

TOWARDS A MORE RESILEINT AND GREENER BANGLADESH:

MID-TERM EVALUATION OF

UNDP BANGLADESH

CPD 2012-2016

OUTCOME 3.1 AND OUTCOME 3.2

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**List of Acronyms and Abbreviations**

ADB Asian Development Bank

ADP Annual Development Programme

ADR Assessment of Development Results

APF Adaptation Policy Framework

AusAID Australian Agency for International Development

BCCSAP Bangladesh Climate Change Strategy and Action Plan

BCR Benefit Cost ration

BGDP Bangladesh Green Development Programme

BRAC Bangladesh Rural Advancement Committee

BRESL Barrier Removal for Energy Standards and Labelling

BSTI Bangladesh Standards and Testing Institution

BWDB Bangladesh Water Development Board

CAS Community Asset Score

CBA Community Based Adaptation

CBACC-CF Community Based Adaptation to Climate Change through Costal Afforestation

CBO Community Based Organization

CBRM Community-Based Natural Resource Management

CC Climate Change

CCA Climate Change Adaptation

CCC Climate Change Cell

CCED Climate Change Environment Disaster

CDMP Comprehensive Disaster Management Programme

CFL Compact Fluorescent Lamp

COP Conference of Parties

CPCountry Programme

CPD Country Programme Document

CPEIR Climate Public Expenditure and Institutional Review

CSOs Civil Society Organizations

CWBMP Coastal Wetland Biodiversity Management Programme

DDM Department of Disaster Management

DFID Department for International Development

DM Disaster Management

DMB Disaster Management Bureau

DMC Disaster Management Committee

DoE Department of Environment

DPHE Department of Public Health

DPP Development Project Proposal

DRH Disaster Resilient Habitat

DRR Disaster Risk Reduction

DRRF Disaster Relief and Response Facility

EB Electronic Ballast

ECA Ecologically Critical Areas

ECDVI Environment, Climate and Disaster Vulnerability Index

EE Energy Efficiency

EE&C Energy Efficiency and Conservation

EM Emergency Management

ER Early Recovery

ERF Early Recovery Facility

EU European Union

EWS Early Warning System

FAO Food and Agricultural Organization

FAP Flood Action Plan

FFF Forest, Fish, and Fruit

FGDs Focus Group Discussions

FYP Five Year Plan

GCF Green Climate Fund

GDP Gross Domestic Products

GED General Economic Division

GEF Global Environment Facility

GGCA Global Gender and Climate Change Alliance

GIZ The Deutsche Gesellschaft für Internationale Zusammenarbeit

GoB Government of Bangladesh

HHK Hybrid Hoffman Kiln

ICT Information and Communication Technology

IDCOL Infrastructure Development Company Limited

IFC International Finance Corporation

IGAs Income Generating Activities

IKEBMI Improving Kiln Efficiency in the Brick Making Industry

INDC Intended Nationally Determined Contribution

INGOs International Non-Government Organizations

IP Inception Phase

IPCC Intergovernmental Panel on Climate Change

IRR Internal Rate of Return

IUCN International Union for Conservation of Nature

KfW Kreditanstalt für Wiederaufbau (Reconstruction Credit Institute)

KI Key Informant

LCD Low Carbon Development

LCFF Local Climate Fiscal Framework

LCG-DER Local Consultative Group-Disaster and Emergency Response

LDRRF Local Disaster Risk Reduction Fund

LED Light-Emitting Diode

LGED Local Government Engineering Department

M&E Monitoring and Evaluation

MDGs Millennium Development Goals

Metric Ton Metric ton refers to 2204 pound or 1000 kg.

MIC Middle Income Country

MoEF Ministry of Environment and Forest

MoFDM Ministry of Food and Disaster Management

MoI Ministry of Industries

MTR Mid-Term Review

MW Mega Watt

NAPA National Adaptation Programme of Actions

NGO Non-Government Organization

NPD National Project Director

NPV Net Present Value

NPWA National Policy for Women’s Advancement

NRM Natural Resources Management

NSDS National Sustainable Development Strategy

ODS Ozone Depleting Substances

PEC Poverty Environment Climate

PECM Poverty Environment Climate Mainstreaming

ProDoc Project Document

REDD Reducing Emissions from Deforestation and forest Degradation

ROAR Results Oriented Annual Report

RRMC Results and Resource Management Cluster

RVCC Reducing Vulnerability to Climate Change

SAARC South Asian Association for Regional Cooperation

SDC Swiss Agency for Development and Cooperation

SEGP Sustainable Environmental Governance Programme

SFYP Sixth Five Year Plan

SIDA Swedish International Development Authority

SMART Specific, Measurable, Achievable, Realistic and Time-bound

SOD Standing Orders on Disaster

SP Strategic Plan

SREDA Sustainable and Renewable Energy Development Authority

SREPGen Sustainable Renewable Energy Power Generation

TE Terminal Evaluation

TNC Third National Communications to the UNFCCC

TPP Technical Project Proposal

Ton (US) US ton referring to 2000 pounds

UN United Nations

UNDAF United Nations Development Assistance Framework

UNDP United Nations Development Program

UNEG United Nations Evaluation Guideline

UNFCCC United Nations Framework Convention on Climate Change

UNICEF United Nations International Children’s Emergency Fund

VfM Value for Money

WB World Bank

WFP World Food Programme

**EXECUTIVE SUMMARY**

During the period of 2012-2016, UNDP Bangladesh has been supporting a portfolio of projects under the Climate Change, Environment, and Disaster (CCED) Cluster programme by building on previous engagements and achievements in the fields of the environment, disaster management and sustainable development. The overall goal and mandate of the CCED Cluster programme is to engage in activities relating to environmental and natural resources sustainability and mitigation; adaptation to climate change; the alleviation of poverty through capacity building of government institutions, NGOs and civil society organizations; mainstreaming the poverty-environment-climate nexus into development planning and budgeting processes; and implementing innovative solutions for addressing challenges stemming from climate change and degradation of common property resources.

The purpose of this outcome evaluation is to document and evaluate the cumulative outcomes of UNDP’s contributions towards climate change adaptation, disaster risk reduction, sustainable use of natural resources and energy efficiency, and access to low carbon energy. This involved an assessment of country-wide transformative developmental changes and the role of UNDP, the Government of Bangladesh, donors, and development partners (including NGOs and CSOs) at the macro level. The evaluation aims to assess UNDP Bangladesh’s contribution towards achieving the country’s development targets. At the project (micro) level, it involved an examination of the UNDP interventions under the CCED programme, in particular their relevance, effectiveness, efficiency and sustainability outputs and outcomes. The outcome evaluation was undertaken over the 8 December, 2014 – 31 May, 2015 period, with evaluation interviews, meetings, consultations, and focus group discussions being undertaken between December 2014 – May 2015, supported by in-depth document reviews throughout this period. The timing of the evaluation was selected in such a way so the findings could assist the forthcoming Country Programme development (2017-2021).

**Major Findings**

* ***The CCED programme has continued to cumulatively contribute to the ‘paradigm shifting’ process in developing a ‘culture’ of risk reduction in the country.*** Although the Country Programme cycle is still underway, sufficient ground has been covered to promote the motto of ‘building and enhancing resilience’ for developmental and environmental sustainability goals. During the 2012-16 Country Programme period, a total of $ 102.32 m was budgeted for CCED Cluster activities, of which the lion's share was implemented by 2014; US $ 80.72 m for CCA and DRR programming and US $21.60 m for NRM and access to low carbon energy areas (Annex I). These investments have directly not only contributed to 4 major policy formulations in the NRM areas (Table 4.1.2.1), and further contributed to ‘paradigm shift’ in the institutional thought-process and actions, but also generated considerable tangible and intangible benefits. For example, a total of 28 initiatives and/or projects were undertaken by the CCED Cluster, which succeeded in developing effective partnerships with 18 government ministries, numerous NGOs and CSOs, as implementing agencies. The ‘paradigm shift’ of national policy and practice areas requires transformational changes over a longer period of time, and therefore, continuous strategic priorities and resource allocation would be required for UNDP to assist Bangladesh to achieve such a goal in CCED areas.
* ***The outcome evaluation revealed that UNDP projects were generally relevant, effective, and efficient, with good Value for Money (VfM). For all project components on which analysis was performed, Value for Money (VfM) was higher than one, implying that benefits surpassed cost of development and implementation.*** [The estimated Value for Money of the CDMI II Core Family Shelter activities is: the Benefit Cost Ratio (BCR) is 2.76:1, and Internal Rate of Return (IRR) is 20.30%. The estimated Value for Money of the disaster-resilient habitat - a component of ERF - is: Benefit Cost Ratio (BCR) is 1.88:1, and Internal Rate of Return (IRR) is 10.50%. The Value for Money of the Triple F (Forest, Fish and Fruit) model – a component of the CBACC-CF project, per beneficiary household is: Benefit Cost Ratio (BCR) 4.88:1, and Internal Rate of Return (IRR) 50.90%. The estimated Value for Money for Green Bricks – IKEBMI project - is: Benefit Cost Ratio (BCR) is 1.92:1, and Internal Rate of Return (IRR) is 10.5%]. ***Overall, compared to international benchmarks, the efficiency in terms of funds invested and the value of benefits is very high.***
* However, due to the limited scope and timescale of the evaluation, the Value for Money analysis was limited to specific project components, which precluded a longitudinal examination of project intervention efficiency analysis. ***Efforts to design a longitudinal Economic Analysis of UNDP programmes and project interventions are meagre.***
* The outcome assessment further revealed that ***it is time to vigorously promote the motto of ‘pro-growth green development’ and for UNDP to prove itself as a ‘thought leader’ in the transition of Bangladesh’s current dependency on non-renewable energy-based economy towards becoming a renewable energy-based economy and society.***
* The CCED programme is at a crossroad to becoming more focused, robust, and strategically well-positioned to continue as a global leader in disaster management and community-based climate change adaptation in Bangladesh. ***In order to position it better, UNDP Bangladesh should invest more on rigorous Economic Analysis of project and programme intervention investments, particularly to earn more credibility from strategic partners.***
* The analysis of UNDP interventions and other activities has revealed that Bangladesh has ***made remarkable progress in mainstreaming climate change, environment and disaster management and poverty reduction.*** The Sixth FYP contains references to most of the policies, strategies and approaches that UNDP and its development partners have supported during the present UNDP country programming period in the CCED portfolio. ***These achievements can largely and/or partly be attributed to a dedicated and capable group of officials, managers experts, and decision-makers at UNDP as well as government policy makers, NGOs, civil society and donors.***
* ***These accomplishments should nonetheless be qualified with critical analysis.*** This is because, ***generally, delivery on the policy level was more effective than on the ground.*** Timeliness of interventions was largely appropriate, in particular in the area of CC adaptation and disaster risk. However, the energy technologies currently promoted in the energy efficiency area are quickly becoming obsolete. ***Overall, an effectiveness rating of CCED programmes was marginally satisfactory.*** It is noteworthy here that political instability and deficiency in human security have hampered the implementation of economic and developmental activities in recent years and could adversely affect the pace of implementation of CCA, DRR, energy, and women’s empowerment activities in the country.
* ***The UNDP CCED portfolio in Bangladesh has piloted innovative approaches to DRR and enhancement of community resilience, which in turn have contributed enormously to equitable economic growth and MDGs.*** While the portfolio is diverse and extends across multiple societal levels (local, regional, national and global), a number of common denominators - namely, policy advocacy, intersectoral linkage, innovation, and social mobilization - have assisted an underlying coherent and ‘team approach’ in this Cluster.
* ***However, this coherence has not always led to further coordination and communication with other UNDP portfolios, which needs to be addressed.*** *For example, there has been deficiency in coordination between CCED programmes and governance cluster.*
* ***There is generally a time lag between the inception and launching of a project. Also, between UNDP and the implementation partners, partnership negotiations have generally been very lengthy.***A challenge for the evaluators in assessing the CPD outcome has been that the UNDP ROARs (Annual Reports) provided to the evaluators (2012, 2013, 2014) gauged output-level achievement and weaknesses, not larger outcome (‘impact’)-level results. The evaluators therefore relied on various proxy indicators and their triangulation to form outcome-level inferences.
* ***It was revealed that explicit planning for and implementation of cross-cutting themes in the CCED Cluster projects has been challenging.*** For example, both in terms of local community engagement as well as women’s empowerment, it appeared that UNDP and the implementing agencies were not ‘on the same page’ when the projects were implemented at the local community level. Similarly, project documentation for cross-cutting themes such as gender equality and human rights has not been adequate to achieve the CPD outcomes.

Based on the outcome evaluation findings, the evaluators compiled a series of recommendations that address future UNDP programming directions as well as overarching and project-level needs. These are summarized below:

**Strategic Vision and Future Country Programming**

The outcome evaluation team believes that, to effectively carry over the achievements and impacts of the current programming into the new Strategic Plan and country programming cycles, an evidenced-based Strategic Vision should be developed. Based on the findings of this mid-term Outcome Evaluation, ***Five Key Thematic Pillars*** for developing a coherent strategic approach are proposed:

* **Enhancing Community Resilience to Climate and Disaster Risk:** By building on its strength, in UNDP Strategic Planning and future programming, integration of DRR with livelihood security and human development should be emphasized.
* **Building Intersectoral Emergency Management Capacity:** Mainstreaming ‘emergency management’ for ERF and sustainable development, as an independent portfolio from DM, should be prioritized by UNDP in its Strategic Planning and forthcoming country programming.
* **Pro-Growth Green Development:** In UNDP Strategic Planning and country programming, linking the Pro-Growth Green Development theme with new products creation, locally appropriate technology, and employment in greener sectors will help the Pro-Growth Green Development address the country’s perspective plans and goals.
* **Improving Environmental Health through Strengthening Environmental Governance:** Building on lessons learned from these interventions, UNDP should strategically position itself to lead initiatives for improving environmental health, with a focus on common property resources.
* **Women’s Empowerment for Climate Change Adaptation, Environmental and Natural Resource Sustainability, and Energy Security:** Women-designated projects, along with screening of all projects through gender sensitive lens, should be added to the CCED portfolio so that funds and human resources can be dedicated to gender equality in the areas of CCA, environmental and natural resources sustainability, and energy security.

**RECOMMENDATIONS**

**Overall CCED Portfolio**

1. **UNDP needs to critically review and undertake appropriate measures to reconcile CPD outcome indicators with country programme outcomes, particularly in the future country programming. The evaluation team recommends that sufficient attention should be devoted to baseline measurement and monitoring of progress and results.**
2. **In order to continue to contribute to nationally and internationally relevant development programmes in the areas of CCED, UNDP Bangladesh needs to strengthen further and coordinate its partnership more closely with government ministries, departments, and other private sector stakeholders.** This is critical because Bangladesh is approaching to become a middle-middle country very rapidly. Recent CCED projects were *very good* in terms of their *relevance* as they cater to the urgent needs of the country and the priorities of the GoB. However, there exist significant gaps in the coverage of pressing issues such as environmental and common property protection (governance, pollution, land-use practices, energy security).
3. With adequate resource inputs, project management and delivery could have been much more efficient. Overall, rating of efficiency CCED programme is *marginally satisfactory*. To address these issues, **UNDP needs to implement mechanisms for speedy project development and approval, allocate required funds for baseline database creation for all interventions, and establish close monitoring of costs and results, and of the evaluation of outcomes and impacts.**
4. **UNDP should consider adopting more rigourous methodologies for economic and financial analysis.** In this case, the PECM guidelines (GED-published Manual of Instruction for Project Analysis) can be a useful tool for UNDP to assess its own projects.**For assessing project intervention Value for Money (VfM), UNDP should adopt a longitudinal approach that examines the flow of costs and benefits over the whole lifetime of the investment.** This aspect is important, among other dimensions, for examining sustainability because a programme or project with a positive payback is expected to sustain better on its own.
5. **In the face of a rapidly changing global environment , UNDP needs to ‘think ahead' strategically and nurture innovative ideas in order to shorten long project cycles.**UNDP should anticipate long-term challenges that are not yet on the government’s radar but may become very important in the future. UNDP is in a good position to leverage its global network for sharing accumulated lessons learnt and innovative approaches that work well.
6. **The extent of achievements is rated as *satisfactory (i.e. good).* However, the quality of the outputs is not always controlled. Some outputs are very good, like the various modalities developed in the course of the PECM. Other outputs, such as some of the knowledge product components of CDMPII, are of *marginal quality*.** UNDP’s overall performance on the national policy level is ***more effective*** than on the local level. For example, limited or no monitoring is being pursued to link community-based risk maps with local government and planning authorities so that further supports for DRR and CCA can be offered to the local government and communities. **UNDP CCED interventions therefore need to target more effective programme delivery to strengthen sub-national and local governmental-level capacity (in CCA, DRR and other developmental activities). More resources should be allocated to these areas.** In order to strengthen the sustainability of delivery at the local level, the evaluation team believes that UNDP should work more closely with the government machinery to strengthen its sub-national (district and *upazila* level), local (union), and village-level institutions, and empower local governments and NGOs in terms of local delivery capacity.
7. **UNDP CCED interventions need to ensure greater programme benefit delivery to the poor, disadvantaged, and physically and mentally challenged populations.**Despite the successful delivery of national-level UNDP CCED Cluster interventions, effective empowerment of the poor, disadvantaged and the physically and mentally challenged has been limited. At the sub-regional and local government level, a ‘top-down’ governance philosophy is still predominant, which is a serious impediment to enhancing the resilience of poor, marginalized populations. **More resource should be placed on building stronger partnerships and granting such vulnerable populations a ‘collective voice' to support social justice and participatory governance, and on fostering a ‘sense of ownership’.** Also, the project planning process for local implementation should be more participatory and leverage the knowledge of locals and other development partners (including NGOs and CSOs).
8. **UNDP Bangladesh needs to reinvigorate its 'risk reduction' and 'building resilient communities' portfolio within the UNDP country office, and its partnerships with GoB ministries, donors and development partners. In consideration of various emerging problems, issues and opportunities (such as the Green Climate Fund), UNDP Bangladesh needs to strategically consolidate and strengthen its CCED portfolio by keeping its focus on 'risk reduction', 'building resilient communities', and resource mobilization and allocation.**
9. **UNDP should undertake strong measures to develop a systemic inventory of project knowledge and lessons learned, and ensure easy access to this information.** UNDP should recognize that projects can generate value-adding assets in terms of natural and social capital, partnerships, and professional reputation.
10. Gender equality, empowerment of women, and human rights considerations are not as prominent in the CCED projects as they could be. Although efforts are being made to encourage implementation partners to do more regarding women’s and human rights, the UNDP strategy did not place sufficient emphasis on these issues and needs significant improvement. **To fill in these gaps, UNDP should adopt a systematic approach to address gender issues in CCED areas. All projects should be screened through a gender sensitive lens (as it is pursued through BCCSAP, 2009).**

**Thematic Areas**

1. **The UNDP CCED Cluster should enhance its leadership role by providing more clarity to CCA and DRR and their connections to community *resilience* and adaptation.**
2. **In order to recognize the multidimensionality of the ‘resilience’ concept, UNDP Bangladesh should consider changing its motto from ‘Build Back Better’ to ‘Triple R - Rebuilding with Reduced Risk’.**
3. **UNDP’s approach to risk reduction and resilience enhancement should emphasize greater coordination among local and sub-national (*upazila* and district) government departments.**
4. **UNDP should establish stronger links between CCA, DRR, and the enhancement of livelihood security.**
5. **UNDP should invest in generating further knowledge on more effective and efficient cyclone disaster prevention measures.**
6. **UNDP Bangladesh needs to further improve on-the-ground delivery capacity of *more inclusive* community-based climate change adaptation interventions.**
7. **UNDP needs to maintain its focus on the niche area of energy efficiency standards and labels.**
8. **UNDP should build further on its established recoemmdnations on enegry efficiency and technology transfer.**
9. **UNDP should continue supporting capacity building in the poverty-environment-climate nexus in partnership with the Government of Bangladesh.**

**SECTION 1**

**INTRODUCTION**

**1.1 PURPOSE AND OBJECTIVES OF THE EVALUATION**

The UNDP Bangladesh **Country Programme** (CP) 2012-2016[[1]](#footnote-1) has been formulated in response to the Government of Bangladesh’s development priorities and vision of attaining middle-income status by 2021, as stated in the Outline Perspective Plan 2010-2021 and ongoing Sixth Five Year Plan (2011-2015). The CP 2012-2016 includes as priority areas climate change (CC), the environment, disaster risk reduction (DRR) and response, and gender equality and women’s advancement - thus revealing UNDP Bangladesh’s strong commitment to expanding the scope of Bangladesh’s Climate Change Strategy and Action Plan (BCCSAP).

