# Scope of Gender-responsive Adaptive Social Protection in Bangladesh

## Policy, Institutional, Expenditure and Micro-Narrative Analysis

General Economics Division (GED), Bangladesh Planning Commission

Australian Aid

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**M. A. Mannan MP**
Honorable Minister
Ministry of Planning
Government of the People's Republic of Bangladesh

# MESSAGE

It is a pleasure for me to know that UNDP and the General Economics Division (GED) of the Planning Commission has analysed the scope of Gender-responsive Adaptive Social Protection in Bangladesh.

The People's Republic of Bangladesh is one of the most vulnerable countries in the world in terms of disaster risk and climate-change adversity. Climate change is exacerbating ecological and environmental risks, including prolonged drought, extreme heat and cold, frequent and prolonged flooding, storms and cyclones, salinity intrusion and erratic rainfall. These factors have profound implications for fiscal attention, budgeting and spending on social protection schemes. It is essential to clarify the respective roles of relevant institutions, policies and programmes sensitive to climate change.

With a view to tackling the triple problems of the poverty, inequality and marginalization, the Government formulated the National Social Security Strategy (NSSS) in 2015. The Cabinet, under the prudent leadership of the Honourable Prime Minister, approved the NSSS providing strategic guidelines for utilising the big investment in social security programmes for poverty reduction and wider socioeconomic development in line with the aspirations of vision 2021. The goals of NSSS are also consistent with the Sustainable Development Goals (SDGs). The Government directed about Tk.743 billion to a variety of Social Security Programmes (SSP), in 2018. This is equivalent to 14.21 percent of the national budget and 2.58 percent of the gross domestic product (GDP) of the country for fiscal year (FY) 2019/20. But SP spending should promote linkages among different policies and investments on climate change and social protection for effectively promoting climate change adaptation (CCA) and disaster risk reduction (DRR) in disaster-prone and climate-vulnerable areas.

I appreciate this study as it presents an analysis of SSPs under implementation in Bangladesh that aim to improve existing national Climate Fiscal Framework (CFF) from the perspectives of CCA and DRR in order to promote Adaptive Social Protection delivery to the poor and vulnerable. It intends to support government efforts to strengthen climate change and disaster resilience in line with NSSS.

I strongly believe that social protection or social security programmes must include built-in mechanisms that factor in those climate change-related challenges that adversely affect poor and climate-vulnerable communities through various channels in the risk-vulnerability chain.

**M. A. Mannan, MP**

**Dr. Shamsul Alam**
Member (Senior Secretary)
General Economics Division (GED)
Bangladesh Planning Commission' 2020
Government of the People's Republic of Bangladesh

# PREFACE

Social protection is fundamental for achieving the Sustainable Development Goals (SDGs). Despite gaps in coverage, social protection systems are crucial to keeping people out of poverty and helping them escape poverty and reduce income inequality. Being relatively new paradigm in the discourse of social protection, 'Adaptive Social Protection' (ASP) came from a realisation that social protection, disaster risk reduction and climate change adaptation were three communities of practice linked by the same fundamental objective of reducing vulnerability and building resilience.

Given the shortcomings in the traditional disaster management models, the disaster risk reduction (DRR) policy framework in Bangladesh has evolved in recent years, graduating from disaster relief and recovery to redressing the rising levels of risk. This policy shift has provided opportunities for introducing social protection (SP) and climate change adaptation (CCA) streams alongside the traditional DRR approaches. Moreover, Bangladesh has a large number of organizations involved in SP, CCA and DRR, which indicates that the country has the greatest scope in the region for integrating the three approaches.

The National Social Security Strategy (NSSS) 2015 has strengthened the existing social safety net programmes and broadens the scope of 'social security' from the narrow concept of safety nets to include employment policies and social insurance. By broadening its scope and coverage, the NSSS has the potential to promote human development with the aim of reducing income disparities and contributing to greater social and economic growth. However, the NSSS has not adequately contributed in improving the national ability to adapt to a changing climate and addressing the underlying causes of vulnerability.

This study assesses current ASP policies, institutions and government spending to derive practicable options for institutional and programme reforms, aiming to encourage climate-change financing to deliver ASP to poor and climate-vulnerable populations, and to support government efforts to address covariate shocks in more flexible ways.

The study intends to support government efforts to strengthen climate-change and disaster resilience in line with NSSS. I expect that the study will create awareness of the need for greater integration of social protection measures, climate change adaptation and disaster risk reduction efforts. There is much to gain from deepening integration between these three areas, in terms of reducing vulnerability and poverty even in the face of worsening climate impacts and/or natural hazards.

**Dr. Shamsul Alam**

**Md. Mohsin**
Secretary
Ministry of Disaster Management and Relief
Government of the People's Republic of Bangladesh

# MESSAGE

I am indeed delighted to learn that the UNDP and the General Economics Division (GED) of the Bangladesh Planning Commission has undertaken a study to analyse the scope of Gender-responsive Adaptive Social Protection in Bangladesh.

The disaster risk context is changing. As Bangladesh is one of the countries in the world most at risk from the negative impacts of climate change including increases in incidence and intensity of extreme weather events and hazards such as soil salinization, rising sea levels and riverbank erosion.

These emerging risks present major challenges to the continued human development, poverty reduction and economic growth of the country, and to the lives, livelihoods and health of its people. Women and girls in Bangladesh are disproportionally impacted by disasters. However, women's contributions to disaster risk reduction are often overlooked. The poorest, most marginalized and vulnerable communities are hardest hit by disasters in Bangladesh as they are repeatedly exposed to natural hazards without the means to recover well.

Since poverty, sustainable development, disasters and climate change are closely interlinked, it is crucial to integrate climate change adaptation with relevant disaster management national policies, strategies and measures as well as in the socio-economic development process, natural resources management and livelihoods support efforts. Moreover, the national disaster management systems and mechanisms require more emphasis on managing risks in a gender-responsive manner.

The safety net and social protection programme provides an excellent opportunity to strengthen risk management and risk reduction and enhance resilience of the poor and vulnerable to shocks and stresses. One of the priority areas of MoDMR according to the National Plan for Disaster Management (2016-2020) is to strengthen the design and implementation of inclusive policies and social safety-net mechanisms, towards the eradication of poverty, to find durable solutions in the post-disaster phase and to empower and assist people disproportionately affected by disasters.

I am happy as this study presents an analysis of Social Security Programmes of Bangladesh from the perspectives of climate change adaptation and disaster risk reduction to promote Adaptive Social Protection delivery to the poor and vulnerable. It intends to support government efforts to strengthen climate-change and disaster resilience in line with National Social Security Strategy.

I hope this report will contribute significantly in achieving resilience, poverty reduction and sustainable development for all through stronger Social Protection Programmes.

**Md. Mohsin**

**Sudipto Mukerjee**
Resident Representative
UNDP Bangladesh

# MESSAGE

Social Safety Nets (SSNs) have emerged as an essential component in the fight against poverty. Initially focused only on protection goals, they are now increasingly combining promotional goals. Adaptive Social Protection (ASP) presents a relatively new paradigm in the discourse of social protection which involves climate change adaptation and disaster risk reduction and attracted global attention.

This study presents an analysis of social safety net programmes under implementation in Bangladesh that aim to improve existing national Climate Fiscal Framework (CFF) and National Social Security Strategy (NSSS) (2015a) from the perspectives of CCA and DRR in order to promote ASP delivery to the poor and vulnerable. It intends to support government efforts to strengthen climate-change and disaster resilience in line with NSSS.

This study assesses current ASP policies, institutions and government spending to derive practicable options for institutional and programme reforms in line with NSSS and CFF. Broadly, the study aims to improve CFF in the light of NSSS, aiming to encourage climate-change financing to deliver ASP to the poor and climate-vulnerable populations, and to support government efforts to address covariate shocks in more flexible ways. Neither the NSSS nor the CFF documents have clearly defined ASP for mobilizing climate-change financing. This study presents a definition of ASP that refines CFF in the light of the NSSS document aimed at mobilizing climate-change financing, and offers a standard for future ASP delivery based on programme priorities.

It is our sincere hope that this study will simulate the ongoing policy discourse towards transforming safety nets into an ever more effective tool against poverty and climate vulnerability.

**Sudipto Mukerjee**

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# Acronyms, abbreviations, definition

| | |
|---|---|
| 7FYP | Seventh Five Year Plan (FY2016–2020) |
| ACL | Asset Creation Loan |
| ADP | Annual Development Programme |
| ASD | Assistance for Slum Dwellers |
| ASP | Adaptive Social Protection |
| BARC | Bangladesh Agricultural Research Council |
| BARI | Bangladesh Agricultural Research Institute |
| BCCRF | Bangladesh Climate Change Resilience Fund |
| BCCSAP | Bangladesh Climate Change Strategy and Action Plan |
| BCCTF | Bangladesh Climate Change Trust Fund |
| BINA | Bangladesh Institute of Nuclear Agriculture |
| BJRI | Bangladesh Jute Research Institute |
| BNP | Bangladesh Nationalist Party |
| BRAC | Bangladesh Rural Advancement Committee |
| BRACED | Building Resilience and Adaptation to Climate Extremes and Disasters |
| BRDB | BangladeshRural Development Board |
| BRRI | Bangladesh Rice Research Institute |
| BSRI | Bangladesh Sugarcane Research Institute |
| BWDB | Bangladesh Water Development Board |
| CARE | Cooperative for Assistance and Relief Everywhere |
| CBA | Community Based Adaptation |
| CBN | Cost of Basic Needs (method for calculating poverty line) |
| CC | Climate Change |
| CCA | Climate Change Adaptation |
| CCC | Climate Change Cell |
| CDB | Cotton Development Board |
| CDMP | Comprehensive Disaster Management Programme |
| CEGIS | Centre for Environmental and Geographic Information Services |
| CFF | Climate Fiscal Framework |
| CFP | Climate Fiscal Policy |
| CFW | Cash for Work |
| Char | Tract of land surrounded by water (in general terms) |
| CI | Corrugated Iron |

| | |
|---|---|
| CLP | Chars Livelihoods Programme |
| CPEIR | Climate Public Expenditure and Institutional Review |
| COP | Conference of Parties |
| CRA | Community Risk Assessment |
| DAE | Department of Agricultural Extension |
| DAR | Department of Animal Resources |
| DoF | Department of Fisheries |
| DFID | Department for International Development (U.K.) |
| DoE | Department of Environment |
| DoF | Department of Fisheries |
| DLS | Department of Livestock Services |
| DMC | Disaster Management Committee |
| DPD | Disaster-prone District |
| DPHE | Department of Public Health Engineering |
| DRM | Disaster Risk Management |
| DRR | disaster risk reduction |
| DRR | Directorate of Relief and Rehabilitation |
| DTW | Deep Tube-well |
| DoW | Department of Women |
| ECHO | EU Humanitarian Aid and Civil Protection |
| EGPP | Employment Generation Programme for the Poorest |
| EI | Ethnographic Interview |
| ENRICH | Enhancing Resources and Increasing Capacities of Poor Households towards Elimination of their Poverty |
| EU | European Union |
| EWS | Early Warning System |
| FFW | Food for Work |
| FFWC | Flood Forecasting and Warning Centre |
| FGD | Focus Group Discussions |
| FSUP | Food Security for the Ultra Poor |
| FSVGD | Food Security for Vulnerable Group Development |
| GDP | Gross Domestic Product |
| GED | General Economics Division |
| GEF | Global Environment Facility |
| GoB | Government of Bangladesh |

| | |
|---|---|
| GGCA | Global Gender and Climate Alliance |
| GO | Governmental Organization |
| GR | Gratuitous Relief |
| Haor | Wetland Ecosystem |
| HFA | Hyogo Framework for Action |
| HID | Human and Institutional Development |
| HP | Hope for the Poorest |
| IAPP | Integrated Agricultural Productivity Project |
| iBAS | Integrated Budget and Accounting System |
| IDS | Institute of Development Studies |
| IFS | Integrated Food Security Programme |
| IGAL | Income-Generating Activities Loan |
| IGVGD | Income-Generating VGD |
| IPM | Integrated Pest Management |
| JMS | Jatiya Mohila Shangstha |
| KII | Key Informant Interview |
| KPI | Key Performance Indicator |
| LDRRF | Local Disaster Risk Reduction Facility |
| LGD | Local Government Division |
| LGED | Local Government Engineering Department |
| LGI | Local Government Institution |
| LIL | Livelihood Improvement Loan |
| MoA | Ministry of Agriculture |
| MBF | Ministry Budgetary Framework |
| MDG | Millennium Development Goal |
| MoDMR | Ministry of Disaster Management and Relief |
| MoEF | Ministry of Environment and Forest |
| MoEFCC | Ministry of Environment, Forest and Climate Change |
| MoF | Ministry of Finance |
| MoFd | Ministry of Food |
| MoFDM | Ministry of Food and Disaster Management |
| MoEF | Ministry of Forest and Environment |
| MoFL | Ministry of Fisheries and Livestock |
| MoHFA | Ministry of Health and Family Welfare |
| MHVS | Maternal Health Voucher Scheme |

| | |
|---|---|
| MoLGRD&C | Ministry of Local Government, Rural Development and Co-operatives |
| MoP | Ministry of Planning |
| MP4 | Making Markets Work for the Poor |
| MoSW | Ministry of Social Welfare |
| MoWCA | Ministry of Women and Children Affairs |
| MoWR | Ministry of Water Resources |
| MTBF | Medium Term Budgetary Framework |
| NAPA | National Adaptation Plan of Action |
| NCWCD | National Council for Women and Child Development |
| NDMC | National Disaster Management Council |
| NEOC | National Emergency Operations Centre |
| NGO | Non-governmental Organization |
| NPDM | National Plan for Disaster Management |
| NSIS | National Social Insurance Scheme |
| NSSS | National Social Security Strategy |
| PACE | Promoting Agricultural Commercialization and Enterprises |
| PEP | Poor and Extreme Poor |
| PFD | Public Food Distribution |
| PIO | Project Implementation Officer |
| PKSF | Palli Karma-Sahayak Foundation |
| PPP | Public-Private Partnership |
| POPI | People's Oriented Program Implementation |
| PMT | Proxy Means Testing |
| PRIME | Programme Initiatives for Monga Eradication |
| PVP | Private Voluntary Pension |
| ODI | Overseas Development Institute (U.K.) |
| MHMF | My House My Farm |
| OMS | Open Market Sales |
| OPM | Oxford Policy Management |
| RDCD | Rural Development and Cooperatives Division |
| RDRC | Rural Development and Rural Cooperation |
| RRAP | Risk Reduction Action Plan |
| RVCC | Reducing Vulnerability to Climate Change |
| SAARC | South Asian Association for Regional Cooperation |
| SDG | Sustainable Development Goals |

| | |
|---|---|
| SDS | Shariatpur Development Society |
| SEIP | Skills for Employment Investment Programme |
| SHOUHARDO | Strengthening Household Abilities to Respond to Development Opportunities |
| SIPP | Social Investment Programme Project |
| SLR | Sea-level rise |
| SP | Social Protection |
| SPP | Social Protection Programme |
| SOD | Standing Orders on Disaster |
| SSNP | Social Safety Net Programme |
| SSP | Social Security Programme |
| STW | Shallow tube-Well |
| SUS | Sabalamby Unnayan Samity |
| SWAPNO | Strengthening Women's Ability for Productive New Opportunities |
| Tk. | Taka (Bangladeshi Currency) |
| TR | Test Relief |
| UDMC | Union Disaster Management Committee |
| UNDP | United Nations Development Programme |
| UNFCCC | United Nations Framework Convention on Climate Change |
| UP | Union Parishad (Union Council) |
| Upazila | Sub-district, an administrative unit of local government |
| USAID | United States Agency for International Development |
| VGD | Vulnerable Group Development |
| VGF | Vulnerable Group Feeding |
| VWD | Vulnerable Women's Benefit |
| WAPDA | Water and Power Development Authority |
| WASH | Water, Sanitation and Hygiene Programme |
| WEN | Women's Environmental Network |
| WFP | World Food Programme |
| WARF-CBA | Where the Rain Falls – Community Based Adaptation |

# Executive Summary

**Background**

Last one decade, Bangladesh has achieved significant socio-economic progress in particular impressively stable economic growth more than 7 percent in a row of each three previous fiscal years. It reduced poverty at an accelerated rate from 48.9 percent in 2000 to 24.3 percent in 2016, and further declined to 21.6 percent in 2018[1]. In the process, it has achieved middle-income country status by establishing 'good practices' in advancing the status of women and girls in the economic and social spheres. The country is expected to graduate from the group of least developed countries (LDCs) by 2024, will achieve the Sustainable Development Goals (SDGs) by 2030, and become a developed nation according to its overarching Vision 2041.

Bangladesh is one of the most vulnerable countries in the world in terms of disaster risk and climate-change adversity. These factors have profound implications for fiscal attention, budgeting and spending on Social Protection (SP) schemes. In 2015, the Cabinet of the Government of Bangladesh has approved the National Social Security Strategy (NSSS) of Bangladesh – a ten years long strategy focused on life-cycle approach, where shocks and climate-related shocks have been emphasized. The current fiscal budget 2019-20 allocated 74,364 crore Bangladesh Taka, equivalent close to nine billion US dollar, which is 13.8 percent of the Annual Development Programme (ADP), and 2.58 percent of the Gross Domestic Product (GDP). Poor and marginalized populations are the prime SP beneficiaries, are also affected by climate-induced extreme events such as cyclones, droughts, prolonged and recurrent floods, and increased salinity. A good amount of resources 12.2 percent allocated to address and continue support to climate-related SP schemes managed by the Ministry of Disaster Management and Relief (MoDMR). The NSSS emphasized on strengthening the impact of public money spent in various Social Security Programmes (SSPs) through a variety of institutions. To identify and address climate-change challenges, the Government prepared the Bangladesh Climate Change Strategy and Action Plan (BCCSAP), Bangladesh Climate Public Expenditure and Institutional Review (CPEIR, 2012), and the Climate Fiscal Framework (CFF).

**A more effective Adaptive Social Protection approach**

Adaptive social protection (ASP) aims to reduce the vulnerability of poor people to a range of shocks and ongoing stresses through the integration of SP, Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR). It is therefore a relatively new paradigm in the SP discourse, incorporates overlapping elements of CCA DRR. In Bangladesh, SP spending is needed to promote linkages among CPEIR, CFF and NSSS as a means of more effectively promoting CCA and DRR in disaster-prone and climate-vulnerable areas.

[1] Extreme poverty (lower poverty US$ 1.9) has also declined persistently during 2010 to 2016 from17.6 to 12.9 and has further declined to .4 percent in 2018. GED, 2019, Bangladesh Moving Ahead with SDGs – prepare for Bangladesh Delegation to 74th UNGA Session 2019. Bangladesh Planning Commission, Government of Bangladesh, September 2019

Climate-induced disasters are proving detrimental to local populations and exacerbate risks for poor and vulnerable communities in developing countries, especially communities dependent on agriculture and natural ecosystems. In response, SP programmes can address the negative impacts of climate extremes and disasters, either by incorporating more 'adaptive' and 'shock-responsive' features in programme design, or through better coordination with existing humanitarian-response intervention channels, administrative institutions, and human resources. ASP can reduce climatic vulnerability in poor and marginalized communities by enabling adaptive capacities while providing a greater range of livelihood options.

ASP of Bangladesh assumes that combining components of the three domains of CPEIR, CFF and NSSS can improve the efficiency of interventions, increasing their impact on those living in poverty by reversing the causes of vulnerability, and promoting people's ability to adapt to a changing climate and concomitant disasters. Integration of SP, DRR and CCA approaches can contribute, through a set of distinctive ASP interventions, to greater cost-effectiveness, efficiency and long-term sustainability.

This study assesses Bangladesh's current ASP policies, institutions and government spending to derive practicable options for institutional and programme reforms in line with NSSS and CFF while adopting gender perspectives. It aims to improve CFF in the light of NSSS, aiming to encourage climate-change financing to deliver ASP to poor and climate-vulnerable populations, and to support government efforts to address covariate shocks in more flexible ways.

**Policy environment for ASP**

The revised Standing Orders on Disaster (SOD), issued in 2010, include various stakeholders in DRR activities, including the Ministry of Women and Children Affairs (MoWCA). The SOD, National Disaster Management Act (2012) and National Plan for Disaster Management (NPDM) demonstrated the Government's commitment to DRR and the realization of the strategic goals outlined in the Hyogo Framework for Action (HFA).

The National Food Policy (2006) aims to promote adequate, safe and nutritious food, creating greater opportunities for access to necessary foods and managing proper nutrition for all, especially among women and children. This policy indirectly recognize SP issues related to food shortages with respect to CCA and DRR. National Agriculture Policy (2013) policy promotes research into and adoption of modern agricultural practices for disaster-prone and climate-vulnerable areas. It encourages the development of agriculture tolerant to drought, submergence and salinity. However, there has been scope of integrating specific guidelines to stipulate for CCA in this policy.

The National Women Development Policy (2011) has proposed strategies for the protection of women and children before, during and after disasters. It advocates special measures to promote the overall safety and security of women and children in pre-disaster situations. The policy places special programmatic emphasis on women's health, as well as on food availability during post-disaster emergencies. The National Child Policy (2011) also emphasizes the need to ensure effective food distribution programmes during disaster emergencies as a case to meet the needs of children under the purview of child protection during and after disaster in relation to SPPs.

Bangladesh prepared the National Plan for Disaster Management in line with the priority areas set out in the Hyogo Framework for Action, 2005–2015 (HFA). In 2005, the Government developed the National Adaptation Programme of Action (NAPA) to address within national policy the adverse impacts of climate change. These two measures include actions to increase the resilience of vulnerable groups, including women and children, by scaling up community-level adaptation, diversifying livelihoods, and providing better access to basic services and SP.

The Bangladesh Climate Change Resilience Fund (BCCRF) applies an institutional framework to support BCCSAP implementation. The plan is being implemented in areas that include food security, SP and health, comprehensive disaster management and building resilient infrastructure. Bangladesh's CFF includes a total of 13 climate-resilient programmes, some of which are meant to address the development of long-term coping capability. It recommends a

set of climate codes designed to track climate change expenditures for policy analysis and reporting, and to estimate long-term climate finance needs by identifying potential climate-induced public expenditures across government ministries.

The Seventh Five Year Plan (7FYP) 2016–2020 emphasized to develop a national training capacity to sustain and progressively expand training efforts, while strengthening the capacity of communities and households to withstand disasters. It gives importance to integrate DRR and CCA for resilience approaches and principles within the planning and policy frameworks of all government institutions, providing technical assistance while monitoring and reporting on implementation. The plan suggested to integrate a gendered approach to disaster resilience in all government planning, policy frameworks and programmes, and identify areas where women's advancement as self-reliant human beings should be ensured, and SP needs to be addressed, specifically for women, including with increased SP and resilience from crises and shocks. There is a need to address women in its overall targets and DRR strategies in reducing the underlying risks and mitigating the effects of climate change and disasters in future 7FYP.

The NSSS broadens the scope of 'social security' from the concept of safety nets to include employment policies and social insurance. It considers a life-cycle approach, consolidating programmes within a small number of priority schemes. Its benefits are meant to be non-discriminatory, available to all poor and vulnerable people who satisfy the income and other selection criteria relating to life-cycle or disability, irrespective of religion, ethnicity, profession or location. Still long way to go to improve the national ability to adapt on the basis of climate change. In future, a development mechanism need to set up to address unsafe living conditions of the affected population with the provision of counter measures against the underlying causes of vulnerability. Introducing social insurance would be a particularly important mitigation measure for risks experienced by people, particularly working women. NSSS has also mapped existing social security interventions against life cycle risks, and the proposed point-wise CCA scheme for different stages of the life cycle should be outlined according to gender.

**Institutions and programmes linked with ASP**

Abroad and complex constituency of interests in climate change includes staff ministries, line ministries, local government, NGOs, the private sector and development partners. Each of at least 37 ministries (and relevant autonomous bodies) operate at least one climate-sensitive programme. There are also 10 Development Partners (DPs) on a bilateral or multilateral basis, which suggests risks and challenges to follow in respect of coordination and coherence. Local government institutions (LGIs) at the upazila and union parishad (UP) levels implement climate-sensitive activities, along with number of NGOs are engaged in DRR and CCA activities.

The Ministry of Disaster Management and Relief (MoDMR) - the pioneering ministry in reducing shocks before, during and after disasters, is responsible for coordinating national disaster management interventions across all agencies. Its long-term CCA comprises an integral component of the DRR plan preparation. In the medium term, consistent with CCA and DRR, MoDMR aims to reduce disaster-related loss and suffering. Implementing the Employment Generation Programme for the Poorest (EGPP), Test Relief (TR), Food for Work (FFW), Vulnerable Group Feeding (VGF) and other programmes serves the goal of reducing poverty during agricultural slack seasons in disaster-prone areas, clearly promoting DRR and CCA. MoDMR supports for relief activities and food distribution through Gratuitous Relief (GR) programmes addresses short-term vulnerability and livelihood risks associated with climate-induced and other disasters.

The Ministry of Women and Children Affairs (MoWCA) implements Vulnerable Group Development (VGD), which is a women-focused SP programme. MoWCA assists with food and productive equipment for vulnerable women, while advocating the protection of women against disaster by developing resilience.

The Ministry of Agriculture (MoA) comprises a vital element in national ASP development, given that agricultural sector links to CCA and DRR in both crop and non-crop sectors. This ministry stresses agricultural research and projects that serve food security, among other things developing crop varieties resilient to climate stresses and

seeds suitable for disaster-prone and climate-vulnerable areas. It allocates funds for the purchase and distribution of seeds, fertilizers and implements for post-disaster relief operations.

The Ministry of Food (MoF) ensures adequate safe and nutritious food for all through a management system that applies apposite policies and strategies. Open Market Sale (OMS) is the only ministry's SP programme that can be directly linked with CCA or DRR.

The Palli Karama-Sahayak Foundation (PKSF), a public-private partnership (PPP), has been implementing a number of CCA and DRR programmes and projects in various parts of Bangladesh. It implements four specialized CCA and DRR programmes conducive to ASP objectives: Samriddhi, Sahos, Promoting Agricultural Commercialization and Enterprises (PACE), and Skills for Employment Investment Programme (SEIP).

The Local Government Division (LGD) employs disaster victims in such activities as road maintenance, tree planting and excavating canals for improved irrigation, helping minimize further threats from climate change and disasters. Local Government Division (LGD) is the direct implementing agency for programmes such as TR (Food and Cash), VGF, EGPP, Food/Cash for Work and VGD.

Among the NGOs, BRAC implements two SP programmes focusing on DRR and CCA, viz. Income Generation for Vulnerable Group Development (IGVGD) and Disaster Management and Climate Change (DMCC). CARE Bangladesh implements Reducing Vulnerability to Climate Change (RVCC) and PRODUCE are examples of successful climate-change projects, while Strengthening Household Ability to Respond to Development Opportunities (SHOUHARDO – II) and Food Security for the Ultra Poor (FSUP-H) projects also serve to embed DRR and CCA themes into food security projects. Action Aid Bangladesh has initiated three CCA/DRR-related projects in disaster-prone areas inhabited by victims of climate change, namely Scaling Up Community Based Adaptation with Local Government in Bangladesh, Recovery and Rehabilitation of the Cyclone Aila Affected People, and Sustainable Agriculture for Monga Mitigation. ASA Bangladesh has been promoting water and sanitation facilities in those areas devastated by super-cyclones Cidr and Aila. Hope for the Poorest (HP), a sister concern of ASA, has initiated Caring for the Uncared, a programme to assist survivors of the two super-cyclones.

**Budget and expenditure**

From a total of 125 SSPs, the study identified 37 SPPs were aligned with ASP, and those were basically covered under revenue budget reflected in the ADP. Among 37 ADPs, 11 were fully compliance to ADPs, and 23 were indirectly or partially covered ASP due to comply either CCA or DDR components; and leftover 3 non-ADPs required institutional improvement, strengthening coordination and reform in making enabling adaptive policy.

The data reveal that the volume of fully adaptive ASPs generally increased over time. The share of public spending on fully and partially ASP programmes in total SSP budget declined over the years. and fully adaptive ASP programmes ranged around 2 percent of total ADP allocation, showed an increasing trend but a fluctuated trend in percentage share was observed in GDP.

The significant rise in total volume of GDP and ADP compared to the volume of ASP might explain this gradual decline.

Government-funded programmes received relatively less allocation for fully adaptive programmes than external funded programmes. In FY 2013/14, the Government made only a 32 percent allocation for fully adaptive programmes, whereas foreign-aided projects received an 80 percent allocation for fully adaptive programmes. Both government investment and foreign aid for partially adaptive programmes rose.

**Gender dimensions of ASP**

Major SPPs such as VGD, EGPP and FFW/Cash for Work help women cope with climate shocks, and they are essential for promoting employment and reducing poverty among underprivileged women in rural Bangladesh. Maternity allowances have proved helpful for poor women during disasters. These are provided for char people through accounts, and withdrawals can be made at the nearest bank branch. Field data showed that, among low-income urban lactating mothers, most of these allowances were used for family needs, which characterizes this programme as 'partially ASP'. My House My Farm (MHMF), which was earlier called One House One Firm (OHOF) under the Rural Development and Co-operatives Division, implements a generally women-sensitive programme that touches upon the issues of DRR and CCA.

In 2016, MHMF programme integrated with Palli Sanchay Bank (Rural Savings Bank). Poultry and cattle farming are the two most important activities of this programme where women are directly involved.

Through the Department of Social Services, the Ministry of Social Welfare provides interest-free microcredit. The Department of Social Services also provides old-age allowances and allowances for widows, deserted wives, and distressed women. Social Services Departments at upazila level distribute allocations to the beneficiaries. MoWCA implements allowances for working lactating mothers; maternity allowances for the ultra-poor and pregnant women; and food assistance to vulnerable women under VGD programme.

MoDMR implements a number of women-focused and gender-sensitive programmes that promote CCA and DRR. The MoDMR Secretariat implements a programme titled Creation of Employment for the Ultra-Poor Especially Poor Destitute Women in Identified Disaster-Prone Areas. Meanwhile, implementation of FFW, TR and EGPP and the distribution of GR (Food and Cash), and house-building grants support both women's development and women's employment to improve their adaptive capacity in face of climate change and to reduce their risk from disasters.

The Ministry of Agriculture's (MoA) Orienting Agriculture toward Improved Nutrition and Women's Empowerment project aims to increase crop-sector production and productivity. Among the SPs, VGD is a fully women-focused SP programme. In addition, EGPP specifies that 33 percent of beneficiaries have to be women, i.e. 33 percent of the EGPP allocation under SSPs was expressly allocated for women.

Share of women in total ASP budget shows a linear upward trend, but with significant fluctuations. Despite the fact that total ASP budget increased substantially in FY2019, and the percentage share of women in ASP fell. Share of women in budget was insignificant in programmes, such as Block Allocation for Disaster Management; Agriculture Rehabilitation; Ashroyan-2 Project; Disaster and Climate Resilience Programme; Chars Livelihoods Programme; Integrated Fisheries and Livestock Development in Flood Controlled Areas and Water Bodies; Investment Component for VGD; Employment of Ultra Poor for Northern Areas; Adaptation to Climate Change and Rehabilitation of Livelihood; and Fund for Climate Change and TR (Cash). Though the Investment Component for VGD and Employment of Ultra Poor for Northern Areas were women-sensitive enough, these two programmes had yet to gain more share of budgetary allocation for women. Since FY2014/15, the total amount of SP budget had increased, but the percentage share of women fell. Furthermore, though the proportion of ASP in total GDP was increasing (at constant prices), the share of women in ASP in total GDP was falling. This was mainly because the ratio of ASP budget for women in total SSP budget was unappreciated or not highlighted in gender-responsive budget documents.

**Policy simulations**

Policy simulations were conducted to indicate optimal budget allocation by individual ASP for the medium term (up to FY 2018/19) vis-à-vis the business-as-usual. About 30.2 percent of the allocation was to be added with the last FY budget expenditure for the GR (Cash) programme to benefit the average climate-vulnerable proportion of the population (i.e. 28 percent). A total of 3,015 new recipients was to be included from climate-vulnerable districts (CVDs) to mitigate climatic risks. Among the CVDs, Bhola would require the greatest amount of additional allocation.

For VGF, an approximately 27 percent growth in allocation, about an additional Tk.400 million (US$5.11 million), is needed to adequately cover the most disaster-prone districts (DPDs) and CVDs. TR (Cash) supports vulnerable people during and immediately after disasters, and districts that lag behind because of disasters will get this special per person allocation. The extra 14.5 percent growth of beneficiaries and allocation is required for the medium term. An extra 19 percent of growth is needed for beneficiaries and allocation over the following years for FFW.

The five major SSPs (VGD, VGF, MA, TR, and EGPP) were included in the gender-related simulations. VGD and Maternity Allowances are fully allocated for women, whereas the other five SSNPs (VGF, GR, TR, FFW and EGPP) only partially cover women beneficiaries. VGD is women-focused, covering a greater number of beneficiaries than any other SPPs. The expected allocation after simulation increases by about 30 percent, to US$36.18 million. The greatest additional allocation would be required in Kurigram, and the least in Chapai Nawabganj. MoWCA's maternity allowances for poor lactating mothers is a women-sensitive SP programme with benefits for poverty reduction, DRR and CCA. An additional 37.45 percent allocation is required in simulations for most of the DPDs.

The greatest allocations under EGPP should go to Kurigram and Satkhira districts, whereas the least projected allocation would go to Barguna District. Though 45 percent of EGPP beneficiaries overall are women, field observations indicate that actual women beneficiaries amount to about 70 percent in the selected districts. The programme would be of benefit to more women in DPDs and CVDs.

VGF operates supplementary food programmes that are certainly needed in most DPDs. Women in Kurigram, Satkhira, Patuakhali and Bagerhat districts would receive higher allocations. Based on post-disaster assessments by upazilas, GR (Cash) supplements post-disaster relief. The greatest projected allocations go to Bhola, Kurigram, Lalmonirhat and Barguna districts. Money for Work programme did not prove as effective as TR (Food) in the field-study areas. The greatest allocation is projected for Bagerhat, Cox's Bazar, Satkhira and Barguna, respectively.

GR (Food) is operated during post-disaster periods. Women comprise 30 percent of the beneficiaries and the programme provides effective support for women, as well as for poor households, in coping with post-disaster adversities. The greatest projected allocation should go to Bhola, Cox's Bazar, Lalmonirhat and Kurigram. The larger national SPPs , meanwhile, need increased coverage. Coverage by larger national SP programmes such as VGD, VGF, GR, EGPP, FFW and TR should be increased as a means of reducing vulnerability in such cases.

**Key observations**

- MoDMR implements GR, VGF, TR, FFW and EGPP. GR presents a quick SP response system for disaster management. What is needed now is quicker assessment of vulnerability to losses and concomitantly improved delivery of disaster relief and rehabilitation.

- Too great a lag was reported between the effects of flooding and the distribution of post-flood relief and rehabilitation assistance. One factor is that the DC is personally responsible for GR allocation and having such a high official play this role delays delivery of GR services to affected people. A devolution of power is thus needed for better programme implementation during disasters.

- Under GR, only disaster-affected people get immediate assistance. But these beneficiaries are often also greatly concerned about the welfare of their livestock.

- Neither the coverage nor the size of allowances is sufficient to address needs during disasters. Additionally, most of the allowances are not fully consistent with household needs.

- Net savings at the end of the VGD cycle are insufficient to support income-generating activities.
- Maternity allowances and allowances for lactating mothers require a mechanism that would provide savings for use in times of disaster.

- Social security programme allocations have an insignificant effect in the extremely diverse range of livelihood activities among individual recipients. Allocations are far less than the number of people eligible for SP support, and they are not designed to adequately address climate-induced risks and resilience.

- Social security programmes have proved most effective in supporting women facing critical socio-economic exclusions. Barriers to accessing related support remain, however, including certain traditional norms and such failures of governance as corruption.

- Social security schemes are grossly inadequate, both in terms of meeting recipient needs and in terms of actual allocations in relation to total numbers of people eligible for SP. At the beneficiary level, depending upon family size, the amount of allocated food grains is often inadequate.

- Data on district-wise disaster risk and people affected by different types of disaster, in conjunction with data regarding poverty and gender issues, are needed to calculate the climate vulnerability dimension.

**Policy recommendations**

- In line with BCCSAP recommendations, more gender-sensitive and women-focused ASPs should be introduced. MoWCA is operating a maternity allowance, an allowance for poor urban lactating mothers, microcredit for income-generating activities, and VGD. All of these can be improved substantially as ASP.

- Social security programmes can include micro-pension and microinsurance for the poorest, which would ideally adopt elements of CCA and DRR in disaster-prone and climate-vulnerable areas. This would promote disaster resilience and improve adaptation capability.

- Social security that include CCA and DRR features should be reformed and properly classified as allocation mechanisms to achieve both efficient spending and optimal benefits in disaster- and climate-affected areas. Programmes such as GR (Cash), GR (In-kind), EGPP and Maternity Allowances for Poor Women should both increase and expand beneficiary coverage. Per capita expenditure for EGPP, VGD and VGF should be increased to cover disaster-vulnerable groups.

- Social security programmes such as TR and FFW should be fully reformed so that they provide direct cash transfers, rather than food support, to the poor. Food support actually deprives the poor of labour earnings, since an inferior quality of food is typically paid as wages.

- Beneficiary targeting mechanisms should be improved, aiming to enhance the quality of outreach and benefits to the most-affected people. It could help increase both coverage and level of benefits to underprivileged people.

- Introducing an additional digit both economic and budget code representing ASP, thereby will be promoting the identification of such iBAS spending. A climate expenditure database is needed, and MTBF can include an additional section for assessing the impact of CC activities undertaken by the relevant ministries. This could also help report the share of public ASP spending by ministry/division.

- The Government has devised polices and guidelines for women, but still fails to address all the gender dimensions of CCA and DRR spending. Effective interventions require a needs assessment phase before delivering the service under SPPs.

- In reforming SPPs budgets and spending with a view to promoting ASP, analysis must embrace the digital data revolution. Adequate context-specific gender analysis must be based on collecting relevant documents, taking into the account geographically disaster-specific, gender and age disaggregated data.

- Community adaptation or climate change co-adaptationas a whole is a collective process, and a climate-vulnerable village development programme will prove more effective than targeting selected beneficiaries in the upazilas.

- NSSS identified insurance schemes for income-sufficient people wanting additional protection against lifecycle risks or hazards. SP programmes with insurance plans for widows, the disabled, destitute women without any assets, and orphaned children should be developed to help these vulnerable people to cope with post-disaster adversity.

- Consolidation of BCCSAP 2009 and NSSS 2015 could fruitfully address NSSSs for climate-induced vulnerability. In addition to the Ministry of Environment, Forest and Climate Change (MoEFCC), other relevant ministries should be incorporated in the next BCCSAP. Preparations are needed to decide how to operate subsequent thematic programmes.

**Gender-specific imperatives**

- Social protection programmes should undertake context-specific, gender analysis-based planning based on the collection of relevant documents as well as geographically disaster-specific, gender and age disaggregated data.

- Project preparations should include consideration of the gendered aspects of SPs. SPs, through improved gender-responsive analysis and planning for CCA, should integrate CCA and DRR at the household level, while increasing CCA and DRR for gender at the community level.

- Project preparations should take account of the vulnerability of local communities or ecosystems to future climate-change hazards. Moreover, climate mapping should include poverty mapping, with due sensitivity to gender issues.

- Gendered impacts of vulnerabilities resulting from climate change should be assessed and taken into consideration in the preparation of adaptation and mitigation strategies.

- Adaptation strategies should be formulated in accordance with the practical needs and capacities of women.

- Women's reproductive health is greatly affected by climate changes, and this should be taken into consideration. Separate ASPs should be undertaken to address climate-change impact on women's reproductive health.

- The National Women Development Policy (2011) addresses many issues related to women's welfare before, during and after disasters. But strategic planning needs to focus even more on issues such as women's safety and security, women's rehabilitation, psycho-social support, and financial support.

- Social Security programmes should be undertaken in the light of long-term projections and budget planning for estimating expected growth.

**Programmatic interventions**

- Establish a concrete institutional support mechanism within MoWCA and MoDMR.

- Initiate a 'social laboratory' ethos within DWA and DDM to promote innovation and to scale up the idea of ASP.

- Identify initial entry points and champions within DWA and DDM, as well as innovation leaders within MoWCA and MoDMR.
- Clarify goals, objectives and approach options for the ASP agenda within DWA and DDM and the respective concerned ministries.
- Revisit ASP policy processes and convergences, where more gender- and climate-sensitive poverty reduction can be achieved in meeting national SP targets.
- Design an awareness/advocacy agenda linking ASP with gender and resilience outcomes as well as promoting its full convergence with 7FYP, NSSS, SDG, and the Sendai and Paris agreements.
- Conduct DWA and DDM capacity analyses and needs assessments for MoWCA and MoDMR, aiming to transform the existing SSNP into ASP.
- Extend partnerships and cooperation beyond the public sector to include research institutions, universities, private-sector organizations, development partners, UN organizations and NGOs working for the poor and for marginalized populations.
- Finance innovative approaches and pilot projects that promote transformation of existing programmes into ASP.
- Inform decision makers regarding ASP with an emphasis on learning and documentation, including performance audits and evaluation.
- Follow up on earlier support for innovations and pilot projects with expansion measures or adjustments where appropriate and ensure a full-cycle participatory learning process for all stakeholders.

# 1. Introduction

## 1.1 Background

**1.1.1 Adaptive social protection (ASP).** With its overlapping elements of climate change adaptation (CCA) and disaster risk reduction (DRR), ASP presents a relatively new paradigm in the discourse of social protection. Aside from embedding national policies and programmes aimed at reducing adverse climate-change effects in many developing countries, social protection[2] (SP), as evidenced by the global Sustainable Development Goals (SDGs) and Agenda 2030,[3] has attracted increasing international attention. A sustainable and inclusive SP system needs to address risks over the span of a person's entire life.

In general, people confront four types of risk:

- **life-cycle risks** such as childhood, old age, poverty and destitution, physical disability and mental disorder, temporary or permanent incapacity to work, and death of the earning family member;
- **health risks,** including illness, accident and epidemic disease;
- **economic risks,** notably unemployment and inflation; and
- **ecological and environmental risks,** including prolonged drought, extreme heat and cold, frequent and prolonged flooding, storms and cyclones, salinity intrusion and erratic rainfall (Ziegler, 2016).

Climate change has been exacerbating all the risks in the fourth category. Both the frequency and intensity of such events are clearly on the increase. At the same time, climate-induced risks in developing and emerging economies in particular are adversely affecting millions of poor, vulnerable and marginalized people.

**1.1.2 Concerns in vulnerable countries.** Bangladesh is one of the most vulnerable countries in the world in terms of disaster risk and climate-change adversity. These factors have profound implications for fiscal attention, budgeting and spending on SP schemes. The Global Climate Risk Index 2017 shows that Bangladesh ranked sixth among the 10 countries in the world most vulnerable to climate-induced natural calamities (Kreftet al., 2016). During the same period, the country ranked third in terms of annual average death toll and number of adverse events, while it ranked fourth in terms of total losses in purchasing power parity (dollar). To identify and address climate-change challenges, the Government prepared the Bangladesh Climate Change Strategy and Action Plan (BCCSAP), Government of Bangladesh (2009).[4] Two other important government documents were subsequently prepared with the aim of

[2] The notion of ASP, proposed by the Institute of Development Studies (IDS) and the UK Department for International Development (DFID), basically advocates a synergistic union of social protection (SP), disaster risk reduction (DRR) and climate change adaptation (CCA). See Ziegler, 2016.

[3] See http://www.2030agenda.undp.org/content/2030agenda/en/home.html [accessed 17 December 2018].

[4] See http://www.bd.undp.org/content/bangladesh/en/home/operations/projects/environment_and_energy/inclusive-budgeting-and-financing-for-climate-resilience1/national-policies-and-strategies/bangladesh-climate-change-strategy-and-action-plan--bccsap--.htm [accessed 17 December 2018]

linking the public budget and institutions with climate change: the Bangladesh Climate Public Expenditure and Institutional Review (CPEIR, 2012), and the Climate Fiscal Framework, or CFF (Finance Division, 2014). The Government expected to direct about US$5.77 billion to a variety of social security programmes, or SSPs (Kabir, 2016).[5] This was equivalent to 13.28 percent of the national budget and 2.31 percent of the gross domestic product (GDP) of the country for fiscal year (FY) 2016/17. In 2015, the Government also introduced the National Social Security Strategy (NSSS) to strengthen the impact of public money spent in various SSPs through a variety of institutions. Poor and marginalized populations, the prime SSP beneficiaries, are also affected by such climate-induced extreme events as cyclones, droughts, prolonged and recurrent floods, and increased salinity. It is thus imperative to consider the sensitivity of existing SP programmes to CCA and DRR as envisaged in BCCSAP, CPEIR, CFF and NSSS (Kabir, 2016).

**1.1.3 Effective linkages needed.** SP spending is required to promote linkages among CPEIR, CFF and NSSS as a means of more effectively promoting CCA and DRR in disaster-prone and climate-vulnerable areas. Both CPEIR and CFF calculated SP spending directly related to climate change, while the others referred to it as 'livelihoods', in which they assigned different climate change weights to identify their relative importance in contributing to adaptation. However, the documents do not systematically demonstrate which SP and 'livelihoods' programmes were identified at the national level as 'climate change relevant', although they identify and analyse, however incompletely, the climate change relevant expenditures at the local level.[6] NSSS implicitly includes covariate shocks[7] from climate-induced disasters, mentioning government efforts to strengthen and consolidate programmes addressing water and sanitation, working age population, vulnerable women, and food support. NSSS also recognizes the importance of reducing vulnerabilities to climate change and risk of disaster. Thus, climate-change interventions implicitly include overlaps between related expenditures and the SP (security) programmes envisaged in the NSSS document.

Since it is unlikely that every programme mentioned in the NSSS addresses the adversities and reducing discomforts of climate change, the implications of ASP for both CFF and NSSS need to be specified.

## 1.2 Study scope and objectives

**1.2.1 Comprehensive analysis.** This study presents an analysis of SSPs under implementation in Bangladesh that aim to improve existing national CFF and NSSS (GED, 2015a) from the perspectives of CCA and DRR in order to promote ASP delivery to the poor and vulnerable. It intends to support government efforts to strengthen climate-change and disaster resilience in line with NSSS. The CFF, prepared under the BCCSAP and CPEIR framework, identifies climate fiscal fund expenditures and revenues, and promotes the development of a transparent and sustainable climate fiscal policy (CFP).

Without interfering with the prevailing public finance fabric, the budgetary policy framework serves as a key CFF element in developing a favourable context for achieving overall CFP objectives.

CFF is thus incommensurate with BCCSAP. The latter plan adopts an integrated approach to climate change, DRR and SP, essentially linking covariate shocks with natural hazards. Therefore, SS programmes must include built-in mechanisms that factor in those climate change-related challenges that adversely affect poor and climate-vulnerable communities through various channels in the risk-vulnerability chain.

**1.2.2 Characterizing an effective ASP.** It is essential to clarify the respective roles of relevant institutions, policies and programmes sensitive to climate change. For example, CPEIR reports that the way climate-change expenditures are defined usually excludes SS programmes, particularly in the context of SP, that makes it difficult to accurately

[5] Traditionally referred to as Social Safety Net Programmes (SSNPs).

[6] According to these documents, the major climate change relevant programmes include Food for Work, Test Relief and Employment Generation Programme for the Ultra-Poor (100-day Employment Scheme).

[7] Natural disasters that variously harm lives, properties and other assets in a single shock.

calculate public climate-change spending (UNDP, 2012). The NSSS document, meanwhile, relegates stage-by-stage life-cycle programmes such as maternal and early childhood, school age, working age, and old age programmes to the same category as general-purpose programmes for disabled persons and food transfer programmes. Currently, however, neither the CFF nor the NSSS are achieving a clearly definitive selection of ASP programmes. To implement CFF and the proposed NSSS, the SP programmes must first be reviewed, and a robust and acceptable set of criteria developed to identify those programmes capable of effectively improving resilience to the impacts of climate change. Calculating accurate climate-change expenditures demands, first of all, an appropriate definition and analysis of ASP.

**1.2.3 Assessment and options.** This study assesses current ASP policies, institutions and government spending to derive practicable options for institutional and programme reforms in line with NSSS and CFF. Broadly, the study aims to improve CFF in the light of NSSS, aiming to encourage climate-change financing to deliver ASP to poor and climate-vulnerable populations, and to support government efforts to address covariate shocks in more flexible ways. Neither the NSSS nor the CFF documents have clearly defined ASP for mobilizing climate-change financing.

This study presents a definition of ASP[8] that refines CFF in the light of the NSSS document aimed at mobilizing climate-change financing, and offers a standard for future ASP delivery based on programme priorities.

## 1.3 Organization of the report

**1.3.1 Nine chapters, annex of statistics and detailed micronarratives.** Following a brief introduction, Chapter 2 proffers a working definition of ASP based on an in-depth review of the literature and consultations with the major stakeholders.

Chapter 3 undertakes a comprehensive analysis of the following undertakings:

- existing policies, e.g. the National Women Development Policy, the National Children Policy, National Food Policy and the National Agriculture Policy;
- national plans, e.g. the Seventh Five Year Plan (7FYP) FY 2016–2020 (GED, 2015a) and the Perspective Plan 2010–2021 (GED, 2012); and
- strategies, e.g. NSSS and ministry medium-term strategy and business plans that cover major SP programmes explicitly and implicitly linked with ASP.

Chapter 4 presents a detailed analysis of the institutions (ministries, divisions and public agencies) that implement SP programmes which include DRR and CCA components. Primarily, the institutions include the Ministry of Disaster Management and Relief (MoDMR), the Ministry of Food (MoFd), the Ministry of Agriculture (MoA), and the Ministry of Women and Children's Affairs (MoWCA). The analysis includes the major activities, programmes and institutional key performance indicators (KPIs), seeking to understand their linkages with ASP. It also discusses institutional roles and behaviour in implementing the major SS programmes, both along the delivery chain and at the grassroots, from the perspectives of rural-level beneficiaries and other stakeholders. The analysis focuses in particular on the MoDMR in extending the ASP, since this ministry allocates the highest relative proportion of its funds for SP that addresses disasters and climate change.

Chapter 5 presents an analysis of public ASP spending in the light of major tracers (by economic spending code) based on data from the Finance Division and the Integrated Budget and Accounting System (iBAS). It also more closely examines selected major ASP-related programmes and projects, viz. the Employment Generation Programme for the Poorest (EGPP), Vulnerable Group Development (VGD), Vulnerable Group Feeding (VGF), Char Livelihoods Programme (CLP), and Test Relief (TR).[9]

[8] Based on consensus among such major stakeholders as policy makers, researchers and selected representatives of civil society. See Box 2.1, below.

[9] See www.ilo.org/dyn/ilossi/ssimain.viewScheme?p_lang=en&p_geoaid=50&p_scheme_id=3173 [accessed 17 December 2018].

Since climate change disproportionately affects women compared to men, Chapter 6 takes a gender perspective in presenting an analysis of the relevant policies and plans, institutions and expenditures.

Chapter 7 shows how simulations can gauge budget implications for selected programmes with respect to increasing their CCA and DRR effectiveness through reformed implementation guidelines and increased spending.

Chapter 8 concludes the report with suggested policy recommendations for extending ASP in Bangladesh in conjunction with necessary policy, institutional and spending reforms.

# 2. Conceptualizing adaptive social protection

## 2.1 Social protection, disasters and climate change

**2.1.1 Increased focus on social protection.** The relevance of SP has soared in the development policy agenda. A growing body of evidence shows that SP, especially in disaster-prone and climate-vulnerable regions of the world, can effectively contribute to poverty reduction while moving people into productive livelihoods. ManySP-related policy instruments have contributed to reducing vulnerability to climate variations and extremes and their impact on rural livelihoods (Davies et al., 2008b). SPs, such as cash transfers, asset-building and food-for-work schemes, involve initiatives that transfer income or assets to the poor, protect the vulnerable against livelihood risks, contribute to reduce poverty, and enhance social status and rights of the marginalized (Devereux and Sabates-Wheeler, 2006; Brownet al., 2009). Recently, it also went beyond humanitarian relief and rehabilitation activities towards preventing and reducing the risk of disasters (Arnallet al., 2010).

**2.1.2 Programme design can benefit from greater focus on these considerations.** Natural disasters, such as more frequent and prolonged floods, droughts and cyclones are believed to be climate change-driven events, demonstrating correlations between climate change and disaster risks. Climate-induced disasters are proving detrimental to local populations and exacerbating risks for poor and vulnerable communities in developing countries, especially communities dependent on agriculture and natural ecosystems (Adger, 2007; Fiottet al., 2010). In response, SP programmes can address the negative impacts of climate extremes and disasters, either by incorporating more 'adaptive' and 'shock-responsive' features in programme design, or through better coordination with existing humanitarian-response intervention channels, administrative institutions and human resources (Davieset al., 2009).

**2.1.3 Life-long protection, beyond helping to cope in times of shock.** Increasingly, stakeholders recognize that SP can play a pivotal role in protecting people from risk and adversity both in times of catastrophic shock and throughout their lives (UNDP, 2014). Distribution networks and mechanisms for executing general SP programmes can also be used to provide short-term emergency responses and assistance during natural disasters. The Human Development Report 2014 also argues that, by consistently providing an additional layer of support, SP can help vulnerable populations devise coping strategies, for example by providing access to continued schooling for their children, necessary medical care, and the means to avoid having to sell their assets, thereby improving the prospects for well-being of these populations in the long term.

**Figure 2.1 ASP functions**

| Prevention | Protection | Promotion |
|---|---|---|
| • Builds anticipatory capacity to reduce the impact of climate variability and extremes by helping people prepare and plan for climate extremes and disasters. | • Increases absorptive capacity during a shock by providing people with a safety net to meet their basic needs. | • Builds adaptive capacity in the long term through sustainable livelihood promotion. |

Source: Based on Bahadur et al. (2015).

**2.1.4 Adapting social safety nets (SSNs) to develop SP as a system.** Particularly in low-income and developing countries, SP has emerged as a popular budgetary policy instrument on the development policy agenda.

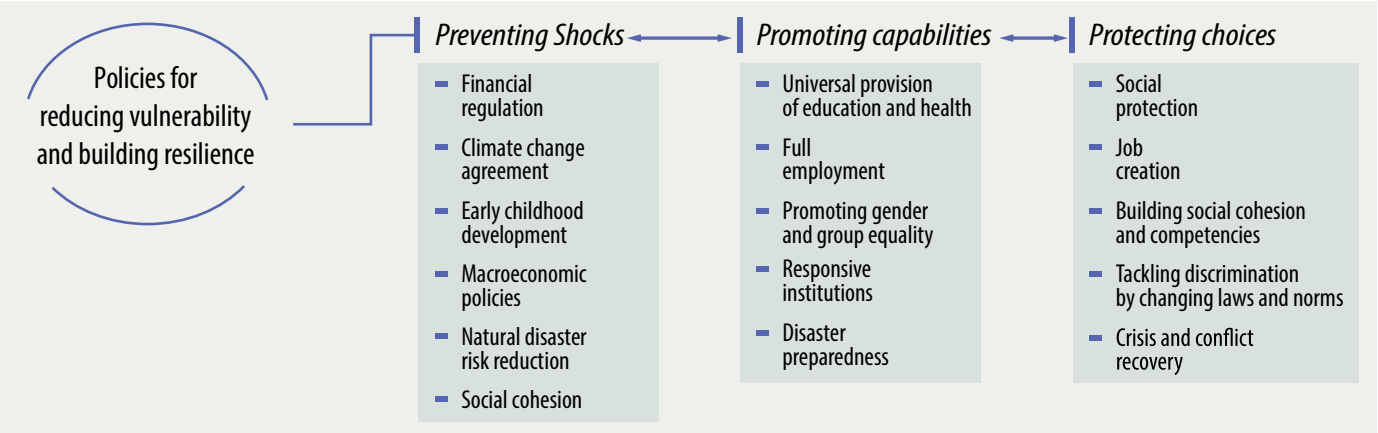
SP may be defined as the sum of programmes and projects that accomplish the following: (1) provide income transfers or support consumption among the poor; (2) protect the vulnerable against livelihood risks; and (3) enhance the social status and rights of socially excluded and marginalized people (Devereux et al., 2004). Climate change and growing risk of disaster are increasingly being recognized as factors that exacerbate vulnerability and poverty in these countries. The World Development Report 2010 suggests that SSNs should be tailored to address the needs of climate change. Following a disaster, it recommends adopting rapid and targeted action, including SP for the most vulnerable. It also advocates developing SP as a system, rather than as a mere series of isolated interventions, applying flexible financing and contingent targeting so that effective responses can be readily provided in the face of sporadic shocks, including disasters (World Bank, 2010).

**2.1.5 Expanding livelihoods and security.** SP has become a key policy response to disaster risks and climate vulnerability for the most vulnerable people. Where sectoral policies can help people improve their livelihoods and security, the appropriate SP can complement such approaches, not only helping rural people to expand their assetsbut to use them more efficiently, encouraging them to adopt higher-return activities that might otherwise be too risky. Ideally, this approach also enhances local people's adaptive capacity to respond to actual or expected climatic events or their consequences, and to moderate harmful outcomes while exploiting beneficial opportunities (Davies et al., 2008b).

## 2.2 Breaking the 'silos': Integrating SP, DRR and CCA

**2.2.1 Promoting synergy.** Traditionally, SP, DRR and CCA have presented three sets of interventions aimed at reducing the shock and hazard impacts at the individual and community levels. Nevertheless, despite their commonalities and overlapping purviews, they are often implemented in a disjointed manner. This has tended to lead to merely trivial cross-fertilization in most low-income and developing countries. Indeed, integrating these three types of intervention would have helped to promote more synergistic responses to poverty, vulnerability and marginalization. An integrated and coordinated approach also helps avoid the risk of duplicated or conflicting interventions and the concomitant waste of scarce human and financial resources.

**Figure 2.2 Policies for reducing vulnerability and building resilience**




Source: UNDP (2014).

**2.2.2 ASP needed in face of newly relevant factors.** SP programmes commonly address macroeconomic, social and cultural drivers of poverty. However, SP must also clearly address the ways in which climate change and disasters exacerbate vulnerability among the poor. Access to SP interventions, if they are designed to integrate DRR and CCA, can thus reduce such vulnerability by enabling adaptive capacities while providing a greater range of livelihood options.

In practice, ASP that recognizes SP will have the scope to adapt so that it can better contribute, through measures to promote climate and disaster resilience, to economic growth and development.

**2.2.3 Adapting livelihoods.** ASP can protect populations with limited adaptive capacities to ameliorate climatic risks, avoiding ineffective or even dysfunctional coping strategies while promoting livelihood resilience by improving the capacity to survive during natural shocks. ASP interventions can help people change or diversify their main livelihood activities in the context of changing weather patterns, for example with such natural resource-dependent livelihoods as small-scale farmers in increasingly drought-prone areas (Devereux and Sabates-Wheeler, 2004). In cases such as the latter, instead of promoting existing livelihoods ASP may involve support for off-farm rural enterprises, assisted migration or improved remittance schemes (Devereux and Sabates-Wheeler, 2011; Bénéet al., 2013).

ASP offers a recognized framework for fostering the integration of SP, CCA and DRR in policy and practice (Davieset al., 2008; Davies et al., 2009). It helps to make SP interventions more resilient to disaster risks and climate change by coordinating the objectives of these three groups of interventions. It also clarifies the ways SP can help overcome the adverse impacts of climate change and disasters through interventions that reduce vulnerability. Basically, the notion of ASP tries to overcome the silos approach of SP, CCA and DRR, a tendency to work fragmentally that prevents policy makers, institutions and implementers from coordinating efforts (UNDP, 2015).

*Women practicing crab fattening in Deluti Union of Khulna as an adaptive livelihood option*

**2.2.4 Overcoming the silo effect through integration.** ASP intends to overcome a too frequently typical 'silos' approach in SP, CCA and DRR. As part of this, it discourages policymakers, institutions and practitioners in those three domains from working independently (Davies et al., 2013). Where they combine efforts, SP, DRR and CCA can better anticipate risks and uncertainties in their strategic and programmatic interventions, thereby reducing the impact of climate-induced shocks and hazards on individuals and communities. Together, these three approaches more effectively reduce vulnerability by way of developing greater resilience in the face of poverty, climate-induced disasters and their distributional impacts.

ASP aims to integrate SP, DRR and CCA on the ground, developing from this experience better approaches to reducing vulnerability, as well as addressing disaster risks and adverse effects of climate change in SP policy and practice. Bringing the objectives of the three practices together, furthermore, provides a new framework for SP interventions that promote more resilience in face of disasters and climate change (Davies et al., 2008b; 2009), while supporting SP interventions that reduce vulnerability and protect populations from disasters and the negative effects of climate change.

Before SP, CCA and DRR approaches are combined within an effective common frame, two basic questions have to be answered:

- To what extent are SP, DRR and CCA approaches already being integrated within existing programmes and projects of Bangladesh?
- Supposing such integration is being undertaken, how do these programmes and projects aim to foster resilience among the poorest and most vulnerable people (Davies et al., 2013)?

**2.2.5 Multi-dimensional programmatic schema.** ASP assumes that combining components of these three domains can improve the efficiency of interventions, increasing their impacton those living in poverty, by reversing the causes of vulnerability, and promoting people's ability to adapt to a changing climate and concomitant disasters.Taking vulnerability to disasters and climate change as its starting point, ASP lays a foundation for more adequate conceptual links among SP, CCA and DRR.

ASP may be distinguished from simple SP in that it views the issues within a multi-dimensional framework:

- vulnerability is in part a consequence of pre-existing socio-institutional contexts;
- it should be understood as lying on a short-to longer-term temporal scale; and
- its causes and remedies are more fruitfully considered on a **local-to-global geographic scale** (Davies et. al., 2008a; Davies et al., 2008b; Cipryk, 2009).

**2.2.6 Range of SP instruments.** ASP recognizes that threats to daily livelihoods do not merely lead to stressful variability and socio-economic disparities in living standards. Indeed, the lack of means to cope with risk and vulnerability can itself drive enduring poverty and vulnerability (Sen, 2003; Dercon, 2005; Wisner, 2009; Brooks et al., 2009). A variety of observers discuss the specific benefits and challenges that types of SP instrument experience in promoting CCA and DRR (Conway et al., 2002; Devereux and Sabates-Wheeler, 2004; Davies et al., 2009). Table 2.1 presents the timeframe within which SP instruments promote DRR and CCA interventions, from short-term 'protective' towards longer-term 'promotional' and 'transformative' interventions (Davies et al., 2013).

**Table 2.1 Social protection categories and instruments, with associated DRR and CCA benefits**

| Timeframe | SP category | SP instruments | CCA and DRR benefits |
|---|---|---|---|
| Short term | • Protective (coping strategies) | • social service protection<br>• basic social transfers (food/cash)<br>• pension schemes<br>• public works programmes | • protection of those most vulnerable to climate risks and with low levels of adaptive capacity |
| | • Preventive (coping strategies) | • social transfers<br>• livelihood diversification<br>• weather-indexedcrop insurance | • prevents damage (e.g. capital stock)<br>• provides coping strategies to address risks to weather-dependent livelihoods |
| | • Promotional (building adaptive capacity) | • social transfers<br>• access to credit<br>• asset transfers/ protection<br>• starter packs (drought/ flood resistance)<br>• access to common property resources<br>• public works programmes | • promotes resilience through livelihood diversification and security to withstand climate related shocks<br>• promotes opportunities arising from climate change |
| Long term | • Transformative (building adaptive capacity) | • promotion of minority rights<br>• anti-discrimination<br>• developing social funds | • transforms social relations to combat discrimination that underlies social and political vulnerability |

Source: Davies et al. (2013).

