

The climate challenge

Community adaptation and women's empowerment in Bangladesh

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This paper is a study of best practice by Christian Aid partner organisations that are working alongside poor and marginalised communities in different regions of Bangladesh to help them develop secure and lasting ways to farm, earn an income and provide for their families. It is intended to be a reference for Christian Aid, its partners and other development agencies looking to expand and improve work on resilient livelihoods in Bangladesh and other parts of South and South East Asia.

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Bangladesh Centre for Advanced Studies (BCAS)

BCAS is an independent, not-for-profit, non-governmental research, implementation and policy institute. It works at local, national, regional and global levels on environment and development integration, good governance and people's participation, poverty alleviation and sustainable livelihood, economic growth, public private partnership and sustainable markets. BCAS promotes people-centred sustainable development by applying and advancing scientific, technical and local knowledge through research, by developing models, demonstration, policy advocacy and project implementation. BCAS believes that exchange of knowledge and people's wisdom are the most cost effective agents to bring about changes in society and institutions. BCAS makes efforts to maximise knowledge generation and innovation among different actors and stakeholders, and develops approaches that adapt to socio-economic and bio-physical systems and institutions. Through participatory research and effective policy advocacy, it promotes sustainable and inclusive social development at local, regional, national and international levels.

Christian Aid

Christian Aid has worked in Bangladesh since 1972. We are recognised for our work on climate change, disaster risk management, gender equality and human rights. Our programme promotes access to just and equitable resources, and supports the creation of resilient and thriving livelihoods for marginalised people and communities. Working alongside our partners, we are committed to making government institutions more accountable to communities. We have significant experience of working with government and civil society organisations in Bangladesh. Our programme is closely aligned with the vision and goals of donor organisations. We work with 16 partners in 25 of most vulnerable districts of Bangladesh across the south coastal region, north-west and central flood and Haor (wetland) areas. We have long-standing relationships with local organisations based on mutual learning and experiences.

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Cover: Sabitri Morol received training from DSK to grow different types of vegetables appropriate to the changing weather and environmental conditions in Khulna, Bangladesh.

Credit: Christian Aid/Ashish Peter Gomes

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List of Acronyms

BADC	Bangladesh Agriculture Development Corporation
BCAS	Bangladesh Centre for Advanced Studies
BCCSAP	Bangladesh Climate Change Strategy and Action Plan
BDPC	Bangladesh Disaster Preparedness Centre
BRH-DRR	Building Resilience of the Haor People of Disaster Risk Reduction
BRH-DRR-CCA	Building Resilience of the Haor People of Disaster Risk Reduction and Climate Change Adaptation
CBDRR	Community Based Disaster Risk Reduction
CBDRR-CCA	Community-based Disaster Risk Reduction Climate Change Adaptation
CBO	community based organisation
CBSDP	Church of Bangladesh Social Development Programme
CCA	climate change adaptation
CCDB	Christian Commission for Development in Bangladesh
CDC	community development centre
CDMP	Comprehensive Disaster Management Programme
CDPPR	Community Development Programme for Poverty Reduction
COB	Church of Bangladesh
CPRP	Comprehensive Poverty Reduction Programme
CRA	Community Risk Assessment
CRA-RRAP	Community Based DRR and CCA: Fortified Livelihoods through Good Governance
CSDRM	Climate Smart Disaster Risk Management
DFID	Department for International Development, UK
DPHE	Department of Public Health and Engineering
DRR	disaster risk reduction
DSK	Dustha Shastho Kendra
EU	European Union

GKT	Gono Kallyan Trust
GUK	Gono Unnayan Kendra
IGA	income-generating activity
IPCC	Intergovernmental Panel on Climate Change
KII	Key Informant Interview
LCB	local capacity building
LDRRAP	local disaster risk reduction action plan
LGI	local government institutions
NAPA	National Adaptation Programme of Action
NGO	non-government organisation
POPI	Peoples' Oriented Programme Implementation
PPA	Programme Partnership Arrangement
PVA	Participatory Vulnerability Assessment
PVCA	Participatory Vulnerability and Capacity Assessment
RBA	rights-based approach
RCU	Resilient Community Unit
RECLAIM	Reducing Climate Change Induced Vulnerabilities through Integrated Adaptation and Mitigation Measure
RLP	Resilient Livelihood Programme
RIVER	Resilience Improvement of Vulnerable Extreme Riparian
SDS	Shariatpur Development Society
UDMC	Union Disaster Management Committee
UNDP	United Nations Development Programme
VDF	vulnerable group feeding
VDG	vulnerable development group

Glossary and terms

Aila	A big cyclone that occurred on 23-26 May 2009 and eighth wettest in Bangladeshi history.
Aman	Rice planted before or during the monsoon season in July-August and harvested in November.
Aus	Rice planted during March and April and harvested during July and August.
Basundhara	Local name of a forum.
Bawali	Forest resource (wood) collector.
BDT	Bangladeshi currency (Bangladeshi taka).
Beel	Lake-like wetland with static water.
Bighas	Area measurement unit of land.
Boro	Winter rice planted in December and January and harvested in April and May, before the onset of the monsoon season.
Chaluni	Filter.
Char	Riverine sandy area.
Charland	Riverine sandy land.
Haor	A back swamp or bowl-shaped depression located between the natural levels of rivers and may consist of a number of beels.
IJamuna	Major river in Bangladesh.
Khal	Local name for a drainage channel connecting beels.
Khaki Campbell	A variety of duck, known for its high levels of egg laying.
Khash land	Government ownership land.
Macha	Temporary small shelter made from bamboo.
Mauwali	Honey collectors.
Monga	Acute food crisis period.
Patol	Type of vegetable.
Rabi	Crop grown in winter-spring (specifically, monsoon winter interface).

Shusamoy Name of a local community-based organisation.

Sundarban The largest mangrove forest in Bangladesh.

Union parishad An administrative unit comprising several mouzas/villages.

Upazila Sub-district.

Foreword

Dr A Atiq Rahman, Executive Director, Bangladesh Centre for Advanced Studies, Dhaka

Climate change seriously affects the lives, economic assets and livelihoods of poor people, particularly women and those belonging to marginalised groups. Yet, these people are the least responsible for the problems caused by emitting greenhouse gases. It is the carbon-dependent industrialised countries with high consumption and greater carbon footprint who are chiefly responsible for the changes in the climate and weather patterns that are now being experienced in parts of Bangladesh.

The Intergovernmental Panel on Climate Change's (IPCC) 2014 report¹ reveals that each of the past three decades has been successively warmer, and 2000-2010 has been the warmest. The recent report by the World Bank (2013)² indicates that South Asia, including Bangladesh, may experience a rise in atmospheric temperature of 3-6°C by the end of this century, which may lead to heat extremes and severe drought, and changes in precipitation and monsoon rainfall patterns. The Bangladesh National Action Programme of Adaptation (NAPA) has also projected that the country may experience up to 83cm rise in sea levels by 2100, which will inundate one-fifth of the coastal areas of Bangladesh, forcing 35 million people from their homes. Climate-related disasters will be intensified and these will have severe impacts on water resources, agriculture, health, livelihoods, food security and human settlement, particularly in the coastal zone and riverine charlands. Christian Aid established its Resilient Livelihoods Programme (RLP) in Bangladesh in order to enhance poor people's, women's and socially excluded people's livelihoods while also addressing the impacts of climate change at a local level.

RLP aims to help build thriving communities with increased incomes, enhanced productivity, greater food security and a better ability to respond to climate variability, extremes and uncertainty. It proposes a pathway for establishing secure and lasting ways to earn a living that considers poor people's vulnerability in broader socio-economic and institutional contexts. The programme develops the capacity of vulnerable groups to plan and implement adaptation and disaster-risk-reduction (DRR) activities at household and community levels by teaching them new ways to adapt to changing weather patterns and plan for extreme weather. In this way, vulnerable groups are better prepared to bounce back from the risks they face, adapt better to climatic and non-climatic stresses (such as drought, floods, or change in market prices) and have more secure ways of providing for their families' needs and develop a better quality of life.

