Assessment of the Key Bottlenecks for the Coverage of Nutrition Sensitive Interventions and the Underlying Causes

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Acronyms

A&T	Alive and Thrive
AARR	Average Annual Rate of Reduction
ACP	Accelerating Protection for Children
ANC	Ante Natal Care
BBS	Bangladesh Bureau of Statistics
BCC	Behaviour Change Communication
BDHS	Bangladesh Demographic and Health Survey
BMI	Body Mass Index
BNNC	Bangladesh National Nutrition Council
CED	Chronic Energy Deficiency
CFM	Child Faeces Management
CIP	Country Investment Plan
CMRA	Child Marriage Restraint Act
CSPB	Child Sensitive Social Protection in Bangladesh
DD	Dietary Diversity
DGFP	Directorate General of Family Planning
DGHS	Directorate General of Health Services
DPHE	Department of Public Health Engineering
DWA	Department of Women's Affairs
ECM	End Child Marriage
EED	Environmental Enteric Dysfunction
FLW	Frontline Workers
HIES	Household Income and Expenditure Survey
HSSP	Higher Secondary Stipend Project
ICVGD	Investment Component of Vulnerable Group Development
IGA	Income Generating Activity
IYCF	Infant and Young Child Feeding
KII	Key Informant Interview
L&HEP	Lifestyle and Health, Education and Promotion
LBW	Low Birth Weight
LMA	Lactating Mother Allowance
MA	Maternal Allowance
MAD	Minimum Acceptable Diet

MCBC	Mother and Child Benefit Programme
MCRAH	Maternal, Child, Reproductive and Adolescent Health
MDD	Minimum Dietary Diversity
MDD-W	Minimum Dietary Diversity for Women
MICS	Multiple Indicator Cluster Survey
MNCAH	Maternal, Neonatal, Child and Adolescent Health
MOHFW	Ministry of Health and Family Welfare
MOWCA	Ministry of Women and Children Affairs
MTBF	Medium Term Budgetary Framework
NNS	National Nutrition Service
NPAN2	Second National Plan of Action for Nutrition
NSSS	National Social Security Strategy
NSVC	Nutrition Sensitive Value Chains for Smallholder Farmers
PA	Physical Activities
PER-N	Public Expenditure Review on Nutrition
PESP	Primary Education Stipend Project
PNC	Post Natal Care
SBCC	Social and Behaviour Change Communication
SEAR	South East Asia Region
SESIP	Secondary Education Sector Investment Programme
SESP	Secondary Education Stipend Project
SF	School Feeding Programme
SMART	Specific, Measurable, Achievable, Relevant and Time-bound
SSNP	Social Safety Net Programs
VAW	Violence Against Women
VGD	Vulnerable Group Development
WASH	Water, Sanitation and Hygiene
WB	World Bank
WFP	World Food Programme
WHO	World Health Organization

Part 1: Bottlenecks Identified for Coverage of Nutrition-Sensitive Interventions

1. Introduction

1.1 Elements of the Document

This initiative by Bangladesh National Nutrition Council (BNNC) consists of following three components:

1. Assessing the key barriers/bottlenecks[1] for the coverage of nutrition sensitive interventions their bottlenecks and underlying causes;
2. Developing a strategy for improving the coverage and quality of nutrition programs/ interventions; and
3. Developing an appropriate community-based conceptual model for reducing bottlenecks and improving coverage.

It is expected that the initiative will identify a series of recommendations (in the second component) to address the bottlenecks identified in the first component. A number of these recommendations may be regarding policy level, requiring longer time for implementation, while the others may be regarding programme level recommendations and would require shorter time to implement. In the third component of the initiative, a community-level model will be developed on the basis of these shorter term recommendations for piloting and checking the results in improving coverage of nutrition sensitive interventions.

This document focuses on the first component which includes the assessment of current status of coverage of a set of nutrition sensitive interventions of key sectors, identification of bottlenecks and underlying causes of low coverage.

1.2 Overview of the Nutrition Situation and the status of underlying determinants of malnutrition in Bangladesh

Bangladesh has made good progress in improving child and maternal nutrition status over time since last 20 years. This progress especially in child nutrition has been steady and on an upward trend from 2004 to 2007, as stunting rates declined by 8 percent from 51 percent in 2004 to 43 percent (Bangladesh Demographic and Health Survey (BDHS), 2007). However, survey results between 2007 and 2011 (BDHS 2007 and 2011), showed no significant improvements for these indicators as the stunting declined only by 2 percent from 43 percent in 2007 to 41 percent in 2011 (BDHS, 2011), whereas underweight, declined from 43 percent in 2004 to 41 percent in 2007 to 36 percent in 2011. However, BDHS 2017-18 showed tremendous success with level of stunting among children

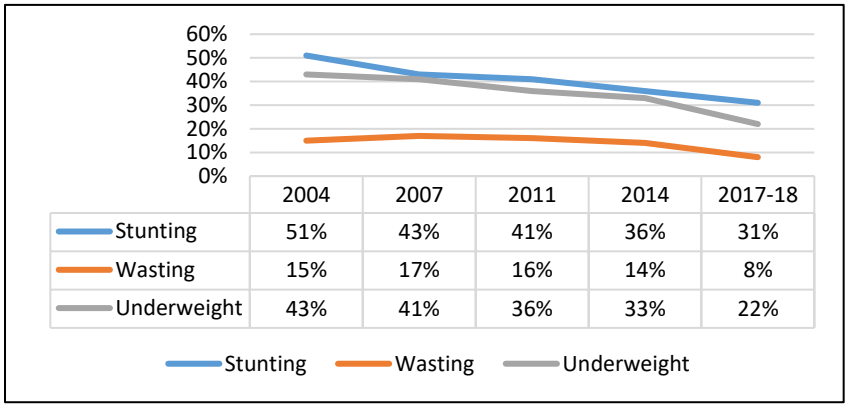


Figure 1: Trends in Nutrition Status Improvement for Children in Bangladesh as per Bangladesh Demographic and Health Survey (BDHS)

[1] Policy, programmatic or external issues that limits the capacity of the nutrition sensitive intervention in benefitting the targeted number of beneficiaries

under 5 declining from 43 percent in 2007 to 31 percent in 2017, underweight declining from 41 percent in 2007 to 22 percent in 2017, and after years of a critically high level of around 15 percent, prevalence of wasting came down to 8 percent in 2017 (BDHS, 2017, 18) (Figure 1).

Although when compared to South East Asia Regions (SEAR), Bangladesh has a lower prevalence of stunting than SEAR average, but a higher prevalence of stunting than the global average (BNNC Annual Monitoring Report, 2019-20).

Critical factors behind Bangladesh's story of change in nutrition are quoted in a six-country study by Nisbett et al, 2017 "Much of the improvement in nutrition in Bangladesh in recent years is explained by what can be seen as nutrition-sensitive drivers within a wider enabling environment of pro-poor economic growth. Key amongst these factors have been improving incomes; smaller family sizes and greater gaps between births; parental - and particularly women's - education and wider health access" (Nisbett et al, 2017).

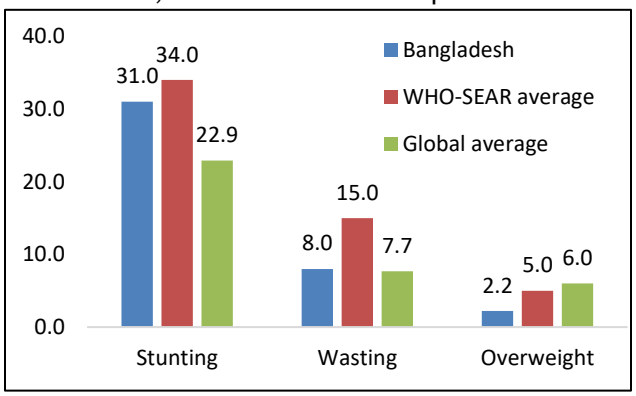


Figure 2: Comparative Progress of Bangladesh in Nutrition Status

Whereas 18.6% of the women of reproductive age in Bangladesh are underweight with a body mass index (BMI) of <18.5 Kg/m2, 23.8% are overweight or obese, with BMI more than 25 Kg/m2. Chronic Energy Deficiency (CED) rate among mothers with Body Mass Index (BMI) less than 18.5 has decreased from 52 percent in 1996-97 to about 30 percent in 2007. While this CED rate at 30 percent for mothers indicates a substantial improvement over time, it is still an issue of public health concern. Particularly, nutritional deficiencies during pregnancy are associated with increased risk of infant Low Birth Weight (LBW) and childhood stunting. Therefore, combating maternal nutritional deficiencies at conception and during pregnancy is high priority to achieve nutritional outcomes. Evidence suggest "Maternal undernutrition, a key determinant of infant and young child under nutrition, remains intractable despite efforts to improve the nutritional status of pregnant women. Maternal anaemia during pregnancy is common in Bangladesh, with serious consequences for both mother and newborn, including increased risk of infant low birth weight and preterm birth, as well as high risk of maternal and perinatal morbidity and mortality. Maternal undernutrition peaked at 38 percent among women aged 15-19 years who have given birth in the past 3 years. Childbearing commonly begins during adolescence, contributing to poor maternal nutritional status and birth outcomes, including high levels of low birth weight infants. Stunting remains quite high among adolescents (27 percent), while overweight and thinness prevalence is around 7 percent and 12 percent respectively (GAIN, 2018). Anaemia and micronutrient deficiencies are common in adolescents, notably vitamin A, zinc, and iodine, and other deficiencies such as calcium are also likely common, since dietary intakes are far below requirements. Hence, although the low birth weight rate has reduced from 36 percent in 2003-2004 to 23 percent in 2016 it is still high.

Though there has been an improvement in quality and diversity of diets consumed by the population, however, diet quality remains below global recommended level, particularly related to consumption of fruits, vegetables, animal-source foods, and pulses. Overall, calorie intake per capita per day has decreased to 2210 Kcal from 2308 Kcal in 2010 (a decrease of about 4 percent) (HIES, 2016). This decrease amount (2210 Kcal) is below the desirable 2430 Kcal/capita/day (Nisbett et al, 2017). This reduction could be attributable to the considerable decrease of rice consumption both in rural and urban areas in 2016 compared to 2010.

According to MICS (2019) survey results, 28 percent among breastfed and 17 percent among non-breastfed children of 6-23 months age group were consuming a minimum acceptable diet (MAD) (MICS, 2019). On

the other hand, the 2017-18 BDHS findings reported that 34 percent of children aged 6-23 months were consuming a minimum acceptable diet (MAD) compared to the 21 percent reported in the BDHS 2011 (BDHS, 2017-18). There exists variation in MAD consumption between different geographical areas as well as in wealth quintiles. With current rate of progress, the NPAN2 target for MAD at 40 percent by 2025 will probably be reached.

Child marriage and early childbearing are common practices in Bangladesh, though the legal age of marriage for girls is 18 years. Age at first marriage has continued to rise slowly due to factors including better education outcomes and enforcement of regulatory instruments. The median age at first marriage among women aged 20–49 years increased from 15.3 years in 2007 to 16.3 years in 2017 (BDHS, 2017-18) which is still too low. Percentage of women aged 20-24 years who were first married before ages 16 and 18 were 32 percent and 59 percent respectively. The rate has remained almost unchanged since 2012-13 (MICS, 2019). Around a quarter (24 percent) of women aged 20-24 years had a live birth before the age of 18 years. Early childbearing has adverse effects on the nutritional status of both mother and child. For example, teenage pregnancy is associated with stunting. The odds of children becoming stunted significantly increase by 22 percent if they are born to a teenage mother. Childhood pregnancy is both a social and nutritional risk for a girl herself and for her future child (WFP, 2019). Children born to young adolescent malnourished mothers are more likely to be malnourished in the future, thus perpetuating the intergenerational cycle of malnutrition.

The Government plans to improve the health of adolescents, young people and teenage couples through facility and community-based approaches. Various nutrition related activities through schools (e.g. micronutrient supplementation, school health, stipend, school meals, making gender friendly WASH infrastructure aiming to improved use etc.) target adolescent girls and could contribute to keeping girls in school. Current notable efforts from Government by engaging the district and upzilla administration and law enforcing forces to lead and work alongside people from different walks of life has created a social movement to stop early marriage. This may potentially delay the age of marriage and first pregnancy, thus breaking the intergenerational cycle of malnutrition and poverty (World Bank, 2019). School attendance can be a strong determinant of achieving higher degree of nutritional status among the next generation. A mother's schooling is associated with better child and own nutritional status; mothers who completed secondary and higher education have less stunted children (18 percent) than mothers with who have no education (47 percent). Moreover, woman's educational attainment is positively associated with their own height. About 18 percent of uneducated women are below 145 centimeters in height compared to 7 percent of women who have completed secondary or higher education (BDHS, 2017-18).

Water, sanitation and hygiene are closely associated with degree of health and nutrition status. Evidence is growing that there is a strong linkage between poor sanitation and hygiene and child undernutrition. A 20-year multi-country analysis revealed that, five or more diarrhoeal infections in the first 2 years of life accounted for 25 percent of all stunting observed. Frequent diarrhoea also increases the severity of wasting in children under five years. Moreover, every five diarrhoeal episodes increased stunting risk by 13 percent. Children were twice as likely to be malnourished if their mothers did not wash their hands with soap after cleaning the child following defecation. Women play a central role in tasks associated with water collection, sanitation, defecation of children, etc. Hence, knowledge and awareness of women of WASH and child faecal management is also relevant to nutrition status of the children.

Though in Bangladesh about 99 percent of households use improved readily available sources of water, either in their dwelling/yard/plot or within a 30-minute round trip, however, these sources are not always safe. For example, 40 percent of tested households, and about 82 percent of the households' drinking water, was contaminated with E. Coli, putting household members more at risk of diarrhoeal diseases and malnutrition. Water sourceslike tubewell are also frequently contaminated with arsenic, manganese. On the other hand, population of coastal belt in Bangladesh are invariably affected with salinity in their water sources, they lack practical techniques and required resources to harvest rain

wate. On the other hand, population of haor area (north-eastern part of Bangladesh) suffer from lack of clean water as well as their sanitation facilities are affected by and large to most population. There is also scarcity of supplies of clean drinking water in urban slums as well.

The percentage of household members using improved sanitation facilities has increased from 77 percent in 2012-13 to 85 percent in 2019 (MICS, 2019). Percentage of households with hand washing facilities where water and soap/detergent were present has also increased from 59 percent to 75 percent during the same period. However, handwashing practices either at household level or at institutional facilities (schools, hospitals, community clinics) are still below the accepted global level in terms of user rate and continuous supplies of water and soaps. As mentioned before, women play the pivotal role in sanitation at household level, including handwashing, hence issues associated in this regard, including educational attainment and knowledge and awareness of women have influence on the handwashing behaviour of household members, particularly children. MICS figures were much higher than BDHS 2017-18 results which show that between 2014 and 2017, the availability of a hand washing station with water and a cleansing agent (including soap) increased from 37 percent to 47 percent. Geographical differences of progress for water quality, sanitation, and hygiene exist.

The 2016 HIES data shows that 27.8 percent of the households have received benefits from Social Safety Net Programs (SSNP) during the last 12 months. A large proportion of poor and vulnerable households do not have access to these programs. Moreover, the targeting is not always proper, and the average demanded size of the benefit is low therefore, the intended impact on poverty reduction from the amount of money spent on these programs is less. . Social Protection Programs offer multiple ways for integrating nutrition considerations. Since women play such a central role in child nutrition are often deprived of economic opportunities/sources of income because of the domestic/reproductive duties traditionally assigned to them, social protection programs are particular vital in filling that gaps in services/resources. Prioritization of targeting for nutritionally vulnerable groups should be an important mechanism to deliver the social protection program's potential nutrition impact. Alongside transfers, a simultaneous behaviour change communication (BCC) campaign can significantly improve the child nutritional status and anthropometric outcomes. Adding BCC to transfers (cash and kinds) leads to an increase in both "diet quantity" and "quality" in terms of household caloric intake, increased consumption of diverse food groups by children, resulting in a significant reduction in child stunting at 7.3 percentage points (Akhter et al, 2019). If this is implemented in in-scale throughout the country by taking all different geographical, economic, social and other local context into consideration, it is likely to positively impact in reduction of stunting.