**2.2.7 Interventions for greater cost-effectiveness, efficiency and sustainability.** Integration of SP, DRR and CCA approaches can contribute, through a set of distinctive ASP interventions, to greater cost-effectiveness, efficiency and long-term sustainability. These three measures use both similar instruments (e.g. asset building and cash transfers) and complementary instruments (e.g. early threat warnings and introduction of new crop varieties), all of which target the chronically poor and most vulnerable. An ASP approach to vulnerability and poverty reduction can work at the levels of policy, allocation and implementation, and adds value in the following four areas:

- introducing a longer-term SP perspective and disaster risk management interventions;
- improving coordination between agencies responsible for SP, DRR and CCA policy, budgeting and executions;
- improving efficiency and reducing duplicated costs in parallel interventions; and
- making use of existing administrative apparatuses, agencies and human resources.

## 2.3 Role of ASP in poverty, vulnerability and resilience

**2.3.1 '3Ps + T'.** The ASP approach is rooted in the '3Ps + T' framework, which takes account of vulnerabilities' underlying causes and applies the following measures to address them:

- **Prevention.** ASP interventions can, for example, play a preventive role by improving the resilience and coping strategies of vulnerable population groups through livelihoods diversification in these communities.
- **Protection.** Following shocks and disasters, ASP instruments, such as cash transfers and public works can play a protective role by helping to prevent severely affected people from falling far below the poverty line and then remaining there.
- **Promotion.** ASP's promotional role helps people engage in income-generating activities, develop skills and seize opportunities presented by climate change.
- **Transformation.** Finally, ASP's transformative role promotes changes in social, political and economic relations that cause poverty, inequality and vulnerability (Devereux and Sabates-Wheeler, 2004). ASP plays this transformative role over longer periods (Ziegler, 2016).

**2.3.2 Character and main goals.** ASP includes measures to build resilience to climate change-related adversity and discomfort among the poorest and most vulnerable people. Its main goal is to combine the SP, DRR and CCA components in programmes and projects; thereby concurrently (1) tackling unsafe living conditions; (2) countering the underlying causes of vulnerability; and (3) promoting capacity to adapt to a changing climate. These goals closely link ASP to the Sustainable Livelihoods Framework (SLF), which describes how people use natural or financial resources to construct a living (Marsh, 2002; Arnallet al., 2010). ASP also recognizes the fact that there are numerous potential pathways out of climate change-related poverty and vulnerability, and the variety of interventions that try to address these problems—which include more than the simple transfer of material goods to poor and vulnerable people—will not all be equally appropriate (Brooks et al., 2009).

**2.3.3 Multidimensional rights and welfare-based initiatives.** Aside from seeking immediate benefits and influencing longer-term processes of change and social transformation, ASP extends to 'rights-based' initiatives measures that can empower people to exercise their voice. It thus recognizes the multidimensionality of poverty and vulnerability, while taking into account the full range of available SP instruments and counter measures (Conway et al., 2002).

ASP approaches are characterized by the following four features:

- **Reducing risk.** By reducing manifold risks, SP can strengthen resilience in helping people adapt to changing climate conditions.
- **Targeting poverty and vulnerability.** One focus of SP instruments is providing access to both asset transfers

and market mechanisms among the poorest and most vulnerable.

- **Adopting rights-based approaches.** ASP addresses equity and justice dimensions of chronic poverty, while addressing CCA by way of its rights-based approach to reducing vulnerability.
- **Promoting transformation.** By focusing on the underlying structural inequalities and barriers that people face, ASP also focuses on transforming and both promoting and protecting livelihoods, as well as building long-term resilience to climate change and disasters (Davies et al., 2009).

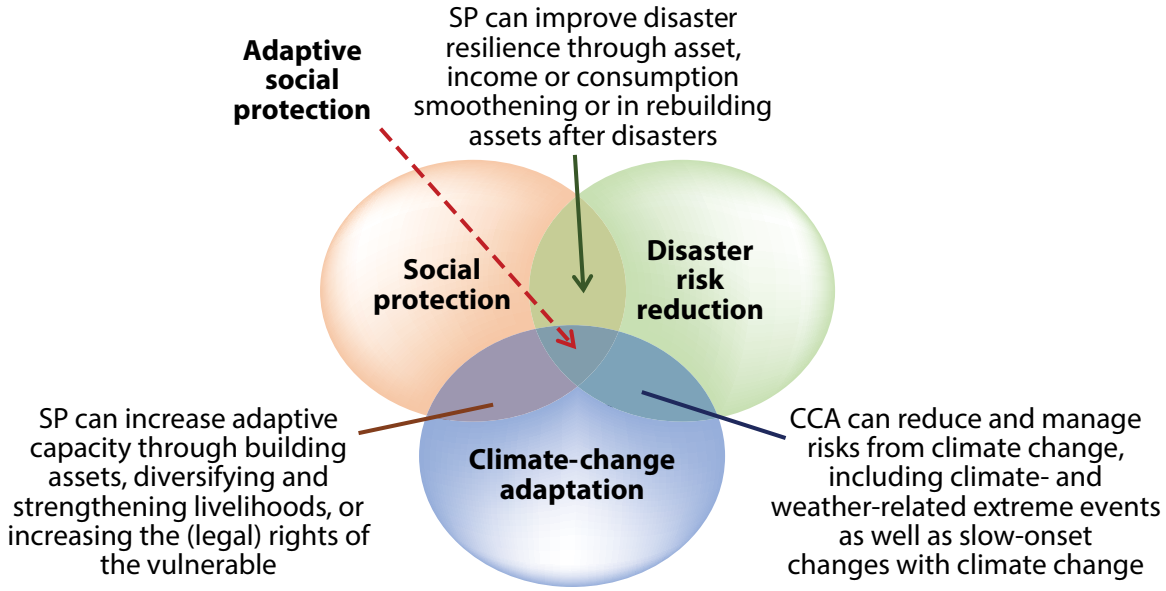
**2.3.4 Non-adaptive interventions.** SP might have negative impacts on CCA, since SP interventions cannot always systematically improve individual and community capacity to adapt to climate change. 'Targeting traps' present instances where SP can lead to 'non-adaptation'. In such cases, SP might seek to help increase household resilience in an area prone to long-term climatic degradation, where a more appropriate adaptation strategy might be resettlement to a less environmentally fragile location. SP interventions targeting cattle-rearing communities in drought-prone areas, for example, might reduce short-term or seasonal household vulnerability, but generating incentives to live in areas with meagre long-term prospects can instead create a trap in terms of sustained CCA (Béné et al., 2013).

**2.3.5 More effective intervention at less cost.** ASP also helps manage disasters, hazards or climatic risks by transforming, strengthening and protecting assets and livelihoods. It also includes efforts to improve institutional capacities, and to decrease vulnerability and build resilience. In these ways, it promotes poverty reduction and sustainable growth. ASP is thus regarded as a good starting point for integrating SP, DRM and CCA, assuming that combining the components of these streams can improve the efficiency of interventions, thereby reducing vulnerability and increasing resilience without much increasing programme costs (Ulrichs, 2016).

**2.3.6 New factors creating new awareness.** Awareness has been growing in recent years of the need to more effectively integrate the spheres of SP, CCA and DRR, and this is because of three factors:

- greater awareness of shocks, mainly from climate change impacts, together with the increased frequency and intensity of climate-induced disasters, which has generated growing concern about the implications for the vulnerability of poor people and the need to strengthen people's resilience;
- greater recognition of how much SP, CCA and DRR can contribute to sustainable development; and, given the ever-more complex and interlinked array of risks that poor and vulnerable people confront, growing evidence that SP, CCA and DRR interventions, applied separately, will not work in the long run; and
- realization of how important a greater integration of these three areas really is, in looking for ways to maximize effectiveness and efficiency by avoiding duplication of effort, and offering potentially significant advantages, even in the face of worsening climate impacts and/or natural hazards, in terms of reducing vulnerability and poverty (World Bank, 2010).

**Figure 2.3 Graphical presentation of ASP**




Source: Based on Ziegler (2016)

## 2.4 Defining ASP, and research questions

**2.4.1 Necessary conditions for effective ASP.** In the face of current and future disaster and climate-change shocks, developing effective ASP presupposes robust SP programmes. Similarly, CCA and DRR cannot effectively address the root causes of poverty and vulnerability without taking a differentiated view of poverty, something that further integration with SP can help. Developing a more coherent CCA approach will include the following: (1) climate-proofing SP through a long-term vision in the context of more reliable and accurate predictions and considerations of vulnerability; (2) SP policy and programmatic options for CCA; (3) a holistic preventive poverty approach to DRR; and (4) an improved growth focus for agriculture.

In the light of the foregoing discussion, it is time to offer a tentative definition of ASP (based on Davies, 2008):

**Box 2.1**
**Working definition of ASP**

ASP presents a broader, developmental approach to SP.

- It is oriented to both short-term and longer-term outcomes.
- It considers interrelations between local and global issues in terms of climate change and socio-economic phenomena
- Depending upon its context, it focuses on either protecting or transforming productive livelihoods while adapting to changing climate conditions, seeking more effectively to target vulnerabilities in the light of multiple shocks and stresses.
- ASP is grounded in an understanding of the structural causes of poverty in a particular region (i.e. climatic zone). As part of this, taking into account the changing nature of climate-induced shocks and stresses, it features an in-builtrights-based rationale for promoting equity and justice within a dynamic longer-term and global perspective for SP programmes.

**2.4.2 Potential advantages of the ASP approach.** An ASP approach can accomplish the following: (1) transform and promote livelihoods; (2) target communities with tailored assistance; (3) incorporate a rights-based rationale for action; (4) introduce a longer-term perspective for SP and DRR interventions; (5) enhance cooperation between the natural and social sciences when designing SP, CCA and DDR interventions; and (6) introduce an SP metric for evaluating the resilience-building component of programming approaches to reducing vulnerability and poverty in developing countries (IDS, 2012).

**2.4.3 Research questions.** With respect to ASP in Bangladesh, researchers may find it fruitful to address these key questions (Arnall et al., 2010):

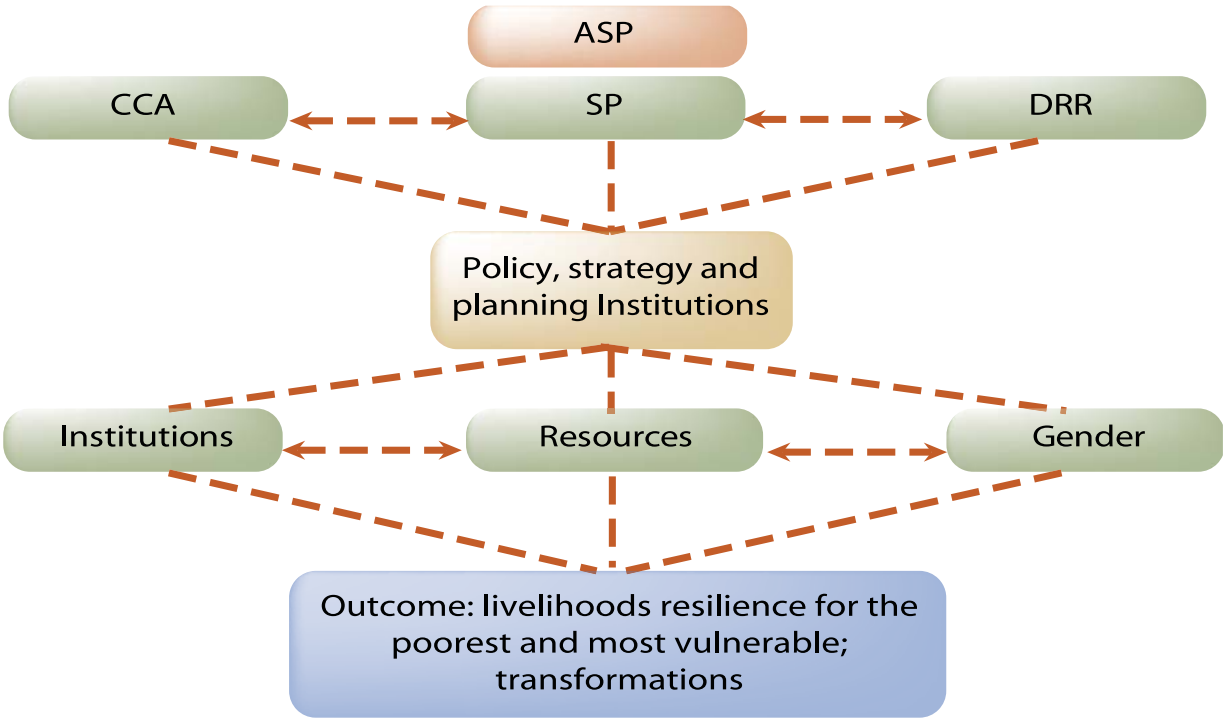
- How do programmes and projects that integrate components of SP, DRR and CCA contribute to livelihoods resilience among the poorest and most vulnerable?
- Relative to other types of intervention, what impacts do these approaches have in terms of effectively reducing vulnerability and poverty?
- What implications do targeting chronically poor and ultra-poor people have for community engagement, for example, with continued monitoring and evaluation of interventions?
- In which circumstances does ASP represent the best use of relatively scarce resources and, among the various options for ASP, which offer the best value for money?
- How do policy environments either facilitate or inhibit the integration of social protection programmes (SPPs), DRR and CCA approaches in Bangladesh?
- What additional dimensions would a gender-inclusive ASP approach entail?

- How can livelihood-protective projects (e.g., weather-indexed crop insurance), work effectively alongside such protection-oriented interventions as cash transfers and Food for Work in achieving the greatest possible coverage when promoting resilience to climate change among the poorest and most vulnerable, including children, the elderly, the physically challenged, the third gender and ethnic minorities?

- Under what circumstances should such SP interventions as microfinance schemes be pursued in diversifying or otherwise altering livelihoods, and how can these help people adapt to climate change?

- What aspects of traditional social and cultural relationships either lead to vulnerability or inhibit adaptation and the building of resilience, and how can transformative approaches overcome such structures?

**Figure 2.4 Conceptual frame for ASP**




**2.4.3 Analytical foundation of this study.** A comprehensive, well-defined conceptual ASP frameworkis applied to tracing such institutions as government agencies, NGOs and donors associated with designing and implementing ASP.

The same framework can provide ASP data for related policy, expenditure and gender analyses.

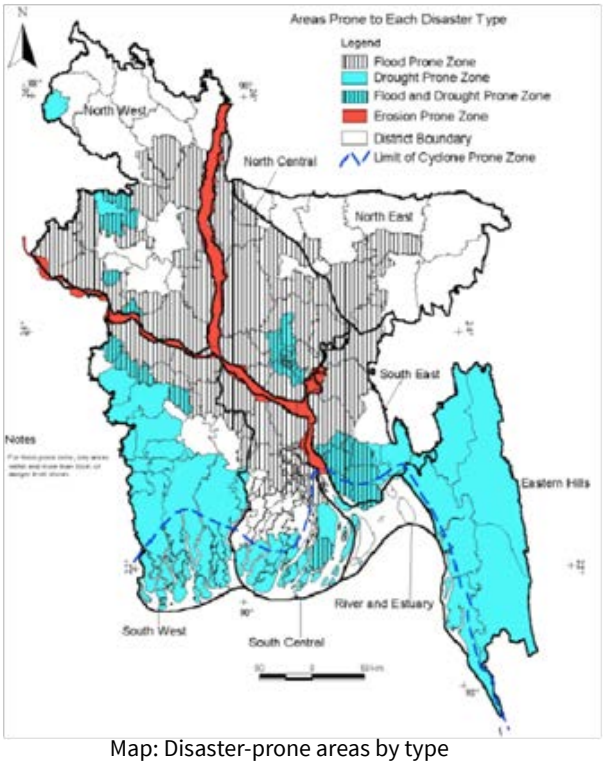
# 3. Policy environment for ASP

## 3.1 Introduction

**3.1.1 New government DRR mechanism.** DRR is particularly appropriate in a disaster-prone and climate-vulnerable country like Bangladesh. Indigenous adaptation and prevention techniques have traditionally addressed such disasters as cyclones, tornedos, floods and river erosion. However, a more effective government mechanism has evolved to institutionalize risk prevention.

Global climate change has led to a gradually increasing number and intensity of disasters. In response, Bangladesh has introduced laws, policies, strategies and plansthat are interlinked in various ways. Since CCA is a newer concept than DRR in this arena, its assimilation has required deeper institutional and policy coordination at various levels.

**3.1.2 Sharing and balancing different objectives.**
Bangladesh is generally considered to be one of the most disaster-prone countries in the world. Though the population displays a strong capacity to respond to floods and droughts, because of the intrinsic severity of these events they rank among the most economically and socially damaging shocks for rural households.



Map: Disaster-prone areas by type
Source: Disaster Management Bureau (2010).

The recent literature has expressed much interest in the idea of ASP as a means of ameliorating this situation, which in itself is helping to foster the integration of SP, DRR and CCA in policy and practice. By bringing the objectives of these three streams together, ASP aims to provide a framework to help SP interventions develop more disaster and climate-change resilience. At the same time, it understands how SP, through its vulnerability reduction interventions, can play a critical role in buffering the negative impact of climate change and disaster (Béné, 2011). It is therefore necessary to build resilience within communities as well as provide support for protective, climate-resilient infrastructure. Meanwhile, backed by the necessary legal and policy framework, interventions need to reinforce the capacity to balance investment between these two areas.

## 3.2 Laws and acts promoting ASP

**3.2.1 Equality for all.** The Constitution of the People's Republic of Bangladesh guarantees equality of opportunity for all citizens, including those vulnerable to disasters and climate change. The Fundamental Principles of State Policy stipulate that the State must adopt effective measures to end social and economic inequality between men and women,ensure an equitable distribution of wealth among citizens, and provide equal opportunities for economic development throughout the country. In addition, the State pledges to undertake initiatives to ensure equality of opportunity and the participation of women in all spheres of national life. It suggests that disaster and climate-affected populations are entitled to receive anequitable share of resources and rights, while advocating positive discrimination in economic, policy-making and social spheres in favour of women from vulnerable communities.

**3.2.2 Promoting the status of women.** The revised Standing Orders on Disaster (SOD), issued in 2010, include various stakeholders in DRR activities, including the Ministry of Women and Children Affairs (MoWCA). Such activities involve responses during normal, early warning, disaster and rehabilitation stages. The Department of Women Affairs is assigned to conduct specific activities, such as ensuring DWA representative participation in disaster management committees (DMC), aiming to ensure the following: (1) women's participation in preparedness and disaster management activities; (2) women's adoption of active roles in identifying the gender gap and in ensuring that all disaster management activities take account of it; and (3) livelihood support to women and children affected by disaster. The SOD and the publication of the National Plan for Disaster Management (NPDM) demonstrated the Government's commitment to DRR and the realization of the strategic goals outlined in the Hyogo Framework for Action (HFA).

**3.2.3 Legislation reflects paradigm shift from relief and rehabilitation to DRR.** Following upon the SOD and the NPDM, the Government enacted the National Disaster Management Act in 2012. This legislative framework enabled the country to more effectively reflect on disasters and, in all key policy documents, to embed the paradigm shift from relief and rehabilitation in DRR. This legislation also comes at a time when the integration of CCA and DRR is being initiated, and an awareness of new and emerging hazards is needed.

## 3.3 Policies

In general, the following policies appear insufficiently cognizant of the roles of ASP in addressing disaster and climate-change resilience, and issues associated with disaster management.

**3.3.1 Policy shift.** Given shortcomings in the traditional disaster management models, the DRR policy framework in Bangladesh has evolved in recent years, graduating from disaster relief and recovery to redressing the rising levels of risk. This policy shift has provided opportunities for introducing SP and CCA streams alongside the traditional DRR approaches.

*Flood proofing through raising homestead plinth level*

The Government has adopted a holistic approach in embracing the processes of hazard identification and mitigation, community preparedness, and integrated response efforts. Relief and recovery activities are now planned within an all-risk management framework seeking enhanced capacities of at-risk communities, thereby lowering their vulnerability to specific hazards (Bray et al. 2008). In general, Bangladesh has a large number of organizations involved in SP, CCA and DRR, which indicates that the country has the greatest scope in the region for integrating the three approaches.

**3.3.2 National Food Policy (2006).**[10] This policy aims to promote adequate, safe and nutritious food, creating greater opportunities for access to necessary foods and managing proper nutrition for all, especially for women and children. It means to establish a year-round food security system for the whole population. It suggests that disaster damage can be minimized, where modern technological tools are applied in the process of food production. Shortcomings of the policy include the following:

- Despite the fact that food shortages are potentially created or exacerbated by both disasters and climate change, this policy does not directly recognize SP issues with respect to CCA and DRR.

- With regard to existing adaptation and resilience interventions, the policy emphasizes the development of resilience to climate-change impacts. With regard to resilience and adaptation, however, it fails to identify various agricultural interventions already practised by climate-vulnerable Bangladeshis, among these the following:

  » adaptations to waterlogging, such as floating-bed agriculture, expelling standing water in rice cultivation, and altering livelihoods;
  » adaptation to salinity issues, such as cultivation of saline-tolerant crop varieties and rainwater harvesting, and shrimp or crab culture; and
  » adaptations to drought, such as digging mini-ponds for rainwater harvest, and adjustment of cropping patterns.

[10] By then the Ministry of Food and Disaster Management. Later, the ministry bifurcated into the Ministry of Food (MoF) and MoDMR.

**3.3.3 National Agriculture Policy (2013).** This policy promotes research into and adoption of modern agricultural practices for disaster-prone and climate-vulnerable areas. It encourages the development of agriculture tolerant to drought, submergence and salinity including the following features:

- It takes into account (1) water and time resource economy, (2) adaptation to climate change, and (3) proper use of genetically modified technology in agriculture.

- It promotes the use of environmentally friendly green technologies (e.g. IPM, INM, AWD) and climate-smart/ resilient technologies; and introduces salinity, submergence and other stress-tolerant crop varieties, especially in the southern regions.

Policy shortcomings include these:

- No strategy has been undertaken for assessing which geographic areas are the most vulnerable due to climate change.

- The policy does not outline adefinition of modern agricultural practices variously appropriate to dry land, wetland, hills and coastal areas, although the 7FYP explicitly aims to promote modern agricultural practices in dry land, wetland, hills and coastal areas.

- No specific guidelines are stipulated for CCA.

**3.3.4 National Women Development Policy (2011).** This initiative has proposed strategies for the protection of women and children before, during and after disasters. It advocates special measures to promotethe overall safety and security of women and children in pre-disaster situations:

- preparing them through widespread awareness training programmes to cope with imminent disaster;

- rehabilitating women and children affected by river erosion and natural calamities;

- making a priority of ensuring security for women while they prepare to dealwith disaster andwith post-disaster rehabilitation;

- improving security for girl children during natural disasters and other emergencies;

- ensuring the availability of health materials and effective sewage systems;

- extending needed psycho-social support in addition to material assistance, in the process stressing women's capacity to overcome disaster emergencies; and

- ensuring the participation of women in food distribution activities during times of disaster.

The policy places special emphasis on women's health, as well as on food availability during post-disaster emergencies. It recommends involving the women themselves, both during and after a disaster, in programmes that address the welfare of distressed women in their communities.

Although the policy outlines gender-sensitive needs during times of disaster, it does not recommend any SP programme as part of related strategies (MoWCA, 2011).

**3.3.5 National Child Policy (2011).** This policy also emphasizes the need to ensure effective food distribution programmes during disaster emergencies, in this case to meet the needs of children. But no explicit follow-up is mandated though specialized programmes for children.

In addition to food availability, priorities include these:(1) children's education and health during post-disaster emergencies; (2) the safety and security of children (especially girls), while preparing to cope with both impending disaster and post-disaster issues; (3) rehabilitation measures, including psycho-social support during disaster emergencies (e.g. materials for distribution are supposed to include toys to help children overcome disaster-associated fears and return their lives to normalcy); and (4) immediate steps to provide facilities to protect children from infections and water-transmitted diseases.

To implement these strategies, the Government established the National Council for Women and Child Development (NCWCD), at the same time continuing extant strategies for ensuring child rights and development during disasters.

Policy shortcomings include the following:

- National Child Policy strategies include child protection during and after a disaster, but direct no part of the SP programme to implementing this end.
- Although the policy prioritizes the safety and security of girl children during disaster emergencies, relevant measures are not properly implemented.
- SP programme yet to propose to implement the pledge to extend logistical and training measures helping children and their guardians cope before, during and after crises

## 3.4 Strategies and plans

**3.4.1 BCCSAP.** Compared to SP and DRR, CCA represents a relatively new field in Bangladesh, but it is increasingly recognized by the Government. Over the period 2009–2018, the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) has provided the main basis of the national battle against the adversities of climate change. It sets out programmes based on six intervention areas including food security, SP and health, aiming to ensure programmes focus on the needs of the poorest and most vulnerable populations.

*To adapt to the impacts of climate change, a woman learning the hydroponic technology in Khulna*

But there appears to be an omission in the BCCSAP document. It explicitly lists ASP as one cross-cutting issue among others (gender, research, education, awareness and communication, monitoring and evaluation [M&E], climate financing, and knowledge management). However, it does not specify how this integration is to be achieved, or how it will engage effectively with ASP. It appears climate-change adaptation and mitigation should be mentioned, but the actionable part of the NSSS document currently omits them.

**3.4.2 NPDM.** Bangladesh prepared the National Plan for Disaster Management (NPDM, 2010–2015) in line with the priority areas set out in the Hyogo Framework for Action, 2005–2015 (HFA). HFA aims to substantially reduce loss of life as well associal, economic and environmental losses sustained by communities and nations as a result of disasters. Led by the Ministry of Disaster Management and Relief (MoDMR), NPDM is an outcome of HFA and the South Asian Association for Regional Cooperation (SAARC). NPDM focuses on Bangladesh's disaster management vision, taking into consideration hazards, climate change, the disasters-development nexus, and national and such drivers for change as the Millennium Development Goals (MDGs), HFA, the SAARC Framework of Action, and BCCSAP.

NPDM includes the following: (1) a national hazards profile; (2) a disaster-management system; (3) specifications of the roles and responsibilities of entities involved in emergency operations and risk reduction; (4) a disaster-management regulatory framework and action matrix for DRR; and (5) a description of the emergency-management priorities and the strategies.[11]

**3.4.3 NAPA.** In 2005, the Government developed the National Adaptation Programme of Action (NAPA) to address within national policy the adverse impacts of climate change.[12] Then, in 2009, the Government prepared and adopted BCCSAP. This Plan includes actions to increase the resilience of vulnerable groups, including women and children, through (1) the scaling up of community-level adaptation; (2) livelihoods diversification; and (3) better access to basic services and social protection. It also intends to ensure food security at the household and national levels by supporting such activities as the development and implementation of climate-change resilient cropping, fisheries and livestock systems.

**3.4.4 BCCRF.** The Bangladesh Climate Change Resilience Fund (BCCRF) applies an institutional framework to support BCCSAP implementation (World Bank, 2013). The plan is being implemented in seven thematic areas: (1) food security; (2) SP and health; (3) comprehensive disaster management; (4) building resilient infrastructure; (5) increasing the knowledge base; (6) climate-change mitigation and low-carbon development; and (7) capacity building and institutional strengthening.

**3.4.5 CFF.** Bangladesh's CFF (2014) includes a total of 13 climate-resilient programmes, some of which are meant to address the development of long-term coping capability.

A programme described as Agriculture Adaptation in Climate Risk Prone Areas of Bangladesh, for example, aims to promote climate-resilient cropping systems. It recommends a set of climate codes designed to track climate change expenditures for policy analysis and reporting, and to estimate long-term climate finance needs by identifying potential climate-induced public expenditures across government ministries. The document has also addressed the fact that the existing classification structure for government budget and accounts does not include a specific code for capturing either climate expenditure or categorical recognition of CC investments. As far as the integration of DRR and CCA is concerned, the analysis suggests that this integration is currently interpreted and translated in the link made, both in policy and practice, between the impact of disasters and climate change-related extreme events on the economy of the country (and, at another level, on the livelihoods of people).

[11] Later, in March 2017, the Ministry of Disaster Management and Relief,Government of the People's Republic of Bangladesh, prepared a draft NPDM titled "National Plan for Disaster Management (2016–2020): Building Resilience for Sustainable Human Development".

[12] National Adaptation Programme of Action (NAPA), in 2005.

*A woman collecting shrimp fry in saline affected Satkhira, one of few ways left to earn a living in the area.*

Instructions should also stipulate that the relevant line ministries properly identify climate-induced activities and priority spending areas/programmes in the Ministry Budgetary Framework (MBF) section. The MTBF preparatory document outlines the line-ministry process, essentially starting with Budget Call Circular-1, which makes no explicit mentionof BCCSAP. But in the MTBF for FY2016/17, the Ministry of Environment and Forest (MoEF)[13] highlighted the BCCSAP document's action plan. The BCFF document also discussed clear guidelines for gender-specific analysis of expenditures.

**3.4.6 7FYP.** The 7FYP objectives are to develop a national training capacity to sustain and progressively expand training efforts, while strengthening the capacity of communities and households to withstand disasters. It also aims to strengthen the national capacity to support response management in local disaster management committees, and to develop a monitoring and evaluation system for this capacity building strategy. To mainstream DRR and CCA, the 7FYP aims to take the following measures:

- Integrate DRR and CCA for resilience approaches and principles within the planning and policy frameworks of all government institutions, providing technical assistance while monitoring and reporting on implementation.
- Integrate DM in district development plans, and provide capacity development training, including Union Disaster Management Committees (UDMCs).
- Include DRR and CCA issues in the training curriculum for such actors as local government, public representatives, officials, Bangladesh Ansar and the Village Defence Party (VDP), religious leaders, and the Boy Scouts.
- Implement a gendered approach to disaster resilience in all government planning, policy frameworks and programmes, and implementation monitoring and reporting (GED, 2015a).

**3.4.7 NSSS.** Bangladesh has made good progress with engaging in policy dialogue and facilitating capacity developmentin the raising of SP's profile. The NSSS (2015) has strengthened the existing SSNPs with a view to achieving more cost-efficient results. It also broadens the scope of 'social security' from the narrow concept of safety

[13] In 2018 the ministry was renamed the Ministry of Environment, Forest and Climate Change (MoEFCC).

nets to include employment policies and social insurance, thereby addressing the needs of a middle-income country. By improving programme design and broadening its scope and coverage, the NSSS can help promote human development with the aim of reducing income disparities and contributing to greater social and economic growth.

The NSSS, however, suffers from several shortcomings. For one thing, it is not doing enough to improve the national ability to adapt to a changing climate. It also lacks a development mechanism that might address unsafe living conditions at the same time it counters the underlying causes of vulnerability.

**3.4.8 Life-cycle approach with shortcomings.** The NSSS has considered a life-cycle approach, consolidating programmes within a small number of priority schemes. NSSS benefits would be non-discriminatory, available to all poor and vulnerable people who satisfy the income and other selection criteria relating to life-cycle or disability, irrespective of religion, ethnicity, profession or location.

The life-cycle approach should also specifically target climate change-affected vulnerable (i.e. disaster prone) regions or groups. A child grant could be allocated to poor and vulnerable households with children of up to four years of age, with the children also entitled to the following: (1) disability benefits; (2) a school meals programme; (3) an orphan's programme; and (4) legal provisions that ensure abandoned children get financial support from the responsible parent. But the grant programme does not stipulate what steps might be taken to support disaster-affected children or households before, during and after a disaster. Furthermore, no specific disability benefit is allocated for disability due to adverse climate or disaster. Thus, the strategy focuses on SSPs that do not include ASP.

**3.4.9 DRR strategies under the 7FYP.** The 7FYP fields DRR strategies that aim to establish or strengthen regional networks and agreements for real-time data sharing regarding disaster risk, thereby streamlining risk assessment. It also stresses the following: (1) analysis and information-sharing systems within the Government; (2) the development of risk assessment and CCA inclusion guidelines; and (3) at the district level and lower, DRR and CCA development planning processes that promote structural and non-structural investments such as disaster and climate-resilient housing, roads, embankments, flood and cyclone shelters, and other infrastructure construction and risk reduction programmes at community levels (GED, 2015a).

*A locally built environment friendly solar engine boat, which can be used for carrying school children or as rescue boat in flood affected areas.*

**3.4.10 Helping transform SP into ASP programmes.** With post-disaster recovery, reconstruction and rehabilitation, the 7FYP aims to accomplish the following: (1) integrate 'build back better' principles with recovery and reconstruction policies, plans and financial projections; and (2) establish a sustainable financing mechanism. It plans to support recovery with build-back-better principles, while establishing an effective targeting mechanism for proper use of SSNPs. Though the activities listed above are not ASP as such, they relate to a broader agenda, and ASP's basic concept is to develop a variety of coping mechanisms. Specifically, three types of coping mechanisms usually prevail in vulnerable populations: resilient, injurious and residual mechanisms (GED, 2015a):

- Resilient mechanisms entail the use of own income and savings, interest-free loans from friends or relatives, low interest loans, social support, religious charity, and safety net assistance.
- Injurious mechanisms include asset sales and high-interest loans.
- Residual mechanisms reduce expenditures and consumption.

The 7FYP targets, however, do not take into account these coping mechanisms. Where SP programmes do properly address them, and in that light reconcile a given budget with current allocations, it can help transform SP programmes into ASP programmes.

**3.4.11 Addressing the 'lagging' regions.** A study of the 'lagging regions' has observed that the 7FYP addresses the building of resilience to adverse environmental and climate change shocks (GED, 2015a).

The bio-geographical impacts of disasters and climates vary according to a given district's location. With that in mind, one proposed strategy to lessen the impact of such natural disasters while building resilience that minimizes subsequent damage, is to invest in the development of new, stress-tolerant agricultural seeds that can grow in these inclement conditions.

The 7FYP also addresses the need to invest in and build more centres where victims of disaster and adverse climate change can take shelter. North-western districts of Bangladesh[14] exposed to droughtshave been receiving priority assistance in terms of agricultural inputs (e.g. irrigation).

So far, however, neither the disaster management fund, the National Emergency Operations Centre (NEOC), nor the information and communication technology (ICT)-based multi-hazard Early Warning System (EWS) has been specified to build resilience to adverse environmental and climate change shocks at the community level in lagging regions (GED, 2015a).

[14] For example, Rajshahi, Chapai Nawabganj, Rangpur, Natore, Meherpur, Jessore and Satkhira.

*An Adivasi woman working in crop field in the north-west region of Bangladesh*

## 3.5 Gender and child perspectives

**3.5.1 Gender-sensitive ASP employment schemes.** SP aims to prevent or manageand, ultimately, eliminate situations that adversely affect the lives of people in the country. Policies and programmes designed to reduce poverty and vulnerability have been mostly gender-neutral in nature, although a few programmes are being delivered exclusively for women.

It is difficult to address the effects of climate change effectively among socio-economically disadvantaged groups in Bangladesh. Gender issues add a dimension that needs to be included, along with climate change, in SP schemes with a view to promoting employment with suitable ASP programmes. The importance of further engaging women in SP cannot be over-emphasized, especially given prevalent social attitudes towards women. Hence, gender-sensitive ASP programmes must prioritize gender-sensitive allocation and implementation in the activity lists.

**3.5.2 Encouraging women's participation while enhancing their socio-economic status and protecting their health and welfare.** Major 7FYP goals include encouraging greater women's participation in the following areas: (1) homestead-based agricultural production; (2) post-harvest management; (3) agro-food processing; and (4) marketing and decision-making for ensuring women empowerment. Women must play crucial roles in transforming agricultural products into elements of national food and nutritional security. To this end, gender-based inequalities all along the food production chain need to be reduced while promoting the engagement of women at all levels of decision-making. Women need access to information, credit and other business development services in order to capitalize on the new market opportunities along changing or emerging value chains. At the same time, both women and children must be protected from health hazards during agricultural operations.

**3.5.3 Issues in need of SP if ASP is to be promoted.** The most critical problems women face due to disasters and adverse effects of climate change include the following: (1) water-borne diseases among children; (2) child care; (3) access to safe drinking water; (4) food preparation for children; (5) access to sanitation facilities; and (6) water collection for household work and drinking.

But the SPs have uniformly failed to addressthese issues. Were SP programmes to allocate budget in the light of these problems experienced by women during times of disaster and climate adversity, that would help transform SP programmes into ASP. [15]

Culturally and socially determined gender roles, through a complex web of physiological and behavioural interrelationships and synergies that pervade every aspect of their lives, greatly impair women's health and that of their children. This situation becomes worse during times of disaster. The SP services could perhaps accelerate the process of transforming SP into ASP by revising their view of women as the natural guardians of their households' health, and by drawing other family members, particularly husbands, into their orbit. Therefore, SP programmes need to prioritize management of nutrition among women and girls due to natural disasters.

**3.5.4 Government initiatives need to go further.** NSSS shows that the Government is especially sensitive to the disadvantageous position of women in society. A range of regulatory and affirmative action policies in the context of the broader social development framework aim to offset the sources of disadvantage. Beyond that, the Government has adopted SSPs to support women living in poverty, for example the Maternal Health Voucher Scheme and Maternal Allowance Programme for Poor Lactating Mothers. But NSSS does not specify whether such programmes will be modified in times of disaster or climate change. In such times, these programmes must provide in-kind support, such as quality food, safe drinking water, and safe delivery to the mother's door.

**3.5.5 Sound implementation one key to success.** NSSS is designed to address the specific concerns and vulnerabilities of women at different stages of the life cycle. But successfully addressing gender-specific life-cycle risks presupposes sound implementation.

Introducing the proposed social insurance, for example, presents a particularly important mitigation measure for risks experienced by working women. NSSS has also mapped existing social security interventions against life cycle risks, but the proposed point-wise schema of CCA for different stages of the life cycle should be outlined according to gender.

In any case, no new SPs have been introduced, following the gender inequalities and gender dimensions of poverty and shocks that have been identified in the strategy.

The major NSSS initiatives and shortcomings are as follows:

- In recognition of the special difficulties faced by vulnerable working-age women, NSSS advocates a consolidated income transfer under a reformed Vulnerable Women's Benefit (VWB) programme.

- NSSS provides for expansion of the Maternal Health Voucher Scheme (MHVS) administered by the Ministry of Health and Family Welfare (MoHFA), plus a range of policy measures to facilitate the entry of women into the labour market. In general, MHVS presents a good approach, though the scheme does not provide delivery support to pregnant women at their door in times of disaster.

- The National Social Insurance Scheme (NSIS) and the Private Voluntary Pension (PVP) would provide pensions as well as address other contingencies such as disability, sickness, unemployment and maternity. But these two strategies lack specific budget allocations or mechanisms for reducing the climate-change and disaster-related suffering among women and girlsthat NSSS identifies.

[15] Salinity issues, for example, are especially important among women because saline water increases health hazards during pregnancy. However, the Women Development Policy has not addressed these problems.

**3.5.6 Gender-specific concerns need more attention in policy and planning.** The 7FYP identifies areas where women's advancement as self-reliant human beings should be ensured, and where SP needs to address women specifically, including with increased protection and resilience from crises and shocks. However, the 7FYP has not thus addressed women in its overall targets, DRR strategies, or warning and response and disaster preparedness, except with post-disaster recovery, reconstruction and rehabilitation, in reducing the underlying risks and mitigating the effects of climate change and disasters. SP programme designs do not take account of suffering that is experienced disproportionately by women and men.

## 3.6 Summary and observations

**3.6.1 Linking thematic and programme objectives.** BCCSAP, a consolidated DRR and CCA document, promotes a pro-poor climate change management strategy. BCCSAP insights and proposals have subsequently influenced the CFF and 7FYP documents. The design of BCCSAP's climate-change action plan is organized according to six thematic areas: (1) food security, SP and health; (2) comprehensive disaster management; (3) infrastructure development; (4) research and knowledge management; (5) mitigation and low-carbon development; and (6) capacity building and institutional strengthening.

Comprehensive disaster management presupposes that thematic objectives are effectively linked with programme objectives. For its part, CFF represents a tool to implement the BCCSAP plan of action in a transparent and sustainable way. To this end, a climate expenditure database is sorely needed, but this document articulates no related guidelines. The document also suggests that the Medium-Term Budgetary Framework (MTBF) can include an additional section that analyses the impact of CC activities undertaken by the relevant ministries.

**3.6.2 SP spending—a neglected imperative.** The 7FYP background paper on climate change and disaster management sets out resilience to disaster and climate change as one of three central 7FYP themes. However, SP spending has yet to be transformed in line with the pledges of the plan document, as evidenced by the relatively unchanged list of programmes and nature of SP allocations.

**3.6.3 Need to assimilate CCA within policy and programmes.** Compared to DRR, CCA is a new concept in this arena, and its assimilation should present a serious concern for policy coordination at the government level. Many regions in Bangladesh are relatively free from climate hazards. But, owing to a limited adaptive capacity resulting from financial, technological, infrastructural and institutional constraints, almost all low-lying areas remain vulnerable to the impacts of climate change.

# 4. Institutions and programmes linked with ASP

## 4.1 Background

**4.1.1 Integrating approaches while balancing investments.** ASP calls for fostering the institutional and practical integration of SP, DRR and CCA. By combining the objectives of these three streams of work, ASP can provide a framework that helps SP interventions develop more resilience to risks from disaster hazards and climate change. At the same time, this consolidation can show how SP, through its vulnerability-reduction interventions, may play a critical role in buffering the negative impacts of climate change and disaster (Béné, 2011).

Bangladesh's long experience of disasters has produced a population with a strong capacity to respond to floods and droughts. Yet, given the severity of these events, something that might be expected to grow still worse, flooding and drought remain among the most economically and socially damaging shocks for rural households. There is thus a need to build resilience within communities as well as to provide support for climate-resilient protective infrastructure.

As part of this, there is a continuing need to balance investment in both these areas.

**4.1.2 SP programme needed for poor and vulnerable.** A fallback strategy is needed to address climate change and environmental degradation, one that (1) includes a gender dimension and (2) pursues SP and crisis prevention with identified resources.

About 65 percent of 145 SSNPs in total are highlighting life cycle-related risks; thus most of them focus on mainstream social security rather than rights-based protections. A systematic weakness in those programmes, which are operated by 23 line-ministries and divisions, is that no formal channel exists for sharing information among the implementing ministries or divisions.

But no SP programme is targeting this combined population group of the poor and vulnerable. While coverage from a variety of SPs has increased overtime, some 64 percent of poor households remain left without access to any SP. If the target is expanded to include the populations mentioned above, the exclusive share of the households increases to 68 percent (GED, 2015b).

## 4.2 Review of current SP programmes

**4.2.1 Easing loss and suffering in the short and long terms**. A number of SP programmes that are both implemented in disaster-prone areas and promote CCA and DRR can be included in ASP, since these programmes aim to bring income stability to the vulnerable poor in the affected areas and, through this process, help people to adapt to the impacts of climate change in the long run.

In addition, the VGF programme's immediate food relief eases the suffering of 2.5 million poor people every year. Immediately following shocks, distribution of disaster relief, such as Gratuitous Relief (GR, both food and cash), relief items and house-building grants can help to reduce the losses and suffering.

**4.2.2 Longer-term mechanisms needed.** Food distribution through Open Market Sales (OMSs), VGD, VGF, TR, GR and FFW undoubtedly servesas disaster relief. But this activity—aside from the housing grants, which do provide long-term DRR advantage— does not providea mechanism that promotes escape from poverty brought on by long-term climate change. Additionally, these programmes work only to support disaster-affected households during times of disaster; they do not provide capacity development support for regaining pre-disaster livelihoods.

This strategy is therefore itself an SSP, but its measures only partly serve as ASP. The Ashroyan-2 project[16] and the construction of multipurpose disaster shelters aim to provide shelter during disasters, such as cyclones and floods. But they do not provide any CCA training. Although an Integrated Fisheries and Livestock Development in Flood Controlled Areas and Water Bodies programme is being executed, it is programmes such as the development of saline-resistant crop seeds that can achieve long-term results. The Chars Livelihood Programme (CLP) presents a good example of integrating disaster-risk management (DRM) and CCA strategies.

**4.2.3 Rhetorical support not matched by DRR capacity and resources.** Beyond the national level, strengthening capacity is critically important at local levels for both the Government and its citizens. Despite the importance afforded the DRR agenda in various key documents, a serious lack of DRR capacity and resources still hampers progress. Among the factors that constrain the central coordinating body tasked with disaster management, the National Committee on Disaster Management (NCDM), is the inability to access adequate government fiscal support to effectively perform its mandate. At local levels, problems seem too big to include in local planning, given the limited resources, even though the policies are formulated at the national level.

**4.3.4 Moves to resolve coordination issues.** DRR operations are currently difficult to implement at all levels, since the ministries and stakeholders have collaborated only in emergencies and disasters over the past several years. At the subnational level, the situation seems even more challenging, given that frontline government services facing the direct impact of emergencies and disasters are even weaker than the national-level disaster management institutions. Capacities differ considerably from one area to another and depend primarily on the presence or absence of external stakeholders. The 7FYP addresses this issue by setting a target of establishing the Disaster Management Fund, the NEOC and ICT-based

**Box 4.1**
**SSNPs that include ASP features**

- "Gucchagram" (Rehabilitationof Climate Victims)
- Small-scale Dairy and Poultry Farmers' Support Project in 22 selected districts
- Community-based Adaptation to Climate Change through Coastal Afforestation
- Bangladesh Climate `Resilient Participatory Afforestation and Reforestation
- Test Relief (TR)
- Foodfor Work (FFW)
- Cashfor Work (CFW)
- Employment Generation Programme for the Poorest (EGPP)
- Vulnerable Group Development (VGD)
- Vulnerable Group Feeding (VGF)
- Gratuitous Relief (GR)
- Open Market Sale (OMS)
- Ashroyan-2 Project
- Multipurpose Disaster Shelter Construction Project
- Integrated fisheries and livestockdevelopment in flood-controlled areas and water bodies
- Employment for Ultra-Poor in Northern Region
- Chars Livelihood Programme (CLP)
- Char Development and Settlement Project (CDSP Phase IV)

[16] See http://socialprotection.gov.bd/social-protection-pr/ashroyan-2-project/ [accessed 17 Dec. 2018].

Multi-Hazard EWS at community levels. If these targets could be met, it would establish a useful forum within which to overcome coordination issues at both national and subnational levels.

**4.3.5 ASP needs to more explicitly and more effectively address women's issues.** Minimizing climate-change effects is a newer approach, and ASP, although it has initiated few women-focused programmes, is gradually receiving a larger share in the national budget. The dominant gender-neutral ASPs include SP programmes, such as Poverty Reduction and Livelihood Security for the People of Economically Backward Areas; Community-based Adaptation to Climate Change through Coastal Afforestation; Bangladesh Climate Resilient Participatory Afforestation and Reforestation; Gucchagram; and One House One Farm (OHOF).

Though no specific provision is found in the allocative sectors of ASP programmes for women's issues, such a provision is a basic need. Women are already among the most marginalized even among the poor, and, given prevailing trends in this era of rapid climate change worldwide, unless appropriate ASP measures are set in motion now this situation will only get worse.

## 4.3 Methodology

**4.3.1 Three-pronged analysis.** This study applied a three-part analysis to the institutional orientation of different ministries to the CCA through DRR and other SP programmes:

- **Tracing government organizations, NGOs and international agencies.** The analysis examined how and to what extent the various concerned ministries, divisions and institutions linked their activities and programmes to ASP. Donors, international agencies and NGOs were involved in funding and partnering with the Government in the execution of these programmes. CFF identified the institutional architecture as a core feature in promoting accountable climate financing, and the researchers therefore conducted an institutional analysis of the various projects as well as of ministry and division's spending on ASP programmes.

- **Analysing the rules of business and involvement down to grassroots level.** Among the questions addressed is this one: how are spending decisions for general SP programmes made to address climate change and disasters in the various agro-climatic zones? Local government institutions (LGIs) implement SP programmes at the grassroots level. The study examined the roles of the above stakeholders, aiming to map expenditure delivery chains and governance, conducting in-depth interviews with government policymakers in selected ministries. Field-level programme governance and beneficiary perspectives were taken into account by conducting field-level consultations in eight agro-climatic zones of Bangladesh (see map in annex 2, below).

- **Clarifying the organizational dimensions of programme implementation.** After the secondary analysis and personal interviews, a few important programmes were selected with a view to clarifying how they were implemented and to what extent they were adaptive. This exercise helped achieve the following: (1) it clarified the institutional aspects of programme implementation; (2) it revealed the perspectives of intended beneficiaries at the field level with respect to programme effectiveness; and (3) it solicited proposed avenues for programme improvement from beneficiaries to meet the emerging needs of climate-vulnerable groups in the context of a changing climate.

**Figure 4.1 Institutional analysis**

## 4.4 Government agencies

**4.4.1 Increasing complexity of DRR operations and related challenges.** The growing number of institutions operating in the DRR field in Bangladesh entails challenges for coordination within and between SP ministries and programmes. Following the introduction of CPEIR, CFF and NSSS, ASP as a concept and programme can be structured around both the use and impact of the ASP approach and the different categories of SP objective.

Meanwhile, the important barriers to greater integration of SP, CCA and DRR include (1) lack of capacity; and (2) lack of coordination between agencies, both between different government departments and between government agencies and other organizations.

CEPIR describes the following DRR and CCA institutions:

- They include a wide and complex constituency of interests in climate change that includes staff ministries, line ministries, local government, NGOs, the private sector and development partners. At least 37 ministries (and relevant autonomous bodies) operate at least one climate-sensitive programme. There are also 10 donors on a bilateral or multilateral basis, which suggests risks and challenges to follow in respect of coordination and coherence.
- LGIs at the *upazila*[17] and *union parishad* (UP)[18] levels implement climate-sensitive activities.
- The highest-spending ministries in respect of climate-sensitive activity are Local Government Division (LGD) at 22.1 percent, the Ministry of Agriculture (MoA) at 19.7 percent, and the Ministry of Disaster Management and Relief (MoDMR) at 17.5 percent.
- Many NGOs are engaged in DRR and CCA activities.

**4.4.2 Important concerned ministries**. Six ministries implement the majority of ASP programmes and projects through relevant departments and agencies. The major concerned ministries are the MoDMR, MoFd, MoWCA, the Ministry of Agriculture (MoA), and the Ministry of Social Welfare (MoSW).

[17] Upazilas (formerly thanas) are administrative regions, sub-units of districts.

[18] Union parishads (or union councils) are the smallest rural administrative and local government unit.

Meanwhile, LGD agencies implement SP infrastructure development projects related to CCA and DRR.

**MoDMR.** The Ministry of Disaster Management and Relief was established to address the effects of natural disasters and climate change, among other things ensuring food availability at the country level. The MoDMR, the pioneering ministry in reducing shocks before, during and after disasters, is responsible for coordinating national disaster management interventions across all agencies. According to the ministry's mission statement, its basic focus is to mitigate the risks of the vulnerable during disasters through strengthening its own capacity. MoDMR's major focuses include the following:

- humanitarian assistance to the vulnerable through EGPP, TR, FFW/MFW, VGF, and GR;
- overseeing SP activities that help populations adapt to the effects of climate change; and
- medium-term strategic objectives such as the following: (1) institutionalizing a disaster management system; (2) upgrading infrastructure to reduce disaster risks; and in general (3) reducing the suffering of the vulnerable.

Principal MoDMR objectives also include the following: (1) formulating and implementing DRR laws, policies and action plans; and (2) emergency response and disaster management. Ultimately, by reducing the potential effects of disaster risks, such efforts help accelerate longer-term adaptations to climatic change and ASP.

Long-term CCA comprises an integral component of the DRR plan preparation. This includes training and research, as well as coordination, monitoring and evaluation activities in the light of experience with disasters and climate change. A major complementary objective involves ensuring employment for the ultra-poor during annual lean periods, thereby reducing the effects of disasters when they do strike, and over the longer term helping to minimize the adverse effects of climate change.

In the medium term, consistent with CCA and DRR, MoDMR aims to reduce disaster-related loss and suffering. Implementing EGPP, TR, FFW and other programmes serves the goal of reducing poverty during agricultural slack seasons among 6.5 to 7 million people every year. These SP programmes focus on disaster-prone areas, so they clearly promote DRR and CCA. Moreover, they can be considered as ASP for disaster-prone and climate-vulnerable areas, since they promote income stability among the vulnerable poor in affected areas and, through this process, promote CCA in the long run.

Women, children and people with disabilities. SP and other MoDMR activities include the advancement of disaster-affected women. Institutionalizing an effective disaster management system, for example, and ensuring its professionalism, competence and capacity—in part by systematically promoting women's participation in these management activities—will empower women in disaster-prone areas.

An effective transport system plays important roles in rescue operations during disasters, especially with women and children. By helping people find shelter during floods and cyclones, communications and transport infrastructure can accelerate the advancement of women's status by accelerating infrastructure construction, extension and upgrade. Women, children and people with disabilities are given priority when shifting victims into safe shelters at the beginning of a disaster. They are also provided with food and medicine, thereby strengthening their social security and capacity to address the adverse effects of disasters.

More is needed to adapt to climate change in the longer term. MoDMR support for relief activities and food distribution through Gratuitous Relief (GR) programmes addresses short-term vulnerability and livelihood risks associated with climate-induced and other disasters. Food relief provided under the VGF programme, for example, alleviates the suffering of 2.5 million poor people annually. Immediately after shocks, supplies of disaster relief such as GR (Food), GR (Cash), saris, *lungis*,[19] blankets, corrugated iron (CI) sheets, and housing grantshelp the affected people cope with losses in time of disaster. The housing grants, at least, can foster long-term DRR and CCA advantages. But it must be asked whether these temporary-help government programmes can promote adaptation to climate-change effects in the long run.

Emergency response system to help establish mechanisms serving ASP. MoDMR focuses on DRR training and research and awareness programmes in trying to neutralize the impact of continuing global climate change. This is consistent with its objective of establishing an efficient and capable emergency response system, thereby accelerating the DRR process and ensuring greater adaptability to climatic change. The ministry runs various SP programmes for disaster-prone areas, some of which, for example housing grants under GR, qualify as ASP. Initiating SP programmes within the context of environmental sustainability helps to establish a mechanism for strengthening ASP.

**MoWCA.** The Ministry of Women and Children Affairs pledges to establish the rights of women and children as well as empower women while encouraging them to engage with all mainstream development activities. Women in Bangladesh are affected more adversely than are men by natural disasters, and MoWCA can be expected to focus on fostering CCA among women.It has already introduced various related activities, including formulation and implementation of the National Women Development Policy 2011 and National Child Policy 2011. Under the VGD, which is a women-focused SP programme, MoWCA assists with food and productive equipment for vulnerable women. It advocates protecting women against disaster by developing resilience.

Meanwhile, the Department of Women (DoW) executes an allowance programme for the ultra-poor and pregnant women. It presents only a general programme for poor women, however, placing no special emphasis on disaster-prone and climate-vulnerable upazilas.

Need for greater collaboration. MoWCA has focused insufficient attention on how disasters in disaster-prone regions can affect the general health of both women and children, as well as the reproductive health of women. This ministry should mentor the monitoring of such hazards. This special focus could effectively publicize the importance of DRR in adapting to the effects of climate change. But this ministry applies no DRR-or CCA-related KPI. This indicates a need for greater coordination among ministries regarding women-focused activities related to disasters and climate change. For example, although their KPIs currently show no sign of collaboration, in future MoDMR and MoWCA could jointly manage the women's segment of climate-change adaptation. DRR and CCA issues, furthermore, could be incorporated to reduce various risks and vulnerabilities among women and children.

[19] A lungi is a garment worn around the waist like a sarong.

*Women and girls are queued up for collecting water from pond-sand filter in a village in the water stressed south-west region*

**Ministry of Finance (MoF).** It deals with budget allocations for different sectors, and it was involved in preparing the CFF. MoF has started to allocate resources from the national budget to specific programmes addressing general and social protection as a means of dealing with the adverse impacts of climate change.

**MoA.** The Ministry of Agriculture comprises a vital element in national ASP development, given that agricultural sector links to CCA and DRR in both crop and non-crop sectors. This ministry focuses on ensuring food security mainly by increasing crop production through crop diversification and development of an improved marketing system. It stresses agricultural research and projects that serve food security, among other things developing crop varieties resilient to climate stresses and seeds suitable for disaster-prone and climate-vulnerable areas. It allocates funds for the purchase and distribution of seeds, fertilizers and implements for post-disaster relief operations.

However, more direct DRR/CCA-related programmes are needed for ASP in MoA. Despite its wide range of activities, MoA lacks programmes that more directly address DRR and CCA issues in the context of food production. For example, MTBF pays less attention to various effects of climate change on food security by avoiding the list of MoAKPIs. Food is the population's primary need in coping with disasters and climate change effects, but MoA has yet to coordinate sufficiently with CCA and DRR processes in addressing the issue of food security on a large scale over the longer term. However, this ministry has initiated a CCA programme that developed salt-tolerant crop varieties.

**MoWR.** The Ministry of Water Resources focuses on constructing embankments, according to government-approved designs, on disaster-prone coasts and islands.

- The Flood Forecasting and Warning Centre (FFWC), under the purview of MoWR, provides the focal point for the Water Development Board. Its operation of sluice gates and other water-discharging devices in completed embankment areas represents a good effort to minimize risk of future disasters. It monitors embankment conditions and repairs breaches and weak points. Indeed, operating the FFWC from April to November is one of the ministry's prime duties.

- The Centre for Environmental and Geographic Information Services (CEGIS) works under MoWR, using geographic information system (GIS) and remote sensing technology for integrated environmental analysis.

- The Bangladesh Meteorological Department monitors weather conditions, providing improved cyclone forecasts and a regular supply of weather information in general. However, the ministry KPI does not include any direction covering other disasters brought on by climate change.

- Disaster-wise KPIs need to be established to save water resources from adverse climate-change effects.

- MoWR also implements programmes for constructing and maintaining dams for flood control and forecasting.

All these activities help promote DRR despite the lack of specifically SP programmes.

**MoFd.** The Ministry of Food aims to ensure adequate safe and nutritious food for all through a management system that applies apposite policies and strategies.Primary ministry activities include the following: (1) initiation of the overall national food management policy; (2) export-import of various crops along with their collection, reservation and distribution; (3) initiation of various food-sector development programmes and their implementation; and (4) long-term food security planning. However, the Open Market Sale is the only ministry SP programme that can be directly linked with CCA or DRR. Considerable scope thus remains for collaboration with other ministries in these two areas.

**MoFL.** The Ministry of Fisheries and Livestock describes its mission as meeting the demand for animal protein by enhancing production, productivity and value addition with fish and livestock products.[20]

- The Department of Fisheries (DoF) is addressing climate-change effects in the following ways: (1) using water hyacinth to cover water surfaces; (2) identifying drought-tolerant fish species; (3) conducting pond fish-culture research and development; (4) releasing fish fingerlings in government-owned bodies of open water;(5) providing advice regarding fish safety and diseases, ideas for small pond/retention pond excavation;and (6) training and awareness programmes for fish farmers.
  These measures are protective of the future environment and serveas tools in the service of CCA and DRR.

- The Department of Livestock Services (DLS) deals with livestock and poultry. Policy focuses on public awareness in the following areas: (1) rainwater harvesting; (2) multivitamin supplements for animal resources; and (3) vaccination programmes.

  All of these are necessary measures to protect livestock during general and climate-induced disasters.

**MoSW.** The Ministry of Social Welfare administers allowance schemes under social safety net programmes (SSNPs) as well as grants and aid to non-government social welfare organizations. Its core functions include implementing programmes aimed at the following: (1) social protection and integration; (3) SSNs; (4) welfare and services delivery; and (5) community empowerment.

**MoEF.** The Ministry of Environment and Forests is responsible for the planning and implementation of environmental protection and management activities. Its roles include the following: (1) all work on climate change and international negotiations; and (2) serving as the focal point for GEF and the United Nations Framework Convention on Climate Change (UNFCCC); and participation in all Conference of Parties (COP) meetings.

**MoP.** The Ministry of Planning plays a significant part in the country's socio-economic development. It initiates and provides guidance for overall medium-term and perspective planning, including support for sectoral planning.

[20] See https://mofl.gov.bd/site/page/80def8e3-21f4-4e54-8dc3-9f7619db8658/Aims-and-Objectives [accessed 18 December 2018].

- The General Economics Division (GED) of the Ministry's Planning Commission is upgrading its institutional capacity to incorporate climate change from the planning perspective.

- This ministry has also assisted with NSSS formulation and the conduct of CPEIR.

- The ministry assumes primary responsibility for outlining directions for national development. This includes the initiation of major policies, including five-year and perspective plans and strategies.

- It also supports sectoral planning, providing guidanceand a supportive role in accelerating the process of development.

The ministry does not have any KPIs, which makes it difficult to assess the ministry in terms of contributions to CCA and DRR.

### 4.4.3 Other agencies.

**PKSF.** The Palli Karama-Sahayak Foundation is a public-private partnership (PPP) under MoF administrative control. It has been implementing a number of CCA and DRR programmes and projects in various parts of Bangladesh. It implements five specialized CCA and DRR programmes conducive to ASP objectives:

- **Samriddhi.** This programme is being operated in the north-western districts of Rajshahi and Rangpur divisions, and in the northern district of Sunamganj.

  Component-I applies the Making Markets Work for the Poor (M4P) approach in 12 value chains, allowing poor and extremely poor men and women to benefit from improved employment and income-generating opportunities facilitated through value chain and enterprise development, as well as to take advantage of sustainable access to quality services (e.g. information, skills and technology).

  Component-II applies a Human and Institutional Development (HID) approach to help the poor and extremely poor to define, manage and lobby for their own development priorities, while securing access to a more enabling environment for livelihood improvement.

  Because they use sustainable livelihood tools, the M4P component and HID qualify Samriddhi as an ASP programme.

- **ENRICH.** Initiated in 2010, Enhancing Resources and Increasing Capacities of Poor Households towards Elimination of Their Poverty takes into account multiple dimensions of poverty, including a wide range of economic, social and environmental indicators, and addresses them in an integrated manner. One major focus is raising awareness among policymakers and the public regarding climate change and its impacts. It also encourages and facilitates such adaptive activities as raising the bases of houses and planting trees and other vegetation to protect houses from winds, and mitigation activities such as installing solar home systems and the use of improved cooking stoves. It supports resilience mechanisms such as use of own income, use of savings, and low-interest loans. It has also promoted several climate-adaptive means to maintaining sustainable ways of living.

- **Sahos.** This disaster management fund offers these advantages: (1) it provides quick financial assistance to poor families; (2) it discourages them from selling advance labour, which amounts to entering into bonded labour, or valuable assets; and (3) it helps them pursue a decent life. It is designed exclusively to ensure immediate financial assistance to support the vulnerable poor during and after disasters. This fund mainly seeks to facilitate coping and recovery mechanisms among poor people. Primarily used for livelihood restoration, it includes the following activities: (1) repair of houses, tube-wells and latrines; (2) restoration of lapsed income-generating

activities (IGAs); and (3) and ensuring consumption capabilities in post-disaster periods. It also guarantees the provision of emergency medical services, water and sanitation.

Sahos can be described as an ASP programme, since it addresses both the DRR and CCA components.