This resilience-building approach further emphasises that people should be able to anticipate risk and vulnerability, organise themselves to act and respond to climate change and disasters, and learn from and improve their disaster risk reduction, adaptation and livelihood practices in the face of a changing climate. The programme further involves government in activities to enhance institutional accountability, empower poor women and men, and ensure equal rights for all. A key objective is to enable civil society to successfully influence government policies and programmes that

benefit women, excluded groups and the very poor, reducing their vulnerability to disaster and improving their livelihoods.

Christian Aid's partners are working in several diverse ecosystems and climate-affected zones of Bangladesh. The key thematic areas on which they work include:

- developing profitable and resilient livelihoods
- climate change adaptation (CCA)
- DRR
- policy advocacy.

As a technical and strategic partner of Christian Aid, Bangladesh Centre for Advanced Studies (BCAS) was assigned to collect and document good practices from the RLP. More than 30 cases of good practice were documented, 14 of which are presented in this paper to raise awareness about adaptation activities and to be disseminated to development partners and audiences more widely.

A case study tells us a story of something unique, special and interesting. Each case study has documented the rationale of the study, steps taken by the partners with communities and vulnerable groups, and outcomes of the interventions. We use mainly qualitative and primary information and insight from the communities, alongside secondary information, and triangulated the qualitative information with quantitative, socioeconomic and climate information. The case studies also identified the challenges of integrating of CCA with DRR and livelihoods, as well as putting forward a number of advocacy issues. Christian Aid's partners and civil society groups can work further in these areas to ensure livelihood security, equity and climate justice.

We would like to thank the BCAS team for collecting evidence and people's perspectives on CCA, DRR and livelihood-related actions in different ecosystems. We express our sincere thanks to Christian Aid for its support to carry out this field study and produce this important publication. My sincere appreciation goes to the BCAS research team who visited the partners and communities to collect best practice examples and who presented the findings in a national dissemination workshop in Dhaka. The BCAS team received important feedback from national actors and participants on the RLP approach and case studies.

I hope this brief publication will serve as a source book and be useful for Christian Aid, its partners and development agencies in Bangladesh and South Asia to scale up the good practices that are documented here. This is a small step towards making livelihoods more resilient. Further steps should be undertaken by Christian Aid, its partners and government agencies based on the learnings and recommendations of this paper, so that the risks that the poor and marginalised communities face are reduced and their livelihoods become more secure.

Chapter 1: Background and introduction

Bangladesh is a densely populated country with widespread poverty: around 43%³ of the population struggle to survive on less than \$1.25 per day. Climate change poses additional challenges to development efforts and threatens to further deepen poverty and increase inequity, social conflicts and instability in society.

The Bangladeshi Government, non-governmental organisations (NGOs) (including Christian Aid, United Nations and the European Union) and their local partners are working with communities to overcome poverty, provide a reliable supply of food and water, and tackle social insecurity and various kinds of inequities. Christian Aid's local partners in Bangladesh are: Shushilan, Church of Bangladesh (COB), Gono Unnayan Kendra (GUK), Dustha Shastho Kendra (DSK), Bangladesh Disaster Preparedness Centre (BDPC), Peoples' Oriented Programme Implementation (POPI), Christian Commission for Development in Bangladesh (CCDB), Nagorik Uddyog, Shariatpur Development Society (SDS), Nijera Kori, Unnyon Unneshon, Incident Bangladesh and Wave Foundation.

1.1 Bangladesh's vulnerability to climate change

The IPCC Fifth Assessment report⁴ assesses current and future climate change impacts on ecosystems and human society, including effects on livelihoods. The report further identifies adaptation strategies and options to reduce climate-related risks and vulnerability. The report has also set principles for effective CCA and established links between adaptation and livelihoods, DRR, mitigation and sustainable development.

It has asserted that climate change adaptation is taking place across the world at different levels, but generally at a slow pace. In Asia, adaptation is being facilitated in some of the worst-affected areas by mainstreaming CCA actions into national and sub-national development planning, early warning systems, integrated water management, agriculture, agro-forestry and coastal reforestation. The Fifth Assessment Report discusses how livelihoods, poverty and the lives of poor people, and inequality interact with climate change, climate variability and extreme events in a multi-faceted way. It suggests that climate-related hazards affect poor people's lives directly through impacts on livelihoods, such as loss in crop yields, destroyed homes, food insecurity, loss of sense of place and community.⁵ It emphasises that some livelihoods are directly climate sensitive, such as the rain-reliant agriculture of smallholders, seasonal employment in agriculture, fishing, pastoralism, wage labour and tourism. Climate change also affects households that are dependent on informal livelihoods in urban settings, directly through unsafe settlements and indirectly through lack of employment, poor wages and rises in food prices. Hence, the livelihoods of the poor need to become climate resilient through reduction in poverty and vulnerability, as well as improving the adaptive ability of women, marginalised groups and poor people.

In order to help address these issues, Christian Aid established the RLP, funded with support from the UK Government. This has set out

to promote climate-resilient livelihoods and disaster risk management (including climate adaptation), address structural poverty in society, and empower poor households and particularly women so that they can participate in local development processes and increase their income and the sale value of their products, provide for their families and have more say and choice in selling their produce. The partners of the RLP are also trying to enhance the capacity and skills of climate-affected vulnerable groups, including women, children, excluded and marginalised communities, so that they can participate in local planning and implementation of adaptation and mitigation measures and DRR. In time, these people become active members of their community for local development (social change agents) and contribute to community development and poverty alleviation. Christian Aid's partners in Bangladesh have been implementing various innovative projects in different ecosystems and have made remarkable progress in the field of CCA, DRR, poverty reduction and livelihoods promotion, reducing the risks poor people face from climate change.

More than 30 good practices have been documented in the past three years. The 13 case studies featured here were selected from various climate-affected ecosystems, such as floodplains, Haor basins, drought-prone uplands and coastal areas. They come from the projects run by Shushilan, Church of Bangladesh Social Development Programme (CBSDP), GUK, DSK, BDPC, POPI, CCDB and Bangladesh Centre for Advanced Studies (BCAS), and use both qualitative and quantitative information to document the background of the particular case, process and outcomes.

Matrix of good practices

	Good practice	Organisation	Key focus
1	Adaptation in coastal agriculture through salt tolerant paddy cultivation.	DSK	Adaptation in agriculture in a coastal zone.
2	Restoration of ecosystem through conservation of sweet water by canal re-excavation.	BDPC	Promotion of ecosystem services for the poor in coastal communities.
3	Empowering women, linkage, lobby, and advocacy with local government institutions	COB	Economic development through women's empowerment.
4	Successful duck-rearing.	BCAS and CCDB	Adaptation in waterlogged and flood plain areas.
5	Women empowerment through income generating activities (IGA) (sweetmeat package making) and market linkage.	Shushilan	Empowering women through small enterprise development.
6	Success in planting a hanging vegetable garden.	BCAS and Rupantor	Adaptation to issue of salinated water through hanging garden cultivation.