The slow progress of reduction of stunting and underweight rate have been compounded by negative effect of recent COVID-19 that has increased poverty, created new poor, reduced employment and increased food insecurity, decreased availability of health and nutrition services. These all are reckoned as the underlying causes of malnutrition in Bangladesh. It has been observed that the coverage and access to health and nutrition services have been reduced, with food shortages and substantial deterioration of food security especially among poor. For example, 75 percent of urban slum dwellers have lost their source of income and thus has resulted in 28 percent drop in household food expenditure. Food

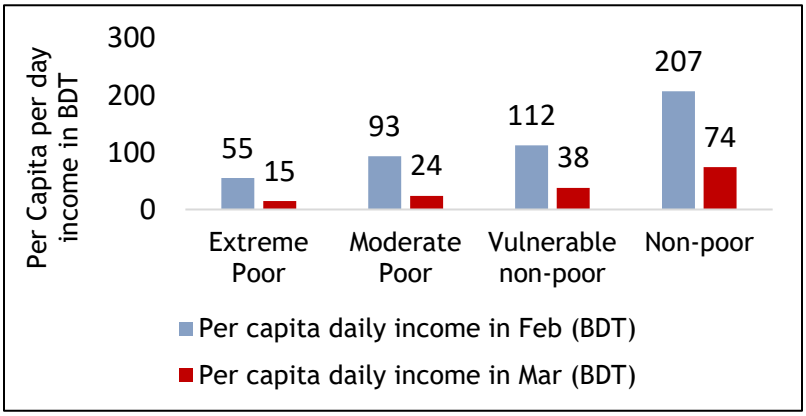


Figure 3: Per Capita Income in February and March for Different Population Group

value chain has been disrupted with 7%-46% increase in price of all varieties of rice. About 25-30 percent of the poor have reduced their expenditure on food, and 70 percent of households are unable to provide a diversified diet to children between 6-23 months. A total of 24 percent urban slums and 15 percent of rural households have reduced their food consumption. Turning back the country economy to normal from now within a short period of time might not be easy and the impact on nutrition is most likely to continue for longer period. It is highly likely that nutrition situation may slide back and probably lose the gain already made as predicted in recently done policy brief by BNNC[2].

The Second National Plan of Action (NPAN2) is in its end of 5th year now at 2020 and it is high time that it has an objective assessment to find an evidence-based answer that is able to reduce malnutrition through its proposed multilevel, multisectoral and multi stakeholders' approach through wider coverage and linkages with other programs through coordination and collaboration.

1.3 Rationale for the Coverage and Bottleneck Assessment

Adequate access to quality services and high coverage of nutrition interventions are key elements for having positive impact of any nutrition programs and on nutritional outcomes of children and women. The relationship between access to nutrition drivers/underlying determinants and stunting is evident as stated before. Inequities in access to services early in the life of a child contribute to the intergenerational transmission of poverty (World Bank All Hands on Deck, 2019). The greatest reductions in stunting are associated with increase in access from none (0) to any one nutrition driver and from any one driver to simultaneous access to any 2 drivers or more (World Bank All Hands on Deck, 2019). The marginal effect on the probability of a child being stunted from access to adequate health only is greater than the marginal effect from access to adequate food and care only or access to adequate WASH only. Total sum effect from daily core living activities including access to food, safe water and hygiene practices, having access to unclean and contaminated water, and linking environment and its effect on health is far greater than having only access to health. Controlling for child, parental, and household characteristics as well as for the geographic location of the household within a country, the probability of stunting associated with having access to adequate health only decreases by 3.0 percentage points, on the other hand, the decrease in the probability of stunting associated with having simultaneous access to adequate health and adequate WASH or adequate health and adequate food/ care ranges from 4.3 to 5.0 percentage points.

Coverage is a product of provision and utilization of interventions, which in turn depend on availability of human resources, supplies, demand and access to services/interventions. Coverage also depends on many factors including systematic outreach approach, generating demand for nutrition uptake community mobilization and public awareness-related programs, high prioritization and coordination (at higher levels) and appropriate integration of services (at lower levels). Furthermore, improving nutrition services and community level systems being supported with basic commodities to provide the full complement of services is also essential. All required inputs activities and outcomes related to coverage and quality would largely depend on overall supportive enabling environment as illustrated in Figure.3. The current coverage rate for nutrition sensitive interventions stated in NPAN2 for example, Infant and Young Child Feeding (IYCF)- especially the complementary feeding practices, minimum acceptable diet (MAD) and dietary diversity of children and women, anaemia, water, sanitation and hygiene (WASH), female education, nutrition sensitive social protection interventions, including women's empowerment interventions are low.

Improving coverage and scaling up of nutrition interventions are required toward improving nutrition outcomes. What else could be a better way to bring a huge number of marginalized population under service provision than get them in evidence based in scale program as the numbers because of population

[2] BNNC, Combating Malnutrition in Bangladesh in the Context of the COVID-19 Pandemic,2020

size are far higher than acceptable level. However, it is revealed in a Lancet report (2013) that, direct nutrition interventions (proven cost-effective nutrition specific interventions), even when scaled up to 90 percent coverage rate, are only able to reduce stunting prevalence by 20 percent and severe acute malnutrition by 60 percent, hence remaining 80 percent of stunting will obviously have to be addressed through nutrition sensitive interventions under relevant sectors (Nisbett et al, 2017).

Furthermore, it was stated that nutrition sensitive interventions (Black et al, 2013) are to be implemented at a scale which reaches the poor who have highest rate of malnutrition. Therefore, an acceleration of the progress toward reducing stunting requires enlisting more sectors in addition to the health sector, such as agriculture; education; social protection; and water, sanitation, and hygiene in the effort to improve nutrition. Large scale '*nutrition sensitive*' interventions in these sectors should only address the key underlying determinants of nutrition effectively but also intensify the role of '*nutrition-specific*' interventions (Black et al, 2013).

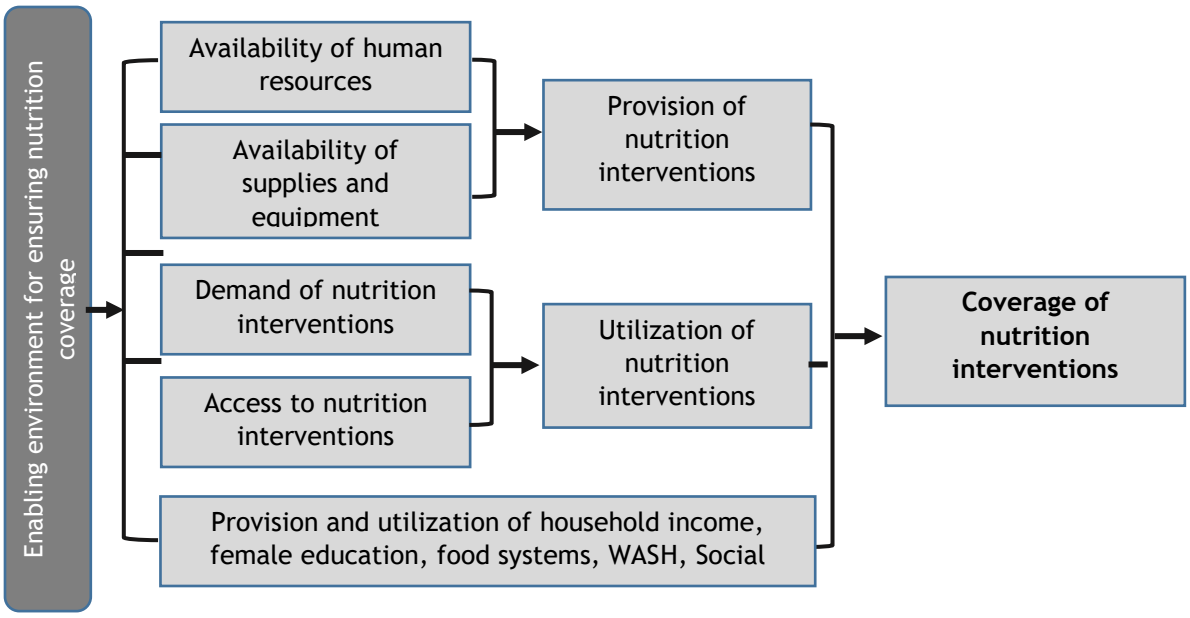


Figure 4: Framework for factors related to coverage of nutrition interventions

Though globally there is good understanding on a set of underlying drivers that are most important for reducing stunting, but their relative importance varies by country. Countries need to identify which underlying drivers matter and they should prioritize based on country context, priorities, capacity, available resources (both financial and human) and relative coverage. Nutrition interventions in Bangladesh have largely been implemented through the health sector which are primarily nutrition specific. These interventions tackle undernutrition by addressing behavioral issues surrounding caring and feeding practices, providing micronutrients, therapeutic/ supplemental foods, and improving access to health care. However, health sector interventions have not been undertaken holistically in a multi-sectoral approach. The study on public expenditure on nutrition (PER-N)[3] in Bangladesh reveals that majority (98 percent) of the money spent for nutrition are spent on nutrition sensitive interventions by fifteen ministries including health. 80 percent of nutrition spending comes from only four sectors (Ministry of food, health and family welfare, primary education and women and children affair) of which only 2 percent of the nutrition spending is on nutrition specific interventions and rest 98 percent is on the nutrition sensitive interventions. This finding is a new understanding contrary to our traditional thinking and belief.

[3] Public Expenditure Review of Nutrition (PERN), 2019

BNNC has decided to focus on nutrition sensitive interventions and underlying factors of malnutrition rather than nutrition specific interventions for assessing their coverage and bottleneck analysis to avoid duplication as similar exercises have either been initiated or already has been undertaken by the government and partners in Bangladesh.

1.4 Methodology

Methodology to obtain information on the bottleneck of nutrition coverage included document review, in-house consultations, expert consultations, and key informant interviews (KII). A workshop followed with the focal points of the projects relevant to the selected indicators with the aim to collect and validate the findings on the bottlenecks.

1.4.1 Document Reviews

Relevant documents around selected indicators of the assessment of bottleneck of nutrition coverage from available secondary and primary sources were collected and put together to make it available to the team responsible to review those. The documents reviewed ranged from in-country evaluation documents of nutrition sensitive interventions, sector specific reviewed policy documents and literature published in well reputed international journals.

1.4.2 In-house Consultations

A core group along with a gender specialist and intern met frequently to cull out the relevant about bottlenecks that formed a basis for further filtration of specific issues for all sectors. mainly those issues that were holding back in-scale expansion of nutrition sensitive programs in the country. The review of adequate numbers of documents provided gaps of statistics between current status of nutrition and expected status as per SDG and NPAN2 goals. However, after few weeks, as this task seemed enormously large it required extra hands to complete this assignment on time, and hence the core group was expanded to form a thematic group.

1.4.3 Thematic Group Discussions

A thematic group drawn from BNNC and partners drawn from WHO, WFP, UNICEF, NI, CARE provided their inputs into the concept note that underwent vigorous review for its content, indicators and proxy indicators selected, objectives and time line in a common table. Rigorous data was collected on specific indicators and often for proxy indicators if those reflected the specific indicators, sectors, list of programs, activities/interventions, coverage budget, current status and bottlenecks. The process included coordinated efforts to have information on the programs and project as well as budget from various ministries.

1.4.4 Key Informant Interviews

To further get in depth information on bottleneck in different sectors, the assigned groups set meetings with the local experts from ministries and NGOs who had been working in relevant sectors in the country. Several consultations were done, the findings were then consolidated to share with the concerned experts. The findings were then consolidated in the preliminary report.

1.4.5 Data Analysis

At the very beginning of the assignment, a set of nutrition sensitive indicators were identified for which the bottleneck analysis was carried out. Once the data collection exercises were completed, the qualitative findings were consolidated around the indicators identified. Afterwards, the findings were further analysed to identify the type and extent of the constraints on the specific indicators.

2. Current Major Project/Programmes with Nutrition Sensitive Interventions

There are a number of projects and programmes in different ministries and departments having nutrition sensitive interventions. Table below indicates some of these projects and programmes that are currently operational. This list does not include the interventions of different OPs, including National Nutrition Service (NNS) and Lifestyle & Health Education and Promotion (L&HEP) under Ministry of Health and Family Welfare (MOHFW). The list also does not include the 132 social safety net programmes (SSNP) as indicated by Ministry of Finance. However, while conducting programme review, MOHFW and SSNPs were also considered in bottleneck analysis.

Table 1: Relevant ongoing projects and programmes having nutrition sensitive activities/interventions

Name of Project/Programme	Implemented By	Components Relevant to Nutrition Sensitivity
Vulnerable Group Development (VGD) Programme	Ministry of Women and Children Affairs	• Food Security • Training on income generating activities (IGA) • Training on health and hygiene
Investment Component of VGD (ICVGD) Programme	Ministry of Women and Children Affairs	• Dietary diversity through fortified rice • Cash support for IGA
Mother and Child Benefit Programme (MCBC)	Ministry of Women and Children Affairs	• Cash support for improved diet of mother and children • Restrain child marriage • Increase breastfeeding • Increase FP
Multisectoral Programme on Violence against Women (4th Phase)	Ministry of Women and Children Affairs	• Restrain gender based violence • Counseling for women and children • Restrain child marriage
Accelerating Protection for Children (ACP)	Ministry of Women and Children Affairs	• Protection of women, adolescent and children • Improved environment for education • Empowering adolescents and increasing awareness on child marriage, gender based violence, eve teasing and sexual harassments
IGA Training for Women	Ministry of Women and Children Affairs	• Increased income and ensure self-reliance of women
Accelerating Action to end Child Marriage in Bangladesh	Ministry of Women and Children Affairs	• Restrain child marriage • Restrain gender based violence
Urban Marginal Women Development Programme	Ministry of Women and Children Affairs	• Training on IGA to ensure income increase and self-reliance
Education Stipend for Disabled Students	Ministry of Social Welfare	• Continuing education for students with disabilities
Rural Social Service Programme	Ministry of Social Welfare	• Poverty alleviation and improvement of livelihood for marginal rural poor • Skills development for IGA

Name of Project/Programme	Implemented By	Components Relevant to Nutrition Sensitivity
Urban Community Development programme	Ministry of Social Welfare	• Poverty alleviation and improvement of livelihood for marginal urban poor • Skills development for IGA
Livelihood development of marginal population in Bangladesh	Ministry of Social Welfare	• Poverty alleviation, income increase
Child Sensitive Social Protection in Bangladesh (CSPB) Phase 2	Ministry of Social Welfare	• Restrain child marriage • Restrain violence on children and gender based violence • Continuing education for children
Secondary Education Sector Investment Programme (SESIP)	Ministry of Education	• School infrastructure improvement • Flexible learning pathways • Improved access & retentions to secondary education
Secondary Education Stipend Project 2 (SESP2), Ministry of Education	Ministry of Education	• Financial incentives for improved access and retentions to secondary education, primarily targeting girls
Higher Secondary Stipend Project (HSSP)	Ministry of Education	• Financial incentives for improved access and retentions to higher secondary education, primarily targeting girls
Primary Education Stipend Project (PESP)	Ministry of Education	• Financial incentives for improved access and retentions to primary education
School Feeding Programme in the Poverty-prone Areas	Ministry of Education	• Increase enrollment and attendance rates of primary school students in food-insecure areas; • Improve health and learning ability of primary school children by reducing micronutrient deficiencies;
Alive and Thrive (A&T)	Implemented by: FHI 360 Funded by: Bill & Melinda Gates Foundation, Global Affairs Canada, Irish Aid, the Tanoto Foundation, and UNICEF	• Community level social and behavior change communication • Community mobilization • Mass media campaign • Micronutrient supplementation (IFA and Calcium)
Income Support Program for the Poorest (ISPP) - Jawtno	Implemented by: Local Government Division of the Government of Bangladesh Funded by: World Bank	• Provide income support to the poorest mothers (conditional cash transfer) • Increase access to health, nutrition and early childhood development services • Strengthen growth monitoring and promotion • Social and behavior change communication • Enhance local level government capacity to deliver safety nets

