office, People's Republic of Bangladesh. Throughout the entire production and supply chain - from importing premium quality spawn and compost to growing, picking, packaging and delivering to consumers' door-steps - strict quality assurance and quality control policies adhere to GAP and comply to HACCP (Hazard Analysis and Critical Control Points), ISO 22000:2005 and BRC (British Retail Consortium).[232] The establishment of a Village Super Market[233] in Khulna, supported by the INGO Solidaridad, is another example of adopting improved postharvest technology in the handling and distribution of perishables.

Promoting nutrition-dense and export-oriented value chains

The MoA has been implementing the *Smallholder Agricultural Competitiveness Programme (SACP*)[234] and working with 250,000 farmers who engaged in production, primary processing and value addition of high-value crops. It targets the cultivation of high-value crops such as cereal, fruit and vegetable, pulse and oil crops for farmers to increase their revenues and profits. Scaling up underutilized local fruits and vegetables is especially relevant in this regard, with a need for promoting their greater use in local food systems and not only targeting high-value export chains but leveraging the nutritional benefits for local consumers. Proper post-harvest management is critical as it enhances the quality, nutritional and economic value of crops while reducing different types of loss. This includes innovations made in the packaging sector. For example, newly designed packaging materials for sugars and sugar-cubes have been developed at the Carew & Co., the State-owned only distillery in Bangladesh located inside the Darsana Sugar Mill compound and under the authority of Bangladesh Sugar and Food Industries Corporation.

[230] Bangladesh Food Safety Authority (2018) *Food Safety (Food Hygiene) Regulation 2018.* In Bangla.

[231] Bangladesh Food Safety Authority (2019) *Food Safety (Food Contact Materials) Regulation 2018*. In Bangla.

[232] Bio-tech Mushroom.

[233] Village Super Market, Khulna.

[234] IFAD (2018) *Smallholder Agricultural Competitiveness Programme- Final Project Design Report*. Asia and the Pacific Division, Programme Management Department.

5.1.3 Needs for further actions under this programme

Prepare a post-harvest loss reduction strategy

Major constraints in establishing efficient NSVC include inefficient handling and transportation; poor technologies for storage, processing and packaging; involvement of too many diverse actors[235]; and poor infrastructures. In light of the huge food loss and waste and the challenges faced under trade liberalization and globalisation, serious efforts are needed to reduce food losses and waste. To that end, NSVC establishment ultimately aims at reducing post-harvest loss and assuring food quality and safety for the ultimate users. Considering the global initiatives to reduce food loss and waste and to achieve SDG 12.3.1, preparation of a post-harvest loss reduction strategy and action plan is urgently needed. Similar national food loss and waste reduction strategy have been developed by Canada[236] and the European Union.[237]

Strengthen product certification to ensure quality and safety

Although the export-oriented large-scale food processing industries have quality and safety certification (GMP, GHP, HACCP, ISO 22000:2005, etc.), certified farms for primary producer (e.g. GAP and ASEAN Good Aquaculture Practices (ASEAN GAqP) are almost absent in Bangladesh. So, steps to be taken to bring the primary producers and MSMEs under various certification schemes to assure product quality and safety for the domestic and export markets. The Bangladesh Agricultural Certification Body (BACB) has been established to provide Bangladesh GAP Certificate but yet to start functionality.

Enhance institutional and individual capacity to support post-harvest systems

Improved post-harvest handling and strengthened value addition activities are the needs of the time. Individual capacity development of food chain actors in the food chain needs to be ensured through vocational education, training and exposure visit. On the other hand, institutional capacity strengthening is required through establishing modern post-harvest research centre or laboratories, research development support, integrating nutrition-sensitive postharvest processing modules in the existing curricula and scaling up extension facilities and services for effective transfer of technologies. Both individual and institutional capacity development need to be monitored using built-in monitoring and evaluation tools and mechanisms.

Strengthen partnership and collaboration to set up post-harvest facilities

Public-private partnership is crucial to introduce new and modern postharvest technologies like refrigerated transport vehicle, low temperature storage, modern slaughterhouse, improved packaging, ethylene-induced ripening chamber, etc. For example, in the case of multi-chambered low temperature storage facilities for fruits and vegetables (except potato), few cold stores may be established by the public sector in order to encourage the private sectors to do more. This is the case of the public-owned (MoA) Central Packing House established in Shampur (Dhaka) to facilitate the export of fresh high quality and safe fruits and vegetables. This facility is equipped with cooling, sorting, grading, inspection and packaging facilities. Similar facilities (especially storage facilities) may be established in major fruits and vegetables growing regions and assembly and whole markets, to reduce the large amounts of loss and waste.

Successfully tackling food loss and waste throughout a supply chain necessitates coordinated action and true collaboration- within the country, and globally. Initiatives are currently taking place in Bangladesh,

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[235] Hassan, M.K. (2012) *Final Report- Improving the Performance of Marketing System of Fruits and Vegetables in Bangladesh*. NFPCSP Research Grants Initiative. Dhaka. FAO.

[236] National Zero Waste Council (2018) *A Food Loss and Waste Strategy for Canada*. Vancouver. Canada.

[237] European Union (2019) *National Strategy for Food Waste Reduction*. Federal Ministry of Food and Agriculture.

but with limited coordination. The emerging focus on food system sustainability, climate protection, agricultural mechanisation and food safety requires strong effective national and international collaborations among various organisations and entities involved.

Increase the competitive environment for agro-processing to boost exports

Bangladesh's agro-processing sector is a 3.2 billion USD industry as per annual turnover. Export earnings of agro-processing companies are growing: BAPA reported a record 700 million USD total export earnings in 2018/19, up 10.24% over the previous year.[238] Creating an enabling environment with, for example, the provision of incentives, especially by way of soft credit, or continued tax exemption and cash incentives, can boost this sector. Export opportunities in global markets can only be exploited through long-term planning with an emphasis on market research, product adaptation and assurance of rigorous compliance requirements. Market research provides information on product needs and changes in consumers' tastes and preferences, and on compliance requirements of importing countries. In addition to processed food, fresh horticultural produce, especially fruits and vegetables, are exported particularly to countries with a large Bengali diaspora. However, to access mainstream export markets exporters must comply with the rigorous compliance requirements of importing countries. Primary producers and MSMEs require technical and financial support to adopt improved practices throughout the supply chain (GAP, GMP, GHP, HACCP, etc.) to assure product quality and safety for domestic and export purposes. ISO 22000, for instance, facilitates border crossing of products so as to bring people food that they can trust.

Explore blockchain as a mean to ensuring traceability of nutrient-rich foods

Establishing blockchain is a future need for NSVC management. Blockchain is a decentralised, distributed and public digital ledger that is used to record transactions across many computers so that the record cannot be altered without the agreement and active involvement of everyone in the network. Transactions can be viewed simultaneously and in real-time, with both greater security and transparency. However, there are many barriers and challenges that hinder its wider popularity among producers and systems. The challenges involve technical aspects, education, policies and regulatory frameworks. High-speed internet service and devices are crucial for chain management through efficiently linking the postharvest operations and the value chain actors.

Food value chain covers activities and participants involved in moving food products from the growers to the consumers. Participants in this chain need financing to carry out their activities. MSMEs generally turn to traditional financing institutions, rural producers, processors and retailers, whereas large companies receive resources from banks. In India, some commercial banks have invested in acquiring knowledge about domestic agricultural markets to identify unmet financial needs that they can serve. The strategy used to cater to this clientele segment leverages on digital technology to ensure these services are more convenient to clients, in addition to having low operation costs. Digital technology can also be tailored to fit unique transactions that take place in agricultural value chain segments. In addition, it allows the recording of a transaction history which can then be used for the development of additional rural financial services.[239]

[238] Ahmed, W. (2020) *Processed food export*. *The Financial Express*. 10 March.

[239] FAO (2017) *Innovative risk management strategies in rural and agriculture finance – The Asian experience*. *By* Emilio Hernández (ed.). Rome.

Innovate in packaging and storage

Improved packaging is a must for prolonged shelf life, retained quality and safety of food. There is a strong correlation between foods with the highest percentage of wastage and the least amount of packaging.[240] There is a lack of improved packaging, especially for perishables in Bangladesh although large-scale food processors are increasingly engaged in packaging innovation, ranging from the materials used to technologies that can help reduce contamination of packaged foods on the assembly line. But more research is needed to understand what the most effective packaging approaches and technologies might be, such as passive technologies, or active and intelligent packaging through chemical or biological agents to prevent food spoilage. Any new food packaging introduced must be of food-grade and approved by food safety standards and regulations.[241] Proper labelling also needs to be assured. Food items have an array of date labels that cause consumers to be wary of buying or consuming food such as: 'best before', 'use by', 'sell by' and 'expiry'. However, labelling needs to abide by the recently promulgated Packaged Food Labelling Regulations 2017 of BFSA.[242]

[240] Ameripen (2018) *Quantifying the Value of Packaging - As a strategy to prevent food waste in America;* McEwen Associates (2013) *The Value of Flexible Packaging in Extending Shelf Life and Reducing Food Waste*. Prepared by for the Flexible Packaging Association.

[241] BFSA (2019) *BFSA Food Contact Materials Regulations 2019*.

[242] BFSA (2017) *BFSA Labelling Regulations of Packaged Food 2017*.

5.2 Programme II.2. Improved physical access to markets, facilities and information

Programme 2.2 focuses on improving the physical access to market, facilities and information which consists of three sub-programmes: (II.2.1.) Improve market infrastructures, physical access to market facilities, (II.2.2.) Strengthen private sector participation and private-public partnerships, and (II.2.3.) Scale-up information dissemination including the establishment ICT (Information and Communication Technology) facilities.

5.2.1 Assessment of progress

Table 19 - Progress towards achievement of Programme II.2

CIP2 output proxy indicators	2015/16 Baseline	2016/17	2017/18	2018/19	Source
Upazilla and union road network in good and fair condition	33% (2014)	49%	47%	49.44%	LGED
Number of growth centres, rural markets, women market centres, and Union Parishad Complexes developed by LGED and DAM	356	385	367	386	LGED, DAM
Capacity of cold storage available (in thousand MT)	4,000 (DAE)	7,000 (DAE)	6,905 (DAE)	7,015 (DAE)	DAE. BBS Statistical Yearbook
Number of Digital Centres across the country at national and sub-national levels	5,286 (2016)	5,286 (2017)	5,312 (2018)	5,865 (2019)	Ministry of ICTs
Number of food, market and infrastructure PPP contracts awarded (2015) by the PPP authority	2 (2015)	0	0	0	Annual Report 2015/16, Public Private Partnership Authority, Prime Minister's Office

The improvement of rural roads continued but is still off target

Rural connectivity plays a fundamental role in generating both on and off-farm rural income, providing employment opportunities and in ensuring physical access to food thereby supporting improving nutritional outcomes. Upazila and union road networks in good and fair condition improved to 49.44%, up 2.44 percentage points year-on-year, and 16.44 percentage points over the reference period (Table 19). Despite this positive trend, rural connectivity remains weak with 40% of the rural population only able to access all-weather roads (28% of the rural roads)[243] which is still far off the 80% target by 2020.[244] To strengthen rural connectivity between rural communities, productive agricultural areas and socioeconomic centres, LGED and ADB kick-started the 285 million USD *Rural Connectivity Improvement Project July 2018- June 2023.* The project's interventions aim at upgrading 1,700 km of rural roads to all-weather standards in 34 districts located in five divisions; improving the capacity of infrastructure agencies; and financing the enhancements to the national rural road master plan.[245]

More growth centres and rural markets developed over the previous year

The number of growth centres, rural markets, women market centres and Union Parishad complexes increased over the previous year by 19 units to a total of 386. While having new establishments is certainly

[243] The Financial Express (2019). *ADB provides $200m to upgrade rural road network in Bangladesh*. 13 January.

[244] *Rural Connectivity Improvement Project (RCIP).*

[245] ADB (2018) *Bangladesh: Rural Connectivity Improvement Project - Project Administration Manual.* Project Administration Manual. September.

important, quality maintenance of the existing centres play an essential role in ensuring the quality of perishable food products.

Cold storage capacity remained constant over the previous year

Cold storage capacity expanded over the reference period from 4,000 MMT at baseline to 7,015 MMT in 2018/19 but remains at the same level as the previous two years which is a worrying signal. Bangladesh Cold Storage Association (BCSA) which is a platform of some 400 cold storage owners reported that during the 2018 harvesting season, farmers and cold storage owners together incurred a loss of BDT 125.15 billion due to low prices and unsold produce at the warehouses, and this could have been prevented by having more cold storage.[246] Therefore, through DAM, the government has decided to establish 500 zero-energy cool chambers (ZECC) on the household premises of 500 selected farmers in 31 districts over the next five years. Three thousand vegetable growers, 875 officers and 750 employees of DAM will also be trained in the usage of ZECC storages[247]

The number of Digital Centres increased

Digital centres in rural areas play an essential role in ensuring the delivery of a variety of public services to the underserved rural households thereby realising digital inclusion by helping more than six million previously under-served citizens.[248] The number of digital centres increased, from 5,286 in the baseline to 5,865 in 2018/19.

5.2.2 Policy development, programmes and initiatives underway

Cumulative investments to improve access to markets, facilities and information is the largest CIP2 programme with its 6.7 billion USD budget, 35% of the CIP2, which was nearly entirely financed (97%) largely by GoB (87%) as well as DPs (23%), as of 30th June 2019. One fourth of the Programme II.2 financed budget is implemented through the four largest rural infrastructural development projects implemented by LGED and DDM. The remaining pipeline reduced to 180 million USD which is likely to be financed over the next and last CIP2 financial year. The post-CIP2 budget, falling beyond the 30th June 2020, stands at 3.5 billion with the continued larger involvement of the GoB (68%) over the DPs (32%).

Expansion of storage, transport and laboratory infrastructure

Establishment of an efficient cold chain is essential to ensure NSVC both in the public and private sector. In addition to public sector storage facilities for foodgrain, there are more than 400 private cold storage units for potato in Bangladesh. But there is a dearth of low-temperature storage facilities as well as cool transportation facilities for other perishables, especially milk, fish, fruits and vegetables. Adequate refrigerated transportation facilities need to be established throughout the country through public-private initiatives in order to reduce loss and waste and maintain the quality and safety of food. The ADB-supported *Rural Connectivity Improvement Project (RCIP)* aims to: upgrade about 1,700 kilometres of rural roads to all-weather standards under 34 districts; to improve the managerial and technical capacity of LGED's officials, the road users' awareness on road safety in project areas, and the skills of women workers in road construction; and to enhance the rural road master plan, by using GIS (Geographic Information System) to identify agricultural value chains, road conditions, and mechanisms for allocating priorities, and resource optimisation.[249] Although export-oriented large-scale food processing industries receive

[246] The Financial Express (2018) *Cold storage owners in need of govt support*. 1 April.

[247] Dhaka Tribune (2019). *500 cool chambers for vegetables at growers' doorsteps planned.* August.

[248] See the a2i One-Stop Shop website.

[249] ADB (2018) *Bangladesh: Rural Connectivity Improvement Project -. Project Administration Manual.* Project Administration Manual. September.

quality and safety certification (GMP, GHP, HACCP, ISO 22000:2005, etc.) from a number of certified farms for primary producers (e.g. GAP, GAqP, etc.), the extensive certification is scant in Bangladesh. The MSMEs and the primary producers are in dire need of quality certification, and the Bangladesh Agricultural Certification Body (BACB) which was recently established is yet to start delivering Bangladesh GAP Certificates.

Innovations to share information and enhance market opportunities

Several initiatives have been undertaken to improve networking and knowledge exchange between different actors in the value chain. They are paving the way for improved market services for farmers and consumers. Modern technologies such as IoT, machine learning and artificial intelligence contribute to modernising agriculture. The GoB is also working to mainstream ICTs throughout the agricultural value chain. In February 2017, the Bangabandhu Sheikh Mujibur Rahman Agricultural University, Huawei Technologies and Awami League's research wing Centre for Research and Information signed an MoU to initiate the *E-Village Project.*[250] They will deploy and test sensor-based real-time data collection and information sharing for the farmers. Another example is *Krishi Kontho***,** an agricultural information service which utilises pre-recorded voice messages and SMSes pushed to farmers.[251] The agricultural information service *Krishi Kontho* was developed by the international NGO Christian Aid in collaboration with the technical partner mPower, the local NGO Gana Unnayan Kendra (GUK), and local farmers subjected to field trials.

Traditionally, small-scale farmers have been unable to access financial services. The online fintech platform *iFarmer* connects farmers to retail investors. It enables access to funding without using farm assets as collateral. Banks can massively contribute to developing the rural agriculture and agro-processing sectors. There have been continued efforts to make up for the lack of rural banking infrastructure and the agro-processing sector was declared a priority sector by the government. The Rajshahi Krishi Unnayan Bank (RAKUB) has also introduced a special credit programme promoting small agro-enterprises (see Outcome I).[252]

Establishing markets for safe and fresh foods

Food safety, quality and nutritional aspects are critical concerns for agri-businesses in Bangladesh. The consumers have limited trust in agri-products. To foster a market for safe food, Shwapno, the chain store with support from the *Agriculture Value Chain (AVC) Project* launched a new brand initiative 'Shuddho'[253] whereby markets are supplied with agricultural foods of high standards and safety. AVC along with GLOBALG.A.P. and the Dhaka Chamber of Commerce and Industry has significantly improved the supply chain and trained the farmers and services providers about Good Manufacturing Practices (GMP). This has generated consumer interest and a market for certified safe food in Bangladesh.

[250] CRI (2019) *E-village- digitally empowering village*.

[251] Christensen, L.R., Ahsan, H. & Akand, E. (2018). Krishi Kontho: An Agricultural Information Service in Bangladesh. *NordiCHI '18: Proceedings of the 10th Nordic Conference on Human-Computer Interaction*. September. Oslo.

[252] Innovision and Katalyst (2016) *Study on the Roles and Opportunities for Private Sector in Agro-food Processing Industry of Bangladesh*.

[253] USAID (2019) *Bangladesh USAID Agriculture Value Chain Project.* United States Agency for International Development. US Government.

5.2.3 Needs for further actions under this programme

Incentivise private sector for high-value crop processing

An agri-processing zone can significantly improve the food sector and boost the economy. Studies suggest setting up agro-processing zones in the Northern region of Bangladesh since most of the agriculture crops are produced there. Such endeavour can significantly reduce transport costs. To facilitate private sector investment, the government may provide incentives such as easy land leasing system, one-stop service for all utility connections, guarantee for loans and tax concessions. The private sector can build the infrastructure in exchange for land and basic utilities. This will lead to enhanced private public partnerships.[254]

Establishment of e-markets and secure payment systems

Developing a virtual platform to create a unified national market for agricultural commodities can help improve competitiveness and transparency in the market. The platform could inform the users about the stock arrivals, prices, buying and selling offers. Such online trading platform can reduce transactional costs, bridge the information gap, cut the middlemen and expand market access for farmers around the country. It also provides a secure e-payment modality to transfer money directly to farmers' bank accounts.

Facilitate private sector to establish safe food through IoT technologies

IoT can change the demographics of the Bangladesh agricultural sector. Modern technology can be used to inform the decision making at farm and business levels. Technology like blockchain can be used to create a digital identity of the farmers along with automated payments, agricultural insurance, traceability etc.[255] The lack of internet connectivity, awareness and human resources are the main inhibitors in countrywide implementation of sustainable and smart agricultural practices. The country needs to develop adequate infrastructure to enable the implementation of such initiatives. Private sector expertise can be used to fill the gaps and adequate policy attention should be given to allow this to happen. Big data analytics for climate-smart agricultural practices in South Asia (Big Data^2 CSA) - in partnership with the public and private sector in Bangladesh and supported by CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) - is developing digital data collection systems serving as crowdsource, data-mine and interpreting environmental, climatic and remotely sensed data, primary agronomic management, and the socio-economic data from thousands of smallholder farmers producing rice and wheat.[256] This would allow to identify key patterns in yield, profitability, greenhouse gas emissions intensity and resilience.

Dynamic and machine learning-based early warning system

With the looming climate adversities and changes in soil conditions, traditional farming methods are becoming inadequate if agriculture is to be sustained. With the help from drones, sensors and IoT devices, farmers could make better informed decisions. GIS is a low-cost tool that can help monitor crop coverage, identify fishing sites and detect soil health. It can also help collect, store and maintain climate data. IoT devices can offer 'just in time' services which could help dairy and fish farms through health care monitoring, for instance through wearable collars, artificial insemination, through accurate estrus

[254] Innovision and Katalyst (2016) *Study on the Roles and Opportunities for Private Sector in Agro-food Processing Industry of Bangladesh*.

[255] FAO and ITU (2019) *E-Agriculture in Action: Blockchain for agriculture Opportunities and Challenges*. Bangkok.

[256] CIMMYT (2019) *Big data analytics for climate-smart agricultural practices in South Asia (Big Data2 CSA)*.

detection, and automated fish feeding, thus reducing cost for the farmers and increasing farm productivity. [257]

Shorter value chain for the perishable products

Cold storage is the best way to preserve the integrity of perishable products. A cold chain from the farm to the processing units or markets can help minimise fresh produce postharvest losses. Existing cold storage facilities in Bangladesh cannot meet the country's requirements. To address this issue, shorter values chain should be encouraged. Building low-cost cold storage facilities (e.g. CoolBot) across the country could dramatically reduce food loss. It would also provide farmers the confidence they need to start growing high-value crops. Private companies may also be encouraged to establish local standard cold storage and vegetable packaging industries to foster local-level processing industries.[258]

[257] FAO (2013) *ICT uses for inclusive agricultural value chains*. Rome.

[258] Innovision and Katalyst (2016) *Study on the Roles and Opportunities for Private Sector in Agro-food Processing Industry of Bangladesh*.

6 Progress towards Outputs for Outcome III

6.1 Programme III.1 Enhanced nutrition knowledge, promotion of good practices, and consumption of safe and nutritious diets

Programme III.1 aims to improve nutrition knowledge, promote good food safety practices and consumption of safe and nutritious diets. While the emphasis is given to dietary diversity and proportionate consumption of cereal and non-cereal foods towards meeting dietary requirements of macro and micronutrient deficiencies, child stunting, wasting and the emerging concerns of non-communicable diseases (NCDs) merit attention. Promotion of a healthy diet, lifestyle and increased physical activity are key strategies to prevent NCDs. Accordingly, three subprogrammes are included in this programme. (III.1.1) is about scaling up nutrition training and behaviour change communication (BCC); (III.1.2) promotes dietary guidelines linked with NCD strategies and related nutrition services; and (III.1.3) advocates for research, development and promotion of knowledge-based tools on nutrient-dense recipes with local foods using Food Composition Tables (FCTs) for Bangladesh.

6.1.1. Progress towards achievements

Table 20 - Progress towards achievement of Programme III.1

CIP2 output proxy indicators	2015/16 Baseline	2016/17	2017/18	2018/19	Source
Proportion of children under 6 months who are exclusively breastfed (%)	55.3% (2014)	…*	65%	…*	BDHS
Share of total dietary energy supply for consumption from cereal	75.8%	75.5%	75.0%	…*	FAOSTAT
Share of total dietary energy supply for consumption from non-cereal	24.2%	24.5%	25.0%	…*	FAOSTAT
Direct gender budgeting as % of MoFood revised budget	4.3%	5.9%	31.8%	2.41%	MoF (Budget Wing)
Poor households raising home gardening and backyard poultry in selected vulnerable districts	49% (2014/15)	…*	…*	…*	BBS
Prevalence of diabetic cases per thousand[259]	8.3 R	8.3 R	8.4 R	9.2	IDF Atlas
Number of mass media activities for nutritional behaviour[260]	1,000	1,000	…*	2,606	MoHFW for 2015/16 and MoInfo and FAO for 2018/19
Number of institutions promoting dietary guidelines	3	9	9	18	FPMU

*R: Revised; *: Not available*

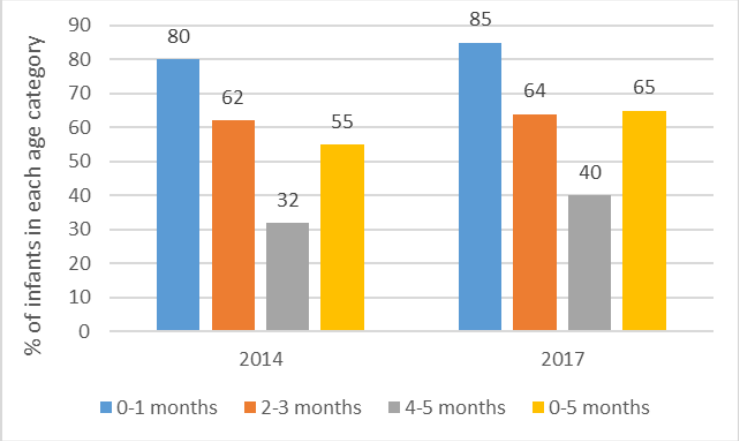
[259] Given the lack of recent available data from the source used in previous MRs, namely the MoHFW Health Bulletin, an alternative source has been sought, IDF, hence the revised numbers.

[260] The MoHFW Health Bulletin provided the numbers for the first two years of the CIP2. For 2018/19, detailed information was provided by the Ministry of Information and FAO.

Exclusive breastfeeding progressed until 2017/18 but no data is available after that

Exclusive breastfeeding (EBF) has the single largest impact on reducing child mortality than any other preventive measures.[261] BDHS showed a remarkable increase in EBF rate from 55.3% in 2014 to 65% in 2017 (Table 20). Assuming this progress continues, Bangladesh can be expected to reach the NPAN2 target for EBF, which is 70% by 2025. However, while more than 80% of children aged 0-1 months were exclusively breastfed in 2017, this was only the case for 40% of children aged 4-5 months (Figure 19). Inappropriate breastfeeding increases the risk of developing malnutrition at an early stage of life.

Figure 19 - Trend in exclusive breastfeeding (%) among infants, by age



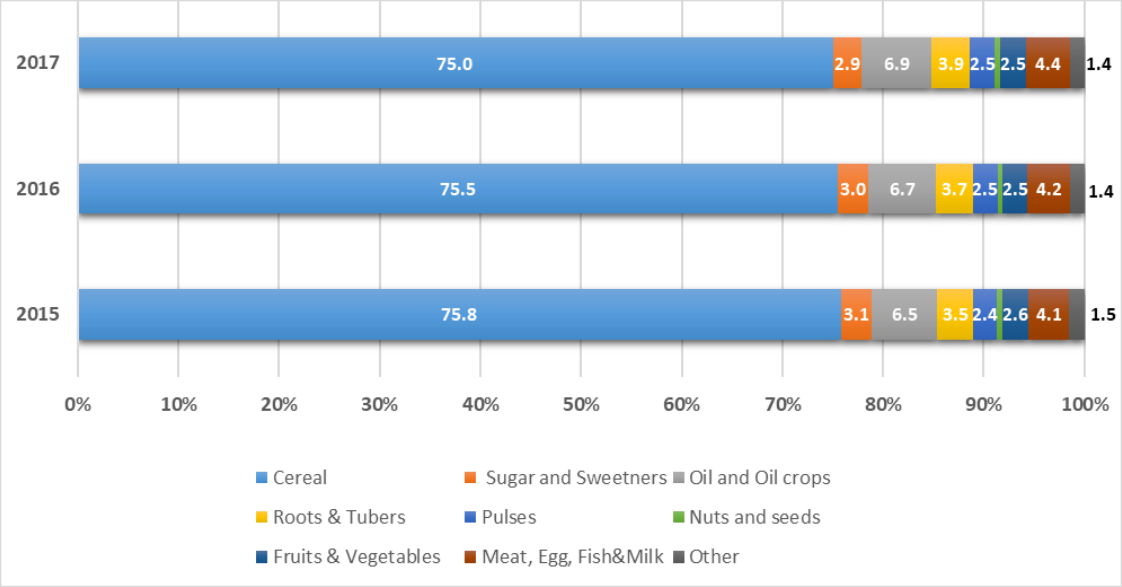
Source: Data from BDHS 2014 and 2017

Share of total dietary energy supply (DES) from cereals remained almost unchanged until 2017 after which there are no data

Between 2015/16 and 2017/18, the ratio of cereal and non-cereal food consumption per capita per day remained almost unchanged, from 76:24 to 75:25. WHO/FAO normative recommendations are that 55-75% of the proportion of total energy consumption should come from carbohydrate, 10-15% from protein and 15-30% from fat. In 2017, consumption of cereals provided 75% of the average dietary energy, the maximum of the recommended range for carbohydrates (Figure 20). The aggregate supply of dietary energy from protein-rich animal source foods and vegetable protein (i.e. pulses) was close to 7% which is significantly lower than the normative recommendation. The DES from oil and oil crops was approximately 7%, also significantly lower than the recommended intake. The DES is clearly predominantly cereal-based, reflecting a lack of dietary diversity in Bangladesh.

[261] EBF is an integral part for optimal breastfeeding includes early initiation within one hour of life and continued breastfeeding for up to two years of age and beyond. EBF is crucial for child survival and health as breastmilk provides all the essential energy and nutrients for an infant's optimal growth and development in early stages, especially in the critical window from birth to two years of age. Notably, EBF reduces the risk of the infant to experience diarrhoeal diseases, upper respiratory tract infections, obesity in later life, and EBF could improve the neurocognitive functions of the child.

Figure 20 - Share of food groups as percentage of Daily Energy Supply (DES)



Source: Data from FAOSTAT

Direct gender budgeting within the Ministry of Food fell back

Gender-responsive budgeting is essential to ensure gender-equitable distribution of resources. The government tracks expenses of different ministries to prioritise gender issues in their policy and programmatic work, in line with the National Women Development Policy 2011. Women's empowerment and equity have been well-reflected in gender-responsive budgeting. The direct budget allocated to gender issues within the Ministry of Food substantially increased from 4.3% in 2015/16 and 5.9% the following year, to 31.8% in 2017/18. In 2018/19 however, it dropped back to 2.41% which calls for renewed efforts in this regard.

Efforts continue to promote home gardens and backyard poultry but there are no recent national data available

Homestead garden and backyard poultry have immense potential to make availability and access to micronutrient-rich fruits and vegetables and animal source foods like egg and chicken at the household level. Homestead garden and backyard poultry also provide income-generating activities, especially among the poor. There are no recent nationally representative data available for this indicator, but several initiatives have been taken to promote home-gardening and backyard poultry in vulnerable households. One of them is the Government's *Amar Bari Amar Khamar*[262] programme which provided support to 1.28 million vulnerable households[263], of which about one third were engaged with home gardening and backyard poultry. The cumulative numbers of beneficiary families from this programme was 0.74 million in 2016-17 and 1.4 million in 2017-18, increasing to 2.3 million in 2018-19.

Prevalence of diabetes increased

Diabetes mellitus is one of the major NCDs that leads to morbidity and mortality. As reported by the International Diabetes Federation (IDF), more than two-thirds of people with diabetes die due to cardiovascular complications. Bangladesh is one of the countries with the highest burden of diabetes

[262] My House My Farm.

[263] As of April 2019.

globally. In the last decade, the prevalence of diabetes mellitus has shown an increasing trend, rising from 6.6 per thousand in 2010 to 9.2 in 2019. If the prevalence of diabetic cases continues to rise, Bangladesh is unlikely to achieve the SDG 3 target of reducing deaths from NCDs by one third by 2030. Extra efforts are needed to create awareness through primary prevention.

The number of mass media activities for nutrition behaviour change increased

Mass media are one of the most important and influential tools for NBCC for sharing nutrition information and knowledge. More than two thousand six hundred mass media activities related to food and nutrition were recorded in 2018/19 including health bulletins, print media (newspapers), radio television and mobile applications in 2018-19 (Table 20). BTV, the national television, and the 12 private TV channels telecasted a wide range of programmes on food and nutrition on a daily, weekly and quarterly basis. BIRTAN developed a mobile application *Amar pushti* focusing on eight topics- applied nutrition, nutrients in food, balanced diets, malnutrition, nutrition in life cycle, cooking methods and safe food (Table 21). Popular newspapers, magazines and health bulletins published information on safe food, healthy diet, nutrition and healthy lifestyle in their weekly, fortnightly and monthly copies. BIRDEM published two nutrition-related magazines which were widely distributed.

Table 21 - Number of mass activity for nutritional behaviour in 2018-19 including the themes of nutrition and health, and agriculture and technology

Sector	Subject of programme	Number of activities	Coverage
Bangladesh Television	Shukhi poribar, Shustho thakun, Maa o shishur bitorko, Shishu o nari, Shastho barta, Banglar krishi, Maati o manush, Krishok o binodon, Tothya batayan, Adhunik biggan	1,211	Nationwide
Private TV Channel	Channel 24, ATN, Jamuna TV, NTV, RTV, Channel i, Channel 24, Ekattor 71 TV, Independent TV, Somoy TV, ETV, Desh TV, Boishaki, Mohona TV	300	Nationwide
Bangladesh Radio	Shuker shoptahe thikana, Nari o shishu Unnoyan, Shashtho shokol shukher mul, Aponar shashtho, Aongona, Banni shikha, Jatio pushti prokolpo, Kishan bodhu, Banizzik karjokrom	300	Nationwide
Radio Community Program	Shashtho-e- shukher mool, (pramanno prog), Jatio pushti prokolpo 2016-2022, Bohirangon	36	Nationwide
BIRTAN	Amar pushti (mobile app)	8	Nationwide
Print media (newspapers & magazines)	Nutrition and health messages published on a weekly, fortnightly a monthly basis	736	Nationwide
BIRDEM	Kanti	3	1,500 copies
BIRDEM	Diabetes Newsletter (monthly)	12	48,000 copies
Total mass media activities		**2,606**	

The number of institutions promoting national dietary guidelines increased

In 2018-19, 18 institutions distributed around 2,280 copies of the national dietary guidelines both in hard and soft copy. Daffodil University, College of Home Economics Azimpur, Bangladesh College of Home Economics, The National College of Home Economics and Jashore University of Science and Technology used the guidelines as a practical module. Shomorita Hospital used the book as a reference for serving sizes, Recommended Nutrient Intake (RNI) values for accurate diet planning and dietary prescription for

patients. Besides, BARI, BARC, BIRDEM and the Bangladesh Agricultural University (BAU) are also using the dietary guidelines in their research and training purposes. In the previous two years, only nine institutions (BIRTAN, MoA, BARI, BARC, INFS, BAU, BBF, FAO, IPHN, and DAE) had used these dietary guidelines for research and programme purposes.

6.1.2. Policy development, programmes and initiatives underway

The total budget of this programme was 138.7 million USD as of 30th June 2019, making it the second smallest programme of the CIP2. This is due to the nature of the projects covered under this programme which are relatively inexpensive, namely nutrition training and BCC, the promotion of dietary guidelines, and research, development and promotion of knowledge-based tools on nutrient-dense recipes with local foods using FCTs. This should not prevent the government and DPs from investing in this area in adequate measure, however. The financed budget has come so far in comparable amounts from the government and the DPs. About half of the total financed amount can be attributed to the DGHS *Community Based Health Care* project which is also supported by UNFPA and USAID. 21% can be attributed to the joint EU-LGD *Support to Urban Health and Nutrition to Bangladesh* project. The rest are mostly small components of the NNS relevant to this programme.

Updating of the Dietary Guidelines for Bangladesh

The Dietary Guidelines for Bangladesh 2015 are being revised as a joint effort of the MoHFW and MoFood, BIRDEM, NNS-IPHN, with support from FAO and WHO and in partnership with other stakeholders. The process of revision started in 2018, continued in 2019 and will be finalized in 2020. The Dietary Guidelines for Bangladeshi Population 2020 are based on the principles of a food-based approach to healthy eating that can help improve the nutritional and health status of the population on a sustainable basis. It supports an eating plan of diverse nutrient-rich foods. The guidelines outline advice and messages for the general population and also for different ages and physiological groups that have increased nutrient needs, and certain therapeutic conditions. It is expected that the revised guidelines will serve as an educational tool and contribute to the improvement of nutrition awareness and behaviour change in the population. It is also intended to serve as a tool to guide health, agriculture and food policies and to stimulate demand for healthy foods.

Promotion of nutrition through national events

Bangladesh has been celebrating a *National Nutrition Week* (NNW) on 23-29 April each year since it was reintroduced by the government in 2018. In 2019, the NNW was organized with the 'Think about nutrition if you think about food'. Activities, as well as mass-media campaigns, were organised to increase public awareness and disseminate information on tackling malnutrition and undernutrition with the use of locally available foods. On this occasion, BNNC, United Nations organisations, DPs, INGOs and NGOs jointly reaffirmed their commitment to collective action to accelerate the reduction of malnutrition in Bangladesh. The *Nutrition Olympiad* (NO) was celebrated as part of the NNW: it is a national event organised since 2017 targeted youth and adolescents. The theme of the 2019 NO was *'Foster Youth engagement for a well-nourished world'.* The one-day event involved activities to attract youth engagement such as a food design competition, street plays, and a healthy snacks competition. More than a thousand youths, government officials, international and national organisations, civil society, professionals, academia, and media participated in the event. NO offers the opportunity to Nutrition Clubs - constituted by school students, adolescents and youth – to receive regular mentorship and training from experienced nutritionists. Other important national events include the *World Food Day*, the *World Breastfeeding Week, the National Food Safety Day, World Food Safety Day, 3-day National Vegetable Fair, 3-day National Fruit Fair* and *World Egg Day*.

Initiation of the Nutrition Challenge Badge

The Nutrition Challenge Badge (NCB) is the outcome of the Youth and United Nations Global Alliance (YUNGA) Learning and Action Series, which is designed to help children and youth explore basic concepts of good nutrition, healthy and environmentally friendly eating habits and lifestyles through the nutrition clubs established under the programme. On completion of the assigned activities, the children are entitled to receiving an NCB. The *Meeting the Undernutrition Challenge (MUCH)* project, implemented by GoB and FAO launched the NCB in Bangladesh in collaboration with the BIID Foundation to coincide with Universal Children's Day. The target was to enrol 600 children, youth and adolescents from 20 selected schools in Sylhet, Dhaka, Rangpur, Chattogram, Mymensingh and Rajshahi.

Implementation of the school meal policy and programme

Nutritious meals for school children have a high return on investment as they improve children's health, increase enrolment in schools and productivity throughout their life. The government-led *School Feeding Programme in Poverty Prone Areas* project which has been running since 2013 started providing hot meals (see Programme IV.2). The meal is intended to be a healthy, fresh, locally-sourced meal that will fulfil part of the day's macro and micronutrients requirements. A National School Meal Policy 2019 was formulated and recommended that at least 30% of daily calorie requirement and 50% of daily micronutrient requirements of every primary school student be covered by school meals. This new policy will contribute to increase primary school attendance and reduce the dropout rates in the primary schools.

6.1.3. Needs for further actions under this programme

Revise and implement the National Strategy for IYCF

Despite the current progress in EBF, inappropriate infant feeding remains prevalent. The challenges related to optimum breastfeeding include socio-cultural beliefs that favour mixed feeding, a non-supportive health-system, inadequate skilled support at health facilities and community level, aggressive promotion of infant formula, milk powder and other breast-milk substitutes (BMS), inadequate workplace policies to support maternity and paternity leave legislation and poor knowledge of the benefits of EBF. Strict implementation of the BMS Act 2013 and compliance with the existing laws against infant formula or breastmilk substitutes are required. Poor dietary diversity of child feeding is another major concern. The NNS under the Health, Population and Nutrition Sector Programme (HPNSP) 2018-19, IPHN with the technical support of Bangladesh Breastfeeding Foundation (BBF) have been revising National strategy for infant and young child feeding for 2018-2025 which had not been updated since 2007. It will build on existing achievements and, based on evidence from Bangladesh and globally, provide a framework for actions to protect, promote and support the optimal IYCF. This revision process needs to be accelerated and the revised strategy should be implemented as soon as possible.

Promote healthy diets and lifestyles to prevent NCDs, including diabetes

Diets in Bangladesh tend to be carbohydrate intensive, with a predominance of refined grains. Moreover, emerging food-production technologies and supermarkets have made energy-dense foods more readily available. This includes refined carbohydrate foods with added sugars, refined grains and unhealthy fats. Altering diets by replacing refined cereals such as white rice with whole grains (e.g. brown rice), encouraging low glycaemic index meal along with high dietary diversity and increasing physical activity can help to prevent diabetes in high-risk individuals. This calls for introducing changes in policies related to healthy eating, enabling healthy environments and improving health systems to tackle NCDs. It is therefore recommended to scale up the Multisectoral Action Plan for Prevention and Control of Noncommunicable Disease 2018-2025. Under the fourth HPNSP for 2017-2021, the WHO Package of

Essential Noncommunicable Disease Interventions protocol for early detection and management of cardiovascular diseases, diabetes, chronic respiratory diseases and cancer to prevent life-threatening complications (e.g. heart attacks, stroke, kidney failure etc.) is being rolled out at the primary care level like community clinics and upazila health complexes. As part of the protocol, patients diagnosed with hypertension and diabetes will be counselled about living a healthy lifestyle and provided with required anti-hypertensive and anti-diabetic drugs free of cost at the primary healthcare level. The outreach should be expanded through other health programmes such as immunization or family planning.

Promote under-utilised foods

Underutilised foods and especially Neglected and Underutilized Species (NUS) need to be promoted through food-based dietary guidelines, and the food composition tables must document the nutrient composition of such foods as well as ethnic foods. These foods which include minor cereals, special maize varieties, oilseeds, indigenous fish species, local fruits, vegetables and seeds are underutilised, despite having a much higher nutrient content than globally known species or varieties commonly produced and consumed. In addition to their superior nutritional qualities, many of these crops require fewer inputs, can be grown on marginal land and are easily intercropped or rotated with staple crops, and fit easily into integrated practices such as agroecology. Because they are frequently adapted to marginal conditions and often have the unique ability to tolerate or withstand stresses, NUS can make production systems more sustainable and climate-resilient. They are also less damaging to the environment and are culturally acceptable. Unfortunately, due to the urbanisation and transformation of eating habits towards increasing consumption of imported and processed foods, they are minimally consumed. Traditional foods should be promoted by preserving genetic species, highlighting their importance in the current production systems, and exploiting opportunities to enhance their production and consumption through production technologies, nutrition education and value chain development.

Integrate Nutrition Behaviour Change Communication (NBCC) into nutrition-sensitive programming

Integrating NBCC with nutrition-sensitive interventions such as homestead production of diverse, nutrient-rich foods and social protection programmes can have positive effects on the nutritional status and health of rural households, particularly among women and young children. Based on results of *Transfer Modality Resource Initiative (TMRI),* integrating intensive high-quality BCC in social protection programmes, more specifically in the social safety nets that provide sufficient amount to have an impact (1,500 BDT/per month) can improve household food security and child nutrition. Encouraged by the TMRI results, the Ministry of Women and Children Affairs (MoWCA) piloted the Investment Component for the Vulnerable Group Development (ICVGD) programme for destitute women, which adds a cash grant for investment, fortified rice distribution and nutrition BCC to existing Vulnerable Group Development (VGD) activities (see Programme IV.2). Lessons learnt from this programme, the existing nutrition-sensitive social safety net and agricultural programmes, need to be linked to BCC and nutrition education to have an impact on nutrition outcomes. NBCC should focus on enhancing dietary and nutrition knowledge for all, regardless of economic and social status, age or gender. Hence, appropriate contextualized BCC focusing on standardized and correct information on dietary knowledge, healthy cooking methods, nutrient dense-recipes, dietary diversity, appropriate IYCF practices, food handling, preservation, storage, food safety issues and WASH should be developed and disseminated.

6.2 Programme III.2 - Optimised food utilisation through provision of safe water, improved food hygiene and sanitation

With increased availability and accessibility of food, it is important to ensure adequate food utilisation for optimum food digestion and nutrient absorption and use by the human body. This Programme intends to scale-up the supply of safe water for consumption and domestic use (III.2.1); Ensure hygienic food handling, preparation and services, and scale-up handwashing behaviour (III.2.2); and Improve sanitary facilities and practices, including the prevention of animal cross-contamination, for reducing diarrheal disease and foodborne illness and child undernutrition (III.2.3).

6.2.1 Progress towards achievements

Table 22 - Outputs indicators and progress for Programme III.2

CIP2 output proxy indicators		2015/16 Baseline	2016/17	2017/18	2018/19	Source
Percentage of urban and rural population with access to safe drinking water [SDG6.1.1][264]	Urban	91%	93%	93%	93%	DPHE (APA)
	Rural	90%	90%	90%	90%	DPHE (APA)
Percentage of urban and rural population with access to sanitary latrines [SDG 6.2.1][265]	Urban	58%	70%	70%	70%	DPHE (APA)
	Rural	62%	75%	75%	75%	DPHE (APA)
Number of children ≤5 years admitted in upazlla health complexes, at district-level secondary hospitals and in medical college hospitals for diarrhoea and gastroenteritis of infectious origin[266]	National	148,078 (2015)	464,740 (2016)	…*	623,502 (DGHS/ MoHFW)	DGHS, Health Bulletin

…* *not available*

No progress has been registered in access to safe drinking water

Access to safe drinking water -defined as an improved source located on-premises, available when needed, and free from microbiological and priority chemical contamination- improved marginally in urban areas since the beginning of the CIP2, from 91% to 93% in the year under review. However, there was no progress in rural areas where the coverage remained at 90%. The 2019 MICS reported that 96.9% of the population has access to a basic water source when needed and that 98.5% use improved sources of drinking water. The country is on track to achieve 100% access to safe drinking water. However, in 40.3% of the cases, the water available to households and 81.9% of the drinking water was found to be contaminated by E. coli. Moreover, 18.6% of the population were still drinking arsenic affected water[267]- notwithstanding the improvement from 25.5% in 2012-13.

[264] SDG indicator 6.1.1: Proportion of population using safely managed drinking water services. Here, 'Safely managed drinking water' is defined as the use of an improved drinking water source.

[265] SDG indicator 6.2.1: Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water.

[266] From 2016/17, the information could only be obtained for 'Number of children ≤5 years admitted in upazila health complexes, district-level secondary hospitals and medical college hospitals *for diarrhoeal disease*, as opposed to *for diarrhoea and gastroenteritis of infectious origin*, which explains the sudden rise in cases.

[267] Containing 10 ppb arsenic concentration as per WHO standard.

Access to sanitary latrines remained static

The political commitment of the government and the multisectoral approach adopted has led to remarkable progress in sanitation coverage and a reduction in open defecation The percentage of urban population with access to sanitary latrines increased from 58% in 2015 to 70% in 2016 but has remained at this level ever since. Similarly, in rural areas, access significantly increased from 62% in 2015 to 75% in 2016 but has not changed after that. Despite significant progress at the onset of the CIP2, a large proportion of the population remains without access to sanitary latrines and is therefore at risk of faecal contamination that may harm the nutrition.

The number of under-five children admitted in health facilities for diarrhoeal diseases rose

According to WHO, diarrhoea is the second largest cause of mortality and morbidity worldwide among the under-five children. Adequate access to safe drinking water, improved sanitation facilities and hygiene practices including handwashing with soap and water can prevent a significant proportion of diarrhoeal diseases. The number of children admitted in primary, secondary and tertiary health centres for diarrhoeal and gastroenteritis infections increased from 464,740 in 2016 and 623,502 in 2018-19. Part of this substantial increase may reflect the raised awareness of the need to treat diarrhoea as it continues to be an important cause of death for children. This leads more people to visit health centres, where they may have treated the problem at home previously. Nevertheless, these numbers call for scaling-up integrated WASH and nutrition interventions. Handwashing is the most cost-effective health intervention to reduce the incidence of diarrhoea in children under five.