	Good practice	Organisation	Key focus
7	Women-focused adaptation and livelihoods.	GUK	Economic empowerment of women through home-based agriculture.
8	Safe drinking water for flood plain areas.	BCAS and CCDB	Improvement of health and hygiene through use of deep tube well that is not affected by floods.
9	Livelihood promotion through IGA of forum.	CCDB and CPRP	Empowerment of poor communities through multi-skill development activities by local forum.
10	Maize cultivation in char lands.	BCAS and GKT	Adaptation to drought.
11	Income generation through goat-rearing.	BCAS and GKT	Economic development of poor through alternative income.
12	Success of community institutions.	BCAS and Rupantor	Empowering poor coastal communities to improve adaptation methods.
13	Floating gardens success.	BCAS and CCDB	Adaptation in water-logged areas.
14	Plinth-raising gives char dwellers better livelihood.	GUK	Adaptation and DRR in flood-prone areas.
15	People's institute, a strong voice to claim rights.	CCDB	Collective actions for community empowerment.
16	Duck-rearing in the Haor basin helps to fight poverty.	POPI	Adaptation and empowerment of poor in Haor areas.
17	Knowledge centre of Rupantor shares information to increase rural society's knowledge of climate effects and adaptation.	BCAS and Rupantor	Community empowerment through knowledge dissemination.
18	Cultural events, a soothing technique to raise awareness against social problems and poverty.	COB	Awareness about rights and empowerment among poor communities.
19	Eco-demo farm of Shushilan, a ray of hope to vulnerable people living near the coast.	Shushilan	Diverse adaptation actions in coastal zone.
20	Participatory Vulnerability and Capacity Assessment (PVCA) helps to explore sustainable climate-change adaptation options and make management planning effective.	BCAS and GKT	An approach to empower local community to analyse local context and development of action plan.
21	Community empowerment through needs-based IGA.	CCDB	Economic empowerment of poor community for resilient livelihoods.

	Good practice	Organisation	Key focus
22	Successful advocacy to get a community water filter.	BCAS and CCDB	Improvement of health and hygiene.
23	Successful pig-rearing.	Shushilan	Promotion of resilient livelihoods by considering local context.
24	Whole family livelihoods promotion approach.	GUK	A resilient livelihoods approach for char dwellers.
25	Success of vermicompost in enhancing employment and income of the poor.	GUK	An innovative initiative for environmentally friendly economic development.
26	Bashundhara People's Forum: an ideal institute for women's self-development.	CCDB	Collective actions for community empowerment.
27	Public hearing towards good governance.	BNPC	Initiatives for accountability and transparency of community leaders and local government.
28	Success in handicraft livelihoods.	POPI	Resilient livelihoods of the poor of Haor community.
29	Boat and net distribution success for fishing community	DSK	Livelihood promotion through skills-based IGA.
30	Success of small enterprise development for women.	COB	Livelihood promotion through women's engagement in small enterprise development



Chapter 2: Creating resilient livelihoods

A telling sign of climate change is its impact on the ecosystem's resource base. The increase in extreme events, such as flooding, cyclones and drought, is affecting agriculture and food security, natural resources, water and health, employment and income. It is damaging the livelihoods of millions and deepening poverty by amplifying environmental and socio-economic pressure on land and access to and availability of natural resources (eg, fresh water). The livelihoods of women, marginalised people and poor communities must be protected from the impacts of climate change and other social-environmental stresses. Christian Aid and its partners are promoting 'secured livelihoods' as a priority area of action through the RLP.

The key principles of a resilient livelihoods system are anticipation of risk; self-organisation and community action; and raising voices and learning how to change institutions and practices to support the poor and vulnerable. The programme focuses on promoting climate-resilient and economically profitable livelihood options for the most vulnerable groups and communities. This work also aims to increase the sale value of products, which helps to enhance poor people's access to and control over productive resources, such as water, land and forests, and to increase employment, income and household food consumption. The livelihood options for women and poor communities were identified and promoted based on localised climate change impacts and disaster risks. People's capacity and skills were also enhanced so that they will be able to help reduce climate and disaster risks and maintain their livelihoods.

Poor and vulnerable communities' ability to adapt (in terms of awareness, new knowledge, technologies, skills and institutional links) has been increased so that communities can take anticipatory adaptive measures and gain greater livelihood and development results.

2.1 Conserving fresh water restores eco-system

Background: In disaster-prone, south-west coastal Bangladesh, Bagerhat is one of the most vulnerable districts to cyclones, tidal surges, high salinity, high tides, river erosion, temperature rises, and drought. Morelganj Upazila is particularly vulnerable, being surrounded by the Boleshwar, Vola and Panguchi rivers and the Sundarbans, the world's largest mangroves. Agriculture, fisheries, water, health, livestock, infrastructure and livelihoods are adversely affected every year by cyclones, salinity, high tides and water logging.

Salinity affects the soil quality and yield of crop; it also affects the fish species, habitat and productivity of open water fisheries, and has created an acute crisis around fresh drinking water and irrigation for agricultural production. Conservation of fresh water is essential to revive agriculture. Water logging (saturation of the soil) also affects agriculture and crop production. In 2007, people in Nishanbaria and Khaulia unions were severely affected by super cyclone Sidr and

have not yet overcome the damages and losses they sustained eight years ago.

In February 2011, Christian Aid partner BDPC started a project named the Community Based DRR and CCA Fortified Livelihoods Initiative to reduce the risk from and vulnerability to climate change of poor communities in Khaulia and Nishanbaria unions.

Local actions: A number of suitable adaptation options and strategies were identified through a local DRR action plan, which included conservation of fresh water by re-excavating decommissioned canals to provide irrigation for agriculture. In Amarbunia village, such a canal was re-excavated to help conserve rain water. The length of the canal was estimated at 2,700 feet long by 32 feet wide and 9 feet deep. The budget for re-excavation of the canal was BDT1.7m. The cost was jointly borne by the project and Union Disaster Management Committee (UDMC) supported by the Comprehensive Disaster Management Programme (CDMP) of the Government of Bangladesh. The re-excavation of the canal was completed on 30 August 2012.



Key results: The re-excavation of the canal allows 600 acres of land to be irrigated in the dry season. As a result, vegetables and rice crops in the Boro, Aman and Rabi seasons can now be cultivated using water from the canal. The farmers adjacent to the canal are now able to produce crops all year round. The community participation and contribution was a key factor in the successful re-excavation of the canal and giving them ownership over it. The nearby land owners have also given some of their land over to it without any conditions attached.

About 500 families are benefiting by cultivating rice and vegetables using the newly available fresh water. Alongside the Rabi rice, other crops like pulses, wheat, mustard and watermelon are grown. The canal also supports a unique habitat for fish, particularly of local indigenous fish, allowing fishing to develop as another livelihood opportunity. Trees have been planted along the banks of the canal with the help from the Forestry Department. Social forestry has many ecological, livelihoods and DRR benefits, such as helping to protect the crops and villagers from cyclones and tidal surge. Fruit

Case study 1

Habib Mridha's story

Habib Mridha is a farmer in Amarbunia village, where he lives with his wife and two sons. He has a homestead land of 33 decimals where he grows vegetables, and cultivates a further four bighas of land as a share copper. In the past few years, before the re-excavation of Amarbunia canal, Habib used to grow vegetables at home and cultivated transplanted Amon rice through share cropping. Both were dependent on rain water. His homestead land was mainly fallow and he only cultivated a very small portion of it due to lack of fresh water. Since re-excavation of the canal, Habib has been able to grow many more vegetables. In 2013, he grew 200 gourd plants, 100 bean plants and 10,000 cabbages and turnips, thanks to water from the canal. He made a good profit from the vegetables and had plenty to feed his family from the yield. The economic benefit was BDT50,000 for the family.



Habib Mridha and his wife working on their vegetable plots.

trees are a source of food for the poor. People also use the canal water for drinking, cooking and washing and to feed cattle.

Re-excavation of the canal has brought a big change to the area's ecosystem and given families a range of different ways to earn a living and feed themselves. The community can now cope better with salinity and drought.

2.2 Char dwellers able to provide for families

Background: Fulchari is a poor upazila in Gaibandha, a disaster-prone northern district of Bangladesh. Most of the unions of the upazila are surrounded by the great river Jamuna. Fazlupur and Fulchari unions are vulnerable to natural risks, such as floods, tornadoes, river erosion, drought and irregular heavy rainfall. Cold spells and dense fog in winter are further climatic stresses. Almost every year the people of the area suffer from a combination of these. Most people living in the riverine charlands depend on agriculture, fishing and waged labour to sustain their families. But river erosion and floods affect the local eco-system and destroy crops and decimate fish stocks, leaving people without a means to support themselves.