- **PACE.** Promoting Agricultural Commercialization and Enterprises aims to enhance livelihoods (higher income from self-employment, business profit and wage employment, plus food security) among the moderately and extremely poor (both men and women) in a sustainable manner. In doing so, it applies three components:(1) financial services for microenterprise; (2) value chain development; and (3) technology and product adaptation. The project introduces proven technologies and products, both agricultural and off-farm, to micro-entrepreneurs. One coping mechanism is the use of own income for sustainable human life.

- **SEUP.** The Skills for Employment Investment Programme aims to develop a skilled workforce through skills training and to place these workers in productive wage and self-employment that, in turn, will sustainably improve their livelihood. Its primary goals are to impart skills training linked to gainful wage or self-employment through PKSF partners and selected training institutes, and to increase access for the targeted poor, both male and female, to market-responsive skills development training programmes. One coping mechanisms is the use of own income, something that SEIP indirectly supports.

**LGD.** The Local Government Division employs disaster victims in such activities as road maintenance, tree planting and excavating canals for improved irrigation, which at once help minimize threats from the risk of disaster and climate change. LGD is the direct implementing agency for programmes such as TR (Food and Cash), VGF, EGPP, FFW/C, MFW and VGD. Those programmes serve as SP programmes, not in terms of poverty reduction among vulnerable groups, but because they support income-generating activities during lean periods.

LGD is heavily involved in implementing most SP programmes under SSNPs.

*Women engaged in road maintenance in Satkhira as part of different SP schemes of the LGD*

## 4.5 NGO approaches and interventions

**4.5.1 BRAC.** The Bangladesh Rural Advancement Committee is the largest non-governmental organization (NGO) in the world. It implements SP programmes focusing on DRR and CCA.

- **VGD.** In 1975, to provide relief to destitute women, the Government launched a VGF programme assisted by the World Food Programme (WFP). In the early1980s, the programme was renamed Vulnerable Group Development (VGD), reorienting its efforts from relief to development and self-reliance for disadvantaged women. To increase self-reliance among disadvantaged women, VGD launched a package of development services comprising savings, credit, functional education, training in income-generating activities and health and nutrition information. In 1985, BRAC signed an agreement with MoDMR and became an implementing partner of the VGD programme. At that point, BRAC assumed responsibility for providing skill-based training for women's groups in four different functional skills: raising poultry, cultivating vegetables, sericulture and embroidery.

- **IGVGD.** Based on the positive initial impact of this collaboration, BRAC designed a new programme: Income Generation for Vulnerable Group Development (IGVGD). In effect, IGVGDP represented a collaborative project under WFP, the Directorate of Relief and Rehabilitation (DRR), the Department of Livestock Services (DLS) and BRAC. The programme aimed to provide skills training and other support to improve the income-earning potential among destitute women who were VGD members, over a period of two years when the VGD women were supported by a WFP wheat ration. Under the extended programme, BRAC has been responsible for motivation, group formation, training and supply of inputs to VGD members. Meanwhile, MoDMR has provided administrative support through BRAC staff. The programme made significant contributions to raising income levels among disadvantaged rural women who would otherwise have been left out of work. At the same time, in general it helped them improve their quality of life and survive disasters.

*A woman entrepreneur at her shop in Kurigram*

- **DMCC.** BRAC's Disaster Management and Climate Change (DMCC) programme aims to build resilience, foster adaptability and respond holistically to the effects of climate change and natural disasters. It works with the Government, NGOs and communities across the country. Established in 2008, DMCC has been working to minimize the effects of climate change and reduce the vulnerability of populations exposed to disasters and climate change. DMCC develops capacity and competence at both the institutional and community levels. It also focuses on providing psychosocial counselling and training to help communities cope with disaster-related stress. Disaster-resilient structures in the southern most regions of the country have been built, further equipping communities to cope with disaster impacts. DMCC also trains BRAC school teachers, health volunteers, village organization leaders and community leaders who serve as first responders during natural disasters. BRAC conducts simulation exercises, recreating disaster scenarios complete with audio-visual effects, where participants from communities endorse disaster protocols for disaster-affected areas, prioritizing relief assistance following emergencies.

Alternative livelihood options are presented to vulnerable households to promote sustainable living. The so include tailoring, rice processing, crab fattening, fish-net making and livestock rearing. DMCC also provides support for improved access to safe water and sanitation.

**4.5.2 CARE.** Bangladesh pioneered tools and methods to assess climate vulnerability and capacity, particularly in climate change advocacy and programming. Reducing Vulnerability to Climate Change (RVCC) and PRODUCE are examples of successful climate-change projects implemented by CARE in the past. SHOUHARDO-II[21] and Food Security for the Ultra Poor (FSUP-H) projects also embedded DRR and CCA themes into the food security projects.

CARE also conducts other programmes with a strong presence in the CCA and DRR areas:

- **WtRF CBA.** The Where the Rain Falls – Community Based Adaptation project was implemented for 2014–2015 in Kurigram District. By promoting adaptive agricultural practices and efficient water-resource management, it aimed to improve the resilience of targeted vulnerable communities to ever-greater consequences of rainfall variability. CARE Bangladesh, as part of the Emergency Capacity Building (ECB) project, played an important role in promoting the enactment of the Disaster Management Act 2012.

- **SHOUHARDO-II.** This programme facilitates linkages between union, paurasabha (municipality), village, slum and district- and upazila-level service providers and advocates for development. This multi-sectoral project presents an instance of successful governmental organization (GO)-NGO collaboration. Designed for remote locations and ultra-poor populations, the programme is implemented in the following areas:
  - » North Chars Region: Nilphamari, Lalmonirhat, Rangpur, Kurigram and Gaibandha districts in the Brahmaputra river drainagebasin.
  - » Middle Chars Region: Bogra, Jamalpur, Tangail, Sirajganj, Sherpur and Pabna districts in Jamuna river drainage system and the north bank of the Padma River.
  - » Haor Region: Sunamganj, Habiganj, Kishoreganj, and Netrakona districts in the north-east part of the country.
  - » Eastern Coastal Zone: Noakhali, Chittagong, and Cox's Bazar districts, and Maheskhali, Kutubdia, Sandwip and Hatia islands.

- **FSUP-H.** Food Security for the Ultra Poor was a five-year project (2009–2013) funded by the European Union (EU) and implemented by CARE Bangladesh together with three national partners: Sabalamby Unnayan Samity (SUS), Assistance for Slum Dwellers (ASD)and People's Oriented Programme Implementation (POPI). It aimed to reduce extreme poverty, food insecurity and vulnerability in the haor region of north-eastern Bangladesh.[22] The programme targeted 55,000 ultra-poor households, with a focus on ultra-poor women in Sunamganj, Netrakona and Kishoreganj districts. This cash injection provided vital support for these households during the lean months while also providing protection from the annual flooding that occurs in this region. This scheme focused on raising homesteads of project participants above high-water levels, helping to reduce homestead flooding and increase household resilience to disaster. Other flood protection schemes were implemented, including road maintenance, school-ground raising, market-ground raising and excavation of holding ponds. At the same time, providing 30 days of cash-for-work, FSUP-H supported extremely poor woman by conducting 146 small-scale flood protection schemes in the *haor* region.

[21] Strengthening Household Ability to Respond to Development Opportunities II (SHOUHARDO II) was a project funded by the Government of Bangladesh and United States Agency for International Development (USAID). CARE Bangladesh implemented the project from June 2010 through September 2015.
[22] A haor is a wetland ecosystem.

- **CARE-TICA.** This project presents another instance of GO-NGO collaboration. A technical training and systems development project, it focuses on developing and strengthening field-level MoHFW staff skills and capabilities via various need-based, continuous and systematic training schemes.

  In one instance, CARE International provided the training and other logistics support for MoHFW field staff involved in a mass rural immunization programme.

**4.5.4 Action Aid Bangladesh.** This NGO has initiated two CCA/DRR-related projects in disaster-prone areas inhabited by victims of climate change. It implemented Scaling Up Community Based Adaptation with Local Government in Bangladesh, a project funded by the Embassy of Denmark. The project extended 19 months from January of 2011 and focused on empowering women who were affected more adversely by climate change. It facilitated the scaling up of community-based adaptation and capacity building to cope with climate change. It also advocated among policymakers and politicians to adopt pro-poor, disaster-adaptive financing and promotion of community-based adaptation best practices. Project locations included Shahjadpur and Belkuchi upazilas of Sirajganj District; Porsha and Shapahar upazilas of Naogaon District; Kolapara upazila of Patuakhali District; and Sadar upazila of Faridpur District.

Action Aid Bangladesh also initiated two other CCA and DRR projects:

- **Recovery and Rehabilitation of the Cyclone Aila Affected People.** This project focused on rehabilitation, livelihoods support, water and sanitation. It worked to recoverand rehabilitate people affected by Super-cyclone Ailain the most vulnerable communities of Shayamnagar upazila in Sathkhira District and Dacope Upazila in Khulna. Rehabilitation was accomplished through livelihood support and restoration of damaged property and infrastructure. The project ran from 1 January 2010 until 31 March 2011. Funded by EU Humanitarian Aid and Civil Protection (ECHO), it targeted 5,000 households (about 27,500 persons).[23]

- **Sustainable Agriculture for Monga Mitigation.**[24] This project focused on sustainable livelihoods, sustainable food security, capacity building in the associations, and women's rights. It included a provision for a sustainable food security for 2,500 households (13,750 people living in the targeted locations in the monga-prone area of Ulipur Upazila in Kurigram District). The project was funded by the Corti Foundation in 2010.

**4.5.5 ASA Bangladesh.** This microfinance institution is promoting water and sanitation facilities in those areas devastated by super-cyclones Cider and Aila. Hope for the Poorest (HP), a sister concern of ASA, has initiated Caring for the Uncared, a programme to assist survivors of the two cyclones focusing on districts of the southern region of the country. HP works to improve sanitation and water supply facilities in the slum areas of coastal towns in Satkhira. More than 14,000 people benefited from HP's Water, Sanitation and Hygiene (WASH) component. Under the programme, a number of capacity-building training and awareness-raising Sanitation sessions were organized for local sanitation entrepreneurs and traders in sanitary commodities.

## 4.6 Field-level programmes and delivery chains

**4.6.1 ASP programmes (either fully or partially ASP).** Some direct government programmes implemented at field level can be considered either fully or partially ASP. These are VGD, VGF, TR, GR, food-for-work (FFW), CFW, EGPP, OHOF, allowance programmes for poor lactating mothers, allowances for urban low-income lactating mothers, micro-credit for women self-employment programmes, the Comprehensive Disaster Management Programme (CDMP), and Strengthening Women's Ability for Productive New Opportunities (SWAPNO) projects.

[23] See http://www.actionaid.org/bangladesh/where-we-work/recovery-and-rehabilitation-cyclone-aila-affected-people [accessed 18 December 2018].

[24] Monga, a Bengali expression, refers to an annual cycle of poverty and hunger.

Those programmes or projects are directly linked with MoDMR, MoEF, MoA, MoWR, MoSW, MoWCA, the United Nations Development Programme (UNDP) and LGD. Conversely, VGF, GR, FFW, TR, Work for Money (WFM) and EGPP are delivered by the upazila administration's Relief Branch, under the direct supervision of the upazila Project Implementation Officer (PIO).

**4.6.2 MoDMR the apex organization.** MoDMR is responsible for coordinating national disaster management interventions at the field level across all ministry agencies. It deals with the effects of natural disasters by ensuring food availability and addressing livelihoods risks at the grassroots level. MoDMR establishes disaster action plans in the most disaster-prone areas and includes CCA and DRR within its purview.

Ministry policies generally focus awareness efforts on ways to reduce disaster risks and losses, as well as to strengthen national disaster management capacity. Relevant activities include Community Risk Assessment (CRA), the Risk Reduction Action Plan (RRAP) and the Local Disaster Risk Reduction Facility (LDRRF) components of the CDMP, which improves coordination between development-oriented and disaster-management agencies of the Government at the local level.

The main MoDMR-implemented SP programmes in all upazilas that are closely related to CCA and DRR include TR, FFW, and EGPP. The implementation phase varies from area to area, but field observations have found that these are helpful for the poor, especially in times of disaster. There follows a list of such activities:

- The VGF programme basically supplies in-kind items such as wheat and rice during two Muslim festivals (Eid-ul-Fitr and Eid-ul-Azha).

- The GR programme operates during disasters (e.g. cyclones, floods, hailstorms and fires). It provides both in-kind and cash support. GR relief activities are run during or after disasters directly under district administration. GR food is distributed by the district administration's Upazila Nirbahi Officer (UNO) on behalf of the Deputy Commissioner (DC).

- Currently half of FFW and TR programme allocations, provided as in-kind or cash through public works, are for supplying solar home systems or installing solar street lights in suchpublic places asstreets, bus stops and the *haat-bazaar* (marketplace).

- Public works such as earthworks, road repairs, and small-scale dams for agricultural activitiesare implemented under the EGPP programme and administered by the upazila relief branch. The programme is monitored by the upazila PIO assisted by the Sub-Assistant Engineer. Field studies indicate that about 60–70 percent of the workers are females.

**Figure 4.2 Delivery chain of selected programmes, MoDMR**

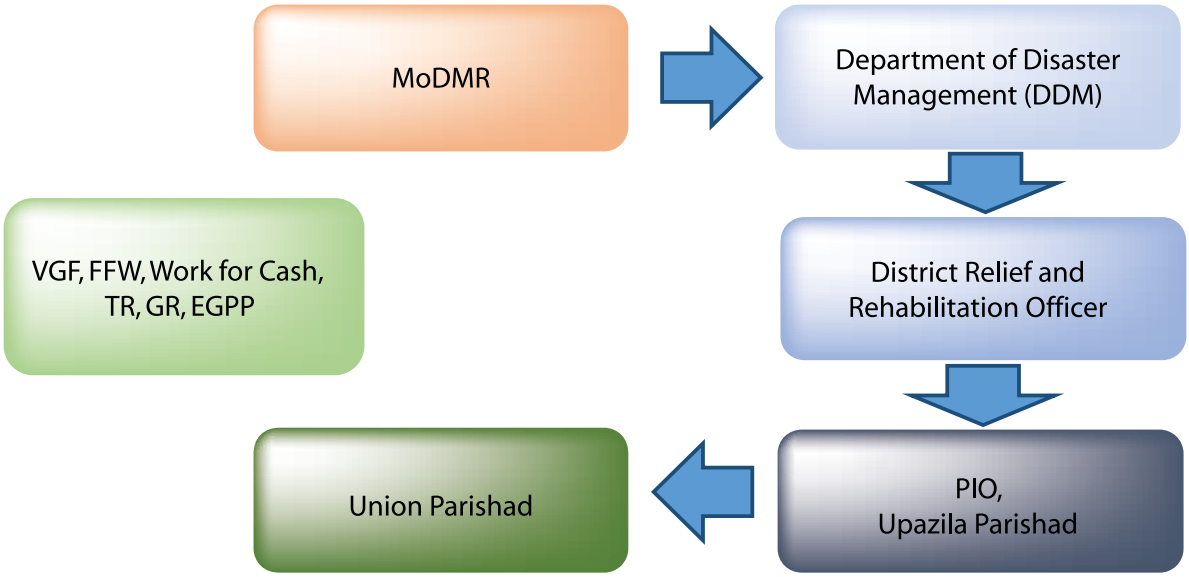
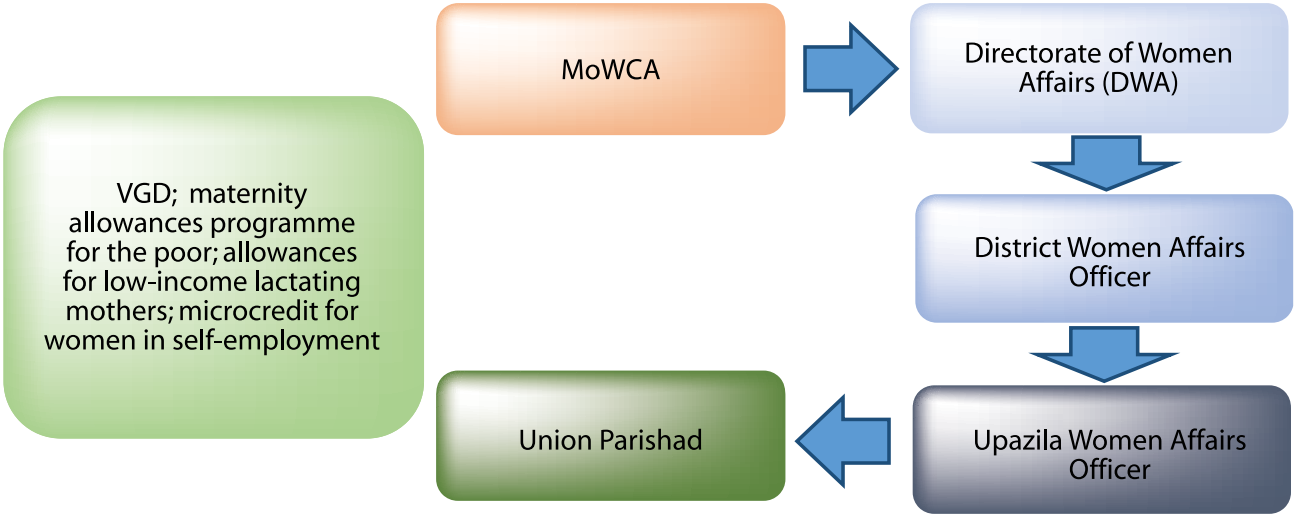



**Figure 4.3 Delivery chain of selected programmes, MoWCA**




**4.6.3 ASP for extremely poor vulnerable women.** Among the various MoWCA-implemented programmes, VGD provides the only ASP for extremely poor vulnerable women, such as widows, the disabled, and separated women. For example, these programmes provided 30 km rice bags from upazila parishad food store houses under the food controller's office. Meanwhile, MoWCA is implementing the Maternity Allowance Programme for Poor Lactating Mothers, Allowances for Urban Low-Income Lactating Mothers, and Micro-credit for Women Self-employment programmes. These are directly operated by the Upazila Women Affairs office. The Maternity Allowance Programme for the Poor is also implemented by the Upazila Women Affairs office. Allowances for low-income lactating mothers in urban areas provides a very limited safety net operating only in district headquarters or municipality areas.

**Box 4.2**
**Institutional good practice**

Rahima (35 years of age) lives in Char Sindurna, a remote riverine char (island) in Hatibandha Upazila in Lalmonirhat District. Massive crop production has improved the overall economic status of this char. However, the fact that the predominant system of transport and communications is by waterway still presents an important hurdle to local development.

EGPP is implemented here as an SSNP. The programme operates in this region in April and May, which is a lean period, contributing to economic solvency among the poor in a time of limited employment opportunity.

Rahima supervises a work team under this programme. One day the PIO visited, along with a study team, and observed that some of the people were not working. He called the workers together and asked them why. Rahima and the others could not adequately explain. The PIO then cut one day's wages for this ignorance. This type of PIO initiative can engage the workers more certainly with their assigned work, and utilize the SSNP budget to better support their livelihoods during disasters, while developing infrastructure to promote CCA in remote chars.

**4.6.4 CCA programmes.** MoA implements various CCA programmes in line with the National Agriculture Policy (2013), addressing such adverse effects of climate change as threats to crop production, including multiple annual, often long-standing floods; recurrent and prolonged droughts; cyclones; and salinity incursions.

MoA runs programmes and projects under different institutions and agencies, among these the Bangladesh Agricultural Research Council (BARC), the Climate Change Trust, and the Integrated Agricultural Productivity Project (IAPP). In one way or another, all these programmes relate to issues of climate change and DRR. For instance, the BARC-implemented Adaptation to Climate Change and Rehabilitation of Livelihoods in South Bangladesh project addresses the effects of climate change in coastal areas. The Bangladesh Climatic Change Trust Fund (BCCTF) is implementing four such priority projects:

- Innovation of sustainable crop management system for drought- and salinity-prone areas in view of preventing the effects of climate change.
- Selection of the cultivation process of the mutant varieties of crops that are high-temperature and salinity tolerant.
- Production, processing and distribution of such stress-resistant crops as rice, wheat, lentil and oilseed.
- Technology extension in the production of vegetables and spices in flooded areas as an adaptive strategy to climate change.

**4.6.5 SP-complementary projects.** In line with the National Agriculture Policy, each of the above MoA projects promotes crop sustainability, thereby contributing to resistance and adaptation to the impacts of climate change, including food shortages in drought and salinity-prone areas.

Other projects also play significant roles in addressing CCA issues in line with National Agriculture Extension Policy (Draft) 2015. While these projects are not described as SP per se, they do complement food and agriculture-related SP programmes, increasing food availability in disaster-prone areas through increased production. The National Agriculture Policy mandates projects that promote long-term sustainable agriculture in the context

of environmental challenges. The main focus of the Department of Agricultural Extension (DAE), meanwhile, is developing the agricultural sector by diversifying working areas. Its primary efforts include the following: agricultural advice extension; suggestions for drought management; HYV rice cultivation; integrated pest management (IPM); plot boundary management; training and awareness programmes; and tree plantation. All these programmes help promote CCA strategy.

**4.6.6. SP support for CCA/DRR even without explicit policy statements.** MoF is running the Constructing a Modern Food Preserver programme from January 2014 to June 2020. It can play an important DRR role during disasters by providing affected populations with access to food. Effective project implementation would prove especially beneficial during crisis periods.

No SP project or programme under this ministry explicitly recognizes any SP issue for CCA and DRR. Nevertheless, with food shortages a clear outcome of both disasters and climate change, the existing project is in fact addressing DRR and CCA issues.

**4.6.7 MoEFCC.** It is the focal ministry for all international negotiations related to climate change. Importantly, it negotiates international assistance for the Government of Bangladesh in addressing CCA and DRR issues. It is also responsible for planning and implementing all activities regarding environmental protection and management. It executes important policies and strategies, such as NAPA and BCCSAP, including the administration of immediate, short-, medium- and long-term programmes at the field level. MoEF implements several projects that address CCA and DRR issues, including poverty reduction through social forestation; conservation of biodiversity and development of eco-tourism; and climate-resilient participatory afforestation and reforestation. These projects are not included in the SP stream, but are of great significance in protecting forest resources, which represents an effective tool in reducing adverse effects of climate change as well as disaster-related loss and suffering.

## 4.7 Summary and observations

**4.7.1 Making increased government SP spending more effective.** Through a large number of its ministries and agencies, the Government has increased spending on SP programmes. But a better targeting mechanism is needed to increase both the extent of coverage and the level of benefits to underprivileged people. Ministries need to foster coordination by integrating programmes and improving delivery mechanisms.

For its part, meanwhile, MoDMR serves as the pivotal ASP-implementing organization. Reports from disaster-prone areas clearly suggest that MoDMR-administered SP programmes can minimize disaster risks among the marginalized. However, the beneficiaries themselves suggested the need to increase both the number of SP programmes and the quality of project delivery, with a view to achieving more effective results from government spending.

Observations from the field also included the following:

- MoDMR implements GR, VGF, TR, FFW and EGPP. GR presents a quick SP response system for disaster management. What is needed now is quicker assessment of vulnerability to losses and concomitantly improved delivery of disaster relief and rehabilitation.

- Too great a lag was reported between the effects of flooding and the distribution of post-flood relief and rehabilitation assistance. One factor is that the DC is personally responsible for GR allocation and having such a high official play this role delays delivery of GR services to affected people. A devolution of power is thus needed for better programme implementation during disasters.

- Under GR, only disaster-affected people get immediate assistance. But these beneficiaries are often also greatly concerned about the welfare of their livestock. This suggests the need for more effective needs-based programme assessments.

- Decentralizing programme implementation to local government institutions could prove effective, since elected UP officials can better assess local needs during times of disaster and are able to more closely monitor the execution of the programme.

- Government-procured solar panels/solar systems, according to the field study, were of poor quality.

- Market prices for rice were lower than the government price, which dis incentivized construction of brick-built roads.[25] This issue also limited the scope of both road and embankment elevation and projects and pond excavation or re-excavation undertakings. Though food insecurity due to disaster is a vital issue, cultural festivals often received greater priority with rice distribution under the VGF programme.

**4.7.2 ASP elements need substantial improvement.** MoWCA programmes include maternity allowances, allowances for poor urban lactating mothers, microcredit for income-generating activities, and VGD. These programmes are either fully or partially adaptive but, as the following field observations suggest, they can be substantially improved as ASP:

- Microcredit for income-generating activities, for example, lacks sufficient human resources to collect due payments from beneficiaries.

- Given that hands-on training is not provided, most training activities are less effective than they might be.

- Neither the coverage nor the size of allowances is enough to address needs during disasters. Additionally, most of the allowances are directed to household needs.

- Some local NGOs provide awareness training on maternal health and nutrition to help mothers ensure proper nutrition for themselves and their infants. Monitoring of such NGO activities is imperative, if maximum returns are to be derived from the programme.

- Net savings at the end of the VGD cycle are insufficient to support income-generating activities.

- With maternity allowances and allowances for lactating mothers, a mechanism is absent that would provide savings for use in times of disaster.

**4.7.3 MoF.** This ministry implements OMS of food grain, which is urban-focused and extends only to upazila headquarters. This programme has yet to reach poor people in rural areas. There is thus a need to strengthen the Public Food Distribution (PFD) system, bearing in mind the demands and requirements of destitute women. For example, elected women representatives can monitor food distribution among destitute and poor women. PFD should also maintain necessary stock, storage and distribution channels for direct supplies of food grains, thereby accommodating implementing authorities when they requisition supplies under the food-based SP programme.

Employment for the Poor and Destitute Women in northern districts was introduced as a women-friendly programme that would ease their access to food.

[25] The Government sets the price of rice at a rate much higher than the market price, and, because it was a food-based construction project, the implementation budget was set accordingly. When the rice was sold in the market for cash, the real budget proved to be much lower than the estimated budget for the project. This effectively disincentivized project implementation.

**4.7.4 MoA.** MoA implements the Integrated Agricultural Productivity Project, which leads to considerable overlapping among targeted beneficiaries. A database of farmers by union agricultural block would help address this problem. Despite opportunities for agricultural education, training and research at home and abroad, a lack of equal opportunity means that women's participation lags behind that of men, both in terms of quality and quantity. A list of women farmers by union agricultural block, and the issuance of women's farmer cards, need to be issued as well so that the effects of disasters and climate change can be better addressed.

# 5. Budget and expenditure analysis

## 5.1 Background

**5.1.1 Budgetary/expenditure considerations in reforming ASP.** This analysis helps provide avenues for expanding the scope of ASP in Bangladesh, and for adopting necessary reform measures with or without budgetary implications.

Any reform in favour of ASP requires an understanding of budgets and expenditures. This is key to sensitizing ASPs regarding the current and emerging needs of disaster and climate-change victims. The present analysis clarifies the policy directives of important documents such as the 7FYP, CEPIR, and the Climate Change Resilience and Trust Fund in the following ways: (1) identification of ASP programmes by category, (2) analysis of allocation/expenditure types and trends by category of adaptation, and (3) classification of allocations by their implementing organizations.

**5.1.2 7FYP recommendations and projects.** The 7FYP indicates that, even though CCA processes involve a wide variety of organizations and institutions, currently no specific organization or institution is charged with coordinating financial performance among this array of entities. CCA financing and expenditure under the 7FYP refers to the following CFF recommendations: (1) to increase the allocation of funds to BCCTF; and, to avoid project duplication(2) to merge BCCTF and BCCRF. The 7FYP shows that the Government has developed NAPA, and set aside a budgetary allocation of US$89.2 million[26] for climate-change purposes.

The Government, with UNDP involvement, has been implementing NAPA as a top priority. Strongly community oriented, this project has successfully promoted agricultural adaptation in coastal zones through community-level activities related to horticulture, livestock and forestry.

**5.1.3 Mainstreaming climate change within planning, programming and budgetary processes.** The Government has undertaken a strategy that safeguards its current spending on projects under the Annual Development Programme (ADP) from climate-induced hazards while using such development practices to ensure adaptation co-benefits. The GED reveals that, on average, about 6 to 7 percent of all development and non-development expenditure, equivalent to US$1 billion annually, has been spent in climate-sensitive activities (CPEIR, 2012). UNDP provided assistance to the Government to mainstream CCA,and DRR in promoting poverty alleviation and gender sensitivity in all ADP projects.

[26] Exchange rate was US$1 = Tk.78.47 in 2016–17.

But considerable work remains to mainstream climate change into planning, programming and the budgetary process. In part, ASP development and financing has to address these core questions: (1) the extent to which SP, DRR and CCA approaches are being integrated within programmes and projects; and (2) where integration is occurring, in what ways such programmes and projects are intended to promote resilience among the poorest and most vulnerable.

**5.1.4 Funding for BCCTF and BCCRF.** The Government has established the BCCTF with support from domestic resources, and BCCRF with support from development partners. Sixty percent of BCCTF resources was directed to more than 200 projects, including the following: (1) food security; (2) SP and health; (3) disaster management; (4) infrastructure; (5) knowledge management; (6) climate-change mitigation; and (7) capacity building and institutional strengthening. The Government and its bilateral partners jointly set up BCCRF to support BCCSAP implementation, with 10 percent of the fund going toward NGOs conducting small-scale community-based projects to develop adaptive capacity at the local level. BCCRF has allocated US$10 million to fund sub-projects in the Bangladesh's most climate-vulnerable zones.

**5.1.5 Integrating CCA with development processes.** The 7FYP aims for an approach that integrates CCA with development processes. It also proposes establishment of a general culture that supports integrating CCA within all development projects. In this way, adaptation co-benefits can accrue from all development spending. The Government expects to establish a Climate Fiscal Cell in the Finance Division to generate updated reports on climate change-related expenditures and disseminate these to assist policymaking.

**5.1.6 MoF roles in ASP.** CEPIR strongly suggests that MoF should play a key role in identifying ASP programmes and projects. MTBF has made a significant contribution to the Government's financial management, which can contribute still more by introducing, in the way it already has with gender and poverty tracking, a climate dimension in tracking budget and expenditure.It would help ensure that climate-sensitive activities are recognized within the performance accountability architecture.

## 5.2 Methodology

**5.2.1 Technical framework for analysis.** Based on the definition provided in Chapter 2 (Box 2.1, above), the present analysis provides a technical framework for analysing ASP budget and expenditure.

More specifically, a project is understood to pursue an SP approach where, using SP instruments to achieve its goals, it aims to protect vulnerable people from livelihood risks and/or enhanced the social status and rights of the marginalized.

Similarly, DRR approaches are identified by their aim of preventing or reducing the risk of disasters, and CCA approaches by their aim of assisting people engaged in agricultural-related livelihoods to cope with a changing climate.

Figure 5.1 describes the stages of expenditure analysis.

**Figure 5.1 Stages in budget and expenditure analysis**

| | |
|---|---|
| **Stage 1** | Develop an accounting template for calculating ASP expenditure to help prepare a separate document by the MoF and provide additional information for MTBF. |
| **Stage 2** | Classify all SP programmesas'adaptive' (fully concentrated on CCA and DRR), 'partially adaptive' (some allocation for CCA and DRR components), 'not adaptive' (no CCA and DRR components), or 'non-adaptive'<br><br>Include CCA and DRR components but nevertheless have adverse impacts on adaptation due to institutional failure and lack of coordination, policy contradiction, mal-governance in implementation, low-quality delivery, or insufficient coverage and amount of transfer.<br><br>Provide total spending under these respective heads for the previous three fiscal years (FYs), thus presenting a spending trend compared to their non-adaptive counterparts. |
| **Stage 3** | Present expenditure trends by ministry and division. |
| **Stage 4** | Calculate adaptive and partially adaptive SP spending as proportions of total SP spending, annual development and non-development budget and GDP. |
| **Stage 5** | Calculate the share of domestic resource and donor funding in ASP programmes, along with donor support trends in those programmes. |
| **Stage 6** | Suggest cost implications of ASP programmes for the MTBF period. |

**5.2.2 Sources for analysis.** This analysis is based exclusively on the followingsecondary sources: (1) budget documents from the Government; (2) programme documents and development project proposals; and (3) the iBAS database. SSNP budget data are from the MoF and Planning Commission.

- SSNP documents from FY2011 to FY2017 indicated that 38 of these programmes qualified as ASP, and these were segregated according to the adaptation criteria outlined in Figure 5.1 (as fully adaptive, partially adaptive or non-adaptive).
- The analysis also separated these programmes by source of funding, considering ADP allocations where ASP programmes financed from revenue budgets (e.g.VGD, TR [Cash], TR [Food], FFW-Cash/Food, GR [Food/In-kind], and EGPP. [26]

ADP/RADP documents provided the data for donor-financed programmes. The analysis included four consecutive fiscal years 2013–2014, 2014–2015, 2015–2016 and 2016–2017 (provisional).

[26] The Agricultural Rehabilitation Programme and OMS were not included in the analysis.

## Table 5.1 SP associated with DRR and CCA, 2014–2015 (R), 2015–2016 (R), 2016–2017 (million US$)

| Sl. | Name of programmes/activities/projects | Revised budget | | | | | Budget |
|---|---|---|---|---|---|---|---|
| | | 2011–12 | 2012–13 | 2013–14 | 2014–15 | 2015–16 | 2016–17 |
| **Cash transfer (allowances) programmes and other activities** | | | | | | | |
| 1 | General relief activities | 0.85 | 0.97 | 1.48 | 1.40 | 2.41 | 2.63 |
| 2 | Block allocation for disaster management | 1.59 | 1.57 | 1.66 | 1.66 | 1.63 | 1.60 |
| **Cash transfer (special) programme** | | | | | | | |
| 3 | Agriculture rehabilitation | 6.57 | 6.52 | 8.00 | 8.00 | 8.34 | 9.48 |
| **Food security programmes: social protection** | | | | | | | |
| 4 | Open Market Sales (OMS) | 221.94 | 219.93 | 201.36 | 0.17 | 110.47 | 146.90 |
| 5 | Vulnerable Group Development (VGD) | 98.60 | 107.44 | 107.57 | 114.18 | 126.48 | 147.67 |
| 6 | Vulnerable Group Feeding (VGF) | 171.13 | 150.22 | 175.34 | 181.53 | 186.68 | 187.52 |
| 7 | (a) Test Relief (TR) Food | 135.64 | 157.66 | 165.00 | 98.85 | 87.26 | 161.92 |
| | (b) Test Relief (TR) Cash | 0.00 | 0.00 | 0.00 | 0.00 | 74.56 | 0.00 |
| 8 | Gratuitous Relief (GR) – Food | 34.23 | 32.48 | 35.07 | 36.31 | 37.48 | 41.25 |
| 9 | (a) Food for Work (FFW) | 162.06 | 186.74 | 79.15 | 139.50 | 104.35 | 193.12 |
| | (b) Work for Money (WFM) | 0.00 | 0.00 | 55.15 | 21.62 | 76.39 | 0.00 |
| 10 | Employment Generation Programme for the Poorest | 126.25 | 0.00 | 180.13 | 193.11 | 191.65 | 208.51 |
| **Miscellaneous funds: social protection** | | | | | | | |
| 11 | Fund for Climate Change | 88.37 | 50.04 | 25.73 | 25.75 | 12.78 | 12.64 |
| **Running development projects** | | | | | | | |
| 12 | Ashroyan-2 Project | 18.31 | 15.02 | 21.23 | 25.75 | 26.83 | 10.11 |
| 13 | Disaster and Climate Resilient | 0.00 | 0.00 | 0.00 | 10.03 | 6.39 | 6.32 |
| 14 | Rehabilitation of Aila Affected Infrastructure | 2.78 | 3.13 | 4.50 | 8.89 | 8.62 | 8.21 |
| 15 | Haor Infrastructure and Livelihood Development | 0.00 | 0.00 | 11.58 | 24.82 | 24.28 | 26.54 |
| 16 | Coastal Climate Resilient Infrastructure Improvement | 0.00 | 0.00 | 6.43 | 17.51 | 26.19 | 36.65 |
| 17 | Rural Employment and Road Maintenance Programme | 16.97 | 32.21 | 12.12 | 31.54 | 29.77 | 13.90 |
| 18 | (a) Emergency 2007 Cyclone Recovery and Restoration | 0.00 | 0.00 | 38.60 | 23.17 | 44.90 | 31.72 |
| | (b) Emergency 2007 Cyclone Recovery and Restoration | 0.00 | 0.00 | 11.48 | 1.99 | 25.55 | 18.42 |
| 19 | (a) Bangladesh Rural Water Supply and Sanitation | 0.00 | 0.00 | 0.00 | 0.00 | 12.39 | 19.90 |
| | (b) Rural Water Supply | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20 | Chars Livelihood Programme | 0.00 | 0.00 | 21.22 | 24.36 | 12.02 | 0.44 |
| 21 | One House One Farm | 56.94 | 67.30 | 72.34 | 75.14 | 61.33 | 39.84 |
| 22 | Integrated Fisheries and Livestock Development in Flood Controlled Areas and Water Bodies | 2.52 | 0.00 | 1.51 | 2.67 | 3.96 | 4.17 |
| 23 | Rural Livelihood (2nd phase) | 0.00 | 0.00 | 3.52 | 3.86 | 4.73 | 5.05 |
| 24 | Initiative for Development, Empowerment, Awareness and Livelihood, Kurigram | 0.00 | 0.00 | 0.00 | 0.00 | 0.51 | 0.63 |
| 25 | Bangladesh Climate Resilient Participatory Afforestation and Reforestation | 0.00 | 0.00 | 4.93 | 9.86 | 12.14 | 9.87 |
| 26 | Char Development and Settlement | 9.11 | 9.03 | 11.11 | 14.34 | 31.25 | 69.45 |
| 27 | "Gucchagram" (Climate Victims' Rehabilitation) | 4.55 | 7.61 | 4.61 | 1.28 | 2.56 | 6.14 |
| 28 | Comprehensive Disaster Management Programme | 5.14 | 8.86 | 10.64 | 19.55 | 4.05 | 0.00 |
| 29 | Reconstruction of Houses of Sidr Affected Landless People | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30 | Community-based adaptation to Climate Change through Coastal Afforestation in Bangladesh | 1.01 | 1.25 | 1.93 | 2.39 | 0.00 | 0.00 |
| 31 | Construction of Flood Shelter in Flood Prone and River Erosion Areas | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| Sl. | Name of programmes/activities/projects | Revised budget | | | | | Budget |
|---|---|---|---|---|---|---|---|
| | | 2011–12 | 2012–13 | 2013–14 | 2014–15 | 2015–16 | 2016–17 |
| 32 | Water Supply and Sanitation Project in Cyclone Prone Sidr Affected Coastal Area | 0.00 | 0.00 | 6.05 | 0.00 | 0.00 | 0.00 |
| 33 | Disaster Risk Mitigation and Reduction | 2.08 | 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| **New development projects** | | | | | | | |
| 34 | Investment Component for Vulnerable Group Development | 0.00 | 0.00 | 0.00 | 0.60 | 1.46 | 2.84 |
| 35 | Multi-purpose Disaster Shelter Construction | 0.00 | 0.00 | 0.00 | 0.68 | 6.38 | 31.72 |
| 36 | Employment of Ultra Poor for Northern Areas | 0.00 | 1.92 | 0.00 | 1.42 | 1.66 | 3.21 |
| 37 | Adaptation to Climate Change and Rehabilitation of Livelihood | 0.00 | 0.00 | 0.00 | 0.00 | 3.21 | 2.24 |
| **Total ASP budget** | | **1,183.55** | **1,078.83** | **1,300.67** | **1,314.95** | **1,398.23** | **1,489.87** |
| **% of SSNP budget** | | **5.39** | **4.67** | **4.88** | **4.29** | **3.89** | **3.29** |
| **Total SSNP budget** | | **2,774.29** | **2,889.51** | **3,429.49** | **3,944.13** | **4,596.35** | **5,715.69** |

Source: Based on Finance Division data (2016).

## 5.3 ASPs based on adaptation criteria

**5.3.1 SNSPs.** None of the SPs under the government budget included, either explicitly or implicitly, CCA and DDR features. The current analysis considers the budget documents of the previous few years mainly to broadly explore programme allocations and executions based on the adaptation criteria set out in Figure 5.1. From a total of 146 SSNPs, the study identified 37 SSNPs that were fully adaptive, partially adaptive or non-adaptive, and that basically came under revenue budget and ADP over the period of analysis. Table 5.2 (below) presents the major adaptive SSNPs according to the various adaptation criteria (see annex 1 for more details).

**5.3.2 Trend analysis.** Allocation for SSNPs in the ASP budget was estimated by selecting SSNPs that implicitly or explicitly met the criterion of serving adaptation. A total of 38 SSNPs were found to be fully, partially or non-adaptive. Following this analysis, some leading programmes were examined in terms of beneficiaries and other stakeholders at the field level. The study also looked at directly donor-funded programmes implemented by local NGOs.

Research established that 11 out of 37 SSNPs were fully adaptive; 23 SSNPs indirectly or partially adaptive that included either CCA or DDR components; and 3 SSNPs were non- adaptive due to institutional inadequacy, lack of coordination or policy constraints. To explain this relative share of allocation, the researchers performed a trend analysis for ASPs in comparison with total SSNP budget, ADP allocations and gross domestic product (GDP).

**Table 5.2 Major ASPs by adaptation criteria**

| Project name | Adaptive or otherwise | Why/comments | Objectives/goals |
|---|---|---|---|
| Agricultural Rehabilitation | Partially adaptive | Based on CCA and DRR components but does not strongly address either. | |
| VGD | Partially adaptive | Helps mitigate poverty and vulnerability with special priority regarding 80 disaster-prone and climate-vulnerable upazilas. But scope remains for improvement. | |
| GR – Food | Partially adaptive | Provided during disasters, but not need-based. Differential treatment is required for disaster-prone and climate change-vulnerable areas. | |
| Food/Cash for Work | Non-adaptive | Nearly 50% of the allocation is appropriated by local 'syndicates'; this resource could be better used for CCA and DRR. | |
| EGPP | Partially adaptive | Elevating and widening roads or embankments to help mitigate flooding, storm surges and water logging. Of total wages, 12.5% issaved for future consumption, which helps during disasters or other risk situations. But scope remains for improvement. | |
| Chars Livelihood Programme | Adaptive | Habitat protection from recurrent flooding not only qualifies CLP for CCA but for full integration of social safety net, DRR and CCA. | CLP addresses four components of human well-being: livelihoods (habitat protection), food security, health, and women's empowerment. |
| One House One Farm | Non-adaptive | Microcredit provided, but institutional set up is insufficient to reap benefits in CCA and DRR. | |
| Bangladesh Climate Resilient Participatory Afforestation and Reforestation | Partially adaptive | This project provides climate-change coverage of 28%, environment policy and institution coverage of 25%, and water management coverage of 20%. | |
| Gucchagram (Climate Victims Rehabilitation) | Adaptive | Provides *khas*[27] land for victims of climate change and climate change-related disasters. | |
| Ashrayon-2 Project | Adaptive | This project aims to address both DRR and CCA. | This programme provides for three months of VGF. |

| Project name | Adaptive or otherwise | Why/comments | Objectives/goals |
|---|---|---|---|
| Haor Infrastructure and Livelihood Development | Adaptive | It addresses both DRR and CCA in haor and depression areas. | Its main target is flood-affected people during the monsoon period and its primary goal is helping to reduce poverty, while reducing vulnerability to flooding. It helps develop village markets and other community infrastructure, as well as to protect houses from land erosion. |
| Emergency 2007 Cyclone Recovery and Restoration | Adaptive | It addresses both DRR and CCA in Aila-affected areas. | It focuses on long-term restoration and rehabilitation needs, and on improvements tothe agriculture sector and livestock services. |
| Rural Livelihood (2nd phase) | Partially adaptive | Addresses DRR only; assists in income-generating activities to some extent. | |
| Initiative for Development, Empowerment, Awareness and Livelihood, Kurigram | Partially adaptive | It addresses both CCA and, indirectly, DRR in disaster-affected parts of Kurigram. | Its primary goal is to reduce poverty through livelihoods, awareness building, asset transfers and market linkages. |
| Community Based Adaptation to Climate Change through Coastal Afforestation in Bangladesh | Adaptive | Rational use of coastal land to plant trees and cultivate fisheries. It addresses both DRR andCCA. | Forest, fish, fruit (3F) model. MoEF received Earth Care Award in 2012 for this programme. |
| Construction of flood shelters in flood-prone and river erosion areas | Partially adaptive | This needs-based programme is running in 43 cyclone- and flood-prone districts. It directly addresses both DRR and, indirectly, CCA. | |

| Project name | Adaptive or otherwise | Why/comments | Objectives/goals |
|---|---|---|---|
| Adaptation to Climate Change and Rehabilitation of Livelihood | Adaptive | It explicitly addresses both DRR and CCA. The programme takes both medium and long-term approaches to adaptation. | It promotes adaptive technologies, while supporting such activities as development of salt-tolerant crop varieties, livestock rearing, and rural women engaged in homestead gardening. It promotes farming techniques to adapt to climate change, whileraising awareness among households, communities, and schools of the need for preparedness in the face of climate change. |

**5.3.3 Positive trends.** Figure 5.2 (below) compares, for the previous eight FYs, the budget share of fully ASP programmes out of the total SSNP budget to their partially adaptive and Non-adaptive counterparts.

Interestingly, the volume of fully adaptive ASPs increased except for FY2012/13. The percentage share of Non-adaptive SSNPs, meanwhile, fell at a faster pace than had that of partially adaptive programmes. These trends suggested better budgetary allocations as well as positive changes in institutional practices among the relevant implementing ministries and other agencies.

**Figure 5.2 SP budget by adaptation status (% of total SSNP budget)**

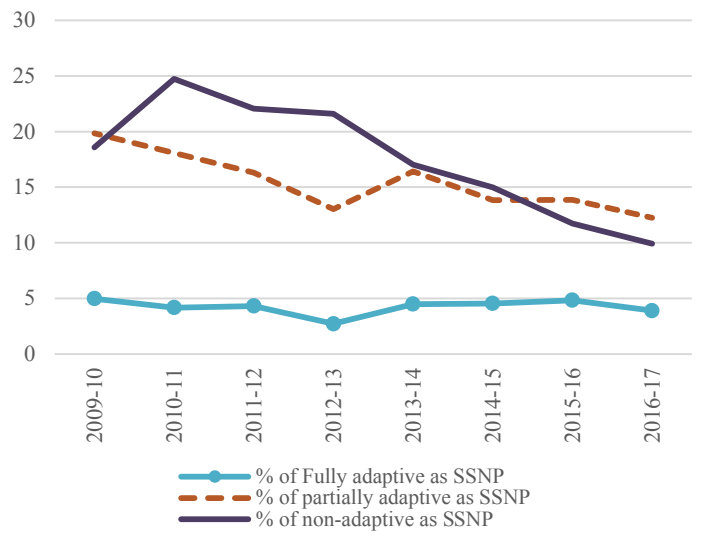
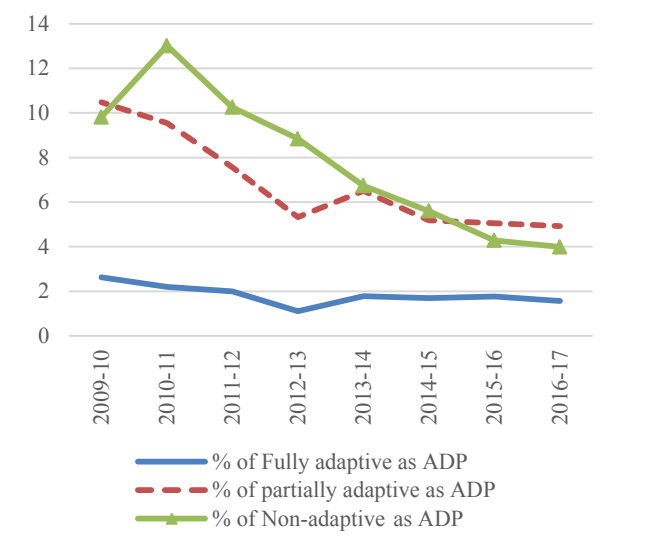



**Figure 5.3 Share of ASP in ADP (%)**




**5.3.4 Share of budget in Non-adaptive SP declined.** The share of public spending on fully and partially ASP programmes in total SSNP budget declined over the years, while allocation in non-adaptive programmes remained fairly stable. Since the total budget allocated for SP has increased significantly over time, it implies that the share of budget in non-adaptive SP has declined. Figure 5.3 presents, for the last eight FYs, the percentage share of fully adaptive SSNPs in ADP allocation, compared to its partially adaptive and non-adaptive counterparts. After FY2014/15, the percentage share of non-adaptive programmes fell below that of the partially adaptive programmes. Before that, the partially adaptive programmes sharply decreased to below the non-adaptive line. Fully adaptive ASP programmes ranged around 2 percent of total ADP allocation over the previous eight years.

**5.3.5 Share of budget in fully adaptive SP trend upwards.** The percentage share of non-adaptive SP programmes in total SP fell faster than that of the fully and partially adaptive programmes. Figure 5.4 shows the percentage share of the fully adaptive programmes compared to partially adaptive and non-adaptive counterparts in GDP for the last eight FYs. Institutional non-adaptive practices regarding implementation of the different programmes fell within the given time periods. The percentage share of fully adaptive SP programmes showed an increasing trend except in FY 2012/13 and FY 2015/16.

**Figure 5.4 Share of ASP in GDP (%)**

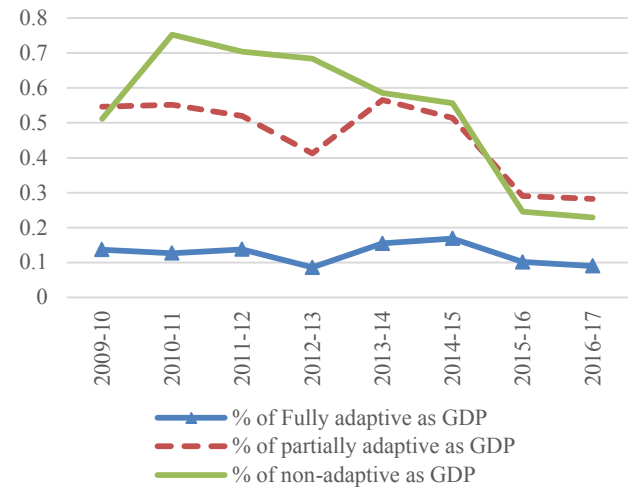
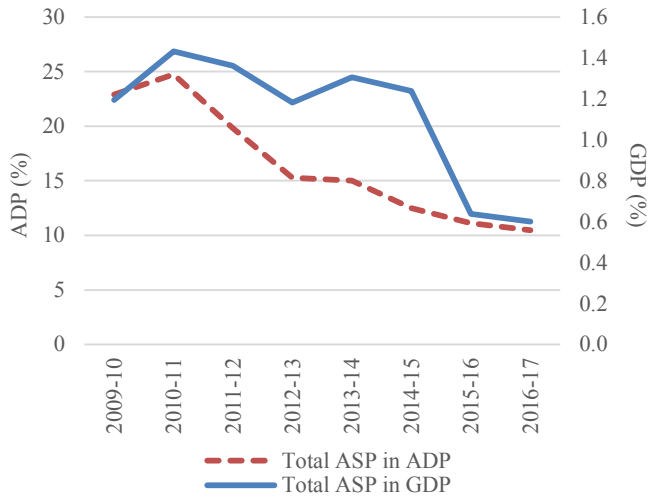



**Figure 5.5 Share of ASP in GDP and ADP budget (%)**




**5.3.6 Percentage share of ASP in ADP declined over time.** Figure 5.4 shows the percentage share of ASP in GDP and ADP for the previous eight FYs. The percentage share of ASP in GDP fluctuated. The significant rise in total volume of GDP and ADP compared to the volume of ASP might have been the reason behind this gradual decline.

## 5.4 ASP budget by source of financing

Because the SP programmes were sourced from either revenue budget or ADP allocations, some of the SP programmes under general, cash transfers, food security and empowerment programmes were funded from the revenue budget, for example Agricultural Rehabilitation, TR, VGD, VGF, FFW, EGPP and OMS. On the other hand, most SP programmes under running development were fully financed by donors, some were fully financed by the Government, and others were financed by the Government in collaboration with donor agencies. The study mapped 26 ASPs that were financed under ADP allocations. The following table shows the top ASPs under ADP allocation segregated according to government and external resources.

**Table 5.3 Top 10 ASP programmes by source of funding (in million US$)**

| Programme/project | 2013–14 | | 2014–15 | | 2015–16 | | 2016–17 | |
|---|---|---|---|---|---|---|---|---|
| | Govt. fund | Project aid | Govt. fund | Project aid | Govt. fund | Proj-ect aid | Govt. fund | Proj-ect aid |
| One House One Farm | 72.34 | 0.00 | 75.14 | 0.00 | 61.33 | 0.00 | 39.84 | 0.00 |
| Emergency 2007 Cyclone Recovery and Restoration | 0.17 | 49.47 | 0.09 | 50.09 | 1.22 | 72.81 | 0.31 | 50.72 |
| Coastal Climate Resilient Infrastructure Improvement | 1.29 | 5.15 | 3.73 | 13.78 | 26.19 | 0.00 | 4.42 | 32.22 |
| Rural Employment and Road Maintenance | 5.08 | 7.04 | 20.60 | 9.66 | 22.10 | 7.67 | 0.00 | 13.90 |
| Haor Infrastructure and Livelihood Development | 3.09 | 8.49 | 5.15 | 17.25 | 4.47 | 19.80 | 4.42 | 22.11 |
| Ashroyan-2 Project | 21.23 | 0.00 | 19.31 | 0.00 | 26.83 | 0.00 | 10.11 | 0.00 |
| Char Development and Settlement | 1.82 | 9.28 | 2.36 | 11.99 | 2.59 | 12.28 | 0.00 | 17.79 |
| Chars Livelihood Programme | 0.61 | 20.61 | 0.64 | 23.71 | 0.52 | 11.50 | 0.44 | 0.00 |
| Bangladesh Rural Water Supply and Sanitation | 0.48 | 2.57 | 0.39 | 6.44 | 0.38 | 12.01 | 0.00 | 19.90 |
| Disaster and Climate Resilient | 12.87 | 5.22 | 9.66 | 0.38 | 6.39 | 0.00 | 6.32 | 0.00 |
| Multi-purpose Disaster Shelter Construction | 0.00 | 0.00 | 0.04 | 0.64 | 0.05 | 6.08 | 0.13 | 31.59 |
| Bangladesh Climate Resilient Participatory Afforestation and Reforestation | 0.00 | 4.93 | 0.00 | 9.86 | 0.00 | 12.14 | 0.00 | 9.87 |

Source: ADP (various years).

**5.4.1 Mixed trends in ASP funding sources.** My House My Farm is a solely government-funded programme; it is not non-adaptive. On the other hand, the Bangladesh Climate Resilient Participatory Afforestation and Reforestation programme is both fully donor funded (UNDP) and fully adaptive in nature. The Haor Infrastructure and Livelihood Development and Char Development and Settlement programmes, collaboratively financed by the Government and donors, is fully implemented by government agencies. The latter two programmes are fully adaptive in terms of objectives and implementation. The Ashroyan-2 project, under ADP allocation, is fully funded by the Government and operated under the Prime Minister's Office. This project is also fully adaptive.

**5.4.2 Share of donor-funded ASP in total budget.** Compared to the previous two years, the share of donor-funded ASP in total budget significantly increased in the provisional budget for FY2016/17, when it nearly equalled the government-funded ASP. Figure 5.5 shows ASP budgets financed from ADP allocation under SSNPs by funding sources(i.e. government funds and project aid from donors) for four consecutive fiscal years, where the FY2016/17 was proposed budget. The jointly government- and donor-funded projects remained similar over the previous three consecutive years, but when it came to the last budget year, external project funding began to rise.

**5.4.3 Fully adaptive, partially adaptive or non-adaptive.** Both government- and donor-funded ASP programmes under ADP allocations included fully adaptive, partially adaptive and non-adaptive components. Total allocation for 26 SSNPs was ADP financed, and these programmes were adaptive in terms of the earlier definitions of adaptation. The analysis divides the total allocation for these 26 SSNPs according to funding source (government or donors). Then these ASP programmes from ADP allocations are categorized according to whether they were fully adaptive, partially adaptive or non-adaptive.

**Figure 5.6 ASPs under ADP allocations by funding sources (%)**

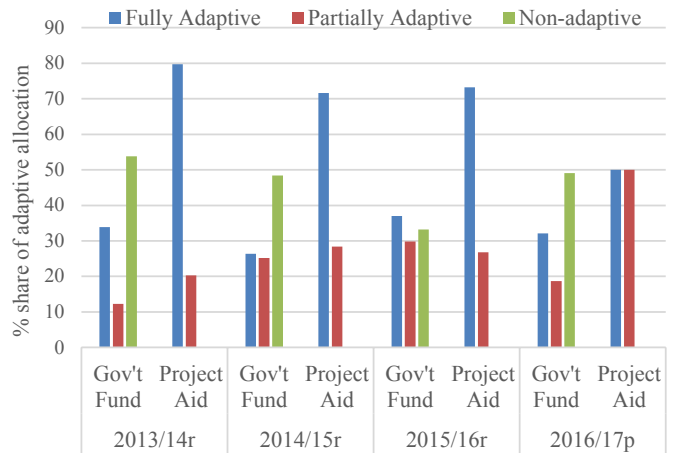
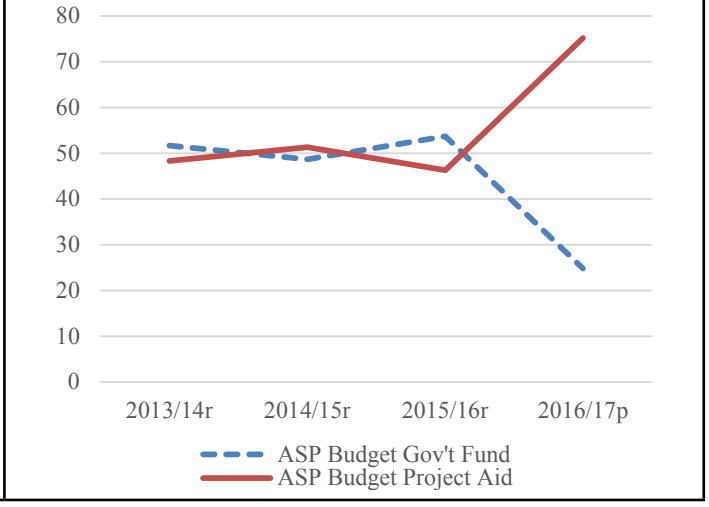



**Figure 5.7 Adaptive or partial adaptive allocation and funding sources (%)**



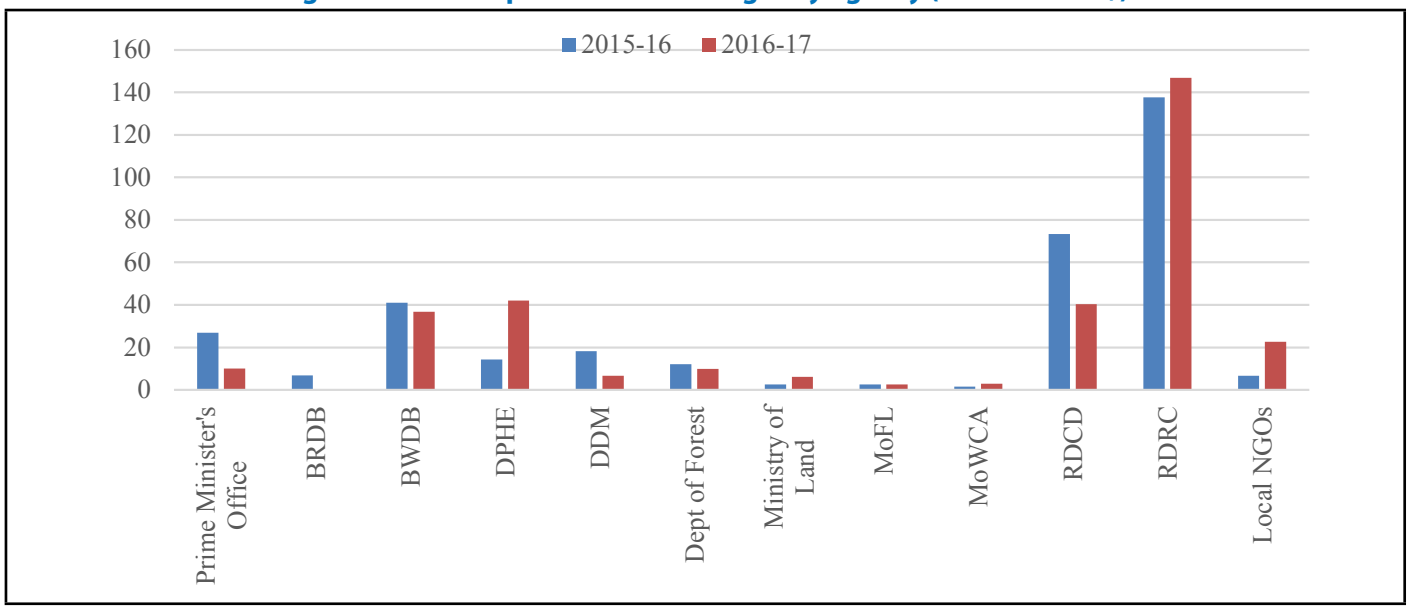

Note: r = revised and p = provisional.]

**5.4.4 Adaptive status, government vs externally funded programmes.** Government funded programmes received relatively less allocations for fully adaptive programmes than did externally funded programmes. In FY2013/14, the Government made only a 32 percent allocation for fully adaptive programmes, whereas foreign-aided projects received 80 percent allocation for fully adaptive programmes (Figure 5.6).

Both government investment and foreign aid for partially adaptive programmes rose. While government-funded programmes included non-adaptive elements, the foreign aid-allocated programmes did not.

The Rural Development and Cooperatives Division (RDCD), the Rural Development and Rural Cooperation (RDRC), and the Bangladesh Water Development Board (BWDB) were the major government agencies implementing ASP programmes. Figure 5.7 shows the major government agencies provided with allocations for ASP programmes under ADP allocations (both governmentand donor funded). The Prime Minister's Office only directly implemented the Ashroyan-2 project. However, RDCD allocations were decreasing, whereas RDRC allocations were increasing. In addition, DPHE allocation increased faster than less generously funded ASP agencies. The Department of Forest also received a significant portion of the adaptive allocation.

**Figure 5.8 ASP implementation budget by agency (in million US$)**




## 5.5 Key observations

- The present analysis took into account 41 SSNPs that met the criteria of the ASP definition. The ASP budget allocation was segregated according to the different ministries and sources of funding and considered only those 24 SSNPs financed from ADP allocations. The MTBF included no climate dimension for tracking budgets and expenditure.

- The percentage share of ASP in Bangladesh's GDP was most adjacent to the horizontal axis in Figure 5.4. Meanwhile, the percentage share of ASP in ADP was declining.

- Eleven of 38 SSNPs were fully adaptive, and 23 SSNPs included either CCA or DDR components. Four of the 38 SSNPs were non-adaptive. Though BCCSAP (2009) included 37 programmes dedicated to addressing climate-change adaptation and disaster risk reduction, associated action plans were yet to be fully implemented at the field level.

- Interestingly, the volume of fully adaptive programmes increased, except in FY2012/13. The percentage share of non-adaptive safety net programmes fell faster than is that of partially adaptive programmes.

- One hundred percent donor-funded projects/programmes were fully adaptive in nature, but the government-funded programmes were either partially adaptive or non-adaptive. The Government allocated only 32 percent for fully adaptive programmes, where as in FY2013/14 the foreign aid projects allocated 80 percent for fully adaptive programmes.

