

# Improving Multisectoral Nutrition through Targeted Technical Assistance: BANGLADESH

Despite impressive 6 percent economic growth over the past decade, Bangladesh ranks amongst the highest in the rate of malnutrition globally (1). Both stunting (36 percent) and underweight (33 percent) have slowly declined, but wasting, at 14 percent, remains largely unchanged (2). Malnutrition is a cross-cutting problem for all Bangladeshis—as even the wealthiest households experience prevalent stunting and wasting. The key underlying causes of malnutrition are complex, but include poor dietary quality and diversity amongst women and children; poor infant and young child feeding practices; gender inequality and age discrimination contributing to early marriage and childbearing in adolescence; and an unclean environment and poor access to safe and appropriate water sources, treatment and storage.

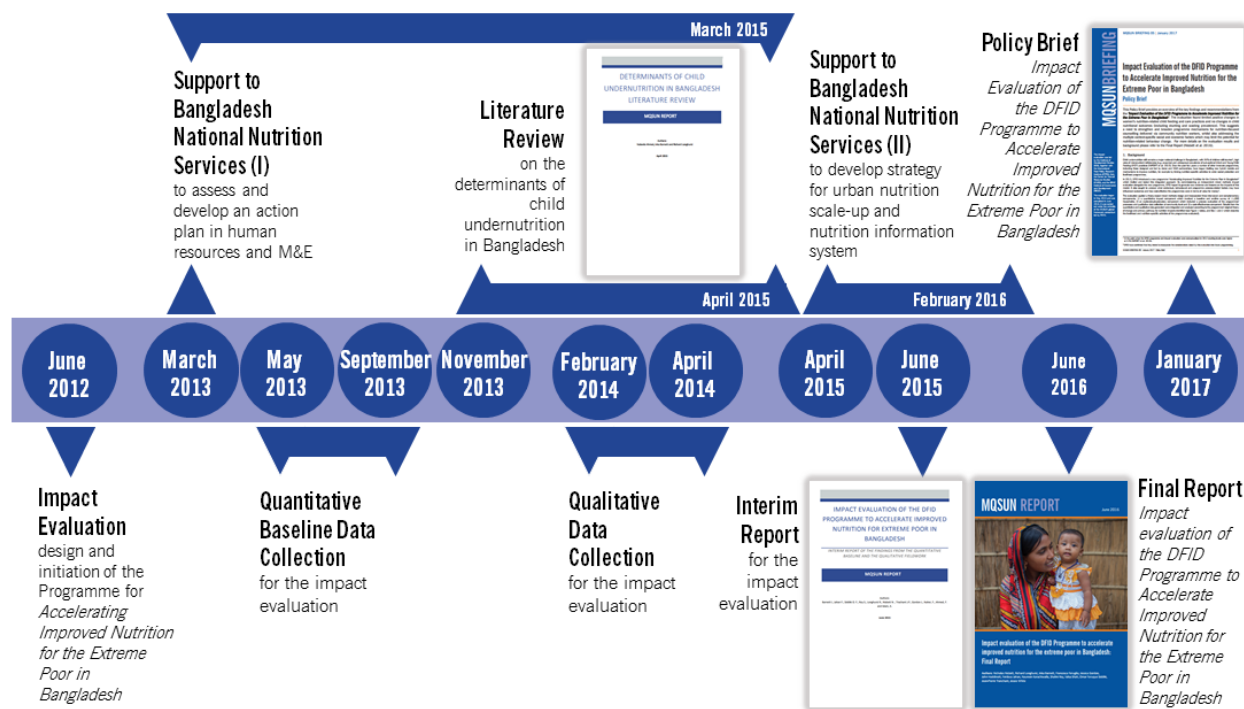
Maximising the Quality of Scaling Up Nutrition (MQSUN) is funded through the United Kingdom's (UK) Department for International Development (DFID) and provides evidence-based technical expertise to DFID country offices and the Scaling Up Nutrition (SUN) Movement for the design and implementation of effective multisectoral nutrition programming and policies.

Bangladesh has had difficulty aligning nutrition programming with context-specific underlying causes of malnutrition and scaling up high-quality nutrition services through uncoordinated governance structures at all levels. MQSUN provided a range of technical assistance to DFID and the Bangladeshi government between 2011 and 2016 to address this challenge.

