Bangladesh: situation analysis for Transform Nutrition

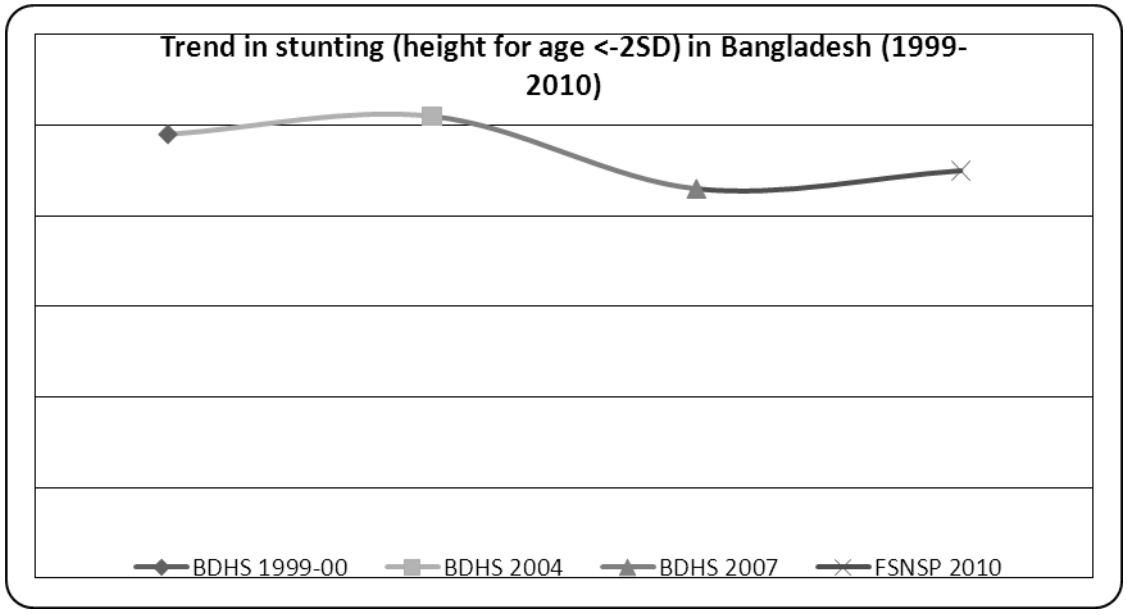
Situation Analysis

Outcomes

Malnutrition refers to both undernutrition and overnutrition. In Bangladesh while rate of undernutrition is still high, although slow, the rate of overweight and obesity in children and women is also increasing (Ahmed et al., 2012). However, in this situation analysis we only focus on child and maternal undernutrition in Bangladesh. Undernutrition results from both macro (protein energy deficiency) and micronutrient including essential vitamins and minerals deficiencies.

Malnutrition or undernutrition is estimated to be an 'underlying cause' of about 60% of childhood deaths in Bangladesh (Faruque et al., 2008). Improvement in overall child nutritional status has been slow over the years in Bangladesh. According to Food Security and Nutrition Surveillance Project (FSNSP) survey, in 2010 more than 7 million under-five children were stunted, almost 5 million were underweight and nearly 200,000 were wasted in Bangladesh (HKI, 2010). Prevalence of stunting and underweight both remain unacceptably high in the country.

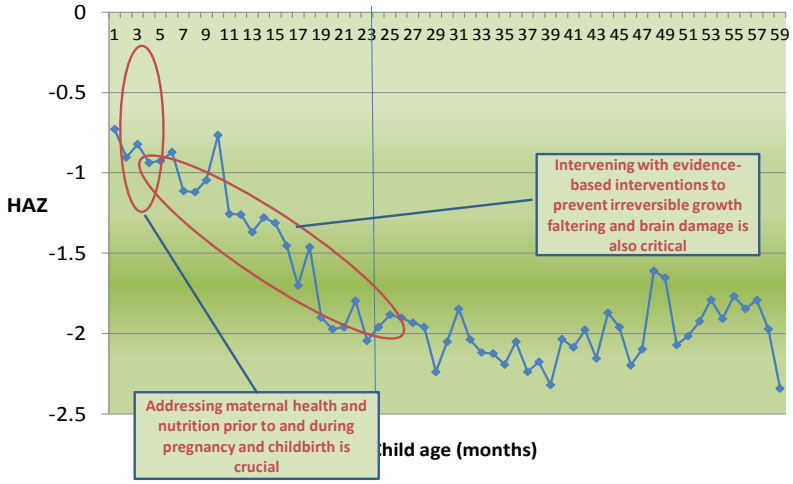
Figure 1: Trend in stunting (height for age <-2SD) in Bangladesh (1999-2010)