- The percentage share of non-adaptive SP programmes fell at a faster pace than that of the fully and partially adaptive programmes. Institutional malpractice in terms of programme implementation would thus appear to have been on the decrease.

[28] *Khas* is government-owned fallow land; no one else has property rights to it.

# 6. Gender dimensions of ASP

## 6.1 Women, climate change and disasters

**6.1.1 Gender, climate and environment are interlinked.** Given that men and women have different access to resources and information, different roles in society, different knowledge, and different coping mechanisms, it is unsurprising that environmental and climatic change should affect men and women differently.

- Women in Bangladesh have limited access to resources. This has restricted their rights, limited their socio-economic activities and muted their voice in decision-making. Women are also often constrained by socially constructed roles and responsibilities that restrict their mobility and their access to social networks and information.

- Moreover, women are more vulnerable to health issues than are men. In times of disaster, for example, women's reproductive health can become seriously threatened. Survival during pregnancy, as well as the health of both mother and baby after delivery, presents a range of gender-specific problems.

- In addition, women are heavily involved in agricultural activities, where strong connections with climatic phenomena prevail. Women's extensive agricultural production activities range from raising livestock and poultry, homesteading vegetables, fruits, spices, and forestry for timber and fuel to agricultural field work. They are also heavily involved in storing and processing food grain.

All these factors make women highly vulnerable to such climate impacts as floods, droughts, tidal surges, salinity intrusion and drainage congestion.

**6.1.2 Better theory and data needed.** Gender relations and climate change are linked in complex and dynamic ways. Climate change and disasters are widely perceived to affect all areas of women's lives adversely, and disproportionately, but the links between this and gender relations have remained obscure for want of better theoretical frameworks and data. Increased climate variability results in more unpredictable agriculture, including frequent droughts and desertification (Terry, 2009). If it leads to food and fuel crises, poor women are exposed to the additional stress of collecting food and fuel for households, which can add to their own issues with malnutrition and loss of welfare.

**6.1.3 Consequences of gender differentiation.** Gender norms and power inequalities curtail women's CCA capability, and gender-based division of labour leaves women with different (and more adverse) levels of exposure to climate risks than those typically faced by men. Gender inequalities spread across issues such as the following:

(1) division of labour; (2) access to and control over resources; and (3) access to knowledge and skills (Rossi and Lambrou, 2008). Gender inequalities manifest themselves in differing roles, resources, rights, knowledge and time to adapt with climate change (Babagura, 2010; Petrie, 2010). Access to and control of livelihood resources (e.g. natural resources and ecosystem services, income, credit, government social protection spending, infrastructure, education, and health facilities) are also gendered. Men and women are likely to have different DRR and CCA social protections due to their gendered nature (Nelson and Stathers, 2009). CCA Women's Environmental Network (WEN, 2010) reveals that poor women are more likely to be negatively affected by climate change because of gendered social roles. Among other things, poor women are more likely to suffer the following adversities:

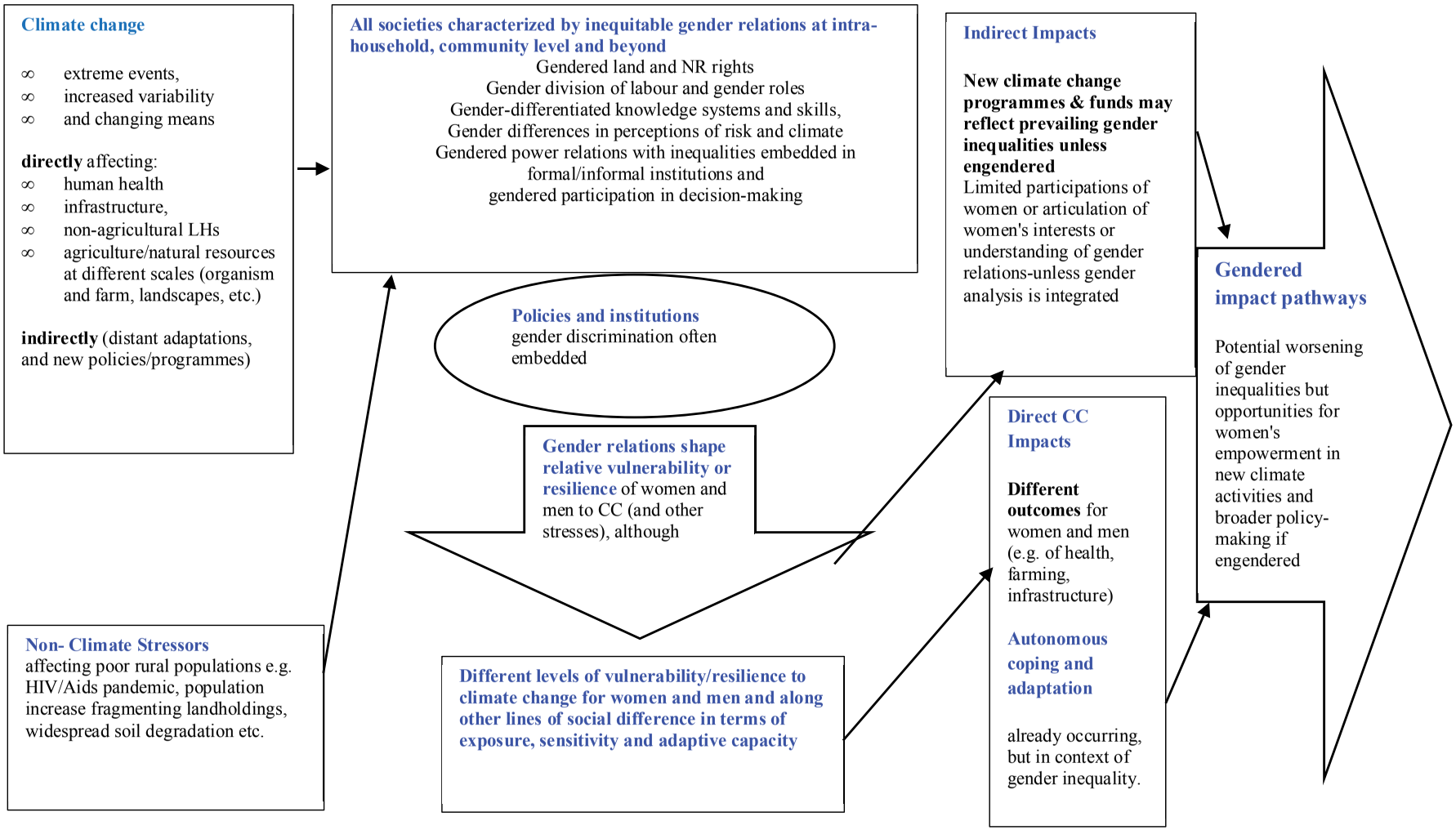
- dying in climate change-related disasters;
- suffering increased workloads, income losses and negative health impacts, including violence and harassment following disaster events;
- displacement or other problems when other (usually male) family members migrate for economic reasons;
- increased burdens of water and fuel collection, and concomitant health problems, due to increased incidence of drought or other changes in climate;
- feeling the effects of rising food prices most acutely, and being the first to suffer during food shortages;
- suffering from exacerbated health inequalities due to biological differences and gender roles;
- suffering from violence, including sexual violence, in conflicts over resources;
- being expected to, and needing to, adapt to the effects of climate change by increasing their workload, on top of their regular domestic responsibilities, reproductive responsibilities and possible roles in such activities as agriculture, petty trading, and marketing; and
- suffering from the results of responses to climate change (WEN, 2010).

*Increased burden of water collection on women in CHT due to climate change*

**6.1.4 Gender inequalities linked to mortality rates.** A strong correlation is apparent between gender inequalities and women's survival rate in natural disasters, such as cyclones, droughts and floods. Women are up to 14 times more likely than men to die as a result of natural disasters (WHO, 2003; Neumayer and Plumper, 2007). Neumayer and Plumper's analyses of a sample of up to 141 countries between 1981 and 2002 indicated that disasters had greater

impacts on female life expectancy than on male lifespans. They show that women died more often where they were socio-economically disadvantaged. A systematic gender-gap effect is plausible, given that disasters exacerbate existing patterns of discrimination (Arora-Jonsson, 2011). The extra time spent collecting water in drought-affected areas also adversely affects the health and education of young girls.

## Figure 6.1 Gender and climate change




Source: Nelson (2011).

**6.1.5 Gender and poverty as important factors behind vulnerability.** Women, especially from poorer groups, are thought to be the most vulnerable, to have the lowest asset base and the least capacity to adapt to shocks (Ahmad, 2012). Three major factors account for the gender-based differentiated exposure and vulnerability to climate-change risks:

- Differences in time use, access to assets and credit and treatment by markets and formal institutions curtail women's opportunities. The cumulative effects of poverty and social, economic and political barriers leave women even more disadvantaged in coping with adverse impacts of climate change.

- Women encounter considerable challenges in influencing policy and other decision-making processes. This makes them less capable of having their problems addressed in policies, programmes and decisions regarding climate change.

- Socio-cultural settings restrain women from accessing information and skills to escape or avoid hazards. For instance, women's dress codes often restrict their mobility, as can their responsibility for small children who cannot swim or run during a disaster (GGCA and UNDP, 2013). Figure 6.1 (above) outlines the effects of climate change and gender inequalities on gendered outcomes and reinforcement of discrimination and disadvantage.

**6.1.6 Promoting women's special capabilities and participation in ASP.** This chapter underscores the fact that gender inequality intersects with climate risks and vulnerabilities related to SP. As well as focusing on women's vulnerability to climate change, it suggests that women should play an important role in providing support to households and communities in mitigating and adapting to climate change. For one thing, a significant gender difference prevails in the knowledge, use, and conservation of natural resources. For centuries, women have passed on their skills in kitchen gardening, food preservation, seed management, water management, forest management, the management of biodiversity and many more. This traditional role has much to contribute to the identification of appropriate adaptation and mitigation techniques, if only women are given the opportunity to use it.

This chapter assesses ASPs in terms of their sensitivity to gendered aspects of climate change.

## 6.2 Climate change, disasters and women in Bangladesh

*Women play an important role in conservation of natural resources*

**6.2.1 Disadvantaged women especially vulnerable.** Poor, under-nourished and sick women, given their reduced capacity to cope with the effects of hazards, tend to be more vulnerable to the consequences of disasters and climate change.

For example, climate change and variability adversely affect reproductive health among many women (Alber, 2009). Poor women in particular tend to be calorie-deficient, and they receive less and poorer quality health care than their male counterparts, rendering them relatively less capable of coping with disasters.

**6.2.2 Poor women often lack basic requirements for self-protection.** The ability of women to create safe conditions during threats of imminent flooding or cyclone is reduced in poor female-headed households, given that they lack the basic requirements for self-protection, among these quality housing located on high ground and adequate storage for food. Poor women are often further handicapped by responsibilities for looking after homes and household assets during cyclones or flooding, an additional burden that leaves them personally even more vulnerable. An estimated 90 percent of the casualties of the devastating 1991 cyclone, for example, were women and children (Cannon, 2002).

**6.2.3 Complex interactions between poverty, gender relations and increasing climatic adversity.** It is difficult to say exactly in what ways and to what extent increasing natural hazards will affect women, but it can be concluded they will likely affect women disproportionately.

Erratic rainfall, recurrent and prolonged droughts and floods, devastating annual cyclones, and increased salinity incursions in coastal areas are among recent phenomena probably associated with climate change. Such events are likely to increase in frequency, intensity, duration and extent. And women are more likely to be increasingly affected in terms of their ability to resist and recovery from such impacts. Vulnerability to single and multiple hazards involves complex interactions between poverty (both income and multidimensional) and gender relations, where women tend to experience higher vulnerability than their male counterparts.

**6.2.4 Extra burdens related to flooding.** Floods increase burdens on women in managing households. Not only do they suffer the loss of household assets and living essentials but, given their typical dependence on economic activities linked to their households, their overall well-being decreases.

It becomes more difficult for Bangladeshi women to restore their livelihoods after a flood (Khondker, 1996). Following crop and livestock losses, many poor and low-income women find it difficult to restore their cash income from food processing or raising cattle and chickens (Baden et al., 1994). Meanwhile floods often contaminate the usual sources of drinking water, and women then have to expend additional time and energy fetching water from more remote locations. In addition, water-borne diseases spread more widely among nutritionally disadvantaged women. At the same time, they are exposed to increased mental stress beyond the prevailing social constraints (Rashid and Michaud, 2000).

**6.2.5 Fewer coping and recovery resources, greater burdens, more exposure to violence.** Gender inequalities make women more vulnerable before, during and after climate-induced disasters (Islam, 2009). One reason that women are more vulnerable to natural disasters than are men is that they tend to have fewer resources to cope with and recover from disasters. They often lack appropriate training, are often physically weaker and, for cultural reasons, have to wear inappropriate clothes. Pregnant and nursing women and those with small children are particularly vulnerable (Cannon, 2008).

Post-disaster mortality, injury and ailment rates are higher among women and girls than among their male counterparts. In part this is because of the following factors: (1) they have lesser access to post-disaster relief and recovery assistance; (2) they have to shoulder household workloads in addition to their labour in paid workplaces; and (3) they suffer from increased violence. Destitute, low-income and economically insecure women generally experience the most severe impacts of disasters (Nelson, 2011).

**6.2.6 Budget and SP gender issues.** This study approaches a gender analysis by examining budgets for SP programmes as they are segregated according to male or female, and seeing how they might in fact perpetuate differential access to resources.

Among other things, the present analysis examines whether the gender budget report includes a gender-focused SP projection. Women are heavily involved in agriculture, and these sectors are strongly linked to climate issues. Thus, the lens of gender analysis was in part focused on agricultural SP programmes. Increases in salinity, for example, have direct effects on agriculture and people, especially on women involved in either homestead forestry (collecting timber and fuel) or agricultural field work. In this light, the study asks whether agricultural SPs address this situation. According to Bangladesh Disaster-related Statistics 2015, about 4.36 million households were affected by disaster between 2009 and 2014 (Ahmed, 2015). Most of these people (34.48 percent) were affected by flooding. Another 21.31 percent of these people were directly affected by cyclones. A total of 20.2 million people were affected by disasters during that period, 52 percent of whom were males and 48 percent of whom were females. Available statistics suggest that the intensity of flooding and cyclones has increased in recent years. They also point to the necessity of introducing gender-balanced budgetary SP allocations, except with programmes that target women specifically.

**6.2.7 Findings and recommendations arising from the study's gender analysis.**

- The gender analysis examines the management of nutrition under SSNPs in the aftermath of natural disasters.
- The study intends to assess whether ASP might help to transform prevailing views of women's roles and responsibilities. Women's culturally and socially determined roles restrict women's mobility and access to social networks and information, a situation that worsens in times of disaster. SP services can accelerate the process of transforming SP into ASP by revising the prevailing view of women, seeing them instead as the natural guardians of their family's health, and by drawing other family members, particularly husbands, into their orbit.
- Women possess valuable knowledge about such essential matters as kitchen gardening, food preservation, seed management, water management, forest management, and the management of biodiversity. This study looks at whether VGD training programmes and maternity allowances links women's special expertise with appropriate climate-change adaptation and mitigation strategies.
- The study also projects budget allocations and beneficiaries for women-centric SP programmes (see chapter 7, below).

## 6.3 Women-oriented SP to foster DRR and CCA

**6.3.1 VGD activities with a focus on women.** Major SP programmes, such as VGD, EGPP and FFW/Cash for Work help women cope with climate shocks, and they are essential for promoting employment and reducing poverty among underprivileged women in rural Bangladesh.

VGD beneficiaries can be climate-proofed by promoting income generation to enhance their resilience or adaptive capacity.

Focus group discussions (FGDs), key informant interviews (KII) and stakeholder consultations at national and local levels suggest that, whether the beneficiaries are affected by climate shocks or not, VGD plays an important role in reducing food insecurity.

It can also reduce disaster risk, where beneficiary persons or households are affected by climate shocks. VGD beneficiaries, for example, can improve their resilience to climate shocks through microfinance activities and savings. Effective monitoring is essential to the success of such activities.

Under EGPP and FFW elevating and widening road or embankment and excavation or re-excavation of ponds are performed. Elevating and widening road or embankment can be helpful in mitigating the flood, storm surge and water logging. Excavation or re-excavation of ponds can be used for harvesting rain water which facilitates safe drinking water and agricultural production in salinity or drought prone areas.

*Women engaged in road construction in Kurigram as part of the SP schemes of LGD*

**6.3.2 Maternity allowances.** These have proved helpful for poor women during disasters, but the allowances remain inadequate to their needs. Maternity allowances are provided for char people through accounts, and withdrawals can be made at the nearest bank branch. Char women can use this money either in time of need in general or in time of disaster. Field data show that, among low-income urban lactating mothers, most of these allowances are used for family needs, which characterizes this programme as 'partially ASP'. Under microcredit programmes for income-generating activities, loans are provided for commercial preparation of biscuits and other snacks, for sewing work, for rearing livestock and for rice husking. Local NGOs are involved in related training for disaster management and income-generating activities.

**6.3.3 One House One Farm.** OHOF, under the Rural Development and Co-operatives Division, implements a generally women-sensitive programme that touches upon the issues of DRR and CCA. Initiated in 2009, it aims to alleviate poverty through e-financial measures (i.e. funds mobilization) followed by family farming livelihoods and income generation for smallholders and the underprivileged. In 2016, the name of the programme was changed to One House One Farm and Palli Sanchay Bank (Rural Savings Bank).

The two most important programme activities in which women are directly involved are poultry and cattle farming. Climate-change factors affect these two sectors directly. However, this programme is insufficiently sensitive towards mitigating the risk for women in those sectors. Moreover, this programme is supposed to provide training for women under this programme, but in fact the programme does not facilitate any training programme for beneficiaries. OHOF programme objectives initially included the following: (1) establish 81,000 cooperatives involving all small

and marginal farm families by 2016; (2) ensure optimum sustainable use of local human and natural resources by 2018; (3) provide an incentive of Tk.200 (US$2.5) per month to each small-holder by 2018; (4) provide a Tk.150,000 (around US$1,900) annual grant to each village cooperative by 2018; (5) provide skill development training to help empower poor farmers, in particular women, by 2016; and (6) ensure OHOF use of absentee-landowner lands by 2021.

This programme, however, should address the linkages between gender issues and climate change with specific allocations. As it stands, women beneficiaries under the programme can save money through the Palli Sanchay Bank. After a year, they receive double the amount of their savings, which should serve as a coping mechanism in time of climatic disaster. In reality, however, this programme again does not provide loans to members, which only promotes ineffective savings rather than productive economic outcomes.

**6.3.4 Test Relief (TR) and Gratuitous Relief (GR).** TR is a nationwide programme aimed at creating employment opportunities for the poor, while transferring income to them during slack seasons and disasters. Programme implementation guidelines stipulate that landless climate- or disaster-affected people should be the beneficiaries. In practice, however, only poor people in general are considered as programme beneficiaries.

Exactly 50 percent of the TR allocation is being provided for solar panels to poor households. In the near future, this initiative could be an important factor in the transformation of TR into an ASP programme. The GR programme, meanwhile, provides short-run food security during catastrophes, and represents one quick mitigation measure for disaster-related shocks. If it addressed gender issues and included hands-on training programme, it could transform itself into an ASP programme.

**6.3.5 Integrated Agricultural Productivity Project.** Running from July 2011 until June 2016, this gender-sensitive CCA project operated across agricultural subsectors. Expected outcomes from the project included the following: (1) increased yield of rice, maize, wheat and oilseeds; (2) increased yield of milk and goat meat; and (3) increased yield of fish. The target group mostly comprised marginal and small farmers in the eight administrative districts of Barisal, Jhalokathi, Patuakhali, Barguna, Rangpur, Kurigram, Nilphamari and Lalmonirhat (about 200,000 crop farmers, 75,000 livestock farmers and 75,000 fishers).

About 25 percent of this number were women farmers (MoA, 2011). The project stipulated that the following should be women: at least 30 percent of the project beneficiaries for dairying, goat rearing and poultry as well as 30 percent of committee members and other decision-making positions in project groups/associations.

**6.3.6 Integrated Agricultural Development Programme for Agro-ecologically Constrained and Economically Depressed Areas.** This programme focuses on specific agro-ecological areas including salt-affected tidal surge areas in the south,[29] and flash-flood and drought-prone areas in the north.[30] The programme aims to enhance productivity in the crop, fisheries and livestock subsectors. Direct project beneficiaries include about 350,000 farmers, especially small and marginal farmers in the more challenging agro-ecological zones.

It was expected that about 25 percent of direct beneficiaries would be women farmers. In addition, other indirect beneficiaries would include farmers who, following demonstration efforts over time, would adopt technologies and practices used by project-supported farmers and rural agricultural workers. Achievement of project objectives was to be measured mainly in terms of actual field-level farm yield increases in crop, livestock and fish production (resulting from use of new varieties, better quality seeds, and improved water management and agronomic practices).

Where women farmers are involved, this programme directly relates to CCA.

[29] Barisal, Patuakhali, Barguna and Jhalakathi districts.

[30] Kurigram, Rangpur, Nilphamari and Lalmonirhat districts.

## 6.4 Ministries/agencies related to women- and girls- sensitive SSNPs

**6.4.1 Social safety net programmes.** For the most part, SSNPs are designed to address food insecurity stemming from shocks, including climate-change shocks. Broadly speaking, these programmes are categorized as SP and social empowerment.

SSNPs prioritize destitute and disaster-affected people, especially women and children. SSNPs designed particularly for distressed women and children include the following: (1) old-age allowances; (2) allowances for widows, deserted wives and distressed women; (3) microcredit for women's self-employment; (4) allowances for working lactating mothers; (5) maternity allowances for ultra-poor and pregnant women; (6) VGD food assistance to vulnerable women; and (7) Creation of Employment for the Ultra-Poor Especially Poor Destitute Women in Identified Disaster Prone Areas programmes.

**6.4.2 MoSW.** Through the Department of Social Services, the Ministry of Social Welfare provides interest-free microcredit for equitable socio-economic development. The Department of Social Services also provides old age allowances and allowances for widows, deserted wives, and distressed women. Upazila Social Services departments distribute allocations to beneficiaries.

**6.4.3 MoWCA.** Irrespective of disasters and climate change, the Ministry of Women and Children Affairs aims to ensure equal opportunity for women in social and economic activities. MoWCA provides technical, vocational and income-generating training, equipment/materials and micro-credit for the self-employment of women through the Department of Women Affairs and Jatiya Mohila Shangstha (JMS). This ministry also implements the following: (1) allowances for working lactating mothers; (2) maternity allowances for the ultra-poor and pregnant women; and (3) food assistance to vulnerable women under VGD programmes. The Department of Women Affairs (DWA) implements the first two of those programmes, and the DWA and the MoWCA Secretariat jointly implement the third.

**6.4.4 MoDMR.** The Ministry of Disaster Management of Relief implements a number of women-focused and gender-sensitive programmes that promote CCA and DRR. The MoDMR Secretariat implements the programme titled Creation of Employment for the Ultra-Poor Especially Poor Destitute Women in Identified Disaster-Prone Areas. Meanwhile, implementation of FFW, TR and EGPP and the distribution of GR Food, GR Cash, saris, lungis, blankets, CI sheets, and house-building grants support both women's development and women's employment to improve their adaptive capacity in face of climate change and to reduce their risk from disasters.

**6.4.5 MoA.** As of this writing, the Ministry of Agriculture was considering the implementation of a new project titled Orienting Agriculture toward Improved Nutrition and Women's Empowerment. This project aimed to increase crop-sector production and productivity. Implementing agencies were to include the Bangladesh Rice Research Institute (BRRI), the Bangladesh Institute of Nuclear Agriculture (BINA), the Bangladesh Agricultural Research Institute (BARI), BARC, the Bangladesh Jute Research Institute (BJRI), the Bangladesh Sugarcane Research Institute (BSRI), and the Cotton Development Board (CDB). Currently the Department of Agricultural Extension (DAE) is implementing the Integrated Agricultural Productivity Project and the Integrated Agricultural Development Programme for Agro-ecologically Constrained and Economically Depressed Areas. Each of them stated that about 25 percent of beneficiaries had to be women farmers, and they allocated agricultural development expenditures for agro-forestry, flood protection, high-yield varieties of food grain, and char development. Their activities also included spending on overall infrastructure development, including roads and highways, electrification (solar panels), and modern, CCA-oriented agricultural methods:

- elevating and widening roads or embankments, which can be helpful in mitigating floods, storm-surges and water-logging; and

- excavation or re-excavation of ponds, which can be used for harvesting rainwater for safe drinking water and agricultural production in salinity- or drought-prone areas.

EGPP and FFW also provide support for these activities.

## 6.5 Assessment of selected programmes from the gender perspective

**6.5.1 EGPP.** Given that a significant number of women qualify as beneficiaries, SP programmes, such as EGPP are generally viewed as women friendly.

EGPP aims to create jobs for the poor, one third of whom are women, during slack periods. Its implementation guidelines specify that the priority programme areas include 80 disaster- and climate change-affected upazilas, including coastal, char and haor, as well as flood- and drought-affected areas.

Only one person from a family, whether male or female, can join this programme, so it may be described as only partly 'gender-sensitive', since it does not prioritize females when recruiting members. Given that women comprise half of the total population, and that they are generally more seriously affected by disasters and climate change, the proportion of women members should be relatively higher. The gender-orientation analysis also concludes that this programme needs to consider whether the nature of the work available to women is appropriate for their often relatively less robust physical capacity.

In any case, the programme may in general be described as gender-sensitive ASP.

**6.5.2 Food/Cash for Work.** A gender-sensitive programme for the poor, FFW/CFW activities construct or reconstruct rural infrastructure, excavating canals to combat water-logging or to serve irrigation, and sets up solar panel and biogas plants. Those eligible for the programme include individuals who own no more than 50 decimals of land,[31] landless people, and those affected by natural disasters, including river erosion.

FFW/CFW qualifies as gender-sensitive because of its general policy of prioritizing female-headed households.

**6.5.3 TR and GR.** These gender-blind SP programmes are executed during disasters and slack employment periods. TR is similar to FFW in terms of beneficiary selection and nature of work involved. However, it does not favour women in looking for work opportunities. Including women as mandatory beneficiaries would make it more gender-sensitive, especially in disaster- and climate change-affected zones.

The DDM of MoDMR executes the programme. Its intended beneficiaries include individuals and organizations affected by disasters as well as poor and insolvent disaster-affected people or households. The programme extends no preferential treatment to women affected by such disasters as cyclones, droughts, floods, or river erosion.

**6.5.4 VGD.** Run by MoWCA, this is the world's biggest women-focused food support programme. Eligible women are expected to satisfy the following criteria: (1) belong to a household with no more than 0.15 acres of land; (2) belong to a household where the monthly income is less than Tk.300 (US$3.8); (3) lack productive assets; (4) be dependent upon seasonal wage employment; and (5) be of reproductive age (18–49 years). Implementation guidelines specify the following priority programme areas: 80 disaster- and climate-change affected upazilas, including coastal, char and haor, as well as flood and drought-affected areas.

[31] A decimal is a unit of land equal to about 1/100 acre (40.46 $m^2$).

## 6.6 Trends and share of gender-sensitive ASPS in SSNP budget

**6.6.1 Gender-disaggregated SSPN budgets.** A different method is used with each of the different SSPN types in setting women's budget allocations in selected SSNP programmes thought to qualify as ASP.

With ASP programmes in general, for example the General Relief Activities and Block Allocation for Disaster Management, the allocation is divided equally among males and females. The rationale for dividing allocations equally is that general safety net programmes target vulnerable groups affected by various disasters. Cash transfer special programmes, such as Agriculture Rehabilitation, where small and marginal farmers affected by natural disaster are selected for the programmes irrespective of gender. SP food security programmes include seven considered to be ASP. Generally, the OMS programme targets a location according to whether it is labour-intensive and lies in a disaster-prone/climate affected. These programmes do not target women in particular. Instead GR, FFW/Money for Work, TR-Cash/TR-Food and VGD programmes include households that meet at least one of these criteria: (1) they are below the poverty line as calculated according to the cost of basic needs (CBN) method; and (2) they are landless and disaster-affected people. Hypothetically, then, males and females should be treated equally. However, VGD is a fully women-focused SP programme. In addition, EGPP specifies that 33 percent of beneficiaries have to be women: i.e. 33 percent of the EGPP allocation under SSNPs is expressly allocated for women.

**6.6.2 Women's share in the budget.** Gender analysis divides the budget on the basis of statistics regarding the respective proportions of men and women working in the relevant ministries, divisions, departments, offices, and organizations. Women's share has been mentioned in Gender Budget Report (2016–2017) for selected programmes/projects. Most of the programmes have not been broken down by gender. The Gender Budget Report reports women's share in the following programmes/projects (Table 6.1). However, development and investment programmes/projects do not specify the gender dimension in any relevant documents. Most of the programmes that explicitly target women, and that do present breakdowns according to gender, report, either directly or indirectly, 30–40 percent of women beneficiaries.

This would suggest that other ASP programmes be given a 35 percent weight in segregating budget allocations.

**Table 6.1 Programmes/projects benefiting women and relevant organizations**

| Sl. | Programmes/projects | % allocated for women | Implementing ministry/ department |
|---|---|---|---|
| 1 | General Relief Activities | | MoF |
| 2 | Block Allocation for Disaster Management | | MoF |
| 3 | Agriculture Rehabilitation | | MoA, DAE |
| 4 | Open Market Sales (OMS) | | MoF |
| 5 | Vulnerable Group Development (VGD) | 100 | MOWCA |
| 6 | Vulnerable Group Feeding (VGF) | 30 | MoDMR |
| 7 | (a) Test Relief (TR) Food | 30 | MoDMR |
| | (b) Test Relief (TR) Cash | 30 | MoDMR |
| 8 | Gratuitous Relief (GR) Food | 33 | MoDMR |
| 9 | (a) Food for Work (FFW) | 30 | MoDMR |
| | (b) Work for Money (WFM) | 30 | MoDMR |
| 10 | Employment Generation Programme for the Poorest | 45 | MoDMR |
| 11 | Integrated Agricultural Productivity Project (IAPP) | 25 | MoFL, MoA |
| 12 | Haor Infrastructure and Livelihood Improvement (HILIP) | 33 | LGD |
| 13 | Rural Employment and Road Maintenance Programme | 33 | LGD |
| 14 | (a) Emergency 2007 Cyclone Recovery and Restoration | 50 | MoDMR |
| | (b) Emergency 2007 Cyclone Recovery and Restoration | 50 | MoDMR |
| 15 | Chars Livelihood Programme | 100 | LGRD, RDCD |
| 16 | One House One Farm | 30 | LGRD, RDCD |
| 17 | Rural Livelihood Project (2nd Phase) | 80 | LGRD, RDCD |
| 18 | Bangladesh Climate Resilient Participatory Afforestation and Reforestation | 40 | MOEF |
| 19 | Comprehensive Disaster Management Programme | 100 | MoDMR |
| 20 | Community based adaptation to Climate Change through Coastal Afforestation in Bangladesh | 45 | MoEF |

**6.6.3 Needs-assessment required.** The Government began gender budgeting in 2005 but, as of this writing, this initiative had been extended to only about 30 of 142 major and minor SSNPs. These included SP programmes running development projects and investment programmes under social safety nets as well as ADP.

But there remains a need to integrate the gender budgeting of gender-sensitive SP programmes that address climate change. Substantial progress has been made in mobilizing resources to mainstream the gender perspective, but implementation is lacking with extending gender-sensitive policies to disaster preparedness and response and recovery activities. The Government has prepared polices and guidelines for women, but these still fail to address gender dimensions of humanitarian needs.

Effective interventions require a needs-assessment phase before delivering services under SP programmes.

**6.6.4 Uncertain gains.** Share of women in total ASP budget shows a linear upward trend, but with significant fluctuations. Despite the fact that total ASP budget increased substantially in FY2017, the percentage share of women in ASP fell.

Share of women in budget was insignificant in programmes such as Block Allocation for Disaster Management; Agriculture Rehabilitation; Ashroyan-2 Project; Disaster and Climate Resilience Programme; Chars Livelihoods Programme; Integrated Fisheries and Livestock Development in Flood Controlled Areas and Water Bodies; Investment Component for VGD; Employment of Ultra Poor for Northern Areas; Adaptation to Climate Change and Rehabilitation of Livelihood; and Fund for Climate Change and TR (Cash). There was no allocation under the TR (Cash) programme from FY2009/10 to FY2014/15. A gradual fall can be observed in the Fund for Climate Change, resulting in a lesser share of women. Though the Investment Component for VGD and Employment of Ultra Poor for Northern Areas were women-sensitive enough, these two programmes had yet to gain more share of budgetary allocation for women.

**Figure 6.2 Share of women in ASP**

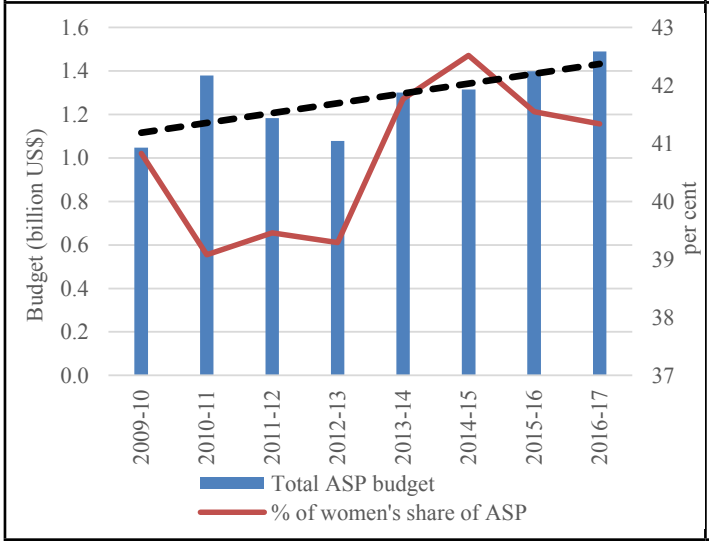
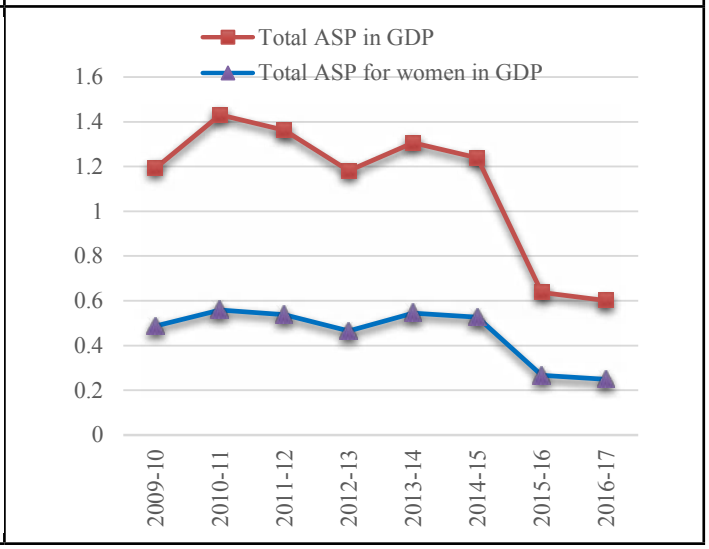


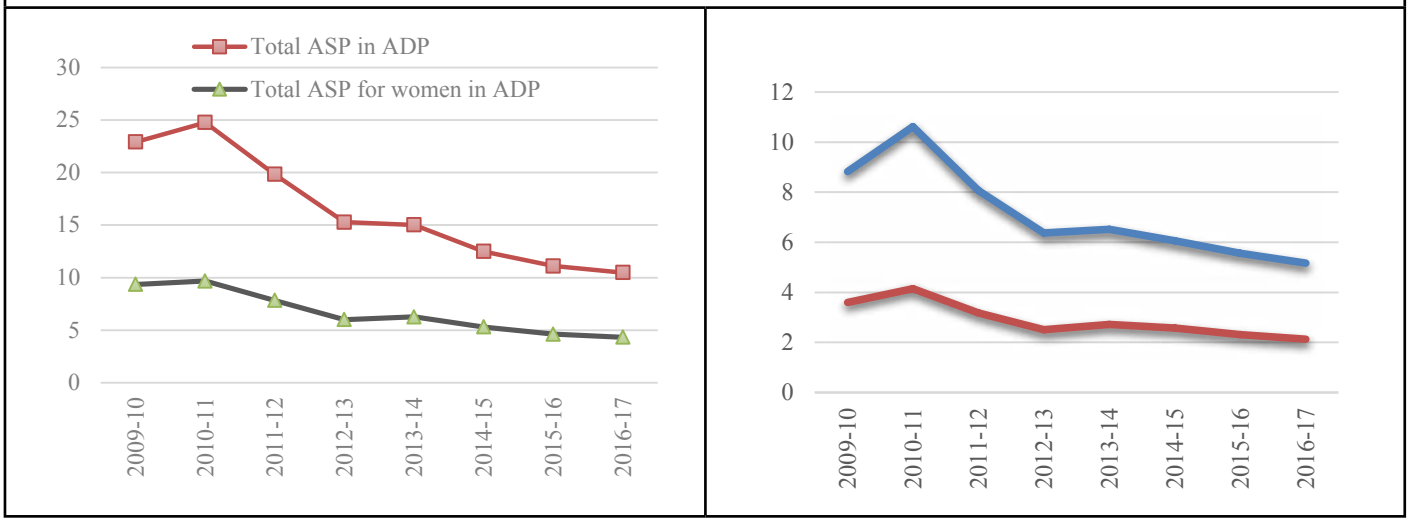

**Figure 6.3 Women-sensitive ASP in GDP (%)**




**6.6.5 Disproportionate share of women in SP budget.** Since FY2014/15, the total amount of SP budget had increased, but the percentage share of women fell. This is because of a disproportionate share of women in SP budgets. In addition, though the number of women beneficiaries was greatest in some women-sensitive programmes, women's budget share remained low. Examples of this included Emergency 2007 Cyclone Recovery and Restoration, and Community-based Adaptation to Climate Change through Coastal Afforestation in Bangladesh. In new development projects, women had the least budgetary share. Furthermore, though the proportion of ASP in total GDP was increasing (at constant prices), the share of women in ASP in total GDP was falling.

Figure 6.4 Share of women-sensitive ASP in ADP (% left) and in non-ADP budget (% right)

**Figure 6.4 Share of women-sensitive ASP in ADP (% left) and in non-ADP budget (% right)**



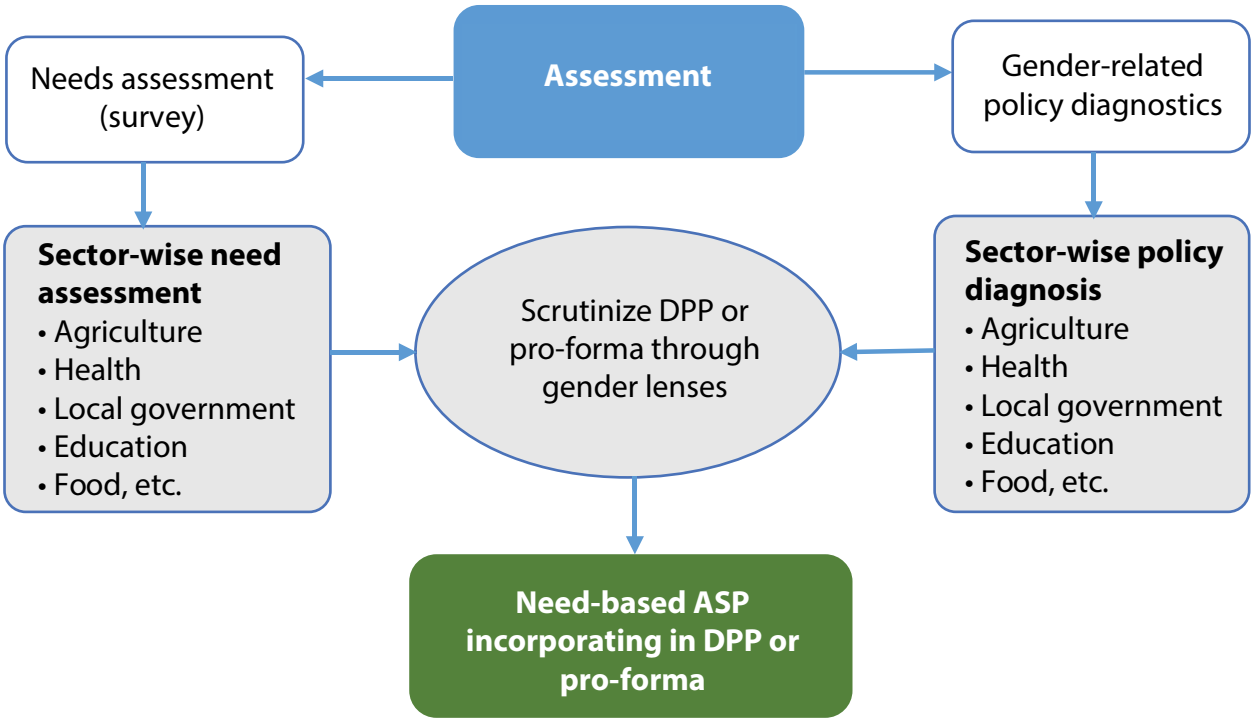

**6.6.6 Explaining the fall.** The proportion of ASP in total ADP was increasing, but the percentage share of women in ASP continued to fall. This was mainly because the ratio of ASP budget for women in total SSNP budget was unappreciated or not highlighted in gender-responsive budget documents.

## 6.7 Climate change and gender framework

**6.7.1 Gender and climate-linked ASP framework.** Project benefits need to be extended more equitably to men and women. To this end, it is strongly recommended that the Development Project Proforma (DPP) for ASPs more effectively addresses gender-climate linkages in formulating gender-specific adaptation strategies.

Figure 6.5 proposes a gender and climate-linked ASP framework to formulate effective adaptation strategies and develop grassroots-level programmes. This framework suggests that addressing climate change from the perspective of gender requires a sector-wise, needs-based assessment, with priority sectors including agriculture, health, local government, education and food. Effective policy diagnosis also presupposes gender-based sectoral prioritization. Both the sector-wise needs assessment and the policy diagnosis can be used to scrutinize the DPP or proforma through gender lenses. This will, in turn, generate practical perspectives for assessing women-friendly ASPs. DPP should incorporate needs-based ASP if efficient and productive budget allocations are to assist women in adapting to climate change.

**Figure 6.5 ASP and gender framework**




**6.7.2 Project design should take gender roles into account.**
Before undertaking ASPs, efforts are needed to assess the possible impacts of climate change on women. Climate change is complex and poorly understood, however, so the accuracy of such assessments will vary. And project design should presuppose assessment of the respective roles of men and women in that project. Only then may the project designer effectively integrate men and women in project activities.

**6.7.3 Information on gendered climate-change impact essential.** Appropriate adaptation measures are needed to mitigate the probable adverse impacts of climate change. Such adaptation measures need to accommodate probable gender impacts of climate change. This presupposes available information regarding gendered impact. To generate such information, the DPPs of all ASPs must include provisions for assessing project impacts on climate change-related gender issues.

## 6.8 On-the-ground narrative insights

Micronarratives such as the following comprise an important qualitative dimension in this study's analysis of correlations between SP programmes in Bangladesh and CCA. The micronarrative analysis aims at better insights regarding current microscale SP schemes at household and LGI levels. It uses people's stories of how these affects their own lives, taking account of both their observations and their recommendations. The insights can help researchers to fruitfully contrast climate-change budget and expenditure with prevalent SP programmes.

This study has conducted ethnographic interviews (EIs) to collect narratives that provide an emic view, i.e. the perspective of those who live within a culture, rather than a point of view external to this lived world. These narratives can be applied to reviews of the following endeavours:

- Propose a set of criteria based on the existing literature, expert opinion and stakeholder consultations that will help clearly identify SSPs implemented by Bangladesh that could be considered as 'adaptive'.

- Review the 95 programmes included in the proposed NSSS and assess which could be considered ASP and included in the CFF.

- Review all the 'social security' and 'livelihood' programmes originally included in the CFF and ensure that these are consistent with the NSSS-proposed ASPs.

- Review the SP programmes that have been defined and agreed upon as 'adaptive', and propose refined climate-change weights that would accurately reflect the climate-change relevance of proposed ASP programmes, as these have implications for mobilizing potential climate-change financing for these projects, and where inflated weights might undermine their credibility.

- Review the costing scenarios of the proposed NSSS and make suggestions regarding how to integrate the impacts of climate change on expected costs.

- Suggest recommendations regarding (1) better integration of SP, DRR and climate-change programmes and (2) the cost implications of such integration that might position Bangladesh favourably to mobilize climate-change financing.

- Suggest recommendations as to how to set coherent social security and climate change expenditure targets.

The researchers have aimed to integrate discursive facts and realities in the formulation of practicable policy. This represents an attempt to use narratives from the grassroots to constitute a grand narrative of the policy that is under review. This task requires a finely articulated methodology, one that can capture realms of fact and reality that remain intangible to most conventional means of comprehending social reality.

The study undertook an anthropological approach, using ethnographic interviews to develop insights of actual people through spontaneous narratives. Here, micronarratives have provided the central methodological approach. EIs were the principle technique of data collection, usually a series of friendly conversations occurring naturally between ethnographer and participant. The conversations took place within a context of background knowledge accumulated through focused observation, social interactions and secondary sources. The principal aim of the EIs was to initiate narratives pertinent to the research questions. The EIs started with a biographical narrative of the participant and only thereafter leading to structured research questions. The EIs followed an articulated tool kit outlining an elicitation protocol that enabled the ethnographers to initiate and capture narratives relevant to the research.

The primary data included narrative accounts from vulnerable women from selected unions in the target districts. These women were recipients of different safety net supports or, in a few cases, only eligible for them. The conversational accounts were rich in micronarratives, which were by definition naturally occurring fragmented anecdotes with coherence and purpose. The micronarratives became the testimonies of the people that vindicate the arguments presented in this report.

In addition to EIs with the target SSNP beneficiaries, focus group discussions (FGDs) provided the key tool for gathering LGI perspectives, particularly in the UP. FGDs were a means of validating the EI data, which also served as a source of important information from the governance point of view. The study conducted five FGDs in selected unions.

Micronarratives were collected from selected unions in five districts, each of them representative of distinct climate zones in Bangladesh. Naogaon District of northern Bangladesh was selected as the archetype of Barind Tract[32] ecology, which is characterized by a drought-prone summer and cold snaps in the winter. Kurigram was selected as the archetype of flood-prone zones. Shariatpur, in the central delta, was selected as a buffer zone with flooding and other frequent natural disasters. Sunamganj, north-east Bangladesh, represented the haor ecology, characterized by marshland that is submerged during the monsoon. Finally, Satkhira, in southern Bangladesh, represented the coastal ecological archetype. Based on available secondary data on these districts, one union from each district was selected for collecting micronarratives. The first union selection criterion was the extent of vulnerability to climate change. Research feasibility provided another, sometimes decisive factor in choosing between equally vulnerable unions. The following chart presents fieldwork locations and times:

| District | Upazila | Union | Fieldwork duration |
|---|---|---|---|
| Naogaon | Shapahar | Shironti | 18/01/2016 to 23/01/2016 |
| Kurigram | Chilmari | Ashtomir Char | 09/02/2016 to 4/02/1016 |
| Shariatpur | Noria | Charatra | 15/03/2016 to 20/03/2016 |
| Sunamganj | Tahirpur | Uttor Sripur | 15/04/2016 to 20/04/2016 |
| Satkhira | Shyamnagar | Buri Goalini | 15/05/2016 to 20/05/2016 |

Spending an average of five working days in the field, five qualified ethnographers conducted more than eight EIs each, reporting on the best six of these. The study thus includes 30 documented narrative accounts from each district, amounting to 150 altogether. The collected narratives were submitted in written form (in Bengali) with the relevant recordings, consent statements and photographs. The narratives, including the FGD reports, were than systematically analysed using the thematic indexing process and the qualitative content analysis method.

### 6.8.1 Insights from the narratives

The study draws from the narrative testimonies of 150 vulnerable women receiving varying degree of social safety net supports in five districts across different ecological zones. The stories they shared include experiences of most of the SP programmes in Bangladesh. As more than 110 narrators have acknowledged, however, the most prevalent programmes in the study areas include the following: Old Age Allowance, Disabled Allowance, Vulnerable Group Development (VGD), Widow Allowance, General Relief, Test Relief and Food for Work. More than 80 narrators have reported experience of the Vulnerable Group Feeding (VGF) programme, Freedom Fighters Allowance, and Agriculture Rehabilitation. Although a few narrators mentioned experience of other SP programmes, for example fishermen or maternity allowances, the above remain the major programmes the study encountered in the collected narratives.

All the 150 narrators were women receiving different kinds of SP support. Most of the narrators (117 out of 150) were aged 26–55 years, while 27 were older than 55 years and only six were younger than 26 years. Housewives comprised 97 of the respondents, while 30 reported day labour as their occupation and the remainder pursued other occupations. Of the 150 narrators, 84 were reportedly illiterate, while 19 were minimally literate and 32 had primary schooling. Only 15 of the 150 narrators had an education beyond primary level. Married women comprised 90 of total, while 48 were widowed, 11 were divorced or deserted, and only one was unmarried.

For most of our participating narrators, climate change remained an elusive phenomenon, one they barely recognized within Bangladesh's diverse seasonal cycles. However, many of them reported, when specifically asked, their observations regarding climatic change. These included a greater magnitude of drought and heat waves, or more frequent hailstorms or tropical cyclones that directly affected their agricultural production or other livelihood activities. They recognized climatic risk in the form of disasters. In their narratives, 136 mentioned experiences of flooding, more than 110 had experienced tornedos, hailstorms, and heavy rain. More than 80 narrators mentioned

[32] For details, see http://en.banglapedia.org/index.php?title=Barind_Tract [accessed 18 Dec. 2018].

drought and cold snaps, while 55 talked about river erosion and 45 reported seasonal flash floods as their most commonly experienced disasters. Only six, all from the coastal belt, mentioned increasing water and soil salinity as a climate change-related hazard.

**Support for policy review of climate-change expenditure.** The study's central objective was mapping the causal relationship between SP programmes and CCA, something that could eventually support policy reviews of climate-change expenditure. To this end, the study focused on the greater socio-economic and cultural contexts under which both adaptation and protection programmes presumably coincide.

FGD and EI respondents deemed SP programmes trivial in two respects:

- Budget allocations were insignificant within the extremely diverse range of livelihood undertakings on the part of individual recipients.

- The allocations were far too limited to meet demand from the number of people eligible for SP supports. Thus, it was a methodological challenge to identify the contribution of SP programmes in relation to CCA.

The vulnerable women interviewed were victims of climate change and various types of disaster. The collected stories were replete with experiences of disaster. Yet the narrators barely connected any of the SP support with their own coping strategies, except for a few mentions of LGI relief support. Most SP programmes contributed little towards these women's adaptation or coping mechanisms, and SP contributions were calculated according to the narrators' own livelihood strategies. Although it is possible to establish a causal relationship between SP programmes and increased resilience in face of climate change, such resilience may have also been influenced by many other factors. SP inputs, when combined with other livelihood resources, may help to build some resilience against climate change.

In any case, the study has found that this resilience does not extend beyond building or renovating houses with savings stemming from SP inputs or assuring food security for some of the most vulnerable families.

### 6.8.2 Adaptive features of SP programmes

ASP is, by definition, a series of measures that aims to build resilience in face of climate change among the poorest and most vulnerable people. It combines elements of SP, DRR and CCA in programmes and projects that simultaneously help address unsafe living conditions, counter the underlying causes of vulnerability, and promote people's ability to adapt to a changing climate (Arnall et al., 2010). SP inputs, as the study has learned from the micronarratives from ground level, to some extent play a secondary or indirect role in building resilience (section 6.8.1, above). The inputs, whether in the form of cash transfers or food support, first impact the recipients' other livelihood options and then—depending upon the extent of human, physical, financial, social and natural forms of capital held by the recipients—strengthen the process of building resilience. The most common pattern is the following: (1) the inputs generate scope for savings of recipient income and other resources; (2) part of those savings can be transformed into strategic resources; and (3) these may be realized as improved climate-change resilience.

Testimonies from a few of our narrators may clarify this.

**Investment in livestock**

- Mossammot Hamida Begum, a recipient of VGD support in Kurigram, clarified the process in her nutshell narrative account:

> Previously I needed to buy two sacks of rice for my family. Now, with VGD food aid, I have to buy only one bag or less. This has cut my food expenses by half. I save this money in addition to the VGD savings scheme. It would be difficult to save this if I kept the money at home. Once I have savings of Tk.3,000 or 4,000 (US$38 or $51), I can do something substantial. I can add more money and buy a cow or goat. If I'm in trouble, if someone in the family

is sick and I don't have money, I can sell off the goat and pay for treatment. If my house is damaged in a storm, I can repair it with the money. I can buy bamboo, wire or whatever material is needed to fix the house.

Armani, one of our narrators from Naogaon, succeeded in overcoming her extremely vulnerable situation with the help of SP support. With two of her disabled daughters, Armani led a life of constant struggle until, in 2013, she started to receive disabled allowances. This hard-working woman intelligently used the support to increase her livelihood assets, which significantly enhanced her family's resilience to disaster or climate change-related adversity.

I bought a cow with the first Tk.6,000 (US$76) I received. The price of a cow was around Tk.15,000 (US$190) back then. I managed the rest of that amount out of my savings. Then the cow bred a calf, and it gave us milk that I could sell. I never received such a large amount again. Sometimes I had Tk.2,000 (US$25), sometimes Tk.3,000 (US$38). I invested it in cultivating wheat or rice. We rented land with the money. Some of the money was spent for irrigation. I was able to buy a sewing machine this year out of the income from the cow and cultivation. Now I'm making money by sewing clothes at home.

It should be noted that her success owed much to other resources, including a gainfully employed husband and her own skills and diligent nature, which helped her to save money regularly. The disabled allowances were a fortunate bonus, which she could use to enhance resources that provided her with increased resilience to vulnerability.

### Investment in housing

- A similar pattern can be observed in the case of Asia, an Old Age Allowance recipient in the same district. Asia's house was badly damaged in a storm several years earlier. After that she lived in the wrecked house until she started to receive the allowance. With that bit of money, she was able to contribute to the family welfare, and her sons then built her a new house.

It took me a long time to repair the house after the storm. When my sons grew up, they rebuilt rooms in the other part of the house. By then, I was getting the allowance. I built this room after I had the allowance. It took me time to do this. The roofing took more than a month. My sons did the work for me. I gave them the money I had and they also contributed some. I paid for the bamboo and rope. My sons did the rest. Now I need to change the roof every year as it deteriorates due to rain. I pay for the materials needed for renovations.

It is clear from her story that she was able to build the house because of her sons, who represented social capital.

- In rare cases, recipients of multiple-protection supports were able to develop better resilience despite the fact they lived in even more vulnerable circumstances. Ayenur of Naogaon, for example, led a life of destitution with her violent husband, poor living conditions and a sick child. Her situation worsened after her husband died of blood cancer. The family had been spending a lot of money for her husband's treatment. It was at this point she started to receive VGD support. Following the death of her husband, she was able to start saving some money. Within three years, she was also receiving a widow's allowance. Thanks to her membership in the political party in power, she also continued to receive the VGD. The savings encouraged her to take advantage of a microcredit loan from an NGO. With that and money she had saved, she rebuilt her house.

Before that I had a straw roof and clay walls. I renovated the house with bamboo and clay with tin. Now the house is much more comfortable, less hot during the summer and less cold in the winter. The tin roof also protects me better from rain in the monsoon.

- The EGPP[33] is more effective in enabling people to build better houses. However, they require the physical ability to perform the work involved in the programme. Achiya, a woman in Kurigram District, used to live on a dam after her family was displaced from a char eroded by the Brahmaputra River, with the family taking refuge on the dam for a few years. She was able to build her house in a new char out of the earnings she received from the EGPP.

> When we lived on the dam, we did not have any house. When a new char emerged in Nayarhat, we were given a shed there under a government rehabilitation programme. There was only a single shed made of a few sheets of tin for the entire family. Then I got the excavating job. It was a '80-days work plan' that I did for 40 days. I earned Tk.14,000 (US$177) from it, and bought some wood posts and tin sheets with the money to build a house in this char. I also got some money from my brothers to help, which I repaid later. Now I have a place to live.

*A dilapidated house in the Chars of Kurigram*

**Establishing emergency funds**

- Cash transfer programmes also provided opportunities to establish emergency funds for some families. For Nasima from Charatra Union, in Shariatpur District, the saving scheme of the 80-days programmes served as an emergency fund.

> We make Tk.4,500 (US$57) in road construction work. They give us Tk.3,000 (US$38) in cash and the remaining Tk.1,500 (US$19) is banked as savings. After five years, this amounts to a reasonable amount of money. When we get that money, we can do something with it. We can buy a cow or goat or start a business. Or we can just leave it in bank as an emergency fund. So, Tk.3,000 (US$38) is for our living and Tk.1,500 (US$19) is for our future.

**Enhancing food security**

- Coupled with other strategic resources, SP schemes can effectively transform living conditions for vulnerable people, effectively contributing to increased resilience or adaptation. An even more compelling feature of such resilience, perhaps, is that some programmes play a very effective role in assuring food security, which in turn can contribute to strategic capital formation. SP programmes such as VGD or VGF, which offer rice as part of their support, have been deemed effective for most vulnerable women living under food shortages. The rice they get under these programmes makes up a significant part of their monthly food grain.

[33] The programme is also known as the '80-days work scheme'.

Hasina Begum, a narrator from Naogaon District, put it this way:

> Every month I buy half of the rice we need from outside, and half comes from the VGD card. That's how I manage rice for the month. When the card expires, I have to skip at least one meal every day, and we have to struggle again. That's why the rice is a big support to me. This also helps us save part of my husband's earnings, which I can use to buy stationery for my children's education. Moreover, I am able to feed them out of this rice.

- What Hasina Begum feared was already a reality for her fellow villager Jayeda Khatun. Jayeda had received VGD support for two years, but it expired. A widow with four children, Jayeda's life had been much easier with the support.

> The rice covered 10 days of food for my family. I could buy vegetables with the money they gave me. I could save 10 days' worth of food costs to do other things. Now I have to spend all my earnings on food because you cannot let your children go unfed. And I have to buy good food for them in the Eid holiday. As a mother, I cannot deny my responsibility. Maybe I cannot do enough, yet I do whatever I can.

- Some narratives show that food programmes supported people during disasters, thereby protecting them from falling into desperate debt, a common tendency among disaster victims. One of our narrators, Minara, from Kurigram, confronted a disastrous situation due to heavy rainfall last monsoon. She had an infant and was solely dependent on her own earnings. But she could not go out to work for weeks during the monsoon. The VGD scheme sustained her during those difficult weeks.

> For weeks, the rain was relentless. I couldn't go out with my baby, since she was just 40 days old. It was hard to take care of her. In fact, it was a disaster. I was lucky I had the VGD card. The rice was a big support. I did not have to buy rice. Since I wasn't earning, I didn't have any other option except borrowing from others. But since I didn't have to buy the VGD the rice, I could manage without borrowing.

The above testimonies are evidence that SP programmes play a crucial role in maintaining food security for the most vulnerable families. Indeed, they may contribute the most fundamental factor in building resilience. Beyond food security, however, their role in building resilience is only indirect, and depends greatly upon other livelihood factors among their recipients. At their best, these programmes create scope for savings derived from other livelihood incomes, which may in part be transformed into strategic capital for adaptive capacity or increased resilience.

**Connecting microcredit**

The study has explored a connection between SPP inputs and microcredit. Ideally, SPPs are designed to lift the most vulnerable families in Bangladesh from extreme poverty to a state where they can take advantage of secondary poverty mitigation measures such as microcredit. Many SPP-receiving families have stepped into microcredit, their SPPs representing a strategic resource to manage the loans they receive from MFIs. Their savings often help them to repay the microcredit instalments. However, it takes considerable resource management skills to articulate the variety of resources to move up, as very few of our narrators could do, from an extremely vulnerable position.

- Selina, from Shatkhira, was one of those few who managed to improve her living conditions through complex management of SPP support, microcredit, and personal loans along with other livelihood strategies. Selina had a range of livelihood skills, including sewing, crab cultivation and livestock raising, which helped her to survive a series of disasters. Following Cyclone Aila, she was deserted by her husband and she had to move with her son to her parent's homestead land, despite the fact her parents' home had been wrecked by the cyclone. At that time, however, she was fortunate enough to qualify for a VGD card. During her account to our researcher, she explained how she managed to maximize this minimal support through combined management of SPP savings and microcredit.

> When I started receiving VGD rice, my first priority was to build a house. I borrowed Tk.40,000 (US$504) from two NGOs: Tk.20,000 (US$252) from Gonomukhi, and Tk.20,000 (US$252) from BRAC. I spent nearly Tk.35,000 (US$442) to build the house. Since I was getting VGD, I did not have to buy rice, but I really had nothing, not even

such bare family necessities as utensils. I earned some money working on the crab farms. Gradually, however, I bought everything I now own. I bought a sewing machine in part with of my own income and in part with a loan from another NGO. Then I started making more money by sewing clothes. But it was the rice and money from the VGD that enabled me to save enough to repay my debts.

- Nasima, from Naogaon, whose microcredit repayment largely depended on savings stemming from VGD inputs, offered a similar story:

> The VGD card has ensured my meals. I don't have to buy much rice now, only for 15 days a month. I can save the money for the other 15 days. When I have VGD rice at home, repaying instalments is easier. But when I have to buy rice, it's difficult to pay. Even if I go unfed for two or three days every month.

- With a combination of VGD support and microcredit, Rehana, in Sunamganj, was able to set up and manage a shop. On top of that, she was able to repay money she borrowed from her parents.

> I paid a bribe of 1,000 taka to get listed for VGD and received rice for two years. In addition to the VGD, I had around Tk.24,000 (US$303) of savings. I set up this shop and began earning around Tk.20,000 (US$252) per month from which I could repay interest on the Tk.5,000 (US$63) I borrowed. I had to spent half of that Tk.24,000 (US$303) when I fell sick. But I could manage my family with the money I made from the shop. I borrowed money from my parents to buy a small piece of land, which I have since repaid.

- For Sabina, also from Naogaon District, VGD support was a welcome bonus that offset the pressure of microcredit repayments. After her husband quit pulling a rickshaw due to health issues, Sabina had to engage in making snacks to sell in a local school. She explained how she managed the repayments both with the income from the business and savings from the VGD support:

> The rice was a big help. I don't have to buy rice now, and I use the money for other purposes. When I built this house, I had to borrow from an NGO and sell a cow I'd raised. I repay the loan with both savings from the VGD card and income from the business. I do not have to buy rice, and for me that is equivalent to an income with which I can repay loan instalments.

### 6.8.3 SP programmes: Non-adaptive features

The foregoing accounts present one side of the collected stories. Aside from cases showing the potential of SP inputs to increase adaptive capacity, however, most of those narratives suggest that the protection schemes are grossly inadequate both in terms of meeting recipient needs, and, given the total number of people eligible for SP, in terms of allocating support.

**Inadequate input**

Although the food programmes have increased food security, depending upon family size, allocations of food grains are often inadequate. This reflects one limitation of SP schemes: they are highly standardized, and fail to address differences in family size, location-specific risk and vulnerability, as well as in the nature of individual needs.