The objective of the mid-term outcome evaluation is to assist and support UNDP Bangladesh in assessing the relevance, effectiveness, efficiency and sustainability of pertinent projects and programmes in respect to progressing towards the outcomes. Also, it aims to assess UNDP Bangladesh’s contribution towards achieving the country’s development targets. The evaluation also includes an assessment of the causal linkages (if any) and outputs which contribute to the achievement of the outcomes and the extent to which the planned outcomes have been achieved (or are likely to be by the end of 2016). It further assesses factors that facilitate and/or hinder progress in achieving outcomes, including the external environment and weaknesses in design, management and resources. Consideration has also been given to the fact that the evaluation results would become critical inputs for the alignment of UNDP’s new Strategic Plan (SP) 2014-2017[[2]](#footnote-2).

**1.2 SCOPE OF THE EVALUATION**

The scope of the mid-term outcome evaluation was specifically defined to encompass all programmes and project activities, with funding from all donor agencies and all executing modalities being implemented under the institutional lead and coordination of the Climate Change, Environment, and Disaster (CCED) Cluster of UNDP Bangladesh since 2012. While there have been 28 programmes and/or projects implemented under outcomes 3.1 and 3.2 during the 2012-16 CP cycle, this evaluation focused on 6 project interventions (Annex I) out of 8 *fully implemented* projects (6/8 = 75%) which contributed directly to achieving the stated outcomes. This part of the evaluation modality involved the project-specific results that supported achievement of the performance indicators, as they required an assessment of the design of the individual programme or project along with their actual progress in achievement, relevance, utility, effectiveness, efficiency, and sustainability. To ensure that all major thematic areas are covered, projects and programmes were selected which encompasses CCA, DRR, sustainable environment and low carbon energy related activities which ran from before and beyond 2012. Considering time constraints, fully implemented programmes could not be covered by the in-depth evaluation. The remaining 10 programmes/projects were in their early stages (mostly at the inception phase) and hence could not be included in the in-depth assessment process using evaluation criteria.

**1.3 ORGANIZATION OF THE EVALUATION AND METHODOLOGY**

* + 1. **Conceptual Considerations**

The conceptual framework of the outcome evaluation was conceived following UNEG Ethical Guidelines for outcome evaluation. These principles are articulated well in the various UN standards and manuals, and include the primary areas (with the evaluators’ interpretation of the various guidelines and principles) shown in Annex II.

**Resilience to Risks from Climate Change and Natural Disasters**

The UNDP CP Outcome 3.1 is defined as “by 2016, populations vulnerable to climate change and natural disaster have become more *resilient* to adapt to risks.” An earlier evaluability assessment has appropriately noted that while the perspectives of resilience to risks from both climate and natural disasters are relevant to outcome formulation, there is nominal agreement on how to define and measure resilience over time.[[3]](#footnote-3) As a broad guideline, the outcome evaluation adopted the UNDP’s definition of building resilience as a *“transformative process of strengthening the capacity of men, women, communities, institutions, and countries to anticipate, prevent, recover from and transform in the aftermath of shocks, stresses and change*”.[[4]](#footnote-4) However, the evaluators also added their own interpretations in order to better reflect the context of Bangladesh.

* + 1. **Evaluation Criteria and Questions**

As noted in the evaluation matrix (Annex III), the outcome evaluation is intended to address the following:

* Relevance of programme and project development, design (development and vulnerability reduction needs in Bangladesh in the designated sectors and linkages to policy and regulatory needs; alignment with UNDP’s CPD).
* Application of lessons learned.
* Evidence of actual progress towards achievement of outcomes.
* UNDP’s role in achievement of outcomes.
* Other external factors, if and where appropriate, affecting achievement of outcomes.
* Effectiveness in partnerships and in formulating partnership strategies.
* Performance measurement (baseline and performance indicators).
* Evidence of innovation.
* Management and economic efficiency (timeliness, value-for-money).
* Contributions to cross-cutting themes, with special emphasis on gender perspectives.
* Concepts and evidence of programme/project sustainability.
* Suggestions from stakeholders to be considered as possible recommendations from the MT outcome evaluation for achieving objectives upon completion of programmes/projects.

The UNDP Handbook on Planning, Monitoring and Evaluating for Development Results has been adopted to formulate the evaluation methodology, to assess the ***relevance, efficiency, effectiveness*** and ***sustainability*** of UNDP’s interventions regarding resilience of the vulnerable population to climate change and natural disasters, and to evaluate benefits from better natural resource management and access to low-carbon energy by the vulnerable population.

**A. Evaluation Questions**

*Outcome 3.1*

For Outcome 3.1 (“By 2016, populations vulnerable to climate change and natural disasters have become more resilient to adapt to risks”), two general questions were formulated and were investigated through reviewing and assessing documents, reports, notes, as well as through inquiries with the stakeholders, beneficiaries, and non-beneficiaries:

1. What have been transformative changes in the country since 2011?
2. To what extent are these changes due to UNDP’s interventions?

The specific questions regarding Outcome 3.1 were kept separate to identify attribution of each outcome. It was recognized that climate change manifests itself as continuous stresses as well as extreme environmental events (e.g. cyclones) and slow onset hazards (e.g. salinity intrusion) and it is often difficult to separate the risk from climate change and natural disasters. Therefore, the evaluation questions sought answers regarding resilience related to risks from climate change and natural disasters separately (where appropriate) as well as in an integrated manner.

The table below depicts the matrix used to guide the questions and lines of discussions with the selected programme/project participant/stakeholders groups, as they were encountered and engaged. In addition, participants/stakeholders were encouraged to add any other details that they felt would contribute to the outcome evaluation process.

|  |
| --- |
| **Table 1.1: Questions and Lines of Discussion with Participants/Stakeholders Regarding Outcome 3.1** |
| ***Relevance of UNDP's involvement and approach****:*   * To what extent are UNDP's key programmes/projects *relevant* to making vulnerable populations more resilient to the risks of climate change and natural disasters? |
| ***Effectiveness in contributing to the achievement of the outcome****:*   * Compared to 2011, are vulnerable populations now more resilient against climate change and natural disasters? * To what extent are these changes due to UNDP's interventions? |
| ***Efficiency in delivering outputs****:*   * To what extent were the relevant programme/project outputs delivered in time and in good quality? * To what extent did UNDP ensure value for money? * Has there been any duplication of efforts among UNDP’s own interventions and interventions delivered by other organizations or entities in contributing to the outcome? |
| ***Sustainability of the outcome****:*   * What indications are there that the outcome will be sustained after external funding ends? |

*Outcome 3.2*

For Outcome 3.2 (“by 2016, vulnerable populations benefit from better natural resource management and access to low-carbon energy”), two general questions were formulated and investigated through reviewing and assessing documents, reports, notes, as well as through inquiries with the stakeholders, beneficiaries, and non-beneficiaries:

1. How has the vulnerable population benefitted from / been impacted by better *natural resource management* since 2011?
2. How the vulnerable population benefitted from / been impacted by easier *access to low carbon energy* since 2011?
3. To what extent are these changes due to UNDP’s interventions?

The table below depicts the matrix used to guide the questions and lines of discussions with the selected programme/project participant/stakeholders groups, as they were approached and engaged. In addition, participants/stakeholders were empowered to add any other details that they felt would contribute to the outcome evaluation process.

|  |
| --- |
| **Table 1.2: Questions and Lines of Discussion with Participants/Stakeholders Regarding Outcome 3.2** |
| ***Relevance of UNDP's involvement and approach****:*   * To what extent are UNDP's key programmes/projects *relevant* to increasing benefits from better natural resource management and access to low carbon energy? |
| ***Effectiveness in contributing to the achievement of the outcome****:*   * Compared to 2011, to what extent do vulnerable populations now benefit from better natural resource management? * Since 2011, how have UNDP projects helped promote low carbon energy sources? * Since 2011, how have UNDP projects helped promote access to energy? * To what extent are these changes due to UNDP's interventions? |
| ***Efficiency in delivering outputs****:*   * To what extent were the relevant programme/project outputs delivered in time and in good quality? * To what extent did UNDP ensure value for money? * Has there been any duplication/overlap of efforts among UNDP’s own interventions and those of other organizations? |
| ***Sustainability of the outcome****:*   * What indications are there that the outcome will be sustained after external funding ends? |

The evaluation questions regarding specific project activities as well as their associated institutional and policy changes are illustrated in Annex III.

***B. Indicators***

The indicators selected in the logical framework of results-based outcome analysis, as illustrated in the Evaluation Matrix (Annex III), follow the SMART criteria (specific, measurable, achievable, relevant, time-bound), wherever possible. In cases where SMART criteria were not appropriate or unavailable, proxy criteria based on logical inferences were used.

As noted in the Evaluability Report[[5]](#footnote-5), the four distinct indicators shown in the Table below (Table 1.3) were emphasized by the evaluators to make evidence-based inferences and judgements:

|  |
| --- |
| **Table 1.3: Country Programme Outcome 3.1: By 2016, populations vulnerable to climate change and natural disaster have become more resilient to adapt to risks** |
| **Outcome Indicator 1**:*Environment, climate and disaster vulnerability index*  **Baseline**: 2011: 0% reduction**Target:** 2016: 20% reduction |
| **Outcome Indicator 2**:*Community Asset Score for disaster risk reduction*  **Baseline**: 2011: 90**Target**: 2016: 300 |
| **Country Programme Outcome 3.2: By2016,vulnerablepopulationsbenefitfrombetternaturalresourcemanagementandaccesstolowcarbonenergy** |
| **Outcome Indicator 1**:*Number of government policies, strategies or plans approved in support of sustainable management of natural resources*  **Baseline**: 18**Target**: 2016: 22 |
| **Outcome Indicator 2**:*Number of MW of energy generated from renewable sources*  **Baseline**: 2011: 71 MW **Target:** 2016: 800 MW |

**Source: UNDP Bangladesh, 2014.**

**1.3.3 Data Collection Methods and Analytical Approaches**

Sources of Data and Methods of Collection

The evaluation matrices were at the core of the data collection process and linked each of the criteria and related evaluation questions to data sources and data collection methods. This approach was followed to ensure a logical approach to using the evaluation criteria. The evaluation team used a multi-level (UNDP and donors, national, district, upazila, union level governments, NGOs, CSOs, rural beneficiaries and non-beneficiaries), mixed-method approach to collect data. The required data for this evaluation were procured chiefly from the following primary and secondary sources, using various data collection methods:

1. Data concerning national-level strategic plans (e.g. Sixth Five Year Plan), sectoral strategic plans, UNDP facilitated documents, UNDP Country Program Document, and other relevant reports and documents related to national strategic plans were procured to determine Bangladesh’s position, capacity and efforts in climate change adaptation, natural disasters risk reduction (DRR), improved and sustainable natural resources management, and access to low-carbon energy, gender equality to respond to global initiatives, processes and needs.
2. Stakeholders’ responses, guided by the evaluation matrices, were collected by organizing *Focus Group Discussions* with CCED cluster personnel, the Ministry of Disaster Management and Relief, the Planning Commission, the External Resource Division of the Ministry of Finance, the Ministry of Industry, and coastal village communities in four districts. Special emphasis was given to obtaining information on (a) their role in the ongoing transformational changes in both sectoral and inter-sectoral areas; (b) their perspectives on UNDP attribution in the relevant sectors, programs and projects; and (c) performance evaluation of UNDP projects on the ground.
3. A *Conversational Session* was organized on February 19, 2015 with donors, senior GoB officials, development partners including international and national NGOs and Civil Society Organizations working in climate change, natural disasters, natural resources management, and low carbon energy areas to procure data on policy, implementation, and advocacy issues and to capture and assess diverse modalities of development thoughts and practices.
4. A total of 15 *Key Informants* from the above stated stakeholders - including UNDP personnel, government department officials at the national, district and upazila levels, NGO and CSO representatives - were interviewed with a semi-structured questionnaire and evaluation matrices to collect data on sector specific expert opinion, experiential knowledge and lessons learned, and directives for broader development perspectives (Annex III).
5. *Direct observations* and *assessments* of the programme/project implementation outcomes were made through visits to national implementation partners and the four selected field sites in both coastal and urban areas. Following discussions with the CCED and RRMC clusters of UNDP, the evaluation team purposefully selected Kederbazard Adarsha Gram in Shyamnagar *Upazila* in Satkhira District, Baine Para Resilient Habitat under Sutarkhali Union of Dacope *Upazila* in Khulna District, Naltona Union of Barguna Sadar *Upazila* in Barguna District, and IKEMBI site at Dhamrai Upazila, Dhaka, representing diverse intervention modalities (i.e., ERF, CDMP II, coastal afforestation, and IKEMBI).
6. A total of eight FGDS were conducted. Two FGDs, one with men and women and another exclusively with women, were conducted in each selected site to generate overall as well as sex-disaggregated data and to capture perception and sense of ownership of the intervention by the local men and women. Local project managers and other staff were interviewed to *triangulate* the FGDs outcome as well as to capture local perspectives on implementation challenges and sustainability. Key Informants including local officials, local government representatives, and local NGOs in various field sites were interviewed face-to-face with a semi-structured questionnaire. *Life–histories* of individual beneficiaries in each field site were obtained. This combination of FDGs, Key Informant interviews, and life-history ‘case studies’ allowed data *triangulation* and *validation* that were collected from national level stakeholders, on relevance, effectiveness, efficiency and sustainability of the UNDP interventions.

The initial desk review (Annex V) and Inception Report preparation period was from 8 December 2014 to 4 January 2015. Meetings, consultations, and group discussions were conducted during three phases: i) 15 December 2014 to 4 January, 2015; ii) 9- 22 February, 2015, and 8- 31 May, 2015. Preliminary evaluation observations were presented to UNDP on 15 February, and a debriefing session was organized on 31 May 2015. The report was submitted to UNDP on 31 May, 2015. Annex IV depicts the evaluation schedule.

**SECTION 2**

**COUNTRY CONTEXT AND DEVELOPMENT CHALLENGES FOR CCED**

**2.1 SITUATION AND CONTEXT**

Bangladesh is currently ranked by the Maplecroft’s index[[6]](#footnote-6) as the most vulnerable country in the world to climate change. As a result of the effects of more than 2% growth rate per annum during 2003-2008 and more than 1.2% growth per annum during 2009-2014[[7]](#footnote-7)on a population base of 163 million and the increased frequency and severity of extreme weather events, the disaster and social vulnerability of the country’s population has increased. The findings of the Fifth Assessment Report of the IPCC suggested that the magnitude of sea level rise by the century’s end, even in a low-emissions scenario, implies considerably increased risk for the settlements, economy, culture, and ecosystems of coastal Bangladesh, particularly if combined with changes in cyclone and tidal surge frequency and intensity. This is because most of Bangladesh’s 147,570 sq. km territory consists of flat terrain, with 50% of the landmass lying only 10 m above sea level. The IPCC Report also claimed that the risk of urban and coastal flooding is highest in Bangladesh among South Asian nations. It observed that climate stress and shocks have begun to adversely affect coastal fishers’ livelihoods,[[8]](#footnote-8)and trigger and accelerate large-scale population out-migration, which is emerging as a major development challenge given the difficulty of adaptation to unfamiliar, congested urban environments.