6.2.2 Policy development, programmes and initiatives underway

In this monitoring report, investments made under DPHE in water and sanitation have been included which has boosted the budget allocated to this programme. It now accounts for 7% of the entire CIP2 budget (8% of the nutrition weighed one) at 1.28 billion USD. This programme is mostly funded by the government, with DPs only representing 17% of the budget already financed. This is even lower that in the previous year where DPs were involved at the rate of 29%. While the pipeline is a mere 2.4 million USD, the budget planned beyond the CIP2 is 1.4 billion USD which shows that the emphasis placed on this programme is set to continue.

Scaling up WASH

The GoB Bangladesh has undertaken to strengthen the capacity of upazila water and sanitation committees to enhance WASH in rural areas. Along with the universal coverage of safe water and sanitation, the government is focused on improving water quality (free from chemical and microbial contamination) through the implementation of the Water Safety Plan 2014.[268] This includes the management of on-site and off-site sewage treatment and faecal sludge management. For WASH, commendable achievements have been recorded with, for instance, the proportion of the population with access to basic handwashing facilities increasing from 59.1% in 2012-13 to 74.8% in 2019.[269] Progress has been specially recorded in rural areas but in urban slums, the situation remains challenging. In the context of an ever-growing urban population, urban WASH and health are some of the critical challenges that the government needs to address. The Department of Public Health Engineering (DPHE), MoHFW and the

[268] WHO/SEARO/Country Office for Bangladesh (2014) *Water Safety Plan (WSP) -A Risk Based Approach for Water Safety.* Dhaka.

[269] Multiple Indicator Cluster Survey (MICS) 2019.

Ministry of Local Government, Rural Development and Cooperatives (MoLGRDC) need to continue focusing on generating evidence and measuring the impact of their interventions.

Global Handwashing Day celebrated

In order to influence, inform and increase public awareness on the positive effects of handwashing, MoLGRDC and UNICEF successfully celebrated the Global Handwashing Day on the 15th of October 2018. Around 1000 school and university children took part in the event and promoted the theme '*Clean hands – a recipe for health*'. As a community engagement strategy, the GoB included schools and school children to encourage behaviour change around WASH.

Technical Symposium on Nutrition-Sensitive WASH

The MoFood and MoLGRDC with support from FAO and WHO and technical collaboration from WFP and UNICEF conducted a symposium on Nutrition-Sensitive WASH on the 5th Nov 2018. This multisectoral collaboration was the evidence of the GoB's commitment to improved nutrition-sensitive WASH.

The COVID-19 effect

In May 2020, the GoB launched a strategic paper to respond to WASH issues during and after the COVID-19 outbreak. Among other measures, the pandemic led to sustained mass communication on hand washing. If this effect can be sustained, it could be beneficial for overall hygiene practices.

6.2.3 Needs for further actions under this programme

Promote public and private sector partnership for improved and innovative social and behaviour change communications

Innovative partnerships and models combining strengths of the public and private sector need to be implemented at scale. To realize the impact of WASH interventions, multi-sectoral actions are needed. The government needs to design and invest in programmes that address the full spectrum of WASH related issues. These include clean water proper sanitation facilities, availability of water and soap for handwashing and behavioural issues such as instilling the habit of handwashing with soap at critical times notably before preparation of food, washing babies, after using the toilet. Unfortunately, commercial financing in emerging markets currently makes up only a small portion of WASH investment in Bangladesh. WASH sector on average attracted only 3% of private sector participation in infrastructure projects.[270] Involvement of the private sector through partnerships must be promoted in order to enable behaviour change. Indeed, the public sector can benefit from utilising the outreach and social marketing platforms of the private sector to reach a larger audience in their mission to positively affect behaviours.

Integrate nutrition-sensitive WASH in policies and programmes

Nutrition and WASH are interconnected and correlated. Studies have established that when WASH interventions are combined with nutrition interventions, the level of stunting can be greatly reduced. In UNICEF's causal framework of malnutrition, the two immediate causes of malnutrition are inadequate dietary intake coupled with sub-optimal feeding and care practices in the first two years of life and high rates of infectious disease due to predominantly unhealthy environment. A meta-analysis carried out by UNICEF shows that improved sanitation and drinking water integrated with other nutrition and health interventions can bring about a decline in child stunting. Stunting reduction is driven by safe water and sanitation, women's education and empowerment and the quantity and quality of food. Income and

[270] WWAP (UNESCO World Water Assessment Programme) (2019) *The United Nations World Water Development Report 2019: Leaving No One Behind.* Paris. UNESCO.

governance play key facilitation underlying roles.[271] This also calls for strengthening coordination between MoHFW, MoLGRDC, United Nations Organisations, CSOs and the private sector to integrate nutrition-sensitive WASH in their policies and programmes. Strategies should focus on access to affordable safe drinking water, expansion of programmes for control and prevention of cholera and diarrhoeal diseases, promotion of hygienic food handling, preparation, services, protective display of food, and scale-up handwashing behaviour, disposal of garbage and hygienic waste (food and non-food) safely for human health protection, improvement of sanitary facilities and practices, including prevention of animal or human to human cross-contamination for reducing water and foodborne illness including diarrhoeal diseases.

[271] Smith L.C. & Haddad, L. (2015) *Reducing child undernutrition: past drivers and priorities for post-MDG era. World Development. 68. 180–204.*

7 Progress towards Outputs for Outcome IV

7.1. Programme IV.1. Timely and effective disaster preparedness and responses through emergency food distribution, agriculture rehabilitation and mitigation measures

This programme aims to ensure that systems are in place to protect vulnerable groups' food and nutrition security before, during and after disasters. It consists of three sub-programmes: 1) to increase the resilience of agricultural systems, including the production of disaster-resilient nutritious crops especially by vulnerable populations; 2) to ensure social and economic access to food for the poorest sections of the population in times of crisis and in areas most affected by the disaster; and 3) to scale-up modern food storage facilities for an improved Public Food Distribution System (PFDS) particularly in disaster-prone areas

7.1.1 Progress towards achievements

Table 23 - Programme IV.1: Outputs indicators and progress against the baseline

CIP2 output proxy indicators	2015/16 Baseline	2016/17	2017/18	2018/19	Source
No. of usable cyclone shelters	3,768 (2014)	3,868	3,868	3,968	DDM/LGED
Number of rural communities with disaster resilient habitats and communities' assets	7,334 (2013)	7,834	7,934	11,604	DDM
Direct gender budgeting as % of MoDMR revised budget	45.8%	23.1%	34.7%	34.7%	MoF
Distribution of food grain through PFDS (thousand MT)	1,216	837	1,102	1,207	FPMU
Effective grain storage capacity at close of fiscal year (thousand MT)	1,870	1,876	1,877	2,030	ITDS, Food Directorate
Average use of effective GoB food grain storage capacity	75%	44%	52%	73%	MISM, Food Directorate
Actual closing stocks as % of budget target	52%	80%	64%	129%	National Budget, FPMU Stock Flow Table
Environment CIP: Early warning information enhanced through Regional and Global Initiatives (MoUs and LoAs)	4	5	5	5	FAO/MoEFCC

The number of cyclone shelters gradually increased

After no increase in 2017/18, the number of usable cyclone shelters increased to 3,968 in 2018/19. This is substantially short of the 7FYP target of 4,447. The *Multipurpose Disaster Shelters Project (2014 to 2020)* plans to construct 552 new shelters and rehabilitate 450 existing shelters in nine coastal districts[272], but as of July 2019, the project's physical delivery was 30% and the financial delivery was 24%[273] - and in October 2019, the Executive Committee of the National Economic Council (ECNEC) approved the extension of the project to December 2021. The shelters built serve as primary schools, and when cyclones and other natural disasters occur, they double up as shelters. Emphasis is also given to building connecting roads and communication networks to shelters to ensure easy accessibility. From June 2018 to June 2019,

[272] World Bank (2017) *Multipurpose Disaster Shelter Project: Implementation Support Mission*.

[273] GoB (2019) *Multipurpose Disaster Shelter Project: Progress as of 31 July 2019*.

Bangladesh experienced one significant cyclone, Fani, in May 2019. Major human loss was avoided[274] after 1.2 million people were evacuated and moved to cyclone shelters in 19 coastal districts.

The was significant increase in the number of rural communities with disaster-resilient habitats and communities' assets

The number of rural communities with disaster-resilient habitats and assets increased from 7,934 in 2017/18 to 11,604 in 2018/19. Disaster resilient habitats and assets incorporate structural safety, adaptive technology, sustainable livelihoods, early warning and community cooperation. Short-term recovery measures must be followed by adequate investment in long-term risk reduction so that communities are not trapped in repeated disaster-cycles.[275] For example, the *Haor Flood Management and Livelihood Improvement Project (2014 to 2021)* is investing in livelihoods and infrastructure to reduce risks of flash floods in north-east Bangladesh.[276] FAO supported the *SAFE Plus Project* to plant half a million tree seedlings for reforestation in Cox's Bazar, to help regulate the watershed, reduce floods and landslides, provide materials for livelihoods and fuel, and conserve biodiversity.[277] The Asia-Pacific Disaster Report 2019 estimates that 78% of the population of Bangladesh lives in 'high-multi-hazard-risk areas'.[278]

The gender budget remained unchanged under the Ministry of Disaster Management and Relief

The direct gender budget in the total budget of the Ministry of Disaster Management and Relief (MoDMR) was 34.7 % in 2018/19, which is the same as the previous year, and a significant drop against the baseline figure of 45.8% in 2015/16. The role of women in disaster preparedness and response is now widely recognized and it is important that implementation of gender-sensitive approaches continue. The National Women Development Policy 2011 calls for specific gendered design in disaster preparedness and responses, including equitable access, relevance to girls' and women's lifecycle and personal security. Women's vulnerability is greater due to lower social-economic status, information and skills, and in past disasters death rates have been higher amongst women, e.g. 91% in the 1991 Bangladesh cyclone, 61% in the 2008 Myanmar cyclone, and 70–80% in the 2004 Indian Ocean tsunami.[279]

Foodgrain distribution by the government marginally increased

The PFDS distributes foodgrain targeted to poor and vulnerable people through different programmes to address emergency and non-emergency food insecurity. The total distribution increased marginally to 1,132 thousand MT in 2018/19, which is somewhat lower than at baseline. The quarterly distributions, starting with the July-September 2018 quarter, were 0.28 MMT, followed by 0.21 MMT, 0.19 MMT and 0.45 MMT. VGF, VGD and Food for Works were the main programmes, accounting for over four-fifths of the distribution. Notably, distribution through the school feeding programme declined from 19 thousand MT in 2017/18 to 2.5 thousand MT in 2018/19.[280]

[274] Dhaka Tribune (2019) *Relief, as Cyclone Fani crosses Bangladesh with no major disaster*. 5 May.

[275] Sadik, Md. S., Nakagawa, H., Rahman, R., Shaw, R., Kawaike, K. & Fujita, K. (2018) *A Study on Cyclone Aila Recovery in Koyra, Bangladesh*. *International Journal of Disaster Risk Science.* 9: 28–43.

[276] JICA (2018) *Bangladesh Our Profile*; JICA (2016) *Haor Flood Management and Livelihood Improvement Project.*

[277] FAO (2019) *Nearly half a million trees planted in two months: FAO restores degraded forests and watersheds in Cox's Bazar.*

[278] United Nations (2019) *Asia-Pacific Disaster Report 2019*. Bangkok. ESCAP.

[279] Habtezion, S. (2013) *Gender and Disaster Risk Reduction*. Global Gender and Climate Alliance and UNDP. New York.

[280] GoB (2019) *Bangladesh Food Situation Report 117 (April-June)*. Dhaka. FPMU. Ministry of Food.

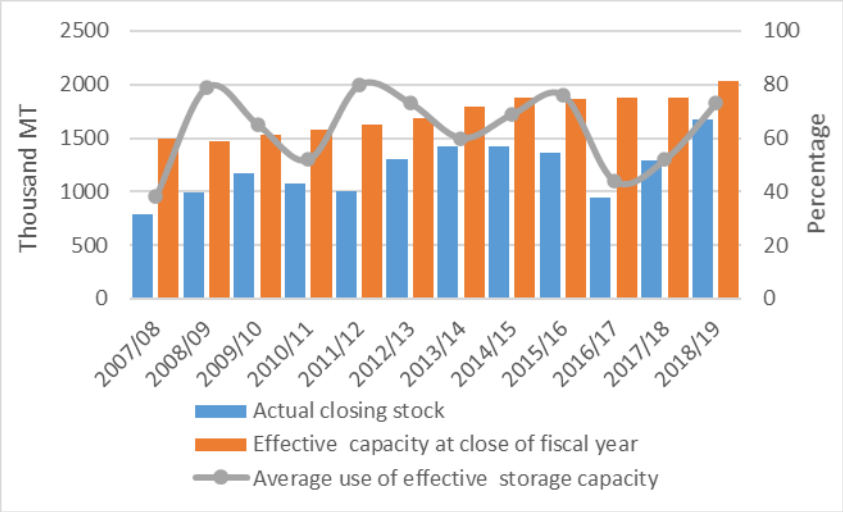
Public grain storage capacity improved slightly

Grain storage capacity reached 2,030 thousand MT in 2018/19, an 8% increase from the previous year (Figure 21). This comes after several years of stagnation (2019)[281] find that the functional/useable capacity of the entire storage system is in reality, 10% lower for a number of reasons. One example is that of warehouses whose floor was raised by several feet to avoid infiltration of water which in turn reduced the overall storage capacity of the warehouse. The *Modern Food Storage Facilities Project (2014- 2020)* plans to create another 535,500 MT of storage capacity and modernise management to reduce foodgrain losses by 50%. However, there are delays in the constructions of the first three of the planned eight silos due in April 2021, so the project is being extended from June 2020 to April 2022, and the expected final cost is raised to USD 412 million.[282]

The average use of effective GoB foodgrain storage capacity was satisfactory

The average use of food grain storage capacity in 2018/19 was 73%, which was close to the baseline year, after two years of low utilisation (Figure 21). A 75% utilisation may be considered close to full capacity utilisation given the seasonality of procurement and the impossibility of attaining full capacity utilisation for more than a short time in traditional storage facilities. The improvement of utilisation of storage capacity suggests a greater ability to respond to unexpected shocks using the PFDS.

Figure 21 – GoB foodgrain closing stock, effective storage capacity and average use of storage capacity



Source: data from Ministry of Food

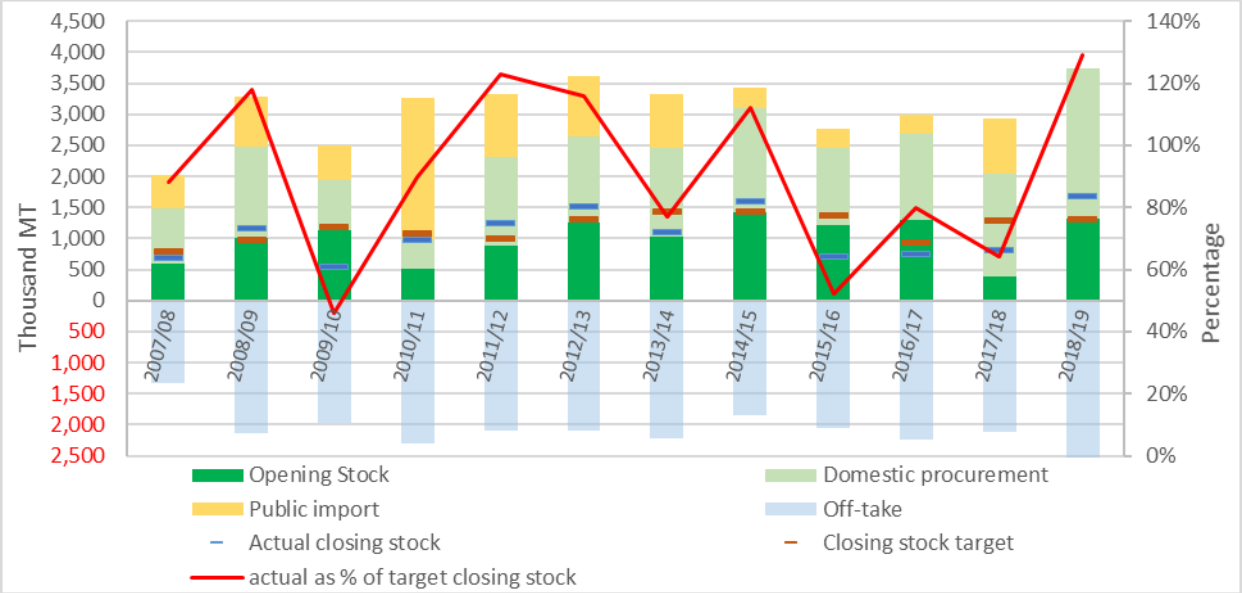
Actual closing stocks doubled from the previous year

Actual closing stocks, compared to the budgeted target, sharply increased from 64% in 2017/18 to 129% in 2018/19. Figure 22 shows how the GoB adds imports and domestic procurement to the opening stocks on the one hand, and distributes foodgrain through the PFDS on the other hand, yielding the annual closing stock. In 2018/19, the closing stock was 1,674 thousand MT compared to a target of 1,298 thousand MT, and this was substantially due to the large domestic procurement of 2,420 thousand MT from price-supported domestic producers, as compared to 546 thousand MT of public imports. Although the PFDS distribution ('offtake') was lower than the budgeted target during the period, in absolute terms, it was larger than previous years.

[281] Kabir, R., Yunus, Md., Hossain, T. & Rashid, S. (2019) *Public food grain storage facilities in Bangladesh: An assessment of functionality, repair needs, and alternative usage*. *IFPRI Working Paper* 2. Washington, DC.

[282] World Bank (2020) *Proposed Project Restructuring of Bangladesh Modern Food Storage Facilities Project*. *Report RES31459*; World Bank (2019) *BMFSFP: Implementation Status and Results Report 12*; World Bank (2019) *BMFSFP: Implementation Status and Results Report 13*; World Bank (2020) *BMFSFP: Implementation Status and Results Report 14*.

Figure 22 - Opening GoB foodgrain stock, intake and offtake, closing stock budget target and actual closing stock as % of target



Source: Data from ITDS, Food Directorate and MISM, Food Directorate

Early warning information was enhanced through regional and global initiatives

Five important initiatives aimed to enhance early warning information continue in place, namely: the Cyclone Preparedness Programme, Red Crescent Volunteers, and Interactive Voice Response technology through mobile phones. The USD 113 million World Bank *Bangladesh Weather and Climate Services Regional Project (BWCSRP)* which is to run until 2023 seeks to modernize the country's weather, water, and climate information systems for forecasting and strengthening of service delivery in priority sectors and communities. The project will also pilot a community-level early warning system for flash floods, thunderstorms and droughts in four districts and is to set up an Agrometeorological Information System portal, agromet information kiosks in 487 upazilas and agromet display boards at 4,051 Unions. Finally, the *Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES)* which was established in 2009 focuses on building joint efforts for enhancing capacity building of national to local level institutions on all aspects of end-to-end early warning, within each Member States early warning frameworks.

7.1.2 Policy development, programmes and initiatives underway

This programme accounted for 1.94 billion USD as of June 30th 2019, which constitutes 10% of the total CIP2 budget. Within this budget however, two projects stand out. The RDCD *One house one farm* project accounts for 34% of this programme's budget (31% in the nutrition-weighed budget). The BWDB and World Bank *Coastal embankment improvement project Phase I (CEIP I) in Satkhira, Khulna, Bagerhat, Pirojpur, Barguna, and Patuakhali District* project accounts for 20% of the total (18% in the nutrition weighed budget). Both these projects end in June 2020. Overall, the DPs contribute to 43% of the total financed budget: 836 million USD. This makes this programme one of the three most important ones in the CIP2 for DPs (the other two are under Pillar I and Pillar II). The pipeline and budget planned beyond the CIP2 are limited in size: 72 and 143 million USD, respectively. Yet, it is essential that the focus remains on disaster preparedness and responses, especially given that the two main projects currently working towards it end soon.

Adoption of climate-resilient and disaster-resilient agriculture

Climate-resilient agriculture (CRA) or climate-smart agriculture (CSA) promotes adaptation, mitigation and long-run resilience. An FAO study of CRA/CSA practices worldwide found an average benefit–cost ratio of 3.7 in hazard conditions and 4.5 in non-hazard conditions, and that such practices can be especially useful in high- to medium-frequency events that occur with low or medium intensity.[283] According to MoF estimates, in 2018/19, climate relevant allocation in the Rural Development and Cooperatives Division budget was relatively low at just 16.3%, and in the MoFL at just 26.1%; it was higher in the MoA at 39.1%, but cognizant of the emphasis of Subprogramme IV.1.1 on disaster-resilience, just 1.1 percentage point of that was disaster-related.[284] For many years Bangladesh has shown good results with several CRA/CSA practices, including alternate wetting and drying, row cropping, ridging and furrowing, stress-tolerant seed varieties, urea deep placement, direct seeding, and floating agriculture.[285] However, even with well-documented results and awareness for the urgency of CRA/CSA, the widespread adoption of such techniques remains too low. Mainstreaming CRA/CSA requires institutional and financial enablers and rigorous evaluation of different CRA/CSA practices.[286] The USD 809 million 'Climate Smart Agriculture Investment Plan'[287] launched in 2019 with is a welcome initiative (see also Outcome I).

Firm commitment to disaster management

The National Plan for Disaster Management (NPDM 2016-2020) emphasizes three goals of saving lives, protecting investments and effective recovery. The NPDM is aligned with the 7FYP and the Asia Regional Plan for Implementation of the Sendai Framework for Disaster Risk Reduction (SFDRR). The UNESCAP estimates annual economic losses due to disasters in Bangladesh is USD 11.5 billion, around 6.5% of GDP, and that disasters increase inequality.[288] As in previous years, MoDRM led awareness campaigns on the International Day for Disaster Reduction in October 2018.[289] The National Food Policy (2006) and its update, the National Food and Nutrition Security Policy of Bangladesh (currently under Cabinet approval), have specific disaster-related measures for agricultural resilience, food access and food market stabilisation. The *Employment Generation Programme for the Poorest, Food for Work/ Work for Money*, *Test Relief*, *Vulnerable Group Feeding*, and *Gratuitous Relief* support the poor during disaster-induced shocks, as well as seasonal stress, and together covered around twelve million beneficiaries, with a budget of BDT 70.2 billion in 2018/19.[290]

[283] FAO (2019) *Disaster Risk Reduction at Farm Level*. Rome.

[284] GoB (2019) *Climate Financing for Sustainable Development: Budget Report 2019-20*. Ministry of Finance.

[285] Afrin, R., Talucder, M.S.A., Paul G. & Uddin M.S. (2017) *Status of Climate-Smart Agricultural Practices.* *Journal Sylhet Agriculture University* 4(2): 251-260; Babu, S.C., De Pinto, A. & Paul, N. (2019) *Strengthening Institutional Capacity for Disaster Management and Risk Reduction through Climate Resilient Agriculture*. In Anbumozhi, V., M.B. Reiling and V. Reddy (eds.) *Towards a Resilient ASEAN* (Volume 1). Economic Research Institute for ASEAN and East Asia. pp. 270 289.

[286] CIAT and World Bank (2017) *Climate-Smart Agriculture in Bangladesh*. *CSA Country Profiles for Asia Series*. International Center for Tropical Agriculture (CIAT). World Bank. Washington, D.C.

[287] World Bank (2019) *Climate Smart Agriculture Investment Plan: Bangladesh.*

[288] United Nations, Economic and Social Commission for Asia and the Pacific (ESCAP) (2020). *The Disaster Riskscape across South-East Asia: Key Takeaways for Stakeholders.* ST/ESCAP/2885.

[289] German Red Cross (2018) *Celebration of IDDR 2018.* Bangladesh Prevention Web.

[290] World Bank (2019) *Safety Net Systems for the Poorest Project*.

Strengthening logistics capacity to prepare for and respond to humanitarian crises

With the Inter-Agency Standing Committee's Global Logistics Cluster[291], Bangladesh is establishing a strengthened Preparedness and Response Platform to combine mapping, imagery, early warning, crowd-sourced information and logistics to increase coordination, collaboration and information among humanitarian agencies and organisations.[292] Mapping of national logistics capacities and stakeholders took place in March 2019, a simulation-based logistics gap analysis was conducted in August 2019 aimed to define a Logistic Preparedness Action Plan[293], and the Preparedness and Response Platform is to be operational in 2020.[294] Humanitarian logistics is 'the process of planning, implementing and controlling the efficient, cost-effective flow and storage of goods and materials, as well as related information, from the point of origin to the point of consumption to alleviate the suffering of vulnerable people.'[295]

Capacitating farmers and fishers to manage climate risks

In order to shield farm households from the negative effects of climate variability, the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is leading the *Capacitating Farmers and Fishers to Manage Climate Risks in South Asia (CaFFSA) Project*, started in January 2019. It aims to deliver timely, reliable and contextualized climate information to farmers in Barisal, Sylhet and Khulna divisions to 150,000 fish farming households in Bangladesh by 2021.

Implementation of poverty reduction projects that address environment and climate challenges

Palli Karma-Sahayak Foundation (PKSF) is implementing several poverty reduction projects[296], including the USD 130 million *Sustainable Enterprise Project*, which addresses environmental and climatic challenges for sustainable production, and involves private microenterprises to enhance the potential for scale-up. In October 2018, two project proposals of PKSF, the *Extended Community Climate Change Project (ECCCP)* and the *Community Based Adaptation for Flood-Prone Areas of Bangladesh (CBAF) Project*, were cleared by the Economic Relations Division, the *National Designated Authority* of *the Green Climate Fund (GCF).*[297]

Rapid financing to respond to small and medium scale emergencies

START Fund Bangladesh, established in 2017 and comprised of 46 NGOs, aims to respond to small and medium scale emergencies by disbursing funds within 72 hours, using 12.7 million USD seed funding from UK Aid. In 2018, four emergencies were supported and 80,000 people were served.[298] Normally national emergency response funds are disbursed in 45-70 days. The START Fund is hoping to develop anticipatory funding mechanisms to reduce the impact of disasters on communities by supporting agencies to quantify risks, assess funding options, pre-position funds, and adopt pre-agreed protocols to release funds.

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[291] The Logistics cluster is one of the thematic clusters which were adopted in 2015 to respond better and more swiftly with humanitarian assistance. Clusters are groups of organizations and other stakeholders designated by the Inter-Agency Standing Committee (IASC).

[292] Logistics Cluster (2018) *Logistics Cluster Preparedness Platform Training Report*. 30-31 July 2018. Antananarivo.

[293] Logistics Cluster (2019) *Simulation-based Logistics Gap Analysis Workshop*. 27-29 August. Dhaka.

[294] Logistics Cluster (2019) *Quarterly Update July – September 2019 Bangladesh Preparedness.*

[295] Logistics Cluster(2006) *Logistics Cluster Concept and Guidelines.*

[296] (i) Samriddhi operates in northwestern Rajshahi and Rangpur divisions, and northern Sunamganj district; (ii) Enhancing Resources and Increasing Capacities of Poor Households towards Elimination of their Poverty is a multi-sectoral anti-poverty programme; (iii) Sahos provides fast financial assistance during disasters; (iv) Promoting Agricultural Commercialisation and Enterprises; and (v) Skills for Employment Investment Programme.

[297] PSKSF (2018) *Quarterly Newsletter April-June 2018*.

[298] START Network (2018) *A new era of humanitarian action: Annual Report 2018*. London.

Responding to women's needs

Women respondents in the mid-term evaluation of the *Multipurpose Disaster Shelters Project (MDSP)* have highlighted a lack of separate women's toilets (81% of respondents), safety for women (66%), space for child care (59%), and facilities for pregnant women (33%).[299] The *MDSP* plans to provide in future shelters a provision for one separate room with a toilet for pregnant women and will further consider accessibility for people with disabilities. The *National Resilience Project (2017 to 2021)* which aims to strengthen capacities for risk-informed, gender-responsive and disability-inclusive disaster planning and responses should help focus attention on gender in preparing and responding to disasters.

7.1.3 Needs for further actions under this programme

Continue improving safe storage capacity, especially in remote areas and at the community level

It is essential for rapid disasters response that foodgrain storage is available in remote parts of the country and at the community level, and the quality of distributed food is consistent with the Food Safety Act 2013 and Food Safety Regulations 2017. Although Bangladesh's storage capacity is old, an IFPRI study found that stored foodgrain is overwhelmingly safe for consumption, although issues of moisture and mould were noted that require monitoring.[300] Currently, there are six silos, 13 Central Storage Depots, and about 633 Local Supply Depots. New silos providing modern storage conditions are planned in eight locations under the *MFSP Project*: rice silos in Mymensingh, Madhupur and Ashuganj (expected in 2021); rice silos in Dhaka, Narayanganj and Barishal (not started); and wheat silos in Chattogram and Maheshwarpasha (not started). In addition, *MFSP* has distributed household silos (food-grade, water- and air-tight, plastic bins) to 500,000 vulnerable households in coastal districts, and the Government plans to cover another 300,000 households.[301] This should be scaled-up around the country as these help household resilience and self-protection.

Ensure safe drinking water and sanitation for people affected by disasters

Natural disasters damage pond sand filters, shallow tube wells, and deep tube wells jeopardising access to safe water. Re-functionalizing damaged drinking water sources does not assure the sustainability of the water supply given the recurrence of the disasters with storm surges in particular. Disaster resilient water sources, therefore, need to be built and managed which comes at a cost. Community-based financing can offer a solution.[302] At the level of emergency shelters, attention also needs to be given to ensuring that appropriate quantities of safe drinking water are supplied as long as required.

Scale-up forecast-based early action

Forecast-based early action (FbA) is emerging to reduce the impact of shocks on vulnerable people by improving the effectiveness of emergency preparedness and livelihoods, response and recovery efforts, and reducing the humanitarian burden. While this concept is not new to Bangladesh, the triggers for action are not always clear and often subjective. Also, because inaccurate forecasts have implications for accountability and perceived misallocation of limited resources, there is a tendency to give preference to

[299] GoB (2019) *Multipurpose Disaster Shelters Project: Mid-term Evaluation*. Local Government Engineering Department (LGED).

[300] Hoque, M.M. & Hoffmann, V. (2019) *Safety and Quality of Food (Rice and Wheat) Distributed through Public Food Distribution System in Bangladesh: Results from Laboratory Tests*. IFPRI working paper. Washington, DC.

[301] World Bank (2020) *Proposed Project Restructuring of Bangladesh Modern Food Storage Facilities Project*. Report RES31459.

[302] Islam, M.S., Afrin, S., Ahsan, M.N. *et al.* (2019) *Households' Willingness to Pay for Disaster Resilient Safe Drinking Water Sources in Southwestern Coastal Bangladesh*. *Int J Disaster Risk Sci.* 10, 544–556.

post-disaster responses rather than early actions. Scaling up of FbA needs to be encouraged to reform prevailing cliental biases in relief by making targeting and delivery of aid more transparent, equitable and needs-based (Tanner *et al*, 2019).[303]

[303][24] Tanner, T., Gray, B., Guigma, K., Iqbal, J., Levine, S., MacLead, D., Nahar, K., Rejve. K. & Venton, C.V. (2019) Scaling up early action Lessons, challenges and future potential in Bangladesh. *ODI Working paper* 547. April. London.

7.2. Programme IV.2. Strengthened social protection and safety net programmes for targeted groups across the life cycle, including disabled and displaced populations

Under this programme, the effectiveness, targeting and content of social safety net programmes are improved to provide better protection to different vulnerable groups. This is done through the following three sub-programmes: 1) Expand and strengthen safety net programmes across the life cycle supporting vulnerable groups, such as poor women, children, the elderly, disabled people and displaced populations; 2) Expand and strengthen programmes for supporting people living in vulnerable and disadvantaged areas (char land, riverbank, *haors*, hill tracts and urban areas); and 3) Introduce nutrition-sensitive social safety net programmes (SSNP), including food fortification, especially for mothers and children.

7.2.1 Progress towards achievements

Table 24 – Programme IV.2: Outputs indicators and progress against the baseline

CIP2 output proxy indicators	2015/16 Baseline	2016/17	2017/18	2018/19	Source
Budgeted coverage of VGD and ICVGD (in hundred-thousand-person month)	VGD 91.3 ICVGD 0.1	VGD 120.0 ICVGD 0.1	VGD 139.8 ICVGD 0.1	VGD 139.8 ICVGD 0.0	MoF, Budget
Number of children covered by the School Feeding Programs in Poverty Prone Areas (in hundred thousand)	28.3	30.6	29.5	31.6	MoF/ GED
Budgeted coverage of Employment Generation Programme for the Poorest (in hundreds of thousands of beneficiaries)	8.27	8.27	8.27	8.27	MoF
Safety net programmes expenditures as % of GDP (SDG 1.3.1.)	2.08%	2.09%	2.17%	2.54%	MoF/ GED

VGD's outreach has expanded but the ICVGD has not been upscaled

Vulnerable Group Development (VGD) coverage was static at 139.81 hundred thousand person months in 2018/19, after the budget was revised downwards from 142.47 hundred thousand person months.[304] The Investment Component for VGD (ICVGD), piloted with 10,000 beneficiaries, adds a cash grant of 15,000 BDT for investment, 30 kg of fortified rice, and training on livelihoods, entrepreneurship, financial management and nutrition BCC. After this pilot phase, the ICVGD is to be upscaled to 100,000 women in 64 subdistricts from 2019/20. A study by IFPRI[305] found, *inter alia*, that whilst VGD targeted female-headed households with no income-earning adult male or with no other source of income, 30% of such households received remittances making them rather well off. The Ministry of Women and Children Affairs adopted IFPRI's improved targeting criteria in January 2019, which are more observable, verifiable, and correlated with poverty.[306] The GoB decided to include into VGD 40,000 women specifically from Cox's Bazar, half of which are in the *Enhancing Food Security and Nutrition Project (EFSN)*, which provides vulnerable women USD 12 monthly, entrepreneurship training and a USD 180 grant to start a small business. The linkage of these two programmes was intended to create a more comprehensive coverage in Cox's Bazar, where food security and nutrition have been strained by the ongoing Rohingya crisis.

[304] GoB (2020) *Social Safety Net Programmes Budget.* Ministry of Finance.

[305] Ahmed, Akhter (2018) *Assessing indicators for selection of participants for the Vulnerable Group Development (VGD) program in Bangladesh.* Dhaka, Bangladesh and Washington, DC: IFPRI.

[306] Ahmed, A. and J. Ghostlaw (2018) *A Bureaucratic Catch-22: Study in Bangladesh shows how Safety Nets can Overlook the Poorest*. IFPRI Blog: Research Post.

The School Feeding Programmes in Poverty Prone Areas continues to expand

The School Feeding Programme in Poverty Prone Areas, begun in 2013, provides school children in selected areas biscuits fortified with vitamins and minerals and hot meals using locally-sourced vegetables, lentils and micronutrient-fortified rice and oil. Students' attendance has grown by 11% in schools where cooked meals are being served, and by 6% where biscuits are being served. Coverage expanded from 2.95 million children in 2017/18 to 3.16 million in 2018/19. The GoB has a plan to universalize the school feeding programme by the fiscal year of 2023/24.

The budget allocation for the *Employment Generation Programme for the Poorest* remained unchanged

The *Employment Generation Programme for the Poorest (EGPP) Programme* has provided employment of 80 days in a year, in two phases during the seasonal lean period, for 8.27 hundred thousand individuals since 2015/16. This represented 3.7% of the government's social protection budget in 2018/19. Beneficiary households have seen improvements in lean season food intakes, including protein; household savings and resilience; and investments in health. Moreover, this programme is particularly beneficial for women who have fewer employment options during low seasons.[307] Due to combinations of geographic targeting, eligibility criteria, gender quota and self-selection, targeting performance of *EGPP* has been better compared to that of other safety net programs in the country.

The weight of safety net programmes in total GDP continued to rise

Government spending on safety nets rose to 2.54% of GDP in 2018/19, compared to 2.17% in the previous year, and represented 14.6% of the government budget, slightly up from 13.1% in the previous year.[308] The government categorises its safety nets spending into social empowerment (mainly human development and livelihoods) and social protection (mainly transfers and protection), and the respective shares of these two components changed greatly from 40/60 in 2017/18 to 30/70 in 2018/19. The social protection component itself represented 10.1% of the government budget in 2018/19, compared to 7.8% in the previous year, but this includes civil servant pensions and Freedom Fighters' health and honorarium, which are untargeted to poverty, and excluding these items shows that the social protection budget was nearly static at 4.3% of the government budget in 2018/19, compared to 4.1% in 2017/18. Within this, food security related social protection was 2.7% of government spending in 2018/19, compared to 2.5% in 2017/18.

7.2.2 Policy development, programmes and initiatives underway

At 1.6 billion USD, this subprogramme represents 8% of the total CIP2 budget. with just under a third of donor funding. Three projects constitute 65% of this programme: the *Ashrayan II* project (23% of the programme budget) whose main objective is to rehabilitate make homeless, landless and shelter- less people; the *School feeding programme in poverty prone areas* (22% of the programme budget); and the *Income support programme for the poorest* (19% of the programme budget). While the pipeline stands at only 72.4 million USD, the budget planned for post June 2021 is a substantial 2.4 billion.

Increase in the budget allocations for a number of marginalised groups

Budgetary allocations for marginalized groups increased in 2018/19, namely: the *Allowance for the Financially Insolvent Disabled*; the *Programme for Livelihood Improvement of Tea-Garden Labours*; the *Stipend for Disabled Students*; *Food Assistance in CTG-Hill Tracts Area*; the *Programme for Improving the Livelihood of Bede & Disadvantaged Community*; the *Rehabilitation and Generation of Alternative*

[307] World Bank and KWPF (2019) *Program Brief- Employment Generation Program for the Poorest Bangladesh.*

[308] GoB (2019 and 2020) *Social Safety Net Programmes Budget* (various years). Ministry of Finance.

Employment for Beggars Profession; the *Street Children Rehabilitation Programme*; *Infrastructure and Livelihood Development in Haor Area*; and the *Development of the Living Standard of the Marginal People of Bangladesh*. Allocations for *Improving the Livelihood of Transgender (Hijra)* and *Coastal Climate Resilient Infrastructure Improvement and Development Support for Special Needs decreased.*[309]

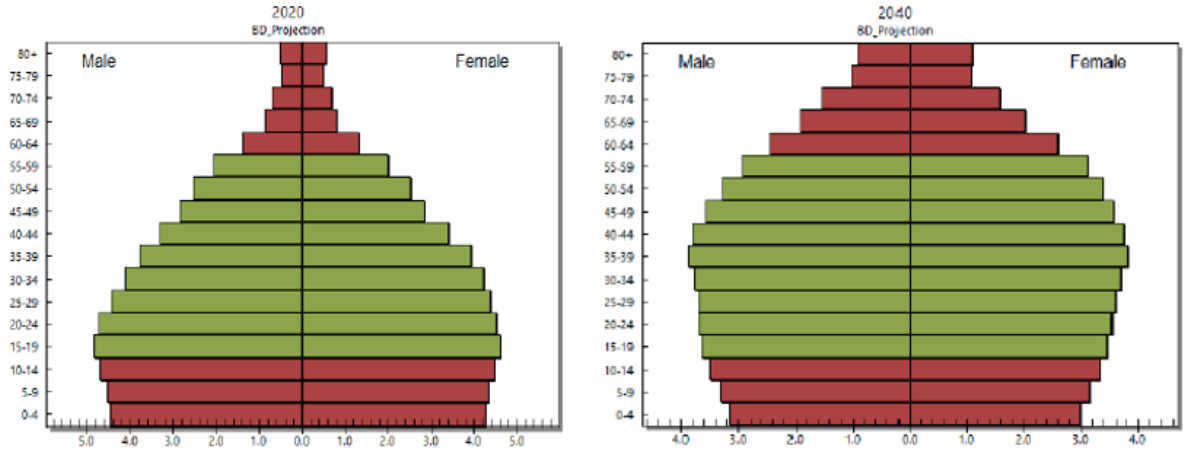
Initiation of electronic payment of benefits

Direct payment of social protection from the government to person (G2P) has begun through electronic fund transfer directly into bank accounts or mobile bank accounts of beneficiaries. Piloting began with maternity allowances and old age allowances in seven upazilas. The nationwide system is planned to be rolled out in FY20. A study conducted by a2i[310] showed that digital payments of SSN allowances could save the government up to USD 15 million annually. Notably, the Department of Disaster Management (DDM) currently makes digital payments under the *EGPP* in nineteen sub-districts.[311] A budget of 2.82 crore taka was allocated in 2018/19 for cash transfer modernization.

Study to determine the viability of a National Social Insurance Scheme initiated

The National Social Security Strategy (NSSS) foresees the development of National Social Insurance Scheme (NSIS) to prepare for a projected ageing population (see Figure 23). The social security system needs to evolve gradually to incorporate formal employment policies and social insurance schemes.[312] The Finance Division plans to initiate a scheme by January 2021, and a viability study was commissioned.

Figure 23 - Population by age and sex in Bangladesh, 2020 and 2040 projections



Source: Australian Aid and UNDP (2018)[313]

Establishment of a Policy Guidance Unit for Child-focused Social Protection

In spite of a young population in Bangladesh, major programmes dedicated to infant and maternal health only began in 2006 and now constitute 3.7% of the total social protection budget (Figure 24) The GoB has

[309] CPD (2019) *An Analysis of the National Budget for FY2019-20.*

[310] a2i (2019) *Accelerating G2P payment digitization.* Government of Bangladesh.

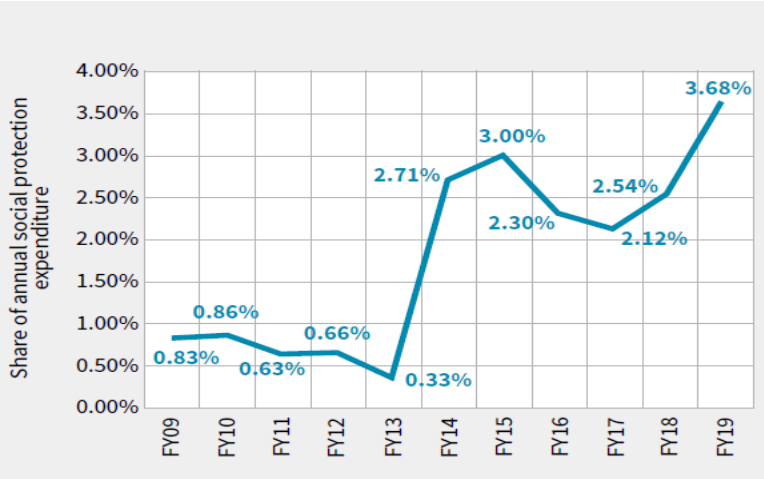
[311] World Bank (2019) *Restructuring Paper: Safety Net Systems for the Poorest.*

[312] GoB (2018) *Social Insurance and Its Prospects in Bangladesh Under the Purview of National Social Security Strategy (NSSS) and Action Plan.* Social Security Policy Support (SSPS) Programme. Cabinet Division and General Economics Division.

[313] *Ibid.*

established a Policy Guidance Unit for Child-focused Social Protection (PGU-CSP) under the Cabinet Division, to accelerate the design and implementation of a Child Benefit Scheme.[314]

Figure 24 - Expenditure on programs related to maternal, neonatal and infant nutrition and health as a percentage of the social protection annual expenditures



Source: World Bank and KWPF (2018)

Bangladesh National Forum for the Elderly

The Bangladesh National Forum for the Elderly (Bangladesh Jatiya Prabin Mancha) was launched in 2018 to enhance implementation of the government's policies for the elderly. The platform is comprised of a broad range of organisations, as well as the MoHFW and the Ministry of Social Welfare. The National Policy on Older Persons (2013) and the Maintenance of Parents Act (2013) cover food, clothing, shelter, medical services and companionship, including through non-contributory pensions and social assistance, and gradually and increasingly contributory pension schemes, and they include measures to increase employment opportunities of older persons and to address the needs of older persons in disasters.[315]

7.2.3 Needs for further actions under this programme

Finalise the beneficiaries' database and make it publicly available

A registry of potential social protection beneficiaries, the National Household Database (NHD), is being created, led by BBS.[316] Household data collection was done nationwide in 2018/19, and the registry is expected to be available in 2020/21.[317] The Centre for Policy Dialogue (CPD)[318] has called for the registry to be accessible to the public to ensure transparency and validation. The Database will be incorporated into a Single Registry Management Information System (MIS) that harmonises and strengthens the management information systems of all social protection programmes and consolidates them into a single digital platform. In preparation, GED has commissioned studies of MIS systems of social protection

[314] World Bank and KWPF (2018) *Program Brief: Towards a Child Benefit Scheme - Bangladesh .*

[315] Mazumder, Md. M.K. (2018) *Bangladesh: Progress towards MIPAA implementation*; PKSF (2018) *Quarterly Newsletter April-June.*

[316] BBS (2017) *Brief Description of National Household Database Project.* World Bank & KWPF (2019) *Program Brief-Employment Generation Program for the Poorest Bangladesh*.

[317] World Bank (2019) *Implementation Status and Results Report: Safety Net Systems for the Poorest* .

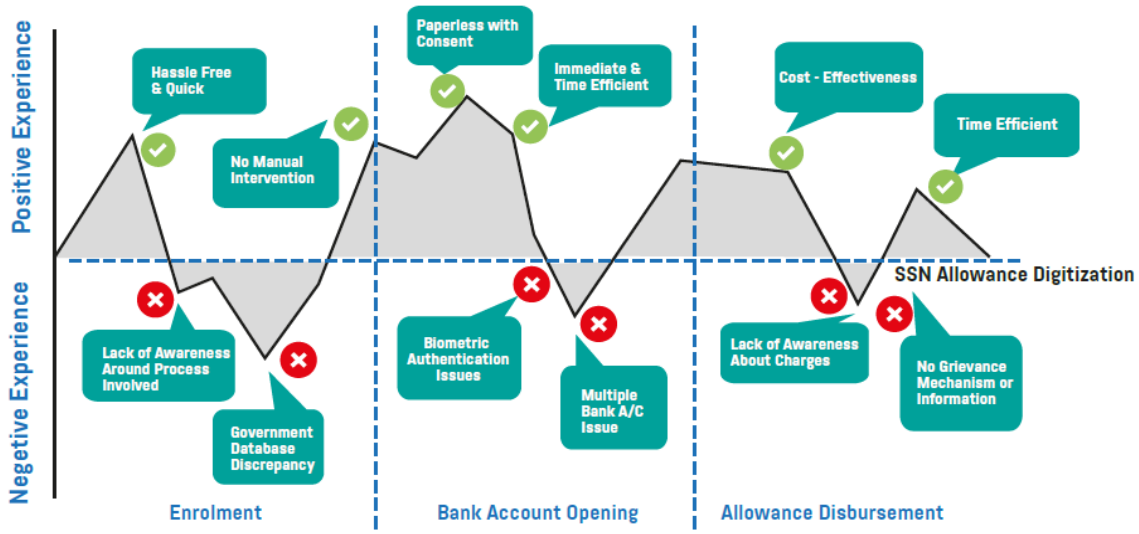
[318] CPD (2018) *An Analysis of the National Budget for FY2017-18*.

programmes. The DDM has started digitizing the MIS systems of large programmes, specifically *Work for Money*, *Test Relief*, *Vulnerable Group Feeding*, and *Gratuitous Relief,* in addition to the *Employment Generation Programme for the Poorest*, which was already substantially digitized.[319]

Fine tune the digitization of G2P social benefits payments, and expand it nationwide

A pilot study[320] to digitize direct cash payments of social benefits has identified some improvements required before expanding the system which, on the whole, was found to benefit both the government and beneficiaries (see Figure 25). For example, information needs to be disseminated on beneficiaries' rights; the creation of electronic accounts needs to be streamlined; and the capacity of field officials needs to be strengthened. The MoF has produced a broader plan for rolling out digital payments, including assessment of technological requirements, MIS systems, actors and costs.[321]

Figure 25 - Beneficiary experience of the social safety net payment digitization



Source: MicroSave Consulting Study cited in a2i (2019)

Strengthen and upscale urban social protection systems

There is an urgent need to address better urban social protection, and more broadly urban food and nutrition security. BBS reported that 10.6% of urban households in 2016 received government social protection benefits, scarcely different from 9.4% in 2010, and this compared against the urban poverty incidence of 19% in 2016.[322] Notably, Dhaka had the lowest coverage at just 3% of urban households. In 2018/19, just 7% and 9%, respectively, of beneficiaries of the Old Age Allowance and Allowances for Persons with Disabilities, were in urban areas. *Open Market Sales (OMS), Ghore Phera (Back to Home)*, *Allowance for the Urban Low-income Lactating Mothers*, and *Rehabilitation and Creation of Alternative Employment for People Engaged in Begging* are some focused programmes for urban areas. The *Livelihoods Improvement of the Urban Poor Communities Project*, covering 36 towns and cities, from 2018

[319] World Bank (2019) *Restructuring Paper: Safety Net Systems for the Poorest*.