Name of Project/Programme	Implemented By	Components Relevant to Nutrition Sensitivity
Nuton Jibon Livelihood Improvement Project	Implemented by: Social Development Foundation Funded by: World Bank	• Provide funding for small infrastructure and livelihood support. • Social and behavior change communication on nutrition • Provide knowledge and support for improved agricultural production. • Establish linkage with government's health and livelihood activities.
Nutrition Sensitive Value Chains for Smallholder Farmers (NSVC)	Implemented by: World Vision Bangladesh Funded By: Australian Government through the Australian NGO Cooperation Program (ANCP)	• Increase income through gender and nutrition-sensitive value chain activities • Increase market access • Improve the utilisation and consumption of nutritious food at HH level • Increase learning on nutrition sensitive agriculture
The Aquaculture: Increasing income, diversifying diets and empowering women in Bangladesh	Implemented by: World Fish Centre Funded By: Bill and Melinda Gates Foundation	• Production of micronutrient-rich small local fish • Increasing women's empowerment through the production of fish
Suchana: Ending the Cycle of Undernutrition in Bangladesh	Implemented by: Save the Children and Partners Funded By: EU and FCDO	• Improve nutrition governance • Improve access and utilisation of nutrition services • Improve economic status to enhance nutrition status • Social and Behavioural Change Communications(BCC)

3. Bottlenecks Identified

3.1 Minimum Acceptable Diet (MAD) for 6-23m Children

The percentage of children (6-23 m) receiving MAD[4] increased to 34 percent in 2017 from 23 percent in 2011 (BDHS, 2017-18). 38.7 percent of children within this age group was found to be receiving more than four (4+) food groups, with quite significant urban-rural discrepancy (46 percent in urban and 36.1 percent in rural). This means an average that a higher proportion of urban residents receive more diversified diet than rural population. BDHS 2017-18 data shows highest proportion (46 percent) of children (6-23 months) from Rangpur eat diversified food group while lowest proportion (31 percent) who eat diversified food are reported from Sylhet. More children from the highest wealth quintile were seen receiving 4+ food groups (55.6 percent) as opposed to the lowest wealth quintile (26.7 percent) which is more than double the proportion from lowest quintile. Overall, 75.6 percent of children (6-23 m) was fed as per minimum meal frequency (BDHS, 2017-18), with no so significant rural-urban discrepancy. There were some regional differences found for minimum diet frequency, highest reported in Mymensingh (81 percent) and lowest in Barishal (70.4 percent). The following can be termed as bottlenecks for achieving MAD for children of 6-23 m.

- **Low education attainment of mothers**: BDHS 2017-18 data show that more children (6-23 m) from families with higher educational background of mothers receive 4+ food groups (53.5 percent) as opposed to mothers of children with no educational background who attained minimum food frequency as 18.8 percent. This indicates a strong association between educational background of mothers/caregivers and MAD of children. Available literature also suggests that the likelihood of achieving MAD is higher among the children whose mothers had secondary and higher levels of education (AOR = 3.04, 95% CI = 1.97, 4.71; p < .001) (Sheikh et al, 2019). The assumption here is that educated mothers are well informed about adversities of having malnourished children. Therefore, they focus more on MAD, including Dietary Diversity (DD) than those who are not educated (Arimond and Ruel, 2004). More discussions on linkages of bottlenecks with education of women will follow in the section on the Education and Dropout of Women Section of this document.

- **Low affordability to purchase nutritious food due to various economic factors:** As mentioned above, prevalence of having 4+ food groups, a proxy indicator of MAD is by and large determined by economic factors as a variant, as evident from BDHS 2017-18. Data show more children from the highest wealth quintile having more Dietary Diversity than those from lower quintiles. Poor households have lower purchasing power resulting in inadequate food access to diverse food categories resulting in poor dietary diversity and food intake, which eventually contribute to a child's inadequate dietary intake (UNICEF, 2020). According to WFP, at least one in eight (13 percent) households cannot afford to meet their nutrient needs (WFP, 2016). The minimum cost for a household to consume a nutritious diet calculated as a basis for comparison (174 Bangladeshi Taka - BDT) is more than twice as high as that calculated for meeting energy needs only (80 BDT) (WFP, 2019). From a study conducted in Sylhet Division (the area with the lowest DD as per BDHS 2017018), it was seen that large household size along with poverty can be one possible reason for limited dietary diversity, since these households cannot purchase anything beyond the energy only diet (Rana et al, 2019). In times of household crises, extremely poor often cut back on meals, particularly expensive items such as meat, fish, milk, fruit and vegetables, in favour of cheaply available rice (Nisbett et al, 2017)). The rural-urban disparity in MAD is also linked to affordability, with extreme poverty in rural areas remaining a big

[4] Prevalence of MAD indicate percentage of children 6-23 months who have met both minimum dietary diversity (4 and more food groups) and minimum meal frequency (more than three meals per day)

challenge (Nisbett et al, 2017). The ongoing COVID-19 pandemic is further exacerbating the situation. This issue is further discussed in the Social Safety Net section of this document. X

- **High price of nutritious food**: Bangladesh has achieved self-sufficiency in rice demand, and most recently also in meat and fish production (BER, 2018), thanks to substantial efforts by government and communities. However, when availability of supply is compared to recommended consumption based on the Bangladeshi Dietary Guidelines, the current supply is low for vegetables, fruit, milk and other nutritious foods (BBS, 2017). The World Bank finds that the price of nutritious foods in Bangladesh has been increasing steeply over time than the price of cheaply available staples. Additionally, price of cheaper staples is even higher in Bangladesh than its neighboring countries (World Bank, 2019). However, improvements in supply chains may increase availability of specific food types, but may not necessarily increase the nutrient value within the food type. For example, the fish species farmed in ponds have lower nutritional value compared to captured fish species, resulting in a decrease of micronutrient intake from fish over recent years despite increased fish consumption (Bogard et al, 2017).

- **Over-reliance on rice for total calorie intake:** The consumption of rice is a long standing practice and custom and is embedded in culture, family practice, taste and therefore it has even been transcended onto politics and economy in Bangladesh. Rice is not only a production of the country but its production processes also are able to engage employment for 48% of the rural population, as almost all of the 15 million farms in the country grow rice, and more than 70 percent of cropped area of the country is accounted for rice production (Nasim et al, 2017). There is a clear policy bias that favours rice production in the country to achieve the accessibility of food in terms of increasing rice production, while this has a partial impact on decreased production of crops like pulse and oilseeds (Naher et al 2014). At present, the calorie intake of Bangladeshis – 2,210 kilocalories in a day – is close to the global average of …… kilocalories in a day. However, nutritional deficiencies continue because of deficiency in animal protein and higher dependency on rice (HIES, 2016). (Technical Report on Food Packages for Disaster Affected Population, April, 2020). Rising carbon dioxide emission is going to make Bangladesh's staple food crops less nutritious and increased salinity in the coastal zones might also alter the micronutrient content of foods, including rice, which may become deficient in zinc and other micronutrients (WFP, 2016).

- **Inadequate public resource allocation for dietary diversificatio**n **interventions**: The NPAN2 includes a component on agriculture and diet diversification and locally adapted recipes, which covers food fortification; food processing and storage; and food security, safety and quality. All these aspects are also covered in the Second Country Investment Plan (CIP2).The recently concluded PER-N, however, indicates that the alignment between the Ministry of Food's objectives and those in NPAN2 should be strengthened. The Medium Term Budgetary Framework (MTBF) of Ministry of Food talks about sufficient and safe food, however, does not discuss about diversification. Food grains in MTBF includes rice and wheat only, which is not sufficient to ensure the DD as prioritized in NPAN2. Ministry of Food accounts for around 3.7 percent of government budget, most of which is for non-development budget and ensuring supply chain of food (procurement, import and distribution). However, the focus is on rice and wheat only. The largest 20 project/operational lines for nutrition in Bangladesh accounted for 81% of expenditures in the PER-N, and one third was for procurement of rice and wheat and subsidy for OMS, again, not ensuring the required DD.

- **Inadequate knowledge and awareness of male household members**: Lack of sufficient knowledge about safe nutrition practices in poor households leads to inadequate care and feeding practices for children, which, in turn, contribute to a child's inadequate dietary intake

(UNICEF, 2020). Study suggest that SBCC interventions improve mothers' behaviour of feeding children of 6-23 months, including MAD, MDD and minimum meal frequency (Hoddinott et al, 2017). In line with this, there have been a number of SBCC interventions from different ministries of government, as well as from development agencies and NGOs. Due to the prevailing socio-cultural context, men are the predominant decision maker for household food purchase in Bangladesh (Schaetzel et al, 2014). In case of adolescent or young mothers, women have little power within the household, as mother-in-laws and other household members are the gatekeepers for critical decisions, including purchase of food (SHIKHA, 2016). So, to improve Dietary Diversity to ensure optimum MAD of children depends on the awareness of these decision makers and gatekeepers to ensure diversified and adequate food in the households. Study suggests existing misconceptions around consuming a diversified diet (e.g. certain foods can cause indigestion/breathing problems) and a lack of full understanding of the benefits, as well as perceived difficulty of remembering to include foods from different food groups (Rana et al, 2019). However, nutrition interventions, particularly SBCC interventions always targets mothers, and sometimes do not include these important decision makers as target audience (NI, 2020).

- **"Less Nutritious Food" being more attractive and affordable**: In Bangladeshi food culture the consumption of rice and sugar are part of social life. Increasingly urban lifestyles, advertising and time-poverty lead to the higher consumption of convenience foods which contributes to the over-consumption of salt, sugar, oil and rice (WFP, 2019). By contrast, higher prices, time-intensive preparation of nutritious foods, and concerns over contamination and adulteration of fresh and processed foods, contribute to low consumption of fruit, vegetables and animal source foods. Most of the highly nutritious foods, especially green leafy and other vegetables, have a low social status and are considered to be food of the poor. With increasing wealth, the demand for meat, milk and fruit is predicted to increase by 20 to 25 percent over the next 10 years, while, the demand for vegetables predicted to grow by only 5 percent over the same period (Ganesh-Kumar, Prasad and Pullabhotla, 2012). Unless actively encouraged and enabled, an increase in wealth might not translate into healthier, balanced diets. Unhealthy dietary habits increase the cost and reduce the affordability of a nutritious diet. The FNG analysis of WFP modeled the implications of over-consumption of rice at the current level (367g per capita per day) and daily snacking (sweet and savory) (WFP, 2019). These dietary choices increase the cost of a nutritious diet by up to 40 percent and reduce the proportion of households that can afford a nutritious diet from 87 percent to 59 percent.

3.2 Minimum Dietary Diversity for Women (MDD-W)

The guideline on Minimum Dietary Diversity for Women (MDD-W) was developed and released by the FAO of the United Nations and FHI 360 in 2016; it proposes a simple dichotomous indicator to assess the dietary quality of women of reproductive age at the population level (FAO, FHI360, 2016), replacing the earlier 9 food groups score (Ruel, Deitchler and Arimond, 2011). As per the CIP2, MDD-W for women was 46 percent in 2015, though this was calculated for 5 out of 9 food groups, and the target set has been 75 percent by 2030, for 5 out of 10 food groups. Not much information regarding MDD-W is known, particularly the geographical difference, rural-urban segregation and differences due to education and wealth.

Majority of the bottlenecks discussed in the MAD section are also applicable for MDD-W, since these bottlenecks have impact on the overall dietary diversity of the household. Particularly education/schooling of mother/caregivers, economic conditions of the household, policies favouring rice, and lifestyle and environment act as bottleneck for dietary diversity of the entire family, including that of women. Specific bottlenecks for MDD-W are discussed below:

- **Unavailability of data:** Unlike MAD or MDD for children, MDD-W is not covered by the major national level surveys or assessments. For example, it is not included in BDHS, BMMS or SVRS. HIES discusses about dietary diversity of the households, however, does not differentiate on gender. Availability of academic papers and research articles is also quite insignificant in case of MDD-W, in comparison to the overall MDD of the family or MDD for children. Due to such unavailability of appropriate data on MDD-W, the issue, hence, often does not receive its just importance.

- **Status of women in the family not strong to make decision on dietary diversity:** A study by Sinharoy et al found positive association between women's voice within the family, particularly with the husband with dietary diversity (Sinharoy et al, 2016), implying, increased bargaining power of women in the household, enables them to negotiate improved diets for themselves. Voice with husband acts, in this case a proxy for women's relative bargaining power. Moreover, it also acts as proxy for control over household resources, in which, women, particularly rural women and adolescent mothers have limited control in comparison to their mother-in-laws and husbands (Shikha, 2016). Although Bangladesh has recently experienced significant women economic empowerment, however, there are miles to go for raising the appropriate voice of women in the household acknowledged by the husbands, particularly in case of rural women and married adolescent girls. Moreover, women still suffer from unequal distribution of food when there is not enough food for the family (WFP, 2016). These can be explanations for the low MDD-W as indicated in CIP2. There are many development programmes working on women's economic empowerment, voice and rights, however, not many programmes or interventions have linked women's voice being heard with MDD-W.

- **Inadequate enforcement of labour act and implementation of maternity benefits for working women in the private sector**: One of the drivers for the recent economic growth of Bangladesh is the increased women involvement in the labour force, particularly in readymade garments sector and informal sector (CPD and MJF, 2015). Paid maternity leave have been introduced in Bangladesh to support working women during their pregnancy and postnatal period. Bangladesh labour Act mandates provision of 16 weeks maternity leave with full payment as maternity benefit for any women being employed for at least six months in the establishment (Bangladesh Labour Act, 2006 and Amendment 2018). However, in the garment sector, most women are seen restricted to leave their jobs after the birth of their children and if they start work again in the same factory they have to start as new employees with lower wages and salaries instead of returning to their former positions; and some owners provide leave to their employees but do not pay them as per the provisions of the Law (Zuhra, 2016). Around 97 percent of the 1.21 crore working women engaged in informal sector are completely out of reach of this benefit as specified in the labour act. Enforcement of this aspect of act in ensuring maternity benefits is, to some extent, inadequate by the relevant enforcing agencies.

3.3 Low Birth Weight

According to the National Low Birth Weight Survey, 2015, the prevalence of LBW is 22.6 percent among the newborns, which is the baseline status against this indicator in NPAN2. There is no significant difference in the prevalence considering the rural-urban segregation (22.6 percent and 22.9 percent respectively). For urban areas, the tendency of LBW is higher among slum dwellers (23.9 percent) than the non-slum dwellers (22.1 percent).