Given the vulnerable situation of the char people, Christian Aid partner GUK established the Resilience Improvement of Vulnerable Extreme Riparians (RIVER) project. The project is being implemented in Fazlupur and Fulchari unions of Fulchari upazila. The project's main objective is to improve the livelihoods of poor people, particularly women, through increasing opportunities to earn an income and enabling them to cope with the changing climate disaster risks. GUK promotes women-focused household-based livelihoods such as livestock rearing, vermiculture and handicrafts to contribute to family incomes and promote ways of earning a living that are not totally dependent on the land and fishing.



Local actions: PVCAs were carried out to enable the community and GUK to have a clear picture of risks and vulnerability due to climatic disasters. The PVCAs identified the disaster patterns and their impacts on the lives and livelihoods of poor households, women and marginalised groups in the local area. The process also identified ways to reduce the risks from and adapt to the problems of floods, erosion and drought by developing existing adaptation

capacity as well as looking at the role and responsibilities of the community and local government to implement a local adaptation plan.

An action plan was developed to reduce the risk and vulnerability of the community by focusing on establishing resilient livelihoods for the target population. The project provided training to beneficiary households on climate change, disaster risk management, and adaptation strategies to cope with climate change. People were also given training to develop skills in cattle-, poultry- and duck-rearing, fish culture, domestic vegetable gardening and vermicompost production to help increase incomes. After the training, the project funds helped people raise their homes above flood levels, rear cattle, poultry and ducks, plant fast-growing crops and produce fertiliser. People were also given improved cooking stoves (which require less wood and generate less harmful smoke) and helped to plant trees around homesteads. The project promoted a holistic approach for securing livelihoods involving all family members.

Key results: Families were helped to raise their homes so that they are safe from floods. Despite flood and drought in the locality, the livelihood activities, such as cattle- and poultry-rearing, and growing vegetables and short-duration (fast-growing) crops were very successful. A short-duration variety of rice was harvested as an early crop before the floods, giving households more food security. The beneficiaries have been able to enhance household productivity, increase incomes, increase food security and thus reduce their vulnerability to climate disasters.

2.3 Duck-rearing in the Haor Basin

Background: The north-east part of Bangladesh is commonly known as Haor Basin. It is prone to many natural disasters due to the distinct characteristics of its ecosystem. The main risks in Haor areas are heavy rainfall, flash floods, water logging, tornadoes and drought, which affect agriculture, fishing, access to safe water, people's health and community infrastructure.

Christian Aid partner POPI has been working in Haor areas for many years. In May, 2011 it set up a project called Building Resilience of the Haor People through Disaster Risk Reduction and Climate Change Adaptation, with the view of reducing disaster risks and promoting resilient livelihoods among disaster-affected vulnerable communities. The project works in 20 villages in five unions of Dirai upazila in Sylhet district.

The key interventions of the project are to create alternative employment and promote DDR activities to reduce the impact of climate change.

Local actions: Due to seasonal water logging as a result of flooding from April to October, and because food for ducks is easily available, duck-rearing was introduced in the area as a suitable livelihood option for poor families. More than 600 families were given 10 ducks each. The beneficiaries were also given training in duck farming.

Case study 2

Fuara Begum's story

Fuara Begum is a housewife and day labourer in Bajetelkupi village, Fazlupur union. Her husband Zabbar Ali is a marginal farmer and day labourer, and they have a son and a daughter. The family has have faced a lot of economic hardship. In 2011, when GUK brought the RIVER project to the char, Fuara Begum became a project member. She received training in income-generation, including how to produce vermicompost, and strategies for coping with disaster. She also got support to raise her homestead.

In 2012, the project supported Fuara to buy a cow. Her family now have milk to drink every day and she regularly sells it too. She was also given some vegetable seeds and started to cultivate vegetables and vermicompost. She says that she has no problem feeding her family now because she has a good amount of daily income from selling milk and vegetables. She has gained confidence by participating in the project, and feels capable of providing for her family despite the challenges of the climate change.



Key results: Employment and incomes of vulnerable people, particularly poor women, have been increased significantly. Consumption of protein and nutritional food have increased at the family and individual levels. About 30% of family income now comes from duck-rearing. The project beneficiaries have learned to adapt to increased flooding and the changing climate.



Chapter 3: Adapting to a changing climate

The impact of climate change on the livelihoods of poor households is incalculable. If the impacts are not addressed properly, it will deepen poverty, insecurity and inequality in the society. Flood frequency and intensity have increased. Now people face devastating floods every five to seven years. Earlier, the interval between big floods was 20-30 years.

Women and girls often bear the greatest burden of disasters as well as taking most of the stresses of economic losses and ecological degradation. In 1991, the super cyclone killed more than 130,000 people in 15 coastal districts of Bangladesh. The death casualties of women and girls were double than the men. During flood disaster in riverine charland in north-central Bangladesh, women take on most of the burdens of the families (cooking food, water collection, safety and security of the children and elderly people) while the male members usually migrate to the mainland for employment.

Poor households and women have limited capacity to address their social, economic and political vulnerability. The increasing intensity and frequency of extreme climatic events has complicated how they are able to earn living. Against this backdrop, people need to adjust to climate variability and the likelihood of extreme events.

Measures need to be put in place to help people cope with extreme events and reduce disaster risks. In order to make them better prepared for climate change and extreme weather events, Christian Aid and its partners are emphasising ecosystem conservation and sustainable development.

3.1 Floating gardens – an innovative adaptation

Background: Joaria and Mitradanga are two villages in Gopalpur union, Tungipara upazila, Gopalganj district. These two villages are seasonally water-logged and prone to floods. The frequency and intensity of natural disasters are increasing and after the recent cyclones Sidr and Aila, saline water covered the area, making it difficult to cultivate crops. Farmers have adopted indigenous technologies for vegetable cultivation – floating gardens! A floating garden requires huge amounts of aquatic weeds including water hyacinth, which are readily available across this region.

Local actions: A Christian Aid-funded project identified a number of viable adaptation options for poor and marginalised groups based on their ecosystems, of which floating gardens was one option. Farmers collect water hyacinth and other aquatic plants from the surrounding aquifers where they grow in abundance. They make a pile of hyacinths and tie it together with bamboo. Both summer and winter vegetables can be grown on the floating gardens.



In Joaria and Mitradanga villages, 50 farmers were trained in floating gardening, particularly in how to make it more productive through growing multiple crops and vegetables. Another 100 farmers were given training on improved floating gardening techniques. The project provided financial support to 25 farmers to demonstrate improved floating bed gardening to others. Farmers successfully cultivated vegetables and crops on their new floating gardens. Now around 90% of farmers in the project areas are practising improved floating garden cultivation during monsoon months.

Key results: Through the project, all farmers targeted were encouraged to adopt the improved technology. With an investment of BDT8,000-9,000, a farmer can produce vegetables worth BDT20,000-30,000 seasonally. They can get about 50%-60% of their household income through floating gardens. They grow crops and vegetables during floods. This practice further reduces their vulnerability and the risks associated with flooding and water-logging.

3.2 Raising homes to reduce the risk of floods

Background: The northern part of Bangladesh is the poorest region of the country. Frequent natural disasters, such as floods, river bank erosion, storms, cold spells, drought and the yearly monga (hungry season) cause a massive loss of property and livelihood assets every year. Chars are formed through the continual process of erosion and sedimentation in major rivers, but they are unstable and prone to annual flooding.

During the monsoonal floods, many people's homes disappear under flood water, and they have to stay in temporary shelters. Raising homes above flood level is one of the best adaptation practices to reduce flood risks.

Local actions: Christian Aid partner GUK has raised 130 of the poorest households' homesteads. The cost of plinth-raising ranged from BDT6,325 to BDT13,275 for each of the households. GUK has also provided each family with BDT14,500 as seed money to start income-generating activities. The recipients have used about 50% of

Case study 3

Rozina Begum's story

Rozina Begum is married to Abdul Mannan and lives in a charland village called Uzanidanga. When she came to live with her husband in Uzanidanga, she experienced the terror of her home flooding for the first time. She describes it as a terrible experience. They had to live on a macha (temporary shelter made of bamboo) with their child. She had to cook, bath and sleep there. She was terrified of losing her child, as well as of being bitten by snakes. Her husband did not have any work at the time, and they faced serious problems with sanitation and collecting safe drinking water.