- Jayeda Begum, from Shunamganj, received VGD support for her family of five children. Although she acknowledged the importance of the rice for feeding her children, she received far less than her family needed.

> I've been receiving rice since last spring. They give us 25 kilos of rice per month. They were supposed to give us 30 kilos, but I've never received more than twenty-five. That's not enough; it's barely enough for a month. And that's not the only thing we eat. It isn't easy to feed so many children. We also need oil, pulse, potatoes and vegetables. Whatever we earn from our day labouring, we need to spend part of it to buy more rice and other things. We have so many mouths to feed; 25 kilos of rice can sustain us for only 10 or 12 days.

- Even if recipients manage to transform SP inputs into strategic resources to build resilience, often those resources are unsustainable. Fakida, from Shariatpur District, presents one example. Fakida has faced displacement

several times in her life due to river erosion. Nevertheless, she does her utmost to provide a living for her family of five children. She cultivates chillies, which are often damaged by excessively hot weather. In difficult times, she works as a day labourer. Following Cyclone Nargis, she received Tk.6,000 (US$76) in general relief. She also became a VGD recipient. She told researchers how she spent her support money and savings to build a house which a subsequent flood then destroyed.

> We bought food with part of the money. Then, after the cyclone, I had to buy bamboo to rebuild my house, and all the money was gone. Six thousand taka is a very small amount. I rebuilt the house, bought bamboo for fencing, and it was damaged again during a flood. See how I am managing in a damaged house? Is Tk.6,000 (US$76) ever enough? The flood has smashed my house once again.

- A more common tendency is for safety net support, particularly cash transfers such as old-age allowances or widow's allowances, to get eaten up by daily necessities, leaving little to build resilience. Moreover, as the money is generally delivered in small monthly instalments, it is never enough that some can be invested instead of spent right away. Achia, from Naogaon, was a recipient of an old-age allowance. She described this typical scenario in the following way:

> The money just flies away. All is spent on clothes, oil, soap, food, medicine and so on and so forth. I cannot save anything. If I could, I would have bought a cow or goat to raise. But I never get the money to use as a stake.

- Achia's fellow villager Aklima, another old-age allowance recipient provided similar testimony:

> I cannot invest the money. All is gone for living. This is just Tk.2,000 (US$25), what can I do with that? I buy rice, pulse, salt, medicine and betel nuts. I buy hair oil and soap. That's what the allowance does. Even a goat costs Tk.3,000 (US$38). What can I do with just Tk.2,000 (US$25)?

- As mentioned earlier, SP programmes tend to be highly standardized, and fail to address contextual differences. For some of our narrators, the VGD rice barely provides food security, since transportation of the rice from the UP is very costly. For example, delivery to the haor areas of Sunamganj District, at times costs nearly half the price of the rice, since the only mode of transport in the area is by boat, and the fares are very high. That is why Rokeya Khatun, from Sunamganj, did not reckon that the input had made any significant changes to her living conditions.

> The rice has barely reduced my living expenses. Those 30 kilos of rice are gone in a few meals. It doesn't bring me any affluence. I spend a lot on my daughters' transport to school. The boat rides are expensive; it takes at least Tk.200 (US$2.5) to bring the rice. It only saves me from some debt. It's difficult to find employment in this area. That's why many people go to Dhaka for work. I wish I could also go to Dhaka.

- Rokeya's neighbour Shujona relates a contrasting story. As a beneficiary of two programmes at the same time, she built a house with SP support. Whereas Rokeya (above) received support only from VGD membership, Shujona also enlisted in the FFW programme. The combined support allowed her to save money with which she could elevate her homestead land, providing better protection during flash floods.

**Spent on health care**

Indirectly at least, we can link SP support for health care with developing increased resilience to climate change. The collected stories suggest that health care is one key area in which our narrators actually spend their SP support money on SP. This is particularly true with old-age or maternity allowances. Both the latter groups face diverse health issues, and the absence of any dedicated health care safety net programme diverts their allowances towards health care expenditure. This eventually inhibits these inputs from being transformed into other types of adaptive strategy. Even families who enjoy the advantage of safety net support, and who can thus save money, have to spend it on health issues. This scenario is evident in the narrative from Helena, a VGD recipient in Shariatpur:

> How can this rice bring us affluence, Sister? Most of our savings goes to treatment. Say, for example, I spent Tk.5,000–6,000 (US$63–76) this month for doctors. If I were not ill, I could have saved the money. That's now gone. See? Now we don't have fishing, and there's no rice for the last two months. So, we have to buy rice from the market in small amounts of 10 kilos or five kilos. We cannot afford a full sack at a time. We have to repay our debts. The children have expenses, we spend on doctors as well. So, illness means expenditure. Doctors prescribe a lot of medicines and the money goes there.

- This story is even more common among the recipients of old age allowances, who face more health issues due to their age. As Somiron from Shariatpur told us:

> I live on the old-age allowance. The money is not very regular, though. They give us Tk.2,400 (US$30) taka every six months. Who can sustain themselves for six months on Tk.2,400 (US$30)? Nothing is left. Maybe for the first one or two months I can manage well without asking money from my son. I can buy my own medicines. But then that's it. The money is gone. See this house? We built it with a loan from an NGO. My son is now repaying the loan; I cannot contribute anything.

- Fatema Khatun, from the same district, related a more detailed account of how most old-age allowance recipients spend their money on health care:

> I received the allowance only last year. I was given Tk.2,000 (US$25) first, then Tk.3,000 (US$38), and finally Tk.2,400 (US$30) after six months. I need medicines three times a day. One of those costs 11 taka each, one is Tk. 400 (US$5), and another is Tk.90 (US$1.14). Some others cost Tk.5 taka or Tk.60 (US 6 to 76 cents). All that money goes to my medicine. I need more than Tk.200 (US$2.5) of medicine every week, which means around Tk.1,000 (US$13) per month.

- Another respondent sold the VGD rice she received to buy medicine. Khadija Begum, from Naogaon, told researchers how administrative failure to deliver the cash on time led her to sell the rice:

> I received rice twice, but there was no cash. I had seven or eight kilos of rice for the Eid holiday. We experienced such hardship that I struggled to decide whether to sell the rice for cash or keep it as food. But I became so sick that I sold the rice to my own son and bought medicine with the money. I thought I would be able to manage meals in one way or another, but medicine was crucial to keep myself alive.

- Poor health conditions often cause unemployment, which further worsens living conditions, and therefore make people still more vulnerable. Such health conditions as maternity, moreover, cause temporary unemployment, and SPP such as maternity allowances thus also become totally absorbed in health care. Phuara Begum, from Naogaon, received a maternity allowance in addition to VGD support during her second pregnancy. Yet, due to medical costs, she could not save anything out of this.

> I could not work for months. I had no income. But there was no avoiding the need to pay for medicine and other necessities of life. I bought medicines with the VGD money. If I didn't buy medicine or nutritious food, how would I breast-feed my baby? I didn't have the means to buy milk for her. So, all my money was gone. I couldn't save anything.

### Investment in education

- Education is another sector in which savings from social protection programme support may be invested. Although investment in education may be transformed into human capital, eventually contributing to enhanced resilience, direct causal connections can often only be tenuously established. Related narrative accounts were collected, however, including that of Jahanara Begum, from Naogaon, who showed how SPP inputs could be invested in education for children:

> We were struggling hard. My son was studying, and it was difficult for us to bear the costs. Any additional support was a big favour. The VGD was very beneficial. That year was easier for me. I didn't have to buy rice. We could buy other things with the money, mostly for my son's education.

### 6.8.4 SP programmes: Non-adaptive aspects

This study characterizes some aspects of SPPs as non-adaptive. For example, a significant number of beneficiaries use SPP support to further practices that contribute to systematic social vulnerability. Most common among these is spending SP inputs on dowries or wedding festivities. These cultural practices promote or intensify vulnerability, rather than catalysing change towards adaptation.

**Spent on dowries**

As mentioned earlier, health care expenditures may qualify as adaptive, if we seek to establish causal connections between resilience and health, an important element of human capital. Some of the testimonies, however, provide evidence that SPP supports were being diverted to totally non-adaptive or counterproductive expenditures, among these paying dowries. Savings derived from SPP support are often spent in marrying off daughters.

- Mojida, from Naogaon District, was a recipient of a widow's allowance. She told researchers how her savings comprised part of the dowry she paid to marry off her two daughters:

  > I had to pay dowries to marry off my daughters. Perhaps the amounts weren't that great, but I had to pay them. (My daughters had fair complexions, which explains why the dowries were less.) For the elder one, I gave Tk.9,000 (US$114); for the next one, I gave Tk.22,000 (US$278). Part of the money came from my earnings through hard work as a housemaid. The rest of money came from my widow's allowance.

- Nazma, from the same district, received VGD support. She had not married off her daughter yet. Despite her illness, she was saving money out of the VGD input to pay a dowry for her daughter:

  > This is a blessing from God, now that I am getting the rice, because I need it most now. I could not have managed the cost of the surgery I went through without it. Now I get 30 kilos of rice every month. I need a little more than a kilo every day, so I only have to buy 10 or 12 kilos every month. I can save money every month, maybe Tk.600–700 (US$8–9). I have opened a DPS account for my daughter and put the money there. I am expecting to receive the rice for one more year. Meanwhile, my daughter is growing up fast. Though she is going to school, soon she'll be of a marrying-off age. Where do I get the money for this wedding all on a sudden? My niece was married off with Tk.30,000 (US$379) in cash as a dowry, along with other ornaments and utensils. I am worried about how would I manage such a lot of money. That's why I'm saving the money for her wedding.

- The dowry isn't a custom exclusive to Naogaon District. This practice is common everywhere in rural Bangladesh. Fatima Khatun, from Shatkhira District, for example, also spent all her earnings from Swapno, a Cash for Work programme, to marry off her daughter:

  > I earned some money by excavating. I spent it to marry off my daughter. We had to buy the groom good clothes, a mobile phone, shoes, beds and other furniture. Isn't this the case with every wedding? I had to do the same, and I did it with that money. I managed my living from other earnings.

Aside from dowries, other non-adaptive aspects were apparent, some playing a non-adaptive role through SPP implementation processes. Most, including policy, planning and implementation issues, were largely related to SPP governance. Given their serious implications for SPP policy debates, those aspects merit separate discussion in another forum.

### 6.8.5 Governance and grievances

This study explored SPPs from a governance perspective, with particular focus on LGIs, examining governance potential and challenges in coordinating SPPs with climate-change expenditure, which would promote ASP. Five

related FGDs were conducted with UP decision makers, seeking to clarify SPP governance issues while validating the insights arising from the micronarratives. The central line of inquiry sought to learn how SPP allocations were distributed, and whether and to what extent decision makers involved with SPP were concerned with CCA.

**Competition for scarce resources**

- From the LGI perspective, the greatest SPP administrative challenge was that allocations, measured against the number of eligible families, were seriously inadequate, which turned the distribution process into a harsh competition for scarce resources. This seemed to lie at the root of all SPP-centred governance issues. The public view and popular discourse in general related almost all corruption allegations against LGIs with the SPP distribution process. The LGIs, on the other hand, justified their actions on the grounds that the inadequacy of the allocations fuelled a sense of deprivation among those who did not get the SPP support. One UP member from Kurigram presented the problem in this manner:

> It is a big problem. Say, for example, we have 50 VGD cards from the Government for a given year. We have a list of 200 people who are eligible for one. So, we have to assess who among them are the most vulnerable and extremely poor. We can make only 50 people happy; we keep the others on waiting list. Thus, three people are waiting for each available card. Maybe next year we'll be allocated another 25 cards, we'll be able to accommodate 25 more eligible people.

- The UPs also had to distribute the allocated SPPs evenly among the union wards, each of which was represented by an elected member. Disputes often arose within the UPs regarding equitable distribution of SPPs such as Test Relief or Food for Work. With food- or cash-transfer programmes such as VGD or VGF, this study collected evidence that, to avoid disputes over fair distribution, some UPs chose to conduct lotteries among eligible women. Anowara Begum, from Shatkhira, was one of those fortunate women who received VGD by winning a lottery, rather than by paying a bribe or employing some other unofficial means of persuasion:

> I've been getting VGD rice for a year. This wasn't a favour from any UP member or chairman. No one recommended me. I won a lottery. They put everyone's name in a jar and a child drew name cards from it. So, it all came down to my luck. They had campaigned regarding the lottery for a week.

Inadequate allocation was also apparent in other cash-transfer programmes such as old-age and widow's allowances. In all the five FGDs, a common remark among the UP representatives was that the number of cards is inadequate for the total eligible population. Other observations included the claim that the rules and regulations sometimes prevented them from selecting those beneficiaries who most needed the support. For example, the age limit became a barrier to providing support to women younger than 65 years, no matter how vulnerable they were. If these people were enlisted anyway, their names were struck off during upazila-level scrutiny.

The amount allocated for some programmes was also inadequate to serve its purpose. For example, the Old Age Allowance, where each beneficiary received only Tk.400 (US$5) per month, was barely enough to meet the needs of a vulnerable aged person. Moreover, the money was delivered at six-month intervals, which made their support even less effective. The money would be more effective, as participant suggested, if it were distributed on a monthly basis.

Cards were usually distributed according to government-specified selection criteria, with the list of eligible beneficiaries based on those criteria. Then officials decided who the most vulnerable, in the light of total number of available allocations, were eligible. These were divided among wards according to total population numbers. Priority was usually extended to those who had not received SPP support over the previous four years. Some UP representatives deemed such restrictions problematic, however. They pointed out that SPP support for consecutive years could permanently lift many vulnerable women out of extreme poverty.

Sometimes Ups adopted their own strategy in resolving disputes arising from SPP allocations perceived as inadequate. They sought ways to distribute allocations in ways that conformed with the regulations, while also satisfying most of the expectant beneficiaries. For example, in Charatra Union of Shariatpur District, where the union included about 1,200 fisherfolk families, the Government allocated the Fishermen Allowance for 560 recipients. This allowance is intended for fisherfolk who cannot fish for six months of the year due to government restrictions. The programme offers 30 kilos of rice to each family during the seasons under fishing restrictions. What the UP did was divide the rice allocated for 560 families among all 1,200 families. Although each of the family received less than half of the official allocation, all families received at least minimum support.

**Decision-making regarding SPP use**

Given that UPs decided how the allocated rice or cash would be used, it was apparent that SPPs such as TR, seasonal employment schemes, or FFW had greater potential to become adaptive. The study therefore inquired how decisions about how to use those SPP inputs were made, and whether climate change-related vulnerabilities played any role in the decision-making process. Most commonly such SPPs were used in the construction, repair or maintenance of transportation infrastructure, particularly roads. They were also used to renovate mosques, temples, schools, graveyards and other community facilities. Respective needs and priorities were determined through annual ward meetings, UP planning meetings, and budget meetings. Setting priorities against inadequate allocation often became a contentious issue among UP members.

Some changes had been made in TR and FFW. For one thing, half of the allocations had to be invested in solar panels. This would have seemed to qualify as promotion of sustainable energy use. However, many members expressed dissatisfaction about being forced to buy solar from only one company. Solar panels normally cost about Tk.20,000 (US$252) per unit. UPs usually sell the rice they get as TR. The Government estimates the price for each tonne of rice at Tk.34,000 (US$430), whereas with low-quality rice UPs had to sell it for much lower prices. So, a discrepancy appeared between government estimates of expenditures and the actual costs to the UPs.

The problem with employment schemes such as the 80-days programme is that they paid less than the standard day-labourer wage. UPs consequently struggled to organize beneficiaries for the work planned for the FFW/CFW schemes. Often, they had to work with people who were unfit for manual labour. Moreover, the sanctioned money or rice was not always delivered in time, which made it more difficult to work with the programme. The money or rice came in instalments. So, they had to do part of the work and then wait for the next instalment to be sanctioned. Often this led to poor implementation of development work.

Although FFW/CFW programmes might in fact potentially be used to build infrastructure protective against or resilient to climate change-related disasters, they were not designed to address climate-change vulnerabilities. The programmes were too standardized and failed to allocate anything additional for areas more vulnerable to climate change.

One much-remarked issue during FGDs with the UPs was the shortage of operational funds for the distribution or implementation of SPP projects. The UPs received barely any budget for transporting VGD or TR SPP rice, for example. FGD participants reported that in unions such as Uttar Sripur, Shunamganj, it was expensive to transport the rice from the upazila to the union.

SPPs tended to grossly ignore the geographical diversity and distinctive nature of climate change-associated vulnerabilities. The scope and strength of the allocations often did not support UP action in time of disasters. In the haor areas of Shunamganj, for example, the most frequent climate change-induced disasters were the flash floods that damaged the rice harvest every year. Building dams or dredging rivers could provide relief, but the limited SPP allocations did not extend to this kind of project. SPP supports in general were insensitive to such seasonal dimensions of vulnerability.

**Grievances of the vulnerable**

Narrative accounts from beneficiaries spoke of SPP governance failures, the most recurrent criticisms including references to corrupt practices such as bribery, nepotism and political influence. Irregularities in distribution, competition for enlistment, bad quality of programme food grains, and poor transportation also featured in the narratives. Bribery, nepotism or political influence often created a strong sense of deprivation among vulnerable women expecting SPP support.

- Amela, from Kurigram, shared her experience of confronting such corruption:

  > They have been distributing the rice for the last 13 months. They give it for 18 months, but on the card, it says that we should get it for two years. I begged this card from the UP chairman. I said that I was starving. I had to bribe him Tk.2,000 (US$25) for this. This is an open secret, that they take money for the card. They ask for money to enlist you in excavation work as well. They do not enlist anyone without money.

- SPP inputs, reportedly, were also being used as a political tool. The study collected testimonies that the cards were being distributed in return for promises of political allegiance to political parties. Ayenur, from Naogaon, included one such allegation in her narrative:

  > When the Bangladesh Nationalist Party (BNP) was in power, they didn't give me a VGD card. My name was taken off the list because I was an Awami League activist. When the Awami League came to power, I got the card right away. The chairman himself gave me this.

- Respondents also expressed complaints about SPP rice quality. Nazma, from Naogaon, talked about the VGD rice she received:

  > The rice is no good; we cannot eat it. When cooked, it tastes bad. Many of us sell off the rice right from the UP office—30 kilos of rice for Tk.500 (US$6). They add too many chemicals to the rice, and it's hard and coarse. If you bake it, it's too hard. We can't do anything with this rice. We only eat it if we're starving.

- As noted earlier, these narratives also indicate that beneficiaries did not get the support when they needed it most. Achia, from Naogaon, is a recipient of the Old Age Allowance. She put it in this way:

  > No one knows when the money will come. There's no certainty. We get it eventually, but not at the times we need it most. And sometimes the amount is only 900 cg, sometimes 1,800 cg, but it's never 3,600 cg.

- The same situation prevails with CFW excavation work. As Chandra, from Kurigram says:

  > I've been doing this for two years. I work year around except for during the monsoon. I dig soil every day, but don't get paid regularly. If I work for two months, they pay me for a month first. They don't pay on a monthly basis. We do Tk.4,500 (US$57) worth of work a month, and we get paid only three or four months later. The money then goes to repaying credit used or groceries during that time. It would be really helpful if they regularized the payments.

### 6.8.6 Gendered aspects of SP on the ground

- As noted earlier, SSPs are crucial for most vulnerable women, especially for the aged, disabled, widows and other destitute women. This study provides evidence that, with SPP support, many of the most vulnerable women would be able to survive in critical conditions. As Shahanaz Begum, from Naogaon, says:

> I survived because of this Disabled Allowance. I get Tk.3,600 (US$45) every six months. This is a great help for me. They give it to us twice a year. Previously the amount was smaller, but gradually it has increased. I buy food and medicine with the money and repay debt. If the money is delayed, I suffer a lot. I have to borrow from others.

- SP support such as old age or widow's allowances have enabled recipients to gain status and respect within their families. Many of them share the money with their children, and, in return, other family members take better care of them. For example, Amena Khatun, from Shatkhira, gives all her money to her son, and her son looks after her.

> I gave the money to my son. He built me this room with the money. I got Tk.5,000 (US$63) and I gave it all to my son. He also added some to make the room for me. Now I have my meals with both of my sons. Whenever I get the money, I buy clothing for my family members. I used to work as a maid before I got this allowance because I had to earn whatever I could to give to my sons who look after me.

- However, intense socio-cultural barriers prevent many women for engaging in SSPs that involve manual labour in public locations. Raashida, from Shariatpur, struggled to get her in-laws to allow her to work in a CFW programme involving excavation:

> My mother-in-law didn't want me to work outside, but my father-in-law said it was okay. I took up this excavating work because I want to educate my children. If I have money, I can buy them food, which my husband would do if he was alive. My brother-in-law heads the family, but he cannot give me any money. So, I didn't have any money in hand, and I couldn't ask for money from anyone in the family.

- Basia, from Kurigram, was less fortunate than Rashida. Despite her willingness to make income from excavating, she was never allowed to work:

> My husband never allowed me to do the government work. He didn't like me to do excavating. I work in his fields. He said he'd starve to death before he let me go excavating. If I did this work, it would shame my brothers, and they might blame my husband.

- In Naogaon in particular, as the study observed, a great cultural barrier prevented women engaging in such work. Nilufa, one local woman, says Muslim women in the area did not go to work in the fields or on road construction. They could do other things, but nothing that required them to work in public spaces.

- But for many women, for example Aklima from Shariatpur, these kinds of work were the only means of survival, and they felt they had to work no matter what society thought.

> If I find another job, I'll do it. If I don't, what will I eat? So, if the work is available, I'll surely do it. We are poor people. For us, a sense of disgrace is a luxury we cannot afford. I have no husband, no one to support me. I have to earn a living by whatever means I can. If I cover myself decently when I'm in public, no one can say anything.

## 6.9 Major findings and observations

**Major findings**

- SP programmes need to be conducted in the light of context-specific gender analysis. Such analysis should be based on the collection of documented, geographically disaster-specific, and gender- and age- disaggregated data. Bangladesh is susceptible to frequent natural disasters, and programmes should have early access to such information, where it can be generated in advance. This database should present an essential facet of all disaster preparedness strategies.

- Qualitative information at national and local levels suggests that, where beneficiaries are affected by climate shocks, VGD plays an important role in reducing food insecurity. At the same time, however, VGD benefits are often unsatisfactory due to insufficient customization, bearing in mind the specific needs of various climate- and disaster-vulnerable areas.

- The EGPP recruits relatively few, but a high percentage of, women members. This is because women comprise half of the total population, and they are generally more affected by disasters and climate change. In addition, some types of EGPP work take account of whether they are appropriate for women's physical capacity.

- FFW, MFW and TR run food/cash assistance programmes where 33 percent of beneficiaries are women. Under these programmes, women are increasingly contributing to climate-resilient rural infrastructure development. But more scope remains for women to create employment opportunities through such programmes. According to beneficiaries, the amount given is insufficient; a person's basic living costs amount to more than the assistance. On the plus side, however, TR extends equal work opportunities to women.

- GR programme implementation guidelines make no special provision for women affected by such disasters as cyclones, drought, floods, and river erosion.

- The IAPP project provides most farmers directly with seed and other inputs, prioritizing the small, marginal and resource poor, with a significant proportion of beneficiaries being female farmers.

- MoWCA, MoDMR, and MoLGRDC are the key ministries implementing and monitoring women-focused SP programmes. MoA and MoSW also extend priority to some of their running development and SP programmes. Women are prioritized in strategic MTBF objectives and activities. Even though the Government, by implementing these projects, shows a positive attitude towards women's empowerment, one significant drawback remains. Most beneficiaries from a variety of villages claimed that some programme beneficiaries are chosen according to their political affiliation. This could present a challenge for women, because cultural barriers among rural people mean that fewer women than men are affiliated with political parties

- The proportion of ASP in total ADP is increasing, but the percentage share of women in ASP is still falling because the ratio of ASP budget for women in total SSNP budget is neither appreciating nor focusing more on gender-responsive budget documents

- The share of women in ASP in total GDP is falling, although the proportion of ASP in total GDP is increasing (at constant prices).

**Key observations**

**1.** The narrative accounts appear to exhibit barely any direct links between SSN programmes and CCA.

Three factors may explain this:

» SSN allocations are insignificant in the extremely diverse range of livelihood activities on the part of individual recipients;
» allocations are far less than the number of people eligible for SP support; and
» they are not designed to adequately address climate-induced risks and resilience.

**2.** However, SSNPs helped many of the narrators with added economic opportunities that resulted in savings. In many cases, concomitant savings were used in ways that promoted enhanced resilience (e.g. housing). Programmes designed to create saving opportunities contributed more significantly to building resilience. SP supports created

scope for savings, which were then transformed into livelihood assets, depending upon the prevalence of other livelihood options and strategic capital.

- Safety net programmes have proved most effective in supporting women facing critical socio-economic exclusions. Barriers to accessing related support remain, however, including certain traditional norms and such failures of governance as corruption.
- The most common instrument of such transformation is the acquisition and raising of livestock, which the beneficiary women can sell in emergency situations.
- Savings are mostly invested in house-building and in survival during times of disasters such as crop failure.
- Food transfer programmes enhance food security for the most vulnerable families, the only identifiable direct connection to adaptation.
- Savings may also be directed to the education of children, an investment in human capital.
- Food support also protects beneficiaries from indebtedness, a typical post-disaster problem.
- Cash transfer programmes also provide opportunities, for some families, to create emergency funds.

**3.** SP schemes are grossly inadequate, both in terms of meeting recipient needs and in terms of actual allocations in relation to total numbers of people eligible for SP. At the beneficiary level:

- Depending upon family size, the amount of allocated food grains is often inadequate.
- The cash transfer programme disburses small portions on a monthly basis, insufficient support for recipients to invest in strategic resource development.
- Absent any dedicated health care SPP, much of the input is spent on health care, including care during unemployment related to health conditions. Thus, the programmes do not support any significant economic development or resilience, especially in the case of Widow or Old Age Allowances.
- SPP support is also diverted to counterproductive expenditures such as paying dowries, where savings derived from SPP support are often spent in marrying off daughters.
- Spending the savings stemming from SPP inputs on children's education is common.
- SPPs have become a strategic resource for managing MFI loans. The savings they enable often help recipients to repay microcredit debt instalments.

**4.** SSNPs are standardized inasmuch as they do not address such comparative differences among beneficiaries as the following:

- family size, location-specific risk and vulnerabilities, and the nature of individual needs;
- distinctive social, economic and cultural features of the vulnerable communities; and
- a diverse range of ecologically or territorially determined climate risks and vulnerabilities.

**5.** Corruption was the most commonly reported governance failure in delivering safety net support. Reports of corruption included the following:

- demanding bribes for enlistment in SL programmes;
- widespread nepotism;
- distribution irregularities; and
- using safety nets as a political instrument to secure votes in elections.

**6.** The key governance challenges in LGI implementation of SPPs include these:

- Inadequate allocations effectively turn SP distribution into a competition for scarce resources.
- Rules and regulations sometimes exclude those very beneficiaries who most need the support.
- Disbursing money in small amounts at long intervals (e.g. every six months) presents unnecessary problems for recipients.
- Allocations for such SPPs as TR or FFW are insufficient to support infrastructural projects for climate-change adaptation.
- Operational funds are barely sufficient to implement the programmes.

**7.** SPP support recipients are generally vulnerable poor women. This assistance is often crucial for lifting them above the poverty line or even for basic survival.[34] The support is most essential during certain stages or events in beneficiary life cycles:

- when a family member is sick and needs extensive health care;
- when the household breadwinner dies;
- in times of disaster and post-disaster;
- in old age, when the vulnerable are no longer capable of making a living;
- when it is necessary to repay microcredit debt instalments; and
- when women are widowed or deserted.

[34] Such recipients commonly take advantage of other development opportunities such as microcredit.

# 7. Policy simulation

## 7.1 Background

ASP budgetary decision-making can benefit from policy simulations.

**7.1.1 More practicable, on-the-ground rationale needed to increase benefits.** The expected cost of climate-change impacts suggests the need to better integrate SP, DRR and CCA. With that in mind, this study explored the implications of increasing per capita expenditure in a few important programmes in selected climate hot-spots.

Major programmes, such as EGPP or VGD are designed to provide equal amounts of per capita benefit in all areas, though in practice, when addressing vulnerability to climate change and disasters, they prioritize select beneficiaries in coastal, char/haor, flood-prone and monga areas. It is not that participation in these programmes can entail special or somehow deferential treatment. But it is costlier to cover impacts among those most affected populations. It thus becomes necessary, when factoring in disaster and climate-change adversities as a sustainable means of adaptation at the microlevel, to present the need to increase benefit amounts in more practicable, on-the-ground terms, rather than to simply apply the current flat rate.

**7.1.2 Purpose of this policy simulation.** Incremental costs of addressing climate-change and disaster-related impacts will vary in each climatic region depending on local conditions and needs. The simulation exercise calculated the additional total and per capita resources needed, and differentiated these for each climatic region.

The simulation was derived from consultations with beneficiaries in selected agro-climatic zones and meetings with selected experts at the national level. Policies concerned with adaptation to climate change should broaden the prevailing approach to delivering social benefits needs, moving from the concept of SSNPs to a more inclusive 'social security strategy' aligned with the life-cycle and incorporating formal employment policies and social insurance schemes.

## 7.2 Simulation scheme

**7.2.1 Three possible outcomes.** An appropriate simulation can prove a powerful tool to help consider different allocation scenarios for increased coverage and benefits. This study used such a simulation in showing how to partition the domain of interest (i.e. targeting climatic regions in terms of their particular conditions and needs) and extend the scope of benefits while retaining the cost efficiency of those benefits (Brantley et al., 2014).

The present study applies a simple method (7.2.2, below) to perform simulations on the basis of limited segregated data regarding beneficiaries of major SSNPs (i.e. from district down to upazila levels). The simulation also refers to SP

programmes, such as VGD, VGF, EGPP, GR (Cash), FFW/MFW and maternity allowances for newly pregnant women. Most of these programmes can be characterized as partially adaptive ASP. The simulation is designed to consider three possible outcomes: (1) increased coverage; (2) increased per unit cost; and (3) increased per unit cost and coverage.

**7.2.2 On-the-ground cost estimates needed.** The various programmes pursue different objectives, and the simulation process does not generate 'one size fits all' scenarios. What are needed are practicable, on-the-ground cost estimates. Therefore, three different points of simulation were considered in estimating expected costs of budgeting for ASP design.

With the 12 identified disaster-prone and climate-vulnerable districts (80 upazilas) in mind, three major SSNPs were used to simulate scenarios in three states. The simulation followed a simple process. It applied three different conditions in each of the 12 districts: increased coverage; increased per unit cost; and increased both per unit cost and coverage. Every disaster-prone district experiences a different pattern of disasters, so different weights could be assigned for increasing coverage or per unit cost.

- When you increase coverage for a particular programme—while keeping that coverage in the other disaster-prone districts constant— the budget expenditure will ultimately have to be increased.

- When you increase per capita expenditure, keeping spending in the other districts' constant, the budget allocation has to be increased.

- When both coverage and per capita expenditure increases, the simulation shows hefty budget increases for the particular programme.

**7.2.3 Three main indicators.** The simulation is structured on the basis of three main indicators: (1) size of population by district; (2) percentage of population under the poverty line; and (3) the percentage of population vulnerable to disasters and climate change. The former two indicators are based on Bangladesh - Population and Housing Census 2011 (BBS, 2011b), and Report of the Household Income and Expenditure Survey (HIES), 2010 (BBS, 2011a), and the last indicator was derived by the author from Bangladesh Disaster-related Statistics 2015 (BBS, 2015). The latter report presents statistics on the number of households affected by disasters such as drought, floods, water logging, cyclones, tornadoes, tidal surges, thunderstorms, river/coastal erosion, landslides, salinity and hailstorms.

The top three disasters by district were selected on the basis of field-level qualitative data together with Bangladesh Disaster-related Statistics 2015 to get percentages for each disaster-prone district. The study applied the percentage of households under the poverty line by disaster-prone district to get the numbers of poor households, and then individual districts were multiplied by the percentage of climate-vulnerable households to get the expected number of beneficiaries. Given that the Government wanted SP programmes to cover all the poor and vulnerable people, this added a climate dimension to the programme's essential design.

**Table 7.1 Vulnerable districts and households**

| Sl. | Selected vulnerable districts* | 2011 (BBS) | | 2015 | Primary hazard/climate exposure |
|---|---|---|---|---|---|
| | | Lower PL (%) | Total households (HHs) | Climate vulnerable HHs (%) by DPD [34] | |
| 1. | Chapai Nawabganj | 12.1 | 366,116 | 14.80 | Drought |
| 2. | Kurigram | 44.3 | 459,838 | 34.48 | Flood |
| 3. | Lalmonirhat | 16.7 | 279,133 | 34.48 | Flash flood, erosion |
| 4. | Bhola | 20.4 | 394,843 | 34.91 | Cyclone, erosion |
| 5. | Barguna | 9.8 | 198,396 | 34.91 | Tidal flood |
| 6. | Patuakhali | 14.7 | 341,301 | 13.60 | Cyclone |
| 7. | Satkhira | 34.4 | 441,324 | 39.00 | Sea-level rise (SLR), salinity |
| 8. | Bagerhat | 24.0 | 328,020 | 39.00 | SLR, salinity |
| 9. | Cox's Bazar | 16.2 | 508,887 | 29.96 | Cyclone |
| 10. | Faridpur | 19.8 | 425,104 | 34.48 | Flood, erosion |
| 11. | Sunamganj | 20.6 | 515,228 | 13.88 | Flash flood |
| 12. | Khulna | 21.2 | 515,228 | 17.69 | SLR, cyclone, salinity |
| | Total (all districts) | 17.6 | 32,009,710 | 28.43 | |

* Randomly selected 12 districts among districts identified as climate- and disaster-vulnerable (BBS, 2015).

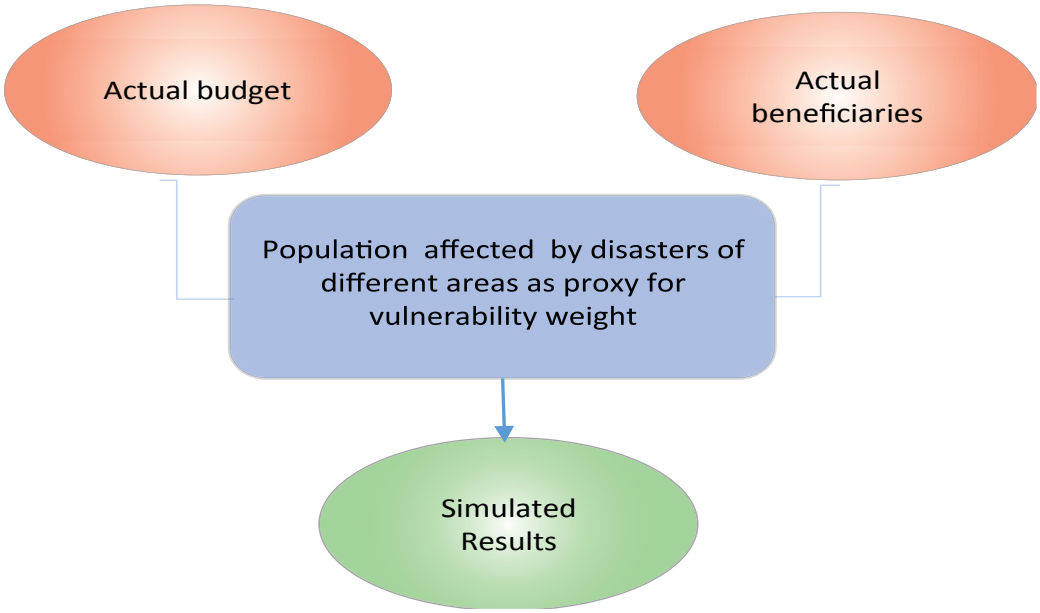
**7.2.4 Applied to three largest SSNPs.** The simulation was applied to the three largest SSNPs: EGPP, VGD and GR (Cash). EGPP was efficient because it allowed saving of Tk.25 (US$0.32) from the daily wage of Tk.200 (US$2.52). The VGD programme distributed a 30 kg rice bag for each beneficiary every month over a 24-month cycle. The third programme represented the sole post-disaster measure that provided immediate support. GR was provided immediately after post-disaster assessment of causes of loss.

**7.2.5 Different programme simulation focuses.** With each of the above SP programmes, taking account of the climate dimension not only increased its respective coverage as such, but also increased per capita expenditure and overall SSNP budget allocation. The EGPP simulation focused on increasing both coverage and per capita expenditure. Meanwhile VGD already provided one of the largest coverages among these programmes, so its simulation focused on per capita expenditure increases. With GR (Cash) , the increase of coverage was considered to examine its trajectories.

**7.2.6** The study assumed these three SSNPs (see 7.2.4) would assist climate-vulnerable people with adapting to disasters through cash or in-kind support. When beneficiaries were compared to poor people, the lower poverty-level income was used to work out the number of poor households. However, members of each poor household affected by disaster should have received either livelihood support or food and cash supports to boost their coping capacity. So, the percentage of climate-vulnerable households by disaster-prone district was applied as exposure to climate shocks to get three corresponding scenarios. Each of the programmes had a different coverage number based on available resources the actual beneficiaries or per capita expenditure or allocation increased by exposure to climate shocks in the given three scenarios.

[34] Disaster-prone and climate-vulnerable districts.

**Figure 7.1 Simulation scheme**




**7.2.7 Three scenarios** were generated to clarify the budgetary implications for increasing coverage, and per capita expenditure, or per unit allocation:

**Scenario 1.** This simulation assumed incremental increase in coverage (i.e. the numbers of beneficiaries are increased) for only the GR (Cash) programme. This gave how much extra allocation was needed to increase programme coverage while per capita expenditure remained constant.

- actual beneficiaries x climate-vulnerable households (%) x disaster-prone districts = extra beneficiaries to be added

**Scenario 2.** This simulation assumed increases in both coverage and per capita expenditure for the EGPP programme.

- actual beneficiaries × climate-vulnerable households (%) × disaster-prone districts = extra beneficiaries to be added
- per capita expenditure × average % of climate-vulnerable households = extra expenditure to be added per person

**Scenario 3.** This assumed an increased per unit allocation for beneficiaries to observe how much extra money would be needed to support people in adapting to climate vulnerability (the VGD programme was the simulation target in this stage).

- per capita expenditure × average % of climate-vulnerable households = extra expenditure to be added per person

The projections were based on the moving average of historical growth for different fiscal years. Three-year moving average growth rates for different periods were used to forecast the growth rate for the following years. But the forecasting based on historical years did not consider climate-vulnerable populations. Therefore, the percentage of disaster-vulnerable populations by district was added to the growth rate in calculating estimates. The weighted average for moving average growths and percentage of disaster-vulnerable populations by disaster-prone districts was calculated by using the forecasting rate for the following two fiscal years.

**7.2.8 SSNP budget allocation scenarios.** Based on budget allocations for the designated SSNPs, the study conducted a simulation for all of Bangladesh, including the 12 disaster-prone districts mentioned earlier. This produced two figures: (1) how much extra allocation needs to be added in the SP programme, and (2) how much extra has to be allocated for the 12 climate-vulnerable and disaster-prone districts.

A separate simulation was conducted to seek a better understanding of the gender dimension.

**7.2.9 Three more scenarios.** Sixteen SSNPs were used in a simulation comparing the following three scenarios: (1) no expenditure growth (Scenario I); (2) historical growth (Scenario II); and (3) historical growth, disaster-vulnerability weighted (Scenario III). In none of the growth scenarios did the calculation maintain the FY2017 budgetary allocation for SSNPs. A three-year moving average of previous FYs was used in calculating historical growth. The third scenario included the disaster weight calculated for the FYs 2009–2015, considering both these factors: (1) the average proportion disaster-affected out of the total population; and (2) field study reports on the perceived incidence of disaster reported by affected communities and local stakeholders. The following two equations were used for conducting general simulations for SP programmes that were fully or partially adaptive as well as gender sensitive.

$$SB_{FY17+t} = FY17+D_1\ HG^i_{FY17+t}+D_2\ DW^i \qquad \text{…….. (1)}$$

$$SB_{FY17+j} = FY17*WS+D_1\ HG^i_{FY17+t}*WS+D_2\ DW^i*WS \qquad \text{…….. (2)}$$

where

D1 = 1 if historical growth is applied and 0 otherwise,
D2 = 1 if disaster weight is applied and 0 otherwise,
SB = simulated budget for fiscal years,
FY17 = provisional budget for FY 2016/17 (intercept term),
HG = historical growth applying three-years moving average,
DW = disaster vulnerability weights,
WS = women's share,
DWi = average weight when the whole of Bangladesh is considered,
i= districts (1, 2, …, 64), and
j=1, 2, 3 (years)

**7.2.10 Figures for three scenarios.** The tables and figures presenting SSNP projections (subsection 7.3 below) compare three different scenarios for the following three FTs. They display estimated budget allocations together with no-growth projections, historically-weighted growth projections, and combined historically and disaster-weighted projections. The first scenario, represented by a horizontal line, shows projected growth for the three FYs as derived by keeping the same budgetary allocation as in FY17 over the next three FYs. The second scenario shows the moving average over the past five FYs, and the situation should the Government keep to the budgetary allocation of those previous FYs.

## 7.3 Results: Budgetary implications for general ASPs

**7.3.1 GR (Cash).** The first scenario (Figure 7.2), where only coverage is increased, looks at GR (Cash), which is gender-blind and implemented immediately following a disaster. The programme does not cover many people, but it is sorely needed by affected people together with the other special programmes. The simulation follows the increment of GR (Cash) programme beneficiaries to estimate the expected extra cost of addressing the climate-vulnerable or disaster-prone districts (DPDs).

**Table 7.2 Scenario for GR (Cash)**

| Selected disaster-prone districts | Actual | | Projected | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2015/16 | | 2016/17 | | 2017/18 | | 2018/19 | |
| | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) |
| C. Nawabganj | 0.01 | 284 | 0.01 | 317 | 0.01 | 356 | 0.02 | 401 |
| Kurigram | 0.03 | 800 | 0.04 | 1,003 | 0.05 | 1,264 | 0.06 | 1,598 |
| Lalmonirhat | 0.03 | 750 | 0.04 | 940 | 0.04 | 1,185 | 0.06 | 1,498 |
| Bhola | 0.13 | 3,367 | 0.16 | 4,232 | 0.20 | 5,345 | 0.26 | 6,774 |
| Barguna | 0.02 | 617 | 0.03 | 775 | 0.04 | 980 | 0.05 | 1,241 |
| Patuakhali | 0.02 | 584 | 0.02 | 647 | 0.03 | 721 | 0.03 | 806 |
| Satkhira | 0.02 | 517 | 0.03 | 665 | 0.03 | 858 | 0.04 | 1,113 |
| Bagerhat | 0.01 | 384 | 0.02 | 494 | 0.02 | 638 | 0.03 | 826 |
| Cox's Bazar | 0.06 | 1,534 | 0.07 | 1,875 | 0.09 | 2,303 | 0.11 | 2,839 |
| Faridpur | 0.01 | 334 | 0.02 | 419 | 0.02 | 528 | 0.03 | 667 |
| Sunamganj | 0.03 | 717 | 0.03 | 796 | 0.03 | 888 | 0.04 | 994 |
| Khulna | 0.03 | 717 | 0.03 | 815 | 0.04 | 931 | 0.04 | 1,068 |
| Total | 0.41 | 10,605 | 0.49 | 12,978 | 0.61 | 15,997 | 0.75 | 19,825 |

**7.3.2 GR (Cash).** About 30.2 percent of the allocation is to be added with the last FY budget expenditure for the GR (Cash) programme to benefit the average climate-vulnerable proportion of the population (i.e. 28 percent). GR (Cash) spends about Tk.3,000 per capita. The increased coverage would increase total allocation by 30.2 percent. A total of 3,015 new recipients need to be included from DPDs to mitigate climatic risks. Among the climate-vulnerable districts, Bhola would require the greatest amount of additional allocation.

**7.3.3 VGF.** An approximately 27 percent growth in allocation, about an additional Tk.400 million, is needed to adequately cover the most disaster-vulnerable and climate-affected districts. The VGF programme simulation incorporates, as a proxy for the vulnerable population weight, the percentage of the population affected by different disasters in different areas. The number of programme beneficiaries is increased according to the weight of the individual district in question. Table 7.3 presents the new simulated number of beneficiaries by district. The higher the district's vulnerability, the higher the vulnerability weight and the greater number of new beneficiaries. The allocation of 20 kg of rice or wheat per person remains the same; only numbers of beneficiary are increased. The overall allocation of food is increased to support extra beneficiaries. On average, about 27 percent of beneficiaries are added after weighting according to the climate-vulnerable population. The overall allocation (in MT, or megatons)[36] 35 is also increased by about 27 percent, i.e. a total of Tk.397 million additional amount is required in the next period.

**Table 7.3 Scenarios for VGF**

| Selected disaster-prone districts | Actual | | Projected | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2015/16 | | 2016/17 | | 2017/18 | | 2018/19 | |
| | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) |
| C. Nawabganj | 0.94 | 101,150 | 1.04 | 113,711 | 1.16 | 126,475 | 1.29 | 140,561 |
| Kurigram | 3.81 | 410,164 | 4.75 | 517,602 | 5.94 | 647,007 | 7.42 | 808,199 |
| Lalmonirhat | 0.63 | 67,601 | 0.78 | 85,308 | 0.98 | 106,636 | 1.22 | 133,203 |
| Bhola | 1.01 | 108,873 | 1.26 | 137,719 | 1.58 | 172,564 | 1.98 | 216,075 |
| Barguna | 1.05 | 113,381 | 1.32 | 143,421 | 1.65 | 179,709 | 2.07 | 225,022 |
| Patuakhali | 2.69 | 289,470 | 2.97 | 322,984 | 3.27 | 356,526 | 3.61 | 393,239 |
| Satkhira | 2.57 | 276,352 | 3.28 | 357,483 | 4.21 | 458,168 | 5.39 | 586,810 |
| Bagerhat | 1.46 | 157,139 | 1.87 | 203,272 | 2.39 | 260,523 | 3.06 | 333,671 |
| Cox's Bazar | 1.54 | 166,062 | 1.88 | 204,306 | 2.29 | 248,920 | 2.78 | 303,059 |
| Faridpur | 0.99 | 106,881 | 1.24 | 134,877 | 1.55 | 168,598 | 1.93 | 210,601 |
| Sunamganj | 1.34 | 143,927 | 1.48 | 160,873 | 1.63 | 177,895 | 1.81 | 196,562 |
| Khulna | 1.55 | 166,964 | 1.75 | 191,075 | 1.99 | 216,388 | 2.25 | 244,866 |
| Total | 19.57 | 2,107,964 | 23.63 | 2,572,631 | 28.65 | 3,119,409 | 34.82 | 3,791,868 |

**7.3.4 EGPP.** The second scenario, increasing both coverage and per capita expenditure, is applied to EGPP, which is fully adaptive and gender-sensitive, with special emphasis on disaster-prone and climate-vulnerable areas. It includes an in-built mechanism whereby a beneficiary saves money from EGPP disbursements to a bank account for later use in lean periods or times of disaster. Wages are paid directly to the worker's bank account. Programme coverage and per capita marginal expenditure for the following three FYs were simulated according to climate-vulnerable households, as shown in Table 7.4.

[36] MT = one megaton, or one million tonnes.

**Table 7.4 Scenario for EGPP**

| Selected disaster-prone districts | Actual | | Projected | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2015/16 | | 2016/17 | | 2017/18 | | 2018/19 | |
| | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) |
| C. Nawabganj | 3.58 | 15,844 | 1.99 | 17,599 | 2.23 | 19,724 | 2.50 | 22,063 |
| Kurigram | 12.40 | 54,865 | 7.74 | 68,499 | 9.74 | 86,206 | 12.24 | 108,306 |
| Lalmonirhat | 3.62 | 15,892 | 2.26 | 19,841 | 2.84 | 24,970 | 3.57 | 31,372 |
| Bhola | 5.56 | 24,524 | 3.48 | 30,692 | 4.39 | 38,718 | 5.53 | 48,761 |
| Barguna | 1.78 | 7,802 | 1.11 | 9,764 | 1.40 | 12,318 | 1.77 | 15,513 |
| Patuakhali | 3.69 | 16,221 | 2.03 | 17,881 | 2.26 | 19,890 | 2.51 | 22,082 |
| Satkhira | 8.87 | 39,142 | 5.68 | 50,107 | 7.33 | 64,646 | 9.44 | 83,264 |
| Bagerhat | 5.90 | 25,910 | 2.16 | 33,169 | 2.78 | 42,792 | 3.58 | 55,116 |
| Cox's Bazar | 6.30 | 27,799 | 3.84 | 33,828 | 4.71 | 41,502 | 5.76 | 50,828 |
| Faridpur | 5.53 | 24,268 | 3.45 | 30,299 | 4.35 | 38,131 | 5.46 | 47,906 |
| Sunamganj | 5.75 | 25,314 | 3.17 | 27,954 | 3.53 | 31,150 | 3.93 | 34,643 |
| Khulna | 6.47 | 28,487 | 3.66 | 32,218 | 4.17 | 36,760 | 4.75 | 41,863 |
| Total | 69.45 | 306,068 | 40.57 | 371,851 | 49.74 | 456,807 | 61.04 | 561,717 |

**7.3.5 Lens of climate sensibility.** When climate vulnerability adds new threats to livelihoods and other activities among affected populations, each programme should be reconsidered through the lens of climate sensitivity. Expected per capita expenditure has to be revised upward by as much as Tk.288, and about 30 percent more new beneficiaries (i.e. 90,852 persons) have to be added from the disaster-prone districts. Thus, the budget for the above-mentioned DPDs rises by 67 percent. The greatest additional allocation would be needed in Kurigram and the least in Barguna.

**7.3.5 GR (Food) and GR (Cash).** GR (Cash) supplements other programmes in support of vulnerable people. The simulation increases the allocation of food per person. Thus, is the basis for calculating the projected allocation required. The simulation presented in Table 7.6 relies on the climate-vulnerable proportion taken from Bangladesh Disaster-related Statistics 2015 (BBS, 2015). The actual per person allocation of rice is 30 kg for each beneficiary. The projected per person food is 39 kg after the simulation. Districts that lag behind because of disasters get a special allocation per person, where an extra 28.43 percent allocation (2,131 MT food equivalent to Tk.77.4 million) will be needed over the following years.

**Table 7.5 Scenario for GR (Food)**

| Selected disaster-prone districts | Actual | | Projected | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2015/16 | | 2016/17 | | 2017/18 | | 2018/19 | |
| | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) |
| C. Nawabganj | 0.09 | 6,667 | 0.10 | 7,441 | 0.11 | 8,351 | 0.13 | 9,408 |
| Kurigram | 0.39 | 28,333 | 0.49 | 35,524 | 0.62 | 44,766 | 0.78 | 56,598 |
| Lalmonirhat | 0.41 | 29,167 | 0.50 | 36,570 | 0.63 | 46,083 | 0.80 | 58,264 |
| Bhola | 0.63 | 45,000 | 0.78 | 56,557 | 0.98 | 71,440 | 1.25 | 90,538 |
| Barguna | 0.14 | 10,000 | 0.17 | 12,568 | 0.22 | 15,876 | 0.28 | 20,120 |
| Patuakhali | 0.21 | 15,000 | 0.23 | 16,615 | 0.26 | 18,509 | 0.29 | 20,696 |
| Satkhira | 0.19 | 13,333 | 0.24 | 17,139 | 0.30 | 22,140 | 0.40 | 28,692 |
| Bagerhat | 0.13 | 9,167 | 0.16 | 11,784 | 0.21 | 15,222 | 0.27 | 19,727 |
| Cox's Bazar | 0.55 | 39,167 | 0.66 | 47,869 | 0.81 | 58,807 | 1.00 | 72,490 |
| Faridpur | 0.24 | 17,500 | 0.30 | 21,942 | 0.38 | 27,650 | 0.48 | 34,958 |
| Sunamganj | 0.22 | 15,667 | 0.24 | 17,384 | 0.27 | 19,400 | 0.30 | 21,730 |
| Khulna | 0.29 | 20,833 | 0.33 | 23,672 | 0.37 | 27,048 | 0.43 | 31,019 |
| Total | 3.48 | 249,834 | 4.20 | 305,065 | 5.17 | 375,292 | 6.40 | 464,240 |

**7.3.6 TR (Cash).** This programme supports vulnerable people during and immediately after disasters. The simulation increases the per person allocation of food, and on that basis determines the projected allocation required. Table 7.7 outlines the way in which the simulation is conducted depending on the climate-vulnerable portion of a given district population. Districts that lag behind because of disasters will get this special per person allocation. The extra 14.5 percent growth of beneficiaries and allocation is required for the following years.

**Table 7.6 TR (Cash) programme projections by district**

| Selected disaster-prone districts | Actual | | Projected | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2015/16 | | 2016/17 | | 2017/18 | | 2018/19 | |
| | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) |
| C. Nawabganj | 0.55 | 12,414 | 0.58 | 13,087 | 0.66 | 14,919 | 0.80 | 18,178 |
| Kurigram | 0.25 | 5,671 | 0.30 | 6,759 | 0.38 | 8,637 | 0.52 | 11,714 |
| Lalmonirhat | 0.59 | 13,254 | 0.70 | 15,798 | 0.89 | 20,187 | 1.21 | 27,377 |
| Bhola | 0.82 | 18,397 | 0.97 | 21,983 | 1.24 | 28,157 | 1.69 | 38,271 |
| Barguna | 0.47 | 10,558 | 0.56 | 12,616 | 0.71 | 16,159 | 0.97 | 21,964 |
| Patuakhali | 0.81 | 18,085 | 0.84 | 18,913 | 0.95 | 21,403 | 1.15 | 25,898 |
| Satkhira | 0.93 | 20,872 | 1.13 | 25,538 | 1.48 | 33,441 | 2.05 | 46,411 |
| Bagerhat | 1.01 | 22,593 | 1.22 | 27,644 | 1.60 | 36,198 | 2.22 | 50,238 |
| Cox's Bazar | 0.96 | 21,378 | 1.10 | 24,805 | 1.37 | 30,911 | 1.81 | 40,943 |
| Faridpur | 0.90 | 20,120 | 1.06 | 23,982 | 1.35 | 30,644 | 1.84 | 41,559 |
| Sunamganj | 1.04 | 23,354 | 1.08 | 24,469 | 1.23 | 27,738 | 1.49 | 33,618 |
| Khulna | 1.16 | 25,990 | 1.23 | 27,924 | 1.43 | 32,399 | 1.77 | 40,132 |
| Total | 9.51 | 212,686 | 10.77 | 243,518 | 13.30 | 300,793 | 17.52 | 396,303 |

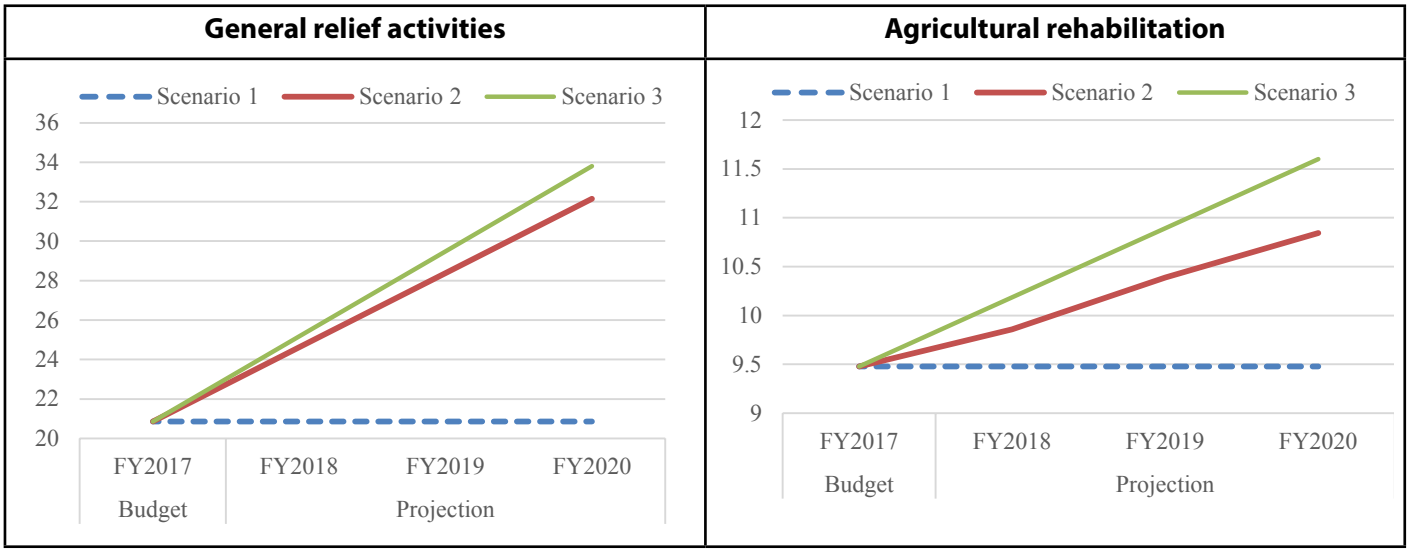
**7.3.7 FFW.** This programme is implemented in rural areas during lean periods to support poor households in exchange for labour on rural public works, thereby assisting the most climate-affected people in vulnerable districts. The simulation increases the per person allocation of food, and this increase yields the projected allocation required. Table 7.8 presents the simulation as it was conducted according to the climate-vulnerable portion of a given district population. The DPDs will get the special allocation per person. An extra 19 percent of growth is needed for beneficiaries and allocation over the following years.

**Table 7.7 FFW projections by district**

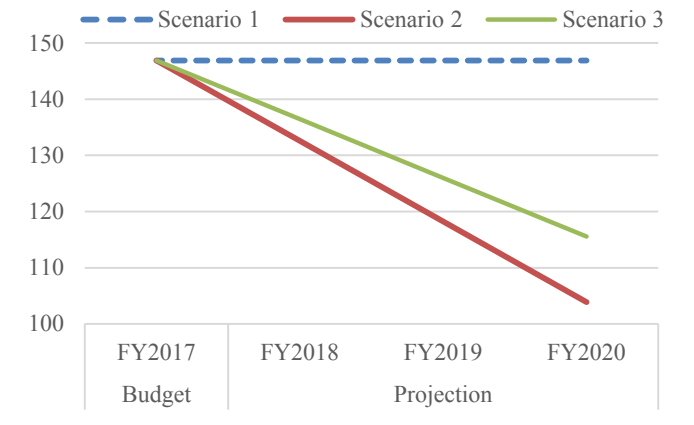
| Selected disaster-prone districts | Actual | | Projected | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2015/16 | | 2016/17 | | 2017/18 | | 2018/19 | |
| | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) |
| C. Nawabganj | 0.47 | 10,625 | 0.51 | 11,648 | 0.64 | 14,470 | 0.77 | 17,325 |
| Kurigram | 0.32 | 7,068 | 0.39 | 8,722 | 0.53 | 12,037 | 0.71 | 16,070 |
| Lalmonirhat | 0.50 | 11,125 | 0.61 | 13,729 | 0.84 | 18,946 | 1.12 | 25,295 |
| Bhola | 0.68 | 15,264 | 0.83 | 18,883 | 1.15 | 26,115 | 1.55 | 34,944 |
| Barguna | 0.72 | 16,082 | 0.88 | 19,895 | 1.22 | 27,514 | 1.63 | 36,817 |
| Patuakhali | 0.69 | 15,367 | 0.74 | 16,718 | 0.91 | 20,627 | 1.08 | 24,524 |
| Satkhira | 0.76 | 16,977 | 0.95 | 21,488 | 1.34 | 30,333 | 1.83 | 41,457 |
| Bagerhat | 0.80 | 17,996 | 1.01 | 22,778 | 1.42 | 32,154 | 1.94 | 43,945 |
| Cox's Bazar | 0.92 | 20,550 | 1.09 | 24,710 | 1.47 | 33,318 | 1.92 | 43,428 |
| Faridpur | 0.70 | 15,675 | 0.86 | 19,344 | 1.18 | 26,695 | 1.58 | 35,640 |
| Sunamganj | 0.87 | 19,415 | 0.94 | 21,160 | 1.16 | 26,149 | 1.38 | 31,141 |
| Khulna | 0.73 | 16,399 | 0.81 | 18,310 | 1.02 | 23,116 | 1.24 | 28,145 |
| Total | 8.16 | 182,543 | 9.61 | 217,385 | 12.89 | 291,474 | 16.75 | 378,731 |

**7.3.8 Third scenario best serves policy?** All programmes except OMS, CLP and One House One Farm show that both the second and third scenarios for the three consecutive FYs display an increasing trend. The third scenario suggests some reason to expect that disaster management might be integrated in programme budgetary allocation. The third scenario demonstrates a positive sign that group action in disaster management might be accounted for in fund allocation. Therefore, this scenario could best serve government policy. Programme simulations with negative allocation projections and no growth, on the other hand, suggest the value of medium-term allocations.