According to the Bangladesh Demographic Health Survey (BDHS) in 2007, 43% of under-five children in Bangladesh were stunted and 41% were underweight. Age-specific data on stunting and underweight show a significant increase in the first 2 years of age, with little change thereafter. Wasting, too, peals in the first 2 years of age, with highest wasting rates seen in the 9−21 month age period (BDHS, 2007). Anaemia peaks at 6-11 months of age (HKI, 2006), demonstrating the importance of first 2 years age window for interventions (Sen et al. 2010). Although there has been improvements in underweight

prevalence, the current rate of reduction of 1.27 percentage points per year means that we are unlikely to achieve the nutrition target of Millennium Development Goal (MDG) 1 (Ahmed et al., 2012). To reach the MDG 1 target, the current rate of reduction of underweight has to increase by 50% and maintained (HKI, 2010). This can only be achieved through a concerted and coordinated effort involving all the sectors. Even if we achieve the target of MDG1, more than a third (>33%) of the children will still remain underweight (Ahmed et al., 2012). In contrast to child undernutrition, there has been greater progress over the years in reducing the proportion of mothers with low body mass index (BMI) (<18.5). The FSNSP survey in 2010 shows a quarter (25%) of mothers with low BMI, which is almost 50% reduction between 1996 and 2007 (HKI, 2011).

Figure 2: Height-for-age z-scores by child age, Bangladesh 2007[1]



Undernutrition equally affects both male and female children. Around 44% of male children and 43% of female children were stunted in 2007. Some analyses suggest that gender differentials become more prominent as children grow older (beyond 2 years of age) (Sen et al. 2010). The proportion of stunted children is about 24 percent higher in rural areas compared to the urban areas. However within the urban settings, a much greater prevalence of undernutrition has been observed among urban slum children and about 44% higher than the rural average. Though, undernutrition is common in all socioeconomic groups, the rate is nearly double among under-5 children from the lowest quintile than those from the highest quintile (BDHS, 2007).

Multiple factors contribute to child malnutrition. Over the years indicators of proper feeding practices for children have not changed. Nearly half of children are still not exclusively breastfed (Annex, Figure 3). More than 50% of the children are receiving harmful pre-lacteal feeds and early initiation of breastfeeding, i.e. initiation of breastfeeding within one hour of birth is still low at 43% (BDHS, 2007). The rate of timely initiation of complementary feeding has been increasing quite steadily. However the problems of complementary feeding remain with ensuring adequately diverse diet and in consuming iron-rich foods. Around 40% of children are receiving an adequately diverse diet and consuming iron-rich foods in their complementary foods (HKI, 2011). Moreover, only 55% of mothers take iron tablets during their pregnancy. More than two-thirds of mothers do not consume adequately diverse food. Low birth

[1] Figure has been adapted/excerpted from Sen, B., Menon, P., Ahmed, A. U., Chowdhury, F. P., 2010, Food utilization and nutrition security, Prepared for Bangladesh Food Security Investment Forum May 2010

weight (<2500g) also leads to childhood undernutrition. Though progress has been made, Bangladesh still has the highest low birth weight rate in the world where one in five children are born with low birth weight (Ahmed et al., 2012).

Bangladesh has achieved a fairly high coverage of vitamin A supplementation in under-5 children and has been successful in eliminating night blindness. However, sub-clinical vitamin A deficiency (VAD) in pregnant women has been reported in some studies and only one in five mothers receive postpartum vitamin A supplementation (Ahmed et al., 2012). Iodine deficiency disorder (IDD) is also a common problem of children and women of reproductive age in Bangladesh. The IDD survey in 2004-05 reported that the prevalence of goiter in women of 15-44 years age group was 12%. In addition over 30% of children and women were suffering from sub-clinical iodine deficiency. More than one-third of pregnant mothers are anaemic in the country, particularly in women from rural areas. Approximately 70% of children aged 6-59 months were anaemic in 2004; of which children of 6-11 months old was the most vulnerable group (92%) (HKI, 2006). Anaemia contributes to low birth weight, impairs growth and brain development of children and decreases immunity. Estimates suggest that loss in economic productivity due to anaemia alone contributes to 7.9% of gross domestic product (GDP) in Bangladesh (HKI, 2006). Iron-deficiency is believed to be the most common cause of anaemia in children and pregnant women. Among other micronutrients, vitamins A and B12, folate, riboflavin, and copper deficiency, also increases the risk of anaemia.