In 2012, GUK helped her to raise her homestead. The homestead was raised with sandy soil, so she was worried that she could not save her house during floods if the foundations were made of sand. So she covered it with a layer of clay soil and carpeted it with grass. Now she has started growing vegetables and making her own compost. GUK gave her some cash, which she used to buy a cow and to start growing chillies to sell. So far she has sold about 300kg of chillies and was able to make a good income last year. She also earned BDT3,500 from earth work. But perhaps most importantly, Rozina feels safe now. She is also happy with the income her new livelihood activities provide.

the cash assistance to purchase cows or goats and they have invested the remaining 50% either in their lands or starting new businesses.

Key results: The group members have earned some cash for their work raising homesteads. The plinth-raising activities have stopped houses from flooding, saved their assets and helped them to start compost preparation, vegetable gardening and duck-rearing, for instance.

3.3 The eco-demo farm

Background: The south-west of Bangladesh has seen a drastic decline in agricultural production over the past two decades due to severe water logging and increased water salinity. Access to fresh water, and the agriculture, health and livelihoods of poor people in the region have been badly affected by salinity, high tides and cyclones.



Given these risks and people's vulnerability, Christian Aid partner Shushilan established an eco-demo farm as a facility for local innovative farmers. This farm is playing a vital role as a local community research centre to find practical solutions for farmers to manage salinity and water-logging. The main objective of the eco-demo farm is to develop and demonstrate technologies that are suitable for the tidal eco-system and the terrestrial agro-eco system. The demonstrated technologies at the eco-demo farm are:

- mangrove plant nursery and plantation
- crab fattening and culture
- organic shrimp farming
- saline-tolerant rice production, and
- developing a buffer zone between brackish and fresh water zones.

Local actions: Many farmers visited the demo farm and replicated the technologies in their own fields. Under this initiative, high land is used for vegetable cultivation. The shallower part is used for brackish water aquaculture and another part is being protected from saline water. This part is used for rice-shrimp cultivation. Farmers achieved visible and meaningful results in how to cultivate vegetables by managing soil salinity.

Key results: Vegetables such as brinjal, okra, patol and bottle gourd are produced on the eco-demo farm. More than 50 households have already completed 25 crop cycles/year and have made a profit of BDT151,982 a year from an investment of only BDT40,723 a year. This has created a real income generation opportunity for them. The initiative has increased food security and employment opportunities. Ultimately, this initiative has proved a very effective adaptation option in coastal Bangladesh.

3.4 Saline-tolerant paddy cultivation

Background: Kamarkhola and Sutarkhali unions of Dacope upazila in Khulna district are affected by salinity, cyclones and tidal surges. In 2009, the super cyclone Aila caused widespread destruction. Christian Aid partner DSK is implementing a community-based DRR and CCA project to help villages prepare for and recover from climate change and natural disasters. The project focuses on adapting farming methods, planting trees, offering training in fish culture and crab fattening, providing fishing equipment and strengthening community organisations.



Local actions: A good number of suitable farming adaptation options and strategies were identified. Salt-tolerant paddy cultivation emerged as one of the most suitable adaptation options for coastal agriculture. DSK provided 4kg of salt-tolerant paddy seeds (BR-49) to each of the 1,000 beneficiaries. Farmers cultivated the paddy variety with the technical support of the agriculture department and DSK. Almost all the farmers got a good crop.

Key results: Farmers get 10-12 maunds (412kg) of yield from 16-20 decimals of land. Employment opportunities for women have increased in the area thanks to training in cultivation of saline tolerant paddy and vegetable varieties. This has increased food security and reduced risks associated with water and soil salinity.

Chapter 4: Empowering women

Women make up 49% of Bangladesh's 160 million population,⁶ yet they have limited access to education, employment and productive resources. In very poor households, it can be more difficult for girls than boys to attend school because of expectations that they will carry out household work, and also often because of the distance they must travel and safety concerns. Women often do not have a say in their community and family, remaining dependent on male family members and dominant institutions in society.

Women and men are affected differently by major climate factors. Women often stay at home after disasters to look after children and older people, while men move away to find work. Women are often left in places where the drinking water may be contaminated with seawater and have a high salt content, which affects their health. About 28% of working women rely on home gardening, raising poultry and cattle, and small-scale trading to earn an income; all these activities are vulnerable to climate variability and extremes like floods, cyclones, salinity and water logging.

But the situation has been changing slightly in the recent years. Some working women have been allowed to play an important role in decision making within their families and communities, particularly in the areas of food, nutrition and child education.

Raising awareness among both women and men about their rights and responsibility in society is essential. Women also need encouragement and empowerment through creating space for them to participate in their community and ensure they have a voice. Involving women and the poor in DDR and local development helps to alleviate poverty, hence, women's empowerment has been a key strategy for Christian Aid's development work.

The RLP aims to increase women's participation in economic and livelihood activities as well as empower them to participate in economic, social, cultural and local development activities. RLP partners play a further supporting role in helping women become agents for change, addressing structural inequality, poverty, insecurity and climate injustice.

4.1 Basundhara People's Forum

Background In Bangladesh, women are often left out of community decisions. Christian Aid partner Christian Commission for Development in Bangladesh has been addressing this through the formation of People's Forums throughout the country. These women-led organisations develop economic activities and mobilise whole communities for development

Basundhara Forum in Kaligram village in Gopalganj district is one of the most successful forums. It is registered as a cooperative and recognised by the Women's Affairs Department of the Government of Bangladesh. In 2011, the Government of Bangladesh selected Basundhara Forum as the best cooperative for its unique activities and development initiatives.

Basundhara has 148 members (most CCDB forums have 100 or more female members, with a president, secretary and treasurer). Women are the key driving force of the forum, and organise major

activities, such as work on livelihoods, DRR and social protection, with some support from CCDB.

Forum members are given training to develop their organisational, finance and leadership skills, and are then put in touch with local government and local organisation leaders in order to have a voice and make change happen. The forum takes a leading role in getting community support, preparing business plans, managing the forum's resources (such as land, a pond, or agro-forestry) and looking after the funds for the improvement of livelihood, food security and DRR of the forum members. CCDB provides guidance only and carries out necessary monitoring and supervision. Forum members are now motivated and organised, getting involved in income-generating activities such as cattle-, poultry- and duck-rearing, tailoring, fishing, and environmentally friendly agriculture with help from loans from the forum's funds. It is expected that the gradually the forums will become be self-sustaining.

Local action: Bashundhara Forum in Kaligram village in Muksudpur upazila has been very successful in reducing poverty and promoting women's livelihoods. All the 148 members of the Bashundhara Forum are now engaged in income-generating activities that created employment for the women and increased their income. Almost 80% members of the forum are now self-reliant. In 2011, the Government of Bangladesh selected Bashundhara Forum as the best cooperative for its unique cooperative activities and development initiatives. The forum received a gold medal and credential from the Cooperative Department.

Key results: The forum has its own office building, office staff and resource (land, office and financial capital of BDT4.8m). The forum is registered with government and has legal entity as a community business to work with the members and community. It has increased social unity and cohesiveness among its members, who now feel empowered and can confidently communicate with government and NGOs to get the necessary support they need for their livelihood and DRR-related activities.

4.2 Village adaptation groups

Background: Bagerhat is situated in the south west region of Bangladesh in Mongla upazila. It experiences frequent climate-change-related weather and natural disasters, such as cyclones, water surges, high tides, high salinity, river bank erosion, rising temperatures, drought and heavy rainfall. Poor people (including farmers, fishers, wage earners and especially women and children) living here are the worst affected by the impacts of climate change.

Christian Aid partner BCAS has implemented a project called Local Capacity Building and Advancing Community Adaptation to Climate Change (LCB). Under this project, women and poor people are made aware of local adaptation measures so that they can prepare for, and cope better with, the impacts of climate change.