Cyclones, floods, droughts, and heat stress adversely affect human safety and security, crop productivity, and infrastructure every year. The combined effects of an estimated 40 million people living in a state of poverty, the vulnerability of coastal areas to cyclones, and high population density of population often lead extreme natural events into catastrophic disasters, causing severe often lead to great loss of life and economic capacity during severe weather events. Subject to the influence of the monsoon, excessive rainfall - which usually takes place during four summer months (June till September) - and associated runoff often causes devastating floods.[[9]](#footnote-9) During 1990-2008, the country lost US 2.2 billion (1.8% of annual GDP) to the effects of natural disasters.[[10]](#footnote-10)The above mentioned geological, meteorological, and hydrological realities make Bangladesh a land highly prone to hazards and disasters. About 1.3 million ha of crop land has been delineated as highly flood-prone and about 5.1 million ha moderately flood-prone.[[11]](#footnote-11) Several studies have revealed coastal zone vulnerability to be ‘severe’ due to the combined effects of climate change, sea level rise, subsidence, changes in upstream river discharge, cyclones, and coastal embankment.[[12]](#footnote-12)The adverse effects of climate variability and change and natural disasters thus pose a major challenge to the prosperity and development of Bangladesh, particularly in the context of relevant components of MDGs.

The rural population of Bangladesh, particularly the poor, is highly dependent on access to natural resources (i.e., forests, land, wetlands, and water bodies) and their well-being. However, rampant encroachment and infringement upon natural resources are rapidly reducing the regeneration/rejuvenation potential of the remaining resource base. With increasing industrial activities and urbanization (the present rate is >3%), surface water system is facing severe pollution. This in turn is threatening the vital open water fishery. The ground water table is also being depleted at an alarming rate. While natural resource stocks (e.g. land and forests) are limited in the country, their declining per capita availability is posing serious developmental challenges. The extent of forest area is about 2.53 million ha[[13]](#footnote-13),which was reduced from 10% of the country’s total area in the 1980s to 6% by 2005[[14]](#footnote-14). Presently, the arable land area is decreasing at a rate of 1% per year, out of only total 8.5 million ha[[15]](#footnote-15). Bangladesh has one of the richest open-water fisheries in the world, producing more than 2.9 million metric tons per year (2009-2010); however, the fish stocks have been declining at an alarming rate due to overfishing, degradation and loss of fish, and water pollution - among other factors[[16]](#footnote-16),[[17]](#footnote-17).

Despite a significant improvement in regulatory regimes on NRM in recent years, the implementation of policies and regulations on the ground has remained very weak. Recognizing the importance of protecting natural resources from environmental pollution, overexploitation, and socioeconomic and demographic pressures, the Sixth FYP reaffirmed that the sustainability of natural resources is essential, and placed priority on this issue so that the poor and the vulnerable populations can continue to access these common property resources.

With industrial development and more than 6% GDP growth rate per year in the past decade, the use of commercial energy has been on the rise since the 1980s. Electricity is being generated primarily using natural gas, from domestic sources, although there has been a gradual shift in recent years towards imported liquid petroleum and coal. There is significant room for attaining a higher efficiency levels in lighting, since the majority of electric light is obtained with incandescent bulbs. It is worth noting, however, that more than 40% of Bangladesh’s population does not have access to power grid, and such inaccessibility is more acute in certain regions (e.g. the north-eastern and northern *haor* areas and the hilly areas of the Chittagong Hill Tracts in the southeast[[18]](#footnote-18). Access to energy is an important precondition for lifting people out of abject poverty and providing opportunities for learning and income generation. Increasing the percentage share of renewables and providing vulnerable and poor populations more access to low carbon energy is therefore highly relevant to both the protection of natural resources and economic and social development. Recognizing the above situation, the GoB’s pro-poor Climate Change Management Strategy (BCCSAP) of 2009 identified *“mitigation and low carbon development options and implementing these as the country’s economy grows over the coming decades and the demand for energy increases”* as one of the six pillars of the Plan.

These scenarios reinforce the need for appropriate planning and budgeting and the building of institutional capacity for implementing relevant, effective, efficient, and sustainable interventions that can respond to regional and site-specific challenges throughout Bangladesh, with local government and community uptake and ownership.

**2.2 NATIONAL POLICY AND STRATEGY CONTEXT**

The above situational analysis involving natural disasters, climate change (CC), natural resource management (NRM) and low carbon energy access and usages provides a snapshot of the prevailing challenges that are being confronted by the nation towards achieving resilience and progress through social and economic transformation. The Government of Bangladesh (GoB) has taken numerous policy steps on each of the stated four thematic areas, which are being complemented by UNDP and other development partners.

***2.2.1 Disaster Risk Reduction:*** Recognizing Bangladesh’s susceptibility to frequent environmental hazards, addressing the causes of hazards, primarily through structural interventions, has been amongst the top priority areas in national policy making. By the late 1960s, policy and programme interventions for building coastal embankments were implemented to reduce risks from tidal surges. Flood embankments were also constructed across floodplains to protect prime agricultural areas and urban centers throughout the 1970s and 1980s. Following the devastating 1987 and 1988 floods, a Flood Action Plan (FAP) was launched by the GoB in the early 1990s, with the aim of implementing numerous infrastructural projects and engineering-based DRR solutions for the water sector. Due to the potential for adverse social and environmental consequences, numerous civil society organizations strongly opposed such a narrow, sector-based approach to DRR.

Despite the lack of a disaster risk reduction (DRR)-specific statement, almost all the Five Year Plans (1 through to 6) and the poverty reduction strategy documents of GoB have given attention to DRR, specifically through the budget statements. In 1998, the GoB has set an institutional arrangement for DRR with particular emphasis on floods and cyclones, and pronounced the Standing Orders on Disaster (SOD, DMB, 1998). With the assistance of UNDP, the government launched the Comprehensive Disaster Management Programme (2004) with the intention of broaden the scope of the DM approach by taking policy actions to the ground level. This initiative triggered a ‘Paradigm Shift’ from post-disaster relief and recovery to pre-disaster preparedness and risk reduction, including early warning systems, relocation to safer ground prior to cyclones, reducing sensitivity to environmental hazards, rescue, and - if necessary - provisioning of relief and rehabilitation, which in turn strengthened resilience. Subsequently, the SOD was revised in 2010 (MOFDM, 2010) to redefine roles of various institutions at different stages of known and frequently occurring hazards, applicable to all levels of governance. In 2012, the GoB enacted the Disaster Management Act (MOL, 2012), which attempted to define the legal premises of all actions at all levels with a specific goal towards reducing environmental hazard-related risks and vulnerabilities.

***2.2.2 Adaptation to Climate Change:***  Due to its complexities and uncertainties, policies regarding climate change are difficult to formulate[[19]](#footnote-19). In the UNFCCC-led climate negotiations, GoB therefore pronounced its commitment primarily to adaptation. In 2005, with the assistance of UNDP, the National Adaptation Programme for Action (NAPA), which was the first national policy document on CCA prepared,[[20]](#footnote-20) provided an account of the vulnerability of various important sectors and identified 15 pilot actions/areas/projects for immediate and urgent financing. Close scrutiny of relevant sectoral policies in connection with CCA revealed that most of the policies having strong linkages with CCA have specific elements to accommodate *climate variability*.[[21]](#footnote-21) Only two policies - namely, the Coastal Zone Policy and the Agricultural Policy - have specifically attempted to address climate change mitigation and adaptation issues. Several NGOs with rich community level experience in dealing with disasters contributed to prescribe feasible actions for CCA. For example, a CARE Bangladesh project (i.e. reduced vulnerability to CC) developed globally known “Community-Based Adaptation” (CBA) approach. In 2009, the Ministry of the Environment and Forests (MOEF) -- which is the focal point of the GoB on climate change – formulated the BCCSAP to institutionalize the policy gap on climate change and offer a programmatic and institutional mosaic in order to address climate change in Bangladesh. It intended to address both CCA and low carbon development (LCD) issues. Subsequently, the GoB established a Climate Change Cell (CCC) within the Department of Environment (DoE). The CCC was transformed into the Climate Change Trust to provide technical support towards managing the financing windows.

***2.2.3 Natural Resources Management:*** The issues of environmental management, from a local to global scale, have been consolidated within the GoB system since the 1990s. The Environmental Management Policy and Action Plan was developed in 1992 to promote conservation of natural resources and arrest their degradation. By actively participating in the Earth Summit in 1992, the GoB signed the Earth Charter and the Agenda 21, the three multi-lateral environmental Conventions on Climate Change, Biodiversity and Desertification, and subsequently ratified them all. The GoB also became a signatory of the Montreal Protocol and Ramsar Convention. As a follow up to all these, the national policy domain has been shifting towards protection of ecological resources, programme development on conservation of wildlife and biodiversity, and the designation of Environmentally Critical Areas (ECA). The GoB has recently pronounced its strategy towards reforestation under the REDD opportunity. In order to arrest air quality degradation, taller smoke stacks have been made mandatory in brick fields. Burning wood is also prohibited by law in the brickmaking industry. In 1997, the GoB enacted and began enforcing environmental standards towards promoting conservation of nature. It developed guidelines for setting up industries and required Environmental Impact Assessment prior to setting up polluting industries. Effluent Treatment Plants have been made mandatory for polluting industries. However, implementation of these policies and regulations has remained weak and ineffective in many cases.[[22]](#footnote-22)

***2.2.4 Low Carbon Energy:*** Considering the need for economic growth and energy demand and domestic and foreign sources of supply, the GoB decided to promote the use of natural gas as a primary source of fuel. In recent years, the GoB has also placed emphasis on renewable energy sources (e.g. solar and wind) as well as obtaining energy from recycling of wastes (e.g. urban refuse and animal wastes, bio-gas from manure). In the UNFCCC negotiations, the GoB accepted the global accord towards reducing carbon emissions and committed to playing its due role in achieving ‘Intended Nationally Determined Contribution (INDC)’ to reducing carbon, and endorsed Warsaw outcomes under UNFCCC regarding emission reduction. Using regulatory instruments, in 2014 the GoB adopted a green tax and relaxed tax regime on the import of higher efficiency hybrid cars. A policy for installing solar panels to supplement 5% of the estimated power demand of high rise buildings is also being implemented by the GoB. In sum, the future trend of an ever-increasing demand for energy due to urbanization and industrialization and the diminishing supply of natural gas from domestic sources is producing both challenges and opportunities for a “paradigm shift” in policy approach towards low carbon and renewable energy sources.

**2.3 CURRENT STATUS AS BECOMING A MORE *RESILIENT* AND *GREENER* NATION:**

**A TRANSFORMATION ON THE WAY**

The noticeable progress that Bangladesh has achieved in the human development, economic growth, and environment sectors in recent decades. These reflect serious efforts made by the successive successful governments, the private sector and civil society organizations to tackle poverty, environment and other sustainable development challenges. The results positioned Bangladesh on course to potentially attain most of the 8 Millennium Development Goals (MDG). Despite facing some challenges in some target areas, the strong overall economic and social development progress achieved has generated the momentum to help Bangladesh attain Middle-Income Country status by 2021.

However, the country is presently suspected of being off-track in meeting MDG 7 (environment) with sub-par performance due to challenges stemming from deforestation, rapid growth of urban slums, rapid loss of biodiversity, and incremental increase in water and air pollution. Bangladesh’s latest MDG report noted several key challenges including efficient use of forest resources, development of water-efficient agricultural practices, and the establishment of appropriate policies and regulatory frameworks. These threats to environmental health and natural resource sustainability, compounded by population pressure and institutional capacity constraints, can undermine its development potential as well as pose a reversal risk to hard-earned developmental gains.[[23]](#footnote-23) CCA and DRR, degradation of environmental health, and limited access to low-carbon energy are therefore still critical areas of concern for Bangladesh’s developmental challenges.

This mid-term CPD 2012-14 Outcome evaluation covers a very short duration – only 3 years – of UNDP CCED Cluster’s activities, which cannot be assessed in isolation without understanding the ‘big picture’ of Bangladesh’s development discourse. Since the liberalization of the global economy starting in the 1990s, Bangladesh’s population and society has undergone an unprecedented economic, social, and cultural transformation, within which certain CCED problems and issues exhibited a remarkable ‘paradigm shift’ - for example, from post-disaster response and relief to pre-disaster risk reduction and early recovery provisions. Similar changes are underway in several other CCED areas, which are evidently generating more momentum to build a much more robust and resilient society to future uncertainties in the global economy, climate change and environmental impacts, sustainability of vital natural resources (e.g. surface and ground water, endangered species), and energy security. While the above stated changes provide the backdrop against which the relevance and effectiveness of the CCED activities are assessed in this report, they also underpin the new policy realities and new development challenges facing Bangladesh. The broader perspectives of transformational changes in Bangladesh’s economy and society at large can be highlighted under the following three themes:

**A miraculous success in economic and social development:** Bangladesh has achieved rapid and spectacular improvements in many economic and social development indicators during the last two decades. Within South Asia, real GDP growth estimates have revealed that Bangladesh grew by more than 6% per annum, which has surpassed - with the exception of Sri Lanka - all other South Asian countries during 2011-2015 (Annex VI and VII.a). World economic growth has been within the range of 3-3.6% during this time period. For the purpose this outcome evaluation, a comparative analysis of the major economic indicators, including GDP, per capita GDP, investment (public and private), savings, human poverty index (HPI), human development indices and school enrolment) for Bangladesh between 2000-2010 and 2010-2014 (the evaluation period being 2012-14) was performed. Though the per-capita GDP growth has slowed during 2010-14 relative to 2000-10, the domestic savings rate (as share of GDP) has been rising in recent years – from 20.1% of GDP in 2010 to 27.1% in 2014 (Annexes VI and VII.a). Similarly, the overall investment growth rate increased from 11.7% to 15.7% in 2014; public investment growth rate during 2000-10 was 6.7% which has increased to 22.8% during 2010-14. The national head count ratio of poverty of 56.7% has been reduced by 25.2 % point in 2015, indicative of a rapid decline in poverty.

Since the early 1990s, infant and child mortality rates have declined significantly, population growth rate slowed significantly, and the gender disparity in primary and secondary school enrolment narrowed. Bangladesh has been labelled as a ‘development puzzle’ by development analysts[[24]](#footnote-24)because these social development achievements were made despite the country’s desperate initial conditions, widespread poverty, and weaker governance performance. Bangladesh’s public spending on health and education as a percentage of GDP has remained lower than other comparable low income countries[[25]](#footnote-25).

**Population becoming more resilient to disaster vulnerability and risk**:

Bangladesh is one of the most vulnerable nations on earth to natural disasters, particularly cyclones, storm surges, and floods. South and Southeast Asian regional longitudinal data confirms this vulnerability (Table 2.1). The total number of people who were affected by disasters during 1994-2003 surpassed 50 million; during 2004-2013, the number was more than 76 million, revealing that Bangladesh still faces serious developmental challenges from disaster risk and vulnerability (Annex VII.b).

In the past (i.e. 1970, 1991), the country experienced loss of lives in hundreds of thousands (AnnexVII.b), and such memories loom large in the minds of those who survived. Many expected similar loss of life and assets when Cyclone Sidr struck in 2007. The multi-donor driven Comprehensive Disaster Management Programme (CDMP), through the then Ministry of Food and Disaster Management, was being implement along the coastal Bangladesh since 2006. The interventions not only functioned as a catalyst for the transition from reactive response and relief to pre-disaster preparedness and risk reduction, but it also made a significant difference in saving lives, livelihoods and assets (unfortunately, more than three thousand people still died by the impact of Cyclone Sidr in 2007).

Today, in addition to pre-disaster preparedness, an early recovery facility is in place with the assistance of UNDP and other partners so that humanitarian assistance can be delivered with minimal delay to the disaster victims, and which supports their resiliency against all odds. Today, disaster risk reduction and climate change adaptation measures are being linked with livelihood improvement through linking family core shelter building with poultry, vegetable gardening, cow rearing (Resilient Habitat building Model), as well as linking Forest, Fish and Fruit production (Triple F Model). These are possible elements for enhancing, with new tools and ideas, this century-old society’s resilience and adaptive capacity to risks from global climate and environmental changes. Successive governmental regimes, along with UNDP and other donors, have shown their commitment to helping Bangladesh’s population and society to transform their vulnerability and become more resilient.

**Table 2.1: Major cyclones that hit the Bangladesh coast**

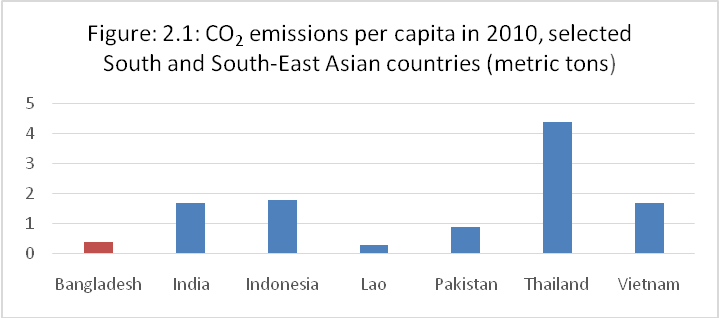
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | | **Maximum Wind speed (km/hr)** | **Storm Surge height**  **(meters)** | **Death Toll** |
| **11 May** | 1965 | 161 | 3.7-7.6 | 19,279 |
| **15 December** | 1965 | 217 | 2.4-3.6 | 873 |
| **01 October** | 1966 | 139 | 6.0-6.7 | 850 |
| **12 November** | 1970 | 224 | 6.0-10.0 | 300,000 |
| **25 May** | 1985 | 154 | 3.0-4.6 | 11,069 |
| **29 April** | 1991 | 225 | 6.0-7.6 | 138,882 |
| **19 May** | 1997 | 232 | 3.1-4.6 | 155 |
| **15 November (SIDR)** | 2007 | 223 | 4.5-5.5 | 3363 |
| **25 May (AILA)** | 2009 | 92 | 3.0-3.5 | 190 |
| **16 May (MOHASEN)** | 2013 | 85 | 1.0-1.5 | 17 |

Source: National Plan for Disaster Management, 2011-2015.