MQSUN provided strategic technical assistance by first conducting a comprehensive literature review of the underlying causes of malnutrition in Bangladesh. Then, MQSUN supported the Bangladesh National Nutrition Services (NNS) to improve the implementation of the NNS operational plan through targeted capacity development, including intensive human resources national planning and monitoring and evaluation (M&E) guidance to institutionalise a national nutrition surveillance system. In 2013, MQSUN supported DFID in the technical design of the *Programme to Accelerate Improved Nutrition for the Extreme Poor in Bangladesh*. MQSUN also conducted an independent mixed methods impact evaluation of the same programme—assessing the effectiveness and cost-effectiveness of integrating nutrition-specific with nutrition-sensitive (e.g. livelihoods) interventions. Figure 1 summarises the MQSUN technical assistance to DFID/Bangladesh.

« MQSUN supported Bangladesh to scale up the country's multisectoral response to address malnutrition. »

**Figure 1. MQSUN Technical Assistance Timeline for Bangladesh.**



## Bangladesh: Determinants of Malnutrition

MQSUN conducted a comprehensive literature review between November 2013 and January 2014 to better understand the Bangladesh-specific immediate, underlying and basic causes of malnutrition in children under two years according to the United Nations Children’s Fund conceptual framework of malnutrition (1990). Because nutrition is such a multifaceted phenomenon—being both a cause and an outcome of health issues—it is important to consider all the determinants of malnutrition in order to effectively address it on a national level. This review added to the global and national evidence base and informed future DFID and Bangladesh nutrition programming. The final report was published in April 2015.

The review identified gender as a strong determinant. Female-headed households are more vulnerable to food insecurity, and poor maternal health can become an intergenerational challenge if adolescent girls are not targeted. As well, wider factors related to socioeconomic status, cultural and ecological context and educational attainment contribute to chronic poverty and food insecurity, which then impacts nutritional status. Bangladesh is also prone to flooding, which can have the most impact on the poor and vulnerable. Table 1 summarises the key causes of malnutrition in Bangladesh. Many of the identified themes are cross-cutting and connect with different causal pathways for child undernutrition within the Bangladeshi context. As well, the impact of these factors on nutritional status can be short term, long term or even generational, depending on the context. These identified barriers were considered when conducting the other technical assistance in Bangladesh.

**Table 1. Determinants of Malnutrition in Bangladesh.**

Level	Specific Determinants		
<b>Immediate Causes</b>	<b>Inadequate dietary intake</b>		<b>Disease</b>
	<ul style="list-style-type: none"> <li>Poor dietary diversity; limited micronutrients</li> <li>Poor maternal diet; intergenerational malnutrition</li> </ul>		<ul style="list-style-type: none"> <li>Poor child health: diarrhoea and acute respiratory infections</li> <li>Poor maternal health</li> </ul>
<b>Underlying Causes</b>	<b>Household food insecurity</b>	<b>Inadequate care and feeding practices</b>	<b>Unhealthy household environment and inadequate health services</b>
	<ul style="list-style-type: none"> <li>Food insecurity; lack of access to nutritious food</li> <li>High food prices</li> <li>Corruption in agricultural sector</li> </ul>	<ul style="list-style-type: none"> <li>Lack of birth spacing/ short intervals between children</li> <li>Poor maternal breastfeeding and caregiving practices</li> </ul>	<ul style="list-style-type: none"> <li>Limited health services access; low vaccination rates</li> <li>Poor water, sanitation and hygiene, especially poor sanitation and unhygienic feeding before age six months</li> </ul>
<b>Basic Causes</b>	<b>Lack of household access to land, income, employment and technology</b>	<b>Inadequate financial, human, physical and social capital</b>	<b>Sociocultural, economic and political context</b>
	<ul style="list-style-type: none"> <li>Poverty</li> <li>Expense of tobacco use</li> <li>Lack of access to education</li> <li>Maternal education/age</li> </ul>	<ul style="list-style-type: none"> <li>Educational status and income level of parents and vulnerability</li> </ul>	<ul style="list-style-type: none"> <li>Gender disparities</li> <li>Female-headed households</li> <li>Intimate partner violence</li> <li>Natural disasters (flooding)</li> <li>Economic shocks</li> </ul>

Source: Ahmed N, Barnett I, Longhurst R. Determinants of Child Undernutrition in Bangladesh: Literature Review. MQSUN Report. DFID; April 2015.