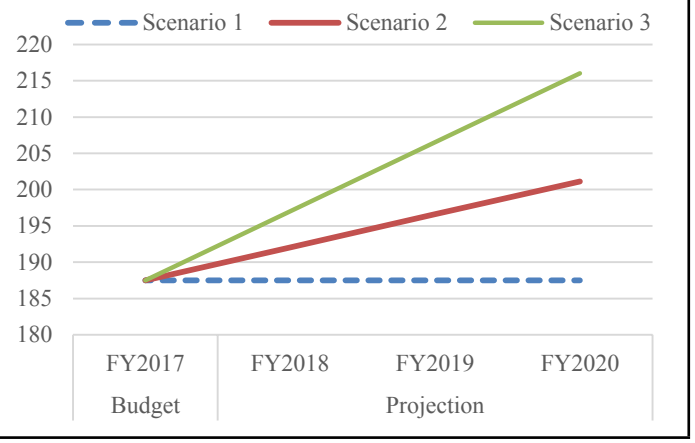
**Figure 7.2 Medium-term budgetary implications for ASPs (million US$)**



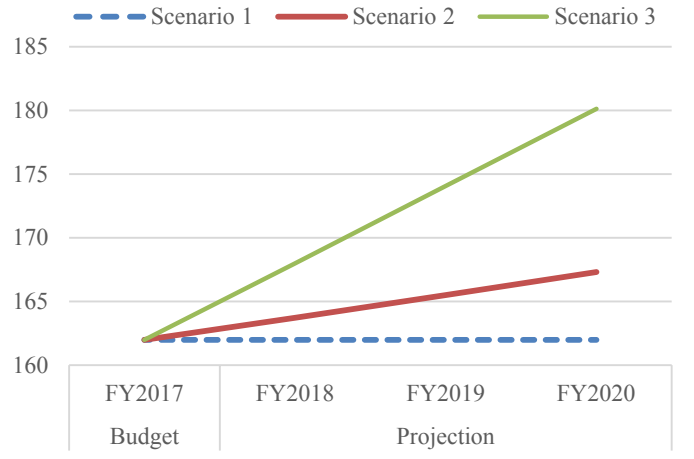
**OMS**



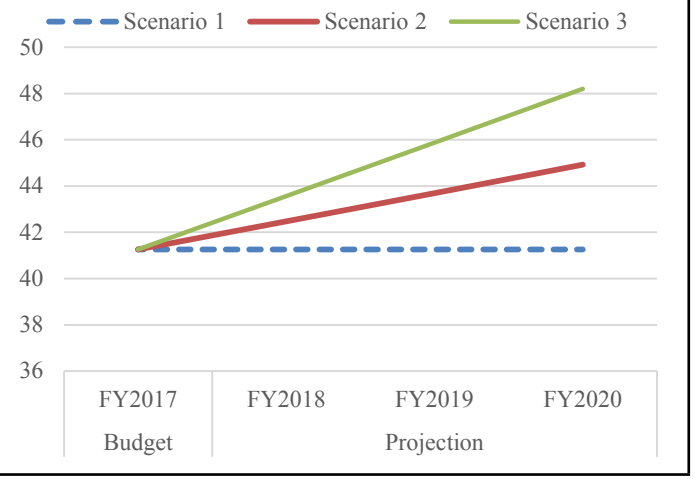

**VGF**



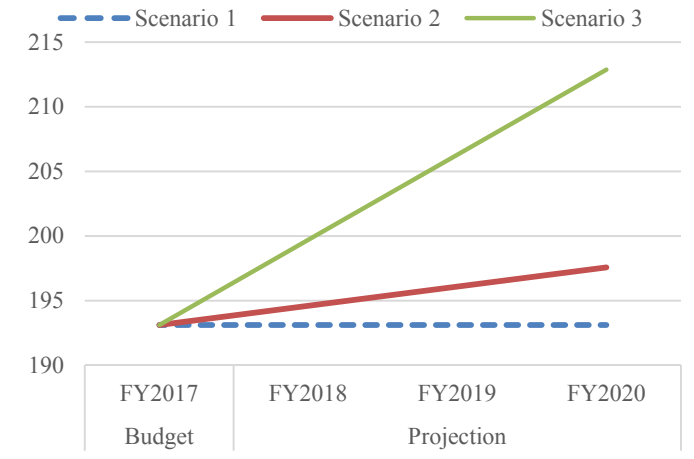

**TR**



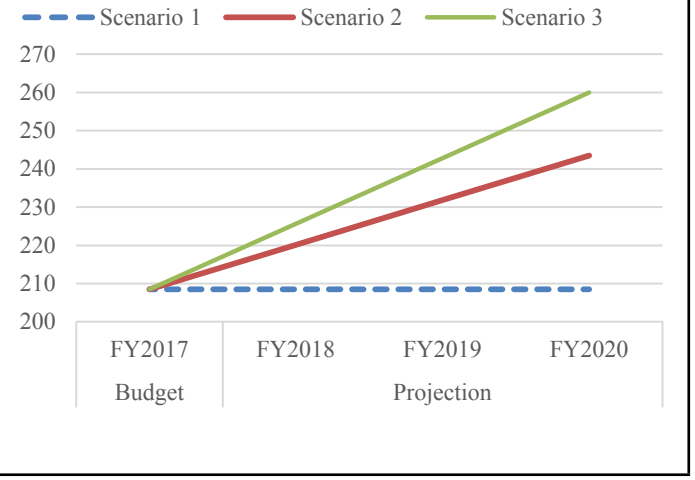

**GR**



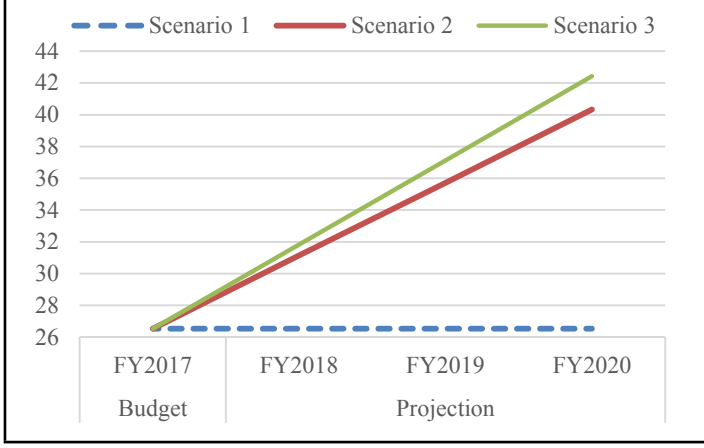

**FFW**



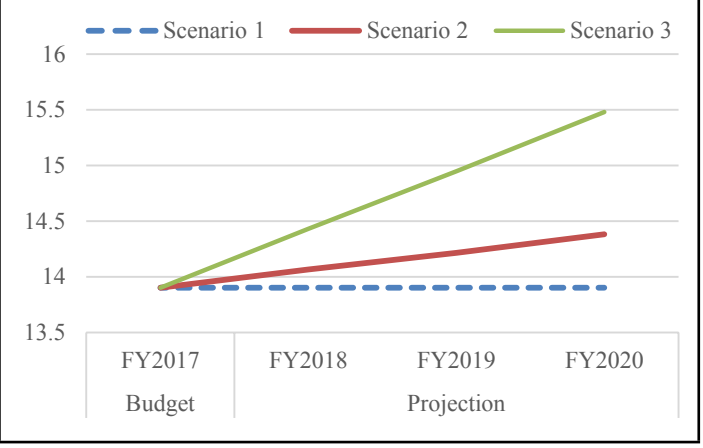

**EGPP**



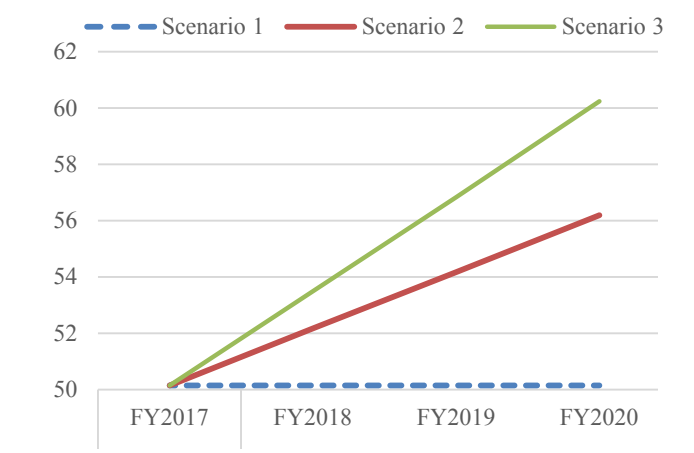
**Haor Infrastructure and livelihood Development**



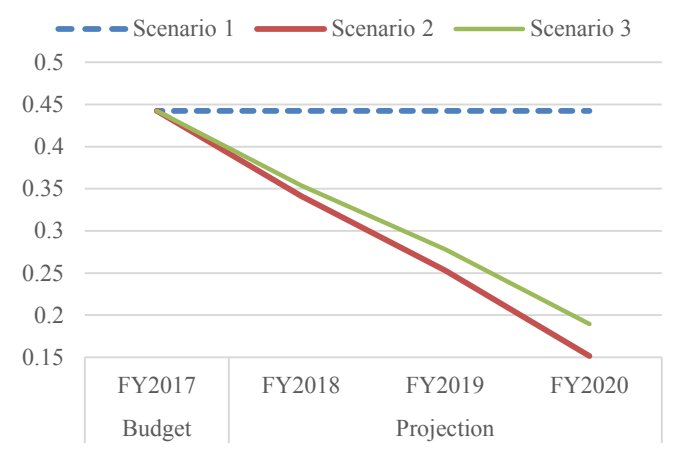

**RERM**



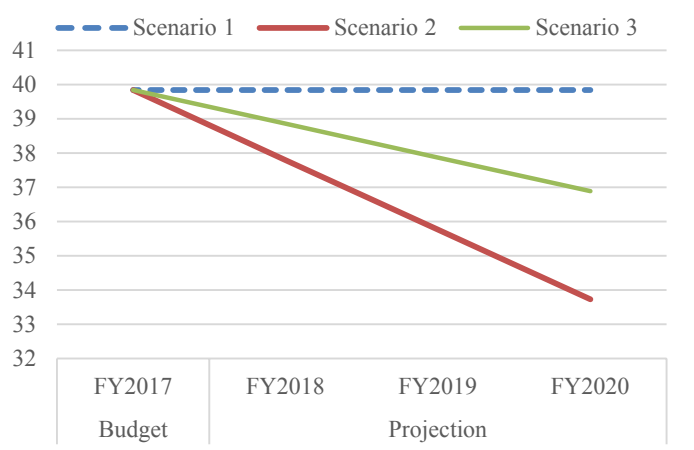

**Emergency 2007 Cyclone Recovery and Restoration**



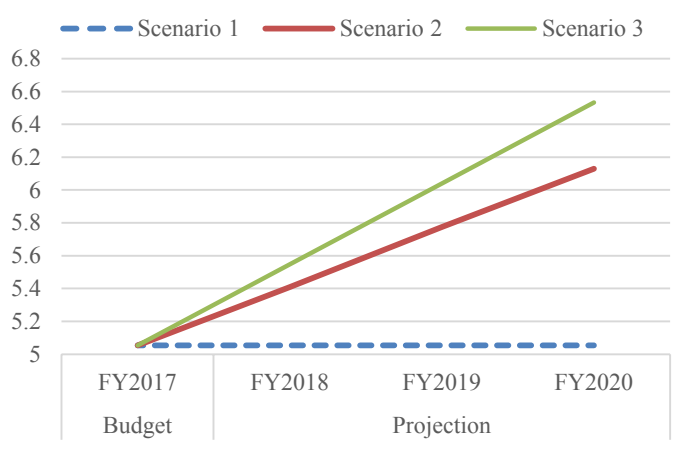

**CLP**

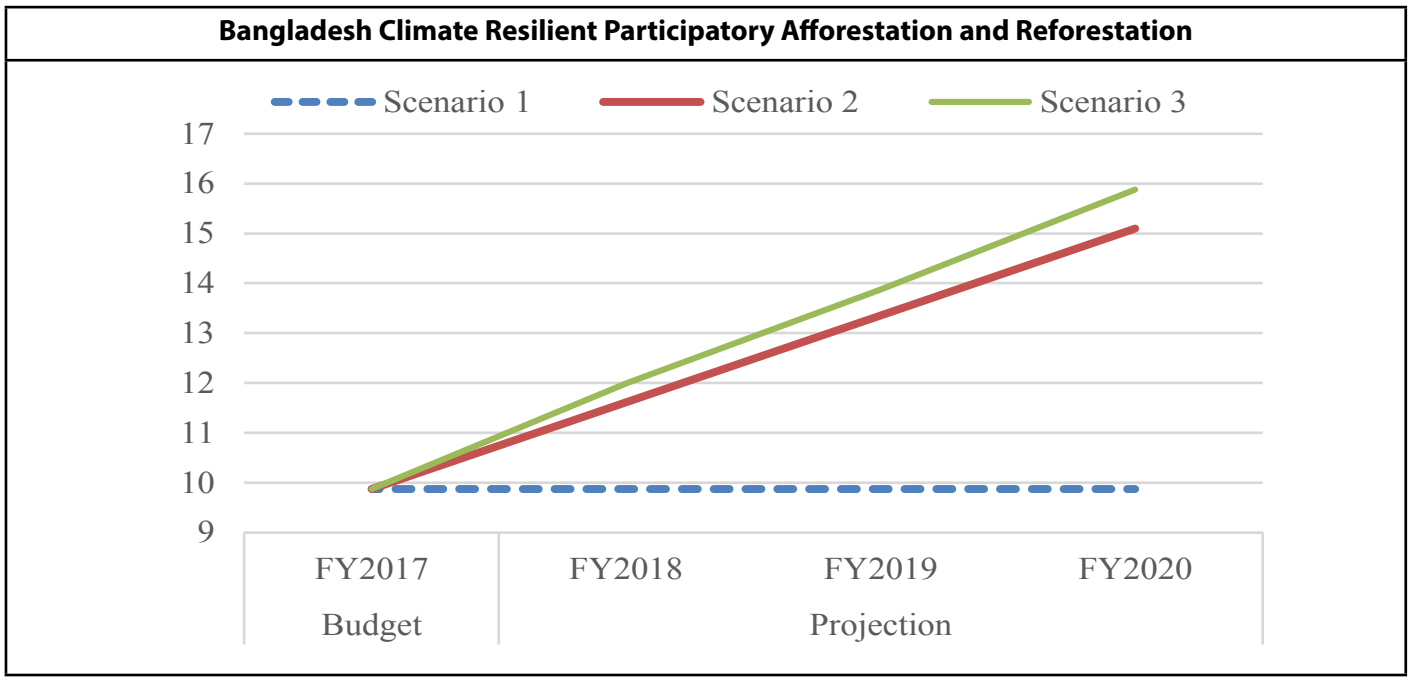



**One House One Farm**




**Rural Livelihood (2nd Phase)**






## 7.4 Gender-based budgetary implications

**7.4.1 Women's share in selected SSNPs.** The figures in Table 7.9 are taken from the MTBF document and the related circular of selected SSNPs. The simulation involves seven SSNPs in the types of scenario described in the earlier subsections. The women-related simulation differs slightly among the FFW, TR, VGF and GR programmes. The FFW, TR, VGF and GR scenarios are simulated for the disaster-prone districts as defined for this particular study.[37] The women's share for the different SSNPs is presented in Table 7.9. The MTBF, Gender Budget Report 2016/17 and programme-related circulars mentioned the gender share. In reality, however, the study found that some SSNPs (e.g. EGPP and VGF) have different shares, as indicated in the circulars or MTBF documents. Field-level observations of the women's share is used to shape the simulation from the gender perspective.

**Table 7.8 Women's share in selected SSNPs (%)**

| SSN programmes | MTBF and circulars | Field observations |
|---|---|---|
| VGF | 30 | 50 |
| GR | 33 | 33 |
| EGPP | 45 | 70 |
| TR | 30 | 30 |
| FFW | 30 | 30 |
| VGD | 100 | 100 |
| Maternity allowances for poor lactating mothers | 100 | 100 |

**7.4.2 Three projections in each of three scenarios, two general programme types.** The five major SSNPs (VGD, VGF, MA, TR, and EGPP) are used in the gender-related simulations. In each case the projections include three scenarios: (1) no expenditure growth; (2) historical growth; and (3) historical growth plus disaster-vulnerable weighted. The three scenarios generate three different projections for each of the three following FYs. Two general

[37] Twelve disaster-prone and climate-vulnerable districts.

types of programme are simulated: (1) fully allocated for women; and (2) partially allocated for women. VGD and Maternity Allowance are fully allocated for women, whereas the other five SSNPs (VGF, GR, TR, FFW and EGPP) only partially cover women beneficiaries.

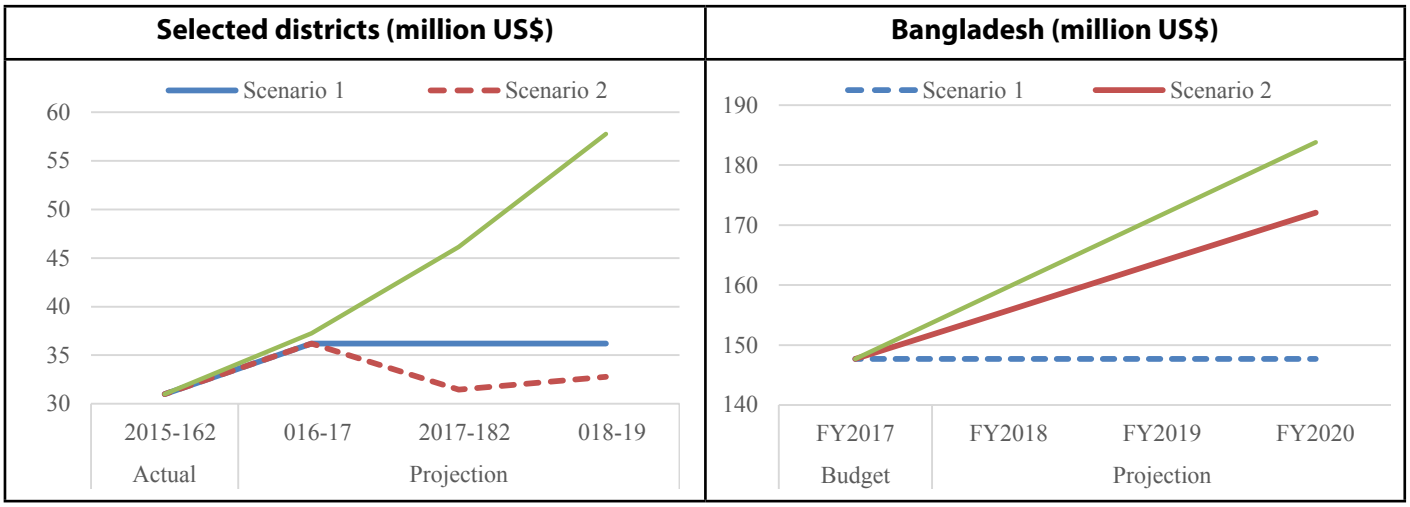
**7.4.3 VGD is women focused.** VGD is women-focused, covering a greater number of beneficiaries than any other SSNP. (In FY 2016/17, this programme targeted a total of 1.2 million beneficiaries.) Therefore, in the third VGD simulation scenario it is per capita expenditure, rather than simple coverage, that is increased for disaster-prone districts. The results demonstrate that the expected allocation after simulation increases by about 30 percent, to US$36.18 million. Per capita expenditure is expected to increase to US$216 where US$166 is distributed equally to each beneficiary. The greatest additional allocation would be required in Kurigram District, and the lowest in Chapai Nawabganj.

**Table 7.9 Scenario for VGD**

| Selected disaster-prone districts | Actual | | Projected | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2015/16 | | 2016/17 | | 2017/18 | | 2018/19 | |
| | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) |
| C. Nawabganj | 1.26 | 7,476 | 1.39 | 8,363 | 1.58 | 9,528 | 1.82 | 10,939 |
| Kurigram | 4.45 | 26,498 | 5.53 | 33,292 | 7.06 | 42,518 | 9.08 | 54,671 |
| Lalmonirhat | 1.62 | 9,621 | 2.01 | 12,088 | 2.56 | 15,438 | 3.30 | 19,850 |
| Bhola | 2.17 | 12,936 | 2.70 | 16,292 | 3.46 | 20,855 | 4.46 | 26,880 |
| Barguna | 1.84 | 10,946 | 2.29 | 13,786 | 2.93 | 17,647 | 3.78 | 22,745 |
| Patuakhali | 3.07 | 18,275 | 3.37 | 20,290 | 3.81 | 22,947 | 4.34 | 26,152 |
| Satkhira | 2.97 | 17,661 | 3.78 | 22,748 | 4.95 | 29,772 | 6.52 | 39,224 |
| Bagerhat | 2.70 | 16,080 | 3.44 | 20,712 | 4.50 | 27,107 | 5.93 | 35,713 |
| Cox's Bazar | 2.26 | 13,464 | 2.74 | 16,490 | 3.41 | 20,538 | 4.28 | 25,759 |
| Faridpur | 2.55 | 15,183 | 3.17 | 19,076 | 4.05 | 24,362 | 5.20 | 31,326 |
| Sunamganj | | - | 3.16 | 19,091 | 3.58 | 21,628 | 4.08 | 24,692 |
| Khulna | 3.27 | 19,443 | 3.68 | 22,143 | 4.27 | 25,677 | 4.98 | 29,999 |
| Total | 28.14 | 167,583 | 37.25 | 224,371 | 46.16 | 278,017 | 57.77 | 347,950 |

**7.4.4 Further support for the third scenario.** An increasing trend is also found for both second and third scenarios for the three subsequent FYs with projected VGD allocation for the entire country. The third scenario shows a positive probability for integrating disaster management in budgetary allocation. Therefore, as with all programmes except OMS, CLP and One House One Farm (see 7.3.8, above) the third scenarios might best serve government policy.

**Figure 7.3 Medium-term budgetary implications for VGD**

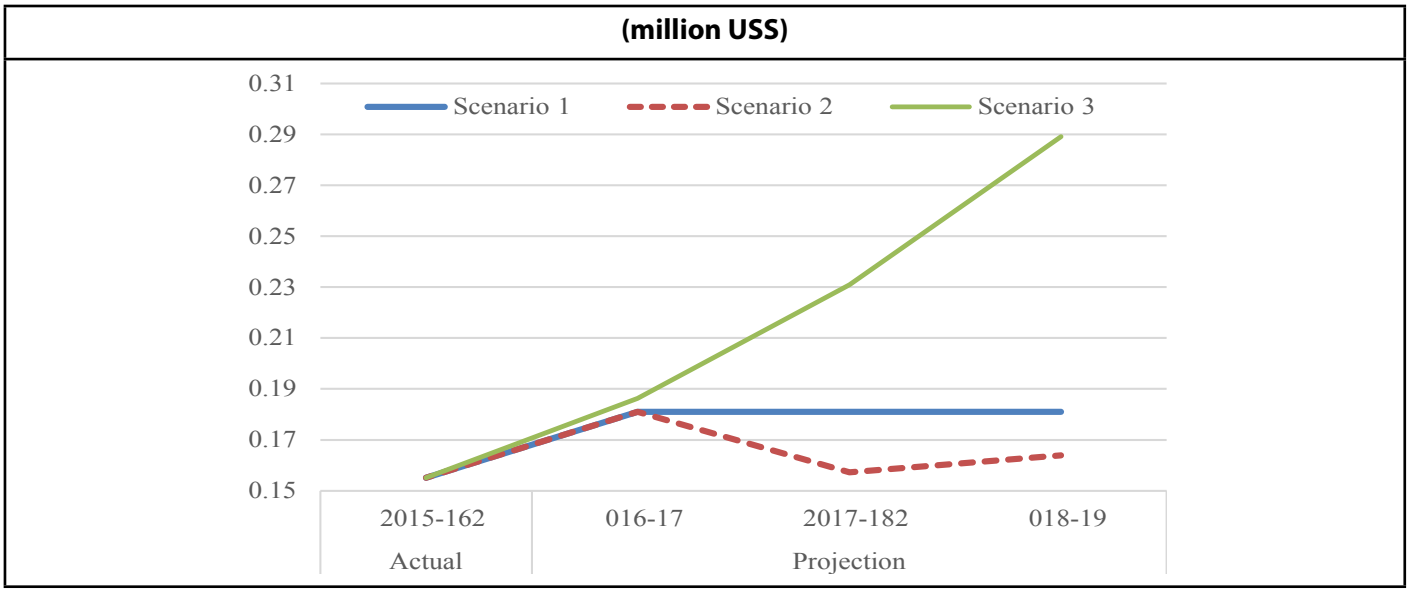



**7.4.5 Women-sensitive SP programme with benefits for poverty reduction, DRR and CCA.** MoWCA's maternity allowances for poor lactating mothers is a women-sensitive SP programme with benefits for poverty reduction, DRR and CCA. The simulation emphasizes both the increase of per person allocation and the number of beneficiaries. The percentage of climate-vulnerable population for different districts is used as a weight in simulating the actual budget. The per person expense is increased from US$6.32 to US$8.11 for disaster-prone districts. The projected beneficiaries are increased by the above-mentioned weight. About 7.02 percent of beneficiaries are added in the simulation incorporating the vulnerability weight. Similarly, the 37.45 percent allocation is increased in simulations for most of the DPDs.

**Table 7.10 Scenario for maternity allowances for poor lactating mothers**

| Selected disaster-prone districts | Actual | | Projected | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2015/16 | | 2016/17 | | 2017/18 | | 2018/19 | |
| | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) | Allocation (million US$) | Beneficiaries (persons) |
| C. Nawabganj | 0.009 | 1,350 | 0.010 | 1,510 | 0.011 | 1,721 | 0.013 | 1,975 |
| Kurigram | 0.014 | 2,213 | 0.018 | 2,780 | 0.023 | 3,551 | 0.029 | 4,566 |
| Lalmonirhat | 0.009 | 1,395 | 0.011 | 1,753 | 0.014 | 2,238 | 0.018 | 2,878 |
| Bhola | 0.013 | 2,040 | 0.016 | 2,569 | 0.021 | 3,289 | 0.027 | 4,239 |
| Barguna | 0.008 | 1,302 | 0.010 | 1,640 | 0.013 | 2,099 | 0.017 | 2,705 |
| Patuakhali | 0.014 | 2,134 | 0.015 | 2,369 | 0.017 | 2,680 | 0.020 | 3,054 |
| Satkhira | 0.015 | 2,414 | 0.020 | 3,109 | 0.026 | 4,069 | 0.034 | 5,361 |
| Bagerhat | 0.014 | 2,254 | 0.019 | 2,903 | 0.024 | 3,800 | 0.032 | 5,006 |
| Cox's Bazar | 0.014 | 2,172 | 0.017 | 2,660 | 0.021 | 3,313 | 0.027 | 4,155 |
| Faridpur | 0.016 | 2,430 | 0.020 | 3,053 | 0.025 | 3,899 | 0.032 | 5,014 |
| Sunamganj | 0.016 | 2,465 | 0.018 | 2,742 | 0.020 | 3,106 | 0.023 | 3,546 |
| Khulna | 0.013 | 2,108 | 0.015 | 2,401 | 0.018 | 2,784 | 0.021 | 3,252 |
| Total | 0.155 | 24,277 | 0.188 | 29,489 | 0.233 | 36,549 | 0.292 | 45,751 |

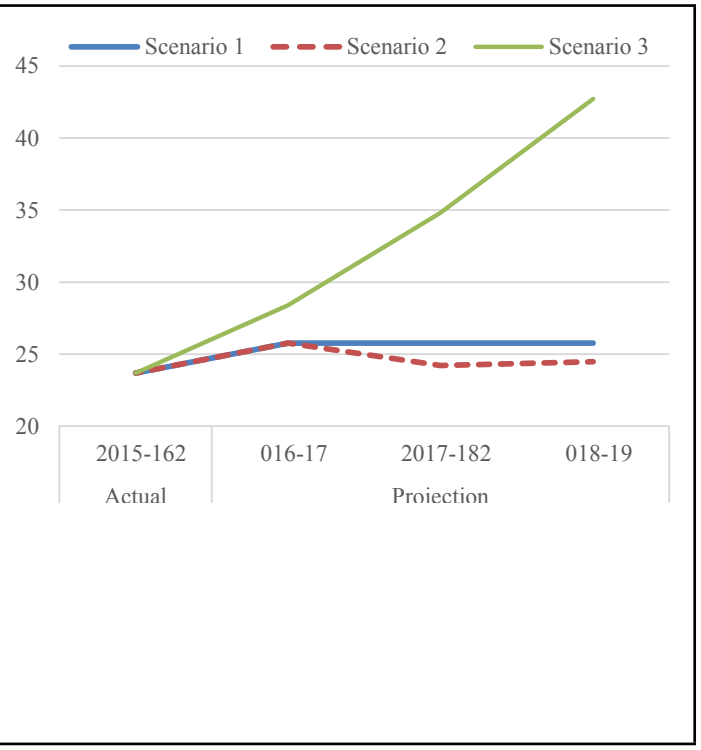
**Figure 7.4 Medium-term budgetary scenarios for maternity allowance in selected districts**




**7.4.6 EGPP.** The simulated projections for this programme show that overall allocation for the 12 districts would increase after weighting by both disaster-proneness and historical growth. The greatest allocations would go to Kurigram and Satkhira districts, whereas the least projected allocation goes to Barguna District. Though 45 percent of EGPP beneficiaries overall are women, field observations indicate that actual women beneficiaries' amount to about 70 percent in the selected districts. The simulation therefore indicates this programme would be of benefit to more women in disaster-prone and climate-vulnerable areas.

**Table 7.11 Scenario for EGPP (million US$)**

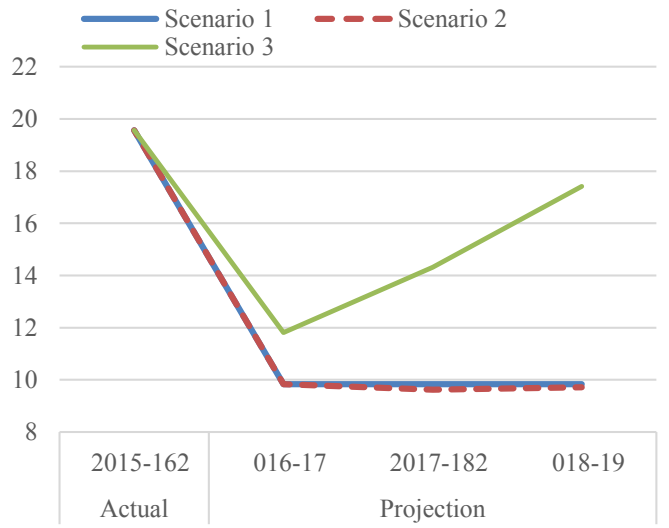
| Selected disaster-prone districts | Actual allocation | Projected allocation | | |
|---|---|---|---|---|
| | 2015/16 | 2016/17 | 2017/18 | 2018/19 |
| C. Nawabganj | 1.27 | 1.39 | 1.56 | 1.75 |
| Kurigram | 4.39 | 5.42 | 6.82 | 8.57 |
| Lalmonirhat | 1.28 | 1.58 | 1.99 | 2.50 |
| Bhola | 1.97 | 2.44 | 3.07 | 3.87 |
| Barguna | 0.63 | 0.78 | 0.98 | 1.24 |
| Patuakhali | 1.31 | 1.42 | 1.58 | 1.76 |
| Satkhira | 3.14 | 3.98 | 5.13 | 6.61 |
| Bagerhat | 1.19 | 1.51 | 1.95 | 2.51 |
| Cox's Bazar | 2.23 | 2.69 | 3.29 | 4.03 |
| Faridpur | 1.96 | 2.42 | 3.04 | 3.82 |
| Sunamganj | 2.03 | 2.22 | 2.47 | 2.75 |
| Khulna | 2.29 | 2.56 | 2.92 | 3.33 |
| Total | 23.68 | 28.40 | 34.82 | 42.73 |



**7.4.7 VGF.** VGF operates supplementary food programmes that are certainly needed in most DPDs. Women in Kurigram, Satkhira, Patuakhali and Bagerhat districts would receive higher allocations. Though the projected budget figures for FY2016/17 are slightly lower than those of the actual FY2015/16 VGF budget, the projections trend higher after FY2016/17.

**Table 7.12 Scenario for VGF (million US$)**

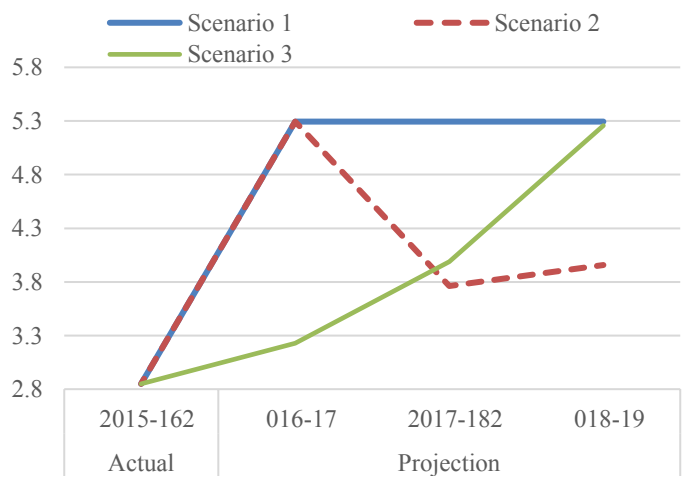
| Selected disaster-prone districts | Actual allocation | Projected allocation | | |
|---|---|---|---|---|
| | 2015/16 | 2016/17 | 2017/18 | 2018/19 |
| C. Nawabganj | 0.94 | 0.52 | 0.58 | 0.65 |
| Kurigram | 3.81 | 2.38 | 2.97 | 3.71 |
| Lalmonirhat | 0.63 | 0.39 | 0.49 | 0.61 |
| Bhola | 1.01 | 0.63 | 0.79 | 0.99 |
| Barguna | 1.05 | 0.66 | 0.83 | 1.03 |
| Patuakhali | 2.69 | 1.48 | 1.64 | 1.81 |
| Satkhira | 2.57 | 1.64 | 2.10 | 2.69 |
| Bagerhat | 1.46 | 0.93 | 1.20 | 1.53 |
| Cox's Bazar | 1.54 | 0.94 | 1.14 | 1.39 |
| Faridpur | 0.99 | 0.62 | 0.77 | 0.97 |
| Sunamganj | 1.34 | 0.74 | 0.82 | 0.90 |
| Khulna | 1.55 | 0.88 | 0.99 | 1.12 |
| Total | 19.57 | 11.81 | 14.32 | 17.41 |




**7.4.8 TR (Cash).** This programme is more effective than TR (Food) because TR (Cash) can easily be converted to labour wages for rural women, especially in climate-vulnerable and disaster-prone areas. The above table shows an increasing trend in budgetary expenditure. In this particular programme, the greatest allocations go to Satkhira, Bagerhat and Faridpur districts. Kurigram District sees the least allocation. These simulated outcomes are consistent with field study findings that suggested this was a fair relative budget allocation, in terms of administering the appropriate programme in the appropriate districts according to their respective vulnerability to adverse climatic phenomena and disasters.

### Table 7.13 Scenario for TR (Cash), million US$

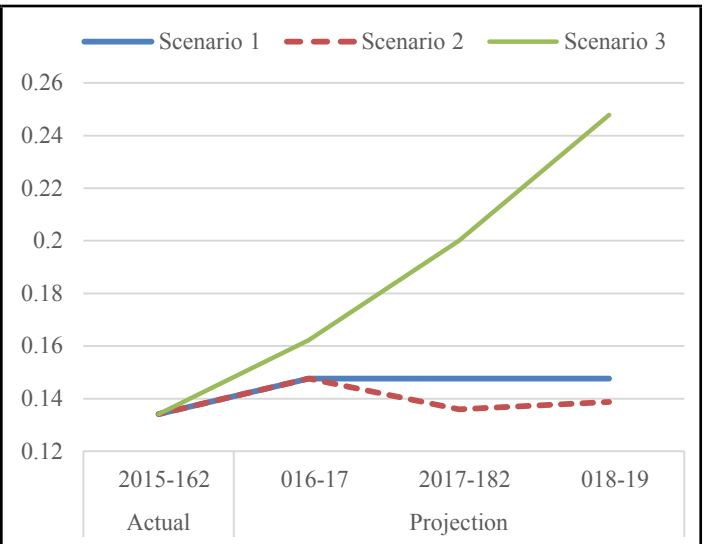
| Selected disaster-prone districts | Actual allocation | Projected allocation | | |
|---|---|---|---|---|
| | 2015/16 | 2016/17 | 2017/18 | 2018/19 |
| C. Nawabganj | 0.17 | 0.17 | 0.20 | 0.24 |
| Kurigram | 0.08 | 0.09 | 0.11 | 0.16 |
| Lalmonirhat | 0.18 | 0.21 | 0.27 | 0.36 |
| Bhola | 0.25 | 0.29 | 0.37 | 0.51 |
| Barguna | 0.14 | 0.17 | 0.21 | 0.29 |
| Patuakhali | 0.24 | 0.25 | 0.28 | 0.34 |
| Satkhira | 0.28 | 0.34 | 0.44 | 0.62 |
| Bagerhat | 0.30 | 0.37 | 0.48 | 0.67 |
| Cox's Bazar | 0.29 | 0.33 | 0.41 | 0.54 |
| Faridpur | 0.27 | 0.32 | 0.41 | 0.55 |
| Sunamganj | 0.31 | 0.32 | 0.37 | 0.45 |
| Khulna | 0.35 | 0.37 | 0.43 | 0.53 |
| Total | 2.85 | 3.23 | 3.99 | 5.26 |




**7.4.9 GR (Cash).** Based on post-disaster assessments by upazilas, GR (Cash) supplements post-disaster relief. The greatest projected allocations go to Bhola, Kurigram, Lalmonirhat and Barguna districts (Table 7.16). That is because the programme's previous allocations went mostly to those areas, given that they are those most frequently affected by disasters. US$38 is distributed to each individual beneficiary directly affected by disaster. In the simulation, GR (Cash) increases its allocation for the projected periods.

### Table 7.14 Scenario for GR (Cash), million US$

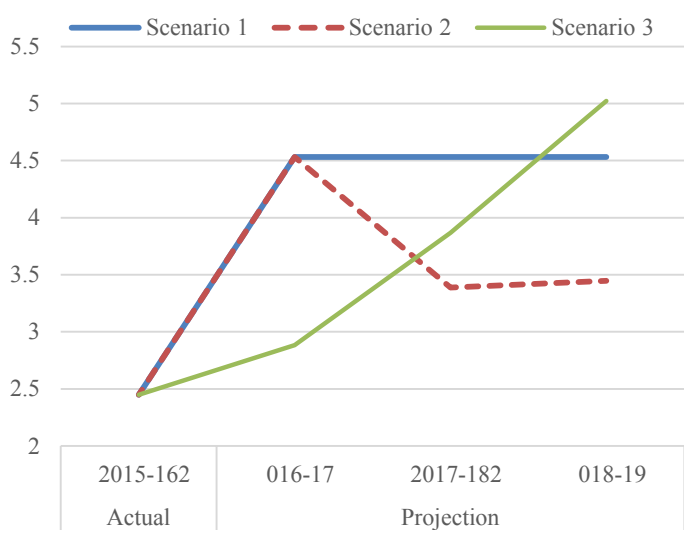
| Selected disaster-prone districts | Actual allocation | Projected allocation | | |
|---|---|---|---|---|
| | 2015/16 | 2016/17 | 2017/18 | 2018/19 |
| C. Nawabganj | 0.004 | 0.004 | 0.004 | 0.005 |
| Kurigram | 0.010 | 0.013 | 0.016 | 0.020 |
| Lalmonirhat | 0.009 | 0.012 | 0.015 | 0.019 |
| Bhola | 0.043 | 0.053 | 0.067 | 0.085 |
| Barguna | 0.008 | 0.010 | 0.012 | 0.016 |
| Patuakhali | 0.007 | 0.008 | 0.009 | 0.010 |
| Satkhira | 0.007 | 0.008 | 0.011 | 0.014 |
| Bagerhat | 0.005 | 0.006 | 0.008 | 0.010 |
| Cox's Bazar | 0.019 | 0.024 | 0.029 | 0.036 |
| Faridpur | 0.004 | 0.005 | 0.007 | 0.008 |
| Sunamganj | 0.009 | 0.010 | 0.011 | 0.012 |
| Khulna | 0.009 | 0.010 | 0.012 | 0.013 |
| Total | 0.134 | 0.162 | 0.200 | 0.248 |



**7.4.10 Money for Work.** The MFW programme is supplemented from the Government's revenue budget, which shows an increasing trend for the projected periods (table 7.17), although MFW programmes did not prove as effective as TR (Food) in the field-study areas. The greatest allocation is projected for Bagerhat, Cox's Bazar, Satkhira and Barguna, respectively, the least is projected for Kurigram District.

**Table 7.15 Scenario for Money for Work (million US$)**

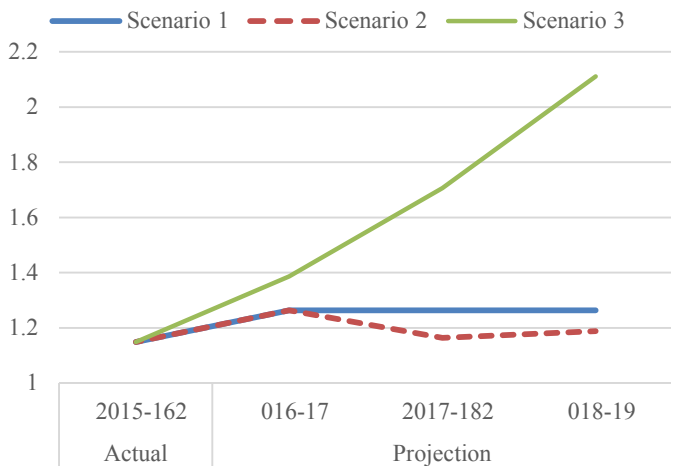
| Selected disaster-prone districts | Actual allocation | Projected allocation | | |
|---|---|---|---|---|
| | 2015/16 | 2016/17 | 2017/18 | 2018/19 |
| C. Nawabganj | 0.14 | 0.15 | 0.19 | 0.23 |
| Kurigram | 0.09 | 0.12 | 0.16 | 0.21 |
| Lalmonirhat | 0.15 | 0.18 | 0.25 | 0.34 |
| Bhola | 0.20 | 0.25 | 0.35 | 0.46 |
| Barguna | 0.22 | 0.26 | 0.36 | 0.49 |
| Patuakhali | 0.21 | 0.22 | 0.27 | 0.33 |
| Satkhira | 0.23 | 0.28 | 0.40 | 0.55 |
| Bagerhat | 0.24 | 0.30 | 0.43 | 0.58 |
| Cox's Bazar | 0.28 | 0.33 | 0.44 | 0.58 |
| Faridpur | 0.21 | 0.26 | 0.35 | 0.47 |
| Sunamganj | 0.26 | 0.28 | 0.35 | 0.41 |
| Khulna | 0.22 | 0.24 | 0.31 | 0.37 |
| Total | 2.45 | 2.88 | 3.87 | 5.02 |




**7.4.11 GR (Food).** This programme is applied during post-disaster periods, when the total allocation for the selected DPDs increases over the projected periods. Women comprise 30 percent of the beneficiaries. This programme presents effective support for women, as well as for poor households, in coping with post-disaster adversities. The greatest projected allocation goes to Bhola, Cox's Bazar, Lalmonirhat and Kurigram, whereas Chapai Nawabganj receives the least allocation.

**Table 7.16 Scenario for GR (Food), million US$**

| Selected disaster-prone districts | Actual allocation | Projected allocation | | |
|---|---|---|---|---|
| | 2015/16 | 2016/17 | 2017/18 | 2018/19 |
| C. Nawabganj | 0.03 | 0.03 | 0.04 | 0.04 |
| Kurigram | 0.13 | 0.16 | 0.20 | 0.26 |
| Lalmonirhat | 0.13 | 0.17 | 0.21 | 0.26 |
| Bhola | 0.21 | 0.26 | 0.32 | 0.41 |
| Barguna | 0.05 | 0.06 | 0.07 | 0.09 |
| Patuakhali | 0.07 | 0.08 | 0.08 | 0.09 |
| Satkhira | 0.06 | 0.08 | 0.10 | 0.13 |
| Bagerhat | 0.04 | 0.05 | 0.07 | 0.09 |
| Cox's Bazar | 0.18 | 0.22 | 0.27 | 0.33 |
| Faridpur | 0.08 | 0.10 | 0.13 | 0.16 |
| Sunamganj | 0.07 | 0.08 | 0.09 | 0.10 |
| Khulna | 0.10 | 0.11 | 0.12 | 0.14 |
| Total | 1.15 | 1.39 | 1.71 | 2.11 |

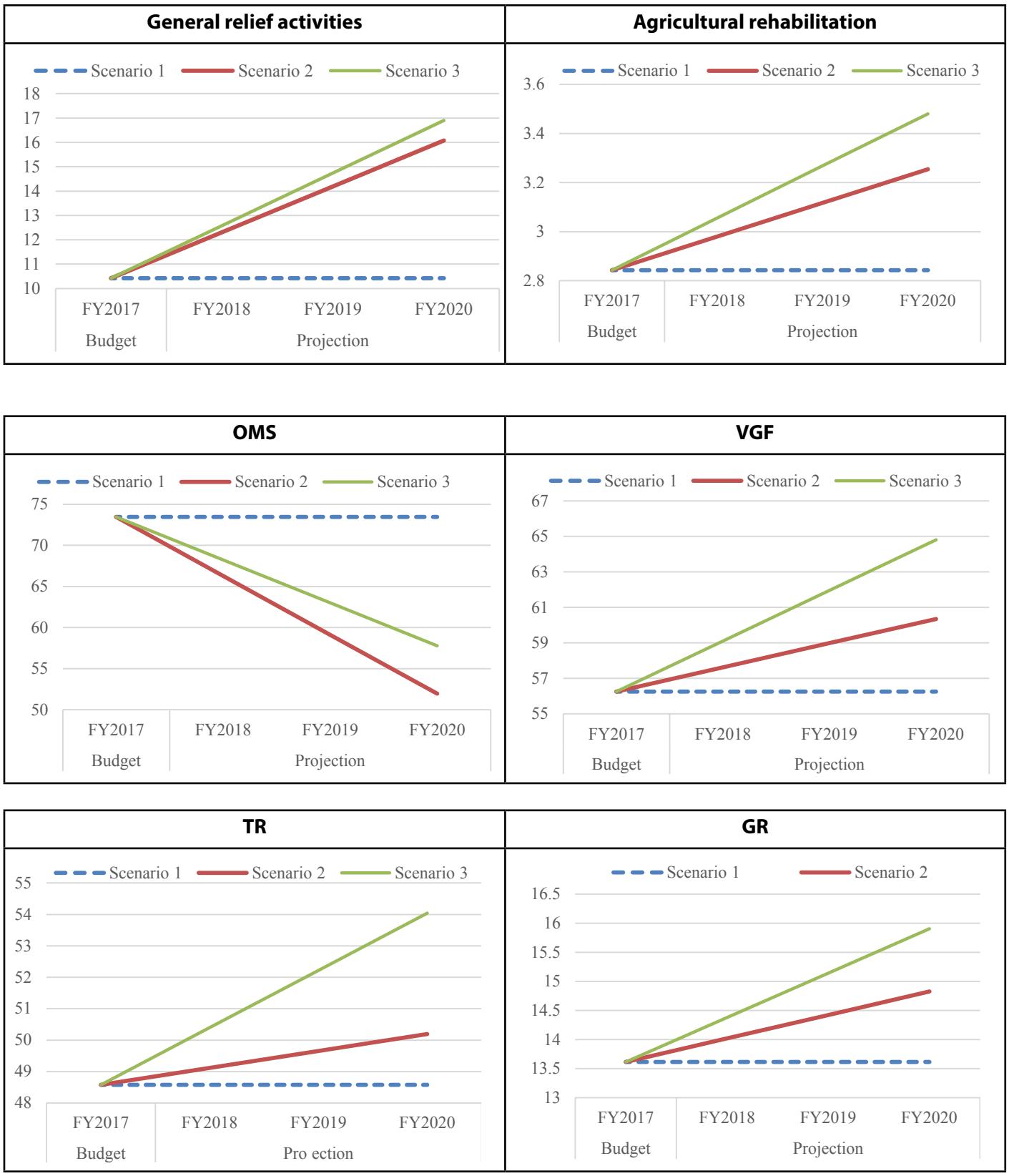



**7.4.12 Best scenario for policy purposes.** Both the second and third scenarios for the three subsequent FYs show an increasing trend in all programmes except OMS, CLP and One House One Farm (Figure 7.4).

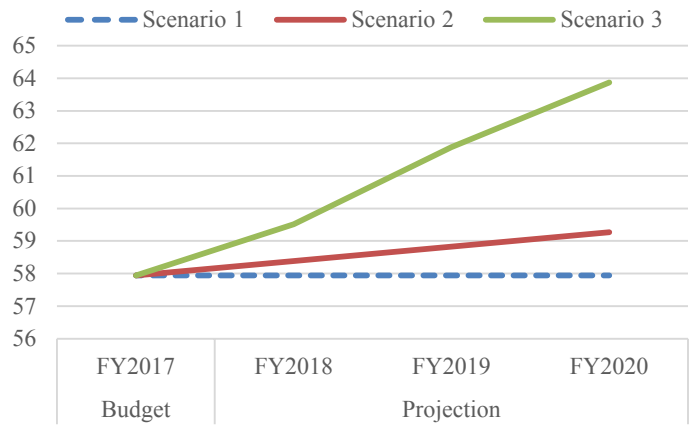
The third scenario integrated 'probability of disaster' in programme budgetary allocations. It also applied another positive weight, 'group action chance of disaster', in fund allocation. This scenario thus might be the best for government policy purposes.

For programmes with negative simulated allocations, the second scenario, which integrates 'historical growth', shows the worst scenarios. It is followed by the scenario of disaster weighting in the above three programmes, which would reduce the women's share. This indicates that the projection indicating no growth would be the best option.

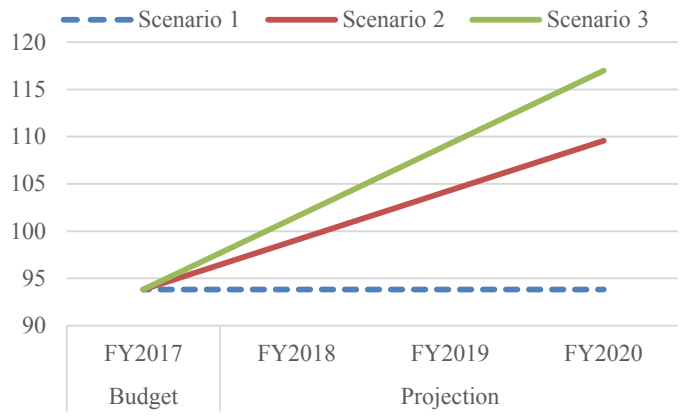
**Figure 7.5 Gender-sensitive medium-term budgetary implications for ASPs (million US$)**



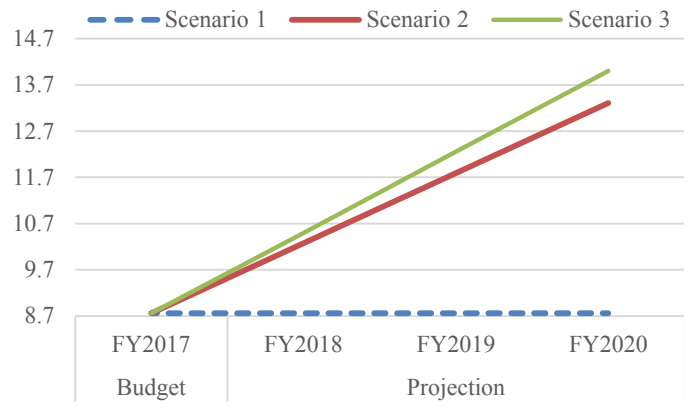
**FFW**



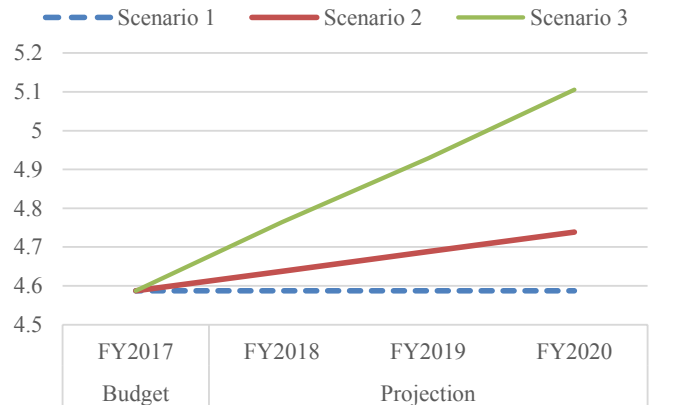

**EGPP**



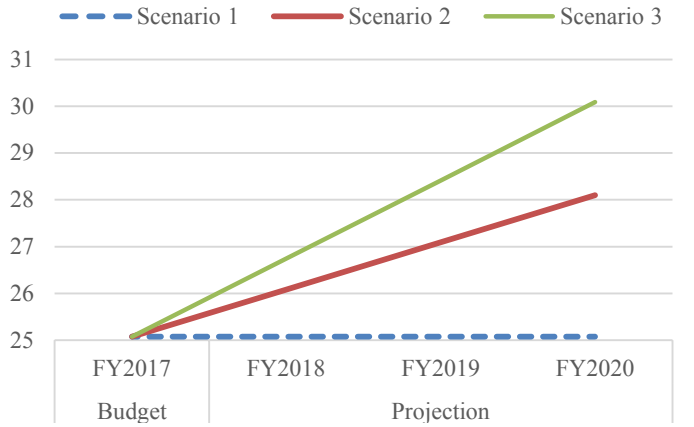

**Haor Infrastructure and livelihood Development**



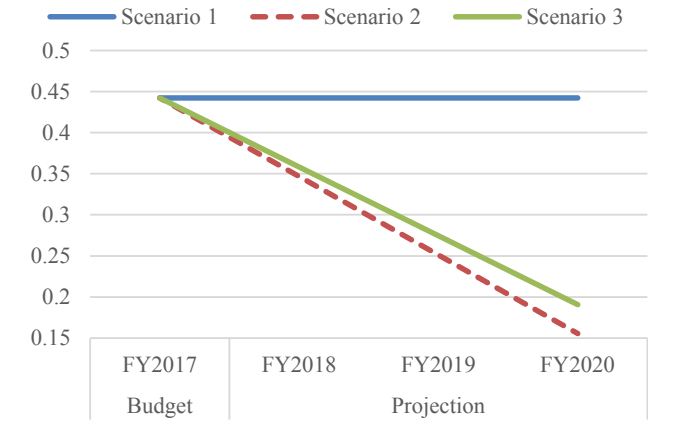

**RERM**

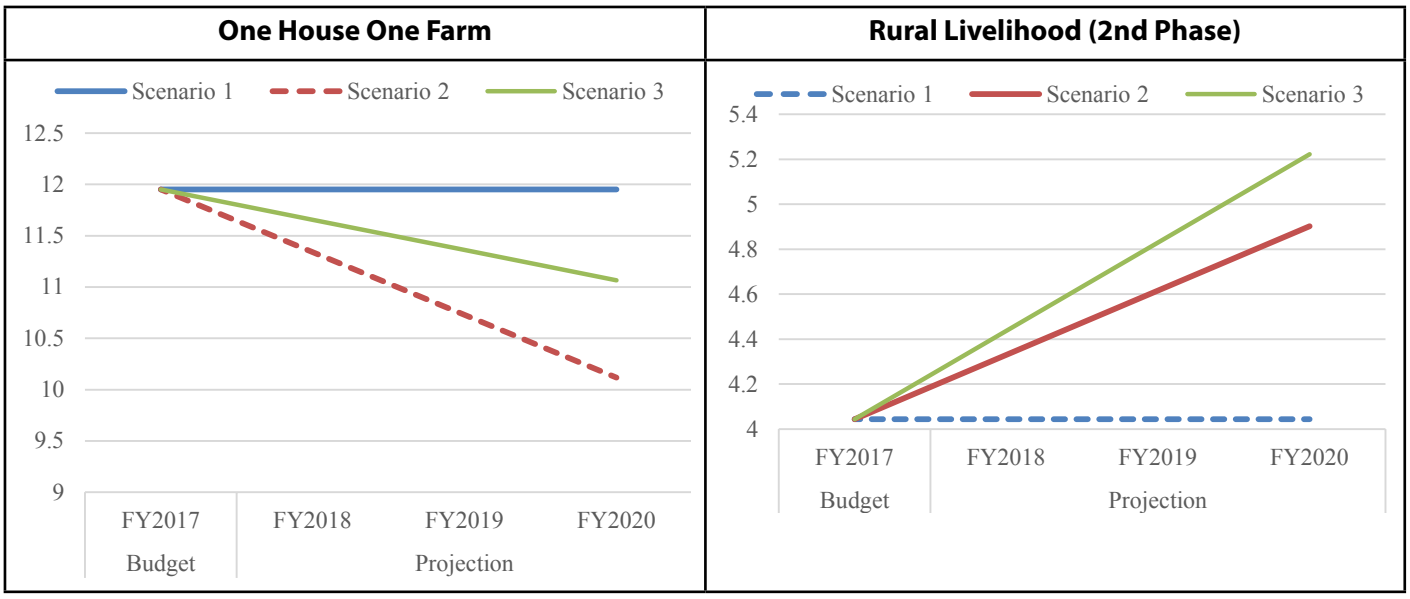


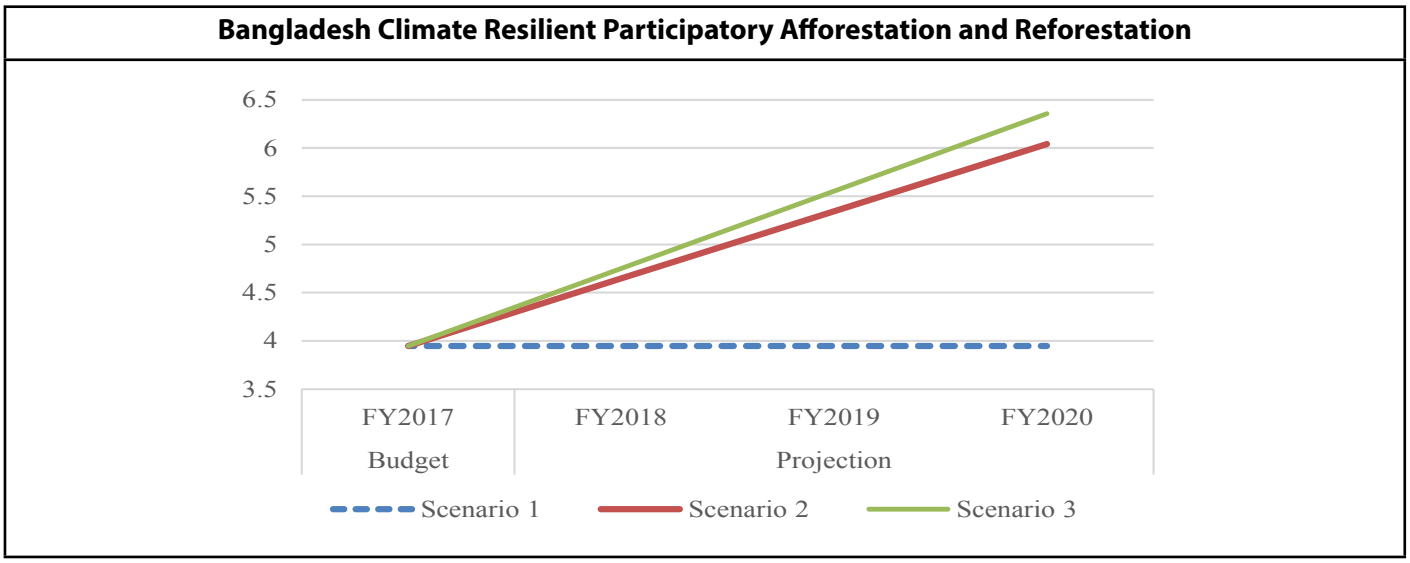

**Emergency 2007 Cyclone Recovery and Restoration**




**CLP**






**7.4.13 Increased coverage needed on part of larger national SP programmes.** The above scenarios (Figure 7.4) show that, overall, the simulations did not successfully address climate vulnerability. However, coverage by larger national SP programmes such as VGD, VGF, GR, EGPP, FFW and TR should be increased as a means of reducing such vulnerability.

## 7.5 Key observations

- Data on district-wise disaster risk and people affected by different types of disaster, in conjunction with data regarding poverty and gender issues, are needed to calculate the climate vulnerability dimension.
- Adding the climate vulnerability dimension does not greatly increase allocation as a whole. Allocation for DPDs, on the other hand, does become comparatively greater. But this can help disaster adaptation measures in those SP programmes referred to in this study to succeed in more practicable ways.
- Disaster-related programme allocations for these vulnerable districts can help to address location-specific adaptation circumstances.

- Both post-disaster and pre-disaster allocations for these disaster-related programmes should target the same people rather than other recipients.
- Local procurement of rice or wheat should be linked with food support programmes such as VGD, thereby minimizing or reducing transportation costs.

# 8. Conclusions and policy recommendations

## 8.1 Concluding remarks

**8.1.1 Study objectives revisited.** The present study has sought to present the following:

- a working definition of ASP; and
- a budgetary and expenditure framework for ASP programmes; all the while considering
- policy perspectives, institutional linkages and delivery chains, and issues of gender sensitivity.

The study has also generated simulated scenarios to better understand what expenditures will be needed if budgeting frameworks are to effectively address ASP issues. Budgets for various types of SSNP have been growing over the years.

What appear to be increasingly frequent and often more intense natural disasters and other climate change-related phenomena pose new concerns. Related policy, institutions and budgetary frameworks must come to terms with CCA, but the delivery chain from upazila to union is inadequate, and has shown a limited capacity to monitor effective outcomes.

Gaps within the delivery chain, furthermore, pose new terms of rules to regulate the system from the top to bottom.

**8.1.2 UNDP support for ADP projects that mainstream CCA and DRR.** The Government is pursuing a strategy of safeguarding current spending on ADP projects from climate-induced hazards, while using such development practices to promote adaptation co-benefits. UNDP has provided assistance to the Government in all ADP projects that mainstream both CCA and DRR, together with poverty alleviation and gender inclusion.

Considerable work remains with respect to mainstreaming climate change into the planning, programming and budgetary processes. Projects and programmes promoting climate-resilient livelihoods in Bangladesh benefit from taking an ASP approach, building on projects and programmes that currently focus on short-term, protection-oriented SP interventions, while taking into account the DRR and CCA dimensions. The potential exists for projects that are already integrating SP and DRR components to explore ways to also integrate CCA elements.

## 8.2 Policy recommendations

**8.2.1 More comprehensive ASP programmes.** In line with BCCSAP recommendations, more gender-sensitive and women-focused ASPs should be introduced. Aside from poverty reduction, SSNP design needs to address gender sensitivity. BCCSAP (2009) has suggested 31 programmes that have yet to introduce proper CCA orientations. Meanwhile, MoWCA is operating ether fully or partially adaptive programmes with maternity allowance, allowance for poor urban lactating mothers, microcredit for income-generating activities, and VGD. All of these are worthy programmes, but they can be improved substantially as ASP.

**8.2.2 ASP financing needed.** SP programmes can include micro pension and microinsurance for the poorest, which would ideally adopt elements of CCA and DRR in disaster-prone and climate-vulnerable areas. The FY2016/17 budget, however, did not include allocation for such schemes, even though the NSSS (2015) recommended introducing those programmes. SSNP micro-insurance or micro-pension schemes for the poorest would promote disaster resilience and improve adaptation capability.

**8.2.3 Avenues to more effective ASP financing.** SPs that include CCA and DRR features should be reformed and properly classified as allocation mechanisms to achieve both efficient spending and optimal benefits in disaster- and climate-affected areas. Ten major SSNPs fully or partially target beneficiaries who are affected by disasters and other shocks. Since they directly benefit vulnerable groups, programmes such as GR (Cash), GR (In-kind), EGPP and Maternity Allowances for Poor Women should both increase and expand beneficiary coverage. On the other hand, per capita expenditure for EGPP, VGD and VGF, for example, should be increased to cover disaster-vulnerable groups from target districts, rather than have them continue under various types of short-term project.

**8.2.4 Reforms needed to current programmes.** Programmes such as TR and FFW should be fully reformed so that they provide direct cash transfers, rather than food support, to the poor. Food support actually deprives the poor of labour earnings, since an inferior quality of food is typically paid as wages. In addition, most government orders with respect to TR or FFW food are sold on the market at less than the set government price. As a result, the quality of the work is gradually deteriorating (see 4.7.1, above). Reform is needed in both of these two long-standing programmes.

**8.2.5 Better targeting mechanisms needed.** Targeting mechanisms should be improved, aiming to enhance the quality of outreach and benefits to the most-affected people. Many government ministries and agencies have increased SP programme spending, but better targeting mechanisms could also help to increase both coverage and level of benefits to underprivileged people.

**8.2.6 Better documentation needed.** Both economic and budget codes should introduce an additional digit representing ASP, thereby promoting the identification of such iBAS spending. CFF represents a tool to implement the BCCSAP plan of action in a transparent and sustainable way. A climate expenditure database is needed, but no guidelines have been articulated in the BCCSAP document. Furthermore, the document suggests that MTBF can include an additional section for assessing the impact of CC activities undertaken by the relevant ministries. This could also help report the share of public ASP spending by ministry/division.