Local actions: Bagerhat Village Adaptation Group was formed after conducting a PVCA and 50% of the members are women. The members of the group are implementing adaptation activities to get fresh drinking water, to improve home-based agriculture and to reduce the risk of disasters.

Case study

Moni Sarder's story



Moni Sarder came to Bagerhat after she married her husband, Sunam, in 1989. She says at that time, she did not notice any impacts of climate change. The land was productive and there were huge fish in the khal and rivers. The family lived well from what they grew on their land and fishing from rivers. But it started to change six or seven years after she came to the village: the water started to be affected with saline, river banks eroded and temperatures rose, and there were more frequent cyclones, tornadoes and higher tides, all of which have had devastating impacts on people's lives and livelihoods.

Moni was an active participant in the project activities such as PVA, local adaptation planning, courtyard meetings, village-level consultations, training and workshops on climate change, CCA, livelihood promotion activities, gender training and many others. In 2009, village adaptation groups were formed. Moni was selected as secretary of Dakhkhin Kainmari Adaptation Group. She is very active in the forum, motivating other members and organising links with union parishads to implement community adaptation activities such as a new rainwater collection system, and improve health services and get more food for the poor. She is now a member of the local government parishad union budget committee, which advocates for women and poor people in the village. She feels that her participation in village adaptation gave her the confidence and skills to participate in the budget committee.

Key results: Women group members have played a major role in promoting adaptation activities at house and community levels. They are working with various government and non-government organisations to get the support and services they need. Women are also carrying out early warning activities before and during the disasters, and participating in rescue operations and rehabilitation programmes. The group has given local women the opportunity and support to speak at the upazila and district levels to ensure their rights for food, water and social security are heard. In many cases, men and women take decisions collectively on disaster preparedness at community level, promote gender-sensitive rehabilitation considering women's needs and priorities (such as getting seeds for home gardening and vegetable gardening); manage drinking water at community level, and share participation in union/village disaster and development committees.

4.3 Linkage, lobby and advocacy for community development

Background: Agoiljhara and Uzirpur upazilas in Barisal district and Kotalipara upazila in Gopalganj district are experiencing rising temperatures, erratic rainfall, drought, heavy rainfall, floods, water salinity, water-logging and cyclones. Most of the people living in these localities are poor and include day labourers, fishermen, rickshaw pullers and small businessmen. Lack of employment in the community, especially for women, is a big problem.

Christian Aid partner COB has been implementing the Community Development Programme for Poverty Reduction Project (part of its Integrated Social Development Programme) since 2011. The main objective of the COB project is to ensure sustainable livelihoods of poor and marginalised people, with a special focus on the young generation and ensuring women's rights by empowering women to have a voice in their community.



Local actions: The project was implemented in 29 villages in Agoiljhara and Kotalipara upazilas. Families who do not get three meals a day, who have no savings through any other NGO project and who own less than 0.5 decimals of land were identified as

project beneficiaries. Eight community development centres (CDCs) were formed and 180 women development groups were formed in these areas with a total of 3,500 members.

All members of the groups took part in training in DRR and CCA. They also took part in training to help develop alternative ways to earn a living. Awareness was raised about preventing early marriage, the dowry system, violence against women and girls, HIV prevention, health and sanitation good practice, and access to safe drinking water. The women's groups were trained in women's rights, and lobbying for government and non-government services. The project has enabled federations to link up well with service providers. Federations are working with the local government union parishad and upazila parishads. Networking, advocacy and campaigning are being undertaken by the women's forums to access resources and services from local government institutions to implement local adaptation measures, DRR and livelihood activities at family and community levels. They have achieved some fruitful results in networking and advocacy. These include greater amount of vulnerable development group (VGD) and vulnerable group feeding (VGF) support; training from government institutions; as well as Watsan and health supports from the Department of Public Health and Engineering (DPHE).

Key results: The women's development groups are now capable of going to government and non-government organisations to articulate their own demands and needs. They are much more confident and empowered.

The women now have more opportunity to leave their houses. They are being encouraged by their husbands in their livelihoods work, and their husbands are fully supportive of the COB project workers' activities. People in the locality have been impressed by the women's new mobility as the women's roles and positions in the family and society have been greatly enhanced. Women are demanding basic rights to water, food and health from the government. They are now getting more food, water, medicine, and safety net support from the government and non-government organisations (NGOs).

4.4. Small enterprise development

Background: Munsiganj union in Shyamnagar upazila, Satkhira district is an area extremely vulnerable to climatic risks and disaster. Women and poor people from the area are particularly affected. Christian Aid partner Shushilan undertook a project called Reducing Climate Change Induced Vulnerabilities through Integrated Adaptation and Mitigation Measures (RECLAIM). The RECLAIM project aims to reduce disaster risks and increase livelihood options for communities vulnerable to climate change. The special focus of the project is to reduce vulnerability among the most vulnerable poor and marginalised women in the community with special emphasis on empowerment and women's participation in social development programmes.



Local actions: Marginalised households were selected through focus group discussions. The project formed farmers' groups at village level, ward level and union level, called Village Shusamoy Committee, Ward Shusamoy Committee and Union Shusamoy Committee respectively. The project formed 54 village committees, nine ward committees and one union committee. Women were included in the village committees.

Making sweetmeat packaging was identified as an appropriate and environmentally friendly livelihood option for the region because it can be done by women (and other members of the family) at home, using only paper and glue, and requires no element that is injurious to the environment. These women were not part of any other income-generating activity. In February 2012, a total of 36 women from the villages of Jelekhali, Dhankhali, Kultali, Harikhali, Kachukhali and Atpara were given training in packet making and marketing of the products to sweetmeat traders. More than 30 beneficiaries were engaged in making packets and marketing their products along with their family members.

Key results: The livelihoods of marginalised poor people, primarily women, have improved through increased alternative employment and income generation. Each woman can earn BDT1,000-1,500 per month from packet making. This process is helping to reduce poverty. Women have gained a say in how the family's money is spent. They also save some money, giving them a level of food security in time of need.

Chapter 5: Building the capacity of institutions

Christian Aid partners are committed to making local institutions (both formal institutions, such as the union parishads, and informal ones, such as community-based organisations) work for the poor. The primary focus is on building the capacity of the people's organisations in order to bring changes to the lives of poor and marginalised people, and promoting links to the local government institutions (LGIs) (who are the main duty bearers to fulfil the rights of the poor) so that vulnerable communities can access greater support and services. If people's institutions are not strong, then they can't help the communities they represent. People need skills and knowledge to ensure their institutions function properly. They need to purposefully participate in LGIs (such as union parishads and upazilas) to assert their demands and rights to well-being, livelihoods and development.

Union parishads and upazilas should be engaged in agriculture development, safe water supply, social safety net programmes, infrastructure development and disaster risk management. Poor people and women, however, very often do not feel the benefits of LGIs. Their ability to participate in local planning, budgeting and implementation is critical to make sure that they are represented and have a voice in order to get equitable benefits from local development, DRR and livelihood programmes.

Further efforts are needed for women and poor people to get representation in LGIs so that the key institutions, including union parishads, upazilas and NGOs, are aware of their needs and priorities in tackling climate risks and promoting secured livelihoods.

5.1 Knowledge centre

Background: Chilla village is in a coastal area very vulnerable to cyclones. Christian Aid partners BCAS and Rupantar have been working in coastal areas building local capacity and promoting community adaptation to climate change for many years. As part of this work, a knowledge centre was set up in Chilla village, one of four knowledge and information centres established during the project period. The main objectives of the Chilla centre are to build the community's ability to engage with LGIs, to enhance people's understanding of climate risks and vulnerability, and to initiate local adaptation measures in consultation with local people.

Local actions: 300 books on topics such as the environment, religion, culture, physics and climate change have been donated to the centre free of charge. Posters, leaflets, and booklets with practical know-how on DRR, CCA and livelihoods are also available at the centre. The centre has a management committee of 11 people, four of whom are women. Every afternoon, the members of the local village adaptation groups and committee members meet for up to an hour in the centre and there are tables and chairs where up to 12 people can read at a time.