[320] a2i (2019) *Accelerating G2P payment digitization.* Government of Bangladesh.

[321] GoB (2018) *Costed Reform Plan for Social Protection Cash Payments in Bangladesh.* Strengthening Public Financial Management for Social Protection Project. Ministry of Finance. Finance Division.

[322] BBS (2016) *Household Income and Expenditure Survey 2016*.

to 2023, will provide community-shared infrastructure and household-grants for housing, education and livelihoods.[323]

Upon request from the Ministry of Planning, BBS, IFPRI, and WFP collaborated in conducting the Urban Socioeconomic Assessment Survey (USAS), which aimed to generate evidence on the current food security situation in areas where the urban poor live, which may contribute to improved design of and targeting criteria for urban social security programmes. The study is currently being reviewed and is expected to provide inputs towards the government's 8th Five Year Plan (2021-2025).

[323] Rahman, A. (2019) What works for the urban poor? *Lessons Learned from UNDP's Urban Poverty Reduction Experience in Bangladesh*. Presentation made at the Bangladesh Social Security Conference & Knowledge Fair 2019. 4-5 December.

8 Progress towards Outputs for Outcome V

8.1. Programme V.1. Improved food safety, quality control and assurance, awareness on food safety and hygiene

This programme aims to improve food safety through the introduction of good practices at all steps of the food supply chain complemented by awareness raising and measures to ensure that foods are safe to be consumed. The aim of each one of the four subcomponents is to: 1) ensure conformity of foods for consumption facilitated through the accreditation of certification agencies, inspection agencies and laboratory services; 2) introduce and popularise Good Agricultural Practices, Good Aquaculture Practices and Good Husbandry Practices that ensure food safety and quality; 3) introduce and scale-up Good Manufacturing Practices (GMP) and Good Hygienic Practices (GHP), including adherence to HACCP compliance; and 4) enhance food safety education, consumer awareness and food safety networks

8.1.1 Progress towards achievements. of programme V.1

Table 25 – Programme V.1: Progress towards achievement of programme V.1

CIP2 output proxy indicators	2015/16 Baseline	2016/17	2017/18	2018/19	Source
Farmers trained on use of organic fertiliser, green fertiliser and microbial fertiliser, in thousands	800	1,025	1,432	1,872	MoA APA Indicator 3.3.1, DAE
Number of food safety management system certificates awarded by BSTI	5	7	10	18	BSTI, MoI BAB
Number of processed food items standardised by BSTI (mandatory certification)	58	58	72 R	72	BSTI, MoI, BFSA, IPH
Identified number of violations of food safety standard under FSA 2013 reported by BFSA	76	70	31	69	BFSA
Number of HACCP/FSMS certified institutions	10	45	70	80	MoI, BAB, BSTI, BARC, IPH
Number of courses delivered on GAP, GHP and GMP	GAP:1 GHP/GMP: 1	GAP:0 GHP/GMP:7	GAP: 1 GHP/GMP: 11	GAP: 3 GHP: 6 GMP: 2	MoA, MoI, BFSA
Number of trainees that have benefited from training on GAP, GHP and GMP	GAP: 50 GHP/GMP: 50	GAP:0 GHP/GMP:233	GAP: 45 GHP/GMP: 437	GAP: 60 GHP: 120 GMP: 40	MoA, MoI, BFSA
Number of food safety initiatives /days observed	0	1	1	2	BFSA, IPH

R: This figure has been revised by BSTI from 74 in MR19.

Training on effective use of organic fertiliser, green fertiliser and microbial fertiliser was extended

The use of chemical fertilisers contaminates agricultural products and degrades soil quality. To avoid the potential risk of exposure to harmful chemical contaminants, consumers are increasingly turning to organic and chemical residue-free foods. Farmers' training on the use of organic fertilisers can boost the availability of organic food in the market. The steady rise in the numbers of farmers trained since 2015/16 is encouraging. Between 2017/18 to 2018/19, an additional 440 thousand farmers were trained in the use of organic, green and microbial fertilisers. Simultaneously, organic fertiliser production and supply is growing as the number and production of organic fertiliser manufacturing units rises. This has led to an

increased collection of domestic kitchen waste, vegetable and food waste in urban areas. Organic fertilisers have the advantage of reducing the need - therefore cost of- irrigation for farmers because they hold water thanks to their organic matter content. They can help restore the soil fertility lost due to the application of excessive chemical fertiliser. The use of organic and non-chemical pesticides and insecticides to control pests is also being encouraged: farmers are being trained to use pheromone trap technology for pest control instead of chemical insecticides which not only leads to healthier produce but is much more cost-effective. DAE with assistance from FAO has been providing pheromone traps to farmers.

Awards of food safety management certifications almost doubled

The number of food safety management certificates awarded by BSTI almost doubled between 2017/18 and 2018/19, up to 18 compared to just five in the baseline year. The certification confirms the capacities of food producers and manufacturers to comply with the food safety standards set by the authority in their management and quality. Initiatives have been taken by several UN and Global Trade Promotion bodies including FAO, the World Trade Organization (WTO) and the United Nations Industrial Development Organization (UNIDO) to strengthen the capacity of Bangladesh Accreditation Board (BAB) to provide accreditation to certification and inspection agencies based on international standards (ISO 17020 and ISO 17021). The increase in the number of food safety management system certifying organisations resulting in more certified manufacturers and producers is encouraging but a faster pace is necessary.

The number of processed foods standardized by BSTI under compulsory certification remained unchanged

Following a clear drive by BSTI to increase the number of standardised processed foods under mandatory certification since the outset of the CIP2, the progress stalled in 2018/19 with the figure remaining at 72. This is worrying given that, notwithstanding the previous steady increase in the numbers of foods certified, the actual number of products covered is abysmally low compared to the number of food items on the market. Product standard setting, inspection and testing facilities are the basic requirements for certification of food products, and this is BSTI's mandatory responsibility. BSTI is also involved in market surveillance activities to ensure the quality and safety of BSTI's certified products.

The number of violations of food safety standards reported by BFSA picked up

After a slump in the number of violations of food safety standards reported by BFSA in 2017/18, this figure returned to previous levels, at 69. BFSA's market surveillance activities are supported by the operation of mobile courts that identify violation of food safety regulations and directives. Sales of expired and rotten food has been treated seriously as a punishable offence under the Food Safety Act 2013. Four years into the creation of the BFSA, the authority still faces operational challenges because of an insufficient number of trained food inspectors and reliable testing facilities. Without recognised laboratory analysis, penalties for infringement of rule are not legitimate. Existing laboratory staff are inadequate and need to be trained in analytical methods and laboratory accreditation. To support this, FAO has been providing training support for laboratory staff focusing on pesticide and drug residue analysis and microbial contamination.

The number of HACCP/FSMS certified institutions continued to rise

Since 2015/16, the number of HACCP/FSMS certified institutes has increased. An additional ten institutes were HACCP/FSMS certified between 2017/18 and 2018/19, which is markedly lower than the increase by 25 in the previous year. A Food Safety Management System (FSMS) is a systematic approach to controlling food safety hazards within a food business to ensure that food is safe to eat. FSMS is based on

the principles of HACCP, an internationally recognized system used to reduce the risk of safety hazards in food at specific points in the food preparation process. This includes biological, chemical or physical hazards. It is an essential requirement for foods to be able to be exported. Several companies, some international, are providing training on HACCP/FSMS enabling producers to show their commitment to manufacturing or trading in safe foods. Unfortunately, the products of some HACCP certified companies have been found to be of a substandard quality which weakens the credibility of regulators.[324]

More emphasis was put on delivering training on GAP

Training on good agricultural practices (GAP), good hygienic practices (GHP) and good manufacturing practices (GMP) is essential for the improvement of food safety. HACCP and personnel hygiene practices must be effectively implemented at all levels of food production and in all processing units. In order to control environmental contamination, street food handlers and distributors must be educated on correct practices. On the one hand, in 2018/19, training on GAP, which had been lagging, has picked up to an extent, with three courses offered to 60 participants (from one course for 45 participants in the previous period). On the other hand, GHP and GMP trainings have slowed down with only 160 individuals trained in eight courses compared to 437 individuals in 11 courses in 2017/18. Notwithstanding the observed trends, these numbers remain too low to make a real impact at the national level. The MoA, officials from the quarantine section who are in charge of checking compliance with the requirements of importing countries, and field services have set up cluster groups of farmers at the district level and upazila level to create traceability and GAP, but this is not enough, and exports continue to be limited due to lack of compliance.

The National and World Food Safety Days were observed

Since its inception three years ago, the National Food Safety Day has been observed on 2nd of February, to coincide with the establishment date of BFSA. The 2019 theme was সুস্থ্য- সবল জাতি চাই, পুষ্টিসম্মত নিরাপদ খাদ্যের বিকল্প নাই, 'Need a Healthy Nation, There is no Alternative to Nutritious, Safe Food'. Concurrently, the first-ever World Food Safety Day adopted by the United Nations General Assembly in December 2018 was also observed for the first time in Bangladesh on the 7th of June, facilitated by the World Health Organization in collaboration with FAO. Through this initiative, efforts to mainstream food safety in the public agenda and reduce the burden of foodborne diseases globally are pursued. The observation of these national and international food safety days helps increase the awareness of food safety by all stakeholders of the food system and particularly by consumers who are ultimately suffer the effects of the lack of food safety.[325]

8.1.2 Policy development, programmes and initiatives underway

With a budget of 206.9 million USD, this programme is among the smallest in the CIP2. The large 58% increase between 30th of June 2018 and 2019 is to a large extent explained by the inclusion of two new projects: the *Expansion and strengthening of BSTI* project and *Solid Waste Collection & Disposal Management in Narayanganj City Corporation* project. DPs only fund 21% of this programme. The MoFood *Establishment of seven food laboratories in seven Divisions* project which constitutes 6% of the entire programme remains in the pipeline.

Strategy on food safety included in the draft National Food and Nutrition Security Policy 2020

[324] World Bank (2019) *Food for Improved Nutrition in Bangladesh.*

[325] Indeed, according to ICDDR,B, 500 people visit a hospital because of diarrhoea every single day (Dhaka Tribune (2019) *National Food Safety Day: What the government is doing to ensure food safety.* 2 February).

The upcoming National Food and Nutrition Safety 2020 dedicates a strategy (Strategy 5.1.) to improving food safety, quality control, and awareness of food safety and hygiene. It emphasises the need to put in place operational standards and procedures to assure that food is free of contamination from sources such as chemicals, trace elements, heavy metals and bacteria. It plans to establish an adequate regulatory framework including surveillance for compliance and enforcement. The creation of an expanded network of duly accredited laboratories for food safety is planned. The popularisation of Good Agricultural Practices, Good Aquaculture Practices and Good Husbandry Practices that ensure food safety is envisaged for primary producers as well as the scaling up of Good Manufacturing Practices, Good Hygienic Practices, including adherence to HACCP compliance for secondary and tertiary producers. Establishment of traceability in agricultural, animal and fish production are the components of the new policy as well as the enhancement of consumer awareness on food safety.

Food Safety (Food Hygiene) Regulations 2018 introduced

The Food Safety (Food Hygiene) Regulation was introduced in 2018 to regulate and provide guidance on sanitation and hygiene issues, such as the cleanliness of the food processing establishments, equipment used for food processing, rules for cleaning drainage systems, health guidance for health workers and storage.[326]

Launch of a Mobile Food Safety Laboratory

A modern mobile laboratory provided by FAO with funding from USAID was launched in March 2019. It is to tour Dhaka markets to raise awareness on food safety and good food handling practices. It is also equipped to test for a range of harmful food contaminants and pathogens including toxic chemicals, heavy metals, pesticides, antibiotics, E. coli, salmonella, shigella, and formaldehyde. BFSA will operate the laboratory, gathering data and insights about food contamination that will inform food safety campaigns. Up to three technicians will be able to perform tests simultaneously. Test results will take from just a few minutes to a few hours. Although they may not be as thorough as analyses performed in large laboratories, they will be able to promptly alert the worst cases of contamination.

Chemical testing units be installed at all land and seaports

The High Court ordered that the BFSA complies with its directives to the National Board of Revenue (NBR) to install chemical testing units at all land and seaports.

Gradation system for restaurants in full swing

The international gradation system for restaurants introduced by BFSA in 2018 for Dhaka city to indicate their quality based on hygiene and food safety regulation is operative even if still far from widespread. In January 2019, 57 restaurants were awarded green and blue coloured stickers after scrutiny by the BFSA. Restaurants are given green, blue, yellow and orange stickers (corresponding to A+, A, B and C, respectively) based on 10 criteria: proof or certification documents, staff hygiene, approved food sources, levels of contamination, cleanliness, processing procedures and temperature control, equipment and machinery hygienic maintenance, chemical substances, pest and insect control, and drainage and pipe management. A mobile application is also set to be developed to enable consumers to check restaurants' grading. This initiative should work as an incentive for restaurants to comply with BFSA standards.

Checks on illegal use of DDT

[326] USDA (2019) Bangladesh Food and Agricultural Import Regulations and Standards Report. *FAIRS Annual Country Report. GAIN Report*. BG 1812.

The GoB launched a USD 42 million project funded in part by the Global Environment Facility (GEF), in partnership with FAO for pesticide risk reduction. It aims to reduce the risk posed by the largest Persistent Organic Pollutants (POP) pesticides stockpiled in the country by collecting, cleaning up and safely disposing the large stockpile of obsolete DDT. It will also develop national capacities to implement more effectively the Stockholm Convention[327] and reduce risks from pesticides, while also improving the sustainability of agricultural production and generating economic, environmental and social benefits.

Development of knowledge and capacities in the area of food safety

In response to the Government's drive to tackle issues of food safety in the country, efforts are being made to train a cadre of people able to understand the problem and verify compliance with regulations. For example, the Interdisciplinary Centre for Food Safety at BAU has started a new undergraduate BSc course in Food Safety Management in partnership with FAO and the Dublin Institute of Technology (DIT) to train new generations of food safety experts. BFSA and FAO's *Food Safety Project* have also organised awareness trainings such as training for women on five keys to safer food, on hand washing and hygiene practices, and on safe food preparation and preservation. Training has also been imparted to primary head teachers.

Better control over imports

The Import Policy Order 2015-2018[328] prevents any imports of fish that contains formalin. In order to check the use of formalin in imported food, the policy includes 12 generic and commercial tags of the formalin in the definition of formalin in its terms. Formalin is thus no longer found among imported foodstuffs.[329]

Total diet study for Bangladesh planned

The *MUCH-FAO Project* is preparing to fund a total diet study to determine the population's dietary exposure to harmful chemical substances (as well as beneficial and necessary ones). This will help estimate dietary exposure to, and assess the health risks of food contaminants, allergens and extraneous materials.

8.1.3 Needs for further actions under this programme

Strengthen the capacities of the BFSA and testing laboratories

As BFSA expands its activities, it still requires additional manpower with the right training not only in districts but also at upazila level. More testing laboratories are needed, equipped with state-of-the-art infrastructure to match international standards, including mobile laboratories which can test products in kitchen markets. A directory published by BFSA listing food testing laboratories shows that most have limited facilities that do not allow them to test all parameters. It is estimated that only 50 laboratories can test foods, and only to a limited extent. They are mostly able to identify composite elements of food but are unable to detect the presence of any external elements.[330] So far, only eight public sectors food testing laboratories have received accreditation from National and International Accreditation bodies. Accreditation must be sought separately for the laboratory infrastructure, the machinery used, their

[327] The Stockholm Convention on POPs is a global treaty to protect human health and the environment from chemicals that remain intact in the environment for long periods, become widely distributed geographically, accumulate in the fatty tissue of humans and wildlife, and have harmful impacts on human health or on the environment. This Convention's signatories agree to phase out of several persistent pesticides and other chemicals, through appropriate measures to mitigate the existing risks.

[328] GoB (2016) *Import Policy Order 2015-2018*. Ministry of Commerce.

[329] Dhaka Tribune (2019) *National Food Safety Day: What the government is doing to ensure food safety.* 2 February.

[330] Hossain, E. (2019) *Food testing labs test hardly any food in Bangladesh.* New Age. 12 January.

operators and each of the tests carried out. The facilities and capacities of food testing laboratories should be systematically assessed. Their jurisdiction also needs to be defined considering their analytical scope and expertise.

Continue educating and raising awareness on food safety

Formal education on food safety management system to produce competent graduates working in the field of food inspection, control, audit and surveillance services is an urgent need. It will ensure food safety control, compliance and assurance in all aspects of food production, preparation, processing and distribution activities. Food safety training needs to be expanded to more institutes to cater to the demand for country-wide food safety inspection and control. Improving food safety also needs more involvement from policymakers, national and local leaders to create awareness and instil the culture of food safety.

Continue promoting the demand for and supply of organic fertilisers and develop and apply standards for organic produce

The demand for organic fertilisers and sensitization of farmers about its advantage must continue to be encouraged. Concurrently, the supply of such fertilisers must be encouraged as the number of producing companies is limited and mostly inadequate in terms of quality standards. To encourage the production and promotion of organic fertilisers, subsidies on chemical fertilisers may need to be rethought, given the high cost of importing them.[331] With the increase in consumer awareness about food safety and health the demand for organic food is growing. Policy level support is required for farmers who want to start or expand their production of organic produce. Simultaneously, standards for organic food should also be developed and endorsed since there is evidence of non-organic foods being sold in the market as organic food, with limited means for consumers to check.

Implement existing laws

At present, Bangladesh has a high number (15) of acts, laws, and regulations of various categories of food products which creates overlapping and complexity in application and enforcement[332]. The Food Safety Act 2013 imposes seven-year imprisonment and a BDT 10 lakh fine for the adulteration of food with life-threatening chemicals. The Special Powers Act 1974 goes as far as imposing a maximum punishment of death penalty for such offences.[333] Yet, offences continue to abound. To improve the situation the existing laws thus need to be strictly imposed and monitored.

Develop certification to enable exports

The fisheries sector is one of the most productive and dynamic industries in Bangladesh. It has the potential to improve food security and influence the development of an agrarian economy. However, due to the lack of responsible farming and proper food safety and quality standards, there has been a decline in the export of its aquaculture products. For example, the Aquaculture Stewardship Council (ASC) accreditation is increasingly becoming necessary to get farmed species into European retail. Efforts have been made on the production side in terms of traceability, quality and getting a regulatory platform in place but this still falls short of what is required. So far, no single Bangladeshi farm has received this accreditation and the limited size of farms in an important impediment to such certification. The inability

[331] UNDP (2019) *Recycling value chain analysis (RVCA) in Teknaf and Ukhia*. Bangladesh Sustainable Solutions to Solid Waste Project.
[332] USDA (2019) Bangladesh- Food and Agricultural Import Regulations and Standards Report- FAIRS Annual Country Report. *GAIN Report*. Number: BG 1812.
[333] Dhaka Tribune (2019) *There's something wrong with the food*. 17 May.

to ensure full traceability and adherence to social-environmental standards has meant that some countries stopped sourcing shrimp from Bangladesh.[334]

Execute existing antibiotics poultry feed ban

Antibiotics are still found in poultry feed although their use is banned in Bangladesh. Traders continue to break the law to ensure low mortality and good growth of chickens even if this poses serious public health hazards, mostly by creating antibiotic resistance in humans. This is alarming given that an overwhelming majority of deaths in intensive care units of the country can be attributed to antimicrobial-resistant superbugs.[335] Efforts must be made to implement the existing ban on the use of antibiotics in poultry feed.

Enhance the results of waste management improvement efforts

Lack of proper management of waste can pose significant risks to food safety. Water streams can be contaminated with pharmaceutical contamination from residential, industrial and agricultural waste streams (e.g. antibiotics used in agriculture and aquaculture). Landfill leachate may leak into surrounding soils affecting agriculture. Certain substances detrimental to human health if ingested such as plastic additives (such as phthalates and bisphenol A (BPA)) are now making their way into surface water systems and even drinking water supplies thus entering the food chain.[336] Thus, initiatives to render waste management more effective continue in the two city corporations under Greater Dhaka but show limited results. In 2016, approximately 6,000 waste bins were installed but their use was limited. Despite the creation of designated spots for waste disposal, illegal dumping continues which creates water clogging when it rains. Efforts continue however and the allocated budget specific to waste management for Dhaka North City Corporation for the fiscal year 2018-2019 increased by more than 7% on the previous year.

Accelerate waste disaggregation and sensitise the general population to the 3R concept

The Dhaka North City Corporation reported a 22% rise in the amount of waste generated in 2017/18 from the previous year, accounting to 0.8 tonnes of waste. The Dhaka South City Corporation generated one million tonnes of waste. Economic development, population growth and the increase in the numbers of shopping malls, shops, restaurants etc. explain the rises observed. Options to acquire more land for landfills but also to create sorting plants are being looked into but this needs to be accelerated.[337] Waste Concern is currently replicating its Integrated Resource Recovery Centres (IRRCs) model across the country through the Department of Environment and the Ministry of Environment, Forest and Climate Change (MoEFCC). These centres transform municipal waste into resources such as compost, biogas, clean water, recyclable materials that can be sold in the market and biodiesel. While measures are gradually being taken to accelerate waste segregation, this needs to be expanded and accelerated, while the general public is sensitized to the 3R concept of reducing (consumption), recycling and reusing.

Develop policy guidelines and sellers' registration for safe and healthy street food vending

Cheap and readily available street foods are a non-negligible source of food for Bangladeshi consumers. But the environment in which these street foods are prepared, handled, catered, preserved and disposed is unsatisfactory and often highly unhygienic. The washing and drinking water used and served to customers is often unsafe as running water is frequently not readily available. Vendors are often illiterate

[334] Holland, J. (2019) *Bangladesh seeks more buck for its 'bagda*. Global Aquaculture Alliance.

[335] The Telegraph (2019) *Superbugs linked to eight out of 10 deaths in Bangladeshi ICUs*. 22 April.

[336] Yu-Chen, A., Tzy-Ying Huang, L. & Wahlqvist. M.L. (2009) *Waste management to improve food safety and security for health advancement.* *Asia Pacific Journal of Clinical Nutrition* 18(4):538-45.

[337] Daily Star (2019) *Time to be WARY OF WASTE*. 21 April.

and unaware of nutrition and food hygiene facts.[338] Policy guidelines for street food vending were developed by the Consumers Association of Bangladesh (CAB) in 2010 to assure the safety and quality of street food. Following this, in order to institutionalize street food vending, FAO has undertaken a number of initiatives, including a pilot study in Khulna where street food carts were distributed along with utensils, clean water jars and food preparation. This was accompanied by training to the vendors on the maintenance of personal hygiene, preparation and servicing of safe foods to the consumers. Khulna became a model for street food vending that also provided a livelihood for both women and males. In 2018, FAO provided the Barisal City Corporation and Dinajpur Municipality a total of 258 street food carts to whom the local government authorities provided an informal registration number with a plan to formalise and extend this to other food vendors at a later stage. Notwithstanding these initiatives, the street food vending sector remains disorganized and needs an improved policy and regulatory system to govern it. The CAB guidelines need to finalised, implemented with a robust monitoring system in place.

[338] Nizame, F.A., Alam, M.U., Masud, A.A., Shoab, A.K., Opel, A., Islam, M.K., Luby, S.P. & Unicomb, L. (2019) *Hygiene in Restaurants and among Street Food Vendors in Bangladesh*. *Am J Trop Med Hyg.* 101(3): 566-575.

8.2. Programme V.2. Reduced food losses and waste

The objective of this programme is that food loss and waste (FLW) are minimised throughout the production chain down to consumption by households. It comprises three sub-programmes which reflect different levels of the food value chain, and the programmes include: to improve methods of estimating food loss and implement appropriate measures to minimise food loss including the nutrient loss at different postharvest steps; to strengthen capacity in postharvest technology and infrastructure (transport, packaging, storage); and to reduce food waste at the retail and household consumption levels.

8.2.1 Progress towards achievements

Table 26 – Programme V.2: Outputs indicators and progress against baseline

Proxy indicators	Baseline (2015/16)	2016/17	2017/18	2018/19	Source
Wastage as a proportion of agricultural produce, including sector specific proportions in Bangladesh	*	*	*	*	MoFood, MoA, MoFL, MoI

* Not available

Recent information on food loss and waste is not yet available in Bangladesh

Recent information on FLW is not yet available in Bangladesh (Table 26). Although levels of postharvest losses of specific food commodities have been estimated over the years, there are no recent nationally representative data generated through an approved or widely recognized methodology on the magnitude of FLW in Bangladesh. FAO (2019)[339] recorded all FLW estimates for Bangladesh from grey literature to national and sectoral reports between 2000 and 2017. It identified 89 studies: the average FLW rate was 7.4% with a wide variation from a minimum of 0.5% to 35%. Such range provides little guidance as to what a realistic figure might be. More recently, an IFPRI study under the *MFSP* assessing current grain losses showed a storage loss of less than 1% during the 12-month period, which meets the standard set by the government. However, this study only considered storage losses and did not cover other sources of losses in the rice supply chain. Champions 12.3 (2017)[340] have shown that in South Asia, food losses are mostly prevalent near production, handling and storage, and less at the consumption level. The estimated share of total food that is lost or wasted is 17% in the region compared to 42% in North America and Oceania. While the focus should, therefore, be on the lower end of the value chain, as value chains transform, waste associated with consumption and distribution will likely increase.

8.2.2 Policy development, programmes and initiatives underway

Food loss and waste addressed in policies and activities started towards the design of a national loss reduction strategy

On the aims of the National Agriculture Policy 2018[341] is to make agriculture safe and profitable, with emphasis on the reduction of postharvest loss, enhancement of agro-processing activities and extension of postharvest technology to end-users. The Export Policy 2018-2021[342] was also published with clear directions on the adoption of good practices to produce and export safe food. Consultations on the progress of achievement of SDG Goal 12 were to be held in early 2020 in view of preparing a report for

[339] FAO (2019) *The State of Food and Agriculture 2019. Moving forward on food loss and waste reduction*. Rome.

[340] Champions 12.3 (2017) *SDG Target 12.3 on food loss and waste: 2017 Progress Report*. *An annual update on behalf of Champions 12.3.*

[341] GoB (2018) *National Agriculture Policy (NAP) 2018*. Ministry of Agriculture.

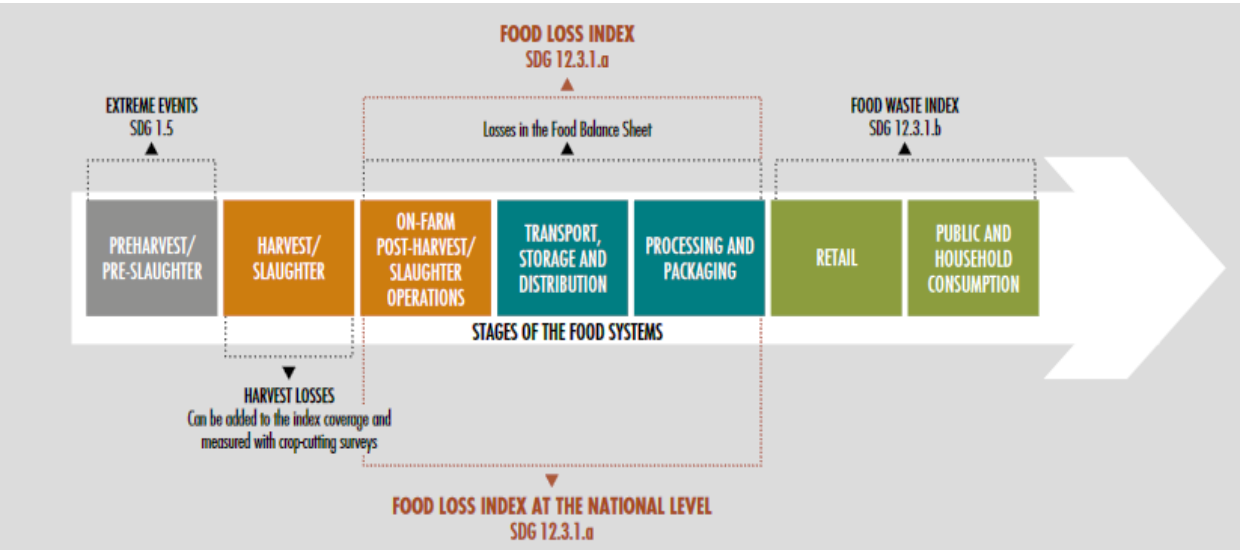
[342] GoB (2018) *Export Policy 2018-2021.* Ministry of Commerce.

the Office of the Honourable Prime Minister on the reduction of food loss and waste and the need for a national loss reduction strategy. The MoFood is responsible for the monitoring of FLW at the national level, while the MoA is the co-lead and the MoFL, Ministry of Commerce, MoI and the Statistics and Information Division under BBS are associated partners.

Research to assess the magnitude of FWL for selected food commodities in the process of being initiated

The Food Loss Index (FLI) and Food Waste Index (FWI) are the two indicators to be used to monitor SDG 12.3.1. Methodology for the calculation of FWI is still under preparation. FLI is a synthetic fixed-base index that compares percentage losses of a country for 10 key commodities from five food groups. In Bangladesh, the evidence on the extent of FLW is scattered and inadequate, thus rendering a national strategy to handle the problem challenging to develop. To improve global, regional and local knowledge about the underlying reasons for food losses and to assess where critical loss points occur, FAO has undertaken a series of case studies for example in India on the value chains of three essential commodities: rice[343], chickpea[344] and mango[345]. The findings are to be used to develop technically, economically, environmentally and socially feasible solutions to reduce food losses. These, however, use a field case study methodology and do not constitute a state or national subsector study. Thus, in the State of Food and Agriculture Report (2019)[346] dedicated to this issue, FAO proposes to measure progress towards SDG Target 12.3 through two separate indices: the Food Loss Index (FLI) and the Food Waste Index (FWI) (see Figure 26). In the year under review, under the *FAO-MUCH Project* which assists the GoB in strengthening its capacities to design and monitor information-based food and nutrition security policies and investment plans, a research project was being developed to assess the magnitude of food losses for selected food commodities chosen from all food groups (cereals, fruits and vegetables, roots and tubers, poultry and livestock and fish). The *FAO-MUCH Project* will also attempt to assess food waste at the retail level, restaurant outlets and catering house in sampled areas of Bangladesh.

Figure 26 - Scope of the estimation of food loss index in food value chain



Source. FAO (2019) The State of Food and Agriculture 2019. Moving forward on food loss and waste reduction. Rome.

[343] FAO (2018) *Food loss analysis: causes and solutions - Case study on the rice value chain in the Republic of India*. Rome.

[344] FAO (2018) *Food loss analysis: causes and solutions - Case study on the chickpea value chain in the Republic of India*. Rome.

[345] FAO (2018) *Food loss analysis: causes and solutions - Case study on the mango value chain in the Republic of India*. Rome.

[346] FAO (2019) *The State of Food and Agriculture 2019. Moving forward on food loss and waste reduction*. Rome.

Collaborations established

National and international collaborations are required to monitor the FLI and take measures to reduce FLW. To this effect, a ministry-level memorandum of understanding was planned for 2020 between Bangladesh Agricultural Research Council (BARC) and the Global Initiative for Food Security (GIFS) of the Saskatchewan University, Canada with a component related postharvest and value addition. Dhaka Food System, a new FAO project funded by Wageningen University and Research (WUR) of the Netherlands was initiated with a particular focus on food waste. A knowledge transfer mechanism with the Indian Team of FLW for the baseline study and computation of the FLI is also being explored.

Projects incorporating the issue of FLW in their objectives undertaken

In Bangladesh, several projects are starting to incorporate the reduction of FLW in their objectives, especially in the crop sector. For instance, the 190.86 million USD *Smallholder Agricultural Competitiveness Project (SACP)* implemented by DAE with partner organisations (DAM, BADC and BARI) has a component on the reduction of food loss through improved postharvest handling and processing practices.[347] In this project, the contributions of GoB, private sector and beneficiaries are 26%, 7.4% and 6%, respectively. Another remarkable success has been achieved through establishment of a *Village Super Market (VSM)* in Khulna with support from Solidaridad, and INGO. The VSMs possess the improved postharvest handling facilities such as cold storage units, freezing and ice facilities which will significantly reduce post-harvest food waste and losses.

8.2.3. Needs for further actions under this programme

Develop a national strategy on the reduction of FLW starting with its quantification

There is an urgent need for investments by both the public and private sectors in critical areas of the food supply chain such as storage, transportation, food processing and packaging industries which will contribute to the reduction of FLW. A national strategy and action plan on the reduction of FLW including the establishment of food banks is thus needed to direct such investments where the gaps and needs are. Such national FLW reduction strategy has been developed by Canada[348] and the European Union.[349] Awareness on the needs and ways to reduce FLW across traditional and modern food value chains is essential and guidance is needed for all actors involved. Adequately quantifying FLW across the food system is a prerequisite to the development of this strategy.

Encourage adoption of good practices to reduce losses and maintain quality and safety

Improvements in on-farm operations through technological interventions and adoption of good practices and infrastructure development for pre-harvest care can help avoid damage and contamination and therefore reduce FLW. Post-harvest management, adequate on-farm primary processing to prepare raw materials for secondary and tertiary processing are also crucial. Good Agricultural Practices (GAP) and Good Aquaculture Practices (GAqP) need to be strengthened by looking into the harvest index[350], timing of harvest, the choice of harvesting technologies, and using appropriate farm-level storages. In Bangladesh, GAP are being developed, where BARC is the Scheme Owner, DAE the certification body and BAB the accreditation body although they are yet to issue certificates. Export of agricultural commodities and food items need to be expanded whereby the surplus production can be exported to neighbouring

[347] IFAD (2018) *Smallholder Agricultural Competitiveness Programme- Final Project Design Report*. Asia and the Pacific Division. Programme Management Department. IFAD. 186.

[348] National Zero Waste Council (2018) *A Food Loss and Waste Strategy for Canada.*

[349] European Union (2019) *National Strategy for Food Waste Reduction*. Federal Ministry of Food and Agriculture. Berlin.

[350] Proportion of the crop biomass harvested for food.

countries. However, assurance of quality and safety of agricultural produce is a prerequisite for export which can be achieved through the application of GAP.

Develop, invest and apply appropriate technologies to reduce FLW

Modernising public warehouses, expanding cold storage and developing integrated transportation cold chains are urgent to reduce FLW. Simple innovations such as replacing sacks by plastic crates can reduce losses in tomatoes and other crops. In the Philippines, rice-storage bags reduced losses by 15 percent. Yet, Hortex Foundation under the Ministry of Agriculture has a very limited number of refrigerated trucks (3 tons capacity; 15 to -25°C temperature range) that are rented to users to carry fresh commodities.[351] Modernization of domestic slaughterhouses and live birds or fish markets is needed for reducing loss and also for assuring food safety and to ensure the supply of hygienic finished meat and meat products. Ensuring appropriate slaughter waste management also contributes to reducing the environmental pollution. For perishable horticultural commodities, controlled atmosphere storage, modified atmosphere storage, heat treatments (hot water, hot air, irradiation), use of ethylene scrubbers and ethylene inhibiting compounds, postharvest fungicides, sanitizers such as electrolyzed oxidizing water, biotechnological tools need to be expanded to prolong storage life and reduce losses. In West Africa, the use of solar dryers to extend the shelf life of fruits and tubers is showing promise in reducing postharvest losses. Packaging techniques such as vacuum packing, nitrogen flushing also help preserve the freshness of food for longer periods. Modern packaging and improved ripening technology for the horticultural commodities are thus also urgently needed.

Increase food processing capacity

Food processing plays an important role in tackling FLW. This includes minimal processing as well as secondary (the conversion of ingredients into edible products) and tertiary processing (the production of prepared convenience foods).

Create an environment that promotes FLW reduction

An adequate policy environment to promote technologies for smallholders and increased storage facilities and cold chain systems is needed. Provisions for sufficient electricity, water, transport systems, communication technology and standards to support the development of post-harvest systems in food supply chains must be provided. Smallholder organisations and supply chain stakeholders must be assisted when accessing finance, for example through credit schemes that have been designed to support the acquisition of post-harvest technologies such as plastic crates for bulk packaging, harvesting tools, hot water treatment tanks to eliminate pests and diseases. Campaigns to promote the economic, social (including nutritional) and environmental benefits of reducing post-harvest losses in fruit and vegetable supply chains should be supported. The establishment/operationalisation of an efficient communication and trade environment is also a prerequisite for implementing FLW reduction measures. Overall, private sector incentives are needed since sometimes the measures needed to minimize FLW are not cost-effective as they require costly quality control and technologies.

Encourage public and private sector initiatives as well as PPPs for the reduction of FLW

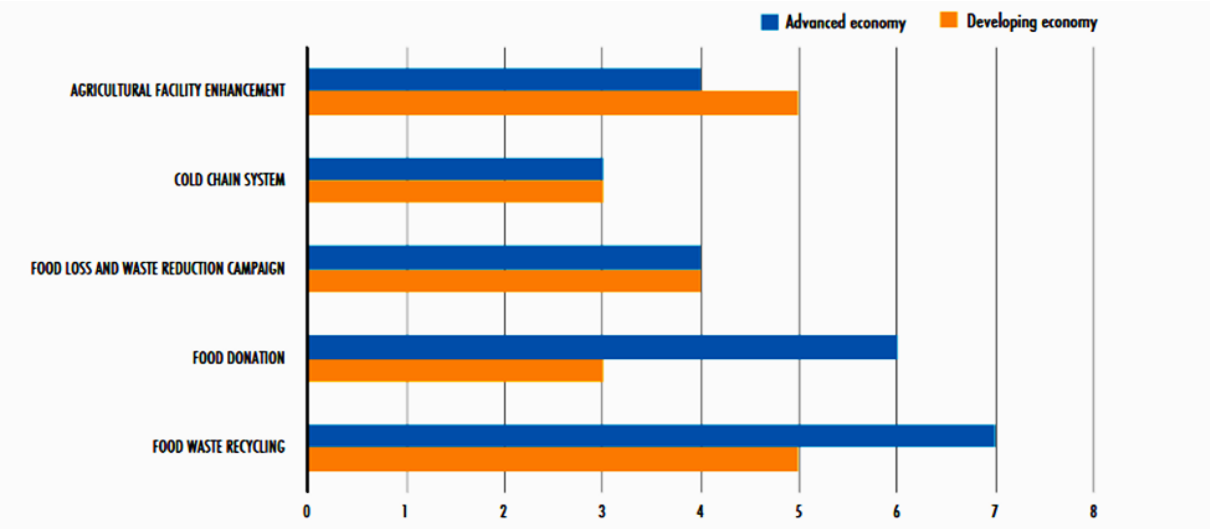
Tackling the issue of loss and waste entails costs which suppliers and consumers will only be willing to bear if these are outweighed by the benefits.[352] These are often associated with the need to develop or improve the quality of certain public goods and services which private actors are not willing to fully fund.

[351] Hortex Foundation (2013) Reefer Truck Available on Rent at Hortex Foundation. *Hortex Newsletter* 13(1).

[352] FAO (2019) *The State of Food and Agriculture 2019. Moving forward on food loss and waste reduction*. Rome.

This is where public–private partnerships (PPPs) can play a role.[353] PPPs interventions towards FLW reduction in Asia-Pacific economies are most common for food waste recycling, and also for agricultural facility management for the developing economies of this region. For developed economies, food donations interventions are the second most common initiative. The most important feature of PPPs according to Asia-Pacific Economic Cooperation (APEC) members, is knowledge sharing and improved policy and project performance. Bangladesh needs to investigate in which areas such partnerships could be most effective.

Figure 27 - Types of interventions towards food loss and waste reduction by public-private partnerships in APEC countries (number of partnerships)



Source. FAO (2019) The State of Food and Agriculture 2019. Moving forward on food loss and waste reduction. Rome.

Develop postharvest systems through skilled human resources and equipped institution

Skills and practices in the generation and application of appropriate loss reducing technologies need to be strengthened. Boosting capacities of farmers and stakeholders in the supply chain and developing capacities within extension systems to address quality management, safety assurance and loss reduction in food supply chains, is crucial. The capacity of local small and medium-sized enterprises (SMEs) that engage in the manufacture of postharvest technologies for local markets needs to be encouraged. Support is also needed to provide access to improved technologies and practices to smallholders. The *Smallholder Agricultural Competitiveness Programme (SACP)* for example is supporting smallholder growers and stakeholders in capacity development in postharvest management and processing of high-value crops in Bangladesh.[354] The establishment of national and regional networks for information and technology exchange on postharvest systems development also needs to be promoted.

Build the capacity of educational and research institutions

Capacity building of the relevant educational institutions and research organisations with modernized curricula for postharvest management and cutting-edge research facilities is crucial. FLW reduction is technical and hence requires technically trained persons to address the issue. For instance, Bangladesh requires additional experts on post-harvest management of perishables, food technology, food safety management, food science and nutrition to strengthen leadership in the agriculture sector and food

[353] *Ibid.*

[354] IFAD (2018) *Smallholder Agricultural Competitiveness Programme- Final Project Design Report*. Asia and the Pacific Division. Programme Management Department. 186.

industries. Effective partnerships among academia even internationally[355] private sector and Government need to be strengthened to generate and use research evidence on reducing FLW.

Promote education and awareness

Knowledge, education and awareness are needed to reduce FLW. To this effect, national and international best practices should be drawn upon to devise appropriate interventions. Awareness building for the numerous stakeholders of the food system including public sector agents and private sector industry fora/associations is important to make a difference. At household level, wise food purchase and storage, standardisation of cooking and serving sizes, portion control, along with nutrition education can help minimise food waste.

Adopt and adapt practices and innovations from across the globe to reduce waste

Appropriate mechanisms for waste distribution/disposal (e.g. for cattle feeding, fish feeding and landfilling) by separating different types of waste must be adopted, adapting it to the needs of urban and rural areas. Information technology can be useful for the redistribution and marketing of food and waste, build awareness and responsible behaviour. Food waste can be minimized at the individual level through a number of actions such as careful storage of foods; donation of accumulated food; freezing of food; use of old fruits and vegetables to create fruit salads or smoothies; and eating leftovers.[356] The government and the private sector can also contribute to reducing waste through initiatives such as the redistribution of food items to the needy at a lower price and the marketing of rescued food. Examples of systems to recover food to avoid it being wasted, especially in developed countries may be adopted or adapted to Bangladesh: in the Netherlands, ResQ-club allows surplus food from restaurants to be bought online and De Verspillingsfabriek sells soup made from rescued unsaleable fruits and vegetables. A mobile phone application first developed in the UK but now extended to many countries, Too Good To Go , offers food that restaurants and shops cannot sell at the end before closure and destined to be thrown, at discounted prices. In France, a law against food waste forces major supermarkets to donate their unsold items to charities that will distribute it. Similarly, in Canada, unused food is recovered from manufacturers, retailers, restaurants and 22,000 people in need are fed daily. Sweden converts 50% of its household waste of 4.4 million tons into energy.[357]

[355] Partnerships with institutions such as the Postharvest Technology Centre of the University of California, Davis, recognized for its contribution in developing postharvest technology of perishables to maintain quality and safety and to reduce postharvest loss would be beneficial for Bangladesh.

[356] Farmveda (2019) *Food Wastage in India.*

[357] Goswami, A. (2018) Food wastage crisis in India. *Clean India Journal*.

8.3. Programme V.3. Improved information and data for evidence-based monitoring and adjustment of policies and programmes

Programme V.3 aims to support FNS-related decision-making, policy formulation and programming with an evidence-based, timely, data-driven analysis that relies on the existing network of information systems. This is done by improving information infrastructures and enhancing coordination in data collection and exchange.

8.3.1. Progress towards achievements

Table 27 – Programme V.3: Outputs indicators and progress against baseline

Proxy indicators	Baseline (2015/16)	2016/17	2017/18	2018/19	Source
Existing food security and nutrition databases/ surveillance systems	FSNIS, FSNSP[358], BDHS[359]	NIPU database, NIS[360], FSNIS	NIPU database, NIS, BDHS, FSNIS	FSNIS, NIPU database, NIPN, BDHS, IPC	FPMU
Food Composition Tables (FCT) updated / disseminated	BIRTAN started training on Bangla version; Research on FCT completed and operational	Operational through trainings and dissemination	BIRTAN has started dissemination through its Training for Trainers	BIRTAN, BIRDEM, INFS and FPMU are disseminating the FCTs through various means	INFS/CARS/ DU/FPMU/ BIRTAN

Different FNS data sources continue to inform policymaking

A variety of government and non-government FNS surveys and surveillance systems continue to inform policy analysts and policymakers thus contributing to shaping nutrition-sensitive policies and programmes and providing updates on coverage and effectiveness of nutrition-specific interventions. BDHS is the main reference to track progress on maternal, child health status, child nutrition and feeding practices at the country level. BDHS 2017-18 collected data between October 2017 and March 2018 and its key indicator report was published in November 2019.[361] In addition, the Household Income Expenditure Survey (HIES) which last took place in 2016 is a national representative survey measuring monetary poverty, the standard of living and nutritional status up to district level. The Bangladesh Integrated Household Survey (BIHS), conducted by IFPRI in 2011/12, 2015 and 2018/19, is the only nationally representative survey of rural Bangladesh to collect data on dietary intake of individual household members and anthropometric measurement and women's empowerment through the Women's Empowerment Index (WEAI). The Health Facility Survey (BHFS, 2017) implemented by the National Institute of Population Research and Training (NIPORT) includes reporting on health care service, facilities and nutrition services. The Nutrition Information and Planning Unit (NIPU), established in IPHN, tracks the implementation of NNS services at the district level. It brings together local-level nutrition data collected from different sources such as Community Clinics, Upazila Health Complexes through the DHIS2 portal. In April 2019, the National Information Platform for Nutrition (NIPN) was officially launched by the MoFood and the European Union. It provides support to the country's strategic decisions by strengthening nutrition-related information systems and improving data analysis. Finally, the information gathered by the Integrated Food Security

[358] Food Security and Nutritional Surveillance Project.

[359] Bangladesh Demographic and Health Survey.

[360] Nutrition Information System.

[361] GoB (2019) *Bangladesh Demographic and Health Survey 2017-18 – Key Indicators*. Ministry of Health and Family Welfare.

Phase Classification (IPC) Chronic Food Insecurity analysis covers a total of 28 districts and is valid until 2020 in the absence of any structural changes.