1. Nutrition-relevant programs

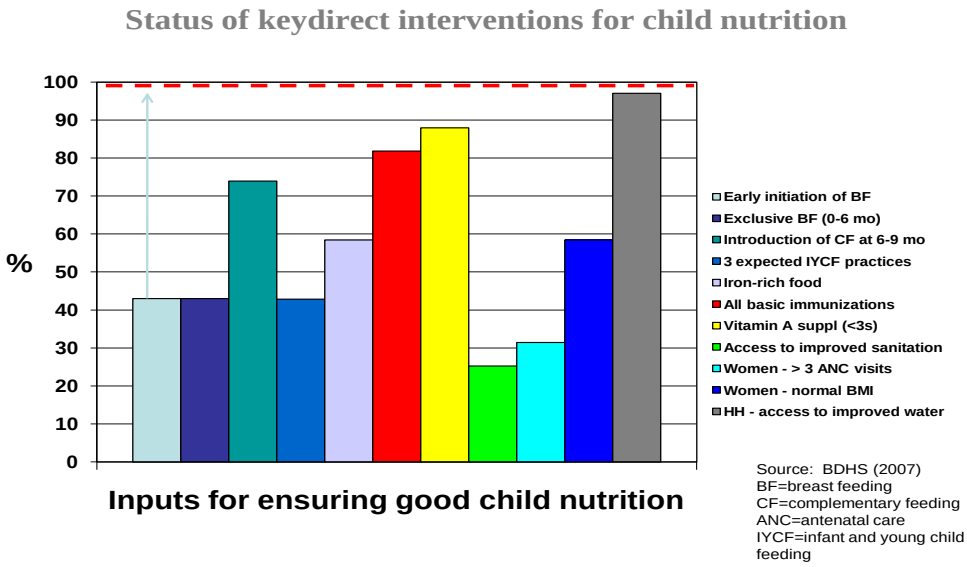
Nutrition specific/ direct (P1)

The Government of Bangladesh is replacing the separately managed National Nutrition Programme (NNP), with the National Nutrition Services (NNS) in an effort to mainstream nutrition as part of the Health, Population and Nutrition Sector Development Program (2011-16). Implementation of direct nutrition interventions will be guided by NNS Operational Plan. NNS has targeted the top recommended interventions for implementation, including promotion of exclusive breastfeeding for 6 months and continued breastfeeding up to 2 years; introduction of complementary foods of adequate nutritional quality and quantity after the age of 6 months; and improved hygiene practices including hand washing, micronutrient supplementation, salt iodization, growth monitoring, and promotion and management of severe acute malnutrition. A variety of other stakeholders are implementing and supporting smaller-scale interventions related to direct nutrition inputs. Alive and Thrive, is a joint program of government and non-government agencies and the private sectors, which supports implementation of the Government of Bangladesh's National Infant and Young Child Feeding (IYCF) Strategy and Action Plan.

In Bangladesh, routine supplementation of vitamin A supplements is scheduled with measles vaccination (for <1 year children) and reinforced through a "National Vitamin A plus Campaign (NVAC)" (twice a year at 4-6 months interval for 1-5 years children) since 2003. Other factors that may have contributed to the reduction in the prevalence of VAD in the population are: the agricultural and nutrition-related policies and programmes, such as, home gardening, homestead poultry, nutrition education, promotion of breastfeeding, and fortification of cooking oil with vitamin A. Mothers are also recommended to take high potency vitamin A supplements within 6 weeks of delivery, but, according to the BDHS 2007 report, only 20% of mothers received post partum vitamin A supplementation. One of the reasons of this low coverage of post-partum vitamin A supplementation could be low utilization of postnatal care by the mothers (IPHN, 2011), which needs to be strengthened.

A variety of activities have been implemented to reduce iodine deficiency disorders (IDD) including mass awareness programs, adoption and promotion of a universal salt iodisation law, and sustained monitoring and training of field workers. However, the latest 2004-05 national IDD survey reported that almost 50% of households still used inadequately iodized (<15ppm) salt, which justifies for continued effort to ensure salt quality and improve use of iodized salt. Iron-folate supplementation during pregnancy has been the only strategy to prevent and control anaemia for women. Pregnant women are provided with supplements as part of antenatal care services. However, the coverage of iron-folic acid (IFA) supplementation of pregnant women is only just above 50%. Infants and preschool children, despite the high prevalence of anaemia and its potential consequences on cognitive functions, are not routinely given any interventions at scale to prevent and control anaemia. Deworming of children aged 24-59 months with albendazole through the six-monthly NVAC has been an indirect effort to prevent anaemia in this group. However the other causes of anaemia have not received adequate attention.