A number of issues, as discussed under MAD and MDD-W are also responsible LBW for newborn in Bangladesh, particularly the economic status of households and education/schooling of mothers. Kabir et al (year) also showed the specific impact of women empowerment on overall maternal nutrition in

general and LBW in newborn in particular (Kabir et al, 2020). Some specific bottlenecks for LBW in newborns are described below:

- **Early pregnancy resulting from child marriage:** Almost all the available relevant literature found strong correlation of child marriage and early pregnancy with LBW of newborns. The National LBW Survey, 2015 identified a high proportion, i.e. 69.8 percent getting married before 18, the legal age of marriage, with the prevalence slightly higher in urban areas (70.4 percent) and higher for urban slums (73.0 percent). The prevalence is particularly high for urban areas of Sylhet in which around 89 percent of the women got married before the age of 18 years. BDHS, 2017-18 found the rate of child marriage being stable at 59 percent for last three years. A matter of concern is that 31 percent of the women got married at the age of 15 as per BDHS, 2017-18. Early marriage leads to early pregnancy, as evident from BDHS, 2017-18, indicating 27.7 percent of teenage girls of 15-19 years bear a child, and 21.7 percent already had a live birth. According to the UNICEF Report titled "Ending Child Marriage: A Profile of Progress in Bangladesh", 2020, Bangladesh has the highest prevalence of child marriage in South Asia and ranks among 10 countries in the world with the highest levels. This proves that the prevailing interventions in the country to prevent child marriage is not very effective. Although government of Bangladesh have enacted Child Marriage Restraint Act, 2017 (CMRA) repealing the earlier British law of 1929, CMRA itself has significant limitations. These are further discussed in the "Child Marriage and Early Pregnancy" section in this document.

- **Current interventions does not adequately ensure adolescent nutrition:** Considering the high prevalence of child marriage and early pregnancy, adolescent nutrition is very important. However, as per UNICEF data, around 29 percent of adolescent girls in the country are malnourished. A GAIN study identified more than half of females (10-49 years) have inadequately diverse diets, resulting into high prevalence of anaemia and micronutrient deficiency (GAIN, 2018). The same study identified adolescent girls (10-16 years) are at least twice as likely as boys (10-16 years) sleep hungry, skip meals, and take smaller meals, and one-and-a-half times more likely eat only rice, as coping strategies during food insecurity. Moreover, a World Bank study identified high prevalence of moderate to severe thinness among early adolescent girls, and a trend toward increasing rates of overweight and obesity among older adolescents in an interval of only three years (The World Bank, 2019b). These indicate the present adolescent nutrition interventions not achieving the expected results to ensure the adolescent nutrition status. The recent MTR of UNICEF-Government of Bangladesh Nutrition Programme identified inadequate provisions for adolescent nutrition, and more specifically for urban adolescent nutrition (UNICEF, 2020).

- **Shortage and high workload of health and nutrition frontline providers:** Majority of the preventive interventions for LBW (e.g. those under NNS, Maternal, Neonatal, Child and Adolescent Health or MNCAH and Maternal Child Reproductive and Adolescent Health or MCRAH under MOHFW, and MA, LMA and MCBP programmes under Ministry of Women and Children Affairs (MOWCA)) are in the areas of nutrition counseling, weight monitoring and micronutrient supplementation. NNS, has the main responsibility of implementation of these activities. However, without its own Field Level Workers (FLW), NNS depends on DGHS and DGFP to utilise the CHCP, HA and FWA for implementation of these activities. Since these FLWs of DGHS and DGFP have their own departmental priorities, often, nutrition interventions are accorded low priority by them (NI, 2020). Limited number of FLWs resulted from high vacancy of approved positions (HR Branch, 2019) may also be a factor in this regard. Moreover, there is no incentive (monetary or non-monetary) scheme to incorporate these activities into their regular activities, which has been identified as a bottleneck by a study of Alive and Thrive (Ash et al, 2017). In addition, there is a high turnover among FLWs, supervisors and management and leadership at national and sub-national levels which impedes maintaining a shared understanding and

commitment to improving LBW rate through improvement of maternal nutrition (Ash et al, 2017). Department of Women Affairs (DWA) have nutrition counseling as a priority for Mother and Child Benefit Programme (MCBP), however does not have any FLW and depends predominantly on Directorate General of Health Services (DGHS) and Directorate General of Family Planning (DGFP) for counseling.

3.4 Overweight/Obesity among Women of Reproductive Age

BDHS 2014 measured the BMI of ever-married women of reproductive age, i.e. 15-49 years, although this variable was dropped for BDHS, 2017-18 survey and hence that makes a comparison difficult. As per BDHS 2014, 23.8 percent of ever-married women of reproductive age are overweight or obese. Among them, 19.4 percent are overweight (Body Mass Index or BMI 25-29.9) and 4.4 percent are obese (BMI ≥30). Mean BMI among ever-married women of reproductive age was found to be 22.3 in BDHS 2014, which was 21.4 in BDHS 2011 and 20.6 in 2007, indicating an increase in this factor. Moreover, prevalence of overweight or obesity among women of reproductive age was found to be increased from 17 percent in BDHS 2011 and 12 percent in BDHS 2007 to the aforementioned 23.8 percent in 2014. There was a significant rural-urban difference seen in BDHS 2014 in this indicator, with the prevalence in urban areas being 36.4 percent. There was also a significant regional difference found, with highest prevalence of BMI ≥25 in Khulna division (27.9 percent) and lowest in Sylhet (15.2 percent). A strong relationship was also seen between education and BMI ≥25, as 40 percent of women having secondary or higher education were overweight or obese. 46.7 percent of those from the highest wealth quintile were found to have BMI ≥25, whereas this figure was only 8.4 percent in case of the lowest wealth quintile. Prevalence of overweight or obesity was found to be higher among older women (30.4 percent among women of 30-39 years age group and 27.5 percent among women of 40-49 years age group) than the younger women (7.1 percent in 15-19 years age group and 20.2 percent in 20-29 years age group).

Studies identified multiple factors contributing to the increased prevalence of overweight/obesity in urban populations, including the presence of modern transport and communication facilities that have limited physical movement to spend calorie to stay fit by reducing weight, increased availability of technology, easy accrual of energy-rich food, reduced levels of physical activity and adoption of sedentary lifestyle (Hashan et al, 2020; and Monteiro et al, 2004). Bottlenecks for nutrition programmes addressing the prevalence of overweight and obesity among women of reproductive age are described below:

- **Insufficient SBCC interventions to address overweight/obesity issues of women:** Apart from L&HEP, the prevalence of SBCC activities focusing on reducing overweight/obesity in women of reproductive age is not that significant in Bangladesh. Some of the development programmes have a few SBCC activities focusing on obesity issues of women, however, those are often not highlighted as intensively as other nutrition-related SBCC activities.

- **Quality of SBCC interventions to address overweight/obesity issues of women**: The Lifestyle and Health Education and Promotion (L&HEP) OP under 4th HPNSP is probably the most relevant programme to address the overweight/obesity among women of reproductive age in Bangladesh. The programme focuses on behaviour change and adoption of healthy lifestyles through print, mass media and local drama. Various activities have been implemented in this work to promote, among others, adoption of healthy diet, exercise and healthy lifestyle. The recent MTR of 4th HPNSP appreciated the interventions under this programme, however, recommended the focus of the SBCC interventions to be targeted towards young as they are more open to taking up healthy lifestyles and continuing with them into adult hood (MTR, 2020). Currently, the SBCC activities of this programme are more open, following a wide range of methods and tools, which might not necessarily target the youth. MTR also indicated that the quality of these SBCC activities is quite unclear and the impact on the lifestyle of the citizens is not known (MTR, 2020).

- **Inappropriate dietary habits of working women in Bangladesh:** As mentioned before, obesity was found to be more prevalent among urban women (36.4 percent in urban areas in comparison to 18.8 percent in rural areas as per BDHS, 2014) of 30+ age group (30.4 percent in this group, in comparison to 20.2 percent in 20-29 years age group and 7.1 in 15-19 years age group as per BDHS, 2014), as more of working women are in urban cities. A study conducted by Begum et al found significant relationship of dietary and sedentary behaviour of working women in urban areas and obesity. The study revealed that skipping breakfast three or more times was detected to be a risk factor of obesity (P = 0.00), and that skipping main meal once, twice, or more per week was also another risk factor of obesity (P = 0.02) (Begum et al). The possible reason may include that those who do not eat early in the morning may feel hungry later and consume higher calories during office time and evening hours than those who eat consistently throughout a day. The study also identified consuming fried or fast food as another potential cause of obesity among the urban working women. Prevalence of physical activities was found to be very low among the urban working women, and could be correlated strongly with the BMI increase (Begum et al, 2020). Bangladesh is observing a fast-paced economic growth along with a shift towards western culture of food intake, especially processed foods or diets containing more fats and refined sugars, which was also cited as one of the risk factors of obesity for urban women in Bangladesh (Ali et al, 2020).

- **Overreliance on oral contraceptive pills:** The use of hormonal contraceptives could be one of the reasons for the higher risk of overweight and obesity among married women (Mkuu et al., 2018). Hormonal contraceptives increase fluid retention that may lead to increase weight gain (Morotti et al., 2017). According to BDHS 2017-18, oral contraception pill is the most widely used contraception method among married women in Bangladesh (25.4 percent). A study identified married women in Bangladesh using oral contraceptive pills citing weight gain as a direct side effect (Khan and Zarifa, 2014). So, adoption of oral contraceptive pills as contraception method can be one possible bottleneck in addressing overweight/obesity among married women in Bangladesh.

- **Impact of sedentary behaviour of women in Bangladesh**: A study by Ghose established an interesting causality between obesity and TV watching among women in Bangladesh. The study identified that the odds of being obese among rural women were 68% (AOR 1.683, 95% CI 1.029 to 2.751) higher among women who watched TV at least once a week compared to those who did not watch TV at all. Urban women who watched TV at least once a week were 67% more likely to be obese (AOR 1.665, 95% CI 1.079 to 2.568) compared to those who did not watch at all (Ghose, 2017). This can be associated with the sedentary behaviour while watching TV or being engaged to similar entertainment devices that restricts physical activities of the individuals and thus lead to obesity. Similar result was also seen in the study of Begum et al in case of urban working women (Begum et al, 2020).

3.5 Childhood Obesity

MICS, 2019 included indicator to measure the prevalence of overweight and obesity of under 5 children, although the study did not include the same for school-going children. According to MICS, 2019, 2.4 percent of under 5 children in Bangladesh are overweight and 0.8 percent are obese. The prevalence is significantly high in urban areas (4.8 percent in +2SD and 1.8 percent in +3SD) than in rural areas (1.8 percent in +2SD and 0.5 percent in +3SD). Both the prevalence of overweight and obesity among under 5 children is high in Dhaka division (4.7 percent and 1.8 percent respectively), while Sylhet has the lowest of prevalence (1 percent and 0.1 percent respectively) for obesity for under 5 children. Children from mothers having higher education have more prevalence of being overweight or obese (4.2 percent and 1.7 percent respectively) than mothers having lower educational attainments. Those from the highest

wealth quintile have more prevalence of being overweight or obese (5.4 percent and 2 percent) than those coming from other wealth quintiles.

As mentioned before, there is no national survey on the BMI of school children. However, a study conducted by Bulbul and Hoque on more than 10,000 primary and secondary school students in 2014 sheds some light on the issue. According to this study, 9.6 percent of the primary and school students in Bangladesh are overweight, while 3.5 percent are obese. The prevalence was found to be more among boys (11.7 percent overweight and 3.8 percent obese) than the girls (7.4 percent overweight and 3.2 percent obese). The prevalence was more prominent in urban areas for both overweight and obesity (10.6 percent and 5.6 percent respectively) than the rural areas (8.6 percent and 1.2 percent) (Bulbul and Hoque, 2014).

Bottlenecks in addressing overweight and obesity issues among children are discussed in the subsequent sections.

- **Lack of awareness of mothers and caregivers on adverse effect of obesity**: There is a strong correlation between mother/caregivers' awareness and obesity of children. Hossain et al. showed that around 69 percent of mothers in Bangladesh are not aware of any health consequences of childhood obesity. Moreover, there is a tendency to consider childhood obesity in developing countries as a sign of healthiness and high social class (Kelishadi, 2007), which can also contribute to the misconception amongst mothers.

- **Over-indulgence of junk food by Urban Children:** There is an increasing trend of obesity associated with the junk food[5] (Epstein et al, 2012), particularly, with the consumption of food and beverages with high saturated fat, sugar and salt. Similar trend is also visible in Bangladesh, with children from affluent urban families frequently visiting fast food restaurants, which is again associated with parent's social status and family income (Bhuyan and Urmi, 2019). Studies suggested that 40 percent of school children in urban areas (Habib et al, 2020) consume fast food at least once a week. In case of urban adolescents, the prevalence is even higher, around 69 percent (Banik et al, 2020).

- **Unavailability of playgrounds and open spaces for urban children**: Physical activities among school going children, particularly in urban areas is in a declining state (L&HEP OP, 2016). A Save the Children study identified non-availability of open space and playground, pressure of study, and lack of security are the major obstacles for the children to enjoy right to play in urban areas. 46.9 percent of children in Dhaka city alone were not able to play outdoor games such as football and cricket due to excessive pressure of study and 34 percent due to lack of open spaces (Save the Children, 2018). On the contrary, children are more addicted to indoor-based video games or electronic devices to pass their leisure time, which is further worsening the situation, as sedentary behaviour is highly associated with such indoor games. Dhaka, the biggest urban city in the country, has less than 0.052 m^2 per capita open green space in comparison to WHO recommendation of 9 m2 (WBB Trust, 2015). A study of Bangladesh Institute of Planners (BIP) indicated availability of only 235 playgrounds in Dhaka city, whereas the minimum requirement is 1,071 playgrounds, implying that 84 percent people of the city having no access to open spaces. However, the BIP study suggests only 42 playgrounds of these 235 are accessible for citizens, while the remaining are being used for other activities (BIP, 2019).

- **Limited physical activities at schools:** Physical activity (PA) confers a multitude of health benefits. Unfortunately, Bangladeshi school children get little PA. A study identified PA was not prioritized at most schools for two primary reasons: 1) there was a general lack of understanding of the importance of PA; and 2) physical education classes did not contribute to grades (Hasan

[5] Calorie dense and low nutrient food and beverage

et al., 2020). Little time and resources are allotted for physical education classes because little priority was given to PA by school authorities. Further, there are social barriers to PA including lack of parental support due to concerns about tiredness and injury and the perception that PA is detrimental to academic achievement of their children (Hasan et al., 2020).

3.6 Early Marriage and Early Pregnancy

The legal age of marriage for women in Bangladesh is 18, but a large proportion of marriages still take place before the woman reaches her legal age. The BDHS, 2017-18 found that 58.9 percent of women (age 20–24) were married before age. The population percentage for women getting married before 18 for rural to urban segregation does not differ much, as it is slightly tilted to rural areas (60.7 percent) than urban areas (54.6 percent). Division-wise, highest percentage of ever-married women getting married before 18 was found to be in Rajshahi (70.1 percent) and lowest in Sylhet (35.4 percent) in BDHS 2017-18. The prevalence was found to be significantly high among those having no education (75 percent), incomplete primary education (75.1 percent), than in complete primary education (70.5 percent). The prevalence was also seen more in lower wealth quintile than higher ones, with the highest in the lowest wealth quintile (74.2 percent) (BDHS, 2017-18). Early marriage leads to early pregnancy, as evident from BDHS, 2017-18, indicating 27.7 percent of teenage girls of 15-19 years bear a child, and 21.7 percent has a live birth. Similar to early marriage, early pregnancy was seen more prominent in Rajshahi division (32.7 percent), among low education group and in low wealth quintile (36.5 percent) (BDHS 2017-18).

Although there are quite a number of development interventions to address early marriage and early pregnancy in Bangladesh, however, these interventions are facing quite some challenges, which are discussed below.

- **Inappropriate budgetary allocations to restraint child marriage**: The Ministry of Women and Children Affairs (MoWCA), with UNICEF support, has led to the creation of Bangladesh's first National Plan of Action (NPA) to End Child Marriage (ECM). ECM relates to a total of 64 development programmes and projects, including seven development programmes and 57 projects in the development budget, all funded out of the recurrent budget (BBS and UNICEF, 2017). The total revised budget amounts to nearly 138 billion taka (1754 million USD) for the period of FY2010/11-2015/16, or almost 23 billion taka (292 million USD) per annum. However, the current size of the budgetary resources devoted specifically to ECM remains limited, at only 1.2 per cent of the total revised Government budget between FY2010/11-2015/16. In particular, budgeted amounts allocated to community awareness and protection from gender-based violence appear negligible (BBS and UNICEF, 2017). The significant proportion of spending is on programmes directly targeting beneficiaries, i.e. Category 1 investments directly targeting girl child. This is skewed by a large increase in health spending recently (which includes adolescent friendly health services). At the same time, the relative share of Category 2 investments (investments are interventions that support families and other agents in preventing girls from being married early) has declined compared with Category 1 over the six-year period.