Ongoing trainings on the Food Composition Tables expanded

Since the finalisation of the Bangladesh FCTs in June 2013, their further updates[362] and translation into Bangla, their dissemination has been ongoing through capacity building organised by BIRTAN, the MUCH project and INFS. In the year under review, BIRDEM has been disseminating FCTs through its various capacity development training programmes including dieticians' training courses. Besides, FPMU, with technical support from MUCH, developed nutrient-dense recipes using the FCTs and disseminated them in nutrition awareness events such as the Nutrition Olympiad and World Food Day. FPMU also disseminated the FCTs in these events to create mass awareness in food choices on the nutritive value of local foods and their use.

8.3.2. Policy development, programmes and initiatives underway

At 145.8 million USD, this programme continues to be among the smallest ones of the CIP2 (0.8% of the total budget). 59% of the funding, both for already financed and pipeline projects, comes from DPs. The ongoing BBS/World Bank *National Household Database (NHD)* project alone accounts for 54% of this programme's budget. The ongoing BBS *Agriculture (Crops, Fisheries & Livestock) Census-2018* project is worth 28% of the total. The pipeline, 10% of the total budget, includes seven projects, compared to two in the last reporting period, which could be interpreted as a sign of a heightened understanding of the need to improve information and data for evidence-based monitoring and adjustment of policies and programmes. Furthermore, the budget planned beyond the life of the CIP2 is 49 million USD which is also substantial compared to the current total budget of this programme.

Mapping Chronic food insecurity with the Integrated Phase Classification analysis and trainings

The IPC helps inform medium and long-term programming and policies to address chronic food insecurity more effectively. IPC operations previously conducted continued over the reference period: awareness raising meetings among TWG members; training activities; drafting of IPC chronic and acute analyses; and discussions of the analyses and related policy implications. In March and May 2019, two IPC Level 1 Trainings on the use of IPC tools and procedures enabled participants to obtain the qualification of IPC Analysts and to use proficiently those resources. Two two-day trainings with about 20 participants on the R Software for IPC data preparation were conducted in April 2018 and 2019. Three IPC workshops took place in November (six-day workshop) and December (five-day workshop) 2019 with the goal of analysing the chronic food security situation at district-level, and in February (three-day workshop) to review the analysis and finalize the findings. The around 51 participants[363] identified the underlying and limiting drivers influencing chronic food insecurity and produced a Chronic Food Insecurity Map for Bangladesh, which was under government approval as of April 2020.

National Strategy for the Development of Statistics in the process of being implemented

Signed in June 2018, the *National Strategy for Development of Statistics (NSDS) Implementation Support Project* became operational in September 2018 and effective in April 2019. The project aims to improve the capacity of BBS to produce quality statistics and make them timely accessible, thereby contributing to realizing the NSDS.[364] The project is operational at three levels: first, to improve the enabling environment

[362] For more information on the FCTs, see Programme III.1.

[363] From 29 Government, Non-Government, and UN institutions.

[364] World Bank (2018) *Restructuring paper on a proposed project restructuring of National Strategy for Development of Statistics Implementation Support*. Report RES40528. March.

by updating statistical legislation, policies and institutional arrangements; second, to strengthen BBS management systems, by improving human and ICT resources, and the statistical infrastructure; third, to strengthen user-producer dialogue so that statistics are used, and users' feedback is incorporated in the production cycle. The project expected outcome is enhanced coverage and improved collection and quality of data for core statistics, including, national accounts and statistics on price, labour, industry, social sectors, and agriculture, as well as gender-disaggregated data when possible.

SDG Tracker further improved and first SDG progress report published

The SDG Tracker developed by the Access to Information (a2i) Programme of the Prime Minister's Office was further developed and enhanced. This web-based searchable information repository enables tracking of Bangladesh's progress towards attainment of SDGs and other national development goals. It provides updates on the implementation status of the goals along with different options for data visualization. It also displays the tier classification of indicators (Figure 28) which flags remaining gaps in data needs. Based on this, the 'Sustainable Development Goals: Bangladesh Progress Report 2018'[365] was published in December 2018. This is the first formal report on the national SDG implementation progress. It covers the years 2016 and 2017.

Figure 28 – Tier Classification for SDG Tracker by A2i

Tier I : Indicator is conceptually clear, has an internationally established methodology and standards are available, and data are regularly produced by countries for at least 50 percent of countries	115
Tier II : Indicator is conceptually clear, has an internationally established methodology and standards are available, but data are not regularly produced by countries.	95
Tier I/II : Multiple tier indicators meaning Indicator whose different components are classified into different tiers	2
Pending : Indicator's data availability is pending for review	19

NPAN2 M&E Report prepared and disseminated

The BNNC published the Monitoring Report 2016/2017 & 2017/2018 for the Second National Plan of Action for Nutrition in 2018. This exercise details the implementation progress towards the NPAN2 2016-2025. There are strong linkages between NPAN2 and the CIP2, which have common objectives and involve the same sectors and stakeholders. Both are in alignment with the SDGs and other international initiatives such as the ICN2 Framework for Action, the UN Decade of Action on Nutrition and the SUN movement and is fully coherent with the national priorities as set in the 7FYP. Hence, actions are being taken to ensure complementarity and synergy in the implementation and monitoring of these two policy action plans. The CIP2 monitoring process enhances the capacity of multiple sectors of the government to collect and use the SMART indicators for national nutrition targets included in the common result framework for monitoring the progress of the CIP2 and NPAN2. The FNS data collected from multiple sectors for MR19 were used to write up the NPAN2 Monitoring Report 2016/17 and 2017/18 section in Chapter 3 entitled 'Thematic Area 2: Agriculture & Diet diversification and locally adapted recipes'. The contribution from the CIP2 monitoring process to the NPAN2 one will continue henceforth.

Publication of the public expenditure review on nutrition

In March 2019, the Oxford Policy Management published the Bangladesh Public Expenditure Review on Nutrition as part of an intervention under *Strengthening the capacity of Child-Focused Budgeting Project* being implemented by the Finance Division. It analyses the level and composition of public expenditure in

[365] GoB (2018) *Sustainable Development Goals: Bangladesh First Progress Report 2018*. Bangladesh Planning Commission, Ministry of Planning.

nutrition over 2014/15 – 2016/17 and for the 2017/18 Budget; it provides a baseline to effectively monitor progress towards the achievement of the nationally set goals for nutrition; and it assesses the institutional mechanisms for the management of public finances for nutrition. While there are currently no plans to hold any other such expenditure review, this endeavour will guide actions to improve nutrition expenditure, both in terms of allocation and execution.

Scaling out of BNNC's activities at the local level

BNNC formed District Nutrition Coordination Committees (DNCC) and Upazila Nutrition Coordination Committees (UNCC) to act as a multisectoral nutrition coordination platform at the sub-national level. Members of these committees are to work together for nutrition planning, implementation, monitoring and evaluation at the district and upazila level. An operational guideline has been formulated to describe the role and responsibilities of DNCC and UNCC members to scale out the interventions to implement the NPAN2. BNNC developed a multisectoral minimum nutrition service package to prioritise specific and sensitive nutrition interventions aligned with NPAN2 to meet the demands of different areas thus ensuring that no one is left behind. It will focus on developing high impact and low-cost interventions by multiple sectors including health and population, agriculture, fisheries and livestock, DPHE-WASH, social protection, education, social welfare, MoDRM and NGOs, civil society and other local-level partners.

8.3.3. Needs for further actions under this programme

Continue efforts to produce SDG indicators' and other relevant FNS data

A data gap analysis conducted by the GoB found that out of the 232 SDG indicators, data were only readily available for 70 indicators, with a lag of up to three years for some. Another 108 indicators could be generated by modifying data from existing censuses, surveys and MIS. Often, the data are not available at the required level of disaggregation or at the required data interval (e.g. HIES is only carried out every five years). Out of the 13 SDG indicators under SDG-2, the main goal covered by the CIP2, only five are reviewed in the first progress report on SDGs.[366] The many other SDGs relevant to the CIP2 (namely SDGs 1, 3, 5, 6, 8, 9, 12, 13, 14 and 17) are also affected by the limited availability of information. Efforts thus need to be sustained to generate and compile the data needed to monitor SDGs in general and FNS in particular. Capacities notably of BBS but also of other institutions responsible for generating information need to be strengthened through sustained political will and financial commitments from the GoB and its DPs, and progress reports on the SDGs should be produced regularly to help focus efforts on filling up data gaps.

Reinforce policy uptake of evidence by policymakers

It is important that policy makers and all those contributing to defining the country's strategic direction towards FNS base their decisions on solid quality evidence. This entails strong capacities to produce such evidence but also capacities to understand and willingness to use this evidence by policymakers and leaders. In a study on capacities to apply research evidence in policymaking in the field of health in Bangladesh and three other countries[367], a number of observations which the FNS sector may learn from were made along with recommendations to address existing gaps, as shown in Table 28.

[366] *Ibid*.

[367] Hawkes, S., Aulakh, B.K., Jadeja, N., Jimenez, M., Buse, K., Anwar, I., Barge, S., Odubanjo, M.O., Shukla, A., Ghaffar, A. & Whitworth, J. (2016) Strengthening capacity to apply health research evidence in policy making: experience from four countries. *Health Policy and Planning*. Volume 31. Issue 2. March.

Table 28 - Situational assessment and strategies to address gaps in Bangladesh in the health sector

Key findings in assessment	Interventions to address gap
Researchers pursue their own interests	Increase opportunities for researchers and policymakers to meet and share ideas
Poor communication skills of researchers and research outputs not relevant	Change methods of communication—use of multimedia communications
Lack of centralized site for accessing information	Build infrastructural support for policymakers to access information; established shared hosted website for ease of research output access
Few opportunities for researchers and policymakers to meet	Establish regular meetings between researchers and policymakers
Poor capacity to interpret and use data	Training programmes for policymakers and policy influencers

Source: Adapted from Hawkes et. al, 2015[368]

Improve knowledge and information on gender-related issues through sex-disaggregated data

Sex-disaggregated data and gender analysis are essential. At the production level, for example, men and women's roles in agricultural production may differ, requiring different approaches to meet their needs with regards to access to technologies, inputs and knowledge. Entry to markets is also likely to differ depending on a person's sex, especially in Bangladesh where women's participation may be conditioned by factors that may be easily overlooked because of their seemingly trivial nature, such as the availability of adequate toilets in the market place. Women's bargaining power may also be restricted compared to that of a man mostly due to cultural norms that need to be explored and understood. Differences in feeding practices between boys and girls from birth throughout childhood may be conditioned by beliefs and preferences: breastfeeding and socio-cultural practices, food taboos, cultural beliefs or caring practices may thus vary according to the gender of the child for example, even through to adolescence, calling for different measures. Delving into the differences that exist between the sexes and understanding gender dynamics is key to ensure FNS at the national level.

[368] *Ibid.*

8.4. Programme V.4. Strengthened FNS governance, capacity strengthening and leadership across FNS

8.4.1. Progress towards achievements

Table 29 – Programme V.4: Outputs indicators and progress against the baseline

CIP2 output proxy indicators	Baseline (2015/16)	2016/17	2017/18	2018/19	Source
CIP Monitoring Reports produced	Yes	Yes	Yes	Yes	FPMU
Additional resources mobilised for CIP2 (million USD)	…*	1,783 (1,607 new projects + 176 revision) R	2,904 (1,952 new projects + 952 revision) R	4,208 (3,650 new projects + 558 revision)	FPMU
Increase in ongoing projects (number of projects & value, in million USD)	…*	70 R 1,607 R	90 R 1,952 R	83 3,650	FPMU
SUN index for 'Bringing people together into a shared space for action'	54%	69%	75%	75%	SUN Annual Progress Report
Right to Food issues discussed by policymakers and at Parliamentary level	No	No	No	No	FPMU

* Not available; R: Revised

The CIP monitoring is an established annual process

FPMU, along with 18 other Ministries and government agencies, continues to lead and coordinate the annual production of the CIP monitoring report. High-level FNS focal points across core ministries have been established and function efficiently (see Outcome V) to supply information towards and contribute to the yearly monitoring report. They participate in its development at every step of the way in workshops held on a regular basis between December and May of each year as per a Roadmap that details the entire process and assigns responsibilities.

Additional resources mobilised for CIP2 accelerated over the three-year implementation period

Additional resources mobilised stood at 4,208 million USD and was largely driven by new financing which totalled 3,650 million USD (87% of total additional resources) with the remaining 558 million USD (13%) accounting for budget revisions in the existing projects.

A steady number of newly ongoing projects continued to sustain CIP2 resource mobilisation

The newly mobilised budget of 3,650 million USD accrued from 83 new projects, a number only slightly lower to the 90 of last year. The total number of new projects over the three years of CIP2 implementation stands now at 243.

The SUN index for 'Bringing people together into a shared space for action' remained quite high but unchanged from the previous year

Progress in the SUN index 'Bringing people together into a shared space for action' is gauged in the annual Joint assessment through five progress markers, namely 1) select/develop coordinating mechanisms at country level; 2) coordinate internally, engage with others for broader influence; 3) engage within/contribute to MSP; 4) track, report, reflect on contributions and accomplishments; and 5) sustain the political impact of the multi-stakeholder platform. By measuring the progress in this marker, the CIP2 checks the degree to which internal harmonisation and coordination have evolved over time. After marked improvements since 2015/16 from 54% to 75% in 2017/18, this indicator has remained at the

same level in the year under review.[369] Coordination between the BNNC and SUN platforms have improved. As a result of the BNNC's increased role and the establishment of decentralised multisectoral nutrition committees at district and sub-district levels, in-country coordination has improved. Nutrition focal points have been identified in 22 nutrition relevant ministries and agencies and regular meetings are held. The SUN Business Network (SBN) and SUN Network for Academia have been successfully established. A *National Nutrition Week* and a *Nutrition Olympiad* were once again successfully organised in 2019.

Calls continued for the Right to Food to be enshrined in law

The Right to Food -inclusive of nutrition- needs to be included as a fundamental principle of State policy to improve FNS governance by clarifying roles and obligations and increasing accountability. The Constitution guarantees the Right to Food but this right is not legally established. NGOs such as Right to Food Bangladesh are pushing for this as the country prepares to become a middle-income country. While the availability of food of diverse types has unquestionably progressed, a substantial portion of the population remains poor and thus vulnerable to hunger and malnutrition. Factors such as weather-related shocks and disasters and the effects of global warming can rapidly push another important section of the population into hunger and malnutrition. Existing social safety nets are not yet entirely able to manage this situation and/or to timely respond to the effects of such shocks (see Programme IV.1), hence the importance of ensuring a Right to Food.

8.4.2. Policy development, programmes and initiatives underway

This programme represents just 0.6% of the total CIP2 budget at 59.7 million USD. It is mostly almost entirely funded (97%) by DPs. The GoB/World Bank *Modern Food Storage Facilities Project (MFSP)* project component pertaining to this programme accounts for 39% of its entire budget. This is followed by the GoB/ World Bank *Strengthening of the Ministry of Disaster Management and Relief programme administration* project which accounts for 22% of this programme's budget. A Cabinet Division project - *Platforms for Dialogue-Strengthening Inclusion and Participation in Decision Making and Accountability Mechanisms* (12% of the programme's budget) has been added since the last monitoring report given its pertinence to improving FNS governance and capacity strengthening and leadership across FNS relevant stakeholders.

Continued expansion of the Bangladesh SUN Business network

The Bangladesh SUN Business Network (SBN) currently brings together 15 members. Its priorities are to convene business with multistakeholder partners; to sensitise business to integrate nutrition into core business model and facilitate partnerships for strengthening the capacity of the private sector; and to improve the enabling environment for influencing food system for a healthier diet. An independent global evaluation of the SBN's progress in 2019[370] concluded that the SBN model was not always clearly operationalised at the national level. But overall, it is agreed that without SBN there would be a limited organisation of business around nutrition in low- and middle-income countries.

Formulation of the new food and nutrition security policy

The drafting of the National Food and Nutrition Security Policy of Bangladesh (NFNSP) was initiated and as of April 2020 was under Cabinet approval. Reflecting the transition from a focus on rice self-sufficiency to a more integrated approach to nutrition security, the NFNSP gives due attention to nutrition while

[369] SUN Scaling up Nutrition (SUN) Movement (2019) *Progress Report 2019 - Nourishing people and planet together*.

[370] Mokoro (2019) *SUN Business Network Evaluation 2019.* Commissioned by GAIN.

encompassing all the complexities of the food system. This was made possible by the facilitation by FPMU of consultations with IFPRI, the Agricultural Policy Support Unit (APSU)-MoA, BNNC, IPH, NGOs and the TWGs.

8.4.3. Needs for further actions under this programme

Ensure adequate capacities to ensure policy alignment and results monitoring

Commitments made in policy and strategic documents must be executed and alignment with policy planning and investment monitoring-related work plans of line ministries ensured. For this, gaps in capacities – especially analytical capacities- among all NFNSP implementing ministries/agencies of the GoB must be filled. Coordination with local government authorities and non-state actors, including the private sector is also crucial and needs to be improved through knowledge and technology transfer.

Adapt capacities to the changing FNS landscape

There is a need for continuous capacity strengthening to analyse the ever-evolving FNS landscape with changes and updates in rules, regulations, strategies and policies. Such context requires versatility, notably from FPMU which provides technical and operational support to the institutions tasked with monitoring the CIP2 as well as the SDGs relevant to FNS and the upcoming NFNSP in a unified framework, namely the Thematic Teams (TTs), the Technical Working Groups (TWGs), the expanded FPWG and the National Committee (NC), under the authority of FPMC. Such flexibility to understand and the ability to monitor and analyse these changes require continuous updating of capacities.

Consider the possibility of adopting nutrition-sensitive budgeting and financing

The GoB, as part of its national budget activities, currently carries out gender, poverty and child responsive budgeting. It now also conducts climate-sensitive budgeting[371] that highlight the climate vulnerabilities of the country and looks at the pattern of resource allocation in line with the climate change strategies, policies and plans. The Bangladesh Public Expenditure Review on Nutrition was a one-off exercise to look at the level and composition of public expenditure in nutrition for over four years (see Programme V.3.). A nutrition-sensitive approach to budgeting and financing should be adopted to improve the FNS of the country.

[371] GoB (2019) *Climate Financing for Sustainable Development- Budget Report 2019-2020.* Ministry of Finance. Finance Division.

9. CIP2 Financing

9.1. Integrated approach for financial monitoring

The financial monitoring of the CIP2 follows existing national systems for monitoring ADP investments as part of the existing national planning process which involves the Ministry of Finance and the Implementation Monitoring and Evaluation Division (IMED). The IMED provides aggregated information on the financial progress of investment projects relevant for the CIP2 while the Planning Commission and line ministries provide information about new project approvals.

The CIP2 annual monitoring reports guide investments by the government, development partners and the private sector through PPPs, towards areas that emerge as needing urgent attention. This process also aims to avoid duplication of efforts in investments made towards achieving FNS. To this effect, it acknowledges the existence of other financial and investment plans that also contribute to achieving FNS whether directly or indirectly. This is the case of the Second National Plan of Action for Nutrition (NPAN2), the Action Plan – Implementation of National Social Security Strategy (NSSS) 2016-21, and the Bangladesh Environment, Forestry and Climate Change Country Investment Plan (2016-2021).

9.2. Gender budgets in FNS related sectors

Focusing on women is essential to achieve FNS: not only do women suffer from food and nutrition insecurity more severely than men with consequences on their offspring, but they are also key in fostering availability, diversity, access and adequate use of food. Their role in agriculture and post-harvest activities, although often underestimated in official statistics, is essential to food production and diversification. Within the household, they are often the ones to allocate the food. They also hold a centre role in the preparation, processing and preservation of food, as well as in childcare, all of which have a direct impact on food utilisation by the different members of the household. Women's empowerment is subjective, complex, and difficult to measure, which made it challenging to quantify the links between agriculture, nutrition, and gender. Using IFPRI's Bangladesh Integrated Household Survey (BIHS), Bangladesh became the first country to collect national-level data to calculate the Women's Empowerment in Agriculture Index (WEAI), which is used to measure the empowerment, agency, and inclusion of women in the agriculture sector. IFPRI's BIHS results generated definitive evidence that showed that agricultural diversity improves household and child dietary diversity, and women's empowerment improves agricultural and dietary diversity.

The GoB recognises the role of woman in the development of the country and to encourage a greater focus on them and on reducing gender differences, dedicates a section on measures taken to promote women's advancement within each ministry in the documents that accompany the National Budget. This includes a measure of the annual expenditure going towards women, specifically. Figure 29 shows the gender-related expenditure for different sectors[372] since 2010/11, corrected for inflation. Figure 30 shows the proportion of gender spending in the total budget of each one of these sectors.

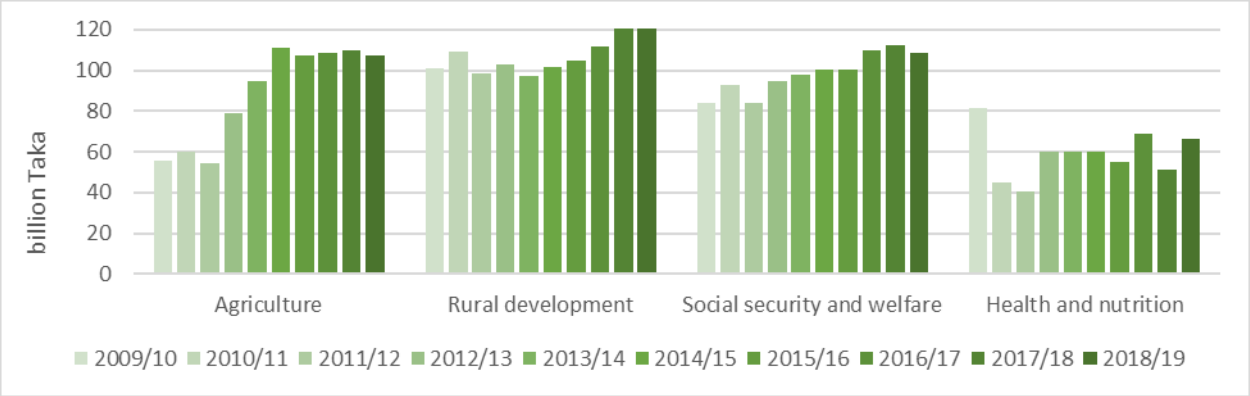
Between 2011/12 to 2014/15, efforts were made to speed up the integration of women in the agricultural sector with increased spending both in absolute terms and relative to the total budget. Since then, these levels have been sustained but have not risen further, although scope remains for involving women more in this sector. In the rural development sector, the last two years under review have witnessed a clear

[372] For the agriculture sector, expenditure from the following ministries and divisions has been considered: MoA, MoFL, MoEFC and MoWR; for the rural development sector: LGD, RDCD and MCHTA; for social security and welfare sector: MoSW, MoFood and MoDM; for health and nutrition: MoHFW.

increase in gender-related spending mostly explained by changes in the Local Government Division budget, which is encouraging, although this is not reflected as a proportion of the total budget of the sector. The last three years under review registered some efforts in gender spending in the social security and welfare spending, but again, this is not reflected in the proportion of the total budgets. No clear trend is visible for the health and nutrition spending and this sector is the one with lowest gender spending in proportion to its total budget.

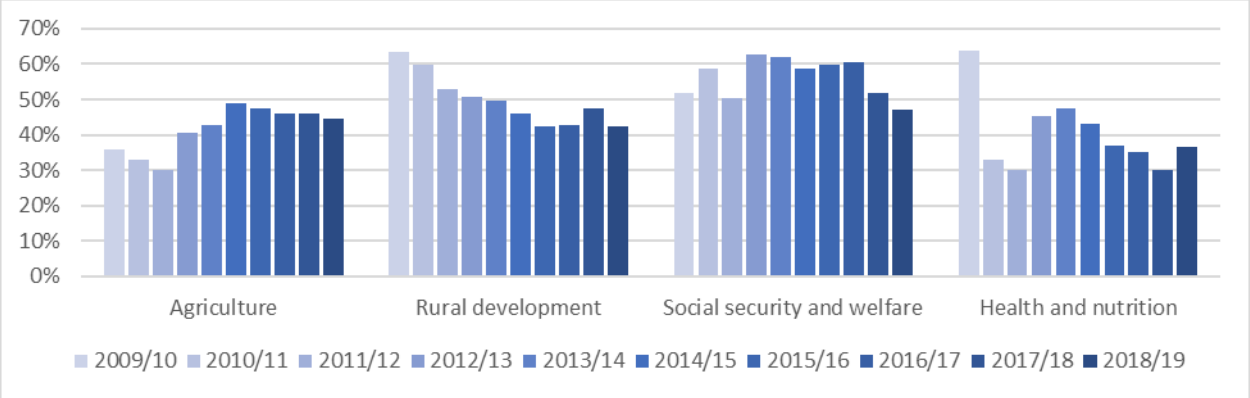
Closing the gender gap by advancing women's rights is key to eliminating hunger, food insecurity and malnutrition. It is therefore key that efforts continue to adequately acknowledge women's contribution to FNS and tackle barriers to gender equality through an enabling policy and legal environment but also through adequate spending, especially in the health and nutrition field.

Figure 29 – Gender-related real expenditure by sector, in billion 2018/19 BDT



Source: Data from Ministry of Finance

Figure 30 – Proportion of gender spending in total budget, by sector



Source: Data from Ministry of Finance

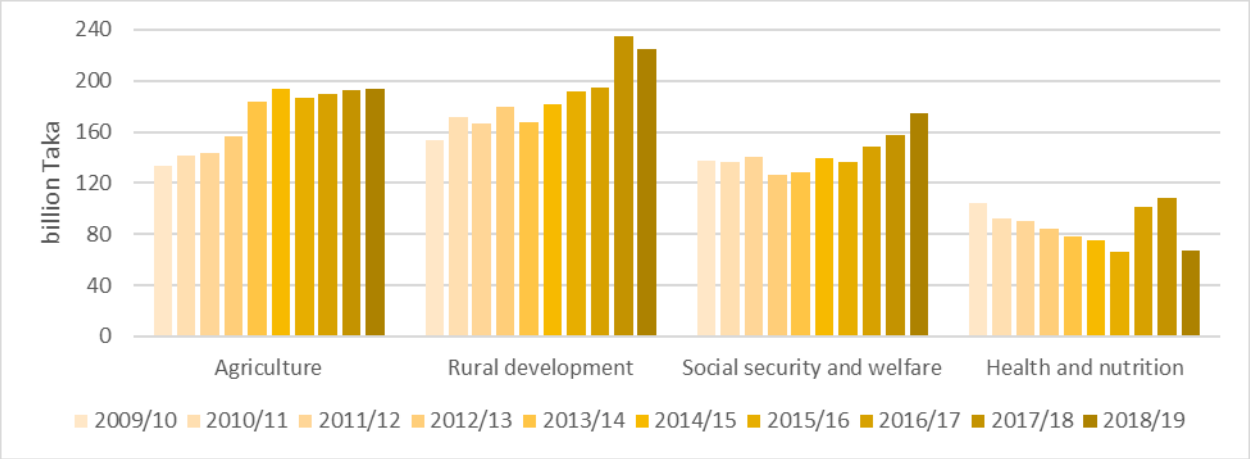
9.3. Poverty budgets in FNS related sectors

Fighting poverty (SDG 1) is closely associated with the endeavour of ending hunger (SDG 2) and achieving one is unlikely to be possible without achieving the other. The four sectors considered, clearly focus a large part of their efforts on projects that directly benefit and target the poor and which promote growth (Figure 31).[373] However, the share of poverty spending in total budgets have been decreasing over the last

[373] Detailed figures by Ministry are provided in Annex 4.

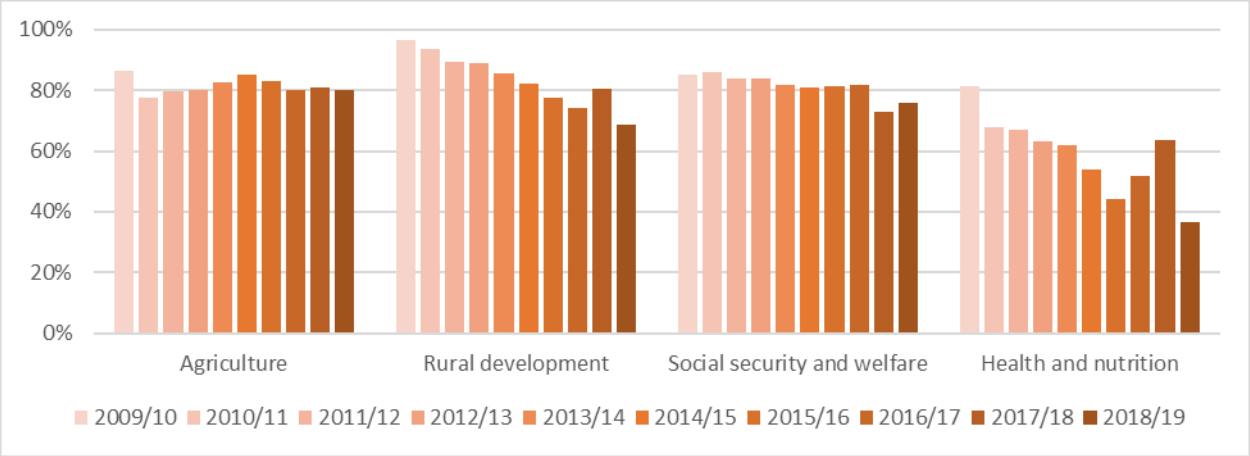
ten years for all the sectors considered (Figure 32). Notwithstanding this – except health and nutrition in 2018/19 - spending has increased in the last three years, reflecting the government's will to achieve SGD 1 (Figure 31). This is likely to positively feed into the measures taken to achieve FNS for all.

Figure 31 –Poverty-related real expenditure by sector, in billion 2018/19 BDT



Source: Data from Ministry of Finance

Figure 32 – Proportion of poverty spending in total budget, by sector



Source: Data from Ministry of Finance

9.4. A methodological note on the CIP2 financing

The CIP2 quantifies total investments for food and nutrition security over the period 30th June 2016 to 30th June 2020 which are necessary to ensure CIP2 results, including SDGs targets, are achieved (see Section 2 on the Approach to the Monitoring). These investments are classified according to the CIP2 framework into five Pillars, 13 programmes and 39 subprogrammes. The CIP2 is a cumulative budget, dynamic in nature, which is updated yearly based on revisions and spending in existing projects and the introduction of newly implemented projects. Accordingly, the total CIP2 budget as of 30th June 2016 totalled 9.26 billion USD.[374] this figure stands at 10.73 billion USD, after three years of implementation, as of 30th June 2019 (Annex 5). The revisions mainly account for the inclusion of projects implemented to improve the supply of safe water and sanitary facilities.

[374] The Bangladesh Bank exchange rate of 30th June 2016 has been used: 78.4 BDT for 1 USD.

The total CIP2 budget is considered in terms of total financed budget and financial gap by both the Government and Development Partners. Out of the financed part, the expenditure part is monitored and helps in informing on the projects' performance in terms of delivery. A feature of the CIP2 is also that it accounts for projects' nutrition sensitivity. Weights are attributed according to the subprogramme a project fall into[375] with the following coefficients: 75% of the project budget is considered for nutrition-sensitive projects; 50% for nutrition supportive ones, and 100% for nutrition-sensitive+ ones.[376]

Project budgets are allocated by using a yearly pro-rata constant basis. Because the CIP2 ends on 30th June 2020, pipeline projects falling within the CIP2 lifetime are expected to be lower than in previous years, while the share of projects' budgets falling outside the CIP2 – i.e. beyond 30th June 2020- is expected to increase. It is therefore important to also consider the evolution of the post-CIP2 budget.

9.5. Changes in the total CIP2 budget and its components

CIP2 budget

Total

At the end of the 2018/19 financial year, the CIP2 total budget was 19.2 billion USD. Of this, 82% was already financed in the form of ongoing projects or projects that had already been completed since the beginning of the CIP2. The remaining 18% represented the financial gap, i.e. pipeline projects (Table 30). Annex 6 and 7 provide the list of all financed and pipeline projects included in the CIP2 budget, respectively.

The breakup between different Pillars of the CIP2 is comparable to that of previous years with *Primary production* and *market and value chains* accounting for over a third of the total budget each. The Pillar on *Diversified consumption* now constitutes 7% of the total budget against 5% in the previous year. The *Social protection* Pillar represents 19% of the budget while the *cross cutting* one remains at a 2% (see Annex 8 for details at programme level).

In the *Primary production* Pillar, it is in fact one of the three subprogrammes, the one on *Improved access, quality and management of crop agricultural inputs, including water and land* which accounts for 28% of the entire CIP2. Similarly, the subprogramme on *Improved access to markets, facilities and information* in Pillar II accounts for 35% of the entire CIP2 budget. Programme V.2 on *Food waste and losses* remains to be populated and no projects are planned currently beyond the CIP2 period.

The substantial disparities in the shares of different Pillars are to be expected given the nature of food systems. Achieving FNS for all means entails a wide range of interventions which carry very different costs. Infrastructure which gives access to markets through roads and bridges for example, is costly. BCC interventions, which are also essential to sensitise certain groups to the need to diversify their diets or feed their infants and children adequately are as important, and yet cost a fraction of the infrastructure projects.

Nutrition weighed budget

Weighting projects according to how nutrition-sensitive they are, reduces the total budget to 12.2 billion USD. This reflects the fact that under the *Market and value chain* Pillar in particular, projects are nutrition-supportive, which means they weigh less in the CIP2 budget as explained earlier (Figure 33). This is the

[375] The attribution of weights by subprogramme rather than for each project is based on the evidence that projects contributing to a specific subprogramme consistently fall in one of the three categories.

[376] For an exhaustive explanation of nutrition budget, see the Roadmap to MR2020.

case of infrastructure development such as road construction. Projects dealing with river restoration (Pillar I) or the enhancement of information for evidence-based policy making and monitoring (Pillar V) for example, also weigh less in the CIP2, thus reducing the size of the nutrition weighed budget. In the nutrition-weighed budget, the *Primary production* Pillar constitutes 42% of the total CIP2 budget and the *Market and value chain* Pillar declines to 28% (see Annex 9 for details at programme level).

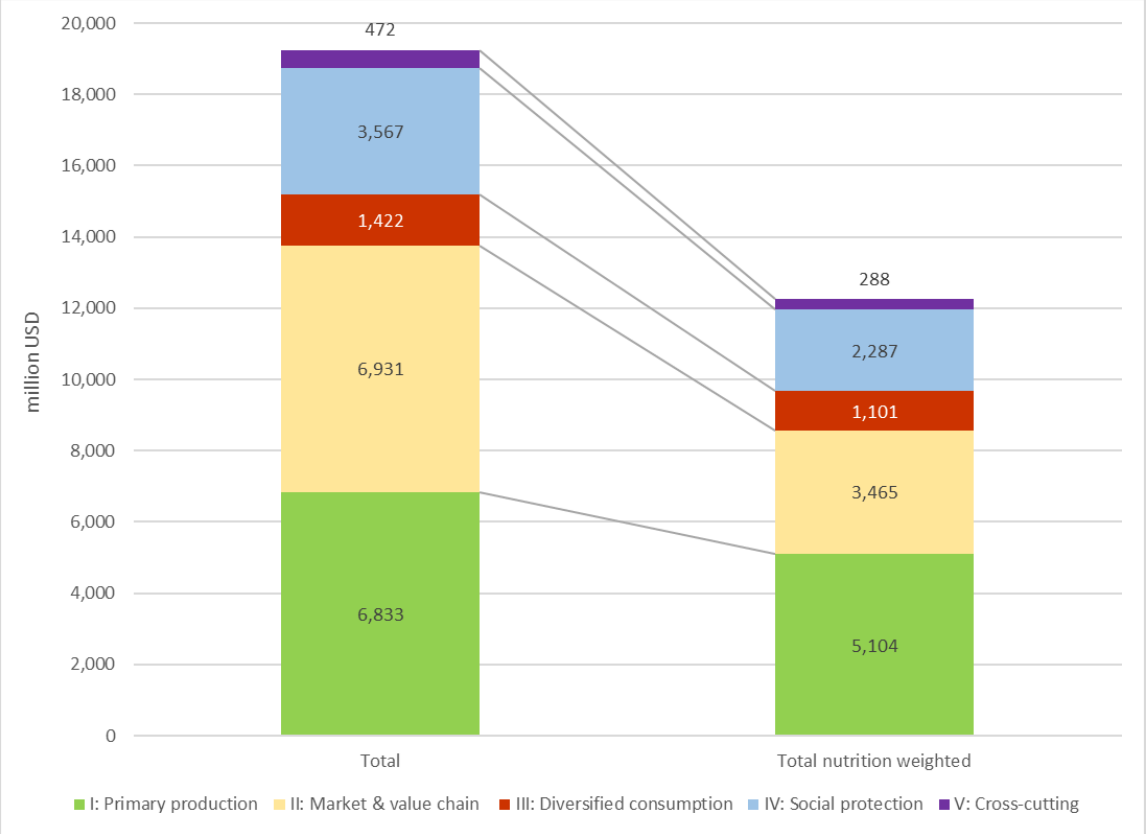
Government and DPs shares

Government financing accounts 64% of the CIP2 budget (62% of the nutrition weighed budget) against 36% for the DPs. These proportions were 68% and 32% in the previous year. There are important differences across Pillars however, with DPs only accounting for only 17% of the *Market and value chain* Pillar budget and 21% of the *Diversified consumption* Pillar. On the other hand, more than half of the CIP2's budget as of 30th June 2019 came from them for the *Primary production* and the *Cross-cutting* Pillars (Table 30).

Table 30. Summary of CIP2 2020 budget (as of 30th June 2019, in million USD)

	Total CIP2			Financed			Pipeline		
Pillar	**Total**	**GoB**	**DP**	**Total**	**GoB**	**DP**	**Total**	**GoB**	**DP**
I: Primary production	6,833	3,008	3,826	3,849	2,635	1,214	2,984	372	2,612
II: Market & value chain	6,931	5,786	1,144	6,699	5,746	952	232	40	192
III: Diversified consumption	1,420	1,121	299	1,228	979	249	193	142	51
IV: Social protection	3,567	2,255	1,311	3,492	2,181	1,311	75	75	0
V: Cross-cutting	472	227	245	436	208	228	36	19	17
Total	**19,225**	**12,397**	**6,826**	**15,704**	**11,749**	**3,955**	**3,519**	**648**	**2,871**

Figure 33. Total CIP budget as 30th June 2019, without and with nutrition weighting, in million USD



Changes in the CIP2 budget

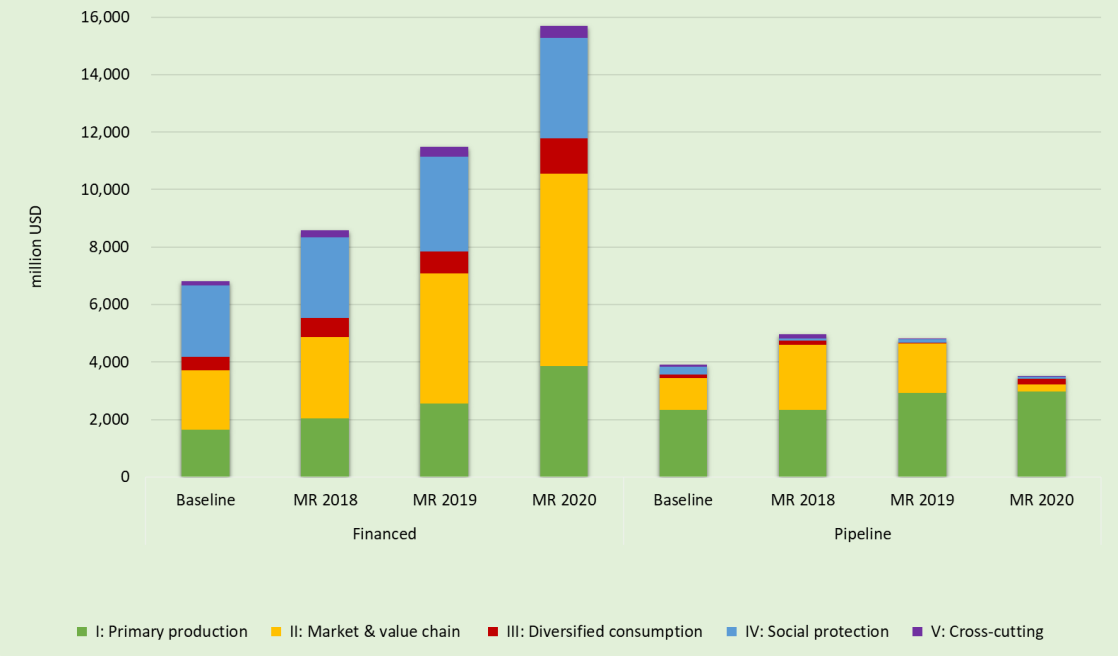
Total

The CIP2 budget increased by 18% between 2017/18 and 2018/19, compared to 20% in the previous year and 26% in the year before that (Table 31). This deceleration is, to some extent, the reflection of the accounting method used and reflects the reduction in the amounts that can be included for pipeline projects given the near ending of the CIP2[377] (Figure 34). The low increase in the *Social protection budget* is notable, only 5%, especially as the NSSS Action Plan 2016-21 is in the process of being implemented. The Pillars on *Primary production* and *Market and value chains* have grown steadily over time. The rise in *Diversified consumption* is due to the revision mentioned above, whereby additional projects have been included in MR20 to reflect the supply of safe water and sanitary facilities. The nutrition weighed budget closely mirrors these trends.

Table 31. CIP2 2020 budget since the baseline (as of 30th June 2019, in million USD)

Pillar	Baseline	2016/17	2017/18	2018/19
I: Primary production	3,976	4,356	5,494	6,833
II: Market & value chain	3,173	5,114	6,242	6,931
III: Diversified consumption	610	793	794	1,422
IV: Social protection	2,751	2,904	3,403	3,567
V: Cross-cutting	217	388	393	472
Total	**10,726**	**13,556**	**16,326**	**19,225**

Figure 34. Evolution of CIP2 2019 budget from baseline to MR 2020, in million USD



Financed budget

Cumulative mobilised CIP2 resources stood at 15.7 billion USD in 2018/19, a 37% increase from the previous year. This compares to a 26% increase in the first year of the CIP2 and 34% in the following one.

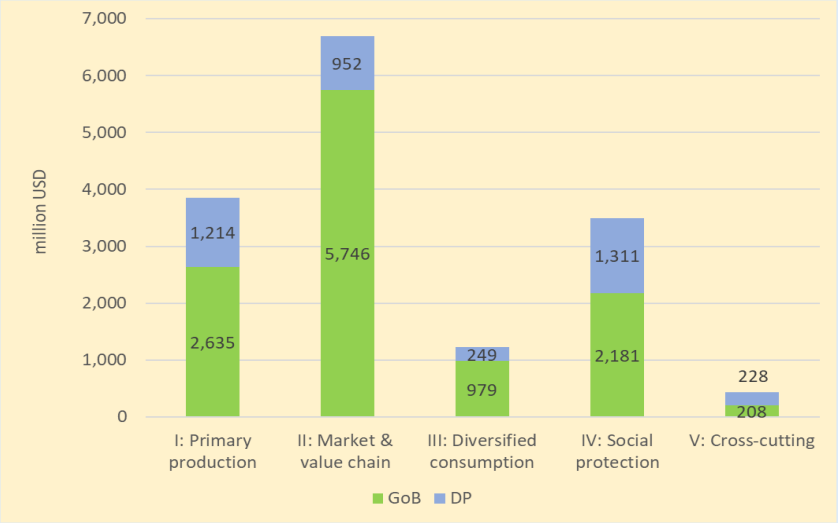
[377] See section on pipeline projects below.

As a point of comparison, the CIP1 average rise in the financed budget was 31%. While the *Primary production*, *Market and value chains* and *Diversified consumption* Pillars have substantially grown in the last year, the *Social protection* and *Cross cutting* one, lagged behind. This should alert both the government and the DPs to a lack of financial emphasis on areas that they, along with other stakeholders, identified as priority when developing the CIP2. The differences in percentage change for each year when applying nutrition weights are minor, but the financed budget has increased to 9.67 billion USD in the year under review from 4.20 billion USD in the baseline (see Annex 10 for the nutrition-weighted changes). Out of the total financed budget, GoB funding stands at 75% which is complemented by the 25% DPs' mobilised resources. Figure 35 shows the financed budget by pillar.

Table 32 - Evolution of CIP2 2020 financed budget from baseline to MR 2020 (in million USD)

Pillar	Baseline	Change baseline to 2016/17	2016/17	Change 2016/17 to 2017/18	2017/18	Change 2017/18 to 2018/19	2018/19
I: Primary production	1,635	24%	2,031	26%	2,564	50%	3,849
II: Market & value chain	2,070	38%	2,849	59%	4,520	48%	6,699
III: Diversified consumption	482	33%	642	20.1%	771	59%	1,228
IV: Social protection	2,478	14%	2,817	17%	3,291	6%	3,492
V: Cross-cutting	143	77%	252	39%	350	25%	436
Total	**6,809**	**26%**	**8,592**	**34%**	**11,496**	**37%**	**15,704**

Figure 35 – CIP2 financed budget by pillar, as of 30th June 2019



Delivery

CIP2 delivery shows the actual expenditures over the three years of CIP2 implementation. As of 30th June 2019, cumulative delivery stands at about 6 billion USD (Figure 36), 61% (or 3.7 billion USD) of which is nutrition-sensitive. Figure 37 presents the share of cumulative delivery in the total CIP2 financed budget. Both total and nutrition-sensitive delivery represents the 38% of the cumulative total financed and nutrition-sensitive budget respectively, as of 30th June 2019. *Primary production*, *Market & value chain, Diversified consumption, Social protection* and *Cross cutting* Pillars delivered respectively 39%, 37%, 33%, 40% and 56%. While these shares are improved compared to a year earlier – except for *Market & value*

chain – the slow progress suggests that an acceleration in delivery is not only needed, but it will not likely translate into the delivery of all the financed budget within the CIP2 period (see Annex 11 for details).