## Support for the National Nutrition Services

The government of Bangladesh decided to accelerate the progress it has made in reducing the persistently high rates of maternal and child undernutrition by mainstreaming the implementation of nutrition interventions across all primary health care services. In 2011, the country approved a five-year Health, Population and Nutrition Sector Development Programme Implementation Plan, which included the NNS operational plan (3)—with a dedicated budget and a team under the leadership of the Line Director for NNS and the Institute of Public Health and Nutrition. The NNS now facilitates the delivery of a comprehensive multisectoral package of nutrition interventions to communities through existing health and family planning services.

In 2013, MQSUN provided intensive capacity support to the NNS and the Ministry of Health and Family Welfare (MoHFW) to implement the NNS operational plan. First, MQSUN conducted a multilevel human resources requirement assessment. Table 2 summarises the key findings from the assessment. To fill in the gaps identified in the assessment, MQSUN completed a workforce projection report, a comprehensive human resources training plan and capacity development plans with clearly defined competencies, roles and responsibilities within the NNS for the implementation of nutrition interventions moving forward. Supervisors were involved in both the initial training and subsequent on-the-job mentoring to ensure competencies were developed and sustained to carry out the responsibilities laid out in the operational plan. The overall outcome was a comprehensive national nutrition in-service training system that enabled scale up of NNS implementation at all levels of the government—from community clinics to district hospitals to divisions of the MoHFW.

**Table 2. Workforce Capacity Barriers to Implementing the National Nutrition Services Operational Plan.**

<p><b>Limited staff:</b></p> <ul style="list-style-type: none"> <li>• Absence of public health/nutrition specialists and focal points at all levels.</li> <li>• High vacancy amongst all classes of medical posts and a lack of time for existing staff to undertake additional responsibilities.</li> </ul>
<p><b>Inadequate knowledge and skills in nutrition:</b></p> <ul style="list-style-type: none"> <li>• Lack of nutrition-specific and nutrition-sensitive knowledge and expertise in health and other sector ministries.</li> <li>• Inadequate training, supervision and support of staff at district, Upazila and community levels to undertake their responsibilities according to the operational plan.</li> </ul>
<p><b>Unclear leadership and accountability mechanisms:</b></p> <ul style="list-style-type: none"> <li>• Parallel lines of authority, supervision and responsibilities within the health service makes coordination and accountability for implementation of the NNS challenging.</li> <li>• Dominance of medical officers in supervision and implementation, leading to a more curative focus for the operational plan.</li> </ul>

Another challenge to implementing the NNS operational plan was lack of capacity and systems to collect, analyse and use data for decision-making at all levels of the government. Therefore, MQSUN also provided targeted M&E support to the NNS to institutionalise a robust national nutrition surveillance system for Bangladesh. First, MQSUN established a nutrition M&E technical working group, which included representatives from government institutions, development partners and nongovernmental organisations (NGOs). The purpose of the technical working group was to contribute to the development of an M&E surveillance system for the NNS and provide technical input on the M&E process.

With the support of the technical working group, MQSUN conducted an assessment of the existing information databases—such as the health management information system and the family planning management information system—and the current tools and flow of information for data collection and storage. Then, after looking at what progress had already been made on M&E within the NNS, MQSUN supported the development of a nutrition M&E framework, including defining an M&E plan and nutrition indicators. MQSUN also assisted in the development of comprehensive tools and mechanisms for nutrition data flow at every level and the creation of national training and supportive supervision materials targeting M&E processes. Specific nutrition indicators and tools were tested in selected pilot districts. After discussion and negotiation with key stakeholders, these indicators, tools and M&E processes were integrated into and streamlined between community clinics, the Directorate General of Health Services and the Directorate General of Family Planning with the MoHFW central data warehouse.

In addition, MQSUN supported the integration of a nutrition information system into urban areas using an online reporting system, which did not previously exist. As well, the programme assisted in the development of an online nutrition information system for NGOs working with bilateral donors—launched in February 2016—to harmonise data collection between these actors and the NNS. Between the establishment of all these M&E mechanisms, MQSUN's efforts will support the improvement of data availability, coordination and integration, which will then enhance programme quality and help to ensure better use of resources to reach more targets for nutrition interventions. High turnover of government staff and lack of strong leadership are still major challenges for the scale up of the NNS operational plan.