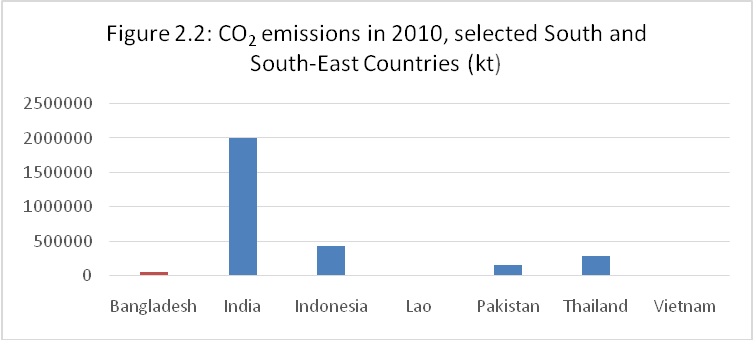
**Steps toward a green economy and development are on the way:**

As stated above, Bangladesh’s economy has grown by more than 5% in recent decades (more than 6% in recent years), with much promise for poverty reduction and sustainable development. Recognizing that the private sector is one of the key drivers behind such growth, the GoB policy direction is increasingly turning to for environmental-friendly paths to generate economic surplus and nurture a new, innovative model of social and economic development.[[26]](#footnote-26)The GoB also has determined that without appropriate regulatory instruments and their effective implementation, environment and natural resource sustainability cannot be ensured. Therefore, since the launching of the concept of ‘green economy’ in the Rio+20 document “The Future We Want”, which provides a list of green economy policies in the context of sustainable development and poverty eradication, the GoB pursued numerous policies that coincide with green economy strategies and policies. These aim at, for examples, promoting productive activities that contribute to eradication of poverty, improving the livelihoods and empowerment of the poor and vulnerable groups, enhancing the welfare of women, children, persons with disabilities, and encouraging existing and new partnerships including public private partnerships to mobilize financing for sustainable development.

One of the core elements of the green economy is the adoption of a policy of energy transition from non-renewables to renewable energy sources to mitigate GHG emissions. From a South and Southeast Asian regional perspective, Bangladesh’s per capita CO2 emissions are relatively low (0.4 Mt per person/year [2010][[27]](#footnote-27)). However, Bangladesh is making headway towards reducing its CO2 emissions through opting for energy efficiency and generation of energy from renewable sources such as solar power. Currently, about 3,000,000 solar home systems exist in rural areas, with 40,000 to 50,000systems being added on average every month. The biggest project supporting this initiative, the WB’s REREDII programme, started in 2012 with the overall expectation of delivering 550,000 SHS. Worldwide, this is one of the most successful private sector provided off-grid electrification efforts, and offers numerous interesting lessons that can be transferred to other developing countries.



Sources: - CO2 emissions: http://data.worldbank.org/indicator/EN.ATM.CO2E.PC



Sources: - CO2 emissions: http://data.worldbank.org/indicator/EN.ATM.CO2E.PC

**SECTION 3**

**UNDP RESPONSES AND STRATEGIES**

**3.1 THE UNDP COUNTRY PROGRAMME FOR BANGLADESH 2012-2016**

The partnership between the United Nations and Bangladesh dates back to the country’s independence in 1971; since then, UNDP has been supporting Bangladesh’s national development efforts as a trusting and dependable partner. In the past decade, UNDP’s strategic alignments with the country priorities and its positive contributions to the achievement of transformational changes have been noted in several quarters[[28]](#footnote-28). One such areas where transformational changes occurred is in disaster management, “where [UNDP] policy advice on the national disaster framework and support for development of early warning systems resulted in a paradigm shift from emergency response to risk reduction, and the mainstreaming of disaster risk reduction in all line agencies”[[29]](#footnote-29).

Building on this recognition, the UNDP Bangladesh **Country Programme** (CP)[[30]](#footnote-30)2012-2016 was formulated to respond to the Government of Bangladesh’s development priorities and vision of attaining the status of a middle-income country by 2021, as stated in the Outline Perspective Plan 2010-2021 and ongoing Sixth FYP (2011-2015). UNDP developed its programme within the framework of the UNDAF, linking its outcomes with the ones of UNDAF (Annex VIII). Three key areas for intervention were identified in the CPD 2012-16: i) democratic governance and human rights, ii) pro-poor growth with equality, and iii) climate change, the environment, disaster risk reduction and response (CCED). Country Programme also included gender equality and women’s advancement as priority thematic areas, revealing UNDP Bangladesh’s strong commitment to expanding the scale of adaptation and mitigation efforts conforming to Bangladesh’s Climate Change Strategy and Action Plan (BCCSAP).

Because UNDP programmes are usually designed to remain flexible to respond to emerging challenges, changes in the context of country demand, and global changes, the interventions evolved over several years. As noted in Section 1, the CPD 2012-16 formulated two specific outcomes (Outcome 3.1 and Outcome 3.2) in the CCED areas. The programme to achieve these UNDAF/CPD outcomes is centered on the CCED Cluster of UNDP Bangladesh, and for the period being assessed (2012-14) comprises 28initiatives of which 8 are ongoing (6 of which were examined in-depth by the evaluation team) (Annex I). Although only 6 initiatives were undertaken under outcome 3.1 relative to 22 initiatives under outcome 3.2, due to the significance in the country context more than 80% of the budget was allocated to projects under Outcome 3.1. The overall mandate of the CCED Cluster encompasses a wide range of thematic areas including enhancing climate change adaptation capacity among vulnerable populations, reduction of disaster risk and development of an early recovery mechanism, mainstreaming the poverty-environment-climate nexus, implementing innovative solutions for meeting challenges posed by climate change, increasing variability and threats to natural resources from degrading biodiversity, environmental pollution and deteriorating environmental health, designing and implementing renewable and efficient energy, and related advocacy.

**3.2 CURRENT UNDP CLIMATE CHANGE, ENVIRONMENT, DISASTER RISK REDUCTION AND REPONSE PROGRAMMES**

The current CCED programmes are generally aligned with UNDAF/CPD 2012-2016 outcomes. The assessment of the UNDP strategies and relevant interventions is therefore presented below following the CPD Outcome structure.

***3.2.1 Climate Change, Environment, and Natural Disasters***

**UNDP strategy**

Recognizing that climate change, environmental protection and disaster risk reduction are critical areas of concern in the CPD, 2012-16, UNDP’s vision was to expand on wider adaptation and mitigation efforts that are also stipulated in the BCCSAP. Through the broader development lens, UNDP emphasized enhancing resilience of vulnerable communities and institutions to adapt to climate and disaster risks, and building further capacity of the GoB. The focused areas were to mainstream the climate-environment-poverty nexus into policy and planning frameworks across ministries, while strengthening community-based risk reduction and adaptation capacities. While changes in the frequency and intensity of various types of natural disasters, such as floods, cyclones and pests is often causally linked with climate change, it is difficult to separate the perspectives of resilience to risks from climate change and natural disasters. Instead of engaging with the conceptual complexities of climate change and natural disaster linkages, UNDP initiatives have appropriately undertaken an *integrative* CC effects-change in natural disaster patterns approach, which is reflected in the identification of CPD thematic areas and the formulation of outcomes.

In the above backdrop and context, the UNDP country office, by building upon the experience and success of CDMP I in launching the ‘paradigm shift’ in approaches from post-disaster relief and rehabilitation to comprehensive disaster management (prevention, mitigation, preparedness, response, recovery and development), with active participation of DFID, EU, Norway, AusAid, and SIDA, UNDP led the formulation of the CDMP II project proposal. In 2010, the Government of Bangladesh signed an agreement with UNDP and launched the CDMP II project. Following the devastating socioeconomic loss from the impact of Cyclone Sidr in 2007 and Cyclone Aila in 2009, and severe flood affecting 46 districts in 2007, the conceptualization of comprehensive disaster management was required to broaden its scope and adopt a multi-hazard approach to disasters and to shift from disaster event management to risk reduction. The foundation for engaging local governmental and non-government agencies, and other local stakeholders in pre and post-disaster interventions was strongly laid out by the 1997 Standing Order. CDMP II was envisioned within the leadership of UNDP to materialize the Second Tier of a ‘paradigm shift’ in disaster management in Bangladesh.

In the face of the emerging global realities of humanitarian and recovery assistance, UNDP Bangladesh has become a ‘dependable last resort’ for the GoB, donors, and development partners. Relying on the successful coordination and delivery of ‘first phase’ (size of $32 million) resources through the Disaster Relief and Response Facility (DRRF), and with the introduction of the ER concept of adopting the ‘building back better’ through the ‘second phase’, following Cyclone Sidr, a Third Phase was launched under the banner of Early Recovery Facility (ERF) to focus more on policy and programmatic support for the GoB, in addition to mobilizing and delivering early recovery interventions. In partnership with SDC, AusAid, and BCPR, UNDP Bangladesh intended to promote the adoption of early recovery planning so that development programmes can minimize the gap between the end of relief and start of longer-term recovery. This initiative was launched in February 2011 and implemented throughout the 2011-15 period.

**Interventions**

The Evaluators found two broad categories of project interventions towards CDP Outcome 3.1, which support the population’s resiliency to adapt to climate and natural disaster risks:

1. institutionalizing comprehensive disaster management, risk reduction, early recovery from disasters, and climate change adaptation at national, sub-national and local community levels, and promoting a coupled DRR and CCA approach; and
2. mainstreaming the poverty-environment-climate nexus in the planning and budgeting system.

***Key Milestones:***

*1. GoB revised DPP/*

*TAPP*

*2. Climate Fiscal*

*Framework*

***Key Milestones:***

*LDCF supported ‘integrating community based adaptation into afforestation and reforestation programmes’ by up-scaling and replicating lessons from CBA through coastal afforestation project.*

***Key Milestones:***

*Effective Humanitarian architecture adopted and in operation by stakeholders*

***Key Milestones:***

*1. Climate & Disaster*

*Vulnerability Index*

*2. Resilience Framework*

*3. Knowledge products*

**Ongoing Projects:**

1. CDMP

2. PECM

3. Coastal

Afforestation

**Ongoing Projects:**

1. CDMP

2. PECM

3. Community-Based

Coastal Afforestation

**Ongoing Projects:**

1. Early Recovery Facility

2. CDMP

**Ongoing Projects:**

1. PECM

2. CDMP

3. Early Recovery Facility

**Country Programme: DRR - CCA**

**Outcome 1: Vulnerable Populations are Resilient to Adaptwith the Disaster and ClimateRisk**

**Output 1.1:**

**DRR-CCA integrated into sectoral policies**

**Output 1.2:**

**Community have greater capacity on DRR-CCA**

**Output 1.3:**

**Capacity enhanced to respond emergencies & early recovery**

**Output 1.3:**

**Access to knowledge for decision making**

Source: UNDP CCED Cluster 2014

Building and enhancing community resilience for adapting to climate and natural disaster risks, through institutionalizing climate and disaster risk reduction into the national development planning, is the largest thematic area in the UNDP CCED Cluster budgetary allocation (Annex I). Within this area, interventions through projects include sub-areas of CDMP –Phase II, and ERF, and PECM. CDMP II was built upon the foundations of an earlier phase of a highly successful programme for establishing a national disaster management framework.

By aiming to further institutionalize DRR, climate risk, and CCA across GoB ministries and departments to mainstream the conception, planning and budgeting, the UNDP-initiated CDMP II interventions demonstrated a ‘thought leadership’ in addressing coupled or linked climate-change and disaster risk reduction issues. CDMP II encompassed both structural and non-structural interventions in reducing risks to both rural and urban populations, trained volunteers to respond fast-onset hazards such as earthquakes, developed pilot contingency plans for earthquakes, and developed CCA and DRR at the household level in rural communities by integrating with livelihood reconstruction and enhancement interventions. In sum, it has institutionalized and mainstreamed DRR and some aspects of CCA within the government machinery, and laid the groundwork for DM and CCA through community and stakeholders’ participation and ownership.

In order to complement CDMP II and address the full cycle of disaster management, interventions through the ERF were designed to establish a coordinated early recovery mechanism, capacity building of GoB’s disaster management personnel, and networking of DM volunteers ready to respond during the onset of disasters. In light of GoB’s commitment to achieving the MDGs in the following areas the PECM interventions were formulated: poverty reduction and environmental sustainability, improve natural resource management and environment outcomes for the poor, mainstreaming pro-poor and gender sensitive environment and climate change issues into the design and implementation of national development processes, and budget and economic decision-making for the PCE areas. The technical tools and guidelines are therefore being developed and institutionalized to direct public sector investment towards CC responsive and effective in reducing the vulnerability of citizens at risk. The PECM interventions are providing technical inputs through the General Economic Division (GED) of the Planning Commission to incorporate the PEC nexus approach into the Seventh FYP, 2016-2021.

***3.2.2 Natural Resources Management and Access to Low Carbon Energy***

**UNDP strategy**

In light of the country priorities outlined in Section 2, Outcome 3.2 of the Country Programme has as its objective that the poor and vulnerable population benefit from better management of natural resources and access to low carbon energy. UNDP planned to “focus on building climate and environmental governance capacity at the national and local levels, specifically in the area of policy compliance and the implementation of conservation plans and regulations to protect the natural resource base of the poor while at the same time supporting Bangladesh’s policy objective to promote low-emission growth, the spread of green technologies, and affordable energy access for the poor”[[31]](#footnote-31). UNDP formulated two particular priorities under Outcome 3.2:

i) providing afforestation, as a component of NRM strategy, in order to enhance the resilience of the local, coastal communities who are most vulnerable to cyclones, storm and tidal surges, sea level rise, intrusion of salinity – which are associated with CC and extreme natural events (either as coupled or independent phenomenon); and ii) low carbon energy access for disadvantaged populations. It was envisioned that, by 2016, as result of UNDP’s interventions and outputs, “the poor and vulnerable [would] benefit from better management of natural resources and access to low carbon energy”[[32]](#footnote-32).

Under this outcome, UNDP intended to focus on building climate and environmental governance capacity at the national and local levels, specifically on policy compliance and the implementation of conservation plans and regulations to protect the natural resource base of the poor, including biodiversity, while at the same time supporting Bangladesh’s policy objective to promote low emission growth, the spread of green technologies, and affordable energy access for the poor.

Adopting an overarching sustainable development lens, in the recent past UNDP Bangladesh focused on sensitization and building awareness of conservation needs, and capacity building at all levels – local, sub-national and national – with particular emphasis on empowering the marginalized and the vulnerable population. Under the rubric of ‘environmental management’, NRM-related strategies were formulated with an intention not only to improve their better access to natural resources but also to build their capacity in protecting and preserving these resources (i.e. by banning fishing during spawning season). In this regard, several components of the Sustainable Environment Management Programme (SEMP) laid the foundation of conceptualizing poverty-environment linkages and the need for specific attention to vulnerable population in intervention design[[33]](#footnote-33).The effects of IUCN, USAID, UNDP and other development partners’ strategy and sensitization work highlighting the significance of biodiversity and conservation were reflected in a number of national policy changes in this area. For example, in 1995, GoB declared 20 protected areas and 12 Ecologically Critical Areas to provide special protection for biodiversity and cultural heritage. UNDP supported Coastal and Wetland Biodiversity Management Programme (CWBMP) in assisting marginal population, which has been largely dependent on degrading natural resources, to transform into stewards protecting natural resources.

**Interventions**

The CCED Cluster portfolio under Outcome 3.2 consists of several distinct groups. A number of projects focus on the management of natural resources (REDD+ Roadmap,CBAFF, Integrating CBA into Afforestation and Reforestation Programmes). Another set of projects focuses on environmental governance and policy (SEGP, Expanding PAs, National Capacity Development for Rio Conventions, UNFCCC TNC, PECM). Three projects focus on ODS phase out, and another three projects are active in the sustainable energy field (BRESL, IKEBMI, SREPGen). An internal project initiation effort focuses on the development of a Green Development Programme for Bangladesh. For ODS, a number of opportunities were captured in these projects. However, there are a number of other multilateral environmental agreements, some with higher relevance for the areas of NRM and governance that have not received much attention from UNDP in this portfolio.

During the current Country Programme period, aligning with the BCCSAP, and the Coastal Development Strategy and Coastal Development Policy, UNDP appropriately continued to keep its focus on *local community capacity building*. For example, the CBACC-CF project is supporting GoB’s policy needs[[34]](#footnote-34)and developmental priorities in areas of climate change resilience, livelihoods adaptation and storm surge risk reduction, as well as UNDP policies and priorities of global initiatives.

**Ongoing Projects:**

1. Climate change adaptation through coastal afforestation

**Ongoing Projects:**

1. PECM
2. SLMP
3. BRESL

**Ongoing Projects:**

1. Brick Kiln
2. MDI
3. ODS VI
4. NOPP
5. BGDP

**Ongoing Projects:**

1. Development of sustainable Renewable energy generation

**Country Programme: Environment, NRM& Low Carbon Energy**

**Outcome 2: By 2016, vulnerable populations benefit from natural resource management (NRM); environmental governance and low- emission green development**

***Output 2.1: Communities and local and national authorities are better able to conserve biodiversity and manage natural resources in a pro-poor and sustainable manner***

***Output.2.2: Relevant institutions have greater capacity to implement existing environment policies, plans and budgets, integrating considerations of PEC change interfaces***

***Output 2.3: Pro-poor Plans, strategies & partnership mechanism are in place to implement low emission green growth with better access to CFM***

***Output.2.4: On-grid and pro-poor off-grid clean energy technologies promoted***

***Key Milestones:***

*SREDA established & operational to serve the purpose of renewable energy for all*

***Key Milestones:***

*1. Scaled up and mainstreamed into Government’s Coastal Afforestation Project – 4 to 9 Districts*

***Key Milestones:***

*Climate Fiscal Framework in the National Financing & Budgeting System*

***Key Milestones:***

*100% Compliance to Montreal Protocol*

Source: UNDP CCED Cluster 2014

In recent decades, UNDP significantly assisted Bangladesh’s commitment and efforts in attaining MDG’s 1,2,3 and 7 by providing technical assistance to conduct appropriate research, prepare appropriate documents, and formulate policies for the purpose of compliance. For example, during the 2007 Bali COPS negotiation, UNDP was a key partner of the GoB in preparing position and policy papers. Also, in compliance with the Montreal Protocol and the Vienna Convention on Reduction of ODSs, UNDP interventions were a key to Bangladesh’s success in meeting development targets. The recent UNDP Bangladesh strategy focused more on improving *energy efficiency* in relation to climate change mitigation and pro-poor economic growth efforts. For example, in line with GoB’s Energy Strategy in the Sixth FYP, 2011-15, which identified introduction of a labeling system with a view to ensuring the use of energy efficient equipment, UNDP initiated the Barrier Removal for Energy Standards and Labelling (BRESL) intervention theme, with a particular focus on achieving greater energy efficiency through the application of appliance standards.