Figure 3: Status of key direct interventions for child nutrition[2]



The Global Alliance for Improved Nutrition (GAIN) supports the private sector in Bangladesh to produce micronutrient powders. This allows easy food fortification at home by mothers to prevent micronutrient deficiencies. The Social Marketing Company (SMC) has introduced MoniMix partnering with Renata, a pharmaceuticals company. Monimix is a micronutrient powder containing iron and some other essential vitamins and minerals and which can be easily mixed at home to fortify food for children. Recently Renata has also started marketing of another micronutrient powder Pustikona, which aims to improve the nutrient content of complementary foods for infants (GAIN Bangladesh websites).

Nutrition sensitive/ indirect (agriculture, social protection, women's empowerment) (P2)[3]

[2] Figure has been adapted/excerpted from Sen, B., Menon, P., Ahmed, A. U., Chowdhury, F. P., 2010, Food utilization and nutrition security, Prepared for Bangladesh Food Security Investment Forum May 2010

[3] Text has been adapted/excerpted from Sen, B., Menon, P., Ahmed, A. U., Chowdhury, F. P., 2010, Food utilization and nutrition security, Prepared for Bangladesh Food Security Investment Forum May 2010

Role of agricultural sector. Poor food diversity leads to food-insecurity to large populations of Bangladesh. The usual diet is heavily dependent on rice, and cereals remain the main source of energy in the diet. Food consumption patterns in Bangladesh show very little diversity even at the national level. Between 1995 and 2005 – over a 10 year period, little change has been observed in the patterns of food consumption in terms of calorie and protein shares in the average Bangladeshi diet. In 1995–96, the percentage of total calorie consumption from rice was 71 percent; in 2005 this share was 68 percent. Furthermore, the consumption of non-rice foods, i.e. nutrient-rich food items such as milk, meat, fish, and fruits, is more price sensitive than that of rice. Despite 33 percent real increase of per capita income, very little change has been observed in food consumption patterns (Sen et al. 2010). The price of non-rice foods that are rich in nutrients also show a rising trend and the poor are more price-responsive than the rich. The low micronutrient content of the diet largely explains the high prevalence of micronutrient deficiency in Bangladesh.

Social protection. Household poverty is an important correlate of maternal and child undernutrition. According to BDHS 2007, the percentage of underweight among under-5 children ranged from 51 percent in the poorest wealth quintile to 41 percent in the middle quintile, and the dropping further to 26 percent in the highest quintile. The government of Bangladesh operates a number of social protection programmes to ensure food security in the country. These include: (i) open market sales (OMS); (ii) Food For Work (FFW) programmes; (iii) Vulnerable Group Development (VGD) programme; (iv) Vulnerable Group Feeding (VGF) programme; (v) test relief (TR); (vi) gratuitous relief (GR); (vii) food aid to Chittagong Hill Tracts area people; (viii) food subsidies; and (ix) employment in char areas**.**

Save the Children, World Food Programme (WFP) and DFID also support several social protection programmes in Bangladesh that is expected to improve food security of vulnerable populations. DFID supported the Economic Empowerment of the Poorest Programme (EEP)/shiree (Stimulating Household Improvements Resulting in Economic Empowerment) which funds a number of programmes and supports the Government of Bangladesh with an aim to reduce the vulnerability of the extreme poor to natural disasters, economic shocks and social exclusion.
The evidence suggests that public transfer and relief programs that provide food to the poor, such as the Vulnerable Group Feeding and the Food-for-Work programmes, have significant effects on reducing child undernutrition among the poor in Bangladesh. There is evidence to indicate that the presence of non-government organizations is associated with a strong reduction in child undernutrition in the bottom consumption quintile.

Women's empowerment. Analyses of Bangladesh Demographic and Health Survey (BDHS) 2007 data and panel data from studies conducted by the International Food Policy Research Institute (IFPRI) show that different measures of women's empowerment are associated with different aspects of child undernutrition (Sen et al., 2010). In particular, study findings underscored the role of women's attitudes and exposure to domestic violence as having negative effects on stunting. Other research studies in Bangladesh also demonstrate that women who are exposed to violence consume smaller amounts of nutritional food supplements during pregnancy and have greater fetal stress. Women's mobility, another proxy empowerment measure, is associated with greater diversity of diets for infants and young children.