## Impact Evaluation for the *Programme to Accelerate Improved Nutrition for the Extreme Poor in Bangladesh*

DFID commissioned MQSUN to conduct an in-depth mixed methods impact evaluation to assess the effectiveness and impacts of the *Programme to Accelerate Improved Nutrition for the Extreme Poor in Bangladesh*, including (1) quantitative analysis; (2) qualitative analysis; (3) process evaluation; and (4) value for money (cost-effectiveness).

The *Programme to Accelerate Improved Nutrition for the Extreme Poor in Bangladesh* aimed to improve the nutritional status of children, women and adolescent girls in extremely poor households by integrating nutrition-specific interventions with three existing nutrition-sensitive livelihoods interventions: the Chars Livelihoods Programme (Phase II 2010-2016); the Economic Empowerment of the Poorest Programme (2008-2016); and the Urban Partnerships for Poverty Reduction Programme (UPPR) (2008-2015). Nutrition-specific interventions were integrated into livelihoods programmes through community nutrition workers targeting pregnant and breastfeeding women, adolescent girls and children under age five—including delivery of micronutrients, household-level behaviour change counselling for infant and young child feeding (IYCF) and community-level health and nutrition counselling focused on adolescent girls. Table 3 outlines the impact evaluation objectives.

**Table 3. Objectives of the Impact Evaluation.**

1. <b>Assess the impact on nutritional status of children under two years of age</b> of the combination of direct nutrition-specific interventions (micronutrients and behaviour change for IYCF) and indirect nutrition-sensitive livelihoods interventions with the existing livelihoods interventions in three different DFID programmes, and compare with the impact of the existing stand-alone livelihoods interventions.
2. <b>Explain the impact on nutritional status</b> , looking at qualitative and quantitative evidence describing both programme-specific attributes and wider societal/contextual processes that may impact nutritional status.
3. <b>Assess the cost-effectiveness (value for money) of integrating nutrition-specific and nutrition-sensitive interventions</b> and recommend the best delivery model for implementation.

MQSUN’s technical assistance included developing an evaluation design, identifying data sources and organising an evaluation team to carry out the evaluation activities. The overarching evaluation design was based on a theory of change drawn from each programme’s results chain. This approach allowed for data collection to focus on testing implicit assumptions, intended and unintended programme consequences and other external factors that can affect household- and community-level outcomes. Table 4 describes the evaluation design, and Figure 2 describes the proposed causal pathways.

**Table 4. Impact Evaluation Design.**

Overall Design
Cross-sectional, quasi-experimental survey design with qualitative research and a cost-effectiveness analysis. <b>Livelihoods interventions (nutrition-sensitive) alone compared to livelihoods interventions combined with nutrition-specific interventions for improving the nutritional status of children under age two.</b>
Research Questions
1. What is the impact on nutrition outcomes of receiving a combination of livelihoods and nutrition-specific interventions (L+N) relative to receiving in all programmes?
2. What is the impact on nutrition outcomes of receiving a combination of livelihoods and nutrition-specific interventions (L+N) relative to receiving no intervention (C for comparison) in UPPR only?
3. What is the impact on nutrition outcomes of receiving a livelihoods intervention only (L only) relative to receiving no intervention (C for comparison) in UPPR only?

**Figure 2. Proposed Causal Pathways for the Impact Evaluation.**



First, MQSUN conducted quantitative baseline data collection and analysis, followed by qualitative and process evaluation activities, including a desk review, process mapping with implementers, beneficiary workshops and village interviews, focus group discussions and life histories. The qualitative information supplemented the results from the baseline assessment. MQSUN also collected and analysed data on the cost of programme activities to determine their value for money. Lastly, endline data were collected and analysed to ascertain the overall programme outcomes. Collectively, the evaluation was able to represent the findings from across the key stages along the causal chain of each of the three livelihoods programmes and provide plausible explanations for the programme’s overall ‘story’—describing whether or not, how and why impacts may have occurred.