Figure 36 – CIP2 yearly delivery by Pillar, as of 30th June 2019

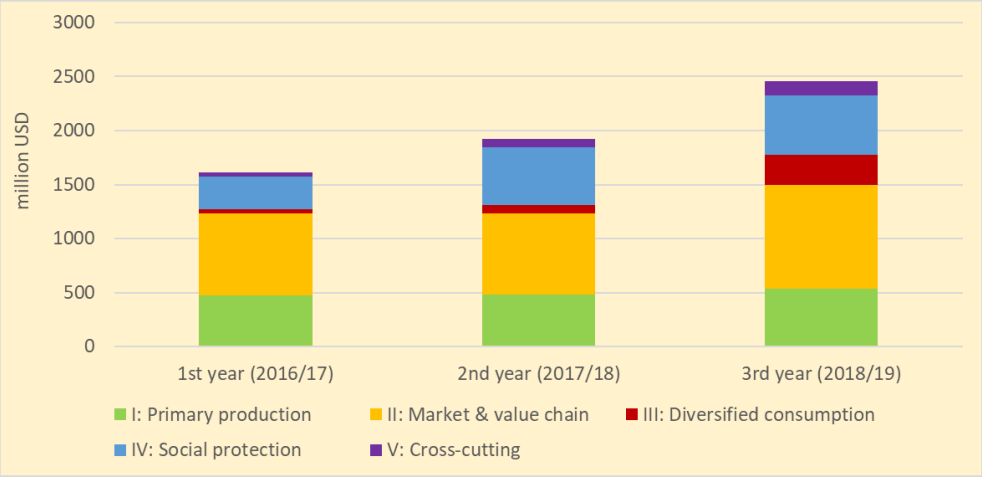
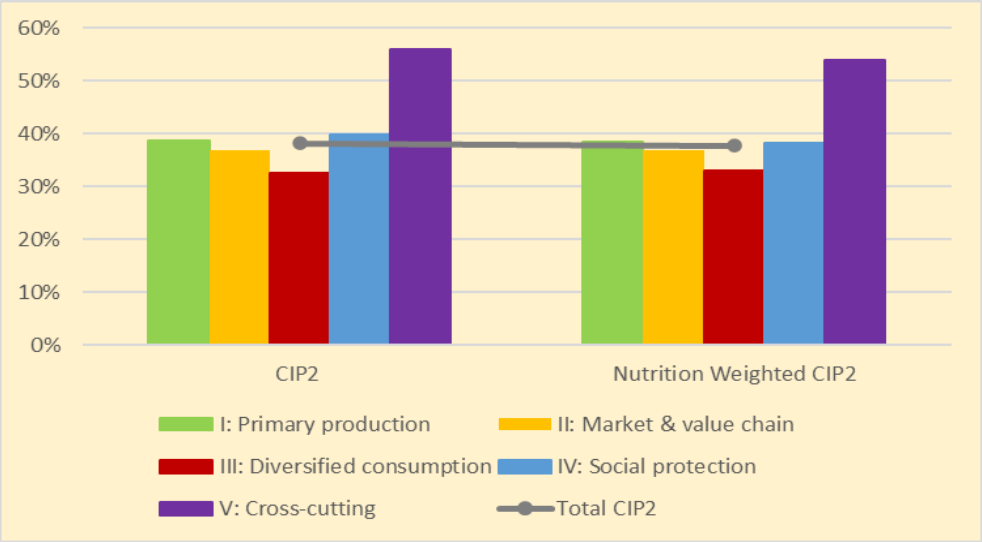


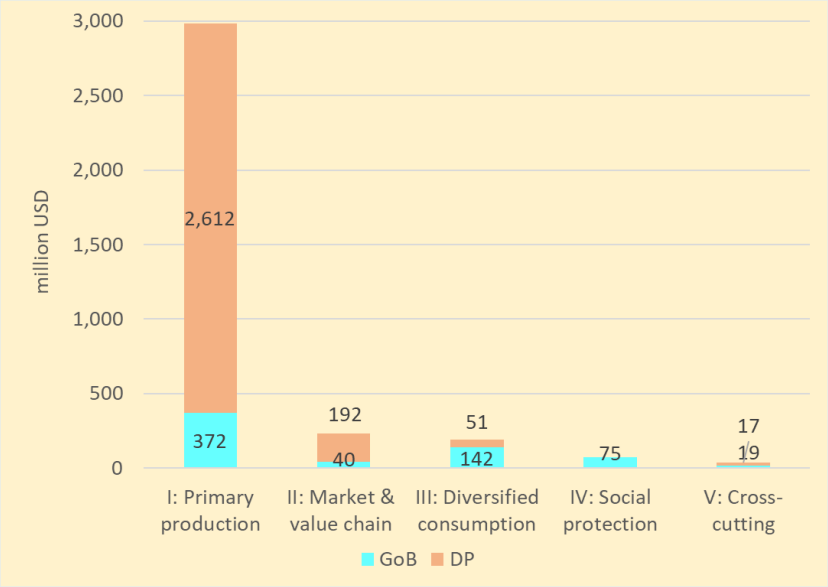
Figure 37 – Cumulative delivery in total CIP2 financed, as of 30th June 2019



Pipeline budget

Pipeline projects reflect the committed budget to attain CIP2 results in addition to the financed budget as reflected by the results indicators. The overall pipeline totalled 3.5 billion USD (82% from DPs and 18% from GoB) as of 30th June 2019 and declined from the 3.92 billion USD in the baseline. The financial is mostly driven by *Primary production* (Figure 38). A drop in the pipeline is to be expected since the CIP2 ends in June 2020. However, it is essential to translate DPs' financial commitments, which represent 82% of the pipeline, into actual funding. The increasing trend in DPs' financed resources shows that this is likely to be the case. The reduction in the pipeline is compensated by a growing post-CIP2 budget. 73% of post-CIP2 commitments are nutrition-sensitive, while the *Primary production* pillar alone channels 89% of committed budget, 7% is under *Market & value chain* pillar, 2% is under *Social protection* and a 1% under *Cross-cutting* pillar.

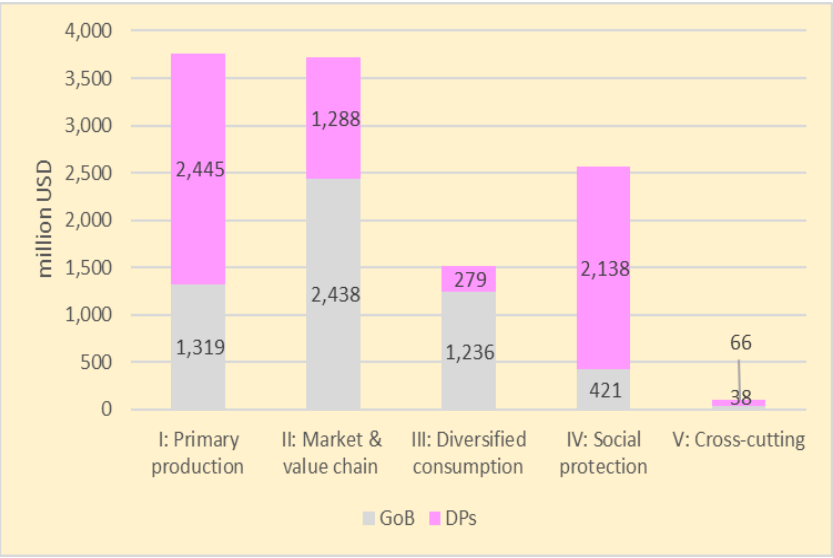
Figure 38 – CIP2 financial gap by pillar, as of 30th June 2019



Budget post-CIP2

As the CIP2 has an implementation period of four years and there is only one year left to the end of it, the bulk of recently financed and pipeline projects fall outside the CIP2, i.e. beyond 30th June 2020. This means that their financing is only marginally reflected in the CIP2 budget. The post-CIP2 budget totals 11.7 billion USD, which is financed for 47% by GoB and 53% by DPs. Figure 39 shows a predominance of Pillar I and II covering the 64% of the CIP2 financing falling beyond the 30th June 2020. It also demonstrates a greater involvement of development partners into *Primary production*, *Social protection* and *Cross-cutting*, while the Government invests relatively more into *Market & value chain* and *Diversified consumption* (see Annex 12 for details).

Figure 39 – Post-CIP2 financed budget through ADP, as of 30th June 2019



10. Progress and recommendations

Progress towards CIP2 Goal is slow but steady

The three-year average prevalence of undernourishment (PoU) and of Severe Food Insecurity both improved while that of Moderate Food Insecurity stagnated between 2016-18 and 2017-19. Child stunting reduced but strong regional disparities persist with Sylhet, Mymensingh and Barisal lagging. Child wasting registered progress and virtually reached the 2025 target of 8%. Per capita agricultural value addition improved; however, based on per capita GDP, agricultural workers are still relatively poorer than other sectors' workers.

To achieve improved security and nutrition for all - the goal of CIP2 - a transition towards nutrition-sensitive food systems is essential. This transition means that from farm to fork, attention must be placed on availability, affordability, and nutritional quality of safe and nutritious foods which includes ensuring that people can make healthy diet choices.

The full impact of the COVID-19 pandemic emergency crisis is still unknown at the time of writing this report, but it is likely that it will pose a concrete obstacle to the achievement of the CIP2 goal and the SDG 2 - Zero Hunger targets. Because some of the progress observed in 2018/19 will no doubt have been set back, the prioritisation of efforts set out by the CIP2 may need to be reviewed, adjusted and adapted. Bangladesh is likely to be affected mainly on the demand side through reduced income opportunities and real value of salaries, savings and cash availability. These impacts are being harder on the poorest and vulnerable that are unable to implement physical distancing measures in the short term, and in the mid-term, are likely to remain or drop back below the poverty line. While it is likely that financial allocations will be constrained after the crisis, it is essential to maintain a drive towards nutrition-sensitive to avoid rolling back the progress made in the last years.

CIP2 outcomes and programmes: progress and recommendations

Outcome I: Efforts towards diversification in production and climate-smart investments in agriculture should be continued to counter the effects of the COVID-19 crisis

There was sustained growth in agriculture which registered a 3.9% increase which compares with the 4.2% of 2017/18 and the 2.8% of the baseline. The trend was driven by the 2017/18 record rice production and excellent performance of the fisheries and forestry sectors. The evolution of sectoral shares points to a slow diversification with the fisheries and forestry sectors' share somewhat expanding but the livestock sector share remaining static. The role of rice remains prominent at 33.31% of the total food value added, and only 0.5 percentage points lower than at the baseline. Improved domestic rice availability had a positive impact on reducing import demand to 0.21 MMT from 3.89 MMT of the previous year, which in turn contributed to a declined rice import dependency. The wage differential between male and female in agriculture rebounded to 31% from 29% last year and 32% in the baseline, the result of a slightly higher increase in agricultural male wages over female ones.

Recommendations for further actions in this Pillar include the need to:

- Accelerate agricultural growth and resilience through climate-smart investments.
- Rebalance agricultural support to ensure diversification is a viable option for farmers.
- Improve support to smallholder farmers by adapting it to their specific profile.
- Promote sustainable use of forests and trees to ensure the livelihood of local communities and agrobiodiversity preservation.

Programme I.1. Sustainable and diversified agriculture through integrated research & extension

Crop production showed mixed trends with a two-year consecutive growth for rice and a positive trend for maize which has been substituting wheat cultivation due to higher yields, adaptability and profitability. While the production of vegetables (in particular *lal shak*) and fruits (especially mango and pineapple) registered a positive trend, that of pulses and oilseeds registered a decline -albeit marginal for pulses-, a worrying trend given that they constitute an inexpensive source of protein and micronutrients. The release of new vegetables and oilseeds varieties and the production of stress-tolerant seeds accelerated, however, the share of agricultural budget allocated to research institutes dropped to just the 4.22% of the total agricultural budget, back to its CIP2 baseline level.

In the reference period, the following targeted policy development, programmes and initiatives underway stood out:

- Providing incentives for expanding *aus* rice cultivation through inputs and seed support to reduce the dependency of farmers on underground water required for *boro* cultivation.
- New Agriculture Extension Policy drafted in 2018 and waiting for approval, envisaging the provision of extension services for crop, fishery and livestock under one umbrella the 'National Agriculture Extension System' and a decentralised response mechanism at the regional level, focusing on the different farmers' characteristics.
- Project launched to strengthen capacity to fight fall armyworm, to train and support agricultural professionals on fall armyworm management strategies.
- New ways to disseminate nutrition-sensitive agricultural technology innovations through the *Farming Future Bangladesh Project*: working with religious leaders which are powerful influencers, to convey information on new technology to farmers.
- Expansion and popularisation of floating agriculture to sustain climate change adaptation.

Recommendations for further actions under this CIP2 programme include the need to:

- Exploit all-year-round production of fruits for nutritional improvement.
- Speed up the establishment of farmer service centres at union level.
- Promote and expand crop insurance programme.
- Involve the private sector to increase resilience to the effects of climate change.

Programme I.2. Improved access, quality and management of crop agricultural inputs, including water and land

The production of improved cereal seeds dropped by 1% after increases above 10% for two consecutive years. The supply of pulses, oilseeds and vegetable seeds declined substantially. The private sector concentrates on producing maize and vegetable seeds, the public sector on wheat seeds, while farmers continue to meet the largest share of their seed requirements for rice pulses, oilseeds and potato. The supply of improved seeds to agronomic requirements dropped, except for wheat, potato and pulses. Testing farm soil - essential to assess soil nutrient content and pH which allows optimising the use of fertilisers – slightly intensified but is still slow. The expansion of land under surface water irrigation slumped to 28.3 thousand hectares from 118.3 in the previous year. Urea and TSP supply was satisfactory and driven by a 53% yearly increase in fertilisers' subsidies, for urea, in particular (+95%). Agricultural credit disbursement rose by 10% in the year under review, and by 34% compared to the baseline, up to 236.2 billion BDT. Quality assurance for fish feed continues far behind the level witnessed at the beginning of the CIP2. The area under DAE organic farming doubled but is still marginal at 235 hectares only.

In the reference period, the following targeted policy development, programmes and initiatives underway stood out:

- Supporting the availability of farmer-friendly machinery - with tillage, irrigation, threshing, weeding and pesticide applications highly mechanised. The National Agriculture Mechanization Policy, 2019 aims to support the availability of farmer-friendly machinery through low-cost credit and machinery sub-contracting.
- Expanding Urea Deep Placement technology which has a positive impact on GHG emissions and farmers' income through increased yields and reduced costs.
- Setting up energy-efficient and environmental-friendly fertiliser factory for the production of granular urea and ammonia. The factory features a recycling system for CO2 emissions that will contribute to a further increase - by about l0%- the production of urea fertiliser.
- Bangladesh Water Rules formulated.
- Construction of a subsidiary pump house under the *Ganges-Kobadak Irrigation Project*.

Recommendations for further actions under this CIP2 programme include the need to:

- Promote on-farm production and preservation of quality seeds for pulses, oils and spices.
- Accelerate the use of organic fertiliser through better manure management.
- Expand the usage of bio-pesticides.
- Improve reservoir systems for rainwater harvesting.
- Promote mechanisation and innovation after COVID-19 through subsidies, sub-contracting agreements and low-interest loans, which will be particularly important in order to revive agriculture.

Programme I.3. Enhanced productivity and sustainable production of animal source foods

Fish production growth slowed down for two consecutive years to 2.4% in 2018/19 from 3.5% registered last year and 5.2% in 2015/16. Increased feed prices, higher interest rates of institutional credit and low domestic market prices contributed to this slowdown. The share of fishery exports declined to 1.2% of total export which compares to the 2% observed in the baseline. However, fisheries' contribution to agricultural GDP slightly increased to 25.6% from 23.8% in the baseline. Livestock's contribution to agricultural GDP, at 10.75% in 2018/19, remained substantially unchanged, but the sectoral growth progressed gradually over the reference period. In particular, egg, milk and meat production improved but the latter remains largely insufficient to meet domestic demand. Livestock poultry and livestock vaccine production and rate of artificial insemination both rebounded over the previous year. However, these encouraging trends are likely to have been stopped in their tracks by the COVID-19 pandemic with the demand and price for eggs and poultry plummeting.

In the reference period, the following targeted policy development, programmes and initiatives underway stood out:

Fisheries

- Holistic action plan to develop the Blue Economy to sustainably develop marine fisheries: including marine science in university curricula, identifying breeding areas and commercially viable species, and supporting the capacity development of agents in the sub-sector.
- Assessment of current fish stocks and aquatic resources - as part of the ERD, FAO and Norwegian Institute for Marine Research Programme titled *Supporting the Application of the Ecosystem Approach to Fisheries Management Considering Climate and Pollution Impacts*.

- Enhancing marine and coastal fisheries, with the *Bangladesh Sustainable Coastal and Marine Fisheries Project (2019-2023)* aiming to increase coastal and marine fisheries' contribution to the coastal economy, poverty reduction, and environmental stability.
- Incentivizing fish culture and capture – through various initiatives such as water body re-excavation, setting up a *haor* and *char* development institute, under the 20 years master plan on *haor* development approved in 2012.
- Promoting non-traditional aquaculture for export markets - piloting the viability of niche productions such as mud crab, oysters, snails.
- Developing cluster models of shrimp farms –providing incentives to grouping shrimp farms to share risk and improve their bargaining power.
- Development of low-cost aquaculture feeding approaches through the joint *Nutrition Pond Project (2014-2019)* of Wageningen University and WorldFish, encouraging the production of homemade feed and exploiting of pond ecosystems and naturally occurring food.

Livestock

- Registration of farmers and feed sellers to facilitate quality checks.
- Launching the *Livestock and Dairy Development Project*, the largest livestock project in Bangladesh to support climate-resilient productivity growth, to enhance market access, and to improve risk management among smallholder farmers and agro-entrepreneurs.
- Conservation and improvement of livestock breeds to enhance climate resilience and sectoral sustainability through improvements of indigenous genetic stock.
- Livestock development in coastal areas through integrated livestock development project in char land and the south-west region livestock development project.

Recommendations for further actions under this CIP2 programme include the need to:

Fisheries

- Regulate fish-farming.
- Promote intensive aquaculture production.
- Finalise the policy framework for cage culture.
- Bring nutrient-dense and indigenous fish species into the commercial culture.
- Harness opportunities associated with the Blue Economy.

Livestock

- Reduce feed and health management costs in intensive farming.
- Enable cooperative and farmer centre systems.
- Support the development of livestock sector value chain

Outcome II: The real value of salaries in agriculture slightly improved due to enhanced availability of rice but is still off target in a context of stable inflation

Inflation rate as measured by the CPI slightly reduced to 5.5% which is the target value for 2020. The low level of rice price in 2018/19 is also the reason for the slight improvement of the agricultural wage rate – a measure of the purchasing power of low-income workforce.

Recommendations for further actions in this Pillar include the need to:

- Invest in conservation of nutrients during post-harvest storage, transformation and distribution.
- Promote nutrition-sensitive value chains through quality and safety certifications.
- Promote financial inclusion to support the resilience of agro-food MSMEs in rural areas.

- Improve access to service, information and markets across food chains.

Programme II.1. Strengthened post-harvest value chain with particular focus on MSMEs

Production of medium and large-scale food manufacturing industries – as measured by the quantum index for both private and public medium and large-scale firms - continued increasing. Farmgate retail price differences widened robustly for onion, and mildly for rice, lentil and potato, while they narrowed for brinjal and green chilli. Food and beverage exports increased by 62% over the reference period and diversified in composition: the contraction of the shares of fisheries exports (-7%) was been offset by the increased share of cereals (1.5%), animal and vegetable fats (13%) and sugar (3%).

In the reference period, the following targeted policy development, programmes and initiatives underway stood out:

- Establishing a favourable policy and technical support to food processing through the Agro-food Processing Promotion Policy (2019), the National Agricultural policy and its focus on reducing post-harvest loss, Export policy 2018-21, and other initiatives to support compliance to regulatory standards to facilitate exports.
- Modernized quality and safety standards and monitoring and surveillance by the regulatory authority through the Food Safety (Food Hygiene) Regulations 2018; and Food Safety (Food Contact Materials) Regulations 2019, both under the Food Safety Act 2013.
- Private sector initiatives on safe production and postharvest practices - the Bio-Tech Mushroom (BTM) adherence to GAP, HACCP, ISO 22000:2005 and BRC.
- Promoting nutrition-dense and export-oriented value chains with the *SACP (Smallholder Agricultural Competitiveness Programme)*, working with 250,000 farmers engaged in production, primary processing and value addition of high-value crops.

Recommendations for further actions under this CIP2 programme include the need to:

- Prepare a post-harvest lost reduction strategy.
- Strengthen product certification for assuring quality and safety.
- Enhance institutional and individual capacity to support post-harvest systems.
- Strengthen partnership and collaboration to set up post-harvest facilities.
- Increase the competitive environment for agro-processing to boost exports.
- Explore blockchain as a mean to ensuring traceability of nutrient-rich foods.
- Innovate in packaging and storage.

Programme II.2. Improved physical access to markets, facilities and information

The improvement of rural roads continued but is still off target at about half of the upazila and union roads in good and fair condition, an improvement of around 16 percentage points over the reference period. Cold storage capacity remained constant over the previous year. However, the number of Digital Centres increased from 5,286 in the baseline to 5,865 in 2018/19.

In the reference period, the following targeted policy development, programmes and initiatives underway stood out:

- Expansion of storage, transport and laboratory infrastructure.
- Innovations to share information and enhance market opportunities.
- Establishing markets for safe and fresh foods- to regain consumer trust in food quality.

Recommendations for further actions under this CIP2 programme include the need to:

- Incentivize private sector for high-value crop processing.
- Establish e-markets and secure payment systems.
- Facilitate the establishment of safe food through IoT technologies by the private sector.
- Develop dynamic and machine learning-based early warning system.
- Encourage shorter value chains for perishable products.

Outcome III: Recent information on diversity, consumption and utilisation is scarce but most recent data indicate widespread micronutrient deficiencies especially among women and children

The proportion of dietary energy from cereals fell from 70% in 2010 to around 64% in 2016, closer to the recommended 60% target. Consumption of protein and micronutrient rich foods, including animal source foods and pulses, remained low despite some improvement in recent years. There was clear progress in children receiving a Minimum Acceptable Diet since the onset of the CIP2, from 23% to 34%, with Bangladesh on track to achieve the NPAN2 target of 40% by 2025. The 2019 MICS shows 76% of households consuming *some* iodised salt clearly that Bangladesh is still far behind the NPAN2 recommendation of 90% consuming *at least 15ppm*. Although the prevalence of anaemia among women of reproductive age reduced from 48.1% in 2000 to 39.9% in 2016, the rate remained almost stagnant between 2012 and 2016, after which there are no data. Less than half of women had a minimum dietary diversity in 2015 and while there is no recent information on this indicator, previous trends suggest that Bangladesh is not on track to achieve its dietary diversification target.

Recommendations for further actions in this Pillar include the need to:

- Develop long-term national food planning to ensure balanced nutrition at minimal cost, developing diets and food lists based on local menus and support actions for achieving healthy and sustainable food systems.
- Promote dietary diversity to enhance nutrient adequacy especially for adolescent girls.
- Improve consumption of fortified foods -including adequately iodised salt- which is cost-effective, and monitor it to adjust policy actions.
- Strengthen National Nutrition Services (NNS) delivery through community clinics.

Programme III.1 Enhanced nutrition knowledge, promotion of good practices, and consumption of safe and nutritious diets

There was a remarkable increase in exclusive breastfeeding from 55.3% in 2014 to 65% in 2017, and it is likely that Bangladesh will reach the NPAN2 target of 70% by 2025. However, these numbers conceal the fact that while 80% of children aged 0-1 months were exclusively breastfed in 2017, this dropped to 40% of children aged 4-5 months. Between 2015/16 and 2017/18, 75% of the Dietary Energy Supply came from cereals, and although there are no data for 2018/19, lack of diversity in the Bangladeshi diet continues to be a problem, especially in poorer sections of the population. Efforts continue to promote home gardens and backyard poultry which can contribute to diversifying diets, although limited data are available for the entire country. With regards to NCDs, Bangladesh is one of the countries with the highest burden of diabetes with cases steadily rising from 6.6 per thousand in 2010 to 9.2 in 2019. Mass media is increasingly being used to deliver messages aiming at changing nutrition behaviour. Also, the number of institutions promoting national dietary guidelines more than doubled in the year under review. Direct gender budgeting within the MoFood has stalled in the year under review and needs attention given the key role women in ensuring nutrition to their children.

In the reference period, the following targeted policy development, programmes and initiatives underway stood out:

- Updating of the Dietary Guidelines for Bangladesh as a joint effort of the MoHFW and MoFood, BIRDEM, NNS-IPHN, with support from FAO and WHO and in partnership with other stakeholders.
- Promotion of nutrition through national events such as the National Nutrition Week in April, the Nutrition Olympiad which involves Nutrition Clubs, as well as events such as the World Food Day, the World Breastfeeding Week, the National Food Safety Day, World Food Safety Day, 3-day National Vegetable Fair, 3-day National Fruit Fair and World Egg Day.
- Initiation of the Nutrition Challenge Badge which aims to help children and youth explore basic concepts of good nutrition, healthy and environmentally friendly eating habits and lifestyles.
- Implementation of the school meal policy and programme to provide part of their daily calorie and micronutrient requirements to every primary school student.

Recommendations for further actions under this CIP2 programme include the need to:

- Revise and implement the National Strategy for IYCF.
- Promote healthy diets and lifestyles including physical activity, to tackle NCDs such as diabetes, by introducing changes in policies related to food and improving health systems.
- Promote under-utilised foods and especially Neglected and Underutilized Species which often offer superior nutritional qualities, require fewer inputs, can be grown on marginal lands, are easily intercropped or rotated with staple crops, and are likely to fit easily into integrated practices.
- Integrate Nutrition Behaviour Change Communication (NBCC) into nutrition-sensitive programming with nutrition-sensitive interventions such as homestead production of diverse, nutrient-rich foods and social protection programmes.

Programme III.2 - Optimised food utilisation through the provision of safe water, improved food hygiene and sanitation

No progress has been registered in access to safe drinking water in the year under review. While DPHE reports that 93% of urban households and 90% of rural have access to safe drinking water, a substantial proportion is still having to drink water contaminated with E.coli and arsenic. Similarly, access to sanitary latrines remained static in 2018/19 despite significant progress at the onset of the CIP2 and a large proportion of the population thus remains at risk of faecal contamination. The number of under-five children admitted in health facilities for diarrhoeal diseases rose which may be explained in part by a greater awareness by the public of the importance of seeking medical assistance in such circumstances.

In the reference period, the following measures were noted:

- Strengthening of the capacity of upazila water and sanitation committees to enhance WASH in rural areas, with more efforts needed in urban areas.
- Global Handwashing Day celebrated in order to influence, inform and increase public awareness on the positive effects of handwashing.
- Technical Symposium on Nutrition-Sensitive WASH.
- In May 2020, the GoB launched a strategic paper to respond to water, sanitation and hygiene (WASH) issues during & after the COVID-19 outbreak.

Recommendations for further actions under this CIP2 programme include the need to:

- Promote public and private sector partnerships for improved and innovative social and behaviour change communications.

- Integrate nutrition-sensitive WASH in policies and programmes which can help greatly reduce the level of stunting.

Outcome IV: Poverty reduction was on-track for the SDG 1 national target, but will likely be slowed by COVID-19

Poverty in 2018/19 was estimated by BBS to have further declined to 20.5% nationally, from 21.8% in the previous year. These figures are 10.5% and 11.3%, respectively, for the proportion of people under the extreme poverty line. Even with a somewhat slower rate of decline after 2010, Bangladesh was on track to achieve the SDG 1 Target 1.2.1 of reducing at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions before 2030. The lockdown due to the COVID-19 pandemic in 2020 led to sharp increases, in poverty depth amongst the already poor, and in poverty prevalence when previously non-poor households fell into poverty.

Recommendations for further actions in this Pillar include the need to:

- Ensure proper financing and implementation of safety nets and social protection systems to shield the large numbers of people still suffering from food and nutrition insecurity, support their efforts to work out of poverty, and break the intergenerational cycle of poverty.
- Recognise the non-economic dimensions of poverty and review the way social protection is designed and targeted accordingly.
- Promote a more inclusive growth with, for example, investments in 'decent job' creation and provision of marketable education and skills to low-income groups.
- Combat growing inequality and consider its many dimensions in order to adapt policy measures.
- Focus on strengthening urban social protection.
- Incentivise rural industry and services which was the main engine of poverty reduction in rural areas between 2010 and 2016.
- Consider the heterogeneity of the poor in designing anti-poverty measures: across geographical areas, across the life cycle but even within households.
- Improve the resilience to shocks and vulnerability to falling back into poverty.

Programme IV.1. Timely and effective disaster preparedness and responses through emergency food distribution, agriculture rehabilitation and mitigation measures

After no increase in 2017/18, the number of usable cyclone shelters increased to 3,968 in 2018/19 but this remains substantially short of the 7FYP target. The number of rural communities with disaster-resilient habitats and assets increased from 7,934 in 2017/18 to 11,604 in 2018/19. Disaster resilient habitats and assets incorporate structural safety, adaptive technology, sustainable livelihoods, early warning and community cooperation. The total foodgrain distributed through the PFDS increased marginally to 1,132 thousand MT in 2018/19, somewhat lower than at baseline. Grain storage capacity reached 2,030 thousand MT in 2018/19, an increase of 8% from the previous year, after several years of stagnation. The average use of food grain storage capacity in 2018/19 was 73%, after two years of low utilisation: a 75% utilisation may be considered close to full capacity given the seasonality of procurement and the impossibility of attaining full capacity for more than a short time in traditional storage facilities. This improvement suggests a greater ability to respond to unexpected shocks using the PFDS. Actual closing stocks, compared to the budgeted target, sharply increased from 64% in 2017/18 to 129% in 2018/19. Five important initiatives aimed to enhance early warning information continue in place, namely: the Cyclone Preparedness Programme, Red Crescent Volunteers, and Interactive Voice Response technology through mobile phones. Finally, direct gender budget in the total budget of the MoDMR was

34.7 % in 2018/19, which is the same as the previous year, and a significant drop against the baseline figure.

The following developments stood out in the reference period:

- Adoption of climate-resilient and disaster-resilient agriculture which promote adaptation, mitigation and long-run resilience.
- Continued firm commitment to disaster management reflected in policies and programmes.
- Strengthening logistics' capacity to prepare for and respond to humanitarian crises notably with the adoption of the Inter-Agency Standing Committee's Global Logistics Cluster.
- Capacitation of farmers and fishers to manage climate risks by delivering timely, reliable and contextualized climate information.
- Implementation of poverty reduction projects that address environment and climate challenges.
- Rapid financing to respond to small and medium scale emergencies.

Needs for further actions under this programme include:

- Continue improving safe storage capacity, especially in remote areas and at the community level to ensure food security and safety during and after disasters.
- Ensure safe drinking water and sanitation for people affected by disasters.
- Scale-up forecast-based early action (FbA) to reduce the impact of shocks on vulnerable people by improving the effectiveness of emergency preparedness and livelihoods, response and recovery efforts, and reducing the humanitarian burden.
- Pay greater attention to gender sensitivity in disaster preparedness and responses.

Programme IV.2. Strengthened social protection and safety net programmes for targeted groups across the life cycle, including disabled and displaced populations

The VGD coverage was static at 139.81 hundred thousand person months in 2018/19. The ICVGD which adds a cash grant for investment, 30 kg of fortified rice, and training on livelihoods, entrepreneurship, financial management and nutrition BCC were to be upscaled and although no budget was allocated in 2018/19, MoWCA confirmed that they have secured USD 66 million but reported delays in the implementation. The School Feeding Programme in Poverty Prone Areas continued to expand while the budget allocation for the Employment Generation Programme for the Poorest remained unchanged. Overall, the weight of safety net programmes in total GDP continued to rise, up to 2.54% of GDP in 2018/19, compared to 2.17% in the previous year.

In the reference period, the following developments stood out:

- Increase in the budget allocations for several marginalised groups, for instance, the financially insolvent or student disabled or tea-garden labours.
- Initiation of electronic payment of benefits through electronic fund transfer directly into bank accounts or mobile bank accounts of beneficiaries.
- Launch of a study to determine the viability of a National Social Insurance Scheme, in particular, in the context of a projected ageing population.
- Establishment of a *Policy Guidance Unit for Child-focused Social Protection (PGU-CSP)* under the Cabinet Division.
- Launch of a Bangladesh National Forum for the Elderly to enhance implementation of the government's policies for the elderly.

Recommendations for further actions under this CIP2 programme include the need to:

- Finalise the National Household Database, a registry of potential social protection beneficiaries, and make it publicly available.
- Fine tune the digitization of G2P social benefits' payments and expand it nationwide.
- Strengthen and upscale urban social protection systems.

Outcome V: The institutional setup to monitor FNS is well established and functional

The five Thematic Teams (TTs) -one for each CIP2 Pillar- continued to be a platform for FNS policy discussion and for essential data gathering, thereby supporting the CIP2 monitoring process and the drafting of the national food and nutrition security policy of Bangladesh. The Technical Working Groups (TWGs), originally established to assist FPMU in developing the CIP2 in 2016, also met in May 2019 in the last stages of the MR19 preparation in order to scrutinize the report and provide further inputs as necessary. The official publication of the CIP2 at the beginning of 2018/19 was followed by the production of the first Monitoring Report of CIP2 (MR19) in June 2019.

Recommendations for further actions in this Pillar include the need to:

- Institutionalise FNS capacity strengthening rather than rely on projects to be able to respond to an ever-changing policy landscape.
- Translate government and development partners' political commitment into concrete actions that will contribute to the effective implementation and monitoring of the CIP2
- Encourage non-state actors to participate in FNS-related policy and strategy development.
- Acknowledge and help enhance the role of the private sector in achieving FNS.

Programme V.1. Improved food safety, quality control and assurance, awareness on food safety and hygiene

An additional 440 thousand farmers have been trained on the use of organic fertiliser, green fertiliser and microbial fertiliser since 2015/16, and the number of BSTI food safety certificates of compliance almost doubled to 18 compared to just five in the baseline year. The number of processed foods standardized by BSTI under compulsory certification remained unchanged which is worrying given that the actual number of products covered is abysmally low compared to the number of food items on the market. The number of violations of food safety standards reported by BFSA picked up again. The number of HACCP/FSMS certified institutions continued to rise, albeit at a slower pace. On the one hand, more emphasis has been put on delivering training on GAP but on the other, GHP and GMP trainings have slowed down. These numbers remain too low to make a real impact at the national level. The National and World Food Safety Days continued to be observed.

In the reference period, the following measures were noted:

- Strategy on food safety included in the draft National Food and Nutrition Security Policy 2020 emphasising the need to put in place operational standards and procedures to assure that food is free of contamination from sources such as chemicals, trace elements, heavy metals and bacteria.
- Food Safety (Food Hygiene) Regulations 2018 introduced to regulate and provide guidance on sanitation and hygiene issues.
- Launch of a Mobile Food Safety Laboratory to raise awareness on food safety and good food handling practices and test for harmful food contaminants and pathogens on the spot.
- Chemical testing units to be installed at all land and seaports as per orders of the High Court.
- Gradation system for restaurants to indicate their quality based on hygiene and food safety regulation is operative in full swing but not very widespread.

- Checks on illegal use of DDT
- Development of knowledge and capacities in the area of food safety to train a cadre of people able to understand the problem and verify compliance with regulations.
- Better control over imports notably to prevent any imports of fish that contains formalin.
- Total diet study for Bangladesh planned.

Recommendations for further actions under this CIP2 programme include the need to:

- Strengthen the capacities of the BFSA and testing laboratories not only in districts but also at upazilla level.
- Continue educating and raising awareness on food safety through formal education to produce competent graduates working in the field of food inspection, control, audit and surveillance services.
- Continue promoting the demand for and supply of organic fertilisers and develop and apply standards for organic produce.
- Implement the existing laws which are challenging to strictly impose and monitor due to their high number.
- Develop certification to enable exports in the fisheries sector for example.
- Execute existing antibiotics poultry feed ban.
- Enhance results of waste management improvement efforts in Dhaka but also in other cities and towns, as well as in Cox's Bazar where the displaced Rohingya population crisis has resulted in the exponential increase in waste creation in an area with no infrastructure to handle the issue.
- Accelerate waste disaggregation and sensitise the general population to the 3R concept of reducing (consumption), recycling and reusing.
- Develop policy guidelines and seller's registration for safe and healthy street food vending.

Programme V.2. Reduced food losses and waste

Recent information on food loss and waste (FLW) is not yet available in Bangladesh: although levels of postharvest losses of specific food commodities have been estimated over the years, there are no recent nationally representative data generated through an approved or widely recognized methodology on the magnitude of FLW in Bangladesh.

Among the important developments in this area during the reference period were the following:

- Food loss and waste addressed in several policies and activities started towards the design of a national loss reduction strategy.
- Research to assess the magnitude of FWL for selected food commodities in the process of being initiated.
- Collaborations established to monitor the Food Loss Index and take measures to reduce FLW.
- Incorporation of the FLW issue in several projects' objectives, especially in the crop sector.

Recommendations for further actions under this CIP2 programme include the need to:

- Develop a national strategy on the reduction of FLW involving both the public and private sectors in critical areas of the food supply chain such as storage, transportation, food processing and packaging industries. Adequately quantifying FLW across the food system is a prerequisite to the development of this strategy.
- Encourage adoption of good practices in on and off farm operations to reduce losses and maintain quality and safety.

- Create an enabling environment to promote the right technologies, systems and incentives that will encourage the adoption of favourable to FLW reduction measures.
- Develop, invest and apply appropriate technologies to reduce FLW.
- Increase food processing capacity.
- Encourage public and private sector initiatives as well as partnerships between them for the reduction of FLW.
- Build the capacity of educational and research institutions with modernized curricula for postharvest management and cutting-edge research facilities.
- Develop adequate postharvest systems through skilled human resources and equipped institution.
- Promote education and awareness of the numerous stakeholders of the food system including public sector agents, private sector industry fora/associations and households.
- Adopt and adapt practices and innovations from across the globe to reduce waste.

Programme V.3. Improved information and data for evidence-based monitoring and adjustment of policies and programmes

A variety of Government and non-Government FNS data sources continue to inform policy analysts and policymakers. These are surveys and surveillance systems contributing to inform nutrition-sensitive policies and programmes and providing updates on coverage and effectiveness of nutrition-specific interventions. Since the finalisation of the Bangladesh FCTs in June 2013, their further update and translation into Bangla, their dissemination has been ongoing through various activities.

In the reference period, the following targeted policy development, programmes and initiatives stood out:

- Mapping Chronic food insecurity with the Integrated Phase Classification analysis and trainings.
- National Strategy for the Development of Statistics in the process of being implemented with the expected outcome of enhanced coverage and improved collection and quality of data for core statistics.
- SDG Tracker further improved and first SDG progress report published.
- NPAN2 M&E Report prepared and disseminated: NPAN2 and the CIP2 have common objectives and involve the same sectors and stakeholders.
- Publication of a public expenditure review on nutrition.
- Scaling out of BNNC's activities at the local level through District Nutrition Coordination Committees (DNCC) and Upazila Nutrition Coordination Committees (UNCC).

Recommendations for further actions under this CIP2 programme include the need to:

- Continue efforts to produce SDG indicators' and other relevant FNS data: out of the 232 SDG indicators, data were only readily available for 70 indicators, with a lag of up to three years for some.
- Strengthen policy uptake of evidence by policymakers by reinforcing capacities to produce evidence but also to understand and use the evidence by policymakers and leaders.
- Improve knowledge and information on gender-related issues through sex-disaggregated data.

Programme V.4. Strengthened FNS governance, capacity strengthening and leadership across FNS

FPMU, along with 18 other Ministries and Government agencies, continues to lead and coordinate the annual production of the CIP monitoring report. High-level FNS focal points across core ministries have been established and function efficiently (see Outcome) to supply information towards and contribute to the yearly CIP monitoring report. The SUN index for 'Bringing people together into a shared space for

action' which gauges the degree to which internal harmonisation and coordination have evolved, remains quite high at 75%, but unchanged from the previous year. Finally, calls continue for the Right to Food to be enshrined in law since the Constitution guarantees the Right to Food but does not legally establish it.

Among the important developments in this area during the reference period were the following:

- Continued expansion of the Bangladesh SUN Business network which currently brings together 15 members and helps organise business around nutrition.
- Formulation of the new food and nutrition security policy

Needs for further actions under this programme include:

- Ensure adequate capacities to ensure policy alignment and results monitoring.
- Adapt capacities to the changing FNS landscape.
- Consider the possibility of adopting a nutrition-sensitive budgeting and financing.

Some achievements may be slowed or setback by the effects of the COVID-19 crisis

The food industry needs to be treated as an essential service provider to ensure continuity of operations along food value chains through the establishment of 'green channels' and providing both direct - through cash or in-kind transfers to sustain rural livelihood and indirect support through facilitated loan schemes and grants.

CIP2 financing budget evolution

Integrated approach for financial monitoring

The financial monitoring of the CIP2 follows existing national systems for monitoring ADP investments as part of the existing national planning process which involves the Ministry of Finance and the Implementation Monitoring and Evaluation Division (IMED).

Gender and budgets in FNS related sectors

Between 2011/12 to 2014/15, efforts were made to speed up the integration of women in the agricultural sector but since then, these levels have been sustained but have not risen further. In the rural development and the social security and welfare sectors, increases in gender-related spending have been registered lately, although this is not reflected as a proportion of the total budget of each sector. No clear trend is visible for the health and nutrition spending and this sector is the one with lowest gender spending in proportion to its total budget.

The four sectors considered focus a large part of their efforts on projects that directly benefit and target the poor and which promote growth. However, the share of poverty spending in total budgets has decreased over the last ten years for all the sectors considered although, except health and nutrition in 2018/19, spending has increased in the last three years, reflecting the GoB's will to achieve SDG 1.

Changes in the total CIP2 budget and its components

CIP2 budget

At the end of the 2018/19 financial year, the CIP2 total budget was 19.2 billion USD. Of this, 82% was already financed in the form of ongoing projects or projects that had already been completed since the beginning of the CIP2. The remaining 18% represented the financial gap, i.e. pipeline projects. The breakup between different Pillars of the CIP2 is comparable to that of previous years with *primary production* and

market and value chains accounting for roughly over a third of the total budget each. The Pillar on *diversified consumption* now constitutes 7% of the total budget against 5% in the previous year. The *social protection* Pillar represents 19% of the budget while the *cross cutting* one remains at a 2%. Weighing projects according to how nutrition-sensitive they are, reduces the total budget to 12.21 billion USD. This reflects the fact that under the *market and value chain* Pillar in particular, projects are nutrition-supportive, which means they weigh less in the CIP2 budget.

Government financing accounts 64% of the CIP2 budget (62% of the nutrition weighed budget) against 36% for the DPs. There are important differences across Pillars however, with DPs only accounting for only 17% of the *market and value chain* Pillar budget and just over a fifth of the *diversified consumption* Pillar. On the other hand, more than half of the CIP2's budget as of 30th June 2019 came from them for the *primary production* and the *cross-cutting* Pillars.

Changes in the CIP2 budget

The CIP2 budget increased by 18% between 2017/18 and 2018/19, compared to 20% in the previous year and 26% in the year before that. This deceleration reflects, to some extent, the accounting method used and the reduction in the amounts that can be included for pipeline projects given the near ending of the CIP2. Total mobilised CIP2 resources increased by 4.2 billion USD in 2018/19, a 37% increase from the previous year. This compares to a 26% increase in the first year of the CIP2 and 34% in the following one. The CIP1 average rise in the financed budget was 31%. The bulk of financed resources stem from GoB (75%) and residually (25%) from DPs. DPs' financed resources have accelerated through the CIPs, from 13% in the first year of implementation (2016/17) to 39% in the third year (2018/19). This is an encouraging trend which would allow translating the financial gap into actual mobilised resources. However, this must be associated with an increase in delivery.

Delivery

As of 30th June 2019, cumulative delivery – the actual expenditure over the three years of CIP2 implementation- stood at about 6 billion USD, 61% of which was nutrition-sensitive. Both total and nutrition-sensitive delivery represented the 38% of the cumulative total financed and nutrition-sensitive budget respectively. Cumulative delivery in the total CIP2 financed budget improved for all Pillars compared to a year earlier – except for *market & value chains.*

Pipeline budget

The overall pipeline totalled 3.5 billion USD (82% from DPs and 18% from GoB) as of 30th June 2019 and declined from the 3.9 billion USD in the baseline. This was expected as the CIP2 will end next year and the financial commitment, accounted for these last two financial years -by both GoB and DP-, is reducing. This is compensated by a growing post-CIP2 budget.

Budget post-CIP2

As the CIP2 has an implementation period of four years and there is only one year left to the end of it, the bulk of recently financed and pipeline projects fall outside the CIP2, i.e. beyond 30th June 2020. This means that their financing is only marginally reflected in the CIP2 budget. The post-CIP2 budget totals 11.7 billion USD, which is financed for 47% by GoB and 53% by DPs.

Recommendations based on the financial analysis

- Development partners need to continue mobilising resources to ensure their commitments are translated into financed budget and faster delivery.

- Programmes under the *Cross-cutting* Pillar V need to figure more heavily in government and DPs' investments, especially the one aiming to reduce FWL, which remains to be populated by projects.
- Cumulative delivery in the total CIP2 financed budget improved for all Pillars compared to a year earlier – except for *Market & value chains*. An acceleration in delivery is thus needed, especially if all the financed budget is to be delivered within the CIP2 period.

11. Annexes

Annex 1. Results indicators and changes from the CIP2 in MR19 and MR20

Note: an empty cell means no change has taken place.