**8.2.7 Better needs assessment.** A needs assessment phase is required. The Government has devised polices and guidelines for women, but still fails to address all the gender dimensions of CCA and DRR spending. Beyond the cumulative effects of poverty and social, economic and political barriers, the differences in time use, access to assets and credit and treatment by markets and formal institutions curtail women's opportunities, leaving them even more disadvantaged in coping with the adverse impacts of climate change. Effective interventions therefore require a needs assessment phase before delivering the service under SP programmes. For instance, though Investment Component for VGD and Employment of Ultra Poor for Northern Areas are women-sensitive enough, these two programmes have yet to win a greater share for women in budgetary allocations.

**8.2.8 Women's percentage share in the ASP budget.** This share is falling because a disproportionate number of women share in the safety net protection budget. This relationship should be reversed. In addition, women's share remains low, though the number of women beneficiaries is the highest, even in some women-sensitive programmes such as Emergency 2007 Cyclone Recovery and Restoration and Community-based Adaptation to Climate Change through Coastal Afforestation in Bangladesh. The average share among selected ASPs is about 30 percent; to ensure equal treatment this should be increased to 50 percent.

**8.2.9 Better, more timely data needed.** In reforming SP programme budgets and spending with a view to promoting ASP, analysis must embrace the digital data revolution. Adequate context-specific gender analysis must be based on collecting relevant documents, taking into the account geographically disaster-specific, gender- and age-disaggregated data. This information should be collected in advance of disasters, and the database should constitute an essential facet of all disaster preparedness strategies. Calculating climate vulnerability, together with its poverty and gender dimensions, requires the data regarding district- and upazila-wise disaster risk and affected people according to different types of disaster.

**8.2.10 Dedicated programme needed to focus on climate change-related disease.** Under the first BCCSAP 2009 thematic area, an 'adaptation to health risks' programme focused on research into and development of adaptation strategies. But it has yet to implement health and medical support to beneficiaries during times of disaster. Cyclones, droughts, tidal surges and floods all threaten significant impacts in terms of vector-borne and water-borne disease. In Bangladesh, drought can lead to an increase in dengue fever, given that more people may store water in open containers in areas where access to piped water is limited, and thus provide breeding sites for mosquitos (World Bank, 2014). A dedicated programme, promoted and implemented at the beneficiary level, needs to focus on diseases that may emerge and spread due to climate change.

**8.2.11 More finely tuned targeting of recipients needed.** SPP recipients are selected or targeted on the basis of proxy means testing (PMT), which includes information about dwelling place, ownership of durable goods, and household demographic structure, including the educational level and occupations of adult members. But these characteristics are not considered for the poor (e.g. whether the poverty is extreme or not). In practice, recipients are selected on the basis of their being either poor, women (e.g. destitute, widows or separated) or people affected by disasters.

In any case, it is evident that community adaptation or climate change co-adaptation as a whole is a collective process, and a climate-vulnerable village development programme will prove more effective than targeting selected beneficiaries in the upazilas.

**8.2.12 SP programmes need to include insurance plans for specific vulnerable groups.** NSSS identified insurance schemes for income-sufficient people wanting additional protection against lifecycle risks or hazards. SP programmes with insurance plans for widows, the disabled, destitute women without any assets, and orphaned children should be developed to help these vulnerable people to cope with post-disaster adversity.

**8.2.13 Consolidated efforts could prove more fruitful.** Consolidation of BCCSAP 2009 and NSSS 2015 could fruitfully address national social security strategies for climate-induced vulnerability. Climate change is not an issue for a single ministry; aside from the Ministry of Environment, Forest and Climate Change (MoEFCC), other relevant ministries should be incorporated in BCCSAP 2009. BCCSAP 2009 was to end in 2018, so preparations are now needed to decide how to operate subsequent thematic programmes.

## 8.3 Gender-related imperatives

- SP programmes should undertake context-specific, gender analysis-based planning based on the collection of relevant documents as well as geographically disaster-specific, gender and age disaggregated data. This

information should be generated in advance of disasters. The database should constitute an essential facet of all disaster preparedness strategies.

- Consideration of the gendered aspects of SPs should constitute part of project preparations. And SPs, through improved gender-responsive analysis and planning for CCA, should integrate CCA and DRR at the household level, while increasing CCA and DRR at the community level for both women and men.

- Climate-change hazards vary from locality to locality. Vulnerability of local communities or ecosystems to future climate-change hazards should be taken into consideration during project preparations. DPP should also outline potential scenarios in advance. Moreover, climate mapping (i.e. area-wise climate management plans), should be prepared, just as with poverty mapping, with due sensitivity to gender issues.

- Gendered impacts of vulnerabilities resulting from climate change should be assessed and taken into consideration in the preparation of adaptation and mitigation strategies.

- Adaptation strategies should be formulated in accordance with the practical needs and capacities of women. For instance, women have special capacities for managing environmental resources, since they are directly linked with the use of these resources.

- Women's reproductive health is greatly affected by climate changes, and this should be taken into consideration. Separate ASPs should be undertaken to address climate-change impact on women's reproductive health. Mobile clinics with delivery facilities, especially floating clinics, should be made ready during floods and after cyclones.

- Women have traditional skills and special potential for the management of water and environmental impacts, and this should be taken into consideration in both project preparation and project operation stages.

- The National Women Development Policy (2011) addresses many issues related to women's welfare before, during and after disasters. But strategic planning needs to focus even more on issues such as women's safety and security, women's rehabilitation, psycho-social support, and financial support. Plenty of issues have been identified, but there hasn't been enough strategic planning or institutional arrangements for implementing these programmes. Special strategic attention is needed for programme implementation that aims to develop women's power to adapt to the impact of disasters and climate change.

- According to the Gender Budget Report (2016–2017), MoDMR had allocated a greater share of budget for increasing women's adaptive capacity to natural disasters, showing a growth of 57.84 to 71.86 percent. In spite of this greater allocation, however, the policy still lacked long-term allocation in support of women's greater adaptive capacity. Programmes should be undertaken in the light of long-term projections and budget planning for estimating expected growth.

## 8.4 Programmatic dimensions

This study suggests the following recommendations for immediate measures:

- Establish a concrete institutional support mechanism within MoWCA and MoDMR.

- Initiate a 'social laboratory' ethos within DWA and DDM to promote innovation and to scale up the idea of ASP.

- Identify initial entry points and champions within DWA and DDM, as well as innovation leaders within MoWCA and MoDMR.

- Clarify goals, objectives and approach options for the ASP agenda within DWA and DDM and the respective concerned ministries.
- Revisit ASP policy processes and convergences, where more gender- and climate-sensitive poverty reduction can be achieved in meeting national SP targets.
- Design an awareness/advocacy agenda linking ASP with gender and resilience outcomes as well as promoting its full convergence with 7FYP, NSSS, SDG, and the Sendai and Paris agreements.
- Conduct DWA and DDM capacity analyses and needs assessments for MoWCA and MoDMR, aiming to transform the existing SSNP into ASP.
- Extend partnerships and cooperation beyond the public sector to include research institutions, universities, private-sector organizations, development partners, UN organizations and NGOs working for the poor and for marginalized populations.
- Finance innovative approaches and pilot projects that promote transformation of existing programmes into ASP.
- Inform decision makers regarding ASP with an emphasis on learning and documentation, including performance audits and evaluation.
- Follow up on earlier support for innovations and pilot projects with expansion measures or adjustments where appropriate, and ensure a full-cycle participatory learning process for all stakeholders. Aim to cultivate an ASP culture of informed, evidence-based policy making.

# Annex 1 Tables

**Table A5.1 Programme/project classification as adaptive or otherwise**

| Programme/ project | Adaptive or not | Why/comments | Objectives | Implementing agencies |
|---|---|---|---|---|
| Agriculture Rehabilitation | Partially adaptive | Based on CCA, but DRR component inadequately covered. | | MoA |
| OMS | Mal-adaptive | Poor coverage at the remote upazila level. | | Ministry of Food |
| VGD | Partially adaptive | This support helps to mitigate poverty vulnerability. But its targeting mechanism is inappropriate. | | MoWCA |
| VGF | Mal-adaptive | Programme objectives include covering CCA, but support is only provided during two festivals. This programme is supposed to address both DRR and CCA, but it focuses only on festivals, and not on ASP. | Beneficiaries should be selected based on disaster-induced food insecurity. Programme objectives are to contribute to poverty reduction and CCA. | MoDMR |
| TR Food | Partially adaptive | It explicitly addresses both CCA and DRR. Programme principles clearly state that people made landless by climate change or disaster qualify as beneficiaries. | Of the total TR allocation, 50% is going to provide solar panels for poverty-stricken households, which is a CCA component. | |

| Programme/ project | Adaptive or not | Why/comments | Objectives | Implementing agencies |
|---|---|---|---|---|
| GR-Food | Partially adaptive | Provided in times of disaster, but materials supplied are not needs-based. Different measures are needed for specific social and geographical contexts. | | MoDMR |
| Food/Cash for Work | Mal-adaptive | Price syndication diminishes allocations by 50%. | | MoDMR |
| EGPP | Partially adaptive | EGPP supports elevating and widening roads and embankments, which can help to mitigate flooding, storm surges and water logging. Of total wages, 12.5% is saved for future consumption, which helps during times of disaster or other risk situations. | | MoDMR |
| Chars Livelihood Programme | Adaptive | Habitat protection from recurrent floods not only qualify CLP as CCA, but their programme also fully integrates social safety nets, DRR and CCA. | It addresses four components of human well-being: livelihoods (habitat protection); food security; health; and women's empowerment. All activities under these four components address DRR and CCA. | RDCD, MLGRD&C |
| One House One Farm | Mal-adaptive | Microcredit provided, but institutional set-up not enough for sustainability. | | RDCD, MLGRD&C |
| Bangladesh Climate Resilient Participatory Afforestation and Reforestation | Partially adaptive | This project includes 28% climate change coverage, 25% environment policy and institution coverage, and 20% water management coverage. | | Implemented by BFD, Arannyak Foundation |
| "Gucchagram" (Climate Victims Rehabilitation) | Adaptive | Provides khas land for disaster victims. | | Implemented by BRDB |
| Comprehensive Disaster Management Programme | Partially adaptive | Poor maintenance after project is ended, though it is explicitly intended to address both DRR and CCA. | | MoDMR |

| Programme/ project | Adaptive or not | Why/comments | Objectives | Implementing agencies |
|---|---|---|---|---|
| Fund for Climate Change | Adaptive | It explicitly addresses both DRR and CCA. | | MoDMR |
| Ashroyan-2 Project | Adaptive | It aims to address both DRR and CCA. | This programme provides three months of VGF service. | MoDMR |
| Disaster and Climate Resilient | Adaptive | It formally addresses both DRR and CCA. | | MoDMR |
| Rehabilitation of Aila Affected Infrastructure | Adaptive | It formally addresses both DRR and CCA. | | |
| Haor Infrastructure and livelihood Development | Adaptive | It formally addresses both DRR and CCA. | The main target is flood-affected people during the monsoon period. Its primary goal is reducing poverty. Other objectives include vulnerability reduction and reduce risk of flood; establishing village markets; developing community infrastructure; and preventing erosion of property. | Implemented by LGED |
| Coastal Climate Resilient Infrastructure Improvement(CCRIP) | Adaptive | It formally addresses both DRR and CCA; it promotes public-private finance cooperation for CCA. | Coastal embankment, rural connectivity, water supply and sanitation. Capacity building for mainstreaming climate resilience and knowledge management | Implemented by LGED |
| Rural Employment and Road Maintenance Programme | Partially adaptive | Poverty reduction is its main objective. It has no focus on CCA; the DRR component is addressed to some extent. | Supports ultra-poor, sustainable reduction of poverty as well as rural access road to markets and services. To raise livelihood status of beneficiaries and capacity build-up for both mentally and physically. | Implemented by LGED |

| Programme/ project | Adaptive or not | Why/comments | Objectives | Implementing agencies |
|---|---|---|---|---|
| Emergency 2007 Cyclone Recovery and Restoration | Adaptive | It formally addresses both DRR and CCA. | Focusing on long-term restoration and rehabilitation needs, as well as on improving agriculture sector and livestock services. | FAO, DAE, Department of Livestock, DAF, MoF, LGD, MoWR |
| Bangladesh Rural Water Supply and Sanitation | Partially adaptive | Of its total coverage, 11% goes to natural resources and the environment; 8% goes to pollution management and the environment; and 80% goes to rural services. | | Ministry of Local Government, Rural Development and Co-operatives (MoLGRD&C), Department of Public Health Engineering (DPHE) |
| Rural Water Supply | Partially adaptive | It could be adaptive for disaster-prone areas with prevailing water crises. But its formally stated focus suggests less concern with adaptation goals. | | MoLGRD&C, DPHE |
| Integrated Fisheries & Livestock Development in Flood Controlled Areas & Water Bodies | Partially adaptive | Based on CCA, but inadequate coverage of DRR component. | | MoEF and Department of Fisheries |
| Rural Livelihood (2nd Phase) | Partially adaptive | Addresses only DRR and only to some extent, assisting in income-generating activities. | | RDCD |
| Initiative for Development, Empowerment, Awareness & Livelihood, Kurigram | Partially adaptive | It indirectly addresses CCA. | Primary goal is to reduce poverty through livelihoods, awareness building, asset transfers and market linkages. | BRDB |
| Char Development and Settlement | Adaptive | It explicitly addresses both DRR and CCA. | Protection for climate change, climate-resilient infrastructure, land settlement and tithing, livelihood support, study operation and maintenance. Limited coverage: 150,000 people, 30,000 hectares of land. | DPHE |

| Programme/ project | Adaptive or not | Why/comments | Objectives | Implementing agencies |
|---|---|---|---|---|
| Reconstruction of Houses of Sidr Affected Landless People | Partially adaptive | Houses built under this project are tin roofed and provide unsustainable shelter in times of disaster. | Nepotism is common in this programme. | MoDMR |
| Community Based Adaptation to Climate Change through Coastal Afforestation in Bangladesh | Adaptive | Rational use of coastal land to plant trees and cultivate commercial fisheries. It addresses both DRR and CCA | Forest, fish, fruit (3F) model. MoEF received an Earth Care award in 2012. | MoEF, UNDP |
| Construction of flood shelters in flood-prone and river-erosion areas | Partially adaptive | Need-based programme running in 43 cyclone- and flood-prone districts. It addresses DRR only. | | DMRD |
| Water Supply and Sanitation Project in Cyclone Prone Sidr Affected Coastal Area | Partially adaptive | It addresses DRR to some extent but has no focus on CCA. | | |
| Disaster Risk Mitigation and Reduction | Partially adaptive | It addresses DRR but has no focus on CCA. | Under CDMP | DDM |
| Investment Component for Vulnerable Group Development | Partially adaptive | More focus on socially and politically caused disaster, rather than on climate change. | | MoWCA |
| Multi-purpose Disaster Shelter Construction | Partially adaptive | More focus on protection from both pre- and post-disaster effects; flexible service provision to more affected areas. | Allocates 75% of support to flood shelters; 10% to rural road construction; 9% to primary education; and 6% to other ends. | DDM |
| Employment of Ultra Poor for Northern Areas | Partially adaptive | Focuses include self-employment among rural people, human resource development, poverty alleviation, and education. | Main goals are poverty reduction and self-reliance. | RDCD |

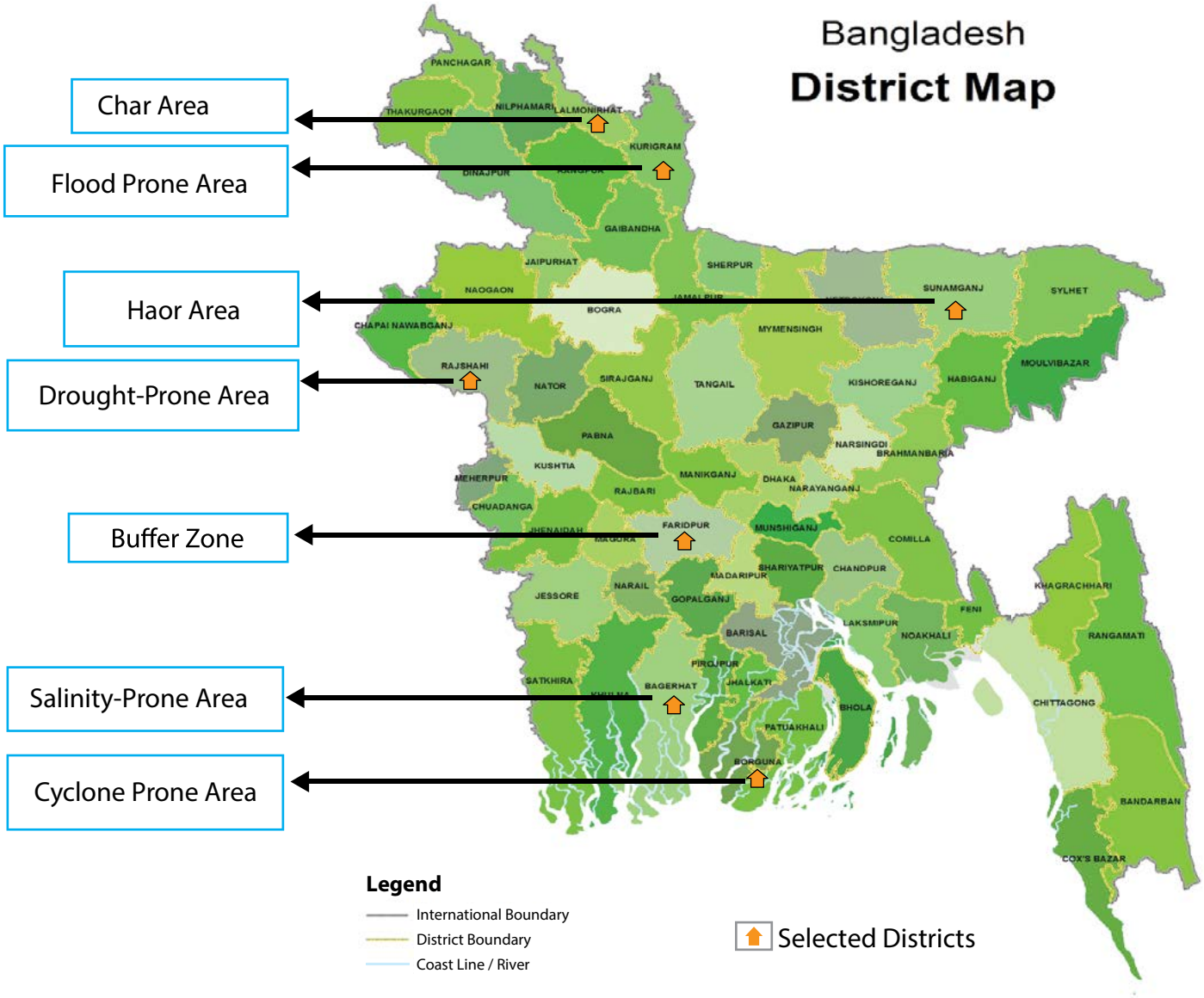
| Programme/ project | Adaptive or not | Why/comments | Objectives | Implementing agencies |
|---|---|---|---|---|
| Adaptation to Climate Change and Rehabilitation of Livelihood | Adaptive | It formally addresses both DRR and CCA. The programme takes medium- and long-term approaches to adaptation. | Promotes adaptive technology with such activities as developing salt-tolerant crop varieties, livestock rearing, and homestead gardening for rural women. Provides farming techniques to adapt to climate change. Promotes awareness and preparedness for climate change among communities, schools and households. | BARC, MoA |

**Table A 5.2 ADP expenditure of top ADP allocated 10 ministries (in billion Tk.)**

| Sl. | Ministry/division | FY 2014/15 | | FY 2015/16 | |
|---|---|---|---|---|---|
| | | Until May 2015 ADP expenditure | % of total allocation | Until May 2016 ADP expenditure | % of total allocation |
| 1. | M/O Housing & Public Works | 4.67 | 52% | 22.72 | 85% |
| 2. | Road Transport and Highways Division | 24.31 | 55% | 47.64 | 75% |
| 3. | Local Government Division | 89.10 | 60% | 122.46 | 73% |
| 4. | Power Division | 46.42 | 56% | 112.85 | 73% |
| 5. | M/O Primary & Mass Education | 28.61 | 66% | 33.56 | 64% |
| 6. | Ministry of Education | 18.94 | 45% | 25.59 | 60% |
| 7. | Ministry of Water Resources | 8.47 | 40% | 14.62 | 51% |
| 8. | Ministry of Railway | 21.39 | 62% | 30.98 | 67% |
| 9. | Bridges Division | 34.36 | 65% | 28.76 | 46% |
| 10. | M/O Health and Family Welfare | 18.38 | 40% | 21.12 | 41% |

Source: ADP documents.

# Annex 2 Map of field study areas



# Annex 3 Selected narratives (ethnographic interviews)

**Micronarratives on climate change and adaptive social protection**

## Narrative 1 Aynoor capitalizes on her luck

**The researchers.** Right after waking up early in the early morning on 17 January, our team started for Sapahar, Naogaon. Once there, it took just another two or two and a half minutes to get to Rajshahi.

It was the last day of our fieldwork, and we had no idea what village we would wind up in. We instructed the microbus driver to head along the Shironti Union road, and said we'd get out in the first village that seemed right. Soon we spotted a picturesque village, serene and silent. We disembarked our bus just before the village border. Five of us began walking through the village. We didn't even know its name. We found a small grocery shop just inside the village and discovered its name on a foundation stone that read 'Kuchkurulia, Goala Union'. As we proceeded down a street in Kuchkurulia, the sound of our footfalls made us feel we were alone in the world. Then we saw a few faces peeking from windows and doors. Even after four days of fieldwork in this remote area, we felt caught off guard. I kept to the rear, letting the others go ahead, so any introduction to the villagers could be with them. While the others were speaking with a curious village boy, my eyes were drawn to a narrow road beside a palm tree in the yard of a mud hut just opposite.

I set out along that road, and soon an old woman, bent with age, hobbled up to me. We exchanged greetings, and she asked, "Where do you live?"

"Dhaka," I replied.

She smiled and invited me to come sit in her yard. I introduced myself and explained why I was in their village. She led me into her house by my hand, eager to talk and to tell me her life story. But after I sat down, she merely gave me a blank look and her eyes moistened as she said, "What can I say? What would you listen to? My life is full of sorrow, Sweetie. This sorrow has no bounds." Then her face clouded with what seemed to be anger. I assured her that I'd listen, but she didn't care.

Meanwhile a crowd had gathered outside the house. The neighbours were coming around to see the new person from outside.

"She's very old," one middle-aged lady told me. "She can neither understand you nor can she talk properly." I asked her whether she was a relative, and she replied that the old lady was her mother-in-law. Then she approached and said, "Please come to my house. Will it do if I talk?"

"Of course, it will," I replied.

Her house was dark, but I could see it was very tidy. I told her I'd like to hear the story of her life.

**Aynoor.** My storyteller was 45 years old. Aynoor's father died in 1971, the year of liberation. After her father's death, her grandmother got her elder uncle married off to her mother in fear of losing the dead son's property. Attracted by the property, her uncle married her mother, but he never loved them like a father. After that marriage four of their sisters were growing up and, after a time, the uncle married two of the elder sisters off. The other sister and Aynoor grew up working as housemaids. The uncle didn't like them. The husband of Aynoor's elder sister arranged her marriage.

Aynoor continued her account:

> When I got married off, my grandmother was still alive. Granny didn't want the marriage to take place because she didn't like the groom. The husband was no good. He used to do drugs and play cards, she said, and he wouldn't provide me with food or clothing. I was still working in other people's houses at that time. My hardship became greater after I gave birth to two children. My husband was always drunk, and never valued my opinions. And at that time women's lives were not so valuable. I suffered great hardships. I'd collect cow dung for other houses, and they'd give me rice in exchange, which I shared with my family. After feeding my husband and children, I'd go to work again and come home again in the evening. I had nothing at that time—no house, no bed or bedding, no saris or any dress.

Aynoor's husband used to beat her a lot. Any talk of household expenditures, their children or their future would invite verbal and physical abuse, and Aynoor would be told to clear out of the house. Her husband would tell her, "Go and find another husband!"

Aynoor wanted to leave her husband's house at that time, but she couldn't because her children were still too young. Aynoor had a son and a daughter. She both worked in other people's houses and made cooking fuel with cow dung collected from many houses. She would collect cow dung for others in the village, go fishing in the pond, and work in others' fields. Aynoor would barter half a kilo of fish for a quarter kilo of rice grain. She had to feed her children rice with starch.

She would work the whole day and return home very tired. She passed her days hand to mouth, sometimes without any food. She had only one sari. She would wash it wearing only a petticoat and wear it again after it was dry. Aynoor would bring home food she earned in exchange of her labour, and her husband and children would live on that. If she bought anything or brought cash into the house, her husband would steal it. He'd steal things from the house, sell them in the bazaar and spend the money on wine and gambling.

After 18 years of this marriage, her husband was diagnosed with blood cancer. Aynoor had to collect money from the villagers to cover household expenditures. As Aynoor told me:

> All this happened about 14 years ago. When my husband got cancer, my daughter was seven or eight years old, and son was about nine. When he was sick, I had to collect money from the village. I couldn't eat or couldn't do anything, so I'd ask people for help. And they helped a lot.
>
> I had my husband admitted to Rajshahi Mission Hospital. He ran away from there during Eid ul Adha. He couldn't eat beef there, and when he insisted, they wouldn't let him stay. The doctor declared that he

> wouldn't survive long in any case. Nevertheless, I wanted to leave him there. But they called me and told me I had to bring him home. He was there for two years.
>
> He got medicine from the hospital for free. And whatever he got, he sold it for money to buy drugs, to smoke and to play cards. For those two years, I worked in other people's houses to earn money, though some would instead give me vegetables or rice. This is how we lived. My paternal cousins also helped a little. After my husband died, I had to bring my children to neighbour's houses while I worked, though I didn't let my children work for the others.

After her husband's death, Aynoor continued working as a housecleaner, but she never let her children do the same. She sent her daughter to school, seeing her educated up to class V. Aynoor's son couldn't go outside because of a skin disease (he became sick if exposed to the sun). Because of this, she couldn't send him to school. Neither could she send him to the fields to work. (After he grew up, however, he could do fieldwork in the winter and in dull weather.) Aynoor collected money from the people in different villages for his treatment, but it didn't help. Later she married her son off, and now there was a grandson from that marriage. Since her son couldn't work in the field regularly, Aynoor bore the cost of her son's family.

When her daughter was in class V, Aynoor married her off. She had to offer a dowry for the marriage. Afterward, Aynoor continued to help her daughter and her son-in-law.

> When I married my daughter off, I took money from the villagers and my mother, and my brother helped. I gave a dowry of 20,000 taka for my daughter's marriage. After my daughter's marriage, my son also got married. Now I mostly stay with my daughter. When I married my daughter off, my son-in-law had nothing. He used to drive a rental van rickshaw. Then he set up a tea stall with money I contributed. My son-in-law doesn't have a mother of his own. His stepmother hates him. She once expelled him from the house.
>
> Then I rented a house in Sapahar with my daughter and-son in-law. Since, I have set up a tea stall and, following negotiations with a poultry seller, a poultry shop. After I set up these shops, by the grace of Allah, my son-in-law has built a house for 500,000-taka, bought a tiller, two bhotbhotis [light passenger vehicles], and a motorbike, and has given my daughter jewellery. Now my daughter is very happy.

Currently, Aynoor's son works in the field. He grows mustard and rice. He also works in others' fields. However, his health does not permit him to work full time. Aynoor gives money to plant potatoes, onions, mustard and rice on their rented land, and her son works in the field. She takes her share of the profits from her son.
One year before her husband's death, Aynoor qualified for government relief. After her husband died, Aynoor received support from widow allowance and VGD schemes. She has since contributed to the security of her daughter's and son's families as well as her own. As Aynoor says:

> I started getting a widow's allowance three years after the death of my husband. Before that I used to live on housework for others. I had no money at that time, and my son couldn't work. When my husband died, my uncle-in-law, who was a UP member, came and said that he would do something, and then I started getting the allowance. Before that, seeing my situation, they gave me rice for three consecutive years.
>
> Those I worked for gave me different names, Sister. Why should I lie? Do you understand? I took food under the name Aynoor for two years; then they named me Kajli, and I took food under that name for two years again. Then again, under the name Anwara, I took food for two years. I had food support for six years in a row. The chairman and UP members helped me for the sake of my children. Before my husband died, I had a VGD card, and after I took food for six years, they gave me a widow's allowance card. When my husband was alive, I didn't have corrugated tin on my house, you know. He lost all the money playing cards, even selling the door to our house as well as my saris.

Three years after her husband died, Aynoor started getting the widow's allowance. Aside from the allowances, she continued doing housework, cultivation and fishing. She saved money from working in others' houses, but was forced to spend the savings. She had to spend 30–40,000 taka for her husband's medical treatment.

After she got the VGD card, she no longer had to spend money for food, and she was able to save some money. At that time VGD card-holders received 15 kgs of brown flour and 150-taka. One year after she started getting this support, her husband died. After her husband died, her expenditures were reduced because she no longer needed to spend on his medical treatment. At the same time, she started getting the widow's allowance, so her savings grew bigger than ever.

Then Aynoor heard about upazila (sub-district) women's loans from the place where she collected, he brown flour and taka support. She took a loan of 10,000 taka, repaying that over the next five years. The loan enabled her to build a house with a tin roof, quality bamboo, clay and rope. Now her roof would not get blown away in a storm. As Aynoor says:

> This house used to have clay walls and a thatched roof. Later I rebuilt it with bamboo from my savings, and then with clay and tin over that. That means we're protected from the rain and better insulated from both heat and cold. Over there, at my mother-in-law's house, you felt cold, right? You will feel cold in that room, but not in this house. The cold cannot come through that clay. To do it this way, I had to spend at least 5–6,000 taka. I have done it all by myself. Sister, I have installed these canes myself. I have done all this with my own two hands. I had only built the walls before my husband's death, but after he died, I used kota [wire] to bind the house and added the tin. Before that, there was only straw; I didn't have kota to bind the roof.

In all, Aynoor took three loans. The second time she borrowed 15,000 taka and used it to sow rice. With the third loan, she bought two cows.

She reported that female VGD card holders were also given education and training. Aynoor, for example, took training in poultry rearing, and now she earns 2–3,000 taka every two to three months from selling poultry in the bazaar. It has been 10 years since Aynoor started earning from poultry and field cultivation on a monthly basis, while at the same time receiving the widow's allowance. She doesn't do housework anymore. After her son's marriage, she helped her daughter-in-law to get a VGD card by recommending her to UP members. It has been one year since her daughter-in-law started receiving 30 kg of rice against her VGD card. Today Aynoor's daughter and son-in-law look after her, and Aynoor saves her widow's allowance for contingencies.

The poultry rearing training helped Aynoor to become solvent. After that, she also took VGD training in community health care and another course in resistance to disasters, including recognizing signs of storm, flooding, earthquakes and drought, as well as conducting relief activities during actual times of disaster. She also took training in child nurseries as well. Today Aynoor herself works as a trainer and is engaged in raising community awareness of a variety of issues, and she provides BRAC training. She has been working as a trainer for 15 years and earns between 500 and 1,000 taka per month doing this.

While living in her father's house, before her marriage, Aynoor witnessed a great flood. Their house was not damaged at that time, but many villagers were ruined. Aynoor's father was the chief of the village guards, so they saw distressed people receiving council relief, including the distribution of bread and molasses. While her husband was alive, Aynoor saw a number of storms and floods, and sometimes they went without food for seven or eight days at a time. They would have to beg rice starch from door to door.

As Aynoor says:

> I have seen storms and floods many times. When my husband was alive, there were any number of floods. Sometimes I had to fast for seven to eight days. I would beg rice starch from people's houses. I would go to collect cow dung from neighbours. If they would cook rice, I would tell them, "Please give me the rice starch." If they were kind, they would give some to me, otherwise not.
>
> My husband was alive then. There was a flood one of those years. We lost all of the paddy to the flood. This was 18 or 19 years ago. At that time, the government used to distribute bread and pressed rice by boat. I never got any, but my sisters did. Those who lived near the river received the relief. They still do. The relief workers never come inside our village. The flood had badly damaged our house. We used to live in a single room. We often went hungry. If the neighbors gave us food we ate, otherwise we did not.

Their house was flooded, but finally the water went down in just one night. They got plenty of fish at that time. (Floods brought an abundance of fish.) Gradually Aynoor repaired her house by working in other people's homes; she also managed to collect enough money to feed the family three meals a day. At that time, she received no assistance, whether from individuals or from the Government. It was a very hard time for her.

Later, Aynoor took a women's loan from the upazila, and fixed her house. She constructed a strong roof with clay, bamboo and tin.
After her marriage, Aynoor witnessed a great drought while staying in her husband's house. During that time of drought, villagers were constantly hungry. As Aynoor says:

> People remained famished. There was no cultivation of crops, so no one had anything to eat. Wealthy people would see us eating watery rice, horseradish and potato. But when I begged food, they would say, "Should you get whatever you want just because you want it?" The householders also said that. So, I stayed hungry. I had to struggle a lot during the drought. If you asked for rice grain, you had to cut 37.32 kg rice paddy in exchange for 0.93310 kg rice grain. Sister, is it possible to cut 14,400 square feet of paddy just for 0.93310 kg rice grain? People died trying. At that time, I had no children, only my husband and me. We passed that time in such hardship. That drought was 10 or 11 years ago. Since then, I haven't seen another one.

Later, Aynoor took various kinds of training in how to respond to disasters. She reinforced her house with her savings, and that is why no longer has to experience such hardship in storms or floods. She adds this:

> If one doesn't have money… One needs money. And one needs to work. How can I live on others' kindness? I lived on others' work for 12 months. Besides, we do not see floods and drought the same way we did before.

However, every year still brings storms:

> A 'storm' means branches, whole trees flying away. It happens every year or so. One warning sign is that everything gets dark. Then the winds come. Roofs and tin sheets fly away. Two-storey houses get crushed up against brick houses. There's much damage on all sides. People begin crying. Some go to the mosque. Don't you see what they do in their distress? Everyone does the same: they stay in their houses. Not many people get injured in this area, because only the tin roofs get blown away. The walls remain. People stay inside the house, which is why they don't get injured. But the rain and floodwaters do come inside.

Asked whether they get any help during or after the storm, Aynoor says that during any natural disaster they get no relief or any other kind of help. After the disaster, those who have money can recover from the distress according to their ability. Those who have nothing, on the other hand, pass their days hungry amid the ruins. Some, like Aynoor, manage to find work and save money and renovate their houses. As Aynoor says:

> Previously the storms used to blow homes away, since people wouldn't reinforce their houses by adding additional angled pieces of bamboo and tightening the roof. Now they do. Nowadays, people's houses do not fly away. When ants establish their colonies on higher ground, if the frogs are croaking a lot, these are signs that there will be floods and storms that year. If the frog makes a burrow inside your house, then there will be flooding. Other signs include these: if there are white clouds, then it will rain; if the clouds are black, then the rain will be less.

Aynoor learned these things from the VGD training. And now the other villagers also know them. A villager who lived beside Aynoor's two brothers was killed during a storm by lightning. After that incident, villagers became more careful. No one goes outside during storms. They have installed iron rods in holes behind their houses as lightning rods; rainwater fills the holes and the lightning passes through the iron rod. Aynoor also learned this from in the training programme.

Nowadays, agro-production is not like it was before. Aynoor says this:

> I have worked in the fields as well. I have planted onions for others, sowed other seeds. These days crop production has improved. Previously, there was only aman rice cultivation.[38] And now there is wheat, mustard and many other crops. Previously there was more alternation of heavy rain and drought. At that time there were no deep tube-wells. Today, deep tube-wells improve crop production. This season, because of the fog, wheat cultivation will face problems. I don't cultivate wheat, but some people in the village do. Wheat is more profitable than rice. Rice grows twice a year, and wheat only once. Here people sow guti swarna, sumon swarna and pari rice. Pari rice is sowed more often now because of drought. During a drought, rainy-season rice doesn't grow well, that is why pari rice is sowed instead. No other kind of rice grows during drought, so there is no choice but to sow this variety. This is cultivated using water from deep tube-wells; the other kinds can be grown with rainwater. When there were no deep tube-wells, we would use pond water.

On the one hand, this bumper growth of crops is a blessing. On the other hand, it has reduced fisheries, and because of that is a curse. As Aynoor says:

Now we don't see fish, Sister. When my husband was still here, I caught fish using khaliz [traps] every day. Now everyone cultivates crops right over the ponds and kill the fish with poison. It rains as usual, but there are no fish in the pond. Fry fish, gochi fish, tengra fish and catfish have all died because of pollution from organic fertilizers. I used to sell fish and have more left for my own food. I used to exchange fish for rice grain. But today what I get by the grace of Allah I eat. I don't sell those. I still catch khariz fish during the rainy season. However, I catch fewer today.

Aynoor blames climate change for that. Fertilizers and pesticides were not so necessary previously. But the use of agro-chemicals increased together with an increased prevalence of insect pests. Moreover, says Aynoor, now foods don't taste as good as they used to, adding this:

> Now the sky has changed, and the climate has worsened. Did people used to apply such poison? No, they didn't. These days we don't have a long winter, droughts are frequent, and insects are increasing in number. Before we planted green spinach, foreign spinach, but today the situation is such that, if you don't sprinkle poison on it, it won't grow. Before this we used cow dung fertilizer, and our baskets overflowed. We got 0.93310 kg of green spinach for two-taka. Now it's 10 taka per kilo and scarce. And because of this chemical fertilizer, the number of fishes have shrunk, although we get bigger crops. Nothing can be grown without poison!

[38] Aman rice, the country's largest rice crop, is harvested in November and December. It accounts for more than half of annual production. See: https://en.wikipedia.org/wiki/Rice_production_in_Bangladesh [accessed 21 December 2018].

> Previously we would cook pulao, rice in a seasoned broth; you could smell it from far away if it was cooked with rice leaves. Can you find that distant smell anymore? Can you say that I am having biriyani? Just because of the poison, this is happening. Insect numbers are increasing, so is the use of poison. You know currently there is a bug that eats at the root of rice paddy.[39] This insect was never seen before. In fact, there didn't used to be such a large number of insects in general. The climate is bad now. Did the sun shine that strongly before? No. This year the sun is shining so hot you feel your skin burning. Do we have horsebeans like before? Now insects with long feelers have covered them. Trees have to be cut down because of the insects.

Aynoor declares that climate change is behind the changes in cultivation:

> Cultivation methods have changed in this area. Since it rained this past winter, the potatoes won't survive. All the saplings will die. If it hadn't rained, the crops wouldn't have been ruined. Did it ever used to rain in the winter? I have never seen this. I have seen rain in the rainy season. This rain that comes at the wrong time is like a poison. Now I have to apply poison to my potatoes; if I don't, the plants will die. I have applied the poison because of this rain. If I don't, my potatoes will be like coal. They become riddled with insects and die. This rain is good for wheat, but the potatoes and onions, which grow underground, will perish.

Aynoor says there isn't as much fish as there used to be:

> There used to be many catfish, but today they're very scarce. I used to catch catfish, and they brought a good price. I would catch them and kept them alive in a pot of water. But we don't get these fish anymore. They vanished because of the poison. Now it's rare; you can't get it even for 800-taka.

After the harvest, the locals have long burned the roots of crops so that insects do not eat them. These days, however, poisons are needed to save the crops from insects.

After Aynoor's training, she was able to vaccinate her hens. They have to be vaccinated in the spring and in winter. The hens would have died in the winter, but now the winter is not that cold, says Aynoor, so fewer die. But last year 100–150 cows died of an unknown disease. And now the cows are infected with that same disease again. The animals retain water until they are swollen. This has been happening for three to four years, with the cows affected mostly in winter. The villagers took the cows to the animal hospital, without success. Nevertheless, Aynoor says, by the grace of new technology at least the crops are better.

> There was no wheat ear [grain-bearing tip of the stalk] before. Now it is in cultivation, and there's more of it than ever. We had no idea what wheatear looked like, or where it came from. But the council decided to distribute it, and now we are eating it.

Now people use straw, crop stubble, and dry bits of wheat as fuel for cooking. There used to be less cultivation and, consequently, less straw, crop stubble, and other dry bits, so they cooked with dried cow dung and leaves. Now they instead use cow dung as fertilizer.

[39] The brown planthopper (BPH), Nilaparvata lugens (Stål) (Hemiptera: Delphacidae) is a planthopper species that feeds on rice plants (Oryza sativa L.). These insects are among the most important pests of rice, which is the major staple crop for about half the world's population. They damage rice directly through feeding and also by transmitting two viruses, rice ragged stunt virus and rice grassy stunt virus. Up to 60% yield loss is common in susceptible rice cultivars attacked by the insect.

Aynoor no longer lives in poverty. She has endured great hardship in her life, but the worse of it may be behind her. Wherever she went, in whatever circumstances, she sought opportunities to rise above them. She accepted help from various sources of government help, for example the VGD card, senior citizen allowances, various types of training, and upazila loans. And she managed those to better her living conditions. But she had to overcome odds to receive such support:

> When BNP[40] was in power, I didn't receive a VGD card. The leaders crossed out my name, just because I favoured the Awami League [a different political party]. But when the Awami League came into power, I did get the VGD card, Sister. The chairman gave it to me himself. Now my daughter-in-law will get that card. When I went to the upazila, the upazila chairman told me, "Keep mum! If you do not get it, who will?" this is how my daughter-in-law got the card.

Everyone gets 10 kg of rice grain during the Eid festival. Those who get a government allowance are also entitled to it. Aynoor talks about this:

> During the Eid, we get a 10 kg rice grain bonus. Everyone receives it, including the poor and distressed. We who get allowances, we also get it. Why should I lie? Many in my village received allowances and cards, but we had to run around to the chairmen and the UP members. Suppose we went to them today, they'd say, 'Go away. This year you don't get it. Maybe next year.' And the next he says the same. Then you go to certain other leaders, and you do get the card.

Aynoor changed her own and her families' situations by managing a variety of allowances, sources of aid, social capital, own labour and good sense. Today her family no longer lives in poverty.

She connected with important people around her during her hard times, at ideal times and through effective communications and the use of her social capital as a tool to accumulate financial capital, raising herself and her family out of poverty and reducing their vulnerability to climate change and disaster. According to her account, she came to lack for nothing, and pronounced herself happy with her children's circumstances.

The main tools to transcending her earlier hardships, she said, were her own labour and intelligence.

[40] The Bangladesh Nationalist Party.

# Narrative 2

**Micronarratives on climate change and adaptive social protection**

## Achiya's lonely struggles

**The researchers.** It is the last day for us in the Ashtamir Char. We reached this particular village in the morning. As per our daily routine, we have spread out to various corners of the village. At the end of Hajipara Char, there is another locality (para).[41] That area probably lies to the south.

Local people determine directions by the relative positions of the villages, since the whole area is surrounded by water. In fact, I don't much understand the system. When they tell me to go north and turn east after a little walk, I just nod and pretend that I have understood where to go. Then I start walking in the wrong direction, having in fact misunderstand. But I went to Hajipara the other day, so I am familiar with the routes. I also asked someone to guide me to the beneficiary's house.

I had talked to the person the other day. She told me many such female beneficiaries lived in this locality. As the river flows well into the back area, this area too is not too far from the river, though it has not experienced river erosion in a long time. But the local people think that erosion is going to hit the area bad, cutting deep. After I reach Runa's place, I observe them busy at their sewing. They invite me to have a seat with them. I spend some time chatting, and, when they are done; they take me to the house of an old acquaintance of theirs. After the introductions are out of the way, I learn that we have already heard her story. I say my goodbyes, and Runa's mother takes me to another house.

**Achiya.** There I meet Achiya. It has not been long since she came to the village. About 12 or 15 years ago she came here and started a family. Most of our narrators were living in this char through family dynasties. Achiya was comparatively new, but the char has always welcomed newcomers.

Somewhat ruthlessly, however, it can also take everything away from them in a flash, as we will see.

Achiya used to live in Chilmar. During the flood of 1988, everything she had was taken away. Still, they stayed there at the charity of others. Eventually, they came here to start a new future. Now, their children have carved out their own places on pieces of land available here. We learn about her life directly from Achiya:

> In the flood of '88, everything we had was washed away. When my youngest daughter was three years old, her father died. So, I had to raise my three children alone. I was able to do this because the people of Chilmari were great. I used to work as a maid in a local household. I myself lived in a makeshift house in that same area. My employers used to feed us. If they had spare rice, they gave me bowlfuls to take home. They also provided me with relief rations. They gave me rice husks for the children to eat. If the people of that area hadn't done such things, I would not have survived. They took real care of us.

The memory that cut the deepest remains fresh in her memory. Achiya started her story with the flood because during that time she lost everything, her husband, her house, everything. And this loss had a profound effect on her life. That incident propelled her in a completely new direction. Here's an account of those times in her own words:

> Then we came to this char. With great toil, I paid for the education of the children. The older son studied until SSC. He now has four children and lives separately from us with his wife and children.
>
> There's a saying: When there was no one for you, I was there; now you have a lot of friends, and I am a stranger to you. I raised my children, toiling away in the sun, scraping up bits of food for them. And now there's no one to look after me. The youngest daughter still looks after me a bit; she can't leave her mother

[41] A neighbourhood characterized by a strong sense of community. See: https://en.wikipedia.org/wiki/Para_(Bengali) [accessed 21 Dec. 2018].

alone. She also has a house here. And this house is for the younger son. He had no father, no grandparents. I raised them with lots of trouble.

My cousins were living in this char around that time. They were doing very well. Even now, they own a plenty of land in the village. Thinking they would need people to look after those lands and houses, I came here to live with them. They wanted to take me in, but out of the fear of losing honour in the village, at first, they declined. Not many people can accept that a single woman would come and live alone in a house with her three children. But I begged them, saying that I too had a sense of honour and would live with honour. I had three children, who would look after them, if something happened to me. My sons used to work, and I used to look after the homestead and do the household chores. There's never any shortage of work in a landlord's household. They used to feed me and give me some money too. Using that money, I had my sons educated. They married my daughter off as well. And in that very house, my son also had his wedding. Then they all started their separate families. Still I lived in my brother's place. Now I've got older, everyone says that I should come and live in my son's place.

After Achiya found shelter at her brother's house, she worked to raise her children. But after the sons started earning, they did not pay much attention to her well-being. So Achiya had to fend for herself. Nobody expects to live in someone else's home after their children have grown up. On top of that, the looming threat of river erosion remained a constant in their lives. After the river destroyed one house, Achiya built another with her son, and started living there.

My son had bought a lot of land on credit, and I thought I might be able to build a house there. So, I took out a loan to build this house. The former house was lost to the river three years ago. My daughter's house was also there. That house was on the north side. (Nowadays the river flows from both the north and south sides.)[42] I don't know what I'm going to do now. I don't know where the river is going to flow next. When the river erosion hits, life becomes infinitely harder. We just move to a higher place for a few days. Then we have to look for a place to stay again. You cannot find boats. Carrying your things from place to place becomes a nightmare. Everybody is trying to move their things at the same time, which creates a shortage of boats. And, if you're just a few seconds late, everything may be eaten up by the river. There was a lot of houses on that side; all of them had been washed away. There are no houses there. And now the river is so close. The banks have already started crumbling. The school is on the verge of destruction.

Although they live in the same house, Achiya and her son's family do their cooking separately. After toiling for years to raise her sons, she now has to fend for herself. To do that she both works and takes advantage of a new system, the widow's allowance. It helps her a lot, as she says:

The daughter-in-law has this room. I live in that room. We have separate cooking facilities. The son works as a farm labourer. I get by somehow because of the widow allowance. It's been four or five years since I started getting it. I was still living in my cousin's house. A lot of local members used to visit that place. One day a member came to visit, someone I knew. So, I asked him to register me as eligible for that support, and he granted my request. Since then, my name has been the widow allowance register. Because of that money, I can still fend for myself. None of my sons take care of me. Even if they wanted to, their wives wouldn't let them. My daughter knows about my hardships. When my saris get old and frayed, she buys me new ones. She buys them and says, wear these; your allowance doesn't get you much. (She gave me the sari I'm wearing now.) I have also raised my grandchildren. They stay with me, eat with me. They are crazy about me. But my own sons don't remember me.

[42] Chars are mid-stream landmasses of river deposits. They are surrounded by water, hence the talk of the river coming from all sides, referring to erosion of their land by the currents.

So now I fend for myself. But the allowance comes only every three or four months, and it isn't enough money to last that long. So, I have to hire myself out for housework or fieldwork. Not everyone around here works in the field. But I am not like many people. Now is the season for onions. I work to build up the onion fields with more soil. Now everybody will go down to work at raising the soil level. You have to do this before the water level rises, or else the entire harvest will be ruined. Later, there'll be work for the harvest. I work at such jobs throughout the year. The wheat season is coming, and there will be harvesting jobs available very soon. There isn't much rice grown here, but I harvested peanuts a few days back. Some people pay me with actual peanuts and others give me money. If I work in the field, I get 200 taka a day. It serves me well, but these jobs don't remain throughout the year. Much of the time I have nothing to do except sit around. During those times, I rely on my widow allowance.

She keeps talking about the flood of '88. The disaster left a real mark on her life. The toil involved in raising her children also means a great deal to her. She had taken care of everything for them, including their food. As she tells us:

Very few people have gone through what I did. Their father died on the dam. He didn't even leave us a little grain. We used to live on the dam. This is how we had to live. One day, there was nothing but a polythene sheet over our heads. That became our home. Whenever storms and rains hit, everything got ruined. One day a man died during a storm. Such a vicious storm that was. Whatever we had as a ceiling over our heads was gone too. They used to feed us there, mostly khichuri [a rice and lentil dish]. We stayed there a long time. Then we had to look for a place of our own. I had to look for work.

Around that time, I used to work for 20 taka a day. We were surrounded by water. There was no work. As soon as the water went down a bit, I started looking for work. Everybody was poor then. So, wages for labourers were low. Flour was five taka a ser [unit of weight] and rice was eight-taka. I had three children. The 20 taka was spent buying food for the family. But the people of Chilmari were great. Because of them I and my family survived. A household where I used to do live-in work gave me everything including rice and salt until I found work. They even gave me soap and oil. If they had not given me a space to stay, I would have had nowhere to go.

Achiya always knew what to do to live well. After the flood, she found a house for herself. Then she readied herself to earn money and save it so that she could build a house. Because how long can one stay at other people's homes? To find a place of refuge for herself, she adopted the following lifestyle:

When we were living on the dam, we had no place to stay. Then, there was a new char in Noyar Haat. We were given a house there. It was a government charity for those who had lost everything in the flood. It was a room. We had to make some space using tin sheets. Then, I got a job of digging. It was an 80-day job, but I only did it for 40 days. From that 40 days, I earned 14,000-taka. With that money, I bought timber and tin sheets. Using those materials, I built a house in this char. But I needed more than 14,000-taka to do this. So, my brother gave me some money. Using all that, I built the house. I could only do it because of the digging work I had at that time. Back then 14,000-taka was a lot of money. I repaid my brother's loan by working as a labourer. At least I had a place to stay.

But I didn't have to worry about the weddings of my children. My brother had my son wedded to a local girl. The family was known to my brother. He worked as a labourer in foreign countries. Right now, he has gone to the city to work as a labourer. Although he's only a labourer, my daughter is doing well. The income is good.

Her house was also destroyed. Then she crossed over to this side and built another one. My daughter also works digging excavations. She does whatever she can. She could not go to work today, so she sent her father-in-law in her place. If she misses a day, they will dock her pay. And they give less work to older people; they just help out. She doesn't have to send her father-in-law every day. As soon as she gets well, she'll start going to work again.

The tri-monthly widow allowance is not enough for a person to survive. So, Achiya has to work. In the village, digging is the easiest work to find. Thus, she sometimes works on excavation sites. Since she is a government beneficiary, however, she can work only on non-government projects. Due to her advanced age, furthermore, she cannot take on too much digging work. People understand that, so she is given less to do.

> When I go to work, they count me in. But now I don't go digging. Since I'm getting an allowance from the Government, that work isn't available for me anymore. If there is work raising the level of households to be had, I go there to work. And I've got old, so I do less of this work. Even if I go to work nowadays, I have to do less. If the allowance comes in late, I have to work outside. I have to borrow through the month, and then I repay those debts when I get the allowance. I borrow money from my own people. I don't do the cooperative anymore; I don't have enough money to pay for the cooperative. And if I borrow money from the cooperative, I won't have enough money to repay the interest. I used to do that a long time ago. We had to pay 2 taka a week. Now the rate has gone up. Where can I find such money?

Achiya has been living in this village for a long time. She can describe the changes in village lifestyles, how wages have changed, and the crops that are grown, even the changing nature of the river. A big part of her story was the kind of aid they used to get in disaster areas, and how she used it. She regales us with her experiences:

> Things were very cheap back in those days. Rice was cheap. But labourers also earned less. Then wages and prices started going up hand in hand. Buy wages aren't enough to meet food needs. And all the land is turning into sand. The water rises and turns it into the sand. There used to be a little rice growing here. Now it's virtually non-existent. Every crop we have now is better suited to grow in sand. But the upside is that little care is needed to grow the crops. When water levels rise, these fields are inundated.
>
> When the water starts to rise, you don't even have time to bring your belongings. You have to grab the bare minimum and somehow manage to get to a high place. During such times, the government rice support is the only hope. During the floods and the accompanying river erosion, they give five or ten ser of rice to each of the affected. Food shortages become so acute that even such a small amount seems a lot.
>
> I came right after that flood. They used to give us wheat; then they started giving us rice. After I came to this village a member came along and said that a woman with three children cannot really make it without help. Then he made me a VGD card. Everyone was poor back them, and there weren't enough cards for everyone. So, for the first few months I had to share the card. Finally, I got a card of my own. We used to eat everything that could be made out of wheat. But rice is better. Eating rice is better than wheat flour. But when you're hungry, anything goes. The wheat lasted us two years. After that we had no relief.

Achiya is also engaged in agriculture. Thus, she also knows about the changes in farming experienced in this char. When the season's farming starts, when it ends, when people have no work and so on. She also knows about the harvest calendars that harmonize with the rise and fall of the river tides. As she says:

> Although there is no official relief in this village, there is work. You can work for a living. And in the past, there wasn't such a harvest in the village. There was no harvest in the month of Chaitra [March–April]. There used to be two harvests a year, and rice harvests during the rainy and summer seasons. But now a lot of things grow here. We have pepper, wheat, jute, peanuts, lentils and more. Only a little jute and rice used to grow here. Now, this sandy land has become fertile for agriculture. People used to remain jobless for half of the year. There was so much poverty. They had to go away to find work elsewhere. But that was not enough. There's a difference between rainwater and machine water, when it comes to farming. They sow jute during the rains of Baishakh, the Bengali New Year. The jute has to be harvested first. And the jute eats up the water. So, they farm using machine water. And the farming is proving profitable. And you get 5,000 taka if you go away to work elsewhere. The money wasn't that much before.

> River erosion has increased in recent years. Before. we could save our crops from flooding and erosion. Raise the ground a little higher, and the house would not flood. But all the farmland lies in lower areas, and now the river flows from all directions. In the past, aside from the great flood of '88, there wasn't that flooding. Nowadays, we get floods every year. The households get flooded, the crops are destroyed. And river erosion is ever looming. This is how life goes on. If the household gets destroyed, we have to find some new place to live; if not, we carry the bare minimum and go to high ground. Now, I think, we'll have to go farther away, to the east, where the river is still far away.
>
> I bought this land a few years ago with 3,000-taka. You can mortgage your land, but if it goes under, it's your loss because you have already paid the money, but your land has gone. And you won't get that money back. You have to bear the loss alone. If the house is lost this year, I will face a great loss. I don't have much money. I get by with the allowance money. I built this house by borrowing money. And now, I will have to borrow money again. Loans aren't cheap, additionally you have to move your belongings by boat, which is also costly.

As she grows older, Achiya is losing her strength, and she has sought alternative sources of income. For example, she has taken up rearing goats. She earns something from it and it is a source of much diversion.

> I have taken a pet goat to earn a little pocket money for myself. It has had two kids, one of which I gave away. I raised the other and sold in the market, and bought some things using that money. Things like soap, oil and a sari. There is a *haat* [open-air market] here. I sold it there. So, there was only one goat again. Then it had another kid. I gave that one to a mosque in the name of the father of my children, because after their father died no rites were performed. I dreamt about it and thought that it should be done.
>
> Two or three goats aren't hard to rear. I feed them grass, give them some husks and rice, and it's quite enough. I used to rear chickens. But chickens are very susceptible to sickness. Once, all of my chickens died because of *ranikhet*.[42] So I don't rear chickens anymore. And there is also a problem with thievery. I keep the goat tied around here. If it wanders away to other people's land, it will mean trouble. But what money it brings in, however little, is profit for me. This is how I am trying to get by. And I will find some way to live out the remainder of my life.

[43] Also known as 'Newcastle disease, ranikhet is very contagious.

# Narrative 3

**Micronarratives on climate change and adaptive social protection**

## Helena from the banks of the Padma

**The researchers.** This time our fieldwork takes us on a five-hour journey by both bus and launch from Dhaka to Shariatpur.

Our team bases itself at Shariatpur's Dhanuka. On the 18th of March, early in the morning, we take an auto rickshaw and start for the quay. The trawler we booked comes to fetch us at 8 a.m. sharp. We have our breakfast on the trawler, which rocks at its mooring in the wakes of other boats as we watch people go about their busy lives on both sides of the Padma. Then we sail away down the river. The villages along the banks are very green. Many different kinds of tree are visible, and a variety of fishing and passenger boats share the river with us.

We cross to the other side of the Padma to moor at the Char Atra sandbank, in Naria Upazila (sub-district), where we are presented with lively vignettes of riverine char life. The first thing to catch our eye are the rows of boats attached to the quay, a few other trawlers but mostly fishing boats. Fishing nets are spread out along the riverbank, most of them current nets. Some women are washing utensils, while others wash laundry or take an early-morning bath. Some children are swimming; others are catching fish with torn pieces of net.

After entering the char from the quay, we saw green villages at a distance and little corrugated tin houses silver in the sun. Women have spread chillies out to dry like a vast red carpet in front of the houses. We take the straight path leading from the quay into the village, passing tin houses, large and small, with mango, Chinese dates, papaya, banana, karoi, palm oil and coconut trees. Various kinds of vegetable garden extend along either side of the narrow sandy soil road.

We are going in search of our storyteller. Walking along the rough, zigzagging road we come upon a field full of chilli plants. Veiled village women, their heads covered, are picking the ripe red chillies in the glaring sun. Houses with red-chilli carpets in their yards stand in the midst of the fields, where both young and old women are drying the crop. Two adolescent girls walk beside me. They wear blue-and-white school uniforms, and each clasp three or four books to her chest.

Every house where we want to look for a storyteller seems to be either locked or empty and deserted. We find some houses with small children, with young or old men. I ask the girls walking beside me why most of these houses are locked. They say that most of the women have gone to pick the chillies. This season is an especially busy time for local the women, who spend much of their time in the fields. They go out in the morning and come back in the evening. So where were we going to find our storyteller, I wondered.

I approach women in one field. They look at me once, and then go back to their work. They are obviously curious about us outsiders, but no one has time to talk. I'm at a loss, and am about to step back on the road, just then a child carrying a cell phone calls out, 'Mummy, you got a call!' A petite woman walks out past me by to take the phone. However, the connection is lost by time she gets there. The woman snatches the cell phone from the child. Then she notices us, and asks, "Sisters, what brings you here?" I explain to her that we are researchers. I ask her name. 'Helena,' she replies  I ask her what she does, and she says that she picks chillies, and volunteers the information that her husband catches fish. She wants to know where I come from, when I arrived, how many of us there are, and more. I respond to all her queries, and ask whether she has time to talk to me. 'Please wait a little bit,' she says. 'I have to go back to accompany my mother in the field.'

She instructs the boy to take us to her house. I walked with the boy to a house of bamboo and straw bamboo and enter it. A tin roof full of holes uncertainly shelters a small room with bamboo and straw walls. Soon Helena rushes back from the field. She's exhausted, maybe from the running, and gives me a stool while wiping away her sweat.

She takes a stool for herself and asks, "What will you ask me, Sister? Please go ahead.'

'I want to know your life history,' I say, with some embarrassment.

Blushing, she smiles and begins to tell me the story of her life.

**Helena.** Her hardship started right from birth. Helena is the only child of her father's second wife. Her father's house is not in this char. It's in Ashulia, near Dhaka. Five sons and two daughters from her father's first wife live there. When Helena's mother was pregnant with her, her father and step-siblings started behaving badly with her mother. The step-siblings did not let her mother stay in her father's house after her birth. Helena's maternal grandfather brought her daughter back to his village in Char Atra. So, Helena grew up in her maternal grandfather's house with her uncles.

After they came to Char Atra, her father neither maintained any connection with her mother nor provided them with any financial support. So, Helena began her life of struggle. She and her mother lived with their maternal uncles, but they had to pay their own expenses. Helena's mother used to pick chillies in the fields. And when Helena was a bit older, she also started working in the field. As Helena says:

> During childhood, I wasn't able to study, I couldn't even study Arabic. How could I? I had to pick chillies and spread rice paddy. When I was as small as this boy, I was already working. My uncles didn't feed me for free. I picked chillies with my mother. I'm still struggling. My uncles provided only the shelter we had to arrange food for ourselves. When the original Char Atra got flooded, we were here. Now my uncles live in Dhaka. They do not come here, nor maintain any communication with us.

This is how Helena grew up. She had an aunt, whose husband also got married again, leaving his wife and only son and moved away another village. He broke off contact with her aunt and cousin. That aunt also lived in that house, and the cousin worked in Dhaka from a very young age. When Helena was 10 or 12 years old, she was married off to that cousin. After marriage, Helena went to Dhaka with her husband. She started working in the garment industry, but she could not stay in Dhaka:

> No Sister, I was not happy there, I would fall sick frequently. I only stayed in Dhaka for five years. I was working in the garment industry but would often get ill. I would be on duty for 15 days in a month, and the other 15 days I could not work. Later I moved back here. I'm a girl from this place, and I went away after my marriage. Then my husband and I both moved back. I came back when this son of mine was two months old. He was born in Dhaka. Now my marriage is in its twelfth year. I shifted right after the marriage. My husband was also unable to work because of his heart problem. Is this not a bad situation, Sister? That is why he didn't continue working. Treatment was expensive, one tablet costs 150 taka. We are poor, so we didn't continue the treatment and he stopped taking medicine.

Now Helena's husband and Helena both work in the village. They do not live in Dhaka anymore. Helena's husband cannot do heavy work, including work in the fields, because of his heart problem. He tries to manage his family by fishing, but he cannot do that all year long. Fishing in the river prohibited for part of the year. Therefore, he is forced to stay home. Helena picks chillies and cuts jute in the rainy season. Together with her husband's income, that is all they have to maintain themselves. Helena says this:

> Before our marriage, he worked in Dhaka in a sweater factory. But now, as he has a heart problem, he can't work anymore. He can't do hard labour. So, he cannot even work marking up the fabric, which is why all he does since he left Dhaka is catch fish. However, Sister, they are raiding fishermen now, and don't let us fish.

> So, my husband just sits idly in the house. He can neither catch fish nor can he work from home. I just pick chillies to sell then, and from that I can afford to buy rice and lentils and pay the debt instalments.