Findings from the evaluation revealed limited positive changes in women’s child feeding and care practices and did not find any statistically significant changes in child nutritional outcomes (including stunting and wasting prevalence) in communities receiving the direct nutrition intervention and livelihoods intervention compared to those that received only the livelihoods intervention. Table 5 summarises the key findings of the impact evaluation.

**Table 5. Key Findings from the Impact Evaluation in Bangladesh.**

<p><b>Behaviour change communication (BCC):</b> Programmes need to carefully design and deliver <i>consistent</i> and <i>focused</i> nutrition BCC counselling messages for improved IYCF practices for pregnant women and mothers.</p>
<p><b>Social and economic contextual barriers:</b> Programmes need to be designed to address these barriers from the beginning. In Bangladesh, identified barriers included lack of financial resources, shortage of time for caring practices, fear of food wastage, perceived social value of food and limited childcare and food purchasing decision-making power, as well as deeply rooted context-specific beliefs around childcare-related practices and norms.</p>
<p><b>Operational integration and cost-effectiveness:</b> Initial programme planning needs to take into consideration cost-effectiveness data (e.g. beneficiary household ratios, supervision ratios) and the evidence base in order to effectively integrate nutrition interventions.</p>

These results suggest a need to strengthen and broaden programme mechanisms for nutrition-focused counselling delivered via community nutrition workers, whilst also addressing the multiple context-specific social and economic factors that may limit the potential for nutrition-related behaviour change. A more holistic policy approach should integrate social, education, economic and public health factors. The evaluation demonstrates that new nutrition interventions may achieve their full potential in improving child and maternal nutrition only if they are combined with parallel improvements in these other factors within the specific contexts of the target populations.

Based on the evaluation's overall findings, there is strong evidence to recommend the following design considerations for future programmes targeting improved child nutritional status with behaviour change communication in Bangladesh:

- Focus **behaviour change messages** on targeted IYCF practices considered weak; adapt behaviour change messaging to the context and practices in sub-geographical areas; and improve the frequency and duration of household IYCF counselling sessions.
- Integrate **evidence-based best practices** (e.g. social mobilisation, support groups, incentives for community workers) that address wider economic, social and gender barriers that may prevent translation of knowledge into behaviour change.
- Use more **effective monitoring systems** to track impact.

## MQSUN Bangladesh Technical Assistance Key Findings & Recommendations

A number of key findings emerged from the MQSUN targeted technical assistance for scaling up the national response to nutrition in Bangladesh, summarised in Table 6.

**Table 6. Key Findings and Recommendations on Scaling Up Nutrition in Bangladesh.**

Key Findings
1. <b>Inadequate human resources and capacity for nutrition</b> , including absence of highly skilled nutrition service providers; lack of knowledge, skills and time to deliver nutrition services and unclear leadership and accountability mechanisms within the NNS.
2. <b>High turnover of government staff</b> and lack of strong leadership as major barriers to scaling up the NNS operational plan.
3. <b>DFID's nutrition programmes in Bangladesh had limited positive impacts on IYCF</b> . The programme needs to be strengthened to be more thoroughly evaluated on its nutrition impact.
Recommendations
1. <b>Scale up the national nutrition in-service training system</b> and effectively monitor to ensure knowledge and skills are being sufficiently strengthened to implement the NNS operational plan.
2. <b>Harmonise and scale up nutrition information systems</b> , ensure that health providers and other stakeholders are adequately reporting to the systems and use the data for decision-making at all levels of the government.
3. <b>Integrate a multisectoral lens</b> to the NNS operational plan, by integrating social, education, economic and public health factors into nutrition interventions and vice versa.

Based on MQSUN's initial technical assistance, the following areas are recommended for further technical assistance:

- **In-service training:** Provide technical assistance to support rollout of national in-service training for nutrition at all levels—national, district, Upazila, union, community and individual clinics.
- **Implementation of the NNS operational plan:** With strengthened technical capacity and information systems, provide additional technical assistance to ensure nutrition action is implemented according to the NNS operational plan and that the appropriate resources and support structures are in place to effectively carry out the plan.
- **Integrated, multisectoral nutrition programming:** Provide additional technical assistance to strengthen the design and implementation of the Health, Population and Nutrition Sector Development Programme Implementation Plan.

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## MQSUN Resources

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