Goal Indicators

n	CIP2	MR19	MR20
1	SDG Indicator 2.1.1: Prevalence of undernourishment		
2	SDG Indicator 2.2.1: Prevalence of stunting (height for age <-2 SD from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age		
3	SDG Indicator 2.2.2: Prevalence of wasting among children under 5 years of age (<-2 SD of weight for height)		
	SDG Indicator 2.1.2: Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)		Newly introduced
	SDG Indicator 2.3.1 Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size	PROXY: Agricultural value addition per worker (USD)	PROXY: Agricultural value addition per worker (USD)
	SDG Indicator 2.3.2 Average income of small-scale food producers, by sex and indigenous status		
	SDG Indicator 2.4.1 Proportion of agricultural area under productive and sustainable agriculture		

Outcome indicators

Pillar	n.	CIP2	MR19	MR20
I. Diversified and sustainable agriculture, fisheries and livestock for healthy diets	1	PoA- CIP1: Rice import dependency (import/availability)		
	2	7FYP: Agricultural sector GDP growth rate (%) a) Crop and horticulture b) Fisheries c) Livestock		Forestry added
	3	PoA- CIP1: Share of rice value added in total food value added in current price		
	4	PoA- CIP1: Wage differential between males and females in agriculture		
II. Efficient and nutrition-sensitive post-harvest transformation and value addition	5	7FYP: Average annual CPI inflation rate		
	6	Change in without food agricultural wage rate of male agricultural labour		
	7	SDG 2.c.1: Change in Food Price Anomalies		
III. Improved dietary diversity, consumption and utilisation	8	PoA-CIP1: National dietary energy intake from cereals (%)		
	9	PoA-CIP1: Proportion of children receiving minimum acceptable diet at 6-23 months of age (%)		
	10	PoA-CIP1: Proportion of households consuming adequately iodised salt containing at least 15 ppm		
	11	Prevalence of anaemia among women of reproductive age (15-49)		
	12	Minimum Dietary Diversity (MDD) for women		
IV. Enhanced access to social protection and safety nets and increased resilience	13	7FYP: Proportion of population living below national poverty line, differentiated by urban and rural (SDG Indicator 1.2.1: Proportion of population living below the national poverty line, by sex and age)		
	14	Proportion of population under national extreme poverty line (a) Rural and (b) Urban		
V. Strengthened enabling environment and cross-cutting programmes for achieving food and nutrition security	15	GoB financial commitments to CIP2		
	16	Establishment of high-level FNS focal points across core ministries		
	17	Process of establishment of FNS focal points engaged in policy monitoring is on-going through regular TT and TWG meetings		
	18	Annual high level FNS policy reports produced		

Output indicators

Investment programme	n	CIP2	MR19	MR20
I.1 Sustainable intensification and diversification of crop-based production systems	1	7FYP: % of agriculture budget allocated in the agricultural research		
	2	PoA- CIP1: Annual change in major crops' production		
	3	Direct gender budgeting as % of MoA budget (revised)		% of MoA revised budget
	4	PoA- CIP1: Number of improved new varieties released		
	5	Production of seeds tolerant to salinity, drought and water submergence in MT		
	6	PoA- CIP1: Number of farmers trained on sustainable agriculture practices by DAE		
	7	Number of institutions delivering nutrition training across core ministries		
I. 2. Improved access, quality and management of crop agricultural inputs, including water and land	8	PoA- CIP1: Annual change in improved rice, wheat and maize seeds production		
	9	PoA- CIP1: Improved seeds supply (BADC, DAE & private companies) as % of agronomic requirements		
	10	Number of soil samples analysed to upazilla and union levels		
	11	Arable land increased by expansion of minor irrigation coverage by encouraging optimal use of surface water, and increasing the area of arable land by reducing water logging and submergence in thousand ha	MODIFIED: Increased arable land under surface irrigation coverage (thousand ha)	MODIFIED: Increased arable land under surface irrigation coverage (thousand ha)
	12	Direct gender budgeting as % of MoWR budget (revised)		% of MoWR revised budget
	13	PoA- CIP1: Supply of urea as % of estimated requirements		
	14	PoA- CIP1: Supply of MoP as % of estimated requirements		
	15	PoA- CIP1: Supply of TSP as % of estimated requirements		
	16	PoA- CIP1: Agricultural credit disbursement in billion BDT		
	17	Number of samples of fish feed tested for quality assurance		
	18	Area of land affected by salinisation		
	19	Area of land under organic farming under DAE initiative		
		SDG indicator 5.a.1 (a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure		

		SDG indicator 6.4.1 Change in water-use efficiency over time	PROXY: Water-use efficiency (USD/m3)	PROXY: Water-use efficiency (USD/m3)
		SDG indicator 6.4.2 Level of water stress: freshwater withdrawal as a proportion of available freshwater resources		
I.3. Enhanced productivity and sustainable production of animal source foods	20	7FYP: Percentage of (a) coastal and (b) marine areas that are protected		
	21	7FYP: Percentage of wetland and natural sanctuaries maintained		
	22	PoA- CIP1: Annual change in quantity of fish production		
	23	PoA- CIP1: Fishery exports: a) value as % of total export; b) of which shrimp share in %		
	24	PoA- CIP1: GDP from fishery sector as % of agriculture GDP (excluding forest), at constant prices 2005/06		
	25	PoA- CIP1: Production of eggs (million), milk, (MT) cattle and meat (MT)		
	26	PoA- CIP1: GDP from livestock sector as % of agriculture GDP (excluding forest), at constant prices 2005/06		
	27	Growth rate of livestock GDP		
	28	Number of doses of vaccines produced		
	29	PoA- CIP1: Annual change in artificial insemination		
	30	Number of farmers trained by the DoF and DLS		
	31	Direct gender budgeting as % of MoFL budget (revised)		% of MoFL revised budget
	32	Number of commercial registered (1. Poultry; 2. Livestock; 3. Fish farms)		
	33	Number of ponds		
		SDG 14.2.1 indicator Proportion of national exclusive economic zones managed using ecosystem-based approaches		
II.1 Strengthened post-harvest value chain with particular focus on MSMEs (storage, processing, branding, labelling, marketing and trade)	34	Number of large establishments manufacturing food	PROXY: Quantum index of medium and large-scale manufacturing industry for food	PROXY: Quantum index of medium and large-scale manufacturing industry for food
	35	Number of medium, small and micro establishments manufacturing food		
	36	PoA- CIP1: Difference between farm gate and retail price of selected goods		
	37	Food and beverages exported in million BDT		
	38	Coverage of agro-business entrepreneurship training by the Ministry of Agriculture and the Ministry of Industries (BSCIC), in thousands		

II.2. Improved access to markets, facilities and information	39	7FYP: Upazilla and union road network in good and fair condition (SDG 9.1.1 indicator Proportion of the rural population who live within 2 km of an all-season road)		
	40	Number of growth centres, rural markets, women market centres, and Union Parishad Complexes developed by LGED and DAM		
	41	Cold storage available in thousand MT		
	42	Number of Digital Centres across the country at national and sub-national levels		
	43	Number of food, market and infrastructure PPP contracts awarded (2015) by the PPP authority		
III.1. Enhanced nutrition knowledge, promotion of good practices, and consumption of safe and nutritious diets	45	7FYP: Proportion of children under 6 months who are exclusively breastfed (%)		
	46	PoA- CIP1: Share of total dietary energy supply for consumption a) from cereal; and b) non-cereal		
	47	Direct gender budgeting as % of MoFood budget		
	48	PoA- CIP1: Poor households raising home gardening and backyard poultry in selected vulnerable districts		
	49	Prevalence of diabetic cases (%)		Prevalence of diabetic cases per thousand
	50	PoA- CIP1: Number of mass media activities for nutrition behavioural change communication (BCC)		
	51	Number of institutions promoting dietary guidelines		
III.2. Optimised food utilisation through provision of safe water, improved food hygiene and sanitation	52	7FYP: Percentage of urban and rural population with access to safe drinking water (a. Urban, b. Rural) [SDG indicator 6.1.1 Proportion of population using safely managed drinking water services]		
	53	7FYP Percentage of urban and rural population with access to sanitary latrines (a. Urban, b. Rural) [SDG indicator 6.2.1 Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water]		
	54	Number of children aged 5 years or less admitted in upazilla health complexes, at the district-level secondary hospitals and in medical college hospitals for diarrhoea and gastroenteritis of infectious origin		
IV.1. Timely and effective disaster preparedness and responses through	55	7FYP: No. of usable cyclone shelters		
	56	7FYP: Number of rural communities with disaster resilient habitats and communities' assets		
	57	Month of adequate household food provisioning	REMOVED	REMOVED

emergency food distribution, steps towards agricultural sector rehabilitation and mitigation measures	58	Direct gender budgeting as % of MoDMR budget		% of MoDMR revised budget
	59	PoA- CIP1: Effective grain storage capacity at close of fiscal year		
	60	PoA- CIP1: Average use of effective GoB foodgrain storage capacity		
			ADDED: Distribution of foodgrain through PFDS (thousand MT)	ADDED: Distribution of foodgrain through PFDS (thousand MT)
	61	Actual closing stocks % of budget target		
	62	Environment CIP: Early warning information enhanced through Regional and Global Initiatives (MoUs and LoAs)		
IV.2. Strengthened social protection and safety net programmes for targeted groups across the life cycle including disabled and displaced population	63	PoA- CIP1: Budgeted coverage of VGF (lakh person) and VGD (lakh person month)	MODIFIED: Budgeted coverage of VGD and ICVGD (in hundred-thousand-person month)	MODIFIED: Budgeted coverage of VGD and ICVGD (in hundred-thousand-person month)
	64	PoA- CIP1: Quantity of VGF and GR distributed (in thousand MT)	REMOVED	REMOVED
	65	PoA- CIP1: Safety net programmes expenditures as % of GDP [SDG indicator 1.3.1. Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, new-borns, work injury victims and the poor and the vulnerable]		
	66	Number of children covered by the School Feeding Programs in Poverty Prone Areas (in tens of thousands)		
	67	Coverage of people covered by the Allowance for the Financially Insolvent Disabled (in tens of thousands)	REMOVED	REMOVED
	68	Coverage of Old Age Allowance/Pension (in tens of thousands)	REMOVED	REMOVED
	69	Budgeted coverage of employment generation programme for the poor (in lakh person month)		
V.1. Improved food safety, quality control and assurance,	70	7FYP: Percentage of urban solid waste regularly collected	REMOVED	REMOVED
	71	Farmers trained on use of organic fertiliser, green fertiliser and microbial fertiliser, in thousands		
	72	Number of food safety management system certificates awarded by BSTI		

awareness on food safety and hygiene	73	Number of food items standardised by BSTI	ADJUSTED: Number of processed food items standardised by BSTI (mandatory certification)	ADJUSTED: Number of processed food items standardised by BSTI (mandatory certification)
	74	Identified number of violations of food safety standard reported by BFSA		
	75	Number of HACCP/ISMS certified institutions		
	76	Number of courses delivered on GAP, GHP and GMP		
	77	Number of trainees that have benefited from training on GAP, GHP and GMP		
	78	Number of food safety initiatives /days observed		
V.2. Reduced food losses and waste	79	Wastage as a proportion of agricultural produce, including sector specific proportions in Bangladesh		
V.3. Improved information and data for evidence-based monitoring and adjustment of policies and programmes	80	PoA- CIP1: Existing food security and nutrition databases/ surveillance systems		
	81	PoA- CIP1: Food Composition Tables (FCT) updated/ disseminated		
V.4. Strengthened FNS governance, capacity strengthening and leadership across FNS relevant stakeholders	82	PoA- CIP1: CIP Monitoring Reports produced		
	83	PoA- CIP1: Additional resources mobilised for the CIP2 in million USD		
	84	PoA- CIP1: Increase in ongoing projects (number and value)		
	85	SUN index for 'Bringing people together into a shared space for action'		
	86	Right to Food issues discussed by policy makers and at Parliamentary level		

Annex 2. Number of projects components by programme[378]

Programme	CIP 2017 (Baseline)			CIP 2018			CIP 2019			CIP2020		
	Ongoing	Pipeline	Total	Completed/ Ongoing	Pipeline	Total	Completed / Ongoing	Pipeline	Total	Completed / Ongoing	Pipeline	Total
I.1. Sustainable intensification and diversification of crop-based production systems	41	30	71	50	47	97	63	41	104	82	21	103
I.2. Improved access, quality and management of crop agricultural inputs, including water and land	80	19	99	86	48	134	103	43	146	120	29	149
I.3. Enhanced productivity and sustainable production of animal source foods	46	25	71	61	20	81	67	20	87	77	15	92
II.1. Strengthened post-harvest value chain with particular focus on MSMEs (storage, processing, branding, labelling, marketing and trade)	15	19	34	19	19	38	21	19	40	26	10	36
II.2. Improved access to markets, facilities and information	55	31	86	80	21	101	92	20	112	111	7	118
III.1. Enhanced nutrition knowledge, promotion of good practices, and consumption of safe and nutritious diets	3	15	18	5	15	20	16	5	21	18	3	21
III.2. Optimised food utilisation through provision of safe water, improved food hygiene and sanitation	23	4	27	40	14	54	53	1	54	69	19	88
IV.1. Timely and effective disaster preparedness and responses through emergency food distribution, steps towards agricultural sector rehabilitation and mitigation measures	24	6	30	28	2	30	30	2	32	33	1	34
IV.2. Strengthened cash and food-based programmes for targeted groups across the life cycle including disabled and displaced populations	32	10	42	38	17	55	46	13	59	57	7	64
V.1. Improved food safety, quality control and assurance, awareness on food safety and hygiene	8	16	24	10	16	26	21	8	29	26	4	30
V.3. Improved information and data for evidence-based monitoring and adjustment of policies and programmes	6	1	7	8	5	13	10	3	13	12	7	19
V.4. Improved FSN governance, capacity strengthening and leadership across FSN relevant stakeholders	4	3	7	4	6	10	10	4	14	12	5	17
Total number of projects' components	**337**	**179**	**516**	**429**	**230**	**659**	**532**	**179**	**711**	**643**	**128**	**771**
Total number of projects	**286**	**132**	**418**	**356**	**189**	**545**	**446**	**138**	**584**	**529**	**109**	**638**

[378] A single project may appear in several sub-programmes as its different components may contribute to different CIP2 areas.

Annex 3. Composition of the Thematic Teams

Thematic Teams (TT)		Ministry/ department/ unit
TT A **Diversified & Sustainable Agriculture, Fisheries & Livestock**	1	FPMU, Ministry of Food
	2	Ministry of Agriculture
	3	Ministry of Fisheries & Livestock
	4	Ministry of Industries
	5	Ministry of Water resources
	6	Department of Agricultural Extension
	7	Department of Fisheries
	8	Department of Livestock Services
	9	Bangladesh Chemical Industries Corporation
	10 - 12	FPMU, Ministry of Food
TT B **Efficient & Nutrition-Sensitive Post-Harvest Transformation & Value Chain**	13	FPMU, Ministry of Food
	14	Ministries of Industries
	15	Ministry of Agriculture
	16	Ministry of Fisheries & Livestock
	17	Ministry of Environment, Forest & Climate Change
	18	Local Government Division
	19	Ministry of Local Government, Rural Development & Co-operatives Division
	20	Bangladesh Standard & Testing Institute, BSTI
	21	Department of Agricultural Marketing, DAM
	22 -23	FPMU, Ministry of Food
	24	Ministry of Food
TT C **Improved Dietary Diversity, Consumption & Nutrition**	25	FPMU, Ministry of Food
	26	Ministry of Food
	27	Ministry of Primary & Mass Education
	28	Ministry of Women & Children Affairs
	29	Health Services Division, MoHFW
	30	Local Government Division
	31	Ministry of Local Government, Rural Development & Co-operatives Division
	32	Bangladesh National Nutrition Council, BNNC
	33	Department of Public Health Engineering, DPHE
	34	Institute of Public Health & Nutrition, IPHN
	35	INFS, University of Dhaka
	36 - 37	FPMU, Ministry of Food

TT D **Enhanced Access to Social Protection, Safety Nets & Increased Resilience**	38	FPMU, Ministry of Food
	39	Ministry of Food
	40	Cabinet Division
	41	Ministry of Women & Children Affairs, MoWCA
	42	Finance Division, Ministry of Finance
	43	Ministry of Disaster Management & Relief
	44	Ministry of Primary & Mass Education
	45	Ministry of Social Welfare
	46	Local Government Division, MoLGRD&C
	47	General Economic Division
	48	Departments of Food
	49	Bangladesh National Nutrition Council (BNNC)
	50	FPMU, Ministry of Food
TT E **Cross Cutting Issues of Nutrition-Sensitive Food System & Strategies**	51	FPMU, Ministry of Food
	52	GED, Planning Commission
	53	Finance Division, Ministry of Finance
	54	ERD, Ministry of Finance
	55	Ministry of Environment, Forest & Climate Change
	56	Local Government Division, MoLGRD&C
	57	Bangladesh Bureau of Statistics (BBS)
	58	Bangladesh Food Safety Authority (BFSA)
	59	Bangladesh Accreditation Board (BAB)
	60	Institute of Public Health (IPH)
	61	Department of Public Health Engineering
	62 - 64	FPMU, Ministry of Food

Annex 4. Planned budget spending on poverty in billion BDT for ministries involved in FNS

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
MoA	52	53	61	75	105	113	114	119	118	116
MoFL	5	7	7	7	8	9	10	12	14	13
MoEFC	2	10	10	8	6	6	7	7	6	7
MoWR	15	14	16	20	20	28	28	32	45	57
Total agriculture	**73**	**84**	**95**	**110**	**138**	**156**	**159**	**170**	**183**	**193**
LGD	77	91	98	111	111	127	146	158	198	197
RDCD	3	5	7	9	9	12	10	9	14	16
MCHTA	4	6	6	7	7	7	6	7	11	11
Total rural development	**84**	**102**	**110**	**127**	**127**	**146**	**163**	**175**	**223**	**225**
MoSW	11	10	9	9	11	14	16	21	14	17
MoWCA	12	11	11	11	13	13	15	19	23	31
MoFood	52	9	16	12	14	18	18	18	42	42
MoDM	**0**	52	56	56	59	67	68	76	71	84
Total social security and welfare	**75**	**81**	**92**	**89**	**97**	**112**	**116**	**133**	**150**	**175**
MoHFW	57	55	60	59	59	60	56	91	103	112
Total health and nutrition	**57**	**55**	**60**	**59**	**59**	**60**	**56**	**91**	**103**	**67**
Total poverty budget of FNS-related ministries	**290**	**322**	**356**	**385**	**421**	**473**	**494**	**569**	**658**	**659**

Annex 5. CIP2 baseline (revised) budget by programme

As of 30th June 2016, million USD

Pillar	Total CIP			Financed			Pipeline		
	Total	GoB	DP	Total	GoB	DP	Total	GoB	DP
I.1. Sustainable intensification and diversification of crop-based production systems	736.3	249.2	487.0	205.0	162.7	42.2	531.3	86.5	444.8
I.2. Improved access, quality and management of crop agricultural inputs, including water and land	2,411.7	1,209.8	1,201.9	1,133.9	896.1	237.8	1,277.7	313.6	964.1
I.3. Enhanced productivity and sustainable production of animal source foods	828.0	469.6	358.4	296.5	270.1	26.4	531.5	199.5	332.0
II.1. Strengthened post-harvest value chain with particular focus on MSMEs (storage, processing, branding, labelling, marketing and trade)	367.3	159.4	207.9	56.5	39.8	16.7	310.8	119.6	191.2
II.2. Improved access to markets, facilities and information	2,805.5	2,212.2	593.4	2,013.8	1,492.3	521.5	791.7	719.8	71.9
III.1. Enhanced nutrition knowledge, promotion of good practices, and consumption of safe and nutritious diets	134.8	56.2	78.6	32.8	8.0	24.8	102.1	48.3	53.8
III.2. Optimised food utilisation through provision of safe water, improved food hygiene and sanitation	474.7	399.8	75.0	449.0	374.1	74.9	25.7	25.6	0.1
IV.1. Timely and effective disaster preparedness and responses through emergency food distribution, steps towards agricultural sector rehabilitation and mitigation measures	1,872.9	979.6	893.4	1,661.5	851.3	810.2	211.4	128.2	83.2
IV.2. Strengthened cash and food-based programmes for targeted groups across the life cycle including disabled and displaced populations	877.7	435.2	442.4	816.9	393.2	423.6	60.8	42.0	18.8
V.1. Improved food safety, quality control and assurance, awareness on food safety and hygiene	72.3	18.3	54.0	17.7	15.6	2.0	54.7	2.7	52.0
V.3. Improved information and data for evidence-based monitoring and adjustment of policies and programmes	46.1	5.7	40.4	45.3	5.7	39.6	0.8	-	0.8
V.4. Improved FNS governance, capacity strengthening and leadership across FNS relevant stakeholders	98.1	1.5	96.6	80.0	1.5	78.5	18.1	0.0	18.1
Total	**10,726**	**6,196**	**4,529**	**6,809**	**4,511**	**2,298**	**3,917**	**1,686**	**2,231**

Annex 6. Financed projects by sub-programmes and nutrition sensitivity

In lakh BDT

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
I.1.1	BADC	Enhancing the capacity of horticulture division of BADC by improvement of nutritional security with the supply of horticultural product	100%	6,137	4,603	3,325	2,493	Sensitive	
I.1.1	BARC	National Agriculture Technology Program-2nd Phase (NATP-2)	100%	31,877	23,908	11,858	8,894	Sensitive	USAID, IFAD, World Bank
I.1.1	BARI	Citrus Development Project	100%	525	394	478	359	Sensitive	
I.1.1	BARI	Establishment of Agriculture Research Station, BARI, Gopalganj and Eco-friendly Agricultural Development Project in South-Western Part through Strengthening of Research	100%	6,285	4,714	130	98	Sensitive	
I.1.1	BARI	Improving the Research and Research infrastructure of BARI	100%	6,554	4,916	6,172	4,629	Sensitive	
I.1.1	BARI	Mujibnagar Integrated Agricultural Development Project	50%	65	49	31	23	Sensitive	
I.1.1	BARI	Research, Extension and popularisation of vegetables and spices cultivation on floating bed project	100%	2,192	1,644	1,461	1,096	Sensitive	
I.1.1	BARI	Smallholder agricultural competitiveness project (SACP)	50%	243	182	22	16	Sensitive	IFAD
I.1.1	BARI	Strengthening of oilseed research and development	100%	1,894	1,421	1,620	1,215	Sensitive	
I.1.1	BARI	Strengthening of spices crop research in Bangladesh	100%	5,443	4,082	2,155	1,616	Sensitive	
I.1.1	BARI	Strengthening the Research of Gardener Crops and the Spread of Technology in the Fields of Horticulture and Field Crops	100%	5,439	4,079	4,022	3,017	Sensitive	

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
I.1.1	BARI	Upgrading regional horticulture research station, Comilla to regional agriculture research station	100%	1,492	1,119	42	32	Sensitive	
I.1.1	BFRI	Seaweed cultivation and seaweed made commodity production and research	50%	526	395	46	35	Sensitive	
I.1.1	BINA	Strengthening Research Activities and Substations Development of BINA	100%	6,567	4,925	6,531	4,898	Sensitive	
I.1.1	BRRI	Increasing of Research Activities and Physical Facilities of Bangladesh Rice Research Institute	100%	24,085	18,064	16,992	12,744	Sensitive	
I.1.1	BRRI	Integrated Agriculture Productivity Project (IAPP)	100%	15	11	15	11	Sensitive	GAFSP
I.1.1	BRRI	Pirojpur-Gopalganj-Bagerhat Integrated Agriculture Development Project	40%	85	64	80	60	Sensitive	
I.1.1	BSRI	Strengthening of Integrated Research programme of Bangladesh Sugarcane Research Institute	100%	6,834	5,125	4,927	3,695	Sensitive	
I.1.1	CHTDB	Mixed Fruit Cultivation in remote areas of Chittagong Hill Tracts	100%	5,212	3,909	4,161	3,121	Sensitive	
I.1.1	DAE	Capacity Development of Agriculture Training Institutes project (CDATIP)	100%	7,842	5,881	253	190	Sensitive	
I.1.1	DAE	Establishment of Farmers service centre and technology expansion at upazila level	100%	5,077	3,808	3,773	2,830	Sensitive	
I.1.1	DAE	Integrated Farm Management, Agricultural Production and Employment Programme	33%	7,086	5,314	6,600	3,300	Sensitive	DANIDA
I.1.1	DAE	National Agriculture Technology Program-2nd Phase (NATP-2)	70%	29,174	21,881	20,386	15,289	Sensitive	IDA, USAID, IFAD, World Bank
I.1.1	DAE	Second Crops Diversification Project	17%	502	377	449	337	Sensitive	ADB
I.1.1	DAE	Smallholder agricultural competitiveness project (SACP)	33%	2,595	1,946	279	209	Sensitive	IFAD
I.1.1	DAE	Year-Round Fruit Production for Nutrition Improvement Project	100%	22,460	16,845	18,543	13,907	Sensitive	

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
I.1.1	DLS	Integrated livestock development in coastal area	100%	6,359	4,769	101	75	Sensitive	
I.1.1	MOA	National Agriculture Technology Program-2nd Phase (NATP-2) (Project Management Unit)	25%	2,003	1,502	510	382	Sensitive	USAID, IFAD, World Bank
I.1.1	MOFEC	Sustainable Social Forest Development Project in the Greater Rangpur district	50%	927	695	542	406	Sensitive	
I.1.1	NATA	Strengthening the National Agriculture Training Academy	100%	5,136	3,852	2,941	2,206	Sensitive	
I.1.1	RDA	Action research project on extension and dissemination of modern water saving technologies and management practices to increase crop production	100%	3,061	2,296	2,241	1,680	Sensitive	
I.1.1	RDA	Establishment of Rural Development Academy (RDA) at Jamalpur	33%	4,151	3,113	2,388	1,791	Sensitive	
I.1.1	RDCD	Establishment of Rural Development Academy (RDA) at Rangpur	50%	5,024	3,768	3,991	2,993	Sensitive	
I.1.1	SRDI	Urban Agricultural Production Support Project (Pilot)	100%	616	462	244	183	Sensitive	
I.1.2	BWDB	Climate Smart Agriculture Water Management Project (CSAWMP)	60%	123	92	65	49	Sensitive	NA
I.1.2	DAE	Development of agriculture weather system project	100%	9,536	7,152	6,328	4,746	Sensitive	World Bank
I.1.2	DAE	Enhancing crop production through extension of solar energy and modern water saving technologies pilot project	100%	3,944	2,958	1,192	894	Sensitive	
I.1.2	DoForestry	Climate Resilient Ecosystem and Livelihood (CREL)	100%	8,548	6,411	2,024	1,518	Sensitive	USAID
I.1.2	MOA	Integrated Agriculture Productivity Project (IAPP)	80%	3,370	2,528	87	65	Sensitive	World Bank
I.1.2	RDA	Action Research Project on Disseminating Two-storied Agriculture with Solar Power Irrigation Technology and its Multipurpose Use	100%	2,394	1,796	1,157	868	Sensitive	

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
I.1.2	RDA	Establishment of Rural Development Academy (RDA) at Jamalpur	33%	4,150	3,112	2,388	1,791	Sensitive	
I.1.2	RDCD	Establishment of Rural Development Academy (RDA) at Rangpur	50%	5,024	3,768	3,991	2,993	Sensitive	
I.1.2	UGC	Improvement of salt and submergence tolerant rice through genetic engineering approach to ring food security with environmental safety	100%	40	30	40	30	Sensitive	USDA
I.1.3	AIS	Modernization of Agriculture information service and digital agriculture information and communication strengthening project	100%	6,871	5,153	1,496	1,122	Sensitive	
I.1.3	BADC	Project for Renovation, Modernization and Construction of Office Buildings and Other Infrastructures of BADC	100%	7,800	5,850	1,741	1,306	Sensitive	
I.1.3	BADC	Smallholder agricultural competitiveness project (SACP)	50%	5,505	4,129	604	453	Sensitive	IFAD
I.1.3	BADC	Strengthening Sustainable Nutrition Security through the production of pulses and oilseeds	40%	2,794	2,095	2,196	1,647	Sensitive	
I.1.3	BARI	Mujibnagar Integrated Agricultural Development Project	25%	32	24	31	16	Sensitive	
I.1.3	BARI	Pirojpur-Gopalganj-Bagherhat Integrated Agriculture Development Project	100%	300	225	300	225	Sensitive	
I.1.3	BIRTAN	Infrastructure Development and Strengthening of Bangladesh Institute of Research and Training on Applied Nutrition (BIRTAN)	100%	29,755	22,316	20,542	15,407	Sensitive	
I.1.3	BRDB	Expansion, Renovation and Modernization of Bangladesh Poverty Alleviation Training Complex, Kotalipara, Gopalganj	100%	23,974	17,981	16,708	12,531	Sensitive	
I.1.3	BRRI	Pirojpur-Gopalganj-Bagerhat Integrated Agriculture Development Project	40%	85	64	80	60	Sensitive	
I.1.3	DAE	Agricultural production enhancement project in urban areas	100%	620	465	229	172	Sensitive	

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I.1.3	DAE	Agricultural support for farmers in the Southwestern region	100%	4,320	3,240	3,090	2,317	Sensitive	IDB
I.1.3	DAE	Barisal Patuakhali Bhola Jhalokati Barguna Madaripur Shariatpur Agricultural Development Project	100%	4,480	3,360	616	462	Sensitive	
I.1.3	DAE	Citrus Development Project	100%	1,579	1,184	1,305	979	Sensitive	
I.1.3	DAE	Construction of Rubber Dam in Small & medium Rivers in order to Increase Food Productivity	100%	206	155	196	147	Sensitive	
I.1.3	DAE	Development and expansion of bio-rational based integrated pest management technologies of vegetables, fruits and betel leaf	100%	564	423	317	238	Sensitive	
I.1.3	DAE	Ensure Food and Nutrition Security by Integrated Agriculture Development	100%	7,236	5,427	6,552	4,914	Sensitive	
I.1.3	DAE	Establishment of two Agricultural Training Institutes at Bancharampur upazila of Brahmanbaria district and Saturia upazila of Manikganj district	100%	3,559	2,669	3,480	2,610	Sensitive	
I.1.3	DAE	Farmers Training at the upazila Level for Transfer of Technology (3rd Phase) Project	100%	15,697	11,773	7,779	5,834	Sensitive	
I.1.3	DAE	Farmers Training for Transfer of Technology at upazila level (2nd Phase)	100%	1,055	791	-	-	Sensitive	
I.1.3	DAE	Greater Kushtia and Jessore Agriculture Development	100%	1,921	1,441	758	568	Sensitive	
I.1.3	DAE	Increasing Cropping Intensity at Sylhet Region	100%	4,389	3,292	4,328	3,246	Sensitive	
I.1.3	DAE	Integrated Agriculture Productivity Project (IAPP)	100%	291	218	254	191	Sensitive	World Bank
I.1.3	DAE	Integrated Farm Management, Agricultural Production and Employment Programme	33%	7,086	5,314	6,600	4,950	Sensitive	DANIDA

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I.1.3	DAE	Mujibnagar integrated Agriculture Development (DAE)	57%	597	447	215	161	Sensitive	
I.1.3	DAE	National Agriculture Technology Program-2nd Phase (NATP-2)	30%	12,503	9,377	8,737	6,553	Sensitive	IDA, USAID, IFAD, World Bank
I.1.3	DAE	Noakhali Feni, Lakhipur Chittagong Chandpur Agricultural Development Project	100%	2,780	2,085	603	453	Sensitive	
I.1.3	DAE	Pirojpur Gopalganj Bagerhat integrated agricultural development project	100%	1,291	968	721	541	Sensitive	
I.1.3	DAE	Pirojpur Gopalganj Bagerhat integrated agricultural development project (PCU Component)	100%	130	97	61	46	Sensitive	
I.1.3	DAE	Pirojpur Gopalganj Bagerhat Khulna Satkhira Agricultural Development Project	100%	2,538	1,904	618	464	Sensitive	
I.1.3	DAE	Rangpur division agriculture and rural development project	100%	4,533	3,400	179	134	Sensitive	IDB
I.1.3	DAE	Research extension and popularization of vegetables and spices cultivation on floating bed project	100%	1,600	1,200	708	531	Sensitive	
I.1.3	DAE	Safe crop production project through environment friendly strategy	100%	6,891	5,168	564	423	Sensitive	
I.1.3	DAE	Technology Transfer Project (3rd phase) through peasant training at upazila level	100%	15,697	11,773	532	399	Sensitive	
I.1.3	DAE	Transfer of Technology for Agricultural Production under Blue Gold Program	100%	1,100	825	946	709	Sensitive	Netherlands
I.1.3	MOA	Integrated Agriculture Productivity Project (IAPP)	100%	4,213	3,160	-	-	Sensitive	GAFSP
I.1.3	MOA	National Agriculture Technology Program-2nd Phase (NATP-2) (Project Management Unit)	35%	2,804	2,103	364	273	Sensitive	USAID, IFAD, World Bank
I.1.3	MoFL	Livestock Development based dairy and meat production project (LDDMPP)	6%	8,206	6,155	6	5	Sensitive	World Bank

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I.1.3	RDA	Establishment of Rural Development Academy (RDA) at Jamalpur	33%	4,150	3,112	2,388	1,791	Sensitive	
I.2.1	BADC	Development and Modernization of existing seed production, processing and distribution arrangements of BADC	100%	19,782	14,836	19,718	14,788	Sensitive	
I.2.1	BADC	Development, multiplication and quality assessment of agricultural seeds through biotechnology and dissemination of the technology	100%	1,883	1,412	1,882	1,412	Sensitive	
I.2.1	BADC	Enhancing quality seed supply project	100%	3,222	2,417	2,560	1,920	Sensitive	IDB
I.2.1	BADC	Enhancing the Capability of Vegetables Seed Division, BADC by Strengthening Hybrid Vegetables Seed Production, Processing, Preservation and Distribution Activities Project	100%	1,585	1,189	251	188	Sensitive	
I.2.1	BADC	Establishing seed augmentation (multiplication) farm in the South West Coastal region	100%	6,986	5,239	5,250	3,937	Sensitive	
I.2.1	BADC	Establishing Seed Processing Center and Enhancing Seed multiplication farm at Subarnachar in Noakhali	100%	1,328	996	1,327	995	Sensitive	
I.2.1	BADC	Increasing grain plumpness in Sylhet Region	100%	286	214	129	97	Sensitive	
I.2.1	BADC	Maintenance and rehabilitation of existing fertiliser storage and strengthening fertiliser management	100%	9,190	6,892	8,889	6,667	Sensitive	
I.2.1	BADC	Production and Development of High-Quality seed of Rice, Wheat and Maize	100%	24,297	18,222	18,989	14,242	Sensitive	
I.2.1	BADC	Project for Using Fallow Land and Increasing Cropping Intensity of Sylhet Region	100%	395	297	382	287	Sensitive	
I.2.1	BADC	Strengthening Sustainable Nutrition Security through the production of pulses and oilseeds	20%	5,587	4,190	4,392	3,294	Sensitive	

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I.2.1	BADC	Technical feasibility study project for establishment of seed production farm in the Borochar of Meghna river under Matlab north upazila in Chandpur district	100%	285	214	278	208	Sensitive	
I.2.1	BARI	Development and expansion of bio-rational based integrated pest management technologies of vegetables fruits and betel leaf	100%	1,302	976	1,026	770	Sensitive	
I.2.1	BARI	Enhancing Quality Seed Supply	100%	112	84	8	6	Sensitive	IDB
I.2.1	BARI	Improvement and quality seed production of rice, wheat and maize (2nd phase)	100%	1,833	1,375	1,420	1,065	Sensitive	
I.2.1	BCIC	Construction of 13 (thirteen) no. of New Buffer Godowns at different districts for facilitating fertiliser Distribution	100%	60,216	45,162	12,414	9,310	Sensitive	
I.2.1	BCIC	Construction of 34# buffer godown in the country for effective preservation and distribution of fertiliser	100%	128,303	96,227	73	55	Sensitive	
I.2.1	BCIC	Ghorashal Polash Urea fertiliser project	100%	488,278	366,208	1,650	1,238	Sensitive	Japan
I.2.1	BCIC	Shahjalal fertiliser project	100%	22,564	16,923	20,583	15,437	Sensitive	China
I.2.1	BMDA	Farmer training programs, supply and production of standard seed for crop production	100%	717	538	668	501	Sensitive	
I.2.1	BRRI	Enhancing Quality Seed Supply (BRRI)	100%	382	287	361	271	Sensitive	IDB
I.2.1	CHTDB	Chittagong Hill Tracts Rural Development Project (2nd Phase) PMU Component	100%	21,139	15,854	18,938	14,204	Sensitive	ADB
I.2.1	DAE	Enhancement of Crops Production through Farm Mechanization (Phase-2)	100%	24,247	18,185	24,082	18,061	Sensitive	
I.2.1	DAE	Mujibnagar integrated Agriculture Development (DAE)	43%	450	337	162	122	Sensitive	
I.2.1	DAE	Production, preservation and distribution of Lentil, Oil and Spices seed at Farmer's level	100%	9,919	7,439	5,761	4,321	Sensitive	

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I.2.1	DAE	Production, preservation, Distribution of Quality Seeds of Pulse, Oil, and Onion at Farmers Level (Phase-2)	100%	2,963	2,222	2,912	2,184	Sensitive	
I.2.1	DAE	Production, Storage and Distribution of Quality seeds of Rice, Wheat and Jute at Farmers Level (Phase-2)	100%	6,903	5,177	6,807	5,105	Sensitive	
I.2.1	DAE	Second Crops Diversification Project	75%	2,215	1,662	1,983	1,487	Sensitive	ADB
I.2.1	LGED	Rural infrastructure development project: Greater Dhaka, Tangail and Kishoreganj District	100%	30,222	22,666	27,163	20,372	Sensitive	
I.2.1	MoI	Fortification of edible oil	100%	2,276	1,707	2,276	1,707	Sensitive	
I.2.1	MoI	Fortification of edible oil (phase 3)	100%	968	726	233	175	Sensitive	
I.2.1	PDBF	Eradicating poverty by Supporting Small and marginal farmers in after crop harvesting period	50%	2,440	1,830	1,445	1,084	Sensitive	
I.2.1	SCA	Integrated Agriculture Productivity Project (IAPP)	100%	491	369	-	-	Sensitive	World Bank
I.2.1	SCA	Strengthening seed certifying program	100%	3,138	2,353	49	36	Sensitive	
I.2.1	SFDF	Small Farmers Development Foundation Assistance project (2nd Phase)	50%	4,348	3,261	1,405	1,054	Sensitive	
I.2.2	MOFEC	Eco restoration of the Northern region of Bangladesh	33%	750	563	732	549	Sensitive	
I.2.2	MOFEC	Establishing National Land Use and Land Degradation Profile toward Mainstreaming Sustainable Land Management Practices in Sector Policies	100%	570	427	159	119	Sensitive	GEF
I.2.2	MOFEC	Integrating Community Change Adaptation into Afforestation and Reforestation Program	50%	2,260	1,695	1,323	661	Sensitive	UNDP, GEF
I.2.2	MOFEC	Strengthening National Forestry Inventory and Satellite Land Monitoring System in Support of REDD in Bangladesh	100%	8,438	6,328	4,606	3,455	Sensitive	

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I.2.2	MOFEC	Support to the DPP Preparation of Sustainable Forests and Livelihoods (SUFAL)	50%	404	303	238	178	Sensitive	IDA
I.2.2	PMO	Ashrayan Project-2	25%	96,998	72,749	6,466	4,850	Sensitive	
I.2.2	SRDI	Gopalganj-Khulna-Bagerhat-Satkhira-Pirojpur agriculture Development	25%	578	433	51	26	Supportive	
I.2.2	SRDI	Integrated Agricultural Development project in Pirojpur, Gopalganj, Bagerhat (IADP-PGB)	50%	143	107	141	70	Supportive	
I.2.2	SRDI	Strengthening of soil research and research facilities	100%	3,151	2,363	1,540	1,155	Sensitive	
I.2.3	BADC	Activating Inoperable Deep Tube wells for Irrigation	100%	12,123	9,092	-	-	Sensitive	
I.2.3	BADC	Ashuganj Palash Agro-Irrigation (5th stage)	100%	2,102	1,576	1,732	1,299	Sensitive	
I.2.3	BADC	Barisal Division Minor Irrigation Development Project	100%	9,645	7,234	8,115	6,086	Sensitive	
I.2.3	BADC	Construction of Rubber Dams in Small & medium River for Increasing Food Production	100%	452	339	406	304	Sensitive	
I.2.3	BADC	Construction of rubber dams to increase the use of water for agriculture production on Earth Surface	100%	16,910	12,683	8,690	6,517	Sensitive	
I.2.3	BADC	Digitalization of surveys and monitoring for development of minor irrigation (Phase IV)	100%	3,646	2,735	2,443	1,832	Sensitive	
I.2.3	BADC	Eastern Integrated Irrigated Area Development Project	100%	1,949	1,462	1,801	1,351	Sensitive	
I.2.3	BADC	Expansion of irrigation through utilisation of surface water by double lifting (3rd phase)	100%	11,940	8,955	10,179	7,634	Sensitive	
I.2.3	BADC	Integrated Agriculture Productivity Project (Seed and water management component)	100%	267	200	151	113	Sensitive	World Bank
I.2.3	BADC	Irrigation area development project in greater Dhaka region	100%	5,626	4,219	668	501	Sensitive	

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I.2.3	BADC	Minor Irrigation Development Project by using Solar Energy	100%	3,045	2,284	705	529	Sensitive	
I.2.3	BADC	Mujibnagar Integrated Agricultural Development Project	100%	4,743	3,557	2,590	1,943	Sensitive	
I.2.3	BADC	Mymensingh division and Tangail and Kishoreganj district minor irrigation development project	100%	7,721	5,790	4,539	3,405	Sensitive	
I.2.3	BADC	Pabna-Natore- Sirajganj Irrigation Area Development Project (3rd Phase)	100%	3,239	2,429	3,089	2,317	Sensitive	
I.2.3	BADC	Pilot project of surface water-based irrigation expansion model at Shaniajan union of Hatiabandha upazila under Lalmonirhat district	100%	2,586	1,939	1,304	978	Sensitive	
I.2.3	BADC	Pirojpur-Gopalganj-Bagerhat Integrated Agricultural Development Project	100%	6,444	4,833	4,455	3,341	Sensitive	
I.2.3	BADC	Project for development of minor irrigation and increase irrigation efficiency through conservation of surface water in Rangpur area	100%	7,819	5,864	4,108	3,081	Sensitive	
I.2.3	BADC	Project for irrigation expansion in poverty prone areas under Greater Rangpur district through modern minor irrigation practices	100%	997	748	993	745	Sensitive	
I.2.3	BADC	Small irrigation development project in greater Bogra and Dinajpur regions	100%	6,596	4,947	4,355	3,266	Sensitive	
I.2.3	BADC	Small irrigation development project in greater Khulna and Jessore regions	100%	9,312	6,984	5,647	4,235	Sensitive	
I.2.3	BADC	Smallholder agricultural competitiveness project (SACP)	50%	5,505	4,129	604	453	Sensitive	IFAD
I.2.3	BADC	Strengthening Sustainable Nutrition Security through the production of pulses and oilseeds	40%	5,587	4,190	4,392	3,294	Sensitive	
I.2.3	BADC	Sylhet Division Minor Irrigation Development Project	100%	10,174	7,631	10,145	7,609	Sensitive	
I.2.3	BARI	Smallholder agricultural competitiveness project (SACP)	50%	243	182	22	16	Sensitive	IFAD

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I.2.3	BMDA	Barind Rainwater Conservation and Irrigation Project (Phase II)	100%	6,203	4,652	6,199	4,649	Sensitive	
I.2.3	BMDA	Deep Tube well Installation Project phase II	100%	4,144	3,108	4,141	3,105	Sensitive	
I.2.3	BMDA	Digging shallow well in Barind area to produce crop with less irrigation	100%	4,744	3,558	1,646	1,235	Sensitive	
I.2.3	BMDA	Enhancement of Irrigation Efficiency Through Construction of Sub-surface Irrigation Channel	100%	12,237	9,178	12,132	9,099	Sensitive	
I.2.3	BMDA	Excavation of Dug Well in Barind Area for Cultivation of Crops by Soft Irrigation	70%	3,646	2,734	1,964	1,473	Sensitive	
I.2.3	BMDA	Expansion of Irrigation Facility by Increasing Availability of surface water and removing water logging in Naogaon district	100%	6,813	5,109	6,795	5,096	Sensitive	
I.2.3	BMDA	Extension of Irrigation in Barind Area through Conservation of Water in Canal	100%	8,214	6,161	8,214	6,160	Sensitive	
I.2.3	BMDA	Irrigation extension programme in Bagha, Charghat and Poba of Rajshahi district by decreasing Waterlogging and increasing surface water availability	100%	1,988	1,491	425	319	Sensitive	
I.2.3	BMDA	Panchagarh,Thakurgaon, Dinajpur and Joypurhat Integrated Agricultural Development Project	100%	4,565	3,424	4,556	3,417	Sensitive	
I.2.3	BMDA	Rehabilitation of old deep tube wells in Rajshahi, Naogaon and Chapainawabganj district	100%	2,792	2,094	2,689	2,017	Sensitive	
I.2.3	BRDB	Irrigation expansion programme	100%	549	412	406	304	Sensitive	
I.2.3	BRRI	Mujibnagar Integrated Agricultural Development Project	100%	135	101	134	100	Sensitive	
I.2.3	BWDB	Blue Gold Programme	100%	48,209	36,157	26,444	19,833	Sensitive	Netherlands
I.2.3	BWDB	Buriganga River Restoration Project (New Dhaleswari-Pungli-Bongshai-Turag-Buriganga river system)	67%	65,638	49,229	16,513	12,385	Sensitive	

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I.2.3	BWDB	Capital (pilot) Dredging of River Systems	100%	11,383	8,537	8,509	6,382	Sensitive	
I.2.3	BWDB	Char Development and Settlement Programme 4	100%	14,232	10,674	11,838	8,878	Sensitive	IFAD, Netherlands
I.2.3	BWDB	Climate Smart Agriculture Water Management Project (CSAWMP)	22%	335	251	53	27	Sensitive	NA
I.2.3	BWDB	Development of irrigation and re-excavation of Curzon canals and adjacent branches of Comilla district	100%	1,466	1,100	802	602	Sensitive	
I.2.3	BWDB	Feasibility study for re-excavation of small and medium *khal* and *beels* in the country	100%	498	374	277	208	Sensitive	
I.2.3	BWDB	Gazner Bill Link River Excavation, Development of Irrigation Facilities and fish cultivation project at Sujanagar upazila in Pabna district	100%	28,940	21,705	26,057	19,543	Sensitive	
I.2.3	BWDB	Gorai River Restoration Project	100%	9,275	6,956	8,097	6,072	Sensitive	
I.2.3	BWDB	Haor Infrastructure and livelihood improvement project	45%	31,780	23,835	4,504	3,378	Sensitive	IDA
I.2.3	BWDB	Irrigation Management Improvement Project (For Muhuri Irrigation Project (IMIP)	100%	43,065	32,299	11,797	8,848	Sensitive	ADB
I.2.3	BWDB	Kalni-Kushiara River Management	100%	33,975	25,481	27,492	20,619	Sensitive	
I.2.3	BWDB	Maliara-Bakkhain-Vandergaon Flood Control, drainage & Irrigation Project (2nd Phase) in upazila: Patiya, district: Chittagong	100%	2,253	1,690	2,046	1,534	Sensitive	
I.2.3	BWDB	Pre-monsoon Flood Protection and Drainage Improvement in Haor Areas	25%	11,531	8,649	7,959	5,969	Sensitive	
I.2.3	BWDB	Procurement of dredgers and relevant machine tools for dredging rivers	100%	72,207	54,155	14,082	10,561	Sensitive	
I.2.3	BWDB	Re-excavation of Bemelia, Lagan Balbhadra river under Nasirnagar upazila in Brahmanbaria and Habiganj district	100%	1,779	1,335	1,300	975	Sensitive	

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I.2.3	BWDB	Re-excavation of Canal for Irrigation in Costal Polders under Barguna district	100%	4,247	3,185	700	525	Sensitive	
I.2.3	BWDB	Re-excavation of Titas River (Upper) under Brahmanbaria district	100%	15,547	11,660	5,494	4,120	Sensitive	
I.2.3	BWDB	Riverbank protection work on both Bank of Sangu & Chandkhali River in Chandanaish and Satkania upazila of Chittagong district	100%	14,256	10,692	13,175	9,881	Sensitive	
I.2.3	BWDB	Small river, canal and water body re-excavation project in 64 districts (1st phase)	100%	174,996	131,247	19,999	14,999	Sensitive	
I.2.3	BWDB	Southwest Area Integrated Water Resources Planning and Management (Phase-2)	100%	34,290	25,718	13,743	10,308	Sensitive	ADB
I.2.3	BWDB	Tarail Pachuria Flood control, Drainage and Irrigation Project	50%	6,913	5,185	6,243	4,682	Sensitive	
I.2.3	BWDB	Teesta Barrage Project,2nd Phase	100%	13,102	9,826	7,788	5,841	Sensitive	
I.2.3	BWDB	Water Management Improvement Project (special revised)	100%	4,816	3,612	84	63	Sensitive	IDA
I.2.3	DAE	Enhancement of Crop Production Through Improved On-farm Water Management Technologies	100%	5,509	4,132	3,558	2,669	Sensitive	
I.2.3	DAE	Smallholder agricultural competitiveness project (SACP)	33%	2,595	1,946	279	139	Sensitive	IFAD
I.2.3	DAM	Smallholder agricultural competitiveness project (SACP)	50%	3,370	2,528	134	101	Sensitive	IFAD
I.2.3	DPHE	Re-excavation / renovation of pond / dighies / water bodies of the district council for water conservation and supply of safe water	50%	18,725	14,044	4,239	3,179	Sensitive	
I.2.3	LGED	Small-scale water resources development project	100%	56,553	42,415	507	380	Sensitive	JICA
I.2.3	LGED	Agricultural support for farmers in the Southwestern region	100%	6,511	4,883	5,496	4,122	Sensitive	IDB