Nutrition-relevant policies and institutional arrangements for nutrition (P3)[4]

Bangladesh has policies and policy instruments that address and influence maternal and child undernutrition for many years now. Notable among these are the National Nutrition Policy and the National Strategy for Infant and Young Child Feeding in Bangladesh, both of which are more focused on direct interventions targeted to the "window of opportunity" timeframe. The major policy instrument for direct interventions such as food supplementation and counseling for improved feeding of infants and young children was the National Nutrition Programme (NNP) of the Government of Bangladesh. NNP was the largest single provider of comprehensive nutrition interventions in the country targeting adolescent girls, women, and children and was implemented by local NGOs. However the NNP encountered several challenges. The monitoring and evaluation mechanisms of the programme were weak and governance was poor. The programme did not cater very well to the needs of children with severe acute malnutrition (SAM), and it did not cover any of the cities which have substantial slum populations. The Government, in the new Health, Population and Nutrition Sector Development Programme (HPNSDP, 2011-2016), has decided to discontinue the NNP and to mainstream the nutrition activities into the existing health system, which will be operationalized as the National Nutrition Service (NNS).

The other sectoral policies, which support direct and indirect nutrition interventions in Bangladesh, are summarized below in the following table:

Policy	**Year**	**Nutrition focus**	**Nutrition relevant areas**
Sixth Five Year Plan	2011-15	Indirect	• In the Country Investment Plan (CIP) a roadmap towards investments in agriculture, food security and nutrition" has been formulated. • Diversification in food production has been addressed to tackle the challenge of achieving balanced nutrition. • Agricultural extension together with nutritional awareness program will receive about 8 percent of the agricultural development plan expenditure. • Focus is to ensuring food security for all and elevating nutritional status of the people living below poverty line; • Development of a social safety net program for vulnerable groups with special focus on women and children through improvement and enlargement of targeted food distribution;
National Strategy for Accelerated Poverty Reduction II Poverty Reduction and Strategic Papers (PRSP)	2009-11 2005	Indirect	• Human development of poor to raise their capability through improved access to education, health, sanitation and safe water, **nutrition** and social interventions. Human development is one of the direct strategic blocks to be achieved for accelerated poverty reduction. • Target group for nutrition services include both children and mothers. But the services are not specific to 1000 day period (pregnancy to first two years of age). • Provision of Social Safety Net Programmes (SSNP) to reduce risk and vulnerability of poor and ensure food security in the

[4] Text has been adapted/ excerpted from National Nutrition Services Operational Plan

			country through direct transfer of resources. • Food-for-education programmes and incentive programmes such as school stipend which combine safety net objectives with human development objectives.
National Food Policy National Food Policy Plan of Action	2006 2008-15	Direct	• These policies focus on objectives such as: (i) ensure adequate and stable supply of safe and nutritious food; (ii) enhance the purchasing power of the people for increased access to food; and (iii) ensure adequate nutrition for all, especially women, children and persons with disabilities.
National Agriculture Policy (Final draft)	2010	Indirect	• The National Agriculture Policy broadly aims at creating an enabling environment for sustainable growth of agriculture for reducing poverty and ensuring food security through increased crop production and employment opportunity. • There has been a policy focus on capacity building of women in promoting household food and nutrition security, increased women participation in agriculture and to ensure women's equal access to agricultural inputs (e.g. seed, fertilizer, credit, education & training, information etc.).

Institutional arrangements[5]

The Institute of Public Health Nutrition (IPHN) of the Ministry of Health and Family Welfare (MOHFW), assists the ministry on formulating policies and strategies for nutrition-related activities and programmes and also to conduct research, training and surveillance. The Director of IPHN will oversee the delivery of the "National Nutrition Service (NNS)" programme as its Line Director. He will manage the NNS budget and maintain coordinate and plan with other Line Directors of other relevant programmes of DGHS and DGFP, which will be the main emphasis for the mainstreaming. The Line Director - NNS will also serve as the Member Secretary of the multi-sectoral Steering Committee chaired by the Secretary of MOHFW and the Nutrition Implementation Coordination Committee chaired by the DGHS.