Recognizing that brick making is one of the largest stationary sources of GHG emissions, with 8000 kilns producing 6.4 million tons[[35]](#footnote-35) of CO2 annually, the *Improving Kiln Efficiency in the Brick Making Industry (IKEBMI)* initiative is attempting to contribute to the reduction of GHG emissions through the adoption of modern, energy-efficient kilns. The vision is that a successful implementation of the demonstration energy efficient kilns will result in a direct cumulative energy saving of 15,408 TJ or 604 ktons[[36]](#footnote-36) coal by the end of the project and 1,464 ktons CO2 cumulative direct emissions during the expected 15-year service life of the energy efficient kilns. Similarly, because standardizing and labelling energy efficient electrical appliances returns power (and money) back to the consumers, an initiative (the BRESL project) was launched to achieve greater energy efficiency through the application of appliance standards. This initiative has been a constituent part an Asian regional initiative to accelerate the adoption and implementation of energy standards and labels in the continent, and to materialize energy savings from the use of energy efficient appliances/equipment. This initiative aimed for a 10% reduction in total residential and commercial energy use during peak hours by 2030, and thus contributing to more environmentally sustainable and economically efficient development discourse.

The UNDP CCED portfolio can learn from the ongoing lessons to fulfil its mandate to promote sustainability, CC mitigation through increasing renewable energy sources, and capacity enhancement of marginalized, disadvantaged people. It is a fact that the programme is currently not reaching the poorest of the poor, but several donor agencies (at least WB, GIZ and IFC) are increasingly focusing on this segment as well. Therefore, while the need to provide access to low-carbon energy is a very important field of activity and was highly relevant in 2011, it has since lost significance due to rapid developments in the field. A number of potential gaps in the energy area and recommendations for UNDP on how to address these gaps have been discussed in Annex IX.

The evaluation team’s assessment of the CCED portfolio identified two major weaknesses in coherence and thematic area coverage. I) In the face of rapid urbanization, industrialization and transformation of the rural and urban land and waterscapes, the environmental protection through prevention and control of industrial discharge, agricultural run-off with nutrient overload (especially in the wetland areas), CCED strategies and interventions to improve environmental health through better environmental governance are by and large missing. Such a country-wide weakness in environmental protection is also reflected in the possible failure of Bangladesh in meeting MDG 7; ii) The cross-cutting approach and strategy to assist the advancement of women is not providing the necessary ‘stimulus’ to make a transformational change in the areas of poverty-reduction, improvement of environmental governance and environmental health, and conservation of biodiversity. A dedicated women-focused approach with CCED Cluster should be explored to address this weakness.

Overall, NRM and energy are two very large areas with significant challenges on many levels. Covering all areas with limited resources and on a relatively short timeframe of 5 years may not be feasible. In some areas (like renewable energy access), the overall speed of development in Bangladesh is very fast - indeed, faster than the UNDP project cycle. Therefore coverage of the portfolio needs to be considered in the light of the need for UNDP to focus on those areas that are not sufficiently covered and where UNDP’s strengths and assets built up over the years can be leveraged to the greatest impact. Relevant recommendations are presented under sub-section 5.3.

**SECTION 4**

**CONTRIBUTIONS TO RESULTS – FINDINGS ON OUTCOMES**

Section 4 summarizes the findings of the evaluation with respect to the achievements of the country programme. In sub-section 4.1, UNDP’s strategy and actions to support Bangladesh’s national efforts are analyzed for each defined outcome so that the background and drivers can easily be identified. These inferences were drawn from the contextual analysis (Section 2), evaluation of contributions of CCED Cluster initiated programmes, and project outputs contributions. For each outcome, factors were identified and analyzed to explain the extent of achievement, level and quality of performance, and reasons for shortcomings.

The focus of sub-section 4.2 is the contribution of UNDP-initiated interventions to the programme outcomes. In order to provide a basis and evidence for inferences made in sub-section 4.1 (contributions to outcome level), an assessment of UNDP initiated projects’ outputs and performance - focusing on efficiency and cost-effectiveness of specific project components, using evaluation criteria, is provided in sub-section 4.2. Several ‘case studies’ serve to illustrate the Value for Money (VfM) of 4 specific project components (one comparative analysis and three stand-alone cases) and are included in boxes throughout Section 4, highlighting in-depth economic analysis for assessing efficiency of project component inputs (funds, human resources).

**4.1 CCED CLUSTER CONTRIBUTIONS TO COUNTRY PROGRAMME OUTCOMES – THEORY OF CHANGE**

**AND SYNERGIC EFFECTS**

The GoB’s vision, as highlighted in the 2009 Climate Change Strategy and Action Plan (BCCSAP), is to eradicate poverty and achieve economic and social well-being for all citizens of the country. To this end the BCCSAF will pursue a pro-poor Climate Change Management Strategy, which prioritizes adaptation and DRR as well as low-carbon development, mitigation of CC impact, technology transfer, and the mobilization of provisions for adequate finance. In this mid-term evaluation of UNDP CCED Cluster programming, **it is critical not to limit analysis only to specific project interventions but to also examine the causal links and synergies between all activities and interventions in order to understand the overall impact of intervention, which are more than the sum of the project interventions and outputs**.

The evaluation of the current status of CPD 2012-16 Outcome 3.1 and Outcome 3.2 is by necessity based on the achievements of specific project intervention, with appropriate measurable indicators noted in the evaluation matrices (Annex III).These include the analysis of the causal link of interventions and activities with outcomes and impacts, and qualitative and inferential analysis of policy and institutional level interventions – by bridging national and international communities – that generated national level outcomes.

**4.1.1 CLIMATE CHANGE AND NATURAL DISASTERS**

OUTCOME 3.1: “BY 2016, POPULATIONS VULNERABLE TO CLIMATE CHANGE AND NATURAL DISASTERS HAVE BECOME MORE RESILIENT TO ADAPT TO RISKS”

**Outcome Analysis**

In line with the existential threat to the country described in sub-section 2.1, Outcome 3.1 is formulated with a view to supporting population’s resiliency and capacity to better adapt to climate and natural disaster risks. Two indicators are used to describe the results:Environment, Climate and Disaster Vulnerability Index (ECDVI) and Community Asset Score (CAS)[[37]](#footnote-37)for disaster risk and reduction.

Outcome 3.1 was envisioned such that, “[b]y 2016, populations vulnerable to climate change and natural disasters have become more resilient to adapt to risks”. In order to improve resilience of vulnerable communities and institutions to adapt to risks, UNDP intended to continue focusing on developing the capacity of the GoB to mainstream the climate-environment-poverty nexus into policy and planning frameworks across ministries, while further strengthening community-based risk reduction and adaptation capacities.

*Outcome Measurement Indicators*

In the original country program document[[38]](#footnote-38), the outcome indicators were formulated in the form of two indices with country-wide coverage: the Environment, Climate and Disaster Vulnerability Index and the Community Asset Score. Both indices were expected to improve measurably over the course of the implementation period of the country program. In 2013 the indicators were reformulated to i) annual average economic loss from natural hazards (e.g., geo-physical and climate-induced) as a proportion of GDP over the last five years (Baseline: 2011: 1.13%; Target: 2016: 0.8%), and ii) the extent to which disaster and climate risk management plans are funded through national, local, and sectoral development budgets (Rating Scale: 1=Not Adequately; 2=Nominally [Very] Partially; 3=Significantly Partially; 4= Significantly [Largely] (Baseline: 2011: 1 point [Not Adequately]; Target: 3 points [Significant but not 100% ]. It is assumed that due to challenges in monitoring and reporting based on indices, such a shift in indicators was proposed by the CCED Cluster in consideration of difficulty that was being faced by the implementation agencies in operationalizing them. Changes in indicators were also made due to mismatch between available data and the indicators considered by the planning agencies responsible for the 7th FYP.

The Evaluators, along with Winderl[[39]](#footnote-39), observed a key weakness in the outcome statement that embodies “more resilient to risk” as the core result formulation whereby specificity regarding the definition and measurement indicators of change in resilience attributes was not provided. While presently there is little agreement on how to define and measure resilience, a socioeconomically and culturally appropriate indicator of it, especially in the context of climate change and natural disaster risks, would have been required prior to the implementation of the CPD 2012-16 time period. The resilience indicator should be broad in scope and conceptually straightforward, incorporating the fundamental dimensions of robustness, adaptive capacity to stress and shocks, and capacity to ‘bounce back’ to a new ‘trajectory’.

In the context of system or community resilience, ‘resilience’ can be viewed as the ability of a social system to respond and recover from major shocks and/or disasters, stemming from such factors such as inherent conditions which allow the system to absorb impacts and cope with an event, as well as post-event, adaptive processes that facilitate the ability of the social system to re-organize, change, and learn in response to a threat[[40]](#footnote-40),[[41]](#footnote-41). A list of resilience components is presented in Annex Xfor their use to monitor and measure the changes from their baseline so that feasible resilience indicators can be formulated for CPD Outcome 3.1.

The Evaluators highly recommend that further refinement of indicators for measuring progress towards CDP, 2012-16 Outcome 3.1 is required. **Changes in the state of system or community resilience with respect to adaptation to risks should not solely focus on potential losses from disasters but also the addition of inherent capacity of the community and/or society to withstand stress and shocks, and disaster impact. Specific suggestions in this regard are included in Section 5 (Sub-section 5.3) on Recommendation.**

*Climate Change and Disaster Risk Management –*

*UNDP’s Role in Shifting the Thinking and Action Paradigm*

The UNDP interventions elaborated in Subsection 3.2 interact in a synergistic manner, as they work with different partners and produce results on different time scales: The CDMP II was intended to mobilize government departments, volunteers, and NGOs to raise awareness in broad groups of society; the ERF ensures that in event of a disaster, the country will continue to operate; while the PECM introduces climate adaptation aspects to the planning processes. This coherent composition of the portfolio is highly effective and not only ensures the maintenance of UNDP’s reputation as a *thought leader* and key advisor to the government in this area, but also allows UNDP to take on a strategic and structural role as a coordinator of resilience enhancement work of all donors in Bangladesh. The GoB and donors have explicitly confirmed this reputation and opportunity, and expressed support for a stronger role for UNDP in this area. This was echoed, with a caution, in a stakeholder meeting when a senior policy maker stated that: “*UNDP has a proven record of being a leader in DRR and CCA, as well as in other developmental areas of Bangladesh…13 ministries are actively working with DRR…This shows the success of UNDP’s work for CDMP I and II…However, how many ministries are really ‘convert’ in DRR...time will say*”.

The outcome of CDMP II interventions during 2012-14 evaluation period requires an understanding of the policy outcomes of CDMP I, which are clearly reflected in the Sixth Five Year Plan (SFYP) 2011-2015 of the GoB, as UNDP CCED Cluster coordinated CDMP II was built upon the outcomes of its earlier phase. The CDMP I directly contributed to the establishment and implementation of a national disaster management legislative framework, as reflected in the review and redrafting of the Disaster Management Act, National Disaster Management Policy, National Plan for Disaster Management 2007-2015, revised Standing Order on Disaster Management, and the revised Allocation of Business for the Ministry of Food and Disaster Management (MoFDM). In addition, in world regional context CDMP I has supported the drafting of the SAARC Regional Framework on Comprehensive Disaster Management. This first tier of a ‘Paradigm Shift’ in disaster management from post-disaster response and relief to comprehensive disaster management - which was largely an attribution of UNDP coordinated CDMP I project - has led to further new thinking about the broader context of ‘risk reduction’, as previously disaster management strategies conceptualized disasters as an *a priori* phenomenon that hampers sustainable economic and social development significantly.

Deeper conceptualization of risks associated with environmental/natural disasters in the country is succinctly captured in the MDG status report on environment, which states that:

*…it is the poor and the infirm who fall easy prey to disasters and it is also they who may take the longest to recover from adverse effects. Also, during a natural disaster the poor are more numerous among those killed because they are least prepared to face such events and they are generally more concentrated in the hazard-prone areas of Bangladesh. Death of the earning member of a poor family brings lasting misery to its members. Thus the gains in poverty reduction suffer a setback. The other direct effects due to natural disasters include damages caused to residential housing, housing goods, crops, fisheries, and livestock. Damage done to transport and communication facilities, capital assets including stocks of food both at the household and the state level have significant adverse effect* (GoB and UNDP, n.d.)

Dealing with emerging risks arising both from climate change and extreme environmental events has been a priority by the GoB and communities throughout the country, and UNDP CCED Cluster supported the country through a number of project interventions and close partnership developments in order to shift strategic focus from ‘post-disaster response and relief’ to ‘comprehensive disaster management’ and ‘risk reduction’ (e.g., CDMP I).

*Evaluation Using Outcome Indicators*

Although the evaluators found that the originally-formulated outcome indicators were not suitable for effectively measuring CC and DRR, these indices were nonetheless used due to lack of alternatives. However, the qualitative evaluation of contributions to outcomes considered achievement milestones and causal links between intervention outputs and outcomes, which were triangulated by interviews with implementation agencies, stakeholders, community beneficiaries and non-beneficiary members.

An assessment of the causal link between achieved outputs and targeted outcomes in the mid-term year of the 2012-2016 UNDP Bangladesh country program has revealed that positive and significant quantitative changes towards achieving CDP Outcome 3.1 were attributed to the wide-ranging and far-reaching intervention outputs of CDMP II, ERF and PECM projects. As described in further detail in Sub-section 4.2, the project interventions have thus far performed ‘satisfactorily’, particularly in areas of institutionalizing and mainstreaming DRR and CCA at the national level (as can be seen in the indicators presented in Annex III).At the district, upazila and community levels, however, results have been only ‘marginally satisfactory’. During the remaining period (2015-16) of CPD 2012-16, it will therefore be critical to re-focus on local government and community capacity building and generation of resources such as financial, physical, and human resource capital through education and training.

By 2014, 95% of the intended 20% reduction of the Environment, Climate and Disaster Vulnerability Index (ECDVI) in the coastal areas since 2011 was observed, likely as a direct and/or indirect result of UNDP initiatives and other contributions made by the GoB and other development partners’ interventions (Table 4.1.1).The significantly reduced loss of life during the 2013 Cyclone Mohasen validates this to some extent. The unique contributions by the UNDP interventions were made mainly to areas of its ‘thought leadership’, in bridging between international community and GoB, and in providing a neutral platform to address Bangladesh’s national priority areas.

According to the Theory of Change underlying the programming, the building blocks reflecting changes in community members’ risk awareness and their behavior change with a willingness to act – lead to disaster risk reduction and enhance resilience as outcomes. In this case, the reduction in ECDVI as a direct or indirect result of UNDP and development partners’ contributions. However, it is noteworthy that an evaluation of outcome achievement using ECDVI is constrained by its inability to reveal attributiveness, delivery qualities, and capacities.

Relevant to risk reduction as well as enhancing resilience at the community level is the Community Asset Score, which measures the status of community infrastructure and assets that enable people in disaster-prone communities to cope with shocks. During the 2011-14 period this index revealed that 69% (144/210) of targets were achieved[[42]](#footnote-42).Various surveys and empirical studies have confirmed that due to both recent rapid economic growth (6% of GDP growth per annum) and qualitative behaviour change in disaster preparedness through savings, asset accumulation, community-level poverty, and household and collective asset accumulation declined significantly. These are well reflected in the success (more than 50%) of UNDP and other partners’ contributions to community resource creation. Nationally, the effects of developmental intervention building blocks are reflected in the reduction of vulnerability and enhancement of community resilience to disaster and climate risks.

**Table 4.1.1:**Progress in reducing natural disaster and climate change risk in vulnerable populations during the 2012-2014 period, as measured by quantitative outcome indicators

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Outcome Indicator** | **Baseline** | **Baseline Year** | **Target** | **Target Year** | **Actual Progress** | | | **Remarks on performance** |
| **2012** | **2013** | **2014** |
| **Environment, climate and disaster vulnerability index** | 0% reduction | 2011 | 20% reduction in the index for coastal districts | 2016 | No | No | 19% reduction\*  (95% of target) | ‘Satisfactory’ |
| **Community Asset**  **Score for disaster risk and reduction** | 90 | 2011 | 300 | 2016 | No | 197 | 234\*  (69% of target) | ‘Satisfactory’ |

\*Source: UNDP CCED Cluster, 2014.

Nonetheless, despite UNDP’s serious commitment to supporting community capacity building, linkages with certain local governments, communities, and other institutions have remained weak (For example, the intervention design of the Kedarbazar (Symanagar Union) Resilient Habitat, under ERF, was deficient in envisioning the need for livelihood support for the beneficiaries). This is reflected in the ‘marginally satisfactory’ performance, at the sub-national and local community levels, in reducing disaster and climate change related risk reduction.

**Driving Forces and Identification of Explanatory Factors**

Following two catastrophic cyclones (Cyclone Sidrin 2007 and Cyclone Aila in 2009) UNDP provided timely support to the GoB in the creation of a humanitarian institutional foundation for effecting an early recovery. Through the PECM intervention, UNDP assisted the government in mainstreaming the poverty-environment-climate nexus, and laid the foundation for budgeting and financial resource allocation for CCA and DRR by all relevant ministries and departments. This work is regarded as a pioneering, cost-effective initiative to ensure that not only is the significance of risk reduction and strengthening resilience is recognized, but also that the required budget and provisions are prepared for the timely implementation of these measures. Therefore, the factors which have thus far contributed most to the attainment of Outcome 3.1 include the following: i) the comprehensive-government approach to DRR and CCA; ii) institutionalization of CCA and DDR with increased financial and other resources; and iii) scaled-up of tested models through replication.