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I.2.3	LGED	Bangladesh Agriculture Infrastructure Development Project.	25%	2,959	2,220	2,145	1,608	Sensitive	USAID
I.2.3	LGED	Capacity development project for participatory water resources management through integrated rural development	100%	2,028	1,521	1,688	1,266	Sensitive	JICA
I.2.3	LGED	Comprehensive small-scale water resources development project	100%	34,891	26,168	7,854	5,890	Sensitive	
I.2.3	LGED	Construction of Rubber Dams in Small & Medium Rivers for increasing Food Production	100%	3,536	2,652	1,607	1,205	Sensitive	
I.2.3	LGED	Participatory Small-Scale Water Resources Sector Project (3rd phase)	100%	31,034	23,275	27,281	20,461	Sensitive	ADB, IFAD
I.2.3	RPAF	Extension of Programme of Rural Poverty Alleviation Foundation (PDBF) for Creation of Poverty Alleviation & Self Employment	100%	3,174	2,381	1,301	976	Sensitive	
I.2.4	BWDB	Rehabilitation of BWDB infrastructure Damaged by Natural Disaster in the Coastal Area of Polder No 64/1A, 64/1B & 64/1C at Banskhali upazila in Chittagong district	100%	29,261	14,630	24,358	12,179	Supportive	
I.2.4	BWDB	Rehabilitation of Damaged Polders under Cox's Bazar district	100%	35,720	17,860	18,674	9,337	Supportive	
I.2.4	SRDI	Gopalganj-Khulna-Bagerhat-Satkhira-Pirojpur agriculture Development	75%	193	96	154	116	Sensitive	
I.2.4	SRDI	Integrated Agricultural Development project in Pirojpur, Gopalganj, Bagerhat (IADP-PGB)	50%	143	72	141	106	Sensitive	
I.3.1	BFRI	Hilsha research enhancement in Chandpur river centre	100%	2,608	1,956	1,387	1,040	Sensitive	
I.3.1	BLRI	Dairy development and research	100%	2,327	1,745	1,445	1,084	Sensitive	
I.3.1	BRRI	Hybrid rice research capacity strengthening project	100%	3,174	2,380	3,174	2,380	Sensitive	China
I.3.1	BWDB	Haor Infrastructure and livelihood improvement project	11%	7,594	5,695	18,849	14,137	Sensitive	IDA

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				Total	Nutrition weighted	Total	Nutrition weighted		
I.3.1	DLS	Beef Cattle Development Project	100%	1,545	1,159	1,392	1,044	Sensitive	
I.3.1	DLS	Beef fattening using modern technology project	33%	939	704	2	2	Sensitive	
I.3.1	DLS	Establishment of Livestock production and quality control research	100%	6,613	4,960	1,137	853	Sensitive	
I.3.1	DLS	Establishment of Regional duck breading farm along with hatchery (3rd phase)	100%	10,799	8,099	7,776	5,832	Sensitive	
I.3.1	DLS	Establishment of upazila Livestock Development Centre (3rd Phase)	100%	7,237	5,428	5,705	4,278	Sensitive	
I.3.1	DLS	Livelihood Development-Based Milk Revolution and Meat Production Project	100%	957	718	840	630	Sensitive	IDA, World Bank
I.3.1	DLS	National Agriculture Technology Program-2nd Phase (NATP-2)	80%	29,164	21,873	13,360	10,020	Sensitive	USADI, IFAD, World Bank
I.3.1	DoFish	Establishment of fisheries diploma institute in Gopalganj, Kishoreganj	33%	1,514	1,136	1,133	850	Sensitive	
I.3.1	DoFish	Expansion of Fisheries Technology Services up to Union Level (Phase II)	100%	22,358	16,769	17,435	13,076	Sensitive	
I.3.1	DoFish	Fisheries development in greater Jessore project	100%	3,916	2,937	2,967	2,225	Sensitive	
I.3.1	DoFish	Fisheries development in Rangpur division project	100%	5,037	3,777	4,775	3,581	Sensitive	
I.3.1	DoFish	Fisheries development of greater Comilla district	100%	16,683	12,512	6,634	4,975	Sensitive	
I.3.1	DoFish	Fisheries registration and issuing of identity card project	100%	766	575	474	356	Sensitive	
I.3.1	DoFish	Fresh Water Prawn Culture Extension Project (2nd Phase)	100%	2,739	2,054	2,634	1,976	Sensitive	
I.3.1	DoFish	National Agriculture Technology Program-2nd Phase (NATP-2)	55%	16,903	12,677	2,983	2,237	Sensitive	USADI, IFAD, World Bank
I.3.1	DoFish	Neemgasi community-based aquaculture project	100%	2,255	1,691	1,995	1,496	Sensitive	

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I.3.1	DoFish	Water reformation for Increasing fish production	100%	28,831	21,623	17,811	13,358	Sensitive	
I.3.1	LGED	Haor Flood Management and Livelihood Improvement project	11%	6,374	4,781	25,412	12,706	Sensitive	JICA
I.3.1	LGED	Haor Infrastructure & Livelihood Improvement project.	11%	4,997	3,748	691	518	Sensitive	IFAD
I.3.1	Milk Vita	Establishment of Buffalo Breading Station for Enhancing Milk Production	100%	619	464	388	291	Sensitive	
I.3.1	Milk Vita	Project for establishment of cattle development in Dakshin and Parsh Suri areas in multiplied Faridpur district	100%	17,191	12,893	5,382	4,037	Sensitive	
I.3.1	MOA	National Agriculture Technology Program-2nd Phase (NATP-2) (Project Management Unit)	15%	1,202	901	364	182	Sensitive	USAID, IFAD, World Bank
I.3.1	MoFL	Integrated fisheries and livestock development project in flood control and command area (drainage and irrigation project area) and other water bodies (4th phase)	100%	2,763	2,072	1,942	1,456	Sensitive	
I.3.2	BLRI	Buffalo Development Project	100%	335	251	334	251	Sensitive	
I.3.2	BLRI	Conservation and improvement of native sheep through community farming and commercial farming project (component A) (2nd phase)	100%	1,292	969	1,262	947	Sensitive	
I.3.2	BLRI	Red cattle development and conservation (2nd phase)	100%	2,149	1,611	1,270	952	Sensitive	
I.3.2	BLRI	Scavenging (Deshi) Poultry Conservation and Development Project	100%	410	308	387	291	Sensitive	
I.3.2	DLS	Artificial Insemination (AI) Activities Extension and Embryo transfer (ET) technology Implementation Project (3rd Phase)	100%	23,510	17,633	17,598	13,199	Sensitive	
I.3.2	DLS	Beef fattening using modern technology project	33%	939	704	2	2	Sensitive	

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I.3.2	DLS	Black Bengal goat development and extension	50%	1,293	970	148	111	Sensitive	
I.3.2	DLS	Breed Upgradation Through Progeny Test Project phase III	100%	3,289	2,467	2,466	1,850	Sensitive	
I.3.2	DLS	Buffalo Development Project	100%	1,456	1,092	1,368	1,026	Sensitive	
I.3.2	DLS	Buffalo Development Project (2nd Phase)	100%	5,702	4,276	2,804	2,103	Sensitive	
I.3.2	DLS	Conservation & Improvement of Native Sheep Through Community Farming & Commercial Farming Project (component B) - 2nd Phase	100%	1,236	927	1,187	890	Sensitive	
I.3.2	DLS	Establishment of Institute of Livestock science and technology	100%	21,866	16,400	13,231	9,923	Sensitive	
I.3.2	DoFish	Aquaculture development and fisheries extension project in CHT (3rd phase)	100%	1,817	1,363	1,791	1,343	Sensitive	
I.3.2	DoFish	Brood Bank Establishment project (3rd phase)	100%	3,821	2,866	3,125	2,344	Sensitive	
I.3.2	DoFish	Establishment of *beel* nursery and fingerling stocking in inland open waters	100%	6,358	4,769	2,800	2,100	Sensitive	
I.3.2	DoFish	Establishment of fisheries diploma institute in Gopalganj, Kishoreganj	33%	1,514	1,136	1,133	850	Sensitive	
I.3.2	DoFish	Rehabilitation and development of fisheries infrastructure to increase production of quality fish seed and fingerlings	100%	4,073	3,055	3,666	2,749	Sensitive	
I.3.2	MOFEC	Expending the Protected Area System to Incorporate Important Aquatic Ecosystem	25%	642	482	208	156	Sensitive	UNDP, GEF
I.3.3	BFDC	Construction of Multi-channel Slipway project	100%	1,695	1,271	1,679	1,259	Sensitive	
I.3.3	BFRI	Strengthening Marine fisheries research and infrastructure development	100%	3,699	2,774	911	684	Sensitive	
I.3.3	DoFish	Enhanced Coastal Fisheries (Ecofish)	100%	7,931	5,948	6,281	4,711	Sensitive	USAID
I.3.3	DoFish	Establishment of fisheries diploma institute in Gopalganj, Kishoreganj	33%	1,514	1,136	1,133	850	Sensitive	

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I.3.3	DoFish	Marine fisheries capacity building project	100%	7,567	5,675	4,777	3,583	Sensitive	IDB
I.3.3	DoFish	National Agriculture Technology Program-2nd Phase (NATP-2)	18%	5,378	4,034	9,374	7,031	Sensitive	USADI, IFAD, World Bank
I.3.3	DoFish	Sustainable Coastal and marine fisheries in Bangladesh	100%	74,816	56,112	1,060	795	Sensitive	World Bank
I.3.3	DOFISH	Sustainable Coastal and Marine Fisheries Project in Bangladesh: (SCMFP) Preparation Facility	100%	939	704	266	199	Sensitive	World Bank
I.3.3	DoFish	Technical Support Stock Assessment of Marine Fisheries Resources	100%	311	234	311	234	Sensitive	FAO
I.3.3	MOFEC	Expending the Protected Area System to Incorporate Important Aquatic Ecosystem	50%	321	241	208	156	Sensitive	UNDP, GEF
I.3.4	BLRI	Combating the threats of antimicrobial resistance and zoonotic disease to achieve the GHSA	100%	810	608	257	193	Sensitive	
I.3.4	BLRI	Fodder research and development project	100%	2,388	1,791	2,377	1,783	Sensitive	
I.3.4	BLRI	Foot and mouth disease and PPR research	100%	488	366	428	321	Sensitive	
I.3.4	DLS	Animal Nutrition Development and Technology Transfer Project (2nd phase)	100%	1,950	1,463	1,329	997	Sensitive	
I.3.4	DLS	Beef fattening using modern technology project	33%	939	704	2	2	Sensitive	
I.3.4	DLS	Black Bengal goat development and extension	50%	1,293	970	148	111	Sensitive	
I.3.4	DLS	Establishment of Jhenaidah veterinary college (2nd phase)	100%	1,699	1,274	1,697	1,273	Sensitive	
I.3.4	DLS	Establishment of national institute of livestock and poultry management and disease diagnostic laboratory	100%	3,334	2,501	3,143	2,357	Sensitive	
I.3.4	DLS	Establishment of Quality Control Laboratory for Livestock inputs and its Food Products (EQCLIFP)	100%	9,379	7,034	4,112	3,084	Sensitive	

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I.3.4	DLS	Establishment of Sirajganj Govt. Veterinary college	100%	4,045	3,034	3,981	2,986	Sensitive	
I.3.4	DLS	Food security and public health development through regulation of Veterinary Services and new regressive infectious diseases	100%	10,416	7,812	6,478	4,859	Sensitive	USAID
I.3.4	DLS	Integrated Agriculture Productivity Project (IAPP)	100%	177	133	0	0	Sensitive	
I.3.4	DLS	Livestock Disease Prevention and Control Project	100%	3,067	2,300	2,949	2,212	Sensitive	
I.3.4	DLS	Modernization of Vaccine Production Technology & Extension of Laboratory Facilities Project	100%	4,413	3,310	4,349	3,261	Sensitive	
I.3.4	DLS	Preventing Anthrax and Rabies by Enhancing Surveillance and Response	100%	751	563	37	28	Sensitive	USAID
I.3.4	DLS	South East Region Livestock Development Project	100%	5,824	4,368	5,494	4,121	Sensitive	
I.3.4	DoFish	Livestock Disease Prevention and Control Project	100%	3,042	2,281	-	-	Sensitive	
I.3.4	DoFish	National Agriculture Technology Program-2nd Phase (NATP-2)	18%	5,378	4,034	2,983	2,237	Sensitive	USAID, IFAD, World Bank
I.3.4	MoFL	e-service delivery in fish and livestock	100%	674	506	115	86	Sensitive	
I.3.4	MoFL	Livestock Development based dairy and meat production project (LDDMPP)	6%	35,646	26,735	6	5	Supportive	World Bank
I.3.4	UGC	Molecular characterisation and identification of important genetic and infectious diseases of livestock poultry	100%	38	28	-	-	Sensitive	USDA
I.3.4	UGC	Molecular Epidemiology of Mycobacterium bovis Induction in Animals and Man	100%	10	8	11	8	Sensitive	USDA
II.1.1	BB	Second Small and Medium Sized Enterprise Development Project (SMEDP-2)	100%	1,671	836	214	107	Supportive	ADB

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II.1.1	BSCIC	Control of Iodine deficiency disorder through universal application of salt iodisation (3rd phase) (2nd revised)	100%	1,338	669	1,255	627	Supportive	UNICEF
II.1.1	BSCIC	Honey Cultivation Development through the Application of Modern Technology	100%	509	254	473	237	Supportive	
II.1.1	DAE	Second Crops Diversification Project	8%	236	118	212	106	Supportive	ADB
II.1.1	MoCommerce	Agribusiness for Trade Competitiveness Project (ATCP)	100%	5,702	2,851	5,064	2,532	Supportive	DFID, DANIDA, SDC
II.1.2	BFDC	Establishment of fish landing centers with ancillary facilities in 3 coastal districts at 4 selected areas	100%	5,255	2,627	2,969	1,485	Supportive	
II.1.2	DAE	Safe gardener crop production and post-harvest management project	100%	945	473	794	397	Supportive	
II.1.2	DAM	Mujibnagar Integrated Agricultural Development Project	50%	55	27	55	27	Supportive	
II.1.2	Milk Vita	Establishment of Milk Plant for Enhancing Milk Production at Patiya, Chottogram	100%	4,794	2,397	2,209	1,105	Supportive	
II.1.2	Milk Vita	Establishment of Super Instant Milk Plant at Baghabarighat, Sirajganj	100%	10,520	5,260	7,773	3,887	Supportive	
II.1.2	MoFL	Livestock Development based dairy and meat production project (LDDMPP)	17%	32,697	16,348	6	5	Supportive	World Bank
II.1.3	BRDB	Rural livelihood project (RLP) 2nd phase	100%	36,762	18,381	11,972	5,986	Supportive	
II.1.3	DAE	Integrated Farm Management, Agricultural Production and Employment Programme	33%	7,086	3,543	6,600	4,950	Supportive	DANIDA
II.1.3	DAE	Smallholder agricultural competitiveness project (SACP)	33%	2,595	1,298	279	209	Supportive	IFAD
II.1.3	DAM	Fellow land utilisation and crop intensification project in Sylhet region	100%	1,290	645	1,287	643	Supportive	
II.1.3	DAM	Increasing grain plumpness in Sylhet Region	100%	1,290	645	1,287	643	Supportive	

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II.1.3	DAM	Mujibnagar Integrated Agricultural Development Project	50%	55	27	55	27	Supportive	
II.1.3	DAM	Pirojpur Gopalganj Bagerhat integrated agricultural development project	100%	402	201	280	140	Supportive	
II.1.3	DAM	Smallholder agricultural competitiveness project (SACP)	50%	3,370	1,685	134	67	Supportive	IFAD
II.1.3	DLS	National Agriculture Technology Program-2nd Phase (NATP-2)	20%	7,291	3,646	3,340	1,670	Supportive	USAID, IFAD, World Bank
II.1.3	DOC	Extension of dairy cooperative in Gangasora upazila to create employment, milk and meat production	100%	2,389	1,195	1,016	508	Supportive	
II.1.3	DOC	Poverty reduction and socio-economic development of Greater Faridpur, Barisal & Khulna districts through Expansion of Milk Co-operative Society Programmes	100%	687	344	615	308	Supportive	
II.1.3	DoFish	National Agriculture Technology Program-2nd Phase (NATP-2)	10%	3,073	1,537	1,704	852	Supportive	USAID, IFAD, World Bank
II.1.3	MOA	National Agriculture Technology Program-2nd Phase (NATP-2) (Project Management Unit)	25%	2,003	1,001	219	164	Supportive	USAID, IFAD, World Bank
II.1.3	MoFL	Livestock Development based dairy and meat production project (LDDMPP)	5%	8,206	4,103	16	16	Sensitive	World Bank
II.1.3	RDA	Making Markets work for the Jamuna, Padma and Testa Chars (M4C)	100%	3,206	1,603	2,749	1,375	Supportive	SDC
II.2.1	BARI	Mujibnagar Integrated Agricultural Development Project	25%	32	16	63	47	Supportive	
II.2.1	BFDC	Establishment of fish landing centres in *haor* and *baor* area	100%	5,948	2,974	3,513	1,757	Supportive	
II.2.1	BMDA	Marketing of Agricultural Products through Development of Rural Communication Project	100%	7,097	3,549	7,085	3,543	Supportive	
II.2.1	BWDB	Pre-monsoon Flood Protection and Drainage Improvement in Haor Areas	25%	11,531	5,766	15,917	7,959	Supportive	

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II.2.1	CHTDB	Construction of connecting roads in remote areas from the upazila headquarters of Khagrachari district for socio economic development of the disadvantaged population of CHT	100%	3,250	1,625	3,250	1,625	Supportive	JICA
II.2.1	CHTDB	Rural Infrastructure development of Bandhban Hill district	100%	3,981	1,990	3,362	1,681	Supportive	
II.2.1	DAM	Strengthening Flower Marketing System Through Market Infrastructure, Conservation, and Transportation Facilities	100%	3,175	1,588	26	13	Supportive	
II.2.1	DDM	Construction of 15-meter bridge and culvert in rural roads	100%	365,367	182,683	13	6	Supportive	
II.2.1	DDM	Construction of bridge/culvert (up to 12 m long) on the rural roads at Chittagong Hill Tracts region (2nd phase)	100%	2,627	1,313	1,664	832	Supportive	
II.2.1	DDM	Construction of Bridge/Culverts more or less 15-meter-long on Rural Roads	100%	311,678	155,839	303,078	151,539	Supportive	
II.2.1	LGED	Bangladesh Agriculture Infrastructure Development Project.	75%	8,878	4,439	6,434	3,217	Supportive	USAID
II.2.1	LGED	Barisal Division Infrastructure Development Project	100%	70,633	35,316	33,413	16,707	Supportive	
II.2.1	LGED	Begumganj upazila rural infrastructure development project under Noakhali	100%	4,828	2,414	100	50	Supportive	
II.2.1	LGED	Char Development & Settlement-4	88%	5,967	2,984	5,067	2,534	Supportive	IFAD, Netherlands
II.2.1	LGED	Chittagong Hill Tracts Rural Development Project (2nd Phase)	100%	18,066	9,033	13,556	6,778	Supportive	ADB
II.2.1	LGED	Climate Change Adaptation Pilot Project.	50%	2,686	1,343	2,683	1,341	Supportive	DANIDA
II.2.1	LGED	Climate resilience Rural Infrastructure development	100%	29,266	14,633	12,346	6,173	Supportive	DANIDA
II.2.1	LGED	Coastal Climate Resilient Infrastructure Improvement Project	100%	90,614	45,307	72,916	36,458	Supportive	IFAD, ADB, KfW

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II.2.1	LGED	Construction of Prime Minister's committed road and bridges in Haor area of Sunamganj and Brahmanbaria district	100%	1,338	669	1,254	627	Supportive	
II.2.1	LGED	Construction of two bridges on the river Brahmaputra under Islampur upazila of Jamalpur district	100%	3,022	1,511	2,966	1,483	Supportive	
II.2.1	LGED	Countrywide Rural Market Infrastructure Development Project	100%	173,000	86,500	1,252	626	Supportive	
II.2.1	LGED	Development of important rural infrastructure of Kishoreganj district	100%	34,793	17,397	28,993	14,497	Supportive	
II.2.1	LGED	Development of Important Rural Infrastructure Project (DIRIP)	100%	32,317	16,158	18,164	9,082	Supportive	
II.2.1	LGED	Development of rural roads at Galachipa and Dashmina upazila in the district of Patuakhali	100%	2,334	1,167	2,287	1,144	Supportive	
II.2.1	LGED	Development of rural roads in Dohar and Nawabganj upazilas of Dhaka district	100%	2,123	1,062	1,855	927	Supportive	
II.2.1	LGED	Development of rural roads in Patnitala and Dhamirhat upazila of Naogaon district	100%	2,655	1,328	2,195	1,098	Supportive	
II.2.1	LGED	Development of Sylhet division rural access roads	100%	23,923	11,961	3,653	1,826	Supportive	IDB
II.2.1	LGED	Development of Sylhet Division Rural Infrastructure	100%	12,225	6,113	10,961	5,481	Supportive	
II.2.1	LGED	Development of the Rural Road of Sadar upazila of Kushtia	100%	2,391	1,195	2,268	1,134	Supportive	
II.2.1	LGED	Disaster damaged and other important rural infrastructure development project in 3 CHT area	80%	23,991	11,995	24	18	Supportive	
II.2.1	LGED	Faridpur district's important rural infrastructure development	100%	88,492	44,246	33,988	16,994	Supportive	
II.2.1	LGED	Flood and Disaster Damage Rural Road Infrastructure Rehabilitation Project	100%	278,518	139,259	69,893	34,947	Supportive	

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II.2.1	LGED	Greater Barisal District and Rural Communication and Hat-Bazaar infrastructure development (Barisal, Pirojpur, Bhola and Jhalkati districts)	100%	13,278	6,639	11,266	5,633	Supportive	
II.2.1	LGED	Greater Chattogram Rural Infrastructure Development Project-3	100%	73,703	36,852	5,421	2,711	Supportive	
II.2.1	LGED	Greater Dhaka rural infrastructure development project-3	100%	105,639	52,819	15,649	7,824	Supportive	
II.2.1	LGED	Greater Dhaka rural infrastructure development project-4	100%	38,135	19,068	64	32	Supportive	
II.2.1	LGED	Greater Faridpur district rural infrastructure Development Project (2nd Revised)	100%	86,649	43,324	84,092	42,046	Supportive	
II.2.1	LGED	Greater Faridpur rural infrastructure development (2nd Phase)	100%	78,168	39,084	76,790	38,395	Supportive	
II.2.1	LGED	Greater Kushtia rural infrastructure development project	100%	28,448	14,224	600	300	Supportive	
II.2.1	LGED	Greater Noakhali District Rural Infrastructure Project-3rd Phase	100%	66,702	33,351	15,114	7,557	Supportive	
II.2.1	LGED	Greater Noakhali Rural Infrastructure Development Project (Part-II).	100%	57,514	28,757	41,891	20,946	Supportive	
II.2.1	LGED	Greater Rangpur and Dinajpur District Rural Communication and other infrastructure Improvement Project (2nd Revision)	100%	21,463	10,731	20,616	10,308	Supportive	
II.2.1	LGED	Haor Flood Management and Livelihood Improvement project	85%	49,257	24,629	3,289	2,466	Supportive	JICA
II.2.1	LGED	Haor Infrastructure & Livelihood Improvement project.	85%	38,612	19,306	14,686	7,343	Supportive	IFAD
II.2.1	LGED	Important Bridge construction in Rural Roads	100%	305,388	152,694	27,336	13,668	Supportive	
II.2.1	LGED	Important Rural Infrastructure Development of Gopalganj District	100%	77,684	38,842	26,151	13,075	Supportive	

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				Total	Nutrition weighted	Total	Nutrition weighted		
II.2.1	LGED	Important Rural Infrastructure Development of Kishoreganj Sadar and Hossainpur Upazila in Kishoreganj District	100%	2,115	1,058	2,021	1,011	Supportive	
II.2.1	LGED	Important Rural Infrastructure Development Project (2nd phase)	100%	35,352	17,676	5,094	2,547	Supportive	
II.2.1	LGED	Important Rural Infrastructure Development Project of Sirajganj District	100%	33,473	16,736	7,245	3,622	Supportive	
II.2.1	LGED	Important Rural Infrastructure Development Project: Barishal, Jhalokhati & Pirojpur District	100%	54,278	27,139	22,779	11,390	Supportive	
II.2.1	LGED	Important Rural Infrastructure Development: Bhola Zila	100%	38,446	19,223	19,237	9,619	Supportive	
II.2.1	LGED	Important Rural Infrastructure Development: Khulna Division	100%	184,326	92,163	51,282	25,641	Supportive	
II.2.1	LGED	Improvement of rural infrastructure and communication system of Bauphal Upazila	100%	2,224	1,112	2,067	1,033	Supportive	
II.2.1	LGED	Improvement of rural roads & bridges/culverts in Kazipur Upazila of Sirajganj district	100%	2,151	1,076	2,099	1,050	Supportive	
II.2.1	LGED	Improvement of rural roads in Kamarkhand Upazila of Sirajganj district	100%	2,224	1,112	2,173	1,087	Supportive	
II.2.1	LGED	Improvement of rural roads in Sadar Upazila of Sirajganj	100%	2,200	1,100	2,172	1,086	Supportive	
II.2.1	LGED	Infrastructure Development in the Greater Chittagong (Chittagong and Cox's Bazar District)	100%	36,100	18,050	20,699	10,350	Supportive	
II.2.1	LGED	Infrastructure Development in the Greater Jessore District (Jessore, Jhenaida, Magura & Narail districts)	100%	33,779	16,890	31,330	15,665	Supportive	
II.2.1	LGED	Infrastructure Development Project in Greater Kushtia District (Kushtia, Chuadanga & Meherpur District).	100%	26,637	13,319	25,988	12,994	Supportive	
II.2.1	LGED	Jessore rural infrastructure development project	100%	38,121	19,061	500	250	Supportive	

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
II.2.1	LGED	Khulna, Bagerhat and Satkhira rural infrastructure development project	100%	37,548	18,774	286	143	Supportive	
II.2.1	LGED	Mymensingh Region Rural Infrastructure Development Project	100%	184,331	92,165	24,296	12,148	Supportive	
II.2.1	LGED	Rajshahi Division (Except Sirajganj) Rural Infrastructure Development Project	100%	120,457	60,228	32,199	16,100	Supportive	
II.2.1	LGED	Rangpur division agriculture and rural development	100%	8,326	4,163	8	4	Supportive	IDB
II.2.1	LGED	Rangpur Division Rural Infrastructures Improvement Project-2nd Phase	100%	167,036	83,518	51,089	25,545	Supportive	
II.2.1	LGED	Road infrastructure development project of Sadar and Sreepur upazila of Magura district	100%	4,193	2,097	2,200	1,100	Supportive	
II.2.1	LGED	Rural bridge development assistance project	100%	182,225	91,112	1,564	782	Supportive	IDA
II.2.1	LGED	Rural connectivity improvement project	100%	146,817	73,409	2,395	1,197	Supportive	ADB
II.2.1	LGED	Rural development of Lazam, Manoharganj and Barura Upazilas in Comilla development	100%	1,747	874	1,692	846	Supportive	
II.2.1	LGED	Rural Infrastructure development in Aatpara and Mohanganj in Netrokona district	100%	4,734	2,367	2,800	1,400	Supportive	
II.2.1	LGED	Rural Infrastructure development in Araihazar Upazila of Narayanganj	100%	2,097	1,049	1,974	987	Supportive	
II.2.1	LGED	Rural infrastructure development in Brahmanpara and Burichang upazila of Cumilla district	100%	2,022	1,011	1,976	988	Supportive	
II.2.1	LGED	Rural Infrastructure development in Gournadi and Agaijhara of Barisal	100%	2,300	1,150	2,223	1,112	Supportive	
II.2.1	LGED	Rural Infrastructure development in Islampur of Jamalpur	100%	2,229	1,114	2,178	1,089	Supportive	
II.2.1	LGED	Rural Infrastructure development in Jamalpur and Sherpur zila	100%	38,881	19,441	18,113	9,056	Supportive	
II.2.1	LGED	Rural Infrastructure development in Nandail Upazila of Mymensingh district	100%	2,499	1,249	2,171	1,085	Supportive	

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
II.2.1	LGED	Rural Infrastructure development in South Sadar and Langolkot Upazila in Comilla	100%	7,468	3,734	5,682	2,841	Supportive	
II.2.1	LGED	Rural Infrastructure development in South Sunamganj, Jagannathpur upazila of Sunamganj	100%	5,619	2,810	2,612	1,306	Supportive	
II.2.1	LGED	Rural Infrastructure Development of Akkelpur, Kalai and Khetlal upazila in Joypurhat District	100%	2,008	1,004	2,002	1,001	Supportive	
II.2.1	LGED	Rural Infrastructure Development of Citalmari, Mollahat and Fakirhat in Bagerhat District	100%	2,320	1,160	2,203	1,101	Supportive	
II.2.1	LGED	Rural Infrastructure Development of Comilla, Chandpur and Brahmanbaria District	100%	58,245	29,123	41,386	20,693	Supportive	
II.2.1	LGED	Rural Infrastructure Development of Fakirhat in Bagerhat District	100%	2,198	1,099	2,083	1,041	Supportive	
II.2.1	LGED	Rural Infrastructure Development of Faridpur Sadar upazila in Faridpur District	100%	2,375	1,188	2,182	1,091	Supportive	
II.2.1	LGED	Rural Infrastructure Development of Greater Pabna-Bogra District	100%	50,400	25,200	35,987	17,994	Supportive	
II.2.1	LGED	Rural Infrastructure Development of Greater Rajshahi District (Rajshahi, Naogaon, Natore and Chapainawabganj) project	100%	50,981	25,491	25,990	12,995	Supportive	
II.2.1	LGED	Rural Infrastructure Development of Kuliarchar and Bhairab upazila in Kishoreganj district	100%	2,417	1,209	2,350	1,175	Supportive	
II.2.1	LGED	Rural Infrastructure Development of Madaripur, Sariatpur and Rajbari District	100%	90,334	45,167	24,255	12,128	Supportive	
II.2.1	LGED	Rural Infrastructure Development of Mathbaria Upazila in Pirojpur District	100%	2,028	1,014	2,028	1,014	Supportive	
II.2.1	LGED	Rural Infrastructure Development of Mollahat in Bagerhat District	100%	2,094	1,047	1,664	832	Supportive	
II.2.1	LGED	Rural Infrastructure Development of Naria Upazila in Sariatpur District	100%	1,706	853	1,565	783	Supportive	

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
II.2.1	LGED	Rural infrastructure development of Panchagarh, Lalmonirhat and Kurigram districts (extinct enclaves)	100%	16,911	8,456	15,950	7,975	Supportive	
II.2.1	LGED	Rural infrastructure development project of Bhanga, Sadarpur and Charvadrashan upazila under Faridpur district	100%	4,763	2,382	610	305	Supportive	
II.2.1	LGED	Rural Infrastructure Development Project of Etna, Mithamine & Austagram Upazila under Kishoregonj District	100%	4,895	2,448	905	452	Supportive	
II.2.1	LGED	Rural infrastructure development project: Bauphal Upazila, Patuakhali	100%	2,366	1,183	2,276	1,138	Supportive	
II.2.1	LGED	Rural infrastructure in Bakshiganj and Dewanganj upazila of Jamalpur district	100%	970	485	948	474	Supportive	
II.2.1	LGED	Rural Road development in Dohar and Nawabganj upazila of Dhaka	100%	2,123	1,062	2	1	Supportive	
II.2.1	LGED	Rural Road development in Potnitola and Dhamoirhat of Naogaon	100%	2,655	1,328	99	50	Supportive	
II.2.1	LGED	Rural road rehabilitation project	100%	219,705	109,852	13,680	6,840	Supportive	
II.2.1	LGED	Rural Road, Bridges/Culverts and other Infrastructure development of backward upazilas (Pabna, Sirajganj, Natore, Naogaon, Rajshahi, Nobabganj and Bogra districts) in the North West region of the country	100%	13,323	6,662	10,036	5,018	Supportive	
II.2.1	LGED	Rural Transport Improvement Project (RTIP-2)	100%	328,598	164,299	200,171	100,086	Supportive	IDA
II.2.1	LGED	South Sunamganj and Jagannathpur upazila rural infrastructure development project (2nd phase)	100%	2,707	1,353	24	12	Supportive	
II.2.1	LGED	South-Western Bangladesh Rural Infrastructure Development Project	100%	58,162	29,081	54,210	27,105	Supportive	JICA
II.2.1	LGED	Sustainable rural infrastructure improvement project (SRIIP)	100%	24,471	12,236	21,378	10,689	Supportive	ADB, KfW

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
II.2.1	LGED	Union Infrastructure Development Project (Khulna, Bagerhat & Satkhira district)	100%	16,790	8,395	15,878	7,939	Supportive	
II.2.1	LGED	Union link Road & Infrastructure Development Project: Greater Chittagong (Chittagong & Cox's Bazar) district	100%	15,335	7,667	14,703	7,351	Supportive	
II.2.1	MoCHT	Safe Drinking Water Supply & Sanitation system Development at Different Important Bazar with Surrounding Locality under Khagrachari District	13%	1,582	791	395	296	Sensitive	
II.2.1	MOFEC	Afforestation in Coastal Region Including the Newly Accreted Chars of Bay of Bengal	50%	3,271	1,636	1,246	623	Supportive	
II.2.2	BSCIC	Poverty Reduction through Inclusive and Sustainable Markets (PRISM)	100%	17,832	8,916	14,219	7,110	Supportive	EU
II.2.2	MoFL	Livestock Development based dairy and meat production project (LDDMPP)	28%	21,798	10,899	20	10	Sensitive	World Bank
II.2.3	MoCommerce	Bangladesh Economic Growth Programme	100%	3,533	1,767	-	-	Supportive	USAID
II.2.3	RDCD	Strengthening ICT Programme and E-service of Rural Poverty alleviation	100%	269	134	152	76	Supportive	
III.1.1	BIRTAN	Integrated Agricultural Approach for Ensuring Nutrition and Food Security Project	100%	840	840	618	618	Sensitive+	
III.1.1	DGFP	Information, Education and Communication (FP)	100%	2,199	2,199	1,383	1,383	Sensitive+	USAID, UNFPA
III.1.1	MoFL	Livestock Development based dairy and meat production project (LDDMPP)	26%	6,539	6,539	20	15	Sensitive+	World Bank
III.1.1	MoHFW	NNSA11 -2- SBCC Coordination, E-toolkit & Website (maintenance & update)	100%	80	80	-	-	Sensitive+	NA
III.1.1	MoHFW	NNSA11-1 - Develop & Update SBCC materials	100%	55	55	-	-	Sensitive+	NA
III.1.1	MoHFW	NNSA11-3 -SBCC related Campaign	100%	2,876	2,876	-	-	Sensitive+	NA
III.1.1	MoHFW	NNSA11-4 - Printing of IEC materials, bulletin, training modules & guidelines, poster/festoon, recording & reporting tools etc.	100%	636	636	-	-	Sensitive+	NA

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
III.1.1	MoHFW	NNSA3-2- Updating of existing training module and academic curriculum etc.	100%	9	9	-	-	Sensitive+	NA
III.1.2	DGHS	Community Based Health Care	17%	53,185	53,185	31,782	31,782	Sensitive+	UNFPA, USAID, Pool
III.1.2	DGHS	Lifestyle and Health Education & Promotion (LHEP)	33%	4,483	4,483	1,843	1,843	Sensitive+	USAID, Pool
III.1.2	DGHS	NNSA10-2 - Dietary guideline	100%	19	19	-	-	Sensitive+	
III.1.2	LGD	Support to Urban Health and Nutrition	100%	22,911	22,911	7,570	7,570	Sensitive+	EU
III.1.3	DGHS	NNSA1 -3- Orientation Programme on IYCF including Home fortification	100%	515	515	-	-	Sensitive+	NA
III.1.3	DGHS	NNSA1-1 - Update National IYCF Strategy	100%	34	34	-	-	Sensitive+	NA
III.1.3	DGHS	NNSA1-2- Baby Friendly Hospital Initiative (BFHI)	100%	735	735	-	-	Sensitive+	NA
III.1.3	MoFL	Livestock Development based dairy and meat production project (LDDMPP)	3%	4,360	4,360	52	26	Sensitive+	World Bank
III.1.3	MoHFW	NNSA10-1 - Nutrient profile model	100%	14	14	-	-	Sensitive+	NA
III.1.3	MoHFW	NNSA3-3 - Training for teachers and student representatives on adolescent nutrition	100%	41	41	-	-	Sensitive+	NA
III.2.1	BMDA	Excavation of Dug Well in Barind Area for Cultivation of Crops by Soft Irrigation	30%	1,563	1,172	842	631	Sensitive	
III.2.1	CHTDB	Safe Drinking Water Supply and Sanitation System Development of Different Important Bazar with Surrounding Locality Under Rangamati District	50%	1,203	902	825	619	Sensitive	
III.2.1	DPHE	Community Based water supply at Low water table Areas of Rajshahi, Naogaon and Chapainawabganj district	100%	3,219	2,414	995	746	Sensitive	
III.2.1	DPHE	Emergency Assistance project for water supply and sanitation at Ukhia and Teknaf upazila in Cox's Bazar District	33%	13,016	9,762	560	420	Sensitive	ADB

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
III.2.1	DPHE	Emergency Multi-sector Rohingya Crisis Response Project (EMCRP)	25%	10,471	7,853	697	523	Sensitive	IDA, World Bank
III.2.1	DPHE	Improvement of Water Supply System in Sirajganj Pourashava	100%	1,492	1,119	995	746	Sensitive	
III.2.1	DPHE	Project for Development & Extension of Water Supply System at Tungipara and Kotalipara Upazila and Pourashava	75%	4,171	3,128	2,700	2,025	Sensitive	
III.2.1	DPHE	Water & sanitation project for Tea garden workers	75%	4,661	3,496	75	56	Sensitive	
III.2.1	DPHE	Project for Safe Water Supply and Sanitation for Rural Area of different Upazila of Rangamati District	75%	3,146	2,360	614	460	Sensitive	
III.2.1	DPHE	40 Pourashavas and Growth Centre Water Supply and Environmental Sanitation Project (Phase-II)	75%	14,503	10,877	8,187	6,140	Sensitive	
III.2.1	DPHE	Arsenic Risk Reduction Project for Water Supply	100%	124,281	93,211	7,457	5,593	Sensitive	
III.2.1	DPHE	Bangladesh Rural Water Supply and Sanitation Project (BRWSSP)	80%	18,133	13,600	4,353	3,265	Sensitive	IDA, World Bank
III.2.1	DPHE	Char Development and Settlement Project-4	100%	819	615	734	550	Sensitive	IFAD, Netherlands
III.2.1	DPHE	District Towns Water Supply Project	100%	50,734	38,051	24,056	18,042	Sensitive	
III.2.1	DPHE	Environment Sanitation and Water Supply with Piped Network in Thana Sadar and Growth Centre Pourashava (2nd Phase)	75%	19,586	14,689	3,730	2,798	Sensitive	
III.2.1	DPHE	Extension and Development of safe water supply and sanitation System in Ishwarganj Pourashava of Mymensingh District	75%	2,382	1,786	50	38	Sensitive	
III.2.1	DPHE	Extension and Development of Safe Water Supply and Sanitation System in Noakhali Pourashava	25%	3,445	2,584	263	197	Sensitive	

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				Total	Nutrition weighted	Total	Nutrition weighted		
III.2.1	DPHE	Formulation for the proposed Bangladesh Municipal Water Supply and Sanitation Project	100%	910	683	841	631	Sensitive	IDA, World Bank
III.2.1	DPHE	Gopalganj and Bagerhat Pourashava Water Supply & Environmental Sanitation System Improvement	75%	12,175	9,131	4,297	3,223	Sensitive	
III.2.1	DPHE	Ground Water Investigation and Development of Deep Ground Water Source in Urban and Rural Areas	100%	4,070	3,052	3,186	2,390	Sensitive	JICA
III.2.1	DPHE	Ground Water Investigation and Development of Deep Ground Water Source in Urban and Rural Areas	100%	4,070	3,052	3,186	2,390	Sensitive	JICA
III.2.1	DPHE	National Sanitation Project (3rd phase)	33%	4,955	3,716	2,665	1,999	Sensitive	
III.2.1	DPHE	Pirganj Pourashava Water Supply & Environmental Sanitation System Improvement Project	75%	1,494	1,121	19	14	Sensitive	
III.2.1	DPHE	Preferential Rural Water Supply Project (PRWSP)	100%	87,417	65,562	37,150	27,863	Sensitive	
III.2.1	DPHE	Project for Improvement of Comprehensive Management Capacity of DPHE on Water Supply	100%	3,005	2,254	1,893	1,420	Sensitive	JICA
III.2.1	DPHE	Project for Water Supply and Sanitation for Rural Area of different Upazila of Khagrachari District	75%	3,306	2,480	822	616	Sensitive	
III.2.1	DPHE	Re-excavation / renovation of pond / dighies / water bodies of the district council for water conservation and supply of safe water	50%	18,725	14,044	4,239	3,179	Sensitive	
III.2.1	DPHE	Safe Water Supply & Sanitation Project at Kuakata Pourashava in Patuakhali District	75%	2,839	2,129	158	118	Sensitive	
III.2.1	DPHE	Safe Water Supply and Sanitation Project in Lalmonirhat, Kurigram, Panchangarh and Nilphamari District giving special emphasis on the Enclave Areas	75%	2,155	1,616	1,433	1,075	Sensitive	

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				Total	Nutrition weighted	Total	Nutrition weighted		
III.2.1	DPHE	Safe water supply at Different Union of Bhandaria upazila of Pirojpur district	100%	1,764	1,323	100	75	Sensitive	
III.2.1	DPHE	Safe water supply in different upazilas of Bandarban district	100%	4,504	3,378	3,034	2,276	Sensitive	
III.2.1	DPHE	Safe Water Supply in Rural Areas of Khulna, Bagerhat & Satkhira	100%	4,593	3,445	2,876	2,157	Sensitive	
III.2.1	DPHE	Survey project for preparation of feasibility study and development projects on water supply and sanitation in Cox's Bazar city	75%	148	111	22	16	Sensitive	
III.2.1	DPHE	Water source contamination and probable solution of water supply using Nano technology in Bagerhat, Faridpur and Rangamati Districts	100%	4,808	3,606	320	240	Sensitive	
III.2.1	DPHE	Water Supply & Environmental Sanitation including Faecal sludge Management Project in 32 Pourashavas	75%	53,448	40,086	522	391	Sensitive	
III.2.1	DPHE	Water Supply and Environmental Sanitation System Improvement Project for three Pourashava in Jamalpur District	75%	5,764	4,323	1,430	1,073	Sensitive	
III.2.1	DPHE	Water Supply and Sanitation in 23 Pourashavas Project	75%	55,798	41,848	455	342	Sensitive	IDB
III.2.1	DPHE	Water Supply in Rural Areas	100%	83,630	62,723	37,857	28,393	Sensitive	
III.2.1	DPHE	Water Supply in Rural Areas	100%	83,630	62,723	37,857	28,393	Sensitive	
III.2.1	DPHE	Water Supply, Sanitation and Health Education	33%	11,687	12,864	5,265	3,948	Sensitive	UNICEF
III.2.1	MoCHT	Development of safe water supply and sanitation system in neighbouring habitations including the important markets of Bandhban Hill District	100%	1,528	1,146	1,469	1,102	Sensitive	
III.2.1	MoCHT	Safe Drinking Water Supply & Sanitation system Development at Different Important	50%	1,186	890	1,185	889	Supportive	

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				Total	Nutrition weighted	Total	Nutrition weighted		
		Bazar with Surrounding Locality under Khagrachari District							
III.2.1	MODMR	Project for Procurement of Saline Water Treatment Plant (2-ton truck mounted).	100%	8,189	6,142	1,021	766	Sensitive	JICA
III.2.1	MoE	Piloting Pure Drinking Water Supply & Solar System in the Off-Grid Primary Schools of Lama, Ali Kadam and Thanchi Upazilas of Bandarban District	100%	500	375	109	82	Sensitive	
III.2.2	DPHE	National Sanitation Project (3rd phase)	33%	4,953	3,715	2,665	1,999	Sensitive	
III.2.2	DPHE	Water Supply, Sanitation and Health Education	33%	11,687	12,864	5,265	3,948	Sensitive	UNICEF
III.2.2	MOA	Integrated Agriculture Productivity Project (IAPP)	15%	632	474	261	196	Sensitive	World Bank
III.2.2	MoHFW	NNSB2-1 - Workshop on development of GHP and GMP communication materials	100%	3	2	-	-	Sensitive	
III.2.3	CHTDB	Safe Drinking Water Supply and Sanitation System Development of Different Important Bazar with Surrounding Locality Under Rangamati District	50%	1,203	902	825	619	Sensitive	
III.2.3	DPHE	Emergency Assistance project for water supply and sanitation at Ukhia and Teknafupazila in Cox's Bazar District	33%	13,012	9,759	560	420	Sensitive	ADB
III.2.3	DPHE	Emergency Multi-sector Rohingya Crisis Response Project (EMCRP)	75%	3,490	2,618	232	174	Sensitive	IDA, World Bank
III.2.3	DPHE	Project for Development & Extension of Water Supply System at Tungipara and Kotalipara Upazila and Pourashava	25%	1,390	1,043	900	675	Sensitive	
III.2.3	DPHE	Water & sanitation project for Tea garden workers	25%	1,554	1,165	25	19	Sensitive	
III.2.3	DPHE	Project for Safe Water Supply and Sanitation for Rural Area of different Upazila of Rangamati District	25%	1,049	787	1,841	1,381	Sensitive	

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				Total	Nutrition weighted	Total	Nutrition weighted		
III.2.3	DPHE	40 Pourashavas and Growth Centre Water Supply and Environmental Sanitation Project (Phase-II)	25%	4,834	3,626	2,729	2,047	Sensitive	
III.2.3	DPHE	Bangladesh Rural Water Supply and Sanitation Project (BRWSSP)	20%	4,533	3,400	17,414	13,060	Sensitive	IDA, World Bank
III.2.3	DPHE	Environment Sanitation and Water Supply with Piped Network in Thana Sadar and Growth Centre Pourashava (2nd Phase)	25%	6,529	4,896	11,191	8,393	Sensitive	
III.2.3	DPHE	Extension and Development of safe water supply and sanitation System in Ishwarganj Pourashava of Mymensingh District	25%	794	595	150	113	Sensitive	
III.2.3	DPHE	Extension and Development of Safe Water Supply and Sanitation System in Noakhali Pourashava	75%	1,148	861	788	591	Sensitive	
III.2.3	DPHE	Gopalganj and Bagerhat Pourashava Water Supply & Environmental Sanitation System Improvement	25%	4,058	3,044	1,432	1,074	Sensitive	
III.2.3	DPHE	National Sanitation Project (3rd phase).	33%	4,953	3,715	2,666	2,000	Sensitive	
III.2.3	DPHE	Pirganj Pourashava Water Supply & Environmental Sanitation System Improvement Project	25%	498	374	57	43	Sensitive	
III.2.3	DPHE	Project for Water Supply and Sanitation for Rural Area of different Upazila of Khagrachari District	25%	1,102	827	2,465	1,849	Sensitive	
III.2.3	DPHE	Safe Water Supply & Sanitation Project at Kuakata Pourashava in Patuakhali District	25%	946	710	473	355	Sensitive	
III.2.3	DPHE	Safe Water Supply and Sanitation Project in Lalmonirhat, Kurigram, Panchangarh and Nilphamari District giving special emphasis on the Enclave Areas	25%	718	539	478	358	Sensitive	