- **Social pressure and norms enforcing early marriage**: Human Rights Watch identified social pressure as a key factor driving child marriage in communities where child marriage is the norm. While NGOs have reached some communities with awareness raising efforts about the risks of child marriage, such efforts by the government are noticeably absent. Attempts by some government officials and police to make communities aware that child marriage is illegal are undermined by community members' convenience of local government officials frequently facilitating child marriage by providing forged birth certificates in exchange for bribes (HRW, 2015). There is a strong social pressure to get girls married to prevent them from having a romantic or sexual relationship before marriage, and there is also great stigma attached to "love

marriages". Social pressures can be so intense that parents sometimes end up feeling that arranging an early marriage is an act of kindness and loving parenting.

- **Harassment, intimidation, and coercion enforcing early marriage**: Parents sometimes agree to child marriages as a result of harassment or threats, including threats of abduction or even assault (HRW, 2015). Families facing these threats felt that they have little or no ability to obtain help and protection from police or other local government officials, even though the behavior in question is clearly a crime.

- **Dowry encouraging early marriage among poor families:** The practice of a bride's family paying a "dowry" to the groom's family, in the form of cash, jewelry, or goods, creates incentives for poor families to marry off their daughters earlier (HRW, 2015). In spite of specific laws restraining it, the payment of dowry remains widespread in Bangladesh. Dowry, is typically lower or may not be necessary at all for child brides.

- **Low use of contraception methods among adolescents**: Although the total prevalence of CPR is 61.9 percent in Bangladesh, the prevalence is significantly low among the adolescent brides within the age group of 15-19 - only 48.9 percent (BDHS, 2017-18). Considering the modern contraception methods, the rate is even lower, only 43.7 percent (BDHS, 2017-18).

- **Unmet need for family planning among adolescents:** Sexually active and fecund women who prefer to space or limit births, but who are not using family planning services, are considered to have an unmet need for family planning. Unmet need does not necessarily mean that family planning services are not available. It may also mean that women lack information, or that the quality of the services available does not inspire the necessary confidence, or that women themselves have little say in the matter (WHO, 2014). BDHS, 2017-18 suggests that the total unmet need for family planning is 12 percent, whereas the prevalence is higher in 15-19 years group (15.5 percent) and in 20-24 years group (15.7 percent). Due to the socio-cultural norms, adolescent girls are shy in visiting health facilities to receive information regarding family planning methods, hence domiciliary visits would have been a better mode of information for them. However, due to the shortage of FP workers, domiciliary visits have been reduced to 20 percent by skilled FP workers in 2017 in comparison to the 43 percent in 1993-94 (BDHS, 2017-18). This can be another reason for low use of contraception methods and high unmet need for FP among adolescents.

3.7 Women Education and School Drop-out

Women education is very important for almost all the nutrition indicators. As elaborated in previous sections, all the indicators discussed above have a positive impact if the mother/caregivers having completed secondary or higher education. Moreover, continued schooling of girls result in increased health and nutrition education, increased awareness on nutrition-sensitive issues, more coverage under social safety net programmes (e.g. stipend) to ensure resources for food and nutrition and delayed marriage and child birth. Women's education level continued to increase, between 2014 and 2017, the proportion of ever-married women age 15-49 who completed secondary education increased from 14 percent to 17 percent (BDHS, 2017-18). This proportion is, however, much different in MICS, 2019, which indicated 44.3 percent of women of 15-49 completing secondary education and 17.2 percent completing higher secondary or higher education (MICS, 2019). Considering married women having under 5 children and within 15-49 years, MICS, 2019 indicated 49 percent women having secondary education and 16 percent completing higher secondary or above. So, there is quite a difference between the status of educational attainment of married women in Bangladesh between BDHS and MICS.

As shown before, completion of secondary education has been considered for all nutrition interventions in national surveys cut-off point for mother/caregivers' education. According to Gender Statistics of BBS, adult literacy rate among women is in rising trend for both rural and urban women during 2012 to 2017. However, completion rate of girls' secondary education is almost same in 2016 and 2017 at 61.4 and 61.6 percent respectively (Gender Statistics of Bangladesh, 2018). Dropout rate from secondary education in both 2016 and 2017 for girls was almost the same - 38.6 and 38.4 percent respectively. Considering the secondary schooling in Madrasah and Vocational schools, completion rate for girls was again almost similar in 2016 and 2017, 57.8 and 58.5 percent respectively, with dropout rate being 42.2 and 41.5 percent respectively (Gender Statistics of Bangladesh, 2018). These figures indicate the dropout rate for girls in Bangladesh from secondary education is still quite significant, in spite of considerable programmes taken by Ministry of Education, Ministry of Social Welfare, Ministry of Women and Children Affairs and other government entities, some of which have been shown in the previous section. Bottlenecks in this regard are described below.

- **Harassments in and en route to education institutes discouraging girls' education:** Girls are facing multifaceted difficulties to realize their fundamental rights to education, to get access to, retention and completion of education cycle. Structural discrimination, traditional socio-cultural practices, negative attitude of the service professionals, duty bearers towards girls acts as a barrier to receive care and services from the existing system (UNCESCO, 2013). These limit their opportunities in education, and skill development. Incidences of sexual harassment such as back sounds, filthy comments, stopping of their transport (rickshaw) or during travelling, objectionable messages through mobile en route to every schools and colleges every day is common. A study revealed that more than 78 per cent girls in schools and more than 69 per cent of female learners in colleges face gender based harassments en route to and from school/ college (UNCESCO, 2013). The types of harassment identified were offensive, demeaning, and discriminatory comments, disgusting language, word and gesture (targeting on intelligence, complexion, body structure etc.) by the boys/male learners.

- **Unfriendly educational environment for girls from marginalised families:** Social marginalization and unfriendly environment in schools and colleges are important factors that cause psychological and intellectual absence of children for participation and learning process both at the secondary and higher secondary level. Learners from poor families in general, learners from disabled and marginalized family occupations in particular quite often become psychologically absent in learning due to the negligence, negative attitude and underestimation by the teachers and peers learners (UNCESCO, 2013). Major reasons identified include social perception regarding the poor, marginalized and disabled learners, inability of parents from low wealth quintile or low educational attainment to guide children, and inability of students from poor families to avail the private tuition from teachers etc. result in these students to inactively participate in learning process and perform well in class, and eventually drop-out of secondary education.

- **Violence against women:** Violence Against Women (VAW) is a major concern and an obstacle to higher studies for women in Bangladesh. As mentioned before, as high as 59 percent of adolescent girls got married in Bangladesh. As per VAW survey of BBS, as many as 80.2 percent of currently married women have experienced some forms of violence by their husbands in their lifetime (BBS, 2015). Overall, more than 50% violence takes place in between the age of 15 to 24, the age when girls pursue higher education.

- **Involvement of child and adolescents in income generating activities resulting in dropping out from schools:** Children's engagement in income generation may also be responsible for their school dropout at secondary education level, particularly those from lower wealth quintile. As per a study, 55 percent of children dropping out of secondary education are involved in income

generating activities (Hossen, Hira and Mohsin, 2018). Adolescent girls are usually engaged in income earning activities like housemaids and factory workers, which often motivates their parents to discontinue their education. Sometimes, if both guardians/parents are engaged in economic activities, they prefer their adolescent girl child to get involved into household activities rather than pursueeducation. The rise of female employment in the manufacturing sector in Bangladesh during the last two decades provides adolescent girls with an alternative to early marriage. However, it has also led to an increase in female child labour. An estimate suggests that girls between 10 and 13 account for 3 percent of the workforce in the ready-made garments industry in Bangladesh, girls between 14 and 17 account for a further 11 percent (Asadullah and Wahhaj, 2016).

3.8 Coverage of Social Safety Net Programmes

It has been explained in the previous sections that all the nutrition indicators are negatively affected by affordability, household income, price and other economic factors. Population within the higher wealth quintiles have better nutrition attainments, as discussed before, for almost all of the indicators. Hence, to ensure appropriate access to nutrition interventions, those in the lower wealth quintiles are required to be brought under social safety net programmes.

Bangladesh adopted the National Social Security Strategy (NSSS) in 2015. According to the latest information from Ministry of Finance, there are 132 safety net programmes in Bangladesh in 2019-20, into which, GOB has allocated around 5232 Billion BDT, which is roughly 2.58 percent of the GDP of Bangladesh (Budget 2019-20, Finance Division). This is slightly higher than that of 2018-19 in which the allocation for social safety net programmes were 4425 Billion BDT, roughly 2.54 percent of the GDP (Revised Budget 2018-19, Finance Division).

The major SSNPs in Bangladesh can be divided under four broad categories: (i) employment generation programmes; (ii) programmes to cope with natural disasters and other shocks; (iii) incentives provided to parents for their children's education; and (iv) incentives provided to families to improve their health status. A review indicates that SSNPs in Bangladesh have led to increased school enrolment and attendance especially among girls in secondary schools and closing the gender gap; additional employment generation; provision of food during crisis; building infrastructure; and increased access to and utilisation of maternal health care services (Khuda, 2011). As can be deduced from discussions in the previous sections, all of these improvements have direct or indirect impact in improving nutrition status of the population, particularly those from lower wealth quintiles. However, in spite of these efforts, social safety net programmes sometimes may not result in increased expected coverage for nutrition interventions of the citizens. Bottlenecks in this regard are discussed below.

- **Limited coverage of out-of-school children by safety net programmes:** Majority of the child-focused investments are school-based programmes for children, and allocations for non-school child programmes are negligible (ILO, 2019). Due to the large proportion of dropouts from school, as detailed before, a large number of children and adolescents are probably not covered by the child safety net programmes. As poverty is the root cause of child labour, school-based programmes alone are not enough to shift girl child and adolescent away from issues like becoming factory workers or getting employed in informal sectors.

- **Improper selection of beneficiaries at local level:** Beneficiary targeting (to bring in the right group of people) has been a major weakness of SSNPs. Even according to government estimates, 82 per cent of the beneficiaries of SSNPs belonged to the poor and vulnerable group while18 per cent of the beneficiaries were non-poor (Bangladesh Planning Commission, 2015). A diagnostic study conducted by Strengthening Public Financial Management for Social Protection (SPFMSP) Project identified that the beneficiary selection for Maternity Allowance (MA) and Lactating

Mother Allowance (LMA) not always adhere to the criteria set for these social safety net programmes, and sometimes, those who are not poor or are having more than 2 children also receive MA or LMA (Maxwell Stamp, 2017). This is primarily because the implementing ministry, i.e. MOWCA does not have FLW and have to rely on local government representatives like UP Chairmen and Members, validation through whom is not very intensive. A recent country strategy review of WFP revealed that the upazilas in which WFP is supporting MOWCA in selection beneficiaries through online registration and verification through NGOs under the MCBP, are doing well in terms of selecting right beneficiaries (WFP, 2020).

- **Insufficient cash allowance amount:** Till 2017-18, allowance for both MA and LMA was BDT 500 per beneficiary per month, roughly equal to USD 5.90. As mentioned before, nutritious diet (BDT 893 per person per month) is costlier than energy-only diet (BDT 564 per person per month), hence this allowance is not sufficient to ensure the required nutrition of mothers. From 2018-19, the allowance amount has been increased to BDT 800 (USD 9.45), however, experts suggest that the amount is still insufficient and recommended increasing it to at least double (Nawaz, Newar and O'Connor, 2019).

- **Inappropriate use of allowance by the beneficiaries:** Since MA and LMA are paid for 24 months only and paid to beneficiaries in lump sum for six months or one year, recipients may not view it as increasing permanent income. Uncertainty associated with the payment and timing of payments makes the allowance a "windfall gain". This type of windfall gain often used by households for investment purposes so that transitory increase in income can be converted into increased flow of income in the future. Therefore, most women do not use the money to improve food and nutritional intake (Maxwell Stamp, 2017). This also signifies that the SBCC activities associated with these programmes are not effective to ensure beneficiaries using the allowance appropriately. From 2018-19, MOWCA has merged MA and LMA into the MCBP, and increased the period to receive allowance from 24 months to 36 months, however, the issue of delayed payment still persists.

- **Mismatch of MOWCA information infrastructure across the ministries:** To resolve some of the issues, particularly the selection issues in MA and LMA, the merged and newly introduced MBCP of MOWCA have introduced a digital registration system in which the interested pregnant and lactating mothers can apply directly online using their appropriate documents, instead of going to UP chairmen or members. While this is a great initiative, the infrastructure issues hinder the benefits to some extent. The MCBP's digital information system is not integrated with other digital systems, such as those run by the Ministry of Health, which collects children's health information from birth onward. The Union Data Centres where women enrol are often located far from where the women live and lack reliable electricity and connectivity, necessary for enrolment. This can result in multiple trips to centres for the women, which can be costly as well as physically demanding. Moreover, the centres are currently run by independent operators who are not held accountable for the accuracy of their data inputs, often resulting in incorrect data entry, resulting in failure of allowance transfer.

- **Resource constraints in major school-based programmes like school feeding programme:** The School Feeding Programme (SF) of Ministry of Education, supported by WFP is a highly effective programme to ensure nutritional needs of the school children and ensure their participation in education process. However, due to resource constraints, the programme could only reach 3 million school children of 93 upazila of 29 districts in Bangladesh, only 19 percent of the all upazilas in Bangladesh, indicating a low coverage. The Mid-day School Meal Programme is another effective programme, which is only being implemented in three upazilas, due to resource

constraints. Although government has decided to expand the school meal programme, however, the target is planned to cover only 16 upazilas in near future.

- **Inadequate production capacity of rice kernels which has a negative effect on rice fortification:** Rice Fortification Programme of Ministry of Food, supported by WFP has been an effective intervention to ensure fortified rice in the package of VGD programme of MOWCA. However, the limited physical facilities to produce fortified kernel (which is mixed with normal rice kernel for rice fortification) is hindering the coverage of this programme (WFP, 2020). Currently, there are only three kernel producers in Bangladesh, production capacity of whom is limited in comparison to the requirements.

- **Inconsistent classifications of social safety net programmes:** Given the large number of SSNPs in Bangladesh, the listing of programmes in the government documents is often confusing. As observed earlier, SSNPs have been characterised in multiple ways. These involve transfers and subsidies; access to credit special employment schemes; empowering through education, health; etc. SSNPs can be direct or indirect; conditional or unconditional; in cash or kind; universal or targeted. It is challenging to track the programmes over a period because these are often introduced and revised without following any transparent system (CPD, 2018).

3.9 Handwashing Behaviour

Percentage of households with hand washing facilities where water and soap/detergent were present has increased from 59 percent to 75 percent over the period, as per MICS statistics for Water, Sanitation and Hygiene (MICS, 2019) which is much higher than BDHS 2017-18 statistics which show that between 2014 and 2017, the availability of a hand washing station with water and a cleansing agent (including soap) increased from 37 percent to 47 percent only. MICS, 2019 shows more prevalence of handwashing facilities in urban areas (87 percent) than in rural areas (71.4 percent). MICS also indicates significant regional difference, with the highest prevalence in Dhaka (88.2 percent) and lowest in Barishal (46.6 percent). MICS also indicates a relationship of handwashing behaviour with education and wealth, as families having household head with higher education (91.8 percent for higher secondary+ and 81.2 percent for secondary education) and higher wealth (96.8 percent for highest wealth quintile while only 44.3 percent for lowest wealth quintile) have more prevalence of handwashing facilities.