Through the PECM-stimulated budgetary and planning processes, evidence of increased investments and commitments by the ministries of finance, agriculture, education and women’s and children affairs to CCA and DRR efforts can now be found in their plans and implementation strategies. For example, budgetary resources for enhanced early warning capacity for the Flood Forecasting and Warning Centre (the 5-day advance warning would enable communities to save 70% of their movable assets[[43]](#footnote-43), adaptation and scaling up of climate field schools, adoption of masters degree programs in disaster management, and implementation of an action plan to protect women vulnerable to disasters are included in the CDMP II programming – all have great potential for strengthening resilience to cope with climate change and disaster risks.

UNDP’s initiative to invest in evidence-based risk analysis, data procurement and adoption of appropriate technology, including ICT, reflected futuristic ideas and actions that have the potential to further reduce disaster and climate risks. UNDP leadership has inspired similar efforts by other donors and development partners. For example, the seismic risk assessments in selected critical urban areas that informed the planning and design of disaster-resilient urban building construction created synergic effects, has influenced the development of a follow-up World Bank programme at a cost of $140 million.

Nonetheless, the effectiveness of UNDP interventions has been hampered by three main factors: i) capacity deficiency in human resources (for example, the hiring of 5 personnel in the Department of Disaster Management was delayed for considerable period of time) and technical capacities (e.g. much ICT equipment at the district level remained underutilized due to lack of technical know-how); ii) weak vertical institutional (national-district-upazila-union) organization; and iii) deficiencies in undertaking initiatives to facilitate and support DRR and CCA capacities in ministries and departments other than MoDM and Department of Disaster Management.

An additional factor was the frequent transfer of responsibilities among disaster management governmental personnel, which lead to widespread loss of institutional memory and sustainability capacities.

The recent (February 2015) oil spill in the ecologically sensitive Sundarban mangrove areas, and the proximity to earthquake-prone Himalayan faults underscores the need for emergency management capacity building, which presently is viewed as a sub-set of disaster preparedness and response. These knowledge and capacity gaps should to be addressed through UNDP-led initiative to disseminate and integrate information on cross-sectoral emergency management; this recommendation is elaborated on in Sub-section 5.3.

**4.1.2 NATURAL RESOURCE MANAGEMENT AND ACCESS TO LOW CARBON ENERGY**

OUTCOME 3.2: BY 2016, VULNERABLE POPULATIONS BENEFIT FROM BETTER NATURAL RESOURCE MANAGEMENT AND ACCESS TO LOW-CARBON ENERGY

**Outcome Analysis**

By aligning with the BCCSAP, the UNDP country programme 2012-16 intended to build on earlier strengths as well as to support innovative strategic interventions that would complement previous and current adaptation and mitigation efforts by the GoB, donor agencies and other development partners. Targeting the poor and vulnerable population’s welfare and strengthening resilience, it was envisioned that as a result of intervention outputs and other generated building blocks, CDP Outcome 3.2 would be that “The poor and vulnerable benefit from better management of natural resources and access to low carbon energy”. Under this outcome, UNDP intended to focus on building climate and environmental governance capacity at the national and local levels. Special attention was given on policy compliance and the implementation of conservation plans and regulations to protect the natural resource base of the poor, including biodiversity, while at the same time support Bangladesh’s policy objective to promote low emission growth, the spread of green technologies, and affordable energy access for the poor.

*Outcome Measurement Indicators*

Two very different sets of outcome indicators are used for measuring the benefits to poor vulnerable population from better natural resource management and access to low carbon energy: *number of government policies, strategies or plans approved in support of sustainable management of natural resources; and number of MW generated from renewable sources.* A careful examination of these outcomes reveals that the statement adopted a broader definition of “better natural resources management) (NRM), without specifying a benchmark for this comparison (also cited inWinderl[[44]](#footnote-44)). More importantly, the perspective of actual benefits accrued by these populations through the implementation of government policies, strategies, or plans is not captured by the above stated indicators.

Operationally, changes in “the number of sites under community-based natural resources management” (baseline: 2010: 8; Target: 2016: 20) was regarded as a viable indicator in the CDP. In order to capture the dimensions of ‘vulnerable as well as the poor’ as targeted population, future indicator selections may consider the following: a) number of additional communities (e.g. unions) benefitted; and b) vulnerable and poor population served and benefitted by the new policies and strategies or plans in support of sustainable management of natural resources. One major advantage of using such an approach would be that such indicator will a) precondition creation of a baseline, and b) encompass social development and social justice dimensions.

As stated above, in the energy, environment and climate change nexus area, the UNDP CDP 2012-16 outcome indicators emphasize measuring changes in the energy (in MW) generated from renewable sources and the percentage of households in targeted areas using renewable energy (Baseline: 2010: to be established in 2012; Target: 2016: 15% improvement). The evaluators concur with the EvaluabilityReport[[45]](#footnote-45)that the indicators are hard to measure as no baseline measurement was taken in 2012 as proposed in the indicator. It is also found that the outcome statement remained unclear as to what counts as “low carbon” energy.

In the context of the UN Sustainable Energy for All initiative, a framework has been developed to measure energy access in terms of the quality. The World Bank is currently conducting a baseline survey of the quality of energy access using a multi-tier framework, where the tiers relate to quality levels of the energy supply. Using this framework, the “number of tiers improved” can be used as an indicator. Before the completion of the framework and the baseline survey, it is recommended that the indicator be defined as the **“*number of households whose energy situation has been improved*”** and aggregate the households that have actually been reached with energy measures (like solar lanterns as under the SREPGen, potential cook stoves projects, and integrated measures under afforestation or vulnerability projects) with the number of household equivalents (based on the national average consumption) for energy saved through energy efficiency projects.

***Community-based Natural Resource Management and Low Carbon Energy Access –***

***UNDP’s Role in Linking NRM with CCA, Livelihoods and Energy Security and Enhancing Resilience***

The CCED Cluster portfolio under Outcome 3.2 has several distinct groups. A number of projects focus on the management of natural resources (REDD+ Roadmap, CBAFF, Integrating CBA into Afforestation and Reforestation Programmes). Another set of projects focuses on environmental governance and policy (SEGP, Expanding Pas, National Capacity Development for Rio Conventions, UNFCCC TNC, PECM). Three projects focus on ODS phase out, and another three projects are active in the sustainable energy field (BRESL, IKEBMI, SREPGen). An internal project initiation effort focuses on the development of a Green Development Programme for Bangladesh.

For ODS, a number of opportunities were captured in these projects. However, there are a number of other multilateral environmental agreements, some with higher relevance for the areas of natural resource management and governance, that have not received due attention from UNDP in this portfolio.

*Community-Based NRM*

The UNDP CCED Cluster’s initiatives in the areas of integrative approaches to community-focused CCA capacity building through better management of natural resources, such as forestry offers a showcase of how to build local-level CCA capacity through linking afforestation with diversification of livelihood options.

The multi-dimensional scope of outputs and their causally linked outcomes beyond one particular CPD Outcome area is well exemplified by several UNDP interventions, of which the Community Based Adaptation to Climate Change through Coastal Afforestation in Bangladesh (CBACC-CF), PECM, and CDMP II are noteworthy (which overlaps with outcome 3.1).

Although in the past decades UNDP Bangladesh has contributed enormously to the country in the areas of environmental management and sustainability, the current CCED portfolio is noticeably weak in initiating ‘stimulating’ concepts on environmental protection of vital natural resources such as surface and ground water, arable land, and open-water fisheries. Innovative ideas linking environmental governance with resilience and green development could be explored, particularly with other UN partners, donors, and the GoB. For example, flooding in the south-western region of Bangladesh is a major environmental issue which would generate stimulating interest among many UN partners (such as, FAO, WFP, UNICEF) and GoB ministries (BWDB, LGED) and NGOs (BRAC, Grameen Bank, Shushilan) and INGOs (Oxfam, Islamic Relief, World Vision).

Adopting an overarching sustainable development lens, in the recent past UNDP Bangladesh focused on sensitization and building awareness of conservation needs and capacity building at all levels (local, sub-national and national), with particular emphasis on empowering the marginalized and the vulnerable population. Under the rubric of ‘environmental management’, natural resource management-related strategies were formulated with an intention not only to improve access to natural resources but also build capacity in protecting and preserving these resources (i.e. fishing bans during spawning season). In this regard, several components of the Sustainable Environment Management Programme (SEMP) laid the foundation for conceptualizing poverty-environment linkages and the need for specific attention to vulnerable population in intervention designing[[46]](#footnote-46).The effects of IUCN, USAID, UNDP and other development partners’ strategy and sensitization work, highlighting the significance of biodiversity, were reflected in a number of national policy changes in this area. For instance, in 1995 the GoB declared 20 protected areas and 12 Ecologically Critical Areas in order to provide special biodiversity and cultural heritage protection. The UNDP-supported Coastal and Wetland Biodiversity Management Programme (CWBMP) assisted the marginal population, who are largely dependent on degrading natural resources, in becoming stewards of protecting the resources.

For an in-depth understanding of the outcomes of UNDP’s work during 2012-14, one needs to examine multiplier effects of its interventions, partnerships, and mobilization of international, national and local stakeholders. The multi-dimensional scope of UNDP intervention outputs and their causally-linked outcomes was beyond that of any one particular CPD Outcome area, which is well exemplified by several such interventions. The Community Based Adaptation to Climate Change through Coastal Afforestation in Bangladesh (CBACC-CF), PECM, and CDMP II projects are noteworthy here as examples. Recognizing that forestry is one of the more relevant natural resources, the UNDP initiative on CBAACC-CF was undertaken. More appreciably, linking such community-based efforts with livelihood diversification to effectively enhance adaptive capacity and resilience to withstand shocks, recover from disasters, and to find new trajectory of development has been a central UN strategic component in the CBAACC-CF intervention.

Challenging the conventional ‘top-down’ forest management approaches that promote solely technical-scientific interventions, UNDP CCED Cluster’s CBAACC-CF initiative laid a strong foundation for an interactive (incorporating both ‘bottom-up’ and ‘top down’ approaches), inclusive community-based capacity building initiative within the CCA and DRR evidence-based framework. In this context, the MTR has noted that a revisit of the intervention strategy assumed that the project outputs would be able to develop and/or alter coastal areas and management policies to enhance climate risk resilience, and to expand the community-based approach well beyond the project sites and outputs level. Achievements towards this claimed strategic goal by the CBAACC-CF were validated by local community beneficiaries, as well as national, district and upazila-level stakeholders. However, they also indicated that UNDP should make more efforts in educating and training the national planning and implementation agencies at all levels about the benefits of a two-way, interactive (‘bottom-up and ‘top-down’) approach to project delivery, which is not yet practiced within the government machinery.

As explained in Sub-section 3.3, access to low-carbon energy is highly relevant and important to Bangladesh’s needs because more than 40% of Bangladesh’s population does not have access to the power grid. Such inaccessibility is more acute in some regions than others. As well, access to energy is an important precondition for lifting people out of abject poverty and providing opportunities for learning and income generation. Intending to increase the percentage share of renewables and providing vulnerable and poor populations more access to low-carbon energy is therefore highly relevant for both the protection of natural resources and the economic and social development of Bangladesh.

*Energy efficiency and access to energy issues*

For Bangladesh, energy security is an important consideration for both economic growth and social development; pertinent to this, renewable energy and energy efficiency are important strategies to enhance energy security. The GoB’s Sixth FYP, 2011-15, Part 2 underscores these issues by stating that:

*[t]he availability of domestic primary fuel supply is getting so scarce that it is forcing severe measures like shutting down fertilizer factories, rationing gas supplies for households and transport uses, and keeping idle installed power units…Clearly, the situation calls for an urgent but well-crafted sustainable strategy to address the energy crisis and increase the energy supply to support Bangladesh’s development (Chapter 3, pp. 126-127).*

The fear that the natural gas deposits will be exhausted in the next 20 years has been voiced repeatedly. The official policy for expanding the power sector is characterized by an “all inclusive” approach. The specific expansion plans – adding 14 GW until 2020 and another 15 GW until 2030 according to the Power System Master Plan 2010 - rely mainly on coal power (in 2030: total generation capacity: 39 GW, of which 20 GW is coal-based generation capacity).[[47]](#footnote-47) National coal reservoirs exist, but social and environmental concerns might prohibit their exploitation. Therefore, current plans foresee coal imports and large-scale coal power plants at the coast with associated port facilities. Concerns about future trends in CO2 emission scenario are being voiced by many quarters, and this underscores the importance of renewable energy supply and use within the country.

By referring to the outcome document of Rio+20 (i.e., “The Future We Want”), which offers a list of green economy policies in the context of sustainable development and poverty eradication, the National Sustainable Development Strategy (NSDS) 2010-2021 offers the development policy strategies of Bangladesh with the green economy policy list. These include striving for sustained, inclusive, and equitable economic growth, and improving livelihoods and empowerment of poor and vulnerable groups, promotion of conservation and sustainable use of biodiversity and ecosystems, and regeneration of natural resources. To these ends, the Bank of Bangladesh has undertaken a Green Banking initiative which encourages banks to finance green activities/projects such as renewably energy, green buildings, green products and materials, solid waste management, water management, and clean transportation. This strategy sought assistance from donors and developments partners, with UNDP can playing a key role as a trusted neutral coordinating agency, promoting the development, transfer, and diffusion of environmentally-sound technologies in Bangladesh.

While Bangladesh’s energy footprint is small (Figure 3.1 & 3.2), the increasing demand for electricity and other sources of energy for industry, transportation, and agriculture is one of the most serious sustainable development challenges in terms of both scale and economy. UNDP’s focus has been on continuing implementation of energy efficiency- related interventions that were initiated in earlier Country Programs through standardization and labelling (BRESL) and technology transfer (IKEBMI). Emphasis has thus been on contributing more to the changes in qualitative and technical dimensions of energy issues and the priorities of the GoB rather than on to quantitative dimensions (i.e., increasing energy supply). A new addition to the current country program is the SREPGen program focusing on new renewable activities under the leadership of SREDA. In addressing the issue of access to low carbon energy, UNDP needs to recognize that development in the renewable energy field in Bangladesh is ‘very rapid’ and more efficiency is required in launching and implementing its projects in this area.

***Evaluation using Outcome Indicators***

The original outcome statement in the Country Programme included the following two indicators: *Number of sites under community-based natural resource management (Baseline: 2010: 8; Target: 2016: 20); and Percentage of households in targeted areas using renewable energy (Baseline: 2010: to be established in 2012; Target: 2016: 15% improvement)*

The outcome indicator for the NRM area was subsequently changed to the number of government policies, strategies or plans approved in support of sustainable management of natural resources. The achievements are described in Table 4.1.2.1.

During 2012-14, only 2 sectoral policies that would affect natural resource management strategies in the country could be placed in the policy formulation and implementation pipeline. This quantitative indicator shows ‘marginally satisfactory’ performance, and more efforts must therefore be made to achieve the targets. However, responding to GoB’s BCCSAP, UNDP’s CBACC-CF initiative has contributed to mainstreaming integrative conception and action on the poverty-environment-climate nexus and linking CCA to livelihood diversification through adoption of an intersectoral local community development approach. The UNDP interventions in the area of NRM, specifically in the coastal afforestation efforts towards formulating community-based CCA, demonstrated some degree of effectiveness in promoting climate-resilient development in the coastal areas of Bangladesh. As noted in the CBACC-CF project MTR, however, there is a general lack of self-help motivation and genuine ‘ownership’ among the beneficiaries. The necessary level of technical capacity and beneficiary ownership has not yet been reached to assure sustainability, though this is theoretically achievable.

**Table 4.1.2.1:** Progress on Outcome Indicators during 2012-2014 on Natural Resources Management

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Outcome Indicator** | **Year** | **Baseline** | **Baseline Year** | **Target** | **Target Year** | **Actual Progress** | **Remarks on performance** |
| # of Government policies, strategies or plans approved in support of sustainable management of natural resources | 2012 | 18 (2)\* | - | 22(4)\* | 2016 | 0 | Delayed |
| 2013 | 18(2)\* | - | 22(7)\* | 2016 | 0 | Delayed |
| 2014 | 18(18)\* | 2011 | 22 (20)\* | 2016 | 0 (2 sectoral policies are in the pipeline) | Marginally Satisfactory |

\* These data within parentheses were obtained from a UNDAF report which erroneously counted an extremely low-baseline policy and strategy plan that supported NRM in the country numbers (2 for 2012 and 2 for 2013). A subsequent counting revealed that the actual number was 18 (source: Interview with UNDP representative).

Source: ROAR (2012-2014)

Only a few UNDP interventions in the energy area by the CCED Cluster were registered by the evaluators, one of which is the REDD+ readiness road map which directly contributed to this outcome. There are other achievements in the portfolio that do not count towards this indicator but could be counted towards the indicator if it would have been formulated more broadly to capture all policies in the area of environmental governance influenced by UNDP during the time frame in question, including those in the area of ODS, pollution, green growth and energy.

For the area of access to energy, using “energy produced from renewable energy” as outcome level indicator, and the percentage of households in targeted areas with renewable energy (Baseline: 2010: to be established in 2012; Target: 2016: 15% improvement) is not viable as operational level indicator. It is worth noting that these formulations variously measure installed capacity and energy generated. An Evaluability Assessment[[48]](#footnote-48) found that it is hard to measure changes by these indicators as no baseline measurements were taken in 2012. The country program outcome statements retroactively use a measure of “72 MW” but do not declare what exactly is being measured. Potentially, this relates to the total installed capacity of Solar Home Systems in Bangladesh. In the later formulations, the indicators were changed and the number of households benefitting was replaced by the number of partnerships (Table 4.1.2.2).

None of the UNDP interventions operating prior to 2014 contributed significantly to the country programme indicators. Only one project in the portfolio, namely the development of Sustainable Renewable Energy Power Generation (SREPGen), will contribute directly to the targeted CPD outcome. SREPGen’s implementation has begun only recently, so the results cannot be included in this evaluation. This project is supported by GEF funds, and part of the resources for which the mobilization was outstanding at the time of the writing the Country Programme. The activities scheduled for the SREPGen will contribute to the outcome indicators formulated as they are consistent with the current plans under this project[[49]](#footnote-49).