Helena's family includes her two sons, her husband and her mother. Helena's mother has become old, so she cannot pick chilies like she used to. Nevertheless, she still works. She gets a senior citizen allowance, but she has to spend it all on her medicine. Helena's mother-in-law does not stay with them in the village because of poverty. She works and lives alone in Dhaka. Her mother-in-law keeps her sister (Helena's mother) with them for support. A few days ago, Helena's mother fell down and hurt herself. Helena had to take a loan to treat her foot. As Helena says:

> Mother cannot walk very far. She broke her ankle when she slipped by the tube-well. It was put in a cast in Maulatganj and the ankle will have to be kept bound for two months. She has to do her defecation in the house. I made hand-quilts, and she uses them to clean herself. She can't do any work or go to the pond. My husband took her for treatment. My husband was fishing at that time, and I took a loan and saved money. I took 5,000-taka in my first loan so I could take her to Maulatganj. I have been saving in this SDS for a long time. I have been taking loans for four or five years, and now we have to take another loan to run the household. I will refund the 5,000-taka by picking chillies. I must repay it within one year.

It has been a few years since her husband got the card for fishermen. He gets rice grain against the card when the fishing prohibition is on. They receive 9.331 kg of rice grain per month, but they have to divide it in two. That means that the rice against one card, meant to feed one person, is shared by two people. Distributing the rice in this way, the village chairmen can keep everyone under their fist. Helena and her husband still have not received this year's rice grain. So, they have to take a loan to survive. This year Helena got a VGD 'Safera rice' card through an UP member. She gets 15 kg of rice against that card. Though the card is registered under her name, she has to share the grain (the support from the card is the grain) in the same way they have to share support from the fishermen card. Helena says this:

> Sister, my husband catches fish with a rented boat. He has been doing this for the last five years, ever since he came back from Dhaka. He gets around 200 or 300-taka. He got the fishermen card first. You know people come to the house from a long journey and the chairmen gives 9.331 kg. Not more than 13.9965 kg. Whoever does the weighing of the rice, they all get food. They get it monthly for three months. The fishing prohibition lasts for three months, so they eat for three months. This time they haven't given any yet. My mother gets her allowance card support, but we get nothing.
>
> You see, my safera card rice was distributed only for this time. I have brought five lots as my share. I get half safara, and someone else gets the other half. It's like you get 15 kg, I get 15 kg. they're meant to distribute it every month, but we haven't got it for the last two months. I must keep the card under my name, since the election is very near. And to keep the public satisfied, they must give them something. This is like this. I got it only once and went five times in five months.

Helena had to spend a lot to obtain her card. Nevertheless, she has to share the rice with someone else. In the beginning Helena protested, but later she decided to keep her silence and compromise with the rice distributing system of the village members. Helena says that this 15 kg of rice does not last long with her family. In the end they are forced to take a loan. In this regard, Helena says:

> For this card, the chairman demanded 500-taka, and we paid. Sister, we do not understand things much. We need advice. If he feels like it, he'll give me a card. If he doesn't feel like it, he won't. Julia, daughter of Dadan Munshi Juli member, gave me the card, not a member from our area. She competed in five wards/ three wards as the woman member. We must listen to what she says. And she says, 'let it go. It's of no use talking.'
>
> According to the rules, however, I should get it. The card is in my name. I obtained it with my money. I should get 30 kg, should I not? I argued this point for many days. Now they say, 'Daughter, accept this.

> We have to provide for the others too.' Then I say, 'Ok, take it, and give me the rice.' Now we receive rice in alternative months. I received it in January; they'll receive it in February.

Helena adds this:

> How can we ever get ahead, Sister? Sometimes we fall sick. Suppose we pay the doctor 500 or 600 taka. Could this money not have done better in my hands? But it's all spent! As you see, we cannot catch fish now; but still we have to eat. We are not receiving the grain support, so we have to buy food. We buy 10 kg or five kg, and we eat it on a daily basis. We cannot buy a full sack. How could we? We have to save on one hand and, on the other hand, spend for the children, for the doctors, for my mother's betel leaf and nut, and then for my own treatment. This 15 kg doesn't last even 15 days; only six days.

In a house full of need, a big part of whatever Helena earns is spent for treatment and medicine. Last year, pregnant at the time, Helena became severely ill. The girl child died right after birth. Then Helena had kidney stone complications and had to go to Dhaka for treatment. As Helena says

> At that time, I gave birth to a daughter. I endured six days of labour pain, but finally the delivery was not possible at home. So, I went to Dhaka Medical College Hospital. She was born there. Before the daughter was born, there was like a lump … There was a kidney problem. A kidney stones. I borrowed 20,000-taka to see a doctor. The daughter was still in my womb at that time and after the visit, but she died in childbirth.
>
> One month ago, I spent 5,000-taka on medical expenses for my daughter in Dhaka. One year ago, I was sick, then I got pregnant with a daughter. I was released from the clinic 25 days later, after not even one month. I am so poor that within five days I had to find work picking chillies again. I worked with my aunts. I had to work even in illness.

Helena's household expenses are met by picking chillies. They will continue picking chillies until next week, and then this work will also come to an end. After that, they'll remain unemployed until the rainy season, when they can cut jute. And when the fishing prohibition ends, her husband can catch fish in the river, and contribute a little more. Meanwhile, they are forced to take loans to meet household expenses. Though they can pick chillies now, this year the harvest has not been good. Some unknown disease is killing the plants. Helena adds this:

> If the crop grows, then it grows. This year the fields are burnt! We usually pick the chillies from March to end of April. This year the crop won't last till March. We're picking all the chillies, whether ripe or unripe, because everything is getting burnt. Some disease is spreading. People are saying that it's because of the unexpected rain. All the crops are ruined. By now there are no chillies left; we have picked them all. You saw the field we were picking from? Today is the last day. We won't go there anymore. There are seven days left for picking, if we pick for these seven days, there'll be no chillies left. I picked around two sacks, and for that we get a small share.

Helena is a woman of this char. She has witnessed changes in the climate; she has deep knowledge regarding the plants of the fields and the fishes of the river. While talking about the chillies Helena told me about other crops that grow all year long"

> People cultivate chilli in the chili season, along with mustard and leguminous seeds. But my family doesn't cultivate anything; we only pick for others and get a commission. Jute and rice are grown in the rainy season, a time when we mostly remain unemployed. We just cut a bit of jute, and we get some income from that. You see that jute? In the kitchen? I weave it. They divide the jute I cut into three parts, and they give me one part. You see? This is our work in the rainy season, only cutting jute. We use it to bind the fences, but the damaged house remains the same. The jute can be sold in the bazaar, but we cannot sell it. Whatever we get, we bind fences with it.

She adds this:

> It's chilli season. Now they sow kaun as fodder for the cows, and mustard and the chillies. In the rainy season they sow rice and jute. There are also pumpkins and koroi trees. I have planted pumpkins, but they only grow and rot. I cannot bring those to my home, I could only bring a few. It goes rotten. That didn't happen before; this is the first time. No one can buy or sell anything, whatever survives, we have to eat it all. An no one grows much kaun for livestock fodder. This season they only cultivated a little.

Helena has seen different faces of the climate and the nature of the char while growing up. She has gone through all kind of experiences including changes of the char, erosion and building houses in new areas etc. She has had to shift her house five times because of the river erosion and different natural disasters. With the changes of climate and the soil of the char, the crops and people's occupations also changed. Helena speaks about this:

> Earlier no one used to come to this char. It was a jungle. Soil erosion had left nothing but sand, and that got sticky with silt. At first no one cultivated it. There was only sand. The sand I have put, there was same kind of sand in the land in front of our house. The soil became better until one had to rent land for 30-40,000 taka for cultivation. But then the land deteriorated again because the river became narrower and caused trouble. And now the climate is deteriorating as well.

In Char Atra, river erosion meant Helena had to change houses a number of times. Char Atra was larger before, and the mainland to which it was attached has now been drowned by erosion. Helena was born in the original Char Atra, at her maternal grandfather's house, and grew up there. Erosion has changed the course of the river repeatedly, and they have had to shift their house accordingly. Helena talks about this:

> Suppose this char is eroded eight or nine times. Will people have anything left? How will people earn a living? You see the village there? That house in front? My house used to stand in front of it. That house crumbled along with the riverbank, and the previous one crumbled in the middle of the river. The house before that house crumbled in Sreepur. Then I built a house here. Now the river runs in front of this house. This small area has experienced flood erosion five times. This small patch of ground, for example, cost me 1,500-taka. I built it up with clay, thinking we might erect a house on it. The two of us, husband and wife, now live with our children in one room. My mother lives in another room, which is dilapidated. I'd like to build another house, but I have no money for timber. I brought corrugated tin last year. Now I have to take out loans if I want to buy timber. I've already paid to build up the earthen plot by selling chillies.

She continues:

> The river has eroded its banks five times. There was no cultivation here before, but now people are growing things. They used to farm the land that has now been eroded; but then the river left only sand here, and no one wanted to cultivate it. This place used to stand behind our house. In addition, there was jungle, and people were afraid to walk here. But now people have built their houses here because the river eroded away the nearby mainland. For example, we have built our house here and are now growing things. The quality of the soil has got better; there's silted soil instead of just sand, and that makes cultivation possible.

Every year the villagers have to struggle against storms and flooding. Helena has witnessed such events since childhood. But these days river erosion is more frequent than ever. This sandbank, for example, was much bigger in her childhood. When Helena was little, the place where their present village has grown up was deserted. Helena recalls that the nature of the char was different back then, and there was less poverty. Fish were still plentiful, and people mostly got their living from the river. Over the course of time, however, fish populations have dwindled, and village fishermen have to catch fish with current nets. Land area has been reduced by erosion. Consequently, there is less cultivation, and poverty has increased. There are fewer employment opportunities, which makes the situation even worse. Every year their houses get damaged by storms and flooding, but they cannot build more

robust dwellings. A new house requires much money and hard labour, so they keep taking loans so they can merely restore the bamboo and jute walls. Helena used to live in a more dilapidated house in the jungle. In this matter, Helena tells me the following:

> At that time, 15 years ago, we had no real house. We lived in a house in the jungle. After seeing it, Government gave us this house instead. But all those years ago we lived in the real Char Atra. Which is now under water. But you see, even in this house there are holes here and there, and water comes through them. What can I do? We are poor. The storm strikes in different places. What Allah doesn't give us, we don't want to see.

She also says this:

> Every year storms damage the house. These storms are frequent. How can the posts be strong enough? It's all taken away. Allah is the keeper. What was taken away, I have bound. To obtain one paper takes 200-taka. To bind the fence, one needs bodli, you need your neighbours' assistance to set the house right. Now you see, we couldn't catch fish and that is why things are scattered. If we were able to catch fish, we could set things right.

The house where Helena currently lives with her husband and children and mother is eight years old. The Government gave it to them as protection against floods.

> You remember one year they were giving away houses? We got this house at that time. We were affected by the flood that season. Remember I told you about the real Char Atra? Our jungle house was there. Everything in our household was washed away. We couldn't save anything. We were only able to save the rice grain and the house posts. Later, the UP members saw the leaks in our old house and gave me this one instead. We couldn't get anything with our hard-earned money. We cannot even buy sufficient food; then how would we build a house?

She elaborates

> In the rainy season, water comes into our house. It happens every year. During that time, we stay on the bedstead or on higher places. We got relief only once, some five to seven years ago, when we were living in the real Char Atra. It has been eight years since we got this house. The great flood I mentioned had washed away everything; we got it during that flood.

Since she came back from Dhaka, following her marriage, she has been forced to take loans every year. A loan from the Shariatpur Development Society (SDS) office helps her to run her family for part of the year or sometimes even the whole year. The VGD rice she gets lasts only six to seven days, and for the remainder of the month they have to buy rice to eat. What her husband earns from fishing and what she earns from chilli picking and jute cutting are spent on loan repayments, three meals a day and medical treatment. As a result, they cannot take strong measures to save themselves from the storms and floods. They can't even fix their damaged house.

Helena says this:

> I couldn't take any more measures to fix my house. What measures could I take, Sister? After raising the house with earth, do I have any strength left? If the Government could help to carry the soil, it would be of great help. We work in the fields all day long. And after coming back home, we have to carry soil. I have just spent 1,500-taka to hire someone to carry the soil for me. I need to do more for the house, however, and should have at least two workers to carry soil. So, I'll need 600-taka more. I have to spend 2,000-taka only for soil. Wooden posts are better than bamboo, but I've chosen bamboo. What can I do? Our money is limited. But this bamboo means more hardship. We have replaced it last year, and this year it's been two months since we did that. Every six months the posts need to be changed. We take loans for that. SDS is the big loan.

Helena is only one among many women on the Padma's sandbanks who struggle with river erosion and poverty during storms and floods. They work in the fields in times of illness, under the hot sun and in heavy rains, and they catch fish in exchange for pittances.

All the village women are busy picking chilies, and Helena has handed her work over to her sick mother so she can tell me the story of her hardships and struggle. But she is in a great hurry to get back to picking chillies. Otherwise, she will fall behind some 10 other people and her day's income will be reduced. I can't take much more of her time. In essence, her story seems to be this: Her family, now including their young children, passes the years in shifting from one side of this erosion-prone char to another, battling with nature. At the same time, aside from feeding the household, Helena has to cope with the expense of the illnesses that have become another incessant pressure.

Helena's sons are very young, not yet even of school age. Helena is worried about their future. How can she bring up these two kids, so they have a better life? Helena worries that the expense of their studies, food and clothing will only increase, as will the burden of her loans.

## Narrative 4

**Micronarratives on climate change and adaptive social protection**

### Ups and downs of Samia Begum

**The researchers.** It's been three days since we came here to the farmstead, and the water level in the haor has risen remarkably. Everything is drowning because of the rains every night, and more water is coming down from the mountain.

For the next six months, people will have to live with this flooded haor. The local people are familiar from birth with this face of nature. At the start of Baishakh, the same haors that once gave them dreams of paddy-filled farms starts to rob them of those dreams. Nature can quickly change the script, and their dreams become nightmares. At the start of Poush [ninth month of the Bengali calendar] and Magh [10th month, last month of the winter season], farmers sow seeds in hope that, by the end of Baishakh, the income from their crops will give them money for such things as medical treatment. However, if the haors start to fill 10 days before the usual time, those farmers have to forget about their health and, no matter what happens, they need to do anything they can to save their crops.

We travelled from one village to another for two days by boat. We encountered people of all ages, from children of five years to men in their eighties. And every one of them had to find some way of coping with the situation. For six months of the year, here in the haors everyone, men and women alike, seeks ways to earn a livelihood. For the other six months, the haors fill with water and they instead have to fight with nature.

Most of the local families are unable, from their six months of earnings, to survive the other six months. Fishing might provide a good source of income. But because unregulated fishing is destroying the natural diversity of the area, the Government has prohibited it. When the rainy season comes, some of the families bribe government employees so they can earn money through fishing, but not every family have the necessary assets for this tactic. So they are forced to move to Sylhet, Jaflong or Dhaka in search of a livelihood. This kind of situation creates special panic in families where mother, father, and male children are absent. Almost every family faces economic crisis in the rainy season, so there is no one to offer paid work. Meanwhile, activities such as digging soil, collecting wood, and paddy work is done in the dry season. In rainy season, everything is under water, even the pastures, so raising livestock also becomes impossible. This type of poverty afflicts every family during the rainy season, forcing everyone to wait for external support. If any family gets government help, then their living becomes a little easier, perhaps, but not comfortable. Samia Begum's family is that kind of a family.

**Samia Begum.** She says she is about 50 years old; though has no real idea of her actual age. She lives in Mandiyata village, in North Sripur Union. The village is so small that everyone seems to know everybody else. But it seems that Samia Begum is something of a celebrity. As soon as her name is mentioned, everyone has something to tell you about her past, present or future. She is the mother of four daughters, one of whom is married and who lives with Samia in the same house. One woman guides me to Samia Begum's house. It is 11 a.m. when we arrive, and Samia Begum is getting ready to go somewhere. At first, when I say I want to speak with her, she hesitates; but then she agrees to talk.

She is a charming woman. Her house, built just a few months earlier, seems new. As our conversation starts up, women and children from neighbouring houses gather around. Soon I cannot hear my own voice over the hubbub. There is no lack of children in this village. Everyone lives in houses, and the population density is so high there is no space for playgrounds. So, when they see some new face in the village, they become very eager to meet them. Everything is drowned, so they have no job in hand, as a result they come with their children to meet the strangers as well. Another factor: when they see a new face, they think that it might be people who have come to help them. Women here are warmly inclined towards Samia Begum, so the women begin to sit on her floor and listen to our conversation.

Samia's father's house is in Chilani Tahirpur. Her father was a sharecropper. Both he and her mother, as well as her siblings, are dead, and I did not want to add to her suffering by asking any more about them. After her marriage, when Samia came to her in-law's house, she saw that her husband was also alone, just like her. His brothers are separated from him, he had nothing but this homestead. Samia also had nothing, if she could have got help from her father's side, perhaps the situation would have been easier, but she didn't get that kind of help.

> We had nothing, not even proper shelter. I gave birth to four children under these circumstances. If Allah had not blessed us, we might not have survived. We eked out a livelihood by digging soil, collecting wood and getting help from others. We also got some fitrah,[44] which helped us to survive. My father was only a labourer, and he didn't have any land to sell or he could not afford me to help. Anyway, he died when I was a child After that my mother worked hard and raised me, then she married me off to a poor man, and I wasn't able to reduce my misfortune.

And so she summed up her past and present. If her father's economic situation had been good, she would have been married into a more solvent family. But her father died when she was just a child, so from childhood she was raised in poverty. She faced the same poverty when she came to her in-law's house. If fact, she faced even more poverty there. After their marriage, her husband went to work in a coal mill. His income was not much, but their family could survive on it. They had no farming land of their own, only the homestead.

> In this world, hardship is all I have. I have neither a son nor an earning partner. None of us has the ability to earn even the slightest money. But we have four or five mouths to feed. The man of the house is weak and can't do anything. He used to go the chairman's office and come back. That travel also costs money. And he only gets 2,000–3,000 taka a month. That doesn't even pay for his medical bills. Hardship is upon us.

[44] Fitrah, or fitra. 'According to Islamic theology, human beings are born with an innate inclination of tawhid (Oneness), which is encapsulated in the fitra along with compassion, intelligence, ihan and all other attributes that embody what it is to be human. ' See: https://en.wikipedia.org/wiki/Fitra [accessed 20 Dec. 2018].

One by one, they had four daughters. Then, Samia again got pregnant in the hope of a boy. This time her prayers were answered. That boy is now nine years old. Then she married her daughter off. The son-in-law was also a day labourer. They had to give her daughter everything for her dowry—7.000 taka along with all the furniture for the daughter's house—even though they were poor. But her daughter never returned home after her wedding.

Then, just a few days after her marriage, the second daughter came back. They had not had to provide a dowry for the marriage of their second daughter. But the son-in-law wanted his wife to earn her own keep. The daughter was not happy with this condition. She thought that if she had to earn money, she would feed her parents with it. So, she returned to her parents' house. Now, parents and daughters are holding the family together.

> I have wedded off two of them, and their families are doing well. For her, marriage or not, it is all the same. Her husband isn't interested to take her. So, she came back home and is now earning money. The husband won't take any responsibility for her. That very person once fed the whole family. Tells us to earn our keep. She now works at the mill. Crushes rocks.

It was getting increasingly difficult to manage the family with a single person's income. So Samia Begum was compelled to look for work. Even though her father's household had been poverty ridden, she had never had to work. But now she had to shoulder the responsibility.

The two younger daughters look after the house and the second daughter and mother work in the fields.

> There is a place called Botchora, in Shayon. We looked for work there. We had done various things. Went into waist-deep water and planted whatever needed to be planted. We planted small plants such as pepper saplings in the mud. This year there are no saplings, no trees to be had. They used to pay us at a day rate of 100, 150 or 200-taka depending on how much we planted. We did this for the past two years. This year, we don't have this work. The work is over, but the trees aren't healthy. They're dying. Because of that they are planting no trees this year. The forest grows thicker if it is planted inside the swamp. And that is where the pepper plants were planted. We had planted two or three times. But they don't grow anymore.

In the haor areas, finding work in the dry season is not that hard. The people start protecting their houses with stones and other things right before rain lest their houses are washed away by flooding. So one can find work breaking and carrying rocks. Besides that, one can find work in rock-crushing mills or dam construction. But this kind of work is very unstable. If day labourers are a bit late, there is no work to be found. And when they do have a chance to work, they have to work from dawn till dusk. There is no other option.

> We do the work of crushing rocks. Medium-size rocks are brought by trawler, these rocks are moved to boats, and then the rocks are fed to a mechanical crusher. This work goes on all day long. During the Asar, we get a break for lunch and another at noon to have betel leaf or something.
>
> Waking up, I have to go to work. If there are already many people available, I cannot get work for that day. You have to wake up early in the morning, before anyone else. There are many poor people here who need work, but the mill doesn't need many workers.

In this area, most families live hand to mouth. Everyone desperately seeks work. And, since the mill does not need so many workers, competition for jobs is high. Though Samia's family works very hard, their income is not sufficient. During the rainy season, work is scarce, so they have to make alternative arrangements. They have four daughters who are growing up, so they are under pressure to save money for their daughters' weddings. That is why the husband and wife work so hard, so they can save up the money. Apart from working in the mill, Samia Begum and her husband used to do such work as digging soil or planting trees on dams, in addition to working in another persons' fields. Even then, the family just got by.

The mother and the daughter have the same job now. There are still two unmarried daughters. And they also have a son. They were enrolled in school, but they do not or cannot go to school. The two younger daughters remain busy with household chores, and the boy has asthma. So, they stay at home. Her husband is now an aged person. The Coal Company has shut down, so there is no work there. Fortunately, however, the chairman gave Samia's husband the job of UP security guard. He is now around 70 years old, and is sickly, the effects of age and hard work evident in his posture. But still he works as a guard day and night. He is paid 3,000 taka every month for the work. But he isn't paid regularly, and, since the money comes in small increments, Samia Begum cannot manage it in any meaningful way:

> Apart from being a guard, he doesn't do anything. His payment is 3,000-taka. But he isn't paid the full 3,000-taka. The payment is issued sporadically in bits of 1,000-taka, 1,500-taka and sometimes 2,000 taka throughout the month. This money is spent for his medicine. Even this income is not sufficient for the medicine he takes. Our days go by like this.

So, Samia Begum had to find other work to run the family. For the previous two years she worked planting trees on dams. She had to work for two months each year, and the income was good. But because of the floodwaters the trees did not survive, and she did not get that work again. Because of early floods this year, digging soil, planting trees and mill work finished early. So, in this rainy season she has neither money nor a job.

> There are no jobs in this rainy season. We are sitting idly by. We spend our days in getting help from the chairman; otherwise, we have to sell something if we want to eat. In the working season, we go to the mill for work. If I get 200 taka at the end of the day, I have to pay 100 taka for rice and another 100 taka for other necessities. Thus, I survive with my children. My husband's income is spent on his medicines. He has asthma.

Samia Begum does not have any land for farming. Her husband is old now, and sick She has three daughters and a son. As the rainy season has come earlier this year, she is in trouble. Though she does not have any land of her own, she could grow something on others' land. She could do the work of carrying rocks, digging the soil, cutting the wood. But the flood has taken away all these work opportunities. So, she is worried about how she's going manage the family this season.

> I do work if I get any by the grace of the Almighty; otherwise I have to sit idly at home. The early flood has caused much loss for the household. I sowed guchi seed [one kind of rice] this year in the hope that in the rainy season I could manage the food supply for the family from this. But it didn't happen. We can ask for food or do some work for others in this kind of situation. But this time, there is no one to help because we all are in the same situation. Everyone is busy trying to secure their own future. ... How can we survive without any income? I don't know what has been written as my fate. This time there is no work. We sit idly at home. We can't survive if we don't get any help. Nothing remains or us but death.

Samia Begum's husband had been working as the UP guard for five or six years. As a result, they had the opportunity to communicate with UP members and the chairman. The local chairman had given her a VGD card, in view her and her family's economic condition. Over the previous one and a half years during the rainy season, the VGD card has helped her to organize rice:

> I got it just before the election. And the next election is on the way. Another man will be the chairman. I don't know whether we are going to get it again. If they take pity on us and keep it flowing, that's a bonus. This time I got the money by playing the sympathy card. They gave the money considering me and my children. They first said there was no money, but then gave it to us anyway. But I don't know about our future prospects. This is the story of the chairmen and members. They give six units, but it becomes just five units of rice when we get it. How is that possible? It becomes five units on the way to our home. We had to take the sack before, now they give the sack. Now some get the rice, some don't. They give it to us monthly, but if a month is missed for some reason, we get two months' worth in a month.

It is not hard for Samia Begum to find jobs in the dry season. She can manage to earn an income somehow. But during the rainy season she is left helpless. She has had to starve on various occasions, along with her children. Her hardship lessens when she gets the VGD rice regularly. But usually she doesn't get it regularly. At those times, she has to starve or ask others for help. Her VGD card will expire soon. A new chairman will be elected, and she is tensed for that.

> Obviously, it's painful. You have to scrounge work for a living. When I did not get rice, I had to buy the rice. Now, getting this rice is saving our lives during this rainy season. What happens next month, when I don't get the rice? We are going to have to starve and suffer. Scrounging work does not do well for the family. We had to starve in the rains for three or four days. This is how I am getting by. During these rainy seasons, life is exceptionally bleak, my dear. During the summer, you can at least make a living, however scant that might be.

Though the VGD card helped her to provide meals, there wasn't enough to put aside any savings. The monthly income is not enough to provide meals for her and her children. So, she survives with the help of the VGD card as well as savings put aside over the past two years. But the food is not enough to survive on; one needs a house to stay in as well. So she has built a house with corrugated tin, though it was tough for her.

> I have built a new home. The previous house was made of rice husks and clay. Then we did some work on it, adding tin and other materials. Then the flood washed away my home once again. So, we worked, daughters and mothers; we borrowed and scraped together materials for the house. Then the month of Chaitra [March–April] had passed. We had work in the mill for two years. We have also had the charity of the UP members and chairman. After years of scraping by, I finally had 200-taka in hand. With 100-taka more, saving every penny, I was able to build this house. It took a long time. I would have done more if I had money. But I don't have money.

After working so hard all day long, she only wants to sleep peacefully. She tried to protect her family against bad weather and natural disasters so, even though it was tough for her, she fixed her house up over five or six years by finding money and corrugated tin. But now, though she feels she has the security of shelter, she does not have food security. She could sublet the family land for cultivation, seeking an income and food security for the whole year. But her husband became old; he was no longer able to work in the fields. They do not have any elder son who can help with fieldwork, so she cannot sublease the land. Many people raise livestock, and that can help them in need. But Samia has neither the space not the human resources for that. Husband, wife and daughter go to work. The nine-year-old son is too young to look after domestic animals. So, she had to give up on any idea of raising livestock.

> I couldn't do much permanent work. If I had sons, I could do a lot of things. I would have brought in 200-taka, which would have given me an income of 150 taka. If I had a son, I would have done household work. If I wanted to raise a cow, I had no space, no cowboys. I couldn't let the cow roam free; I would have to at least keep it under a roof. When I go to work, who is going to look after the cow?

Samia faced many hardships. But still she changed her situation through her own hard work, her husband's and daughter's incomes, and the support of her neighbours and the Government. She lived in precarious circumstances after her marriage, and still managed to build a secure place in which to live. In the dry season she can secure enough food for her family. But the rainy season leaves her helpless. VGD rice support reduced her struggles over the previous two years. But she remains tensed for the coming days.

Even when help does come during the rainy season, not everybody has access to that help.

# Narrative 5

**Micronarratives on climate change and adaptive social protection**

## Life of an insect

**Halima.** It's high noon. Hunger has risen along with the sun. Halima slowly gets down from her bed. The door is open, and she feels the wind on her, burning with a brush of salt. She looks for the three goats. Like Halima, they are out and about and searching for food. A gourd-like plant has emerged from the soil, and only Halima has remarked its appearance. Thus far the plant has borne just three fruit. Every day Halima goes out to check it. Far away, past the WAPDA[45] embankment, there's a tube-well. When she's able to fetch non-saline water from there, she uses it to water the plant. She picks the three pieces of fruit and arrays them on the only wooden plank in her small shack. She wants to cook, but she has no ingredients left.

She goes to her paternal cousin's brother's house and says, "Sister-in-law, I couldn't do my shopping at the bazaar; please give me rice and two potatoes." Then Halima retires to her house and waits for the rice to come. Her sister in-law leaves the rice and potatoes beside the fruit on the swinging wooden plank.

Halima eats the rice. There's no more drinking water. She has drunk all there was in the water enclosure by her house. She has a headache. Spreading her hair, she swings on the plank, as in a hammock.

*

**The researchers.** The village is Munshiganj, in Shatkhira's Shyamnagar. It is now 3 p.m., and the sun is shining high in the sky. We have lodgings in the Barsha Resort. We still feel the harsh salinity from that morning's wind. Even in the washroom, there's nothing but saltwater. Our urban skin is burning badly. The heat is so intense that I've been taking a saltwater shower every hour and pouring water over my head in between times. After lunch, we're going to Datinakhali with five ethnographers.

The sky is clear. On both sides of the road, beyond the babla trees,[46] there is water as far as the eye can see. We aren't proceeding along any river; these are shrimp enclosures. Nothing can be seen except that. No environmental diversity. Nothing but shrimp. The number of ponds is overwhelming.

Within an hour we have arrived in Datinakhali. Our driver stops the van on the WAPDA embankment. The embankment runs along the Kholpetua River, and right beside it is the Sundarbans.[47] It's the time of the ebbing tide, so the banks are muddy and the great stands of keora tree[48] are still flooded, though their roots are exposed. The houses are on the other side of the river. The place is not very densely populated. There no big trees, just a few coconut trees, a tamarind tree and babla trees.

The houses are roofed with corrugated tin or thatch. Most of the houses have clay walls and clay floors. A few Chinese ducks can be spotted. No hens, but there are some goats. We don't see any calves. From the embankment we can see an expanse of shrimp ponds behind the houses.

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[45] The Water and Power Development Authority.

[46] Their wood is used for making ploughs and carts.

[47] An area of mangrove forest lying in a Bay of Bengal delta at the confluence of the Ganges, Megna and Brahmaputra rivers.

[48] Banglapedia: This is the name for one of the tallest trees in the Sundarbans mangrove forests, Sonneratia apetala. It can attain a height of about 20m and a girth of about 2.5m. The tree occurs on newly accreted soil in moderately to strongly saline areas and is considered as a pioneer species in ecological succession.' See: http://en.banglapedia.org/index.php?title=Keora [accessed 19 Dec. 2018].

**Shefali.** While on the embankment, we meet Shefali, a social entrepreneur. She has established an organization for people dependent on the forest. We go to a thatched house and see that women are being trained in producing crafts for self-employment. We wondered: Were they unemployed? And if so, how? Shefali calls a few women over, and they take us to some houses built under a social safety net project.

We walk beside the houses where they stand just one foot below the embankment. There is a pond on the right, another water reservoir just beside it and then a small house. Just by the entrance of the house, there's a stove. The lady leaves us on the doorstep.

**Halima.** Entering the house, we see Halima. She's swinging on a plank/hammock with her hair down. She's tall and slim as a cane. Her face is pale, her eyes sunken and yellowish. Her house is bare, aside from a bedstead in the left side and a fishing net beside that. The hammock faces the door, and behind that there's one of two windows. On the far left stands a wooden plank.

We ask if we're annoying her, coming in so suddenly in the afternoon. She smiles and says no. She sits on the bedstead and I make myself comfortable on the hammock. I tell her that it's comfortable, and she says, yes, you're right. Then she asked what we're doing. She hasn't asked me who I am, or why I came to her house. Halima doesn't ask any of these questions, just stares with a curious look on her pale face. She has seen Shefali accompanying me to her doorstep.

I casually introduce myself and turn on the recorder. There follows some of what she tells us.

> The Government asks me how I am. I have no support but the government allowance. I have no one else in my house.

The house is so tiny that it's clear no one is here but Halima. I tell her about our experience in Sunamganj, where there were many people, and children everywhere. With a faint smile Halima replies:

> How would there be any children here? From where could I have them? Hahaha. She has left me… Today she's a 20-year-old woman. She didn't die, just left me. Now my daughter lives in her in-law's house. I myself arranged my daughter's marriage. I earned the price of everything myself and arranged her studies and everything. Now I live all alone. I do not have mother, father, husband or brother. Now they give me the senior citizen allowance every six months.
>
> We two sisters live here. Her husband got married again, leaving her! My husband did the same! Hahaha.

**Rahim Mia.** Forty years ago, Rahim Mia was a woodcutter. During the time of his father and grandfather, the family had a good piece of land, but with financial constraints, including debts to pay off, they lost almost all of it. In those difficult times, they had no alternative but to hand the property over to their creditors. Everyone was greedy for land. Grabbing the rice fields, they pumped in saltwater. No land was left for Rahim Mia's generation other than the house in Burigoalini. What kept them alive was this forest. Rahim Mia cut wood, caught crabs and small shrimps. He stayed within the deep forest day after day, and they lived on whatever he could forage from there. He had two daughters, the elder of whom was Halima. There were no schools or colleges in this inaccessible area.

After the girls were grown up, they learned how to catch little shrimps in the Kholpetua River at night. They watched how their father cut wood and how he sold it. But Halima was a girl of 10 or 12 years, time for a girl to get married. One day a marriage proposal came from Chanka of Shaymnagar. Since the groom's financial situation was good, Halima was soon married off to him. After the marriage, Halima came to learn that her husband had been married before and then divorced. So, she was his second wife. She realized then why her father married her off to this man. No marriage takes place without a dowry. But in this case her father had to pay less.

She passed 10 years with her husband. It was like a breeze of happiness was blowing around her. Young Halima was growing up in her husband's house. One day the husband came to know that his young wife was going to have a baby. He took his wife back to Rahim Mia's house. He promised that he would visit her each month and take her back after the baby was born. But until this time her husband hasn't come to take her back.

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**Halima.** "Didn't you see any hint that he was going to leave you?" I ask Halima. "You could have got married again, right?"

> How could I look inside his mind? He never asked about me anymore. Neither did I care to inquire about him… I lived with him for 10 years. I went out, sat down and stood up. I cooked, and in all those years I was of no use! Oh, how could I have got married? Hahaha. Crazy. I had to send my daughter to her in-law's house, and soon I shall have a son-in-law! Does anyone get married in this situation? Hahaha. Are you crazy?

Halima had a girl child. Her father was aged, she had no brother. She couldn't continue to be financially dependent on her father. She started using what she had learned from her parents from childhood, the strategies for living off the forest. Halima would also start doing day labour from dawn. As a rule, with day labour you work from 6 a.m. to 1 p.m., till the afternoon prayer, and earn 50 taka per day for working in s shrimp pond. She had to dig soil and keep looking for crabs, lying face down hour after hour. Then she would return home with her wages tucked into her sari. After lunch, she would go to the forest to chop firewood, selling the wood in the bazaar. After returning home, she would wait on the bank of the Khalpetua River with a fishing net for the whole night in the hope of catching shrimp fry. The size of the fry determined whether if it would be sold for one taka or for 50 or 24 *paisa*.[49] Disputes with recruiters over wages was a regular occurrence. Women like her could not go into the deep forest. A team of 10 or 12 people was needed. And forming such a group was not possible for a woman such as Halima. Considering everything, she had to find an enclosure owner who paid fair wages, and where they could sell the shrimp fry at a just price.

Sitting on the bedstead, Halima says this:

> I'd do whatever work I could get. I would go to the forest, or to the marshland. I'd catch fish and fry. I'd do everything and anything. I have worked in people's houses. I would do it all and, gradually, I saved money.

One day a cyclone hit this area. According to Halima, that was about 28 years ago. Their house in Burigoalini got washed away by the river. Halima's mother died. Afterwards, this WAPDA embankment in Datonkhali became their address. Halima kept working as a day labourer. She sent her daughter to the religious school, and, little by little, she saved money in the women's *samitee*.[50] She opened a DPS for her daughter. Amid this hardship, she always felt that if she had had a son or if her husband were there, she wouldn't need to do go through all this. Even though she was living a courageous life, this sense of lacking something important weakened her psychologically.

We start talking about the mangrove forest. Have you ever faced problems in the forest, I ask? We hear that Sundarban has many dacoits [bandits].

> No, I didn't go deep inside. Dacoits never got me, even though now there are more dacoits. But the forest rangers! Oh! They caught me so many times. Every time I bumped into them, they would arrest me. They have arrested me so many times and confiscated the boat. I had to set the boat free by paying them money. There was a lady from my area, she's still alive, we both went together and there was another very

[49] There are 100 paisa in a taka.

[50] A women's organization that aims to improve awareness of women's legal issues, while funding education and health access.

> old man, and a lady too. Right after we reached the riverbank, the rangers caught us. I wouldn't get in their boat; instead I jumped out of the boat and ran away. Are we not women? We went there on the sly. Digging the enclosure soil earns us just 50–70 taka. Is that enough to live on?

Days passed. Many times, she lost her boat to the forest rangers together with the wood she had cut. She had to take loans to pay the damages. The damage was not only due to the rangers; she also had to take out a loan every March to May. Her income depended on the weather and the forest rangers. Though her mother died, her father was still alive. Whatever Halima earned as a day labourer was spent on her daughter's education, food and her father's treatment. She was lost in a cycle of debt and loan payment. Then Ganamukhi, an NGO, came to the area. Halima started taking loans from them. Her unpaid loans finally amounted to 10,000-taka.

In 2009, in the month of Chaitra (mid-March), news came that a disastrous cyclone had hit Gabura Haat. Halima fled to the cyclone centre with her family. But even the cyclone centre had been demolished by the cyclone. The embankment was breached, and the water of the river and shrimp enclosures got mixed together. Halima reports the whole area looked like a great ocean. Everyone was left without shelter. There was no dry place to stand. Saltwater was everywhere, and the people were crowded inside their boats. There was severe shortages of food and potable water. Aila wiped out everything except their land, which remained beneath the water.

Seeing his house swept away and contemplating his penniless state Rahim Mia suffered a stroke and died that same day. Halima had to arrange his funeral. Halima says she can still see this awful situation:

> Water and more water! River and river and more river. It heaved and pushed. Finally the WAPDA embankment broke. We had to live on a boat. What more could I say? This Aila killed 22 pregnant mothers. The girl from that house [Halima points] had a baby inside her tummy and she bound her infant against her tummy. Still, she was washed away. She died. There were dead bodies everywhere. The houses and doors floated away. There was only soil. When the news of Gaburaghat being floated away came, no one could save anything. Some took shelter in the boats, some in high buildings. Some simply floated away, and the poor had such a hard time. I had seen a hurricane when my mother was alive, and now I saw this Aila. My mother died in that cyclone, and then my father in this one.
>
> The NGO people came, and they gave us water and puffed rice. The Government gave us this house. The place you are sitting in, is government khas land. It comes with papers. We took money from the Government and, after 30 days, we also got this land in our settlement. We have been in a worse situation; now we have a house at least.

After living in destitution for months, the Government's khas land came. Uttaran, a new NGO, arrived in the area. In the card project from the Ganamukhi Samitee, supplying relief services, the rule was to get a signature from a male member of the family. Even though Halima was the family breadwinner, still she needed to use a man's signature. On the other hand, now that her father was dead, she had to repay the 10,000-taka debt to Ganamukhi. After Aila, Uttaran Samitee announced that they would extend loans of 17,000 taka to women who were without men. Halima paid Ganamukhi 10,000 of those 17,000-taka. Afterwards, she was trapped in Uttaran Samitei. The Government gave 100 kg of rice grain. That helped them survive until water levels receded. The khas land was given by the Government and another NGO contributed corrugated tin to help build a house. With this support she was able to thatch her house as well.

Halima bought goats with money from another NGO. But it took a long time to get over the hardships. Then her younger sister's husband got married again, once more leaving her alone, and she returned to Datonkhali. She also got a piece of khas land to stay on. It took her a long time to go back to day labour. From Halima's expression, I could understand that, although she was able to survive that period of struggle all alone, a house without men had psychologically weakened her. Two years after Aila, she made inquiries and realized that the DPS that she had taken

for her daughter had risen from 12,000 to 14,000 taka. Meanwhile, her daughter sat for the SSC examination and passed with a good grade.

One day a man from Gabura Haat brought a marriage proposal for her daughter. Her neighbours also came to know this. The daughter was only 16 years old at that time. Halima faced a dilemma. Her sister's and her own life had involved unspeakable hardship, but now what should she do? The social custom is to marry the daughter off at the age 13 or 14 years. To ensure her daughter would have someone to provide for her, Halima would have to marry her off sooner or later (and she herself hadn't remarried throughout all this hardship because of her daughter).

Halima also looks back at her life without a man. She had to take loans relying on signatures from her father or uncles. And the greater her daughter's shortcomings, the greater the dowry needed to marry her off. After making up for the loss of Aila over all those years, Halima was finally able to save only 14,000-taka. If anything happened to her, who would look after her daughter? Now that her father was no longer with the family, there was no one. Would her daughter also have to work as a day labourer? Knowing her limited physical capacity, Halima knew she couldn't let that happen. Exacerbating this acute dilemma, the neighbours would come and hector her—get her married, get her married, they'd say, the groom didn't even ask for jewellery or money. Given all these pressures, Halima lost her resolve and put her daughter into someone else's hands.

> I have ruined my daughter. She was good in her studies. Now she has a child, there is no way out now. It was my fault. I can't stop asking myself: what I have done! Why did I do that? What account will I be able to give to Allah? I have brought her up, educated her and what if she is unhappy now? Her father didn't bring her up. I did. Thinking all these thoughts all night till my body aches. Aches. If I had a male child, I wouldn't need to go through this hardship. My daughter passed her SSC exams. I found a groom for her. No marriage takes place without a dowry. No one will take your daughter without one. The mothers have their plans for children. I wanted my daughter to advance in her studies. But I came under other people's influence.

The groom didn't ask for gold, but to save face for her daughter Halima took a loan to buy quilts and mattresses and a trunk to give as gifts.

While Halima, pale-faced, tells of these things, I try to empathize with her. She looks very upset. I try to guess—did her son in-law treat her daughter badly? As Halima speaks, she stretches her legs out in front of her and looks down. Suddenly she stops talking and, points to my cell phone. She says, "Oh. You have taken pictures." I find myself in an awkward position. I've asked her things out of curiosity, but have I pushed too much to have her to reveal very personal information? I try to normalize the mood again. What is happening with her daughter remains unknown. I try to ask whether her daughter needs legal help; I ask if she will tell me about her problems if I switch off the recorder. Halima avoids answering that. She only says that the husband doesn't behave like an educated man with her daughter.

It has been four years since her daughter's marriage. Halima doesn't go to the Sundarbans anymore. The main reason is her anxiety and physical incapacity. She shows how cutting wood in the forest has caused her to waste away. She opens her sari and makes me touch her waist. She's nothing but skin and bones. I asked her why she hasn't seen a doctor.

> Hahaha. Give me money, and I'll see a doctor. They give me the senior citizen allowance every six months. Does it last six months? How could it? Is it enough for food and clothes and a doctor over these six months? I have seen a lot of hardship, dear. A lot of hardship. I cannot sit, with my bones and my waist. How can I manage my money? Would you like to know what I eat? I eat tree leaves. That reduces the pain of hunger. The leaves look like betel leaf. I also drink juice from these leaves. And you know, when I have a headache, I drink tamarind mixed with water. When I had ulcers in my tummy, everyone collected funds to send me to the clinic in Khulna. You are like my daughter, so I am telling you, visiting those big doctors requires money.

> The rich people can afford it, but not me. Where could I find such an amount? So I eat leaves! For the gas, I only drink water. What more do you want to know? There is nothing more to know.

Halima has been receiving the senior citizen allowance for three years. She rents a van rickshaw to go to Munshiganj every six months to receive it. There is a painful story behind her getting the support:

> It took me one year to chase it down. I chased a lot and finally I got it. Then I gave them my photo ID card. At first, they didn't take any money from me. But when the Government sent the money, the government officials took 400-taka from that allowance.

Every six months Halima receives 2,400-taka. She has to spend it very carefully. She married her daughter off, so in line with social custom she invites her daughter to come visit three times a year. In the month of Jaishtha (March–April), during the winter rice-cake time, and during the fishing time. There are expenses connected with all this. She can neither go to her cousin/sister-in-law for rice every day, nor can she go to catch fish fry with the fish net she bought with a 2,500-taka loan since, at the age of 40, she cannot see very well. It is impossible to cut wood in the forest without getting arrested by forest rangers, and then she has to take out another loan to buy things back from them. Due to her physical condition, it is impossible to get a recommendation from the chairman for the forest rangers. But how can she afford treatment with the allowance she receives? She has stomach ulcers. Once her neighbour sponsored her treatment in a hospital in Khulna, but is this possible every time she needs help? She gets tired in this salt wind, but she nevertheless has to walk a long way to get drinking water.

> I feel breathless in this heat. My body has deteriorated, what with the constant hard work. I have to clear my bowel a number of times a day in this heat. My chest feels under pressure. My urine gets thick. I feel pressure in my head; it feels like it is on fire. I keep pouring water on my head.

No rice or vegetables are available for foraging in this area. So, Halima has to buy what she eats with this 2,400-taka. In one month, just for herself, she needs 15 kg of rice grain, and one kg of rice is 28–29 taka. Can't Halima grow something on the government land? Here's what she replies:

> Before and after Cyclone Aila, it's the same. There's still nothing but salty water. These enclosures have existed for a very long time, from 30 or 40 years ago. There's nothing here! No milk, no tasty fish, nothing. The poultry catches diseases. Just because of the salty water nothing can be done. Let me tell you one thing, though. An NGO brought coconut trees and training in how to plant them. Oh, God. You'd have been surprised to see the coconut tree saplings. It amazed me! I thought, I can earn 2,000 taka a year. I planted the coconut trees, but they all died. The soil is polluted. Nothing can be grown here—the soil is totally polluted! This salty soil.

Now her story points toward the root of all the problems. The pace of our discussion quickens, as the greater reason beyond our day-to-day observations is revealed. I tell Halima that I don't understand many things, things which she has known or has heard all her life. I feel ridiculous. As if I wanted to absorb all her knowledge in this one meeting. Halima continues:

> This salty water entered this area 30 to 40 years ago. Those who owned land made these enclosures for prawn farms. They could sell the prawns for 400–500 taka per kilo! But the prawn farms have made the whole area salty. And now the water is poisonous. When poverty came in this area, there were not many people here. Those who had land and money took advantage of the opportunity to snatch other people's land. They took the land and made these enclosures on it. They said, you have five *bighas*,[51] we are going

[51] A traditional unit of measure for land area, It refers to no standard size, with the area described as a bigha varying from place to place. See: https://en.wikipedia.org/wiki/Bigha [accessed 20 Dec. 2018].

> to take one as a prawn enclosure, and slowly they took away everything. People are so mean. Do you see how they kill the poor?

Halima talks about the differences between then and now. Before, when people faced risks when farming, they would pawn their land or be forced to accept a prawn enclosure in the face of difficulty. Now there are samitees, and day labour work so those practices have stopped.

Now there are samitees everywhere, and land grabbing has stopped because the NGOs are here. Hahaha. But everything had already been taken away before that. Only the bones remain. There's nothing more to take away.

And Halima adds this:

> These NGOs are worse than anything. That samitee comes every week. And if you do not pay them, they will do such things. Aah. That's why I gradually left these samitees. I cannot earn anything. Gosh. If you cannot pay them, they will take your goat and your boat. They even took my allowance away! I had only 100-taka left unpaid to Uttaran for the loan I used to buy a boat. Paying 1,000 taka, I took a 5,000-taka loan so that I could buy a fishing net and catch fish. I couldn't pay them, so I paid them with the allowance. Now they won't give me loans anymore! The workers come, and if you cannot pay, they verbally abuse us. That girl who brought you here, she took my boat away. I was so sad. I repaid that money with so much hardship. They neither let me eat nor did they give me money. I became penniless! I received the allowance around the month of Magha, I shall have the same after Ashara. What will I eat? How will I pay the doctor? I can't even oil my hair. How can I eat?
>
> What more will you listen to? I cannot even go to my son-in-law's house. Lying on the bed, I call Allah to take me away. I cannot take this hardship anymore.

Halima wipes away her tears and asks me not to listen anymore. She shows me Uttaran's statement of the last loan. A fishing net is lying on the bed. I ask why it is placed there. In the night, she replies, there are mosquitos, so many people use these nets as mosquito nets. If she feels better, she uses hers to catch fish, but then she has no net for the insects. She is sad that Uttaran has taken her senior citizen allowance away. Halima says many diseases can be cured by honey mixed with water. But for many years she has not been able to drink honey. With a heavy heart, she says people from outside buy honey at any price. Now honey is in such high demand that it's scarce in the forest. Honey that used to cost 70–80 taka now runs 400–500 taka. She can't buy honey at such prices. She talks about Shefali. Shefali gathers honey from every house to sell to the people from outside. No one has honey other than Shefali. If anyone wants to buy it, they have to pay 400–500 taka. She has seen a bottle of root oil that cools the head. It costs 80 taka again, out of Halima's reach.

An NGO training initiative convinced Halima to plant a coconut tree in her yard. She had hoped it would prove beneficial, maybe allowing her to sell coconut oil. At her request, then, I went closer to the coconut tree, now diseased, to take a photograph. Meanwhile, she continued speaking:

> Do you know how much a coconut cost? Fifty-taka. If the tree had produced coconuts, I could have lived by selling them. You know, I swam under water to collect mud in which to plant the sapling. But no coconuts grew.
>
> Plus, the chickens caught diseases, and now there are no chickens. The goat is sick; its skin is mangy. It cannot eat. There isn't even any rice! There was rice before. I used to collect it and bring it home. A goat that cost 4,000–5,000 taka now sells for 1,000–2,000 taka. This isn't Aila's fault. Aila brought water one day and washed everything away.
>
> There's no peace anywhere, sweetie. There's no way left to make a living. Nothing but insects everywhere.

Our discussion has come to an end.

# References


Adger, W. N. 2007. *Climate Change Impacts, Adaptation and Vulnerability.* Working Group II contribution to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge: Cambridge University Press.

Ahmad, N. 2012. *Gender and Climate Change in Bangladesh: The Role of Institutions in Reducing Gender Gaps in Adaptation Program.* Social Development Working Paper 126. Washington, DC: The World Bank. Available at: http://documents.worldbank.org/curated/en/559391468340182699/Gender-and-climate-change-in-Bangladesh-the-role-of-institutions-in-reducing-gender-gaps-in-adaptation-program [16 Dec. 2018].

Alber, G. 2009. 'Gender and climate change policy'. In J.M. Guzmán; G. Martine; G. McGranahan; et al. (eds.). *Population Dynamics and Climate Change.* New York: UNFPA; London: IIED, pp 149–163.

Awal, M.A. 2013. 'Social safety net, disaster risk management and climate change adaptation: examining their integration potential in Bangladesh'. *In International Journal of Sociology Study* 1(4): 62–72.

—. 2015 'Scale-up potentialities of some social safety net programmes to climate change shocks in Bangladesh'. (PDF) Available at: https://www.researchgate.net/publication/276534038_Scale-up_potentialities_of_some_social_safety_net_programmes_to_climate_change_shocks_in_Bangladesh [accessed Dec 17 2018].

Arnall, A.; Oswald, K.; Davies, M.; et al. 2010. *Adaptive Social Protection: Mapping the Evidence and Policy Context in the Agriculture Sector in South Asia.* IDS Working Paper 345. Brighton: Institute of Development Studies (IDS).

Arora-Jonsson, S. 2011. 'Virtue and vulnerability: discourses on women, gender and climate change'. In *Global Environmental Change* 21: 744–751.

Babagura, A. 2010. *Gender and Climate Change: South Africa Case Study.* Southern Africa: Heinrich Boll Stiftung.

Baden, S., C.; Green, Goetz, A.M.; Guhathakurta, M. 1994. *Background Report on Gender Issues in Bangladesh.* BRIDGE Report 26. Sussex: Institute of Development Studies.

Bahadur, A.V.; Peters, K.; Wilkinson, E.; et al. 2015. *The 3As: Tracking Resilience across Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED)*. BRACED Knowledge Manager Working Paper. London: Overseas Development Institute (ODI).

BBS (Bangladesh Bureau of Statistics). *2011a. Report of the Household Income and Expenditure Survey (HIES), 2010.*

—. *2011b. Bangladesh - Population and Housing Census 2011.*

—. *2015. Disaster-related Statistics.* Available at: https://www.unescap.org/sites/default/files/10_Bangladesh_Showcase-Disaster_Statistics.pdf [18 Dec. 2018].

Bene, Chris. 2011. 'Social protection and social change'. *In Social Protection for Social Justice.* Special Issue, 42(6), pp. 67–70. Available at: https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1759-5436.2011.00275.x [27 Dec. 2018].

—; Cannon, Terry; Davies; Mark; et al. 2013. *Social Protection and Climate Change.* Prepared for the OECD-DAC Task Team on Social Protection, 15th ENVIRONET Meeting, Paris, 25–26 June.

Brantley, Mark W; Lee; Loo Hay; Chun-Hung Chen; et al. 2014. 'An efficient simulation budget allocation method incorporating regression for partitioned domains'. In *Automatica* 50(5). Available at https://www.researchgate.net/publication/261599021_An_Efficient_Simulation_Budget_Allocation_Method_Incorporating_Regression_for_Partitioned_Domains [19 Dec. 2018].

Bray, I.; Chughtai, S.; Kenny, S.; et al. 2008. *Rethinking Disasters: Why Death and Destruction Is Not Nature's Fault but Human Failure.* New Delhi: Oxfam International.

Brooks, S.; Thompson, J., Odame, H.; et al. 2009. *Environmental Change and Maize Innovation in Kenya: Exploring Pathways In and Out of Maize*. Brighton: STEPS Centre, IDS.

Brown, T.; Gibson, S.; S. Ashley. 2009. *Building Consensus for Social Protection: Insights from Ethiopia's Productive Safety Net Programme (PSNP)*. London: DFID.

Cannon, T. 2002. Gender and climate hazards in Bangladesh'. In *Gender and Development* 10(2): 45–50.

Cannon, T. 2008. *Reducing People's Vulnerability to Natural Hazards: Communities and Resilience*, Research Paper No. 2008/34. United Nations University, UNU-WIDER.

Cipryk, R. 2009. *Impacts of Climate Change on Livelihoods: What Are the Implications for Social Protection?* CDG Working Paper. Brighton: Institute of Development Studies (IDS).

Conway, T.; Moser, C.; Norton, A.; et al. 2002. *Rights and Livelihoods Approaches: Exploring Policy Dimensions.* Natural Resource Perspectives. London: Overseas Development Institute (ODI).

Davies, M.; Leavy, J.; Mitchell, T.; et al. 2008a. *Social Protection and Climate Change.* Briefing Note for Expert Group to the Commission on Climate Change and Development. Stockholm: Ministry of Foreign Affairs.

—; Guenther, B.: Leavy, J.; et al. 2008b. 'Adaptive social protection: synergies for poverty reduction'. In *IDS Bulletin* 39(4): 105–112.

—; Guenther, B.; Leavy, J.; et al. 2009. *Climate Change Adaptation, Disaster Risk Reduction and Social Protection: Complementary Roles in Agriculture and Rural Growth?* Working Paper 320. Brighton: Institute of Development Studies (IDS).

—; Béné, Christophe; Arnall, Alexander; et al. 2013. 'Promoting resilient livelihoods through adaptive social protection: lessons from 124 programmes in South Asia'. In *Development Policy Review* 31 (1): 27–58.

Dercon, S. 2005. *Vulnerability: A Micro-perspective.* QEH Working Papers. Oxford: Queen Elizabeth House.

Devereux, S. and Sabates-Wheeler, R. 2006. *Transformative Social Protection*, IDS Working Paper 232, Brighton: Institute of Development Studies (IDS).

—; Sabates-Wheeler, R. 2011. *Graduation from Social Protection Programmes in Rwanda – A Concept Note*. Brighton: Future Agricultures Consortium.

Disaster Management Bureau. 2010. *National Plan for Disaster Management 2010–2015*. Dhaka: Government of Bangladesh.

Finance Division. 2014. *Climate Fiscal Framework* Dhaka: Ministry of Finance, Government of Bangladesh.

Fiott, D.; Ndaruzaniye, V.; Volkmann, E.; et al. 2010. *Climate Change and Security in Africa*. Vulnerability Report for Africa. Climate Change, Environment and Security (ACCES), FAO, UNEP, Global Water Institute, Madariaga and the International Organization for Migration.

GED (General Economics Division). 2012a. *Bangladesh Climate Public Expenditure and Institutional Review*. Dhaka: Planning Commission, Government of Bangladesh.

—. 2012b. *Perspective Plan of Bangladesh 2010–2021: Making Vision 2021 a Reality*. Dhaka: Planning Commission, Government of Bangladesh.

—. 2015a. *National Social Security Strategy (NSSS) of Bangladesh*, Dhaka: Planning Commission, Government of Bangladesh.

—. 2015b. *7th Five Year Plan FY2016–FY2020: Accelerating Growth, Empowering Citizens*. Dhaka: Planning Commission, Government of Bangladesh.

GGCA; UNDP. 2013. *Overview of Linkages Between Gender and Climate Change*. Policy Brief. New York: UNDP. Available at: www.undp.org/content/dam/undp/library/gender/Gender%20and%20Environment/PB1-AP-Overview-Gender-and-climate-change.pdf [16 Dec. 2018].

Global Gender and Climate Alliance (GGCA); UNDP. 2013. *Overview of Linkages Between Gender and Climate Change*. Policy Brief. New York: UNDP. Available at: www.undp.org/content/dam/undp/library/gender/Gender%20and%20Environment/PB1-AP-Overview-Gender-and-climate-change.pdf [16 Dec. 2018].

Government of Bangladesh. *Bangladesh Climate Change Strategy and Action Plan*. Available at: http://www.bd.undp.org/content/bangladesh/en/home/operations/projects/environment_and_energy/inclusive-budgeting-and-financing-for-climate-resilience1/national-policies-and-strategies/bangladesh-climate-change-strategy-and-action-plan--bccsap--.htm [17 Dec. 2018]

Islam, R. 2009. 'Climate change-induced disasters and gender dimensions: perspective Bangladesh'. In *Peace and Conflict Monitor*. Available at http://www.gendercc.net/fileadmin/inhalte/literatur_dateien/4a042d249ef75.pdf [16 Dec. 2018].

Institute of Development Studies (IDS). 2012. *Adaptive Social Protection: Making Concepts a Reality*. Brighton: IDS.

Kabir, Mahfuz. 2016. 'Paris Climate Deal and adaptive social protection'. In *The Daily Star*. Dhaka, 2 January.

Khondker, H.H. 1996. 'Women and floods in Bangladesh'. In *The International Journal of Mass Emergencies and Disasters* 14(3): 281–292.

Kreft, Sönke; Eckstein, David; Melchior, Inga. 2016. *Global Climate Risk Index 2017: Who Suffers Most From Extreme Weather Events? Weather-related Loss Events in 2015 and 1996 to 2015*. Bonn and Berlin: Germanwatch.

Marsh, R. 2002. *Working with Local Institutions to Support Sustainable Livelihoods.* Rome: Sustainable Development Division, FAO.

MoA. 2011. *Environmental Management Framework Report for Integrated Agricultural Productivity Project (IAPP)*. Dhaka: Ministry of Agriculture.

Nelson, V. 2011. *Gender, Generations, Social Protection & Climate Change: A Thematic Review, London:* ODI.

Nelson, V. and Stathers, T. 2009. 'Resilience, power, culture and climate: a case study from semi-arid Tanzania and new research directions'. In *Oxfam Gender and Development Journal.* Special issue on Gender and Climate Change, 17: 81–94.

Neumayer, E.; Plumper, T. 2007. 'The gendered nature of natural disasters: the impact of catastrophic events on the gender gap in life expectancy, 1981–2002'. In *The Annals of the Association of American Geographers* 97(3): 551–566. Available at: http://eprints.lse.ac.uk/3040/1/Gendered_nature_of_natural_disasters_%28LSERO%29.pdf [accessed 16 Dec. 2018].

Petrie, B. 2010. *Gender and Climate Change: Regional Summary.* Southern Africa: Heinrich Boll Stiftung

Rashid, S.F.; Michaudm S. 2000. 'Female adolescents and their sexuality: notions of honour, shame, purity and pollution during the floods'. In Disasters 241: 54–70.

Rossi, A.; Lambrou, Y. 2008. *Gender and Equity Issues in Liquid Biofuels Production: Minimizing the Risks to Maximize the Opportunities.* Rome: Food and Agricultural Organization (FAO).

Sen, B. 2003. 'Drivers of escape and descent: changing household fortunes in rural Bangladesh.' *In World Development* 31(3): 513–34.

Terry, G. 2009. 'Introduction'. In G. Terry (ed.), *Climate Change and Gender Justice.* Warwickshire and Oxford: Practical Action and Oxfam GB.

Ulrichs, Martina. 2016. *Increasing People's Resilience through Social Protection.* London: BRACED.

UNDP. 2017. Bangladesh Climate Public Expenditure and Institutional Review (CPEIR). Available at: http://www.bd.undp.org/content/bangladesh/en/home/operations/projects/environment_and_energy/inclusive-budgeting-and-financing-for-climate-resilience1/national-policies-and-strategies/climate-public-expenditure-and-institutional-review--cpeir---.html [17 Dec. 2018].

—. 2015. *Adaptive Social Protection in Cambodia: Strategy Paper.* Phnom Penh: UNDP Cambodia. Available at: http://www.kh.undp.org/content/dam/cambodia/docs/PovRed/Adaptive%20Social%20Protection%20in%20Cambodia_Eng.pdf [16 Dec. 2018].

—. 2014. *Human Development Report 2014 — Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience.* New York.

—. 2012. *What Have We Learnt?* CPEIRs in the Asia-Pacific Region. Available at: www.asia-pacific.undp.org/content/dam/rbap/docs/Research%20&%20Publications/democratic_governance/APRC-DG-2012-CPEIR-LessonsLearnt.pdf [accessed 16 Dec. 2018].

WHO/WMO/UNEP. 2003. *Climate Change and Human Health – Risks and Responses (Geneva).*

Wisner, B. 2009. 'Vulnerability'. In R. Kitchin and N. Thrift (eds), *International Encyclopedia of Human Geography*. Oxford: Elsevier.

Women's Environmental Network (WEN). 2010. *Gender and the Climate Change Agenda: The Impacts of Climate Change on Women and Public Policy*. UK: WEN

World Bank. 2010. *World Development Report 2010: Development and Climate Change*. Washington, DC.

—. 2013. *Bangladesh Climate Change Resilience Fund (BCCRF) annual report 2012 (English)*. Washington, DC ; World Bank Group. Available at: http://documents.worldbank.org/curated/en/267181468210282725/Bangladesh-Climate-Change-Resilience-Fund-BCCRF-annual-report-2012 [26 Dec. 2018].

—. 2014. *Climate Change and Health Impacts: How Vulnerable Is Bangladesh and What Needs to Be Done?* Draft Final Report, April 18, 2014, Disaster Risk and Climate Change Unit, Sustainable Development Department, South Asia Region. Available at: http://siteresources.worldbank.org/INTSOUTHASIA/Resources/223497-1378327471830/HealthImpactClimateChangeerfCLEAN2DraftFinalReport_final.pdf [26 Dec. 2018].

Ziegler, 2016. Susanne. 'Adaptive Social Protection – Linking Social Protection and Climate Change Adaptation'. In Cormac Ebken; Jean-Olivier Schmidt (eds), *Discussion Papers on Social Protection*. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, April. (German Society for International Cooperation, Ltd.) Available at: https://www.giz.de/expertise/downloads/giz2015-en-adaptive-social-protection.pdf [16 Dec. 2018].

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