Key results: Awareness among the community on the impacts and the challenges of CCA has been significantly increased. NGOs and union parishad representatives also use the knowledge centre. People get simple and practical solutions to address their problems. The centre further creates space for sharing their problems and successes in everyday life, helping to build relationships and offering a community meeting place. Many of the visitors to the knowledge centre are literate, but few are illiterate. The knowledge centre displays posters with image messages, and keeps audio-visual and radio clips to communicate important message about disasters, early warning and adaptation messages.

5.2 Public hearing towards good governance

Background: In Morelgang upazila in Bagerhat district, the effects of climate change are being felt through the increase in floods, especially by poor communities. In 2011, Christian Aid partner BDPC set up a project called Community Based DRR and CCA: Fortified Livelihoods through Good Governance (CRA-RRAP). Establishing good governance to improve and strengthen poor people's livelihoods was a main focus for the project. A public hearing is a meeting with a huge public gathering that creates space for open dialogue to ensure transparency and accountability to the public from service providers. Through these meetings, relationships between service providers and service users are built. It also helps instil trust between them. As part of this, public hearing meetings have provided a key way to ensure poor people are able to get their concerns heard by those in power.



Local actions: Union parishad and upazila administrations (particularly those involved in agriculture, fisheries, livestock) and service recipients (including Mauwali, Bawali, farmers, fishermen, forest dependent groups, small traders and day labourers) all participate in public hearing meetings. These meetings have the opportunity for poor people to gain greater access to services through dialogue, lobbying and advocacy. This has benefited the communities greatly.

Four public hearing meetings were arranged in Khaulia union and Nishanbaria union in 2012-13. The meetings updated people about their basic rights, enhanced good governance through accountability and transparency, and encouraged greater responsiveness of duty-bearers.

Key results: Several achievements have come about as a result of these meetings.

- Ensuring easy access of poor vulnerable communities to natural resources.
- Service users have a clearer idea about the ability, limitation and responsibilities of service providers.
- People can justify their position as service provider and service user.
- Service providers are becoming more dedicated in their service provision.
- There is less corruption in implementation of programmes and selection of beneficiaries.
- Solutions to existing problems are being found through joint efforts.
- People succeeded in getting resources from local government for a fresh water reservoir on public land.
- Getting greater amount of VGD and VGR support for the poor.

Case study 5

Shahana Begum's story



In 2006, Shahana Begum's husband left her, leaving her to bring up their son and daughter alone. The family live in Masterpara village in Khaulia union, an area affected by climate change and disasters. As a result, there is a shortage of work. Shahana grew so worried that her health deteriorated. She had to move into her mother's home and earn money working as a servant. In 2011, at a time when she was very depressed, she joined the BDPC project and became a member in the ward awareness group. Shahana went to training workshops and discovered from BDPC project staff that she was entitled to 37 types of services from the union parishad. She had made an urgent request to the union parishad for a VGD card, but failed to receive anything. BDPC supported her to bring the matter to the union parishad at a public hearing meeting. In the first public hearing meeting that took place in Khaulia union in 2012 under the BPDC project, more than 1,000 people attended in addition to government representatives and NGOs. Local people put forward a range of problems affecting them, including personal demands. Like others, Shahana applied to the upazila union chairman for a VGD card. The chairman treated her application as a priority and he arranged a VGD card for the 2013-14 period. With this card, Shahana was able to get 30kg of wheat/rice per month, helping her to feed her family.

Chapter 6: Lessons learned and advocacy issues

Getting feedback from the RLP actions of the partners was quite challenging. It needed participatory reflections from the implementing partners, community and the official duty bearers. Lessons have been learned about the effectiveness of the RLP approaches, resilient livelihood work, and integration of CCA into livelihood and DRR programmes.

From looking at the strategies and actions that worked well (and also those that didn't), partners have recognised the implementation challenges, including how to remove the key barriers and where to improve the implementation process. There have been some generic lessons about local planning and implementation of RLP and CCA activities; integration of CCA into livelihood, engagement of actors and stakeholders in local action; empowerment of poor people and women; and enhancing the institutional linkages of the community with local government and civil society representatives. We also learned few lessons specific to particular action and partners. A set of recommendations and advocacy issues have been identified for the partners, local actors, LGIs and national government on best practice when it comes to building climate-resilient livelihoods.

The generic lessons from the RLP suggest that PVCAs went very well. PVCAs give a strong base from which to plan local adaptation and climate-resilient livelihood actions. The participatory research and learning process enhanced knowledge and skills for integration of CCA and DRR, as well as tackling climate change impacts and improving livelihoods. The PVCA and local planning helped to integrate CCA into DRR and partners' and local actors' approaches to establishing resilient livelihoods. There has been some level of integration of local knowledge with scientific and technical knowledge in adaptation and resilient livelihood actions at household and community levels. Institutional linkages of the community enhanced to a great extent where local leaders played a key role. Market linkages of poor people and women were strengthened in some areas. All those efforts created new resources and enhanced poor people's and women's access to available resources and services, which in turn increased their productivity and incomes. The local efforts gave people more financial security, enhanced their social standing and empowered them to have a voice in their community, helping to address climate change impacts and social vulnerability.

6.1 Resilient livelihoods

The RLP approach promoted appropriate livelihood activities considering the climate risks and vulnerability. Productivity in the crop fields and home gardens (in both salinity and flood contexts) has been increased. One of the key principles of RLP was self-organisation (learning and doing by the communities themselves). There is a need to increase the capacity of the community to learn continuously and change their practices and institutions, which is one of the key elements of the Christian Aid's resilient livelihood framework. With these principles, BDPC implemented Community-

based Disaster Risk Reduction Climate Change Adaptation (CBDRR-CCA) Fortified Livelihoods Initiative through Good Governance project in Morrelganj, Bagerhat, and GUK implemented the RIVER project for livelihoods promotion in charland in Gaibandha district, and POPI implemented Building Resilience of the Hoar People of Disaster Risk Reduction and Climate Change Adaptation (BRH-DRR-CCA) for enhancing livelihood in haor in Sunamganj district. The following are the lessons from different ecosystems and livelihood zones.

- When the community and local government work together, a big change for the community is possible. Canal re-excavation in coastal villages was a good example.
- A whole-family approach for promotion of livelihood was a very successful strategy used by GUK with climate-vulnerable charland dwellers.
- Vermicompost was an income generation activity for women that supported livelihood. It is eco-friendly and has great market potentials.
- Duck-farming is considered as one of the good adaptation techniques in the flood-prone haor areas, where the poor women can access ecosystem services for their livelihoods.

6.2 CCA and DRR

Partners are trying to integrate CCA and DRR into their livelihood and development programme. One of the key learnings in community adaptation to climate change is that blending of scientific and technical knowledge with local knowledge is required. The good practices on CCA and DRR were collected from the projects that are being implemented by BCAS in Manikganj and Gopalganj area, GUK in Gaibandha, Shushilan in Satkhira, and DSK in Khulna. The key learnings are:

- adaptation is location specific. Local innovation is needed for effective adaptation. DRR activities on humanitarian grounds are very important for survival and security along with long-term ecological (ie, growing saline-tolerant paddy) and institutional responses
- homestead raising was found to be an effective adaptation option to protect assets from flood damage. A clay layer is better than sandy soil to make the homestead stable, long-lasting and productive
- Shushilan's eco-demo-farm was effective in testing the local adaptation options where community and agricultural scientists worked collectively.

6.3 Empowering women

Christian Aid partners are working for women's empowerment through social mobilisation, training and capacity building. The good practices have been documented from the projects of CCDB in Gopalganj, Church of Bangladesh Socila Development Programme (CBSDP) in Barisal, BCAS in Bagerhat and Shushilan in Satkhira. It is felt that women can be part of solution if they are given opportunity and ownership in the planning and implementation. They have good

leadership qualities and can be active change agents both in the family and society.