Bottlenecks for coverage of the handwashing behaviour are detailed below.

- **Insufficiency for handwashing facilities at school:** National Hygiene Baseline Survey (NHBS), 2014 found only 35 percent of schools having handwashing locations with both water and soap. The facilities were found to be more prevalent for secondary schools (53 percent) than the primary schools (30 percent). The survey also identified that on an average, 187 students use one toilet.

- **Inadequate knowledge of rural mothers and caregivers:** Although MICS indicates a higher number of handwashing facilities at households, data from NHBS sheds doubts on the actual knowledge of the mothers and caregivers on using soaps,washing both hands, particularly in rural areas. As per NHBS, 2014, only 13 percent of 3-5 years old children and 57 percent of mothers/caregivers could demonstrate the right way of handwashing using soap to clean both hands. Only 52 percent of mother/caregivers had visibly clean hands as per the NHBS, 2014. A study of Parveen et al suggests mothers in rural areas use water alone for washing hands instead of using both water and soap. Rural mothers and other caregivers usually wash their hands if they are involved in cooking, sweeping, cutting vegetables or fish, or when hands are ‘visibly dirty’ from the perspective that their hands were also being washed while performing these tasks and thus did not need to be washed again (Parveen et al. 2018). The perception of rural mothers of neonatal child regarding handwashing is more towards removal of bad smell, chilies or spices to

avoid skin irritation of children rather than for hygiene (Parveen et al. 2018). This indicates inadequacy of knowledge of rural mothers and caregivers regarding appropriate handwashing behaviour. Halder et al in 2010 indicated the similar behaviour of rural women in 2010 (Halder et al. 2010), which further implies that the situation has not improved from 2010 to 2018.

- **Inadequate capacity of government agencies to ensure effective handwashing behaviour interventions:** A WASH study of World Bank identified hygiene as a weak link in the WASH sector (The World Bank, 2016). According to this study, results demonstrated in NHBS, 2014, could be attributed to, among others, the capacity of Department of Public Health Engineering (DPHE), the main agency working in the water and sanitation sector, focusing on infrastructure development and does not have the capacity, neither the comparative advantage of implementing behavior change communication (BCC) activities. The Government of Bangladesh (GOB) has formulated a set of comprehensive policies and strategies in the water and sanitation sector (four legislative acts, two national policies, and five national strategies). However, translation of these policies and strategies into action appears to be a challenge, as there are not enough incentives and scope for the individual ministries involved in WASH sector, to work beyond their domains (The World Bank, 2016).

- **Limited visible implementation of national level strategies to improve handwashing behaviour:** Although there have been numerous interventions on improvement of knowledge and awareness on handwashing behaviour, the conversion of knowledge into practice remain poor. The National Strategy for Water Supply and Sanitation Bangladesh, 2014 acknowledged this challenge and included a number of strategies to increase the practice, including exploring new approaches for hygiene promotion that are effective in translating people's knowledge into practice. However, in spite of developing the strategy in 2014, no visible improvement has been seen on implementing new or improved approaches for hygiene promotions. Similarly, there were specific strategies expressed in this regard in the National Hygiene Promotion Strategy for Water Supply and Sanitation Sector in Bangladesh 2012, for hard-to-reach population, particularly those living in urban slums, however, limited implementation has been visible till date.

- **Indicators to measure progress not SMART:** The indicators put in in the national programs to track progress of the relevant WASH interventions, are often broad and focus at the macro-level picture, and not at all are Specific, Measurable, Achievable, Relevant and Time-bound (SMART). Those indicators are mostly backed by international organizations keeping in view to compare international context for multi countries. These are obviously good enough to capture a broad picture of important outputs an intervention, however, often these broad indicators often miss the specific aspects of what a country strives to achieve. For example, percentage of people using (or have) drinking water captures total percentage of people who have drinking water, but it misses if those water is safe and free from arsenic, manganese, coliform bacteria, and salinity. Same is true for the indicator- percentage of people who use toilet, as it captures broad picture but misses the quality part, including type of toilet they use, cleanliness of the toilet, availibility of soaps and water, if those toilets are designed specifically for women for meeting the needs for their menstrual hygiene. Therefore, indicators highlighting absolute proportion of households using water and sanitation do not reflect actual figures and context specific realities.

3.10 Child Faeces Management (CFM)

Bangladesh has made remarkable progress in improving sanitation, particularly in reducing open defecation. According to the MICS, 2019, 84.6 percent of the population uses improved sanitation facilities, with very low difference in urban-rural segregation. However, there are miles to go in achieving sufficient improvement in CFM. According to MICS, 2019, safe disposal of child faeces was observed only for 49.2 percent of cases. There is a significant urban-rural difference, with the prevalence of safe CFM

more in urban areas (68.3 percent) than the rural areas (44 percent) (MICS, 2019). Safe CFM was seen more prevalent in Dhaka (63.2 percent) and least in Mymensingh (16.7 percent). Mothers with higher education have a more tendency to safely manage child faeces (66.9 percent in case of higher secondary or above and 51.4 percent in case of secondary, whereas only 31.9 percent in case of pre-primary or no education). The prevalence is significantly higher in higher wealth quintiles (79.9 percent in the highest wealth quintile, whereas only 27.2 percent in the lowest wealth quintile).This indicates that, although there has been an improvement in sanitation, however, the sanitation interventions could not improve the CFM issue in Bangladesh. Possible bottlenecks in this regard are explored below.

- **Misconceptions regarding child faeces**: Compared to commonly reported unsafe disposal for faeces of children <18 months, faeces of older children (18–36 months) were more likely to be disposed of safely (Islam et al, 2018). This maybe because of the common misconception that the child faeces are not as harmful as adult faeces, resulted from faeces of young children being smaller, less smelly, and containing fewer visible food residues.

- **Lack of knowledge on safe cfm:** MICS, 2019 indicates only 52.5 percent of child faeces as being safely managed in spite of having improved sanitation facilities at the household, indicating presence/absence of hardware having little impact on hygienic feces management. A study linked this phenomenon with the acceptability of open defaecation of children, in spite of having improved sanitation in the household (Islam et al. 2020), indicating the lack of awareness and knowledge of caregivers regarding CFM.

- **Inadequate messaging on CFM included in SBCC interventions:** Although there are quite a number of WASH and sanitation interventions in the country, there are very few focusing specifically the CFM issues. Most interventions include child faeces disposal messages along with other health education messages or other water, sanitation, and hygiene (WASH) hardware and software components (Majorin et al. 2019). Even in the current limited interventions, messages on CFM are not often exclusively mentioned.

3.10 Limited multi-sectoral enabling environment

Some of the bottlenecks discussed in the previous sections are associated with complex social and cultural context of Bangladesh, and require multi-sectoral coordination and collaboration among government, non-government and civil society. However, there is a dearth of such multi-sectoral enabling environment for which such complex issues are not being addressed. For example, indicators including early marriage, early pregnancy, women education and drop-out have bottlenecks like harassment, intimidation, violence against women and lack of security. These issues require involvement from law and enforcement agencies, as well as local government entities and civil society organisations. Whereas multiple organisations are already working in these issues, these are not being done in a coordinated way and with a nutrition-focus. Hence, often the individual efforts of organisations does not result in the intended coverage expansion of the nutrition sensitive interventions.

As indicated before, nutrition sensitive interventions are being implemented by around 22 ministries, yet, resource constraints or inappropriate allocation of resources have been identified as a constraint for coverage in these interventions. This is again an issue of multi-sectoral collaboration, as the ministries and departments involved, although may work on a common goal for nutrition, are not aware and work in isolation in terms of planning and budgeting. A common joint action plan from different ministries targeting nutrition is absent till date, even a synchronnised work plan involving these ministries on nutrition has not yet been evident. This is particularly an issue with the social safety net programmes. The specific number of such programmes vary from time to time and are being implemented by almost all the 22 ministries mentioned above. However, there is almost no synergy among these programmes,

often resulting in duplication of efforts and resources, which can be otherwise be planned more efficiently had there been multi-sectoral coordination in the implementing ministries.

Monitoring, reporting and data management is another area that suffers from lack of proper multi-sectoral coordination in nutrition sensitive interventions. As mentioned before, the ministries involved in nutrition sensitive intervention implementations have varying data infrastructure, and monitoring and reporting mechanism, with very limited coordination among themselves. Without a system for data synchronisation and cross-validation, issues involving duplication of beneficiaries in ministries, improper verification and selection, and delay in fund transfer happens at the field level. Enforcement of prevailing regulatory and policy instruments is also hindered due to varying monitoring and reporting system across the ministries.

Civil society plays an important role in holding government accountable for inputs and outcomes and nutrition-policy measures, whereby government is often focused on the coordination of response, management and funding mechanisms and donor relationships. Civil society actors are instrumental in 'spotlighting' nutrition to decision makers, including policy-makers and programme managers. Civil society also plays the "pivotal role" of a strong and vibrant civil society in fuelling improvements for nutrition, ensuring policy is implemented to positively impact malnutrition, and overcoming exclusion and inequality barriers to improved nutrition. The availability of good-quality data is also critical in supporting civil society groups to advocate for more focused and sustained government interventions; a lack of good-quality data makes it difficult to reach consensus for advocacy on what needs to be delivered to address undernutrition. However, involvement of civil society in nutrition sensitive interventions is quite limited in Bangladesh for which the benefits of collaboration with civil society in coverage of these interventions cannot be harnessed. Similarly, the role of private sector is also missing in nutrition sensitive interventions. Private sector has the capacity to support government in numerous areas, including technology-based solution for improving nutritious food supply chain, making nutritious food available, decreasing price, increasing availability, etc. In the absence of a proper incentive structure and collaboration modality, the nutrition sensitive interventions are lacking the effective involvement of private sector.

4. Classifications of the Bottlenecks

Bottlenecks identified in the previous section can broadly be classified into two categories - the macro-level underlying bottlenecks caused by different structural, socio-cultural, economic and policy factors, and the programmatic bottlenecks caused by accessibility, availability or utilisation of nutrition-sensitive interventions. Bottlenecks identified against the selected indicators are summarised and categorised as per the two broad categories in the table below.

Table 2: Major Classifications of the Bottlenecks Identified

SL	Indicator	Current Status and Target	Underlying Bottleneck (Structural, socio-cultural, economic, policy or systemic issues)	Programmatic Bottlenecks (Availability, accessibility or utilisation of interventions)
1	Minimum Acceptable Diet (MAD) for 6-23 M Children	Current Status: 34% (BDHS, 2017-18) NPAN2 Target: 40%	• Resistance to change among decision makers of the households regarding dietary issues, who are not always the mothers or caregivers of children • Low education attainment of mother/caregivers; • Overemphasis of policies on rice production; • Low affordability to purchase nutritious food due to various economic factors; • High price of quality and nutritious food	• Inappropriate resource allocations in dietary diversification interventions • Inadequate knowledge and awareness of male household members • Less nutritious food being more attractive and affordable • More dependence of programmes (e.g. OMS) on rice for food packaging to ensure required calorie intake
2	Minimum Dietary Diversity for Women (MDD-W)	Current Status: 46% (CIP2, 2015) NPAN2 Target: 75%	• Status of women in the family not strong enough to make decision on dietary diversity • Low education attainment of mother/caregivers to have understanding on MDD-W issues • Outreach GO-NGO programmes have not been able to evaluate what approach would be the most successful to address the macro-level issues	• Inappropriate resource allocations in dietary diversification interventions • Inadequate knowledge and awareness of male household members • Ineefctive enforcement and improper implementation of maternity benefits for working women, specially in private sector • Unavailability of data on MDD-W • More dependence of programmes (e.g. OMS) on rice for food packaging to ensure required calorie intake

SL	Indicator	Current Status and Target	Underlying Bottleneck (Structural, socio-cultural, economic, policy or systemic issues)	Programmatic Bottlenecks (Availability, accessibility or utilisation of interventions)
3	Low Birth Weight (LBW)	Current Status: 23% (National LBW Survey, 2015) NPAN2 Target: 16%	• Status of women in the family not strong to make decision on dietary diversity • Early pregnancy due to early marriage • Low education attainment of mother/caregivers; • Child marriage and early pregnancy; • Perceived false security to poor family regarding early marriage of their daughters • Low affordability to purchase nutritious food due to various economic factors; • High price of quality and nutritious food • Increased price of food items • Policy favoring rice for calorie intake	• Shortage of health/nutrition frontline service providers; • High workload of health/nutrition frontline service providers • Current interventions not adequately ensuring adolescent nutrition
4	Overweight/obesity among women of reproductive age	Current Status: 39% (BMI ≥23) (BDHS, 2014) NPAN2 Target: 30%	• Limited awareness of ill consequences of obesity • Dietary habit of working women • Impact of sedentary behaviour of women	• Insufficient SBCC interventions targeting specifically overweight/obesity issue of women; • Quality of SBCC interventions to prevent overweight and obesity among women • Overdependence on oral contraceptive pills
5	Childhood obesity	Current Status: Overweight 2.8%; Obese 0.80% (MICS, 2019)	• Unavailability of playgrounds and open spaces	• Limited physical activities at school • Lack of awareness of mothers and caregivers on adverse effect of obesity • Over-indulgence of urban children on junk food
6	Early marriage and early pregnancy	**Early Marriage** Current Status: 59% (BDHS, 2017-18) NPAN2 Target: 30%	• Social pressure and norms enforcing early marriage • Harassments, intimidation and coercion enforcing early marriage	• Inappropriate budgetary allocations to restrain child marriage • Higher unmet need of FP methods among adolescents

SL	Indicator	Current Status and Target	Underlying Bottleneck (Structural, socio-cultural, economic, policy or systemic issues)	Programmatic Bottlenecks (Availability, accessibility or utilisation of interventions)
		Early Pregnancy Current Status: 28% (BDHS, 2017-18) NPAN2 Target: 10%	• Dowry system resulting early marriage, since amount of dowry is lower in case of child and adolescent brides • Gaps in regulatory instruments to restraint child marriage	• Low use of contraception among adolescents
7	Women education and drop-out	Current Status: 44.3% (Completion of Secondary Education) (MICS, 2019) NPAN2 Target: 90%	• Harassments in and en route to educational institutes • Unfriendly educational environment • Violence against women • Involvement of child and adolescents in income generating activities resulting drop-out from school	• Insufficient stipend amount • Resource constraints for school feeding programmes to cover secondary schools
8	Social safety net programmes	Current Status: 10% (Estimation) NPAN2 Target: 50%	•	• Limited out-of-school child safety net programmes • Insufficient cash allowance amount • Mismatch of information infrastructure across ministries • Resource constraints for school feeding programme • Inadequate production capacity of rice kernels • Inconsistent classifications of social safety net programmes • Improper selection of beneficiaries at local level • Inappropriate use of allowance by beneficiaries
9	Handwashing behaviour	Current Status: 27% (FSNSP, 2014) NPAN2 Target: 50%	• Inadequate knowledge of mothers and caregivers at rural level	• Insufficiency of facilities at school • Indicators to measure progress not SMART • Inadequate capacity of government agencies to ensure handwashing behaviour interventions • Limited visible implementation of national strategies into actions to improve handwashing behaviour

SL	Indicator	Current Status and Target	Underlying Bottleneck (Structural, socio-cultural, economic, policy or systemic issues)	Programmatic Bottlenecks (Availability, accessibility or utilisation of interventions)
				•
10	Child Faeces Management (CFM)	Current Status: 49% (MICS, 2019) NPAN2 Target: 70%	• Misconceptions of mothers/caregivers regarding child faeces • Lack of knowledge of household members on safe CFM	• Not enough messages on CFM included in SBCC intervention; • Difficult to monitor the actual CFM at field level; •

Part 2: Strategy to Address Bottlenecks

1. The Strategy to Address the Bottlenecks

Bottlenecks identified for the coverage of nutrition sensitive interventions are complex and require multidimensional and multisectoral approach to address. Part I of the report categorised the bottlenecks into two groups based on their level of influence - the underlying bottlenecks resulted from complex socio-cultural, economic, structural or policy issues; and programmatic bottlenecks resulted from availability, access and utilisation of the nutrition sensitive interventions and other programmatic issues.. Hence, a multidimensional strategy is proposed in which the underlying bottlenecks would be addressed through medium to long term[6] activities having policy level impacts, while the programmatic bottlenecks would be resolved through shorter term activities having local level impacts. X Parts of this strategy is described below:

1. **Corrective Actions:** These are the measures, ideally required, to resolve the bottlenecks identified. For each of the bottlenecks identified, a set of corrective actions have been suggested. For each corrective action, an indicator for change has been suggested to specify the improvement in the status of the bottleneck that the action intended to. These corrective actions are supported by an indicative monitoring mechanism aimed to ensure the effective implementation of the strategy detailed out in the document thereby addressing the bottlenecks and improving coverage of nutrition sensitive interventions. The corrective actions have further been classified into two categories - the policy level corrective actions, requiring interventions from the national level stakeholders and the programme level corrective actions requiring interventions from the local level programme actions. While the both types of corrective actions were used to develop the recommendations, the programme level corrective actions would be the basis of the concept and outline of community-based model, to be detailed out in the part III of the report. The corrective actions are attached as Annex 2 and Annex 3 of this document.