**Table 4.1.2.2:** Progress on outcome indicators during 2012-2014 on vulnerable populations benefitting from better access to low carbon energy

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Indicator components** | **Baseline** | **Year Baseline** | **Source Baseline** | **Milestone 2014** | **Actual Progress by end 2014** | **Milestone 2015** | **Milestone/**  **Target 2016** | **Target 2017** |
| Number of new development partnerships with funding for improved energy efficiency and/or sustainable energy solutions targeting underserved communities/groups and women | 1 | 2013 | Development of Sustainable Renewable Energy Power Generation (SREPGen) Initiation Plan, 2012; SREPGen Initiation Plan Annual Work Plan 2013; SREPGen Project, Signed Project Document 2013 | 2 | 1 | 2 | 2 | 3 |
| Number of people with improved energy access as a result of UNDP-supported intervention | 0 | 2013 | Power Division, Ministry of Power, Energy and Mineral Resources, 2013, 2014; Development of Sustainable Renewable Energy Power Generation Project Database 2013, 2014 | 0 | 0 | 20,000 | 233,000 | 446,000 |
| Number of MW generated from renewable sources | 1 | 2011 | Number of MW generated from renewable sources | - | 403 MW | - | 800 MW | - |

However, caution is required as this area is currently being piloted by other strong institutions e.g. SREDA and IDCOL. In particular, IFC occupies the field of solar lanterns in the rural electrification arena with their “Lighting Asia-Bangladesh” initiatives. If UNDP funds were used for solar lanterns, attribution to the UNDP/SREPGen project would likely be limited. It is more likely that the incremental effect will be low. Similarly, KfW is supporting the financing of solar water pumping through IDCOL[[50]](#footnote-50). UNDP should reconsider allocating these funds to areas within the broad field of SREDA activities that justify additional funds e.g. implementation of some of aspects of the Energy Efficiency and Energy Conservation Master Plan[[51]](#footnote-51).

Other renewable energy area projects under development which have delivered results already do not directly link to the outcome indicators as they are in the field of energy efficiency. It is estimated by the project team that the BRESL project has delivered energy savings equivalent to 100,000 households. However, this energy will most likely not be available to off-grid households which are specifically the target of the outcome indicator.

The UNDP CCED Cluster programmes on CPD, 2012-16 Outcomes achieved some noticeable institutional change (e.g. with the Ministry of Industry and the BSTI), which enhanced their focus on energy efficiency. Similarly, the implementation of the Brick Law has been traced back to the original UNDP initiative on improved kilns.

The evaluators attempted to validate the UNDP ROAR 2014 claims that “a strong focus on piloting innovative technology and approaches has resulted in a number of high-impact replications for better resource management and energy efficiency. UNDP worked closely with the government and its partners to support these changes by facilitating stronger partnership with the private sector and facilitating technology transfer.” It was found that UNDP interventions have triggered technology transfer and improved standards for production (bricks) or consumption of energy (BRESL). Nonetheless, several aspects fall short: i) the technologies which were promoted are already being phased out in other parts of the world. The Hybrid-Hoffmann-Kiln was abandoned in numerous developed countries in favour of more modern technologies. The slow process of project implementation and the lock-in to specific technology and its provider have caused limited UNDP project’s impact. The Compact Fluorescent Lamp, a major component of the BRESL project, is largely being pushed out of the market by LED lighting. These developments demonstrate the risk posed by slow project development and implementation to the sustained relevance of UNDP programs. The technological drawbacks should be mitigated by a more ambitious vision and a more active search for technologies that are demographically, socio-culturally and environmentally appropriate for the context of Bangladesh. ii) In terms of sustainability, both energy-related UNDP projects are stalled, and further activity and institutionalization are needed to warrant continuous improvement. UNDP needs to pick up these threads and ensure the resources for this continuation in order to remain relevant as an effective and synergic development partner.

**Driving Forces and Identification of Explanatory Factors**

Following the Rio Summit of 1992, the GoB initiated, with UNDP Bangladesh’s support, programme implementation towards integrating the environment into its mainstream planning exercise. Subsequently, UNDP assisted the government in expanding its strength in mainstreaming energy and climate change, and their linkages with forestry (as an NRM component) issues through its support in formulating the National Adaptation Programme of Action. This initiative has been recognized as a pioneering initiative to ensure that environment, climate change and energy issues enter the mainstream of government decision making[[52]](#footnote-52). It is also intended to lay the foundation for an integrative thought process on the poverty-environment-climate nexus. It is apparent that UNDP Bangladesh’s focus has subsequently shifted from mainstreaming environment and energy sectors to climate change agenda associated with adaptation and mitigation, as evidenced in its allocation of funding and personnel. The devastating loss of development achievements in the coastal regions of the country due to Cyclone Sidr and Cyclone Aila have brought to the attention of the GoB, donors, and development partners the need to adopt the concept of DRR and CCA in a more integrative way.

The GoB launched the Bali Action Plan at the 2007 Bali Conference of Parties to the UN Framework Convention on Climate Change (UNFCCC) identifying a set of actions essential to achieve a secure climate future, and call for international support to build Least Developed Countries’ resilience to global warming and climate change. Subsequently, the GoB has developed the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) in 2009 which emphasized enhancement of resilience to CCA by community empowerment through livelihood diversification as a priority strategy. It states that:

*The thrust of the strategy is on sustainable development, poverty eradication and increased well-being of all vulnerable groups in society with special emphasis on gender sensitivity…While adaptation is the major priority issue in relation to climate change, Bangladesh has shown its commitment also to a low carbon development path as an important element in its quest for sustainable development. Whether it is adaptation or mitigation, development of institutional and human capacity within the country is absolutely essential for managing investment as well as identifying areas for intervention through research and knowledge management[[53]](#footnote-53) (preface).*

Responding to GoB’s BCCSAP, UNDP’s CBACC-CF and PECM initiatives have contributed significantly to mainstreaming integrative concept and action on the poverty-environment-climate nexus and linking CCA to livelihood diversification through the adoption of an intersectoral local community development approach.

For Bangladesh, energy security is an important consideration for both economic growth and social development; pertinent to this, renewable energy and energy efficiency are important strategies for enhancing energy security. The GoB’s Sixth FYP 2011-15 Part 2 underscores these issues by stating that:

*[t]he availability of domestic primary fuel supply is getting so scarce that it is forcing severe measures like shutting down fertilizer factories, rationing gas supplies for households and transport uses, and keeping idle installed power units…Clearly, the situation calls for an urgent but well-crafted sustainable strategy to address the energy crisis and increase the energy supply to support Bangladesh’s development (Chapter 3, pp. 126-127).*

The pro-poor Bangladesh Climate Change Strategy and Action Plan (BCCSAP) of 2009 identified *“mitigation and low carbon development options and implement these as the country’s economy grows over the coming decades and the demand for energy increases”* as one of the six pillars of the Plan. In this regard, there are significant opportunities for saving energy through higher energy efficiency and conservation. Energy efficiency and conservation help mitigate the current energy crisis and reduce the need for investments in generation capacity and thus enhance energy security. This signifies that there are ample opportunities for UNDP to contribute both to the renewable energy and energy efficiency sectors. Through the implementation of BRESL and IKEBMI, UNDP has already contributed to the attainment of energy efficiency. However, it is worth noting that many actors are presently active in enhancing Bangladesh’s renewable energy supply. Relatively speaking, in the field of energy efficiency UNDP has a more unique reputation for developing energy efficiency standards for consumer appliances and for technology transfer in the brick industry. UNDP can and should build upon these established strengths, and expand them topically.

Well on its way to attaining middle income status, Bangladesh is likely to increase the pressure on its natural resources and energy security. Adopting the paradigm of Green Economy and Inclusive Growth and acting early can help mitigate potential negative consequences of such rapid growth. In this regard, the evaluators recognize that UNDP’s most important impact on Bangladesh is in the area of triggering innovation, supporting the government in policy formulation and implementation, and in aligning government priorities with policies and donor programs. It is also crucial to recognize in UNDP’s initiatives that linking energy into other UNDP community and pro-poor initiatives is of high relevance, potentially in cooperation with other active agencies. For example, GIZ has developed autonomous solar drinking water supply systems that are comparatively disaster-resilient. Finally, it is recommended that outcome indicators which reflect a broader set of results that are more relevant to the UNDP program should be prioritized.

**4.1.3 PROMOTING GENDER EQUALITY AND OTHER CROSS-CUTTING ISSUES**

In formulating the MDGs, gender equality was acknowledged as a major human rights issue and development goal. The term ‘gender’ refers to the social attributes and opportunities related to being male, female, or gender neutral, and the associated equity and equality issues have emerged as core guiding policies and principles of the UN system[[54]](#footnote-54). Women by far suffer the greater share of gender inequality, and worldwide UNDP makes serious efforts for women’s empowerment and gender mainstreaming through strengthening gender sensitive government programmes, enhancing women’s capacity to participate in policy planning, improved monitoring and evaluation of programmes, and ensuring accessibility to gender-relevant data.

Gender equality remains a major challenge in Bangladesh, though considerable progress has been made in recent years by the government and other institutions. The Sixth FYP, 2011-15 states the government’s commitment to addressing this issue:

*[I]n addressing gender based discrimination, the SFYP will follow a two-pronged approach: Firstly, gender will be integrated into all sectoral interventions. Secondly, attention will be given to remove all policy and social bias against women with a view to ensuring equality as enshrined in the National Constitution.*

The Sixth Five Year Plan (2011-2015) considers women’s engagement in political and economic activities as a cross-cutting issue with women’s empowerment as one of the main drivers of transformation[[55]](#footnote-55).  In terms of women’s empowerment in MDG, Bangladesh has achieved some major milestones; for example, the government adopted a ‘National Policy for Women’s Advancement’ (NPWA) in 2011. However, much work remains in this area.

**UNDP Strategy and Interventions**

The UNDP Gender Equality Strategy 2014-2017 clearly states that UNDP will work with national partners to *transform traditional gender norms and reduce or eliminate the barriers to women’s economic empowerment*. UNDP Bangladesh changed strategic direction from an approach based on advocacy, support for gender-related policies and rules, and support to sex-disaggregated data and research to interventions on gender mainstreaming in UNDP projects[[56]](#footnote-56). In order to address gender equality concerns, UNDP Bangladesh has gradually strengthened women’s empowerment and advancement in its core programmes, though this was not implemented across all projects. For example, environmental and energy sector project outcomes do not have adequate gender equality components.

Gender-responsive DRR practices have been piloted in many countries since the 1980s. Linking gender to climate change (especially in policies and CCA projects) is an extremely challenging task; however it attained its momentum since 2007 from the UNFCCC Conference of the Parties in Bali. In 2007, UNDP Bangladesh (through Climate Change Cell that was established with the assistance from CDMP I) commissioned a study on Gender and Climate Change in Bangladesh, the first of its kind anywhere in the world. Such efforts were made by the UNDP CCED Cluster whenever the opportunity arose. For example, UNDP Bangladesh facilitated the REDD+ (Reducing Emission from Degradation and Deforestation) strategy to support the GoB. UNDP places a gender marker (GEN2) on strategies which have gender equality as a significant objective. Notably, significant research has been conducted internationally to understand how forest-dependent women and men can benefit from REDD+ projects. The GoB position on REDD+ does not yet adequately address such learning and modalities, which at operational level might be detrimental for women in a forest-dependent community.

**Outcome Analysis**

The detailed gender equality outputs and results generated from six selected UNDP projects are analyzed and presented in Sub-section 4.2.4. In this sub-section, an overarching outcome analysis is presented.

The evaluators found varying intensities of gender equality efforts in the UNDP interventions during 2012-14 period. Some specific patterns were observed: in most cases, in the early phase of project interventions, gender equality and women empowerment aspects were absent or weak, and as further opportunity arose, some projects attempted to ‘catch-up’ on the issue, while others have achieved remarkable gender-related outcomes. For instance, on the one hand, inclusion of gender aspects was not originally planned during the inception phase of the IKEBMI project; rather, it evolved through an opportunity from the Global Gender and Climate Change Alliance (GGCA). The project did have a mandate to address gender inequality, however appropriate design of gender components at an early planning stage could produce much more effective outcomes.

Nonetheless, the PECM is one the most successful cross-cutting, integrative UNDP interventions with regards to both budgeting for CCA, DRR and the environment - and the promotion of gender equality. In this regard, the example of the revised Development Project Proforma (DPP) can be cited here. DPP entails, in its “project detail” format, a description of impact and specific mitigation measures relating to “gender, women, children, physically or mentally challenged persons /excluded group’s needs” (among others). The PECM manual adopted a Gender Analysis Framework to systematically analyze gender relations within a community and identify issues and barriers facing women in the community. However, though mainstreaming gender in all development projects has been facilitated through the revised DPP manual (along with mainstreaming climate change, environment and disaster risk reduction), it has not yet been implemented. This is partially because there is a need to strengthen capacity for addressing gender issues.

Under the CDMP II project, a Facilitator’s Guidebook on “Practicing Gender and Social Inclusion in Disaster Risk Reduction” was produced which would be of great value to DDR if widely disseminated and closely followed. Gender equality has been advanced through the national Disaster Management Act and subsequent enforceable Rules (2014), which were drafted to ensure national and local representation of the Department of Women Affairs (Ministry of Women and Children Affairs) in disaster coordination and management committees. Standing Orders on Disaster (SOD) spells out the responsibility of different agencies and ensure the representation of local government women members in local-level disaster management committees. However, it is evident that the female members of local-level disaster management committees are not effectively participating in the process[[57]](#footnote-57).

The UNDP Gender Marker is a useful tool that rates gender mainstreaming and equality at the activity level on a scale from zero to three. A Gender Marker requires projects to rate all project activities in terms of how they contribute to gender equality and women’s empowerment. This is done in the work planning and budgeting phase, and can also be used for monitoring/reporting.

Each activity is allocated a gender rating of 0, 1, 2 or 3, as follows:

1. Activities that have gender equality as a principal objective should be rated 3;
2. Activities that have gender equality as a significant objective should be rated 2;
3. Activities that will contribute in some way to gender equality, but not significantly, should be rated 1; and
4. Activities that are not expected to contribute noticeably to gender equality should be rated 0.

Table4.1.3.1: Percentage Distributions of Gender Markers of UNDP Projects (2012-2014)

|  |  |  |
| --- | --- | --- |
| **Gender marker** | **Number of projects** | **Percentage** |
| **GEN0** | 8 | 33.3 |
| **GEN1** | 8 | 33.3 |
| **GEN2** | 7 | 29.2 |
| **GEN3** | 1 | 4.2 |
| Total | **24** | **100.0** |

Source: UNDP RRMC Cluster, 2014.

Although gender equality and women’s empowerment are mandated and accepted priorities for the UNDP CCED Cluster, there have been only sporadic efforts to include gender issues in project interventions. This is reflected in the analysis of gender markers, which reveals that the vast majorities of activities either “contributes in some way to gender equality, but not significantly” or “are not expected to contribute noticeably to gender equality” (Table 4.1.3.1, and Annex XI). Women as target beneficiary group (micro credit model) have been included in a number of cases, however limited systematic analysis has yet taken place (applicable for most of the projects) to achieve gender equality and women’s empowerment.

Achieving gender empowerment requires is a holistic approach where the serious involvement of different actors is critical. The UNDP CCED Cluster needs to link more of its project activities to the greater development initiatives. Even the indicators set by UNDP PECM project as gender inclusion in development initiatives (in DPP manual, referred earlier) can be considered for adoption by UNDP Bangladesh.

**4.1.4 ORGANIZATIONAL AND STRATEGIC POSITION AND PARTNERSHIPS**

Triangulation of all interviewees, stakeholders and implementation agencies has confirmed that UNDP is seen as a trusted and neutral development platform. UNDP Bangladesh is recognized as a Thought Leader as well as a reliable partner and effective coordinator of donor funds. This places the UNDP Bangladesh CCED cluster in a particularly strong position to influence and coordinate policy-making and support the government in the areas where operational weaknesses and capacity gaps prohibit effective governance. However, the evaluators found that some capacity gaps still remain; in particular, the cooperation between various government levels is still a major challenge. Such cooperation deficiencies have also been noticed within some UNDP projects (e.g., such lack of extended collaboration by CDMP II implementation agency with other government and non-government organizations is elaborated in the evaluation of effectiveness of CDMI II project – see Subsection 4.2.2).

Apart from this partnership with the government, UNDP also has effective partnerships with the other UN Organizations (e.g., FAO, WFP), INGOs (e.g., IUCN), NGOs, and CSOs. For example, UNDP partnered with BRAC to build the resilient habitat under ERS at Kederbazar, Shymnagar. Also, under ERF maintains a roster of nearly 100 NGOs, many of which are based in local communities from diverse regions. However, it is unclear whether UNDP devotes sufficient resources to building and maintaining these relationships. Several stakeholders have suggested that UNDP Bangladesh would be uniquely placed to take on a coordinating role for international donors in the environmental, natural resource governance, and energy fields. However, in order to act on this advantage, a systematic emphasis on regular coordination opportunities (e.g. round tables, presentations of programming priorities and current activities by projects or the cluster) is necessary. Such efforts will help raise the profile of UNDP Bangladesh. The excellent positive response that the evaluators received when requesting to meet other donors should encourage UNDP to conduct more systematic outreach to donors.

Interviewed government partners highly praised UNDP’s responsiveness, neutrality, and emphasis on universal moral and ethical values and responsibilities in its programming and activities. According to the internal view of UNDP staff, UNDP understands how to “manage” the government, and make serious efforts to find common ground and encourage progress on project concerning issues that may be contentious.

While some projects did encounter delays, no project had to be terminated prematurely. Except for two projects – the ERF and the IKEBMI projects – all projects are executed in accordance with the National Execution modality. This means that the project management unit is situated in the national government agency responsible for the project and all decisions, except hiring and procurement, are taken by the government - with the advice of the UNDP portfolio managers when necessary. When the CCED Cluster staff have the impression that there might be practices inconsistent with good governance they can launch external audits. This has happened several times.