- Thousands of women have become self-reliant through forums and livelihood activities of CCDB.
- True leadership is nurtured by doing and learning.
- Women leaders accessed greater resources, supports and services from the local government and service providers where they were empowered and had their own organisations and network for negotiations.
- Pro-poor markets create employment and income for the women.

6.4 Building the capacity of institutions

In Bangladesh, rural institutions are dominated by power-elite relationships and body politics. These do not very often work in favour of the poor households, women and marginal groups. Raising the voice of the poor and demanding their right for food, water, health and social security from duty bearers yielded good results in some cases. A rights-based approach (RBA) can help poor people to get greater access to institutions and resources for livelihoods. Christian Aid partners are working to promote institutional capacity as a priority area of action to bring change to the lives of the socially disadvantaged. The lessons are:

- Knowledge centres work as a local informal institution of the poor. They not only enhance knowledge on CCA and DRR, but also provide the community with a good basis to form links with actors and stakeholders.
- Further support would be needed to make the centres an effective institution of the poor.
- Public hearing meetings were very successful in giving poor people access to the government supports and services.

6.5 Advocacy issues

Good lessons have been drawn from the implementation of Programme Partnership Arrangement (PPA) activities. There are huge challenges for the government and local actors to promote inclusive social development with justice and fairness, and there has been ample scope for the Christian Aid partners to work with vulnerable communities, local actors (including the LGIs) and national actors.

Here are the main advocacy issues for actors and stakeholders at national and local levels.

National level

- Implementation of National Adaptation Programme of Action (NAPA) and Bangladesh Climate Change Strategy and Action Plan (BCCSAP) projects.
- Climate resilient infrastructure (such as embankment strengthening, shelter building, building climate-resilient housing, etc).

Key learning points

Ecosystem regeneration supports adaptation and livelihood: One of the lessons of BDPC in Morrelganj, Bagerhat is that collective action helps to address big problems. Ecosystem regeneration through canal re-excavation can promote the livelihoods of the poor with many social benefits. The whole-family approach by GUK was very successful in addressing climate disaster and livelihood in riverine charland.

Women's empowerment accelerates social and economic development: CCDB's approach of poverty alleviation and women's empowerment has shown that if women are given opportunity, resources, training and necessary supports, they can play vital role in social and economic development. The forums of CCDB worked well to reduce women's social and climate vulnerability, and the lesson is that capital formation was a critical input for achieving success.

Successful adaptation requires meaningful collaboration among the key actors: DSK promoted adaptation in coastal agriculture through using saline-tolerant seeds in Dacope, Khulna. New seeds were provided and best farming practices were taken from the government department. For the successful adaptation, collaboration was needed among the community, NGOs and government.

Blending of local knowledge with scientific knowledge: In flood-prone water-logged areas, the floating garden was a very good adaptation option. Traditional practices are given some technical and scientific modifications, which increased productivity and efficacy. The key learning is that information and knowledge is a critical input to community adaptation and resilient livelihood.

- Climate-resilient farming and input supply (saline-tolerant and early varieties of crops).
- Distribution of khash land (public land) among the char-dwellers and poor people for small-scale agriculture and fisheries.
- Research and development for climate-resilient and pro-poor technology.

Regional and local levels

- Greater supports and services (improved seeds, water supply and sanitation) for the poorest and smallest-scale farmers.
- Greater access of the poor to social safety net and effective implementation.
- Better market access for the poorest people and women.
- Ensuring a rights-based approach (RBA) for development, and raising the voice of the poor, helping to claim their rights and demands for service.
- Effective participation of poor people and women in local planning and implementation of CCA, DRR and livelihood programmes.
- Greater access of poor people to credit and loans for livelihood activities.
- Legal entity, or registration, of women's organisations.
- Linking of poor people with LGIs.

Key actions:

- Collective action and support for poor people, women and vulnerable communities to ensure climate risk reduction and secured livelihoods.
- Enhancing links between poor people with LGIs and service providers.
- Scaling-up adaptation, eco-demo farm and DRR.
- Participatory research and innovation for pro-poor solution and technologies.
- Ensuring institutions and markets are accessible to, and work for the poorest.

Chapter 7: Conclusion and way forward

Christian Aid partners in the eight disaster-prone and poverty-stricken districts in Bangladesh are working to improve the lives of poor households by ensuring their food, water and livelihood security, and reducing the impact of climate change and disaster. The partners worked with 240 village communities in 35 unions, covering all the key ecosystems in Bangladesh. The case study documentation process captured more than 30 good practices. Thirteen good cases in four categories have been presented here.

The field investigation and evidence suggest that the strategies and actions for all thematic areas (livelihoods, CCA and DRR, empowering women, and institutional capacity building) were appropriate in local and social contexts. Effective implementation resulted in increased productivity, increased sale values of the products, increased household income and increased food consumption by individuals and within families. The work helped to reduce disaster and climate risks, and empower and improve the resilience of poor people, women and marginal communities living in the most climate-affected regions. Greater achievement happened where true needs and priority were considered in planning and implementation of the actions; where community and LGI participated with sincerity and motivation and felt a key part of the process and outcomes. Local innovation, linkages and supports from the local government and people working in the development sector further helped the partners to achieve higher results. The human stories tell us the real world pleasures and challenges of working with vulnerable communities.

The PVCA has been considered an appropriate approach for engaging local communities, including women, in the planning and implementation of activities. For example, the needs of the community in Amarbunia village, Bagerhat district was reflected and realised through restoration of the ecosystem and conservation of fresh water by canal re-excavation. Women-focused adaptation on the raised homestead, production of vermicompost, improved floating garden techniques, eco-demo farms, growing saline-tolerant paddy, duck-rearing etc, helped to promote livelihood security and disaster risk reduction. The people's forum, adaptation groups, knowledge centre, lobby advocacy and the public hearing meetings empowered poor people, women and vulnerable communities, enhancing their links to institutions and increasing their capacity to work with LGIs and become active social change agents. These process and local actions would need further support for sustainable outcomes.

Empowering poor people played a significant role in motivating communities towards demanding their rights and attainment of social justice. The people's institution provides a platform for the poor community, particularly for women to organise themselves and raise their voice to the LGIs. The forum and CBOs also guard against malpractices. Christian Aid should support this initiation for long-term results.

To advance local adaptation, there is further need to build the capacity of poor people, women and local organisations to influence national policies and programmes that would benefit them in the climate-affected zones. The civil society, NGOs and CBOs can work as pressure groups so that government institutions become more accountable and responsible to poor households, women and vulnerable groups.

It is learned from the evidence that women are efficient users of resources (water, land, money, etc) and they have great resilience in addressing disasters. The capacity and knowledge of women must be harnessed, especially in relation to small home gardens, integrated small fish culture, duck-rearing, child-rearing, health, and resilience building. Special emphasis should be given to and efforts made to empower women in making decisions at family and society levels.

It is strongly felt that Christian Aid partners should develop their strategies and action plans in the light of the current and future challenges of the country, which include not only climate resilient livelihood and empowerment, but also contributing to green development, climate change mitigation, poverty alleviation and inclusive social development. We need solidarity and concerted efforts to take on the challenges. We have to work with vulnerable communities, local actors, NGOs and the government. Civil society and NGO engagement is crucially important for influencing policy and institutions to work for the poorest and most vulnerable groups.

Endnotes

¹ IPCC, Technical Summary – Working Group-I Physical Science Basis of Climate Change 2013, Contribution of the Working Group-I to Fifth Assessment Report, 2014.

² *Turn Down the Heat: Climate Extremes, Regional Impacts and the Case for Resilience*, World Bank, 2013.

³

unicef.org/infobycountry/bangladesh_bangladesh_statistics.html

⁴ See note 1.

⁵ L Olsson et al, 2014.

⁶ BBS, Bangladesh Statistical Year Book, Bangladesh Bureau of Statistics, Government of Bangladesh, 2012.

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