2. **Recommendations:** These are the proposed approaches and specific activities to operationalise the corrective actions. Primarily, five dimensions of recommendations are suggested in this strategy to address the bottlenecks of nutrition sensitive interventions, namely:

   i. Review respective sectoral and departmental policies and update and/or formulate new policies to ensure enabling environment for implementation of nutrition sensitive interventions;
   ii. Ensure multisectoral collaboration for improving implementation of nutrition sensitive interventions along with rationalizing resource allocation;
   iii. Review and update of existing SBCC strategies and interventions to ensure advocacy, social mobilization and BCC in favour of the nutrition sensitivity;
   iv. Creating an evidence base for better design and implementation of nutrition sensitive interventions;
   v. Promote participation of private sector in nutrition sensitive interventions through creating an enabling environment.

   Each set of recommendations have specific proposed activities and timelines in line with the impact of bottlenecks, mentioned above, i.e. short, medium and long term, detailed out in section 4 and table 1.

[6] In this strategy, short term has been defined as one to three years; medium term has been defined as three to five years and long term has been defined as more than five years

3. **Pathways to overcome the bottlenecks:** This part of the strategy elaborates how the recommended activities specifically address the bottlenecks by bringing about the intended changes in terms of intermediary results or outcomes and long term results or impacts. The purpose of this section is to inform the policy makers about the process by which the recommendations would improve the coverage in the nutrition sensitive interventions. A visualisation on how the recommendations would address different structural and programmatic bottlenecks is shown in figure 1. Detailed pathways to overcome the bottlenecks are described in annex 1. The pathways to overcome the bottleneck are created through a number of initiatives, including, multi-sectoral coordination, capacity development, gender mainstreaming, knowledge management and evidence creation and private sector participation.

2. Outputs of the Strategy

The strategy will have two major outputs:

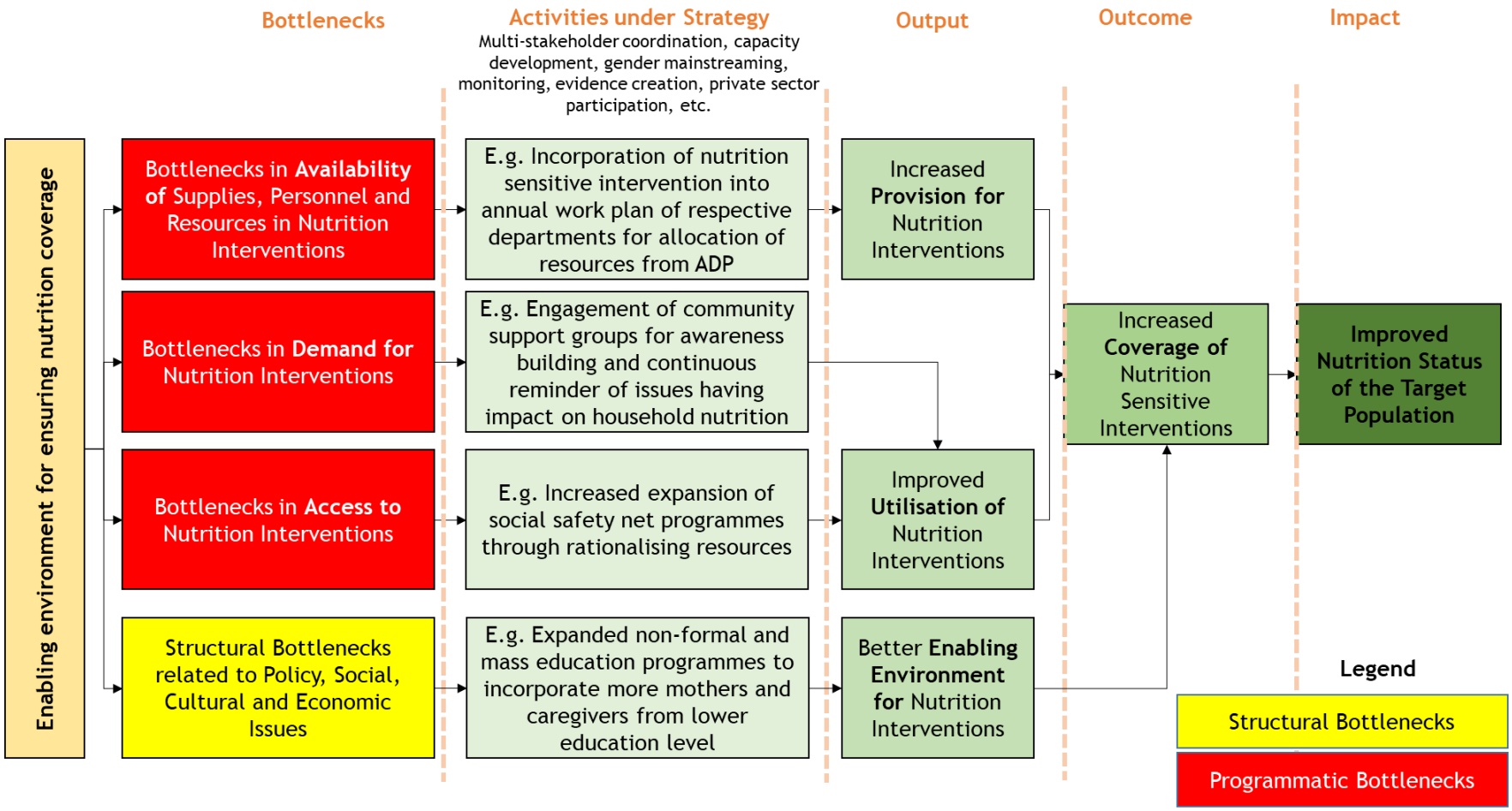
a. **Policy brief:** A policy brief will be prepared to inform and sensitise relevant stakeholders, including the 22 ministries involved with nutrition sensitive intervention implementation, entities under these ministries, development partners, UN agencies, national and international NGOs and civil society organisations. A set of recommendations will also be included in the policy brief to guide the policy-level stakeholders for long term planning, policy formulation and strategy development in addressing the bottlenecks. The recommendations highlighted in blue in table 2 will be included in the policy brief in this regard.

b. **Community-based model development**: As part of this exercise, a community-based model will be conceptualised and tested for effectiveness to implement the short term recommended activities of the strategy. A conceptual model will be created from the short and short to medium recommendations, highlighted in green in the table 2. Later, an operational research will be conducted in which this conceptual model will be implemented in a selected geographical location as a case, while considering a similar geographical location as control area, and the effectiveness of the model will be measured. This output will further be detailed out in part III of this document.

3. Outcomes and Impact of the Strategy

In ideal enabling environment, there are availability of resources for nutrition interventions (e.g. fund, personnel, equipment) to create demand and enable access for target beneficiaries to the interventions. However, as seen from the bottleneck analysis, there are bottlenecks and constraints hindering the availability, demand and access to nutrition interventions. As per the proposed strategy, each of the recommendations and activities would address these bottlenecks associated with availability, demand and accessibility, and will improve provision of nutrition interventions and increase utilisation of interventions. These will result either from the awareness and sensitisation created from the policy briefs for medium to long term and long term recommended activities or from adoption of the community-based model developed from the short and short to medium term activities. This means that the outcomes of the strategy would be increased provision and improved utilisation of nutrition interventions. Overall, the impact of the strategy would be the increased coverage of nutrition interventions resulted from the increased provision, improved utilisation and supportive enabling environment, as shown in figure 1.

Figure 5: ***Pathways to Overcome Challenges*** *- Illustrative example of how the strategy would increase provision and utilisation of nutrition interventions (outcome) and improve nutrition coverage (impact)*



4. Recommendations, Activities and Timeline of Implementation

As mentioned before, there are five sets of recommendations to generate intermediate results (outcome, i.e. increase provision and improve utilisation) and impacts (i.e. increase coverage of nutrition sensitive interventions) of the strategy. There are multiple activities under each sets of recommendations. The activities have different timelines for implementation, including short term activities (one to three years), medium term (three to five years) and long term (more than five years). Table one below indicates the recommendations, specific activities and timeline for implementation to address the bottlenecks in coverage of nutrition sensitive interventions in Bangladesh. The long term and medium to long term activities, highlighted in blue, would be used to develop the policy brief to inform and sensitise the relevant stakeholders. The short and short to medium activities, highlighted in green, would be used for development of the community-based model.

Table 1: Recommendations, Specific Activities and Timeline of Implementation to Address Bottlenecks

Recommendations	Specific activities	Indicators to be Improved	Timeline
Review respective sectoral and departmental policies and update and/or formulate new policies to ensure enabling environment for implementation of nutrition sensitive interventions	Expansion of non-formal, mass education programmes, and relevant programmes to increase adult education of mothers and caregivers with lower formal educational level	All nutrition sensitive indicators (e.g. MAD, MDD-W, women education, early marriage, WASH, etc.)	Long term
	Inclusion of nutrition sensitive issues in education curriculum at secondary and higher level	All nutrition sensitive indicators	Medium to long term
	Introduction of incentive schemes for private sector to participate in nutrition sensitive supply chain (e.g. setting fortified rice kernel facilities, marketing safe and nutritious food, improved food supply chain, etc.)	MAD; MDD-W; LBW; Obesity of women; Childhood obesity	Medium to long term
	Rearrange tariff structure and regulations to ensure availability and affordable price of food and enable "informed decision" from consumers before purchasing them (e.g. by proper labelling including printing ingredients and the benefit on health on the food packages)	Obesity of women; Childhood obesity	Medium to long term
	Promote diversification in respective food production (crop, livestock and fisheries) and food packaging policies (e.g. food package for relief, OMS, etc.) to reduce dependence on rice in favour of other nutritious components	MAD; MDD-W; LBW; Obesity of women; Childhood obesity	Long term
	Review and update the relevant regulatory instruments followed by effective enforcement and monitoring	Early marriage; Early pregnancy; Women education & dropout; Obesity of women; Childhood obesity	Long term
Ensure multisectoral collaboration for improving implementation of nutrition sensitive interventions along with	Develop multisectoral joint action plan funded through respective sector/departmental sources to address complex socio-economic issues like violence against women, child marriage, early pregnancy, conserve open spaces and	All nutrition sensitive indicators	Long term

Recommendations	Specific activities	Indicators to be Improved	Timeline
rationalizing resource allocation	play grounds, improving purchasing power of nutritious food, coverage of out-of-school children under social safety net programmes, etc.		
	Incorporate relevant nutrition sensitive activities in respective annual work plan with allocation from ADP followed by regular monitoring and reporting	All nutrition sensitive indicators	Short to medium term
	Review and restructure the social safety net programmes to avoid duplication of efforts (if any) and to rationalize resource allocations for improving coverage, increasing allowance, and improving effectiveness of social safety net programmes	MAD; MDD-W; LBW, Social safety nets, Women education and drop-out	Medium to long term
	Design and implementation of a common database for all ministries and departments to be used for better targeting of beneficiaries, regular monitoring, reporting and evaluation.	All nutrition sensitive indicators	Long term
	Increase capacities of respective departments including local government institutes to better implementation of gender-sensitive nutrition interventions	Handwashing behaviour; CFM; Social safety nets; Early marriage and early pregnancy; Women education and dropout	Medium to long term
	Enabling participation of local government representatives, civil society organizations and NGOs in community-based initiatives for mass awareness development to complement the efforts of frontline health and nutrition service providers	All nutrition sensitive indicators	Short term
Review and update of existing SBCC strategies and interventions to ensure advocacy, social mobilization and BCC in favour of the nutrition sensitivity.	Expand the target of the SBCC interventions to include the target groups that were, otherwise, excluded or not specified in the previous SBCC interventions (e.g. male HH members, adolescents, etc.)	MAD; MDD-W; LBW; Obesity of women; Childhood obesity	Short term
	Create new platforms or revitalize existing platforms (e.g. husband forums, adolescent clubs) for expanded coverage of nutrition sensitive interventions	All nutrition sensitive indicators	Medium to long term
	Use of improved and more focused SBCC message delivery methods (e.g. coaching and demonstrations) for sustained change in practice level	MAD; MDD-W; LBW; Obesity of women; Childhood obesity; Handwashing; CFM	Short term
	Incorporate uncovered and emerging issues (e.g. Obesity issues of women of reproductive age, CFM, FP issues for adolescents, important of women education for household nutrition)	MDD-W; Obesity of women; Handwashing behaviour; CFM; Early pregnancy	Short to medium term
	Engage community support groups for awareness building and continuous reminder of issues having impact on household nutrition	All nutrition sensitive indicators	Short to medium term
Creating evidence-base for better design and implementation of	Promote applied agricultural, livestock, fisheries and food processing research for introduction of cheaper methods of	MAD; MDD-W; LBW; Obesity of women; Childhood obesity;	Medium to long term

Recommendations	Specific activities	Indicators to be Improved	Timeline
nutrition sensitive interventions	production, processing, packaging and marketing of nutritious food for mass population		
	Action research to improve dietary diversity within the present cost of food packages distributed under various social safety net programmes (e.g. VGD, OMS, food for relief, etc.)	MAD; MDD-W; LBW; Obesity of women; Childhood obesity; Social safety nets	Medium term
	Designing monitoring mechanisms for regular and effective monitoring, evaluation and reporting so that the policy makers can have the evidence to improve nutrition sensitive interventions	All nutrition sensitive indicators	Short to medium term
	Promote researches to generate innovative technologies and solutions for constraints hindering nutrition status of citizens	All nutrition sensitive indicators	Medium to long term
	Ensure inclusion of all nutrition sensitive indicators in periodic national surveys (e.g. BDHS, MICS, SVRS, etc.) and routine data collection (e.g. DHIS2)	All nutrition sensitive indicators	Short term
Promote participation of private sector in nutrition sensitive interventions through creating enabling environment	Design innovative public private partnership (PPP) to encourage private investment in large scale nutrition infrastructure	MAD; MDD-W; LBW; Obesity of women; Childhood obesity;	Medium to long term
	Increase awareness of industry associations and individual industry owners regarding the impact of nutritional status of employees on the production capacities and encourage them to invest/improve nutrition status of respective workers, particularly working women	MDD-W; LBW; Social safety nets	Medium to long term
	Encourage private sector to participate government efforts in nutrition sensitive interventions (e.g. arranging after-school apprenticeship programme for adolescents, introduce technological solutions for low cost handwashing stations for schools, support in community level awareness building programmes and SBCC activities, etc.)	All nutrition sensitive indicators	Short to medium term

5. Conclusion

Nutrition sensitive interventions have utmost important in improving the nutritional status of the population of Bangladesh. However, understanding the impact of some of the multisectoral interventions (apparently visible as “non-nutrition”) can be difficult, which may in relevant stakeholders not focusing on the addressing bottlenecks. One of the key purpose of this entire exercise was to relate the interventions of the relevant sectors with nutrition, i.e. to elaborate the nutrition sensitivity of the interventions. In the part 1 of the report, i.e. in the bottleneck section, that relationship was clarified.