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
III.2.3	DPHE	Survey project for preparation of feasibility study and development projects on water supply and sanitation in Cox's Bazar city	25%	49	37	66	49	Sensitive	
III.2.3	DPHE	Water Supply & Environmental Sanitation including Faecal sludge Management Project in 32 Pourashavas	25%	17,816	13,362	1,565	1,174	Sensitive	
III.2.3	DPHE	Water Supply and Environmental Sanitation System Improvement Project for three Pourashava in Jamalpur District	25%	1,921	1,441	477	358	Sensitive	
III.2.3	DPHE	Water Supply and Sanitation in 23 Pourashavas Project	25%	18,599	13,949	152	114	Sensitive	IDB
III.2.3	DPHE	Water Supply, Sanitation and Health Education.	33%	11,687	12,864	5,265	3,948	Sensitive	UNICEF
III.2.3	MOA	Integrated Agriculture Productivity Project (IAPP)	5%	211	158	1,394	1,046	Sensitive	World Bank
III.2.3	MoCHT	Safe Drinking Water Supply & Sanitation system Development at Different Important Bazar with Surrounding Locality under Khagrachari District	38%	395	297	1,580	790	Sensitive	
IV.1.1	BADC	Disaster victim Chandpur potato seed producer rehabilitation and increasing opportunity of potato seed collection and processing	100%	880	440	148	74	Supportive	
IV.1.1	BFID	Pilot project on weather index-based crop insurance	100%	1,567	783	1,433	717	Supportive	ADB
IV.1.1	BWDB	Climate Smart Agriculture Water Management Project (CSAWMP)	18%	100	50	177	133	Supportive	NA
IV.1.1	BWDB	Coastal embankment improvement project Phase I (CEIP I) in Satkhira, Khulna, Bagerhat, Pirojpur, Barguna, and Patuakhali District	100%	313,008	156,504	126,606	63,303	Supportive	IDA
IV.1.1	BWDB	Emergency 2007 Cyclone Recovery and Restoration Project (ECRRP)	100%	23,450	11,725	16,487	8,244	Supportive	IDA

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				Total	Nutrition weighted	Total	Nutrition weighted		
IV.1.1	BWDB	Flood & Riverbank Erosion Risk Management Investment Program	100%	63,810	31,905	50,239	25,119	Supportive	ADB, Netherlands
IV.1.1	BWDB	Pre-monsoon Flood Protection and Drainage Improvement in Haor Areas	50%	23,063	11,531	7,959	3,979	Supportive	
IV.1.1	BWDB	Preservation of the left bank of the river Padma from Boairbazar, Dohar Upazila in Dhaka District to Braha bajaraghata	100%	21,762	10,881	18,800	9,400	Supportive	
IV.1.1	BWDB	Protection of Left Bank of Meghna River Through Bank Revetment work at Maniknagar of Nabinagar Upazila of Brahmanbaria District	100%	3,372	1,686	3,056	1,528	Supportive	
IV.1.1	BWDB	Shibpur Flood Control, Drainage and Irrigation Project under Shibpur Upazila in Narshingdi District	100%	4,885	2,443	3,501	1,751	Supportive	
IV.1.1	BWDB	Strengthening Hydrological Information Services and Early Warning System (Component-B)	100%	27,256	13,628	3,654	1,827	Supportive	
IV.1.1	BWDB	Tarail Pachuria Flood control, Drainage and Irrigation Project	50%	6,913	3,457	6,243	3,121	Supportive	
IV.1.1	DDM	Construction of flood shelters in the flood prone and river erosion areas (2nd phase)	100%	8,002	4,001	7,084	3,542	Supportive	
IV.1.1	DDM	Construction of flood shelters in the flood prone and river erosion areas (3rd phase)	100%	83,726	41,863	527	263	Supportive	
IV.1.1	DoForestry	Char Development and Settlement Project-4	100%	1,352	676	755	377	Supportive	Netherlands , IFAD
IV.1.1	LGD	Improvement of Women Ability to Participate in Productive Potential Action (SWAPNO)	25%	20,896	10,448	6,862	5,146	Supportive	UNDP
IV.1.1	LGED	Char Development & Settlement-4	12%	814	407	691	345	Supportive	IFAD, Netherlands
IV.1.1	LGED	Climate Change Adaptation Pilot Project.	50%	2,686	1,343	2,683	1,341	Supportive	DANIDA
IV.1.1	LGED	Emergency 2007 Cyclone Recovery and Rehabilitation Project (ECRRP)	100%	35,124	17,562	28,827	14,414	Supportive	World Bank

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
IV.1.1	Meteorological Dept	Strengthening Meteorological Information Services and Early Warning System (Component-A)	100%	41,618	20,809	1,859	930	Supportive	World Bank
IV.1.1	MOFEC	Eco restoration of the Northern region of Bangladesh	33%	750	375	732	549	Supportive	
IV.1.1	MOFEC	Integrating Community Change Adaptation into Afforestation and Reforestation Program	50%	2,260	1,130	1,323	992	Supportive	UNDP, GEF
IV.1.1	Planning Div	Emergency 2007 Cyclone Recovery and Restoration Project (ECRRP): Project Coordination and Monitoring Unit	100%	1,362	681	816	408	Supportive	IDA
IV.1.1	RDCD	One house one farm project	100%	526,481	263,241	296,750	148,375	Supportive	
IV.1.2	DoFish	Culture of Cuchia and Crab in the Selected Areas of Bangladesh and Research Project (Component A)	100%	1,574	1,181	1,560	1,170	Sensitive	
IV.1.2	MoHFW	NNSA7-2 - Emergency supplies (Need base)	100%	344	258	-	-	Sensitive	NA
IV.1.2	MOL	Cluster villages (Climate Victims' Rehabilitation) (second phase)	100%	94,181	70,636	52,555	39,416	Sensitive	
IV.1.2	UGC	Resource on disasters prevention mitigation measures against flood and storm surges	100%	2,523	1,892	485	364	Sensitive	JICA
IV.1.3	DDM	Construction of district relief godown cum disaster management information centres	100%	11,458	8,593	444	333	Sensitive	
IV.1.3	MoFood	Construction of 1.05 lakh MT Capacity new Food Godown Project	100%	37,267	27,950	27,081	20,311	Sensitive	
IV.1.3	MoFood	Construction of multistoried warehouse at Santahar Grain Silo Premises, Bogra (25,000 MT)	100%	10,754	8,065	6,268	4,701	Sensitive	JAICA
IV.1.3	MoFood	Modern Food Storage Facilities Project (MFSP)	80%	147,327	110,495	62,871	47,153	Sensitive	IDA, World Bank
IV.1.3	MoFood	Old godown renovation and new infrastructure development	100%	17,789	13,341	1,498	1,124	Sensitive	

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				Total	Nutrition weighted	Total	Nutrition weighted		
IV.2.1	BADC	Small Selection Development Project in Greater Noakhali Feni Laxmipur area	100%	9,083	6,812	5,189	3,892	Sensitive	
IV.2.1	BFRI	Culture of Cuchia and Crab in the Selected Areas of Bangladesh and Research Project (Component B)	100%	1,117	838	999	749	Sensitive	
IV.2.1	BITAC	Poverty Alleviation and Self-employment through Expansion of BITAC Programme with the Emphasis of Women's Hands-on Technical Training	100%	2,493	1,870	2,441	1,831	Sensitive	
IV.2.1	BRDB	Initiative for Development, Empowerment, Awareness and Livelihood Project (IDEAL project), Kurigram	25%	235	176	175	131	Sensitive	
IV.2.1	BRDB	Participatory Rural Development Project-3 (PRDP-3)	50%	9,864	7,398	4,148	3,111	Sensitive	
IV.2.1	CHTDB	Rearing of Cow for Better Income Generating Opportunities of Marginal and Poor Women in Remote Areas of Chittagong Hill Tracts	100%	1,064	798	529	397	Sensitive	
IV.2.1	DOC	Development of quality of living women through improved cow care is improved	100%	12,127	9,095	10,593	7,945	Sensitive	
IV.2.1	DOC	Livelihood improvement of disadvantaged women by rearing cows	100%	12,127	9,095	83	62	Sensitive	
IV.2.1	DSS	Cash Transfer Modernization (CTM)	100%	8,585	6,438	101	75	Sensitive	World Bank
IV.2.1	DSS	Child Sensitive Social Protection in Bangladesh (CSPB) (Phase-2)	100%	3,493	2,619	1,287	965	Sensitive	UNICEF
IV.2.1	DSS	Development of the Living Standard of the Marginal People of Bangladesh	100%	4,856	3,642	1,793	1,345	Sensitive	
IV.2.1	Finance Division	Strengthening Capacity for Child Focused Budgeting	60%	416	312	126	94	Sensitive	UNICEF
IV.2.1	LGD	Improvement of Women Ability to Participate in Productive Potential Action (SWAPNO)	65%	54,330	40,747	1,056	792	Sensitive	UNDP
IV.2.1	LGED	Rural Employment and road Maintenance Program-2 (RERMP-2)	100%	50,789	38,091	43,391	32,543	Sensitive	EU

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
IV.2.1	MOFEC	Eco restoration of the Northern region of Bangladesh	33%	750	562	732	366	Sensitive	
IV.2.1	MoLE	Northern Areas Reduction of Poverty Initiative (NARI)	50%	12,014	9,011	8,842	6,631	Sensitive	World Bank
IV.2.1	MOWCA	Establishment of 20 Child Daycare Centre Project	100%	5,192	3,894	1,504	1,128	Sensitive	
IV.2.1	MOWCA	Income Generating Activities of Women at Upazila Level	100%	24,756	18,567	10,324	7,743	Sensitive	
IV.2.1	NWA	Promotion of Women Entrepreneurship for Economic Empowerment (Phase 3)	100%	8,858	6,644	7,899	5,924	Sensitive	
IV.2.1	NWA	Tottha Apa: Empowering Women through ICT Towards Digital Bangladesh Project (2nd Phase)	100%	35,422	26,566	8,868	6,651	Sensitive	
IV.2.1	NWA	Urban Based Marginal Women Development Project	100%	8,615	6,461	4,769	3,577	Sensitive	
IV.2.1	PDBF	Eradicating poverty by Supporting Small and marginal farmers in after crop harvesting period	50%	2,440	1,830	1,445	1,084	Sensitive	
IV.2.1	RDA	Integrated Rural Employment Support for the Poor Women (RESPW)	100%	6,107	4,580	6,060	4,545	Sensitive	
IV.2.1	RDCD	Chars Livelihoods Improvement Programme (CLP) 2nd Phase	50%	220	165	196	147	Sensitive	DFID
IV.2.1	RDCD	Comprehensive village development programme (CVDP)	50%	9,396	7,047	601	450	Sensitive	
IV.2.1	RDCD	Economic Empowerment of the Poorest in Bangladesh (EEP)	88%	1,072	804	627	470	Sensitive	DFID
IV.2.1	RPAF	Poverty reduction through fishery harvesting of jute produced by reproduction of hajama/fallen ponds	100%	12,669	9,502	12,651	9,488	Sensitive	
IV.2.1	SFDF	Expansion of SFDF's activities for poverty Alleviation	50%	553	415	547	410	Sensitive	
IV.2.1	SFDF	Small Farmers Development Foundation Assistance project (2nd Phase)	25%	2,174	1,631	2,810	2,107	Sensitive	

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
IV.2.2	BFRI	Seaweed cultivation and seaweed made commodity production and research	50%	526	395	46	35	Sensitive	
IV.2.2	BRDB	Employment Guarantee Scheme for Hardcore Poor of Northern Region	100%	8,472	6,354	6,492	4,869	Sensitive	
IV.2.2	BRDB	Gaibandha Integrated Rural Poverty Alleviation Project	100%	3,476	2,607	1,583	1,188	Sensitive	
IV.2.2	BRDB	Participatory Rural Development Project-3 (PRDP-3)	50%	9,864	7,398	4,148	3,111	Sensitive	
IV.2.2	CHTDB	High value spice cultivation	100%	2,219	1,664	698	524	Sensitive	
IV.2.2	DSS	Motivational Workshop & Employment Generation for Hijra Community of Dhaka City	100%	300	225	200	150	Sensitive	
IV.2.2	LGD	Income Support Programme for the Poorest	100%	243,754	182,815	8,853	6,639	Sensitive	IDA
IV.2.2	LGED	Disaster damaged and other important rural infrastructure development project in 3 CHT area	20%	5,998	4,498	96	48	Sensitive	
IV.2.2	LGED	Haor Flood Management and Livelihood Improvement project	4%	2,318	1,738	1,196	897	Sensitive	JICA
IV.2.2	LGED	Haor Infrastructure & Livelihood Improvement project	4%	1,817	1,363	1,900	1,425	Sensitive	IFAD
IV.2.2	MoCommerce	Eradication of Rural Poverty by Extension of Small Holding Tea Cultivation in Lalmonirhat	100%	406	304	248	186	Sensitive	
IV.2.2	MOFEC	Afforestation in Coastal Region Including the Newly Accreted Chars of Bay of Bengal	50%	3,271	2,453	1,246	934	Sensitive	
IV.2.2	MOFEC	Expending the Protected Area System to Incorporate Important Aquatic Ecosystem	25%	321	241	416	312	Sensitive	UNDP, GEF
IV.2.2	MOFEC	Support to the DPP Preparation of Sustainable Forests and Livelihoods (SUFAL)	50%	404	303	238	178	Sensitive	IDA
IV.2.2	MOFEC	Sustainable Social Forest Development Project in the Greater Rangpur District	50%	927	695	542	406	Sensitive	
IV.2.2	MoLE	Northern Areas Reduction of Poverty Initiative (NARI)	50%	12,014	9,011	8,842	6,631	Sensitive	World Bank

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
IV.2.2	PMO	Ashrayan Project-2	75%	290,994	218,246	19,399	14,549	Sensitive	
IV.2.2	RDA	Action Research on Graduation from Poverty in Chars Island at Sariakandi and Sonatola Upazila of Bogra District	100%	3,056	2,292	1,962	1,471	Sensitive	
IV.2.2	RDA	Decrease poverty of Kurigram and Jamalpur district	100%	13,016	9,762	69	52	Sensitive	
IV.2.2	RDCD	Chars Livelihoods Improvement Programme (CLP) 2nd Phase	50%	220	165	196	147	Sensitive	DFID
IV.2.2	RDCD	Comprehensive village development programme (CVDP)	50%	9,396	7,047	601	450	Sensitive	
IV.2.2	SFDF	Expansion of SFDF's activities for poverty Alleviation	50%	553	415	547	410	Sensitive	
IV.2.2	SFDF	Small Farmers Development Foundation Assistance project (2nd Phase)	25%	2,174	1,631	1,405	1,054	Sensitive	
IV.2.3	DPE	School Feeding Programme in Poverty Prone Area	100%	273,984	205,488	143,300	107,475	Sensitive	WFP
IV.2.3	LGD	Improvement of Women Ability to Participate in Productive Potential Action (SWAPNO)	10%	8,358	6,269	2,639	1,320	Sensitive	UNDP
IV.2.3	MoHFW	NNSC2-3 - District orientation workshop on food fortification for Supervision & monitoring among district/upazila level respective personnel	100%	65	49	-	-	Sensitive	NA
IV.2.3	MOWCA	Investment Component for Vulnerable Group Development Programme	100%	584	438	584	438	Sensitive	FAO
IV.2.3	RDCD	Economic Empowerment of the Poorest in Bangladesh (EEP)	6%	77	58	45	34	Sensitive	DFID
V.1.1	BAEC	Modernization of food and radiation biological services of BAEC	100%	4,544	3,408	2,082	1,562	Sensitive	
V.1.1	BCSIR	Improvement of IMS for dairy and dairy products laboratories	100%	1,784	1,338	1,647	1,236	Sensitive	

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				Total	Nutrition weighted	Total	Nutrition weighted		
V.1.1	BFSA	Institutionalization of Food Safety for Safer Food	33%	1,077	808	799	399	Sensitive	USAID
V.1.1	BSTI	Expansion and strengthening of BSTI	100%	51,441	38,580	4,160	3,120	Sensitive	
V.1.1	MoFL	Livestock Development based dairy and meat production project (LDDMPP)	2%	2,693	2,020	86	64	Sensitive	World Bank
V.1.1	MoHFW	Improving Food Safety	100%	247	185	-	-	Sensitive	Netherlands
V.1.1	MoHFW	NNSB1-1 - Laboratory Analysis of Food:	100%	793	595	-	-	Sensitive	NA
V.1.1	MoHFW	NNSB1-2 - Risk Based Food Inspection	100%	883	662	-	-	Sensitive	NA
V.1.1	MoHFW	NNSB1-3 - Food-borne illness surveillance	100%	240	180	-	-	Sensitive	NA
V.1.2	BFSA	Institutionalization of Food Safety for Safer Food	33%	1,077	808	799	599	Sensitive	USAID
V.1.2	BRRI	Pirojpur-Gopalganj-Bagerhat Integrated Agriculture Development Project	20%	43	32	40	30	Sensitive	
V.1.2	DAE	Safe Crop Production Project through Integrated Pest Management (IPM) Approach	100%	2,163	1,623	2,076	1,557	Sensitive	
V.1.2	DAE	Strengthening Bangladesh phytosanitary capabilities (1st Revised)	100%	8,076	6,057	7,857	5,893	Sensitive	
V.1.2	DoFish	Strengthening of fisheries and aquaculture food safety and quality management system	100%	521	391	506	379	Sensitive	UNIDO, EU
V.1.2	MoFL	Livestock Development based dairy and meat production project (LDDMPP)	2%	2,693	2,020	6	5	Sensitive	World Bank
V.1.3	DPHE	Emergency Assistance project for water supply and sanitation at Ukhia and Teknafupazila in Cox's Bazar District	33%	13,012	9,759	560	420	Sensitive	ADB
V.1.3	LGD	Procurement of Equipment for Solid Waste Management	100%	15,018	11,264	13,479	10,109	Sensitive	JICA
V.1.3	MoFL	Livestock Development based dairy and meat production project (LDDMPP)	2%	2,693	2,020	10	10	Sensitive	World Bank
V.1.3	MoHFW	NNSB2-2 - Risk Based Food Inspection	50%	442	331	-	-	Sensitive	NA
V.1.3	MoHFW	NNSB2-4- IEC/BCC on Food Safety	50%	291	218	-	-	Sensitive	NA

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
V.1.3	NCC	Solid Waste Collection & Disposal Management in Narayanganj City Corporation	100%	34,591	25,944	29,900	22,425	Sensitive	
V.1.4	MoFL	Livestock Development based dairy and meat production project (LDDMPP)	2%	2,693	2,020	79	39	Sensitive	World Bank
V.1.4	MoHFW	NNSB1-4 - IEC/BCC on Food Safety	100%	582	437	-	-	Sensitive	NA
V.1.4	MoHFW	NNSB2-2 - Risk Based Food Inspection	50%	442	331	-	-	Sensitive	NA
V.1.4	MoHFW	NNSB2-3 - Food-borne illness surveillance	100%	240	180	-	-	Sensitive	NA
V.1.4	MoHFW	NNSB2-4- IEC/BCC on Food Safety	50%	291	218	-	-	Sensitive	NA
V.3.1	APSU	Orientation Agriculture towards improve Nutrition and Women's Empowerment	100%	448	224	431	215	Supportive	USAID
V.3.1	BBS	Agriculture (Crops, Fisheries & Livestock) Census-2018 Project	100%	31,450	15,725	27,781	13,890	Supportive	
V.3.1	BBS	Agriculture and Rural Statistics Survey (ARSS) Project-2017	100%	398	199	350	175	Supportive	
V.3.1	BBS	Census of the Undocumented Myanmar Nationals Staying in Bangladesh 2015 Project	100%	601	301	368	184	Supportive	
V.3.1	BBS	Data conversion, meta data preparation and time series data compilation	100%	927	464	518	259	Supportive	
V.3.1	BBS	Household Income and Expenditure Survey (HIES) Project	100%	1,007	503	996	498	Supportive	World Bank, WFP
V.3.1	BBS	Monitoring the Situation of Vital Statistics of Bangladesh	100%	1,255	628	1,068	534	Supportive	
V.3.1	BBS	Monitoring the situation of Vital Statistics of Bangladesh	100%	3,501	1,751	3,345	1,672	Supportive	
V.3.1	BBS	National Household Database (NHD)	100%	62,269	31,134	58,305	29,153	Supportive	World Bank
V.3.1	BBS	Strengthening Agriculture Market Information System (AMIS) in Bangladesh	100%	340	170	312	156	Supportive	FAO
V.3.1	BBS	Strengthening Statistical Capacity of BBS for Collecting Data on Population and Development (Stat4Dev)	100%	480	240	315	157	Supportive	UNFPA

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
V.3.1	SPARRSO	Establishment of a geographic information system of the coastal areas of Bangladesh and marine fishing zone Identification system based on remote serving and GIS techniques	100%	167	84	-	-	Supportive	
V.4.1	Cabinet Division	Platforms for Dialogue-Strengthening Inclusion and Participation in Decision Making and Accountability Mechanisms	100%	11,474	5,737	1,980	990	Supportive	EU
V.4.1	MoHFW	NNSC1-1 - Revitalization & operation (Inter-ministerial & multisectoral coordination) of BNNC	50%	159	80	-	-	Supportive	NA
V.4.2	BFSA	Institutionalization of Food Safety for Safer Food	33%	1,077	539	799	599	Supportive	USAID
V.4.2	Cabinet Division	Technical Assistance for promoting Nutrition Sensitive Social Security Programmes (PNSSSP)	100%	441	220	103	51	Supportive	WFP
V.4.2	DDM	Strengthening of the ministry of disaster management and relief programme administration	100%	20,250	10,125	12,035	6,017	Supportive	IDA
V.4.2	GED	Formulation of Sectoral Plan and Capacity Development of Concerned Officials for More Effective Public Investment	100%	1,278	639	237	119	Supportive	
V.4.2	IMED	Capacity Development for Monitoring and Reporting to Increase the Effective Coverage of Basic Social Service (CD & MRIECBSS) For the Children and Women in Bangladesh (Phase-2)	100%	768	384	205	103	Supportive	UNICEF
V.4.2	MoFood	Meeting the Undernourishment Challenge Programme (MUCH)	100%	13,900	6,950	-	-	Supportive	USAID, EU
V.4.2	MoFood	Modern Food Storage Facilities Project (MFSP)	20%	36,832	18,416	15,718	7,859	Supportive	IDA, World Bank
V.4.2	MoHFW	NNSC1-1 - Revitalization & operation (Inter-ministerial & multisectoral coordination) of BNNC	50%	159	80	-	-	Supportive	NA
V.4.2	MOWCA	Strengthening Gender Responsive Budgeting	100%	421	211	55	28	Supportive	UN WOMEN

Sub-prog. ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Financed budget (as of 30-Jun-19)		Cumulative delivery (as of 30-Jun-19)		Nutrition sensitivity	DP
				Total	Nutrition weighted	Total	Nutrition weighted		
V.4.2	Planning Div	Strengthening Public Investment Management System (SPIMS)	100%	3,762	1,881	2,912	1,456	Supportive	JICA

Annex 7. Pipeline projects by sub-programme (financial gap)

In lakh BDT

Sub programme ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Allocation over CIP2 Period			Nutrition weight	DP
				Total	GoB	DP		
I.1.1	BARC	Farmer Technology Development Project for the production of profitable crops	100%	685	685	-	Sensitive	
I.1.1	BARC	In the greater Faridpur and Barisal regions, pulses research and development strengthening projects	100%	420	420	-	Sensitive	
I.1.1	BARC	Strengthening of Farm Machinery Research Programs for the production of rice by the mechanical method	100%	644	644	-	Sensitive	
I.1.1	BARI	Climate resilient crop production technology and development project	100%	9,836	2,003	7,833	Sensitive	KSA
I.1.1	BARI	Establishment BARIs agriculture research centre in Gopalganj and agriculture development by strengthening research in south west area	100%	6,285	6,285	-	Sensitive	
I.1.1	BRRI	Farm machinery strengthening for increased production	100%	881	881	-	Sensitive	
I.1.1	DAE	Enhancement of ANGeL model in Increased Agricultural production, Nutritional development and women empowerment project	100%	12,133	-	12,133	Sensitive	NA
I.1.1	DAE	Tuber crop development	100%	4,317	4,317	-	Sensitive	
I.1.1	DLS	Integrated livestock development project for the under privileged and small indigenous people's socio economic and livelihood development	100%	11,727	11,727	-	Sensitive	
I.1.2	DAE	Agriculture adaptation project in Narial, Satkhira and Khulna district by using Climate smart agriculture technology	100%	1,236	-	1,236	Sensitive	NA

Sub programme ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Allocation over CIP2 Period			Nutrition weight	DP
				Total	GoB	DP		
I.1.2	DAE	Climate resilient agriculture development project in southern area of Bangladesh	100%	7,011	-	7,011	Sensitive	IDB
I.1.2	DAE	Integrated farm management wing (2nd phase-IFMC-2)	50%	2,929	976	1,953	Sensitive	DANIDA
I.1.3	DAE	Citrus management expansion and production plantation project	100%	750	750	-	Sensitive	
I.1.3	DAE	Condon Crop Development Project	100%	1,904	1,904	-	Sensitive	
I.1.3	DAE	Corn and sunflower farming expansion project in chars and river areas in the southern region	100%	846	846	-	Sensitive	
I.1.3	DAE	E-Agriculture Extension and Digital Document Services Strengthening Project	100%	398	398	-	Sensitive	
I.1.3	DAE	Greater Mymensingh Agricultural Development Project	100%	607	607	-	Sensitive	
I.1.3	DAE	Integrated and participatory climate service project	100%	5,374	3,566	1,807	Sensitive	NA
I.1.3	DAE	Production and production of Vegetable crops through better agricultural management	100%	1,289	1,289	-	Sensitive	
I.1.3	DAE	Project for citrus fruit expansion, management and increased production	100%	3,492	3,492	-	Sensitive	
I.1.3	DAE	Skills Development Programme of Agricultural Institute	100%	7,842	7,842	-	Sensitive	
I.2.1	BADC	Improved fertiliser management by renovating Existing fertiliser godown and constructing new godowns	100%	6,230	6,230	-	Sensitive	
I.2.1	BADC	Mujibnagar Irrigation Area Development Project	100%	2,296	2,296	-	Sensitive	
I.2.1	BADC	Quality potato seed production and strengthening distribution to farmers level	100%	13,787	13,787	-	Sensitive	
I.2.1	BADC	Strengthening hybrid rice seed production, processing, sorting and distribution system.	100%	1,585	1,585	-	Sensitive	

Sub programme ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Allocation over CIP2 Period			Nutrition weight	DP
				Total	GoB	DP		
I.2.1	BRDB	Production and marketing of higher nutritious crops	100%	6,181	6,181	-	Sensitive	
I.2.1	DAE	Integrated farm management wing (2nd phase-IFMC-2)	10%	586	195	391	Sensitive	DANIDA
I.2.1	DAE	Project for production, preservation and distribution of Improved seed of paddy, wheat and jute by applying improved technology	100%	8,634	8,634	-	Sensitive	
I.2.1	DAM	Ensuring Sustainable Agricultural Development through Access of Market and Finance	50%	3,577	168	3,409	Sensitive	IDB
I.2.1	SCA	Creative projects for seed certification	100%	1,406	-	1,406	Sensitive	NA
I.2.2	DAE	Soil Fertility Productivity Management Project	100%	1,906	1,906	-	Sensitive	
I.2.3	BADC	Comilla Chandpur Brahmanbaria district Irrigation Development Project	100%	2,752	2,752	-	Sensitive	
I.2.3	BADC	Irrigation development in Cumilla, Chandpur and Brahmanbaria district	100%	6,521	6,521	-	Sensitive	
I.2.3	BADC	Irrigation Area Development Project in Greater Faridpur region	100%	1,510	1,510	-	Sensitive	
I.2.3	BADC	Irrigation area expansion in greater Faridpur (4th phase)	100%	4,019	4,019	-	Sensitive	
I.2.3	BADC	Irrigation development by using surface water in Pabna, Natore and Sirajganj districts	100%	11,229	11,229	-	Sensitive	
I.2.3	BADC	Irrigation Development Project using ground water in Chittagong Cox's Bazar district	100%	3,832	3,832	-	Sensitive	
I.2.3	BADC	Irrigation Development Project using groundwater in Sirajganj district of Pabna Natore	100%	5,164	5,164	-	Sensitive	
I.2.3	BADC	Small irrigation development projects using solar power	100%	3,045	3,045	-	Sensitive	
I.2.3	BMDA	Increase irrigation facility by reexcavation of ponds and using surface water	100%	2,852	2,852	-	Sensitive	

Sub programme ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Allocation over CIP2 Period			Nutrition weight	DP
				Total	GoB	DP		
I.2.3	BMDA	Irrigation expansion programme in greater Rangpur division by using surface water and preserving rainwater	100%	3,578	3,578	-	Sensitive	
I.2.3	BMDA	Irrigation expansion project using Gomani river water in Pabna district	100%	540	540	-	Sensitive	
I.2.3	BMDA	Irrigation expansion project using water from the Rangpur Dinajpur district	100%	2,384	2,384	-	Sensitive	
I.2.3	BMDA	Irrigation Project in Natore district by saving rainwater	100%	1,912	1,912	-	Sensitive	
I.2.3	BMDA	Irrigation expansion in Natore by preserving rain and surface water	100%	3,907	3,907	-	Sensitive	
I.2.3	BMDA	Small irrigation development project by re-digging the pond using ground water	100%	823	823	-	Sensitive	
I.2.3	BWDB	Char development and settlement bridging project (Noakhali and Chottogram)	100%	11,294	-	11,294	Sensitive	NA
I.2.3	BWDB	Construction of Ganges Barrage Project	100%	2,095,205	104,760	1,990,445	Sensitive	NA
I.2.3	BWDB	Tangan Barrage Irrigation Rehabilitation Project	100%	5,005	5,005	-	Sensitive	
I.2.3	LGED	Construction of dam on small and medium rivers to increase food production	100%	1,310	110	1,200	Sensitive	NA
I.3.1	BRDB	Production and marketing programme for high quality raw material rich in poverty reduction	100%	2,280	2,280	-	Sensitive	
I.3.1	DoFISH	Climate Smart Agriculture and Water Management Project	100%	1,009	202	807	Sensitive	IDA
I.3.1	DoFish	Fisheries development programme in Rajshahi division	50%	889	889	-	Sensitive	
I.3.2	DLS	Buffalo development project	50%	2,851	2,851	-	Sensitive	
I.3.2	DoFish	Fisheries development programme in Rajshahi division	50%	889	889	-	Sensitive	

Sub programme ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Allocation over CIP2 Period			Nutrition weight	DP
				Total	GoB	DP		
I.3.3	DoFISH	Enhanced coastal fisheries in Bangladesh-2 (EcoFish-2)	100%	847	-	847	Sensitive	USAID
I.3.3	DoFish	The sustainable coastal fisheries project	100%	5,806	-	5,806	Sensitive	NA
I.3.4	BLRI	Research on Black Bengal Goat development	100%	1,046	1,046	-	Sensitive	
I.3.4	BLRI	Research on zoonosis and inter-border livestock disease and prevention program	100%	3,013	3,013	-	Sensitive	
I.3.4	BLRI	Strengthening poultry research and development project	100%	2,471	2,471	-	Sensitive	
I.3.4	DLS	Buffalo development project	50%	2,851	2,851	-	Sensitive	
I.3.4	DLS	Capacity strengthening of Department of Livestock Services	100%	3,144	3,144	-	Sensitive	
I.3.4	DLS	Establishment of livestock science and technology institute in Sylhet, Lalmonirhat/Kurigram and Barisal	100%	3,178	3,178	-	Sensitive	
I.3.4	DLS	Improvement of veterinary health service to improve public health	100%	2,743	2,743	-	Sensitive	
I.3.4	DLS	PPR disease eradication and foot disease control	100%	12,918	12,918	-	Sensitive	
II.1.1	DAM	Agricultural Marketing Services Extension Quality assurance system and value chain Development Project	100%	1,500	-	1,500	Supportive	NA
II.1.1	MoA	Smallholder Agricultural Competitiveness Project	30%	9,059	-	9,059	Supportive	NA
II.1.2	DAM	Development of marketing of agricultural products for the development of quality and value chain	100%	100	-	100	Supportive	NA
II.1.2	DAM	Ensuring sustainable agricultural development by entering into market and financial institutions	100%	480	24	456	Supportive	NA
II.1.2	MoA	Smallholder Agricultural Competitiveness Project	30%	9,059	-	9,059	Supportive	NA

Sub programme ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Allocation over CIP2 Period			Nutrition weight	DP
				Total	GoB	DP		
II.1.2	MoFood	Installation of Premix Kernel Machine and laboratory to ensure foodgrain nutrition	100%	1,663	1,663	-	Supportive	
II.1.3	DAE	Integrated farm management wing (2nd phase-IFMC-2)	40%	2,343	781	1,562	Supportive	DANIDA
II.1.3	DAM	Strengthening of DAM	100%	3,205	3,205	-	Supportive	
II.1.3	MoA	Smallholder Agricultural Competitiveness Project	39%	11,882	-	11,882	Supportive	NA
II.1.3	RDA	Making Markets work for the Jamuna, Padma and Teesta (MforC) project - 2nd phase	100%	917	693	224	Supportive	SDC
II.2.1	CHTDB	Construction of 2 bridges over Sangu river and one bridge over Sonakhali canal in Bandarban	100%	1,662	1,662	-	Supportive	
II.2.1	DAM	Ensuring Sustainable Agricultural Development through Access of Market and Finance	50%	3,577	168	3,409	Supportive	IDB
II.2.1	DAM	Ensuring Sustainable Agricultural Development through Market access	100%	7,203	360	6,842	Supportive	NA
II.2.1	DAM	Strengthening of the agricultural marketing project	100%	6	6	-	Supportive	
II.2.1	LGED	Western Economic Corridor and Regional Enhancement (WeCARE) Project	100%	120,197	20,033	100,164	Supportive	World Bank & AIIB
II.2.1	PMO	Special economic zone, (Nilphamari) agriculture Development project	100%	8,750	2,750	6,000	Supportive	NA
III.1.1	MoInfo	National Nutrition dissemination to ensure balanced diet of the people of Bangladesh	100%	2,026	-	2,026	Sensitive+	WFP
III.1.2	DWA	Primary health care, reproductive health and nutrition service in 21 districts	100%	6,559	6,559	-	Sensitive+	
III.1.2	MoA	Smallholder Agricultural Competitiveness Project	2%	588	-	588	Sensitive+	NA
III.2.1	DPHE	Establishment of Environment friendly solar run water desalinisation unit for supplying safe water	75%	2,405	2,405	-	Sensitive	

Sub programme ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Allocation over CIP2 Period			Nutrition weight	DP
				Total	GoB	DP		
III.2.1	DPHE	Extension and development of water supply and sanitation system of Choumohoni pouroshova in Noakhali District	75%	1,141	1,141	-	Sensitive	
III.2.1	DPHE	Revitalization of the productive tube-well of pouroshova of the whole country	100%	1,179	1,179	-	Sensitive	
III.2.1	DPHE	Strengthening of the water quality testing system	100%	5,963	5,963	-	Sensitive	
III.2.1	DPHE	Supply of safe water and sanitation to all other the country	75%	60,166	60,166	-	Sensitive	
III.2.1	DPHE	Supply of safe water and sanitation to Mothbaria upazila of Pirojpur District	75%	893	893	-	Sensitive	
III.2.1	DPHE	Supply of safe water and sanitation to the rural area of Jogonnathpur upazila of Shunamganj District	75%	2,050	2,050	-	Sensitive	
III.2.1	DPHE	Supply of safe water and sanitation to the rural area of South Shunamganj upazila of Shunamganj District	75%	2,064	2,064	-	Sensitive	
III.2.1	DPHE	Supply of safe water and sanitation to various villages of Khagrachori District	75%	1,580	1,580	-	Sensitive	
III.2.1	DPHE	Water supply and Sanitation to 30 pouroshova of Bangladesh	75%	29,227	1,327	27,901	Sensitive	IDA, AIIB
III.2.1	DWA	Green climate fund for coastal people to combat salinity due to climate change	50%	1,908	1,908	-	Sensitive	
III.2.3	DPHE	Establishment of Environment friendly solar run water desalinization unit for supplying safe water	25%	802	802	-	Sensitive	
III.2.3	DPHE	Extension and development of water supply and sanitation system of Choumohoni pouroshova in Noakhali District	25%	380	380	-	Sensitive	
III.2.3	DPHE	Supply of safe water and sanitation to all other the country	25%	20,055	20,055	-	Sensitive	

Sub programme ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Allocation over CIP2 Period			Nutrition weight	DP
				Total	GoB	DP		
III.2.3	DPHE	Supply of safe water and sanitation to Mothbaria upazila of Pirojpur District	25%	298	298	-	Sensitive	
III.2.3	DPHE	Supply of safe water and sanitation to the rural area of Jogonnathpur upazila of Shunamganj District	25%	683	683	-	Sensitive	
III.2.3	DPHE	Supply of safe water and sanitation to the rural area of South Shunamganj upazila of Shunamganj District	25%	688	688	-	Sensitive	
III.2.3	DPHE	Supply of safe water and sanitation to various villages of Khagrachori District	25%	527	527	-	Sensitive	
III.2.3	DPHE	Water supply and Sanitation to 30 pouroshova of Bangladesh	25%	9,742	442	9,300	Sensitive	IDA, AIIB
III.2.3	LGD	Scaling up Sanitation Market Systems in Bangladesh-SanMarkS phase-2	100%	1,346	244	1,102	Sensitive	SDC, UNICEF
IV.1.1	DWA	Green climate fund for coastal people to combat salinity due to climate change	50%	1,908	1,908	-	Supportive	
IV.2.1	DSS	Driving programme for the women of 5 districts for their livelihood development	100%	1,241	1,241	-	Sensitive	
IV.2.1	DSS	IGA training for women of several upazilas in Faridpur and Rajbari district	100%	818	818	-	Sensitive	
IV.2.1	DSS	Training programme for poor people for improved livelihood in Lalmonirhat district	100%	620	620	-	Sensitive	
IV.2.1	DWA	Investment component for vulnerable group development programme	100%	10,595	10,595	-	Sensitive	
IV.2.1	LGED	Rural employment and road development programme (3rd phase)	100%	43,167	43,167	-	Sensitive	

Sub programme ID	Implementing agency	Project title	% of project budget allocated to this subprog.	Allocation over CIP2 Period			Nutrition weight	DP
				Total	GoB	DP		
IV.2.1	RDA	Technical study project on sustainable rural livelihood and empowerment of women through expansion of crop seed business model by RDA invented rural women	100%	331	331	-	Sensitive	
V.1.1	BFSA	Institutional Capacity Strengthening project	33%	1,500	1,500	-	Sensitive	
V.1.1	BFSA	Strengthening Capacity of BFSA to enhance food safety standard	100%	601	-	601	Sensitive	JICA
V.1.1	MoFood	Establishment of 7 food laboratories in seven division	100%	10,000	-	10,000	Sensitive	NA
V.1.2	BFSA	Institutional Capacity Strengthening project	33%	1,500	1,500	-	Sensitive	
V.3.1	BADC	Pilot research project for Bangladesh irrigation water management and web-based agriculture information system	100%	1,595	238	1,356	Supportive	NA
V.3.1	BBS	Institutional cooperation between statistics Sweden and BBS	100%	933	933	-	Supportive	
V.3.1	BBS	Monitoring the situation of vital statistics of Bangladesh (3rd phase)	100%	2,209	2,209	-	Supportive	
V.3.1	BBS	Population and Household census 2021	100%	5,146	5,146	-	Supportive	
V.3.1	BBS	Strengthening Environmental, Climate change and Disaster statistics	100%	904	904	-	Supportive	
V.3.1	DAM	Strengthening capacity building of DAM in research and policy analysis of agriculture marketing information	100%	647	-	647	Supportive	NA
V.4.1	BBS	National Information Platforms for Nutrition	100%	-	-	-	Supportive	
V.4.1	GED	Institutional Planning Capacity Development to Graduate to Middle Income Country	100%	910	910	-	Supportive	
V.4.1	LGED	Institutionalizing gender equity practices in LGED	100%	702	74	628	Supportive	ADB
V.4.2	BFSA	Institutional Capacity Strengthening project	33%	1,500	1,500	-	Supportive	

Annex 8. CIP2 budget by programme as of 30th June 2019

Pillar	Programme	Total CIP			Financed			Pipeline		
		Total	GoB	DP	Total	GoB	DP	Total	GoB	DP
I: Primary production	I.1. Sustainable intensification and diversification of crop-based production systems	676	471	206	574	409	165	103	62	41
	I.2. Improved access, quality and management of crop agricultural inputs, including water and land	5,475	2,089	3,386	2,652	1,828	824	2,823	261	2,561
	I.3. Enhanced productivity and sustainable production of animal source foods	682	448	234	623	399	225	59	49	10
II: Market & value chain	II.1. Strengthened post-harvest value chain with particular focus on MSMEs (storage, processing, branding, labelling, marketing and trade)	234	106	128	183	98	85	51	8	43
	II.2. Improved access to markets, facilities and information	6,696	5,680	1,016	6,516	5,648	868	180	32	148
III: Diversified consumption	III.1. Enhanced nutrition knowledge, promotion of good practices, and consumption of safe and nutritious diets	139	70	69	127	62	65	12	8	3
	III.2. Optimised food utilization through provision of safe water, improved food hygiene and sanitation	1,281	1,051	231	1,101	917	183	181	133	47
IV: Social protection	IV.1. Timely and effective disaster preparedness and responses through emergency food distribution, steps towards agricultural sector rehabilitation and mitigation measures	1,965	1,129	836	1,962	1,127	836	2	2	-
	IV.2. Strengthened cash and food based programmes for targeted groups across the life cycle including disabled and displaced populations	1,602	1,126	476	1,530	1,054	476	72	72	-
V: Cross-cutting	V.1. Improved food safety, quality control and assurance, awareness on food safety and hygiene	207	153	53	190	150	40	17	4	14
	V.2. Reduced food losses and waste	-	-	-	-	-	-	-	-	-
	V.3. Improved information and data for evidence-based monitoring and adjustment of policies and programmes	146	66	79	131	54	77	15	12	3
	V.4. Improved FSN governance, capacity strengthening and leadership across FSN relevant stakeholders	119	7	113	115	4	112	4	3	1
TOTAL		**19,223**	**12,397**	**6,826**	**15,704**	**11,749**	**3,955**	**3,519**	**648**	**2,871**

Annex 9. Nutrition-weighted CIP2 budget by programme as of 30th June 2019

Pillar	Programme	Total CIP			Financed			Pipeline		
		Total	GoB	DP	Total	GoB	DP	Total	GoB	DP
I: Primary production	I.1. Sustainable intensification and diversification of crop-based production systems	837	398	439	452	309	144	385	90	295
	I.2. Improved access, quality and management of crop agricultural inputs, including water and land	3,878	2,104	1,775	1,577	1,282	295	2,302	822	1,480
	I.3. Enhanced productivity and sustainable production of animal source foods	779	545	233	535	351	183	244	194	50
II: Market & value chain	II.1. Strengthened post-harvest value chain with particular focus on MSMEs (storage, processing, branding, labelling, marketing and trade)	362	202	160	114	82	32	247	119	128
	II.2. Improved access to markets, facilities and information	5,881	5,055	826	4,406	3,927	478	1,475	1,127	348
III: Diversified consumption	III.1. Enhanced nutrition knowledge, promotion of good practices, and consumption of safe and nutritious diets	136	70	66	113	60	53	23	10	13
	III.2. Optimised food utilization through provision of safe water, improved food hygiene and sanitation	658	513	145	658	513	145	0	-	0
IV: Social protection	IV.1. Timely and effective disaster preparedness and responses through emergency food distribution, steps towards agricultural sector rehabilitation and mitigation measures	1,861	1,026	835	1,832	998	835	28	28	-
	IV.2. Strengthened cash and food based programmes for targeted groups across the life cycle including disabled and displaced populations	1,542	1,058	484	1,459	993	466	83	65	19
V: Cross-cutting	V.1. Improved food safety, quality control and assurance, awareness on food safety and hygiene	131	81	50	93	76	17	38	5	33
	V.2. Reduced food losses and waste	-	-	-	-	-	-	-	-	-
	V.3. Improved information and data for evidence-based monitoring and adjustment of policies and programmes	144	55	89	142	54	88	2	1	1
	V.4. Improved FSN governance, capacity strengthening and leadership across FSN relevant stakeholders	118	5	112	115	2	112	3	3	-
TOTAL		**16,326**	**11,113**	**5,214**	**11,496**	**8,649**	**2,847**	**4,831**	**2,464**	**2,367**

Annex 10. Evolution of nutrition-weighted CIP2 2020 financed budget from baseline to MR 2020

In million USD

Pillar	Baseline	Change between baseline & 2016/17	2016/17	Change between 2016/17 & 2017/18	2017/18	Change between 2017/18 & 2018/19	2018/19
I: Primary production	1,210	25%	1,507	26%	1,903	51%	2,866
II: Market & value chain	1,035	38%	1,424	59%	2,260	48%	3,349
III: Diversified consumption	370	37%	508	19.4%	607	57%	952
IV: Social protection	1,508	15%	1,738	21%	2,108	6%	2,232
V: Cross-cutting	76	79%	136	46%	198	34%	265
Total	**4,199**	**27%**	**5,314**	**33%**	**7,076**	**37%**	**9,665**

Annex 11. Budget delivery in the three-year CIP2 implementation

As of 30th June 2019, in million USD

Pillar	1st year (2016/17)			2nd year (2017/18)			3rd year (2018/19)			Cumulative		
	Total	GoB	DPs	Total	GoB	DPs	Total	GoB	DPs	Total	GoB	DPs
I: Primary production	475	395	80	477	378	99	536	429	107	1,488	1,202	286
II: Market & value chain	755	566	189	757	617	140	958	872	86	2,470	2,055	415
III: Diversified consumption	43	23	20	79	64	15	279	235	43	401	322	78
IV: Social protection	302	155	147	536	461	75	555	330	225	1,393	946	447
V: Cross-cutting	39	11	28	74	18	56	131	88	43	244	117	127
Total	**1,615**	**1,151**	**464**	**1,923**	**1,538**	**385**	**2,459**	**1,954**	**504**	**5,997**	**4,643**	**1,353**

Nutrition-sensitive budget delivery in the 3-year CIP2 implementation

As of 30th June 2019, in million USD

Pillar	1st year (2016/17)			2nd year (2017/18)			3rd year (2018/19)			Cumulative		
	Total	GoB	DPs	Total	GoB	DPs	Total	GoB	DPs	Total	GoB	DPs
I: Primary production	352	292	60	353	278	75	398	318	80	1,103	888	215
II: Market & value chain	378	283	94	378	309	70	479	436	43	1,235	1,028	207
III: Diversified consumption	34	19	16	64	51	13	216	180	36	314	250	65
IV: Social protection	194	106	88	331	283	47	332	202	130	857	591	265
V: Cross-cutting	22	7	14	43	12	31	78	56	22	143	75	67
Total	**980**	**707**	**272**	**1,169**	**933**	**236**	**1,502**	**1,192**	**311**	**3,651**	**2,832**	**819**

Annex 12. Budget planned beyond 30th of June 2020

Programme	Total	GoB	DP
I.1. Sustainable intensification and diversification of crop-based production systems	472	277	195
I.2. Improved access, quality and management of crop agricultural inputs, including water and land	2,805	820	1,985
I.3. Enhanced productivity and sustainable production of animal source foods	487	222	265
II.1. Strengthened post-harvest value chain with particular focus on MSMEs (storage, processing, branding, labelling, marketing and trade)	203	48	155
II.2. Improved access to markets, facilities and information	3,523	2,390	1,133
III.1. Enhanced nutrition knowledge, promotion of good practices, and consumption of safe and nutritious diets	86	37	49
III.2. Optimised food utilisation through provision of safe water, improved food hygiene and sanitation	1,428	1,199	230
IV.1. Timely and effective disaster preparedness and responses through emergency food distribution, steps towards agricultural sector rehabilitation and mitigation measures	143	123	20
IV.2. Strengthened cash and food-based programmes for targeted groups across the life cycle including disabled and displaced populations	2,416	298	2,118
V.1. Improved food safety, quality control and assurance, awareness on food safety and hygiene	47	6	40
V.3. Improved information and data for evidence-based monitoring and adjustment of policies and programmes	49	31	18
V.4. Improved FSN governance, capacity strengthening and leadership across FSN relevant stakeholders	9	1	8
Total	**11,670**	**5,453**	**6,216**