2. Nutrition-relevant capacities

Research

ICDDR, B is the leading public health and nutrition research organization in Bangladesh. It hosts a multidisciplinary scientific research staff from Bangladesh and many countries of the world. ICDDR,B works in close collaboration with the Government of Bangladesh (GoB), NGOs, and international research institutes and universities. Experiences with national institutes have revealed that the research capacity of national institutions require substantial improvement. They often lack adequate skills in research and critical thinking, and the ability to effectively utilize research evidence in programme design, management and monitoring.

Implementation

While the implementation of more vertically delivered programmes, e.g. vitamin A supplements, has been done well and has achieved high coverage, interventions that require a functioning health system

[5] Text has been adapted/ excerpted from National Nutrition Services Operational Plan

have faced serious challenges in reaching high coverage. Though nutrition is a national priority, it has been difficult to both engage and maintain the focus of both public health professionals and professionals in other relevant agencies and ministries on nutrition, particularly in relation to nutrition evidence. Poor inter-ministerial communication and collaboration also contributes to inefficient implementation of nutrition programmes.

Policy advocacy

The Institute of Public Health and Nutrition (IPHN) under the MoHFW of the Government of Bangladesh will be leading the government's new initiative to mainstream nutrition within the existing health and family planning system. The mainstreamed programme will focus on those activities within its mandate and where it has the capacity as well as the comparative advantage to act. For activities that lie outside the mandate of the MOHFW, NNS will play a coordination as well as advocacy role and ensure active engagement with other the key sectors (for example, Ministries of Agriculture, Food and Disaster Management, Ministry of Industry).

There are several other agencies that are important in policy advocacy for nutrition. Alive and Thrive (A&T) undertakes policy dialogue at the national-level to encourage investments in IYCF programs and implementation of national-level policies. It has been working to raise understanding of Infant and Young Child Feeding (IYCF) issues and achieve consensus, sustained commitment, and support for good IYCF practices in the workplace, marketplace, and health system through targeted advocacy and build capacity of organizations and individuals to address gaps in the policy and regulatory environment in Bangladesh. The other professional bodies, e.g. Bangladesh Breastfeeding Foundation (BBF), Bangladesh Neonatal Forum (BNF) and development partners eg. UNICEF, Save the Children are also actively engaged in policy formulation in Bangladesh.

3. Future plans, opportunities, challenges

The Government of Bangladesh is planning to accelerate the progress in reducing the persistently high rates of maternal and child under-nutrition by mainstreaming the implementation of nutrition interventions into health (DGHS) and family planning services (DGFP), scaling-up the provision of area-based community nutrition, updating the National Plan of Action on Nutrition in the light of food and nutrition policies. To achieve this, nutrition has been made a priority for the new 5-year national health sector programme and a variety of key strategies and actions will be pursued. In order to implement nutrition services at the field level and coordinate among different entities dealing with service delivery, three Programme Managers (PM) will be working under the supervision of the Line Director - NNS. One programme manager will be responsible for programme implementation within DGHS and a second programme manager (deputed from DGFP) will be responsible for programme implementation in the DGFP. The third programme manager will be responsible for multi-sectoral activities of NNS[6].

Opportunities

Bangladesh is a signatory and active participant in several global campaigns that seek to accelerate progress in reducing malnutrition. Notable of these campaigns are SUN and REACH, which call for a multi-sectoral approach to undernutrition prevention and feature enhanced commitment and coordination between stakeholders. There is a renewal of interest and attention of government agencies, non-government organizations and development partners on public health nutrition. Informal

[6] Text has been adapted/ excerpted from National Nutrition Services Operational Plan

and other networks of nutrition professionals and agencies (including public sector) exist, which can be built on as a problem solving platform to share knowledge and expertise, and enhance capacity.

Challenges:

The key challenges for promoting programmes to prevent undernutrition at the national level in Bangladesh include: placing nutrition high up on the list of priorities, implementing cost-effective and sustainable interventions at scale following appropriate strategies, improving access to the services for those in real need, and evidence-based decision-making and building up operational capacity. For tackling the massive problem of undernutrition, synchronized inter-ministerial activities are essential. Moreover, rising food prices, increasing population and urbanization, vulnerability to climate change and disasters are emerging challenges that will have serious implications for nutrition and food security in the country. There has been a steady increase of food prices in the last two years. This poses a serious threat to the 60 million Bangladeshi population who earn less than one dollar a day to live. On the other hand, one percent of cultivable land is lost each year due to encroachment of urban settlements, industry and infrastructure for the growing population.

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