Purpose of this part was to inform and sensitise the relevant actors on ways to address the bottlenecks identified. While this part of the report is enough to elaborate the relevant strategies and actions, a policy brief will be prepared to inform the policy level stakeholders about the issues and for their actions. The policy brief will be circulated among relevant stakeholders from all the ministries of government, as well as among those from development partners, UN agencies, NGOs and civil society.

BNNC, being a multistakeholder policy platform, unfortunately, is not entitled to implement majority of the recommended actions detailed out in this part of this report. However, BNNC will take the effort to create an evidence base for the relevant stakeholders to adapt and scale up their own sectoral interventions. In this regard, a conceptual model of a set of community-based interventions has been proposed in the part 3 of this report.

Annex One: Pathways to Overcome Bottlenecks

Table 3: Pathways to Overcome Bottlenecks

Bottlenecks	Recommendations	Specific Activities	Timelines	Output	Outcome	Impact
Low educational level of mother/caregivers;	Review respective education to accommodate new/expanded programmes to improve educational level of mother/caregivers	Expansion of non-formal, mass education programmes to increase adult education of mothers and caregivers with lower formal educational level	Long Term	Increased educational status of mothers and caregivers to sensitise and aware about the CFM, dietary diversity and other nutritional issues	Improved practice of mothers and caregivers on dietary diversity, obesity, CFM and other nutrition issues	Improved nutritional status of the citizens
Current coverage of interventions not adequately ensuring adolescent nutrition	Review the education sector policies to improve the enabling environment for adolescent nutrition	Inclusion of nutrition sensitive issues in education curriculum at secondary and higher level	Medium to Long Term	Adolescents are more aware of nutrition issues, including dietary diversity, obesity, and the impact of early marriage and pregnancy on health and nutrition status; reduction of early marriage incidence	Improved nutrition status of adolescents, particularly adolescent girls	
	Review and update of existing SBCC strategies and interventions to ensure advocacy, social mobilization and BCC in favour of the adolescent nutrition interventions	Expand target of the SBCC interventions to include the target groups that were, otherwise, excluded or not specified in the previous SBCC interventions and in this case are the adolescents girls	Short Term			
Lack of awareness of the ill consequences of obesity	Review respective sectoral and departmental policies and update and/or formulate new policies to ensure enabling environment for implementation of nutrition sensitive interventions targeting obesity and overweight issues	Inclusion of nutrition sensitive issues in education curriculum at secondary and higher level	Medium to Long Term	Increased awareness of the school children on the ill consequences of overweight and obesity	Adoption of healthy lifestyle and nutritious diet to prevent and address overweight and obesity	
	Ensure multisectoral collaboration for improving implementation of nutrition sensitive interventions targeting obesity and overweight issues,	Enabling participation of local government representatives, civil society organizations and NGOs in community-based initiatives for mass awareness development on overweight and	Short Term	Increased awareness of mothers, caregivers and community influencers on ill		

Bottlenecks	Recommendations	Specific Activities	Timelines	Output	Outcome	Impact
	along with rationalizing resource allocation	obesity issues to complement the efforts of frontline health and nutrition service providers		consequences of obesity		
	Review and update of existing SBCC strategies and interventions to ensure advocacy, social mobilization and BCC in favour of addressing obesity and overweight issues	Incorporate uncovered and emerging issues in SBCC activities, in this case, obesity issues among children and women of reproductive age	Short to medium term	Same as above		
Inadequate production capacity of fortified rice kernels	Review relevant policies of Ministry of Industry or Ministry of Commerce to create enabling environment for private sector actors to be participate in rice supply chain	Introduction of incentive schemes for private sector to participate in rice kernel fortification supply chain	Medium to Long Term	Increased production and supply of fortified rice kernel in Bangladesh	Increased consumption of fortified rice kernels	
Low affordability to purchase nutritious food; High price of quality and nutritious food	Promote participation of private sector in nutrition sensitive interventions through creating enabling environment	Introduction of incentive schemes for private sector to participate in nutritious food supply chain	Medium to Long Term	More participation of private sector actors in production and marketing of nutritious and safe food	Increased supply of nutritious and safe food in the market at a lower cost	
		Design innovative public private partnership (PPP) to encourage private investment in large scale infrastructure for nutritious food production and processing	Medium to Long Term			
	Ensure multi-sectoral collaboration for improving implementation of nutrition sensitive interventions along with rationalizing resource allocation	Review and restructure the social safety net programmes to avoid duplication of efforts (if any) and to rationalize resource allocations for improving coverage, increasing allowance, and improving effectiveness of social safety net programmes to enable target beneficiaries' ability to purchase nutritious food	Medium to Long Term	Increased allocation for relevant social safety net programmes	Increased access of nutritious food by poor and vulnerable	
	Creating evidence-base for better design and implementation of nutrition sensitive interventions	Promote applied agricultural, livestock, fisheries and food processing research for introduction of cheaper methods of production, processing, packaging and marketing of nutritious food for mass population	Medium to Long Term	Increased availability of cheaper nutritious food	Decreased cost of nutritious food resulting better access by mass population	

Bottlenecks	Recommendations	Specific Activities	Timelines	Output	Outcome	Impact
Less nutritious food being more attractive and affordable	Review respective sectoral and departmental policies and update and/or formulate new policies to ensure enabling environment for implementation of nutrition sensitive interventions	Rearrange tariff structure and regulations to ensure availability and affordable price of food and enable "informed decision" from consumers before purchasing them	Medium to Long Term	Increased tariff on junk food Junk/unhealthy food (high calorie and low nutrient dense food), strict regulation ensuring appropriate labelling with nutrition facts and consequences	Less nutritious food becoming more expensive and less attractive to the customers resulting in decreased demand	
	Ensure multi-sectoral collaboration for improving implementation of nutrition sensitive interventions along with rationalizing resource allocation	Enabling participation of local government representatives, civil society organizations and NGOs in community-based initiatives for mass awareness development	Short Term	Community people are aware of the harmful impact of junk food		
	Review and update of existing SBCC strategies and interventions to ensure advocacy, social mobilization and BCC in favour of the nutrition sensitivity.	Use of improved and more focused SBCC message delivery methods (e.g. coaching and demonstrations) for sustained change in practice level	Short Term			
Over reliance on rice as calorie source and ensure food availability	Review respective sectoral and departmental policies and update and/or formulate new policies to ensure enabling environment for implementation of food diversification interventions	Promote diversification in respective food production (crop, livestock and fisheries) and food packaging policies (e.g. food package for relief, OMS, etc.) to reduce dependence on rice in favour of other nutritious components	Long Term	New or updated agricultural, livestock, fisheries, etc. policies for diversified food production formulated	Diverse cereals pulses available reducing reliance on rice as calorie source	
	Creating evidence-base for better design and implementation of interventions for availability of diversified food items	Action research to improve dietary diversity within the present cost of food packages distributed under various social safety net programmes (e.g. VGD, OMS, food for relief, etc.)	Medium Term	Diversified food packages under social safety net programmes included		
Insufficient allowance amount for social safety net programmes	Creating evidence-base for better design and implementation of interventions for availability of diversified food items	Review and restructure the social safety net programmes to avoid duplication of efforts (if any) and to rationalize resource allocations for improving	Medium to Long Term	Allowance as per requirement of the target beneficiaries are	Social safety net programmes are made more effective and efficient	

Bottlenecks	Recommendations	Specific Activities	Timelines	Output	Outcome	Impact
		coverage, increasing allowance, and improving effectiveness of social safety net programmes		rationalized and increased		
Social pressure and norms enforcing early marriage and early pregnancy	Ensure multi-sectoral collaboration for improving implementation of interventions to address early marriage and early pregnancy issues	Develop multi-sectoral joint action plan funded through respective sector/departmental sources to address complex socio-economic issues to modify social norms	Long Term	Relevant departments, NGOs and CSOs are working on modification of social pressure and norms enforcing early marriage and early pregnancy	Changes in social norms towards restraining early marriage and early pregnancy	
Harassments, intimidation and coercion; Dowry; violence against women	Review respective sectoral and departmental policies and update and/or formulate new policies to ensure enabling environment to address harassments, intimidation, coercion and other relevant gender-based issues	Enforce appropriate provisions of Women and Child Repression Prevention Act, 2020; Child Marriage Restraint Act, 2017 and other relevant acts enacted to ensure safety of women and children, along with proper monitoring of the enforcement	Long Term	Regulations are enforced against harassments, intimidation, coercion, dowry, and violence against women	Enabling environment ensuring women education and restraining early marriage and early pregnancy created	
Involvement of child and adolescents in income generating activities resulting drop-out from school	Review respective sectoral and departmental policies and update and/or formulate new policies to restraint involvement of children and reduce involvement of adolescents into income generating activities that result in drop-out from school	Enforce the appropriate provisions under Labour Act and Children Act in Bangladesh to ensure restraining of children being involved into income generating activities	Long Term	Regulations are enforced against child labour and involvement of adolescents as per the applicable labour laws	Reduced school drop-out.	
	Ensure multi-sectoral collaboration for rationalizing resource allocation for social safety net programmes targeting school children	Review and restructure the social safety net programmes to avoid duplication of efforts (if any) and to rationalize resource allocations for improving coverage, increasing allowance, and improving effectiveness of social safety net programmes to ensure families are not forced to send children in income generating activities	Medium to Long Term	Increased scholarship amount for school students from poor and vulnerable families		
	Promote participation of private sector in nutrition	Encourage private sector to participate government efforts	Medium to Long Term	Increased vocational skills of		

Bottlenecks	Recommendations	Specific Activities	Timelines	Output	Outcome	Impact
	sensitive interventions through creating enabling environment	in nutrition sensitive interventions (e.g. arranging after-school apprenticeship programme for adolescents)		adolescents without compromising school hours, and potential job opportunity created for future		
Limited out-of-school child safety net programmes	Ensure multi-sectoral collaboration for improving implementation of nutrition sensitive interventions along with rationalizing resource allocation	Develop multi-sectoral joint action plan funded through respective sector/departmental sources to design programmes for out-of-school child safety net programmes	Long Term	Increased allocation for safety net programmes targeting out-of-school children	Better coverage of nutrition sensitive safety net programmes for out-of-school children	
		Incorporate relevant nutrition sensitive activities for out-of-school children in respective annual work plan with allocation from ADP followed by regular monitoring and reporting	Short to Medium Term			
Insufficiency of handwashing facilities at school	Creating evidence-base for better design and implementation of handwashing and relevant WASH interventions having close relations with nutrition sensitivity	Promote researchers to generate innovative technologies and solutions for physical constraints hindering arrangement of WASH facilities at school, e.g. gender-specific toilets, innovative menstrual hygiene products disposal system, low-cost handwashing stations	Medium to Long Term	Low cost technology at schools for handwashing made available	Increased handwashing facilities at schools	
	Ensure multi-sectoral collaboration for improving implementation of WASH interventions	Develop multi-sectoral joint action plan funded through respective sector/departmental sources to address handwashing issue	Long Term	Increased allocation of resources for school handwashing facilities		
	Promote participation of private sector in nutrition sensitive interventions through creating enabling environment	Allow and encourage private sector to participate in sponsorship programmes in arranging handwashing facilities for schools	Short to Medium Term	Private sector entities sponsoring handwashing facilities at schools		

Bottlenecks	Recommendations	Specific Activities	Timelines	Output	Outcome	Impact
Mismatch of information infrastructure across ministries. Improper selection of beneficiaries at local level	Ensure multi-sectoral collaboration for improving implementation of nutrition sensitive interventions along with rationalizing resource allocation	Design and implementation of a common database for all ministries and departments to utilize for better targeting of beneficiaries, ensure regular monitoring, reporting and evaluation.	Medium to long term	A common information infrastructure is created for all ministries and departments	Improved synergy of information among ministries allowing better selection of beneficiaries	
Inadequate capacity of government agencies to ensure handwashing behaviour interventions	Ensure multi-sectoral collaboration for improving implementation of nutrition sensitive interventions along with rationalizing resource allocation	Increase capacities of respective departments including local government institutes to better implement nutrition sensitive interventions	Medium to long term	Improved capacity of relevant government agencies	Better implementation of handwashing behaviour improvement interventions	
Shortage of health/nutrition frontline service providers; High workload of health/nutrition frontline service providers	Ensure multisectoral collaboration for improving implementation of nutrition sensitive interventions along with rationalizing resource allocation	Enabling participation of local government representatives, civil society organizations and NGOs in community-based initiatives for mass awareness development to complement the efforts of frontline health and nutrition service providers	Short Term	Increased participation of local government representatives, NGOs and CSOs in programme implementation	Effective complementarity to health/nutrition frontline workers created in implementing nutrition sensitive interventions	
Low use of contraception among married adolescents; High unmet demand for FP among adolescents	Review and update of existing SBCC strategies and interventions to ensure advocacy, social mobilization and BCC in favour of contraception for adolescent couples	Expand target of the SBCC interventions to include the adolescent couples	Short Term	Increased awareness among married adolescents regarding contraception methods and relevant FP issues	Increased use of contraception among married adolescents	
		Incorporate uncovered and emerging issues, like adolescent contraception and FP issues, in the SBCC message and delivery design	Short to medium term			
		Create new platforms or revitalize existing platforms (e.g. adolescent clubs) for expanded coverage of nutrition sensitive interventions	Medium to long term			
	Ensure multisectoral collaboration for improving implementation of nutrition sensitive interventions along with rationalizing resource allocation	Enabling participation of local government representatives, civil society organizations and NGOs in community-based initiatives for mass awareness development to complement the efforts of frontline health and nutrition service providers	Short Term			

Bottlenecks	Recommendations	Specific Activities	Timelines	Output	Outcome	Impact
Over-indulgence of junk food	Ensure multisectoral collaboration for improving implementation of nutrition sensitive interventions along with rationalizing resource allocation	Enabling participation of local government representatives, civil society organizations and NGOs in community-based initiatives awareness on negative effects of junk food on individuals nutrition and health	Short Term	Increased awareness on the harmful impact of junk food	Reduced consumption of junk food	
	Review and update of existing SBCC strategies and interventions to ensure advocacy, social mobilization and BCC in favour of the nutrition sensitivity.	Incorporate the harmful impact of junk food/unhealthy food in the SBCC activities and message dissemination to increase awareness of community people	Short to medium term			
Inadequate knowledge and awareness, particularly of male household members and other decision makers of the household with respect to nutrition issues			Short term	Male household members and other decision makers of the household are included into relevant SBCC activities as target audience	Increased awareness among household members, including male members and decision makers in relevant nutrition issues	
	Review and update of existing SBCC strategies and interventions to ensure advocacy, social mobilization and BCC in favour of the nutrition sensitivity.	Expand target of the SBCC interventions to include the target groups that were, otherwise, excluded or not specified in the previous SBCC interventions	Short term			
		Create new platforms or revitalize existing platforms (e.g. husband forums) for expanded coverage of nutrition sensitive interventions	Medium to long term			
Inappropriate resource allocations; Insufficient allowance amount	Ensure multi-sectoral collaboration for rationalizing resource allocation for nutrition sensitive interventions	Incorporate relevant nutrition sensitive activities in respective annual work plan with allocation from ADP followed by regular monitoring and reporting	Short to medium term	Allocation of resources from multiple sources, for nutrition sensitive interventions made rationalized and efficient	Resource allocations for nutrition sensitive interventions increased	

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