This execution modality helps UNDP Bangladesh keep their operations efficient. However, this efficiency comes at a cost. While the cluster is equipped with excellent Portfolio Managers with extensive networks in the field of environment and disaster relief in Bangladesh, and their respective areas of expertise appear complementary, the evaluators noticed some shortcomings in project oversight. As low-quality reports and project outputs are a severe threat to the sustainability of project results, much closer monitoring and evaluation of the quality of deliverables and results are needed in both the central point of the CCED and RRMC Clusters. Examples for this are the BRESL report outputs, and a number of training manuals for the CDMP project. Similarly, recruitment of high-quality staff, along with their annual performance review, should be strictly pursued; in case of underperformance, the administration should execute their oversight and take action.

At UNDP Bangladesh, standard UNDP M&E practices are implemented. In some cases, the monitoring documents are excellent - for example with respect to the social impacts of the Bricks project. However, a systematic document management, with adequate infrastructure and resources, at the CO is basically nonexistent. This introduces inefficiencies and hampers access to information within the office. Most information needs are satisfied by directly approaching the Portfolio Managers, which increases their workload significantly. Similarly, contact management is absent, with the potential risk of approaching stakeholders multiple times, missing out on important collaboration opportunities, and ultimately damage to UNDP’s reputation that could be easily avoided with networked databases and information management.

Last but not least, a nominal systematic and structured knowledge management strategy is presently in place. Resources based on lessons learning or communication and outreach by the CCED cluster are also not systematically procured, inventoried or made available for providing institutional memory of programmes, projects, lessons learned, past policy discussions and strategic discussions. These needs cannot be met at the current staffing level, as the portfolio managers are required to focus on project oversight, project and portfolio development, and fundraising and stakeholder relations. However, the importance of systematic knowledge development and management cannot be overstated. As UNDP Bangladesh wishes to further develop itself as an effective institution that can help the government overcome barriers for a better and safer social, cultural and physical environment in Bangladesh, lessons need to be systematically extracted and codified, and made available for the stakeholders and the general public.

The evaluators recognize that, as is currently being planned, UNDP Bangladesh wishes to considerably scale up operations in the CCED cluster to take advantage of the significant funds available through the Green Climate Fund. UNDP is one of three agencies (along with ADB and KfW) that can access these funds, and the expected volume could be $100 million US. Procuring this fund would require any serious shortcomings in UNDP’s operations to be address as soon as possible.

**4.2 PROJECT OUTPUTS’ CONTRIBUTIONS TO OUTCOMES – AN EVALUATION BY CRITERIA**

Throughout Sub-section 4.2, observations and assessments of individual projects by the Evaluation Team are organized and presented in two tiers:

1. observations, analysis and evaluation of the selected individual projects that constitute 75% of the CCED Cluster initiated projects in full implementation phase (6 out of a total of 8) by using the *relevance, effectiveness, efficiency* and *sustainability* criteria (XIV); and
2. observations, findings and evidence, and assessment of the aggregate contributions of all (selected samples and others) individual projects initiated by CCED Cluster to CPD Outcomes 3.1 and Outcome 3.2

**4.2.1 PROGRAMME AND PROJECT *RELEVANCE***

According to the UNDP Handbook[[58]](#footnote-58), the *relevance* of Cluster initiated projects and the overall programme refers to their degree of alignment with Bangladesh’s national policies regarding disaster and climate change risk reduction, sustainable natural resource management and access to low-carbon energy, and the priorities and the needs of the intended beneficiaries. As an additional dimension of relevance, the criterion of *appropriateness* is used to determine the acceptability and feasibility of the initiative as operationalized within the Bangladesh context.

*Comprehensive Disaster Management Programme (CDMP-II)*: The goals of CDMP II directly fit into national priorities to reduce Bangladesh’s vulnerability to disasters and climate change risks, as outlined in the SFYP, 2011-15. The six outcomes of the project were designed to address priority issues relating to Bangladesh’s DRR capacity, and to strengthen GoB institutions and other stakeholders’ ability to engage in disaster management. By providing a ‘platform’ to bring new ideas, knowledge and institutions together to push the DRR/CCA agenda, CDMP II functioned as a catalyst. For example, CDMP II played a vital role in developing the climate change cell in the MoEF, which has since become an independent body. In order to add value, CDMP II or similar projects should facilitate creating more ‘space’ for other institutions. In terms of operational roles, it is too ambitious to try to reach out all or most of the local communities (at the union level) of the country as well as to attempt to address all disaster risk related needs of these communities. A much closer engagement with DMCs is needed to ensure that the project’s own design and implementation of activities are aligned and coordinated with other key projects. Overall, CDMP II has succeeded in functioning as a needed national platform to facilitate and assist all key institutions to adopt DRR and CCA strategies, as well as in strengthening, albeit on a limited scale, delivery of risk reduction outcomes for at-risk local communities.

*Early Recovery Facility (ERF)*: The UNDP ERF project is directly aligned with Bangladesh’s National Plan for DM, and was built upon an earlier DRRF project. The project interventions of the ERF project in the area of capacity building have been found to be effectively complementing the UNDP-funded CDMP II project’s goals and activities. The expected outcomes were appropriately designed to institutionalize coordination of early recovery assessment, planning, and response in the country, which has in turn effectively promoted early recovery agenda in Bangladesh. As ER encompasses the swift restoration of basic services, livelihoods, shelter, governance security and rule of law, and environment and social dimensions, project interventions such as construction of Core Family Shelters, providing Cash for Work, and Cash for Training and Cash Grants have been recognized to be highly relevant and effective in the rural Bangladesh context.

*Poverty Environment Climate Mainstreaming (PECM):* As the PECM project aimed to ensure integration of climate change and environmental considerations into development planning and budgeting processes, it was a highly relevant to meeting the critical needs of the GoB’s policies and priorities in areas of CCA, UNDP policies and global priorities, and the needs of the population in general. Highly relevant to policies and actions plans of the GoB is the appropriately emphasized strengthening of organizations and institutions to meet the emerging challenges of mitigating and adapting to climate change. PECM was also highly relevant to strengthening technical knowledge and human resource capacity of the GoB in international climate change negotiations, and disaster risk reduction and response.

*Community Based Adaptation to Climate Change through Costal Afforestation in Bangladesh (CBACC-CF)*: CBACC-CF projectdirectly contributes GoB’s policy needs and developmental priorities in areas of climate change resilience, livelihoodadaptation and storm surge risk reduction. It is the top priority project of the GoB under the National Adaptation Programme of Actions (NAPA) dealing with climate change impacts and vulnerable coastal regions. CBACC-CF project is also aligned with the Bangladesh Climate Change Strategy and Action Plan (BCCSAP), and the Coastal Development Strategy and Coastal Development Policy.

*Barrier Removal for Energy Standards and Labeling (BRESL)*: This project’s theme of appliance standards, is highly relevant and part of the government policy on introducing labeling system with a goal of ensuring the use of energy efficient equipment throughout the country (SFYP, 2011-15; Part 2, Chapter 3). The long implementation time, however, is raising some doubts about the relevance of the specific standards and labels. For example, CFLs are very established in Bangladesh, and their labeling and standardization is maybe less relevant today than the establishment of a testing structure for LED lighting.

*Improving Kiln Efficiency in the Brick Making Industry (IKEBMI)*: The traditional brick kiln industry in Bangladesh is one of the main stationary sources of greenhouse gas emissions, as the approximately 8000 such kilns emit an estimated 6.4 million tons of CO2 annually (ProDoc, 2010). More than two million migratory workers are employed in this industry, making it highly significant socially and economically, but the technology employed is archaic. Consistent with the SFYP 2011-15’s policy goal of mitigation and low carbon development (Part 2, Chapter 10), the potential for reduction of sizeable carbon emissions and improving local air quality by improving kiln efficiency make IKEBMI very relevant.

Summarizing and considering the fact that CCED Cluster programmes during the 2012-2016 Country Programme for Bangladesh have had the opportunity to build on their successes in the previous CPD period (2007-11), some of the projects were already in the pipeline or underway by 2012 (the beginning of the period covered by this Outcome Evaluation) (e.g., CDMP I; DRRF). Most of the 28 CCED Cluster initiated projects reflect the funding sources and conditionality evident in the purpose of the various GEF categories (particularly, Climate Change Mitigation, Biodiversity, Multi-Sector) and the Montreal Protocol, as well as GoB’s sectoral priorities (Climate Change, Disaster Risk Management) outlined in the SFYP, 2011-16. (Given that UNDP Bangladesh has had limited leverage to initiate strategically relevant projects with its own resources, it developed some highly relevant and appropriate projects, such PECM and BGDP (IP)). Consequently, it was challenging for UNDP Bangladesh to develop all projects with a strategic vision of the CCED Cluster and to position itself to address thematic area gaps and critical environmental issues.

On this basis, the Evaluation Team inferred that the interventions in the CCED Cluster programme are in general either ‘highly relevant’ or ‘relevant’ (depending on the priorities of GoB and UNDP) and appropriate. All sampled projects are ‘highly relevant’ with respect to the actual needs of the country and beneficiaries. It was also recognized by the Evaluation Team that some the initiated projects are directly relevant and contributive to the growth and development of the private sector (BRESL, IKEBMI, ODS), international climate negotiations (PECM), other international MEA processes (PPG), and budgets in grand governance (PECM). Certain components of several projects (e.g. CDMP II, ERF), such as addressing gender equity and equality and multi-sector emergency preparedness, could have been made more relevant to the emerging needs of Bangladesh.

**4.2.2 STATUS AND *EFFECTIVENESS* OF PROGRAMME AND PROJECT IMPLEMENTATION**

*Comprehensive Disaster Management Programme (CDMP-II)*: The CDMP Phase II project was grounded on CDMP Phase I (2004-09), and was therefore primarily an incremental effort. This has helped the CDMP Phase II project to become reasonably effective in designing and implementing activities and achieve outputs consistent with targeted outcomes, though its engagement with GoB machinery at lower levels of society (district, upazila and union) has been ‘sporadic’, and in many cases interactions occurred after prolonged gaps of up to several years. Capacity deficiency of DMCs at the sub-national and local level was observed during the field visits. It was also observed that service delivery was more effective where implementation support was sought from local NGOs, and planning and delivery was substituted, though without a permanent solution for capacity deficiency.

Commendable effectiveness has been observed by the evaluation team in achieving Outcome 1 and Outcome 5, which focused on professionalizing disaster management systems and mainstreaming and institutionalizing disaster risk reduction. Varying outcomes were achieved in Outcomes 2,3,4 and 6. Although the project activity targets were specified in accordance with outputs and outcomes throughout the project design, the implemented activities were not well coordinated with targets. More close annual monitoring and a method of incorporation of the feedback to catch-up with the lags as well as required resource and scheduling adjustments would make the implementation and achievement of outcomes more effective. The evaluation team finds the overall performance of CDMP II on achieving outputs and outcomes is reasonably effective.

*Early Recovery Facility (ERF)*: The ERF has provided crucial support to the implementation of the Disaster Management Act 2012, by contributing to capacity building in the newly created Department of Disaster Management. In addition, ERF has assisted in enhancing the capacities of humanitarian actors, including the partner NGOs, by facilitating various training programmes on early ER. In 2014, the ERF is left with only one more year for implementation, and therefore, an early assessment of effectiveness can be attempted. The Evaluation Team determined that, in terms of achieving targeted outputs in a timely manner, ERF has already attained 80-90% of outputs by 2014 and is likely to achieve 100% of targeted Outputs in all but one area by 2015. Overall, programmes were able to perform ‘very well’ when they mobilized knowledge and built capacity of the partners. As noted in the MTR, UNDP’s capacity and size at the field level (district, sub-district) were not balanced against the requirements to accelerate partner’s capacity and functions. Such deficiencies often left weaknesses in programme implementation. For example, the beneficiaries of the Resilient Habitat program at Kedarbarazar, Shyamnagar Upazila remained highly vulnerable to cyclonic storm surges due to breaching of an embankment which was not repaired.

*Poverty Environment Climate Mainstreaming (PECM):* Poverty-Environment-Climate (PEC) linkages were mainstreamed into UNDP programmes (though partially since a coordination mechanism is yet to be developed and implemented) and fully integrated into key national and sectoral planning processes, led by the General Economic Division (GED). During the 2010-13 project period, out of 8 targeted outputs 100% implementation and results were produced in 5 output areas and partial results (<100%) in 3 outputs. Cost effectiveness of the project is reflected in several important results. Technical briefs have been provided to incorporate PEC Nexus issues in the draft DPP and TPP format, Delta Plan 2100. PEC Nexus- related clauses have been addressed in the ADP Guideline. PEC nexus issues have been integrated into the Monitoring and Evaluation (M&E) framework of the 6th Five Year Plan, National Perspective Plan and National Sustainable Development Strategy (2010-21). Climate Public Expenditure and Institutional Review (CPEIR) was conducted, and GED implemented Local Climate Fiscal Framework (LCFF) by forming a team composed of members from relevant ministries and agencies. A new Climate Fiscal Framework has been developed by the Ministry of Finance, making it possible to track the government’s performance on PEC mainstreaming. GED implemented a Local Climate Fiscal Framework, for use by local government

*Community Based Adaptation to Climate Change through Costal Afforestation in Bangladesh (CBACC-CF)*: The CBACC-CF project shows significant effectiveness in promoting climate-resilient development in the coastal areas of Bangladesh. The evaluation team determined that, in terms of achieving targeted outputs in a timely manner, CBACC-CF made commendable progress as it has already attained 100% of outputs except model demonstration (75%) by 2014, and is likely to achieve 100% of targeted Outputs in all areas by 2015. The project enhanced resilience of coastal ecosystems through increasing forest coverage, creating livelihood diversification practices through innovative land use techniques (e.g. the Triple F Model), and mainstreaming women’s role in climate change adaptation. Resilience of protective ecosystems was enhanced through different types of afforestation interventions and diversification of livelihood strategies. Meanwhile, more than 8,500 ha of mangrove plantation and coastal afforestation interventions were undertaken. More than 200 ha of dike plantation activities were also undertaken, including implementation of the Triple F Model. The Team observed that over 80% of the adaptation measures employed by the project demonstrated their effectiveness and sustainability in reducing climate variability in coastal communities. The project has made crucial contributions to the drafting of Climate Resilient Coastal Zone Policy Recommendations for 4 sectoral policies and the development of a framework for mainstreaming mechanisms for climate resilient policy. As noted in the MTR, there is too great a lack of self-help motivation and genuine ownership (e.g. land tenancy and lack of cooperatives) by the beneficiaries to currently sustain many of the individual and group outputs. The necessary level of technical capacity and beneficiary ownership has not yet been reached to assure sustainability although this is achievable.

In this context, the CBACC-CF MTR has noted that a revisit of the intervention strategy assumed that the project outputs would be able develop and/or alter coastal areas, manage policies to enhance climate risk resilience in vulnerable coastal communities, and expand the community-based approach well beyond the project sites and outputs level. Achievements towards this claimed strategic goal by the CBAACC-CF were validated by local community beneficiaries, as well as national, district and upazila level stakeholders. The evaluators, however, observed that lack of effective promotion of the successes in such community level innovations (e.g. Triple F Model) hampered the achievement of targeted outcomes. More efforts should be made towards effectively promoting the benefits of a two-way, interactive (‘bottom-up and ‘top-down’) communication among the national planning bodies, as by and large a deeper comprehension of such an approach is still weak in the government machinery.

*Barrier Removal for Energy Standards and Labeling (BRESL)*: The BRESL project overall has been `effective` in terms of achieving outputs in a timely manner, as all targeted outputs are likely to be achieved by the project’s termination in 2015, except for the star label assignment (wherein CFLs, fans and electronic ballasts (EB) were completed while AC, refrigerators and electric motors could not be implemented due to absence of laboratory facilities). As of 2015, 62 manufactures have updated their product lines to meet the new standards. More attention could have been paid to changing consumer behaviour in theproject design and the selection of output category for making it more effective. The evaluators observed that the public demand for efficient appliances is still low but slowly rising. The supervision and monitoring of the standards is unclear, as adopting and maintaining the standards is currently voluntary (although the EE&C Master Plan provides for stepwise introduction of mandatory standards). Assessment is assisted by the progress reports but is limited by the lack of MTR or TE.

*Improving Kiln Efficiency in the Brick Making Industry (IKEBMI)*: While the project built a significantly reduced number of demonstration facilities only, the outreach and public resonance of the project has had a significant and lasting impact. The project triggered a discussion about this technology and ultimately led to regulatory and legal action (i.e., the revised Brick Act, 2013) prohibiting use of the worst technology, mitigating some of the environmental consequences and opening minds to the potential of modern tunnel kiln technology. These results are even better than anticipated since the original HHK technology is not up to modern standards. The MTR has revealed that because activities focused on technical support to individual demonstration models rather than developing a technical understanding of various energy-efficient kiln options, appreciation of the project was limited to brick makers and other specific stakeholders. More focus on ‘soft’ activities that support broader audiences will make such project more effective.

**Synthesis of effectiveness of project interventions**

The detailed assessment on effectiveness is presented in Annexes XII.a & XII.b, including a narrative assessment and evidence regarding whether or not contributions were made to the achievement of outputs and outcomes. The main conclusions and findings regarding the contributions of the initiated projects to the CPD Outcomes 3.1 and 3.2 are summarized below.

The progress made by each of the selected projects until 2014 is reported in Annex XV. Effectiveness of the CCED initiated projects is measured primarily from six of the eight fully executed projects, and it was found that their policy level delivery, particularly at the national level, was much more effective (PECM, Disaster Management Act-2012, Influence on Climate Change Section in SFYP, Revised standing order on disaster, Bricks Act, energy efficiency standards) than the ground-level delivery at the regional and local level. Delivery capacity at the district and Upazila level is weak, as reflected in the underperformance of ICT instruments. At the local level, CCA performance was not up to standard in all outputs and was weak in many areas. Lessons were learned from implementation and delivery problems in the resilient habitats program in Kedarbazar, particularly in terms of limited access to livelihood options, access to markets, road communication, connectedness to local-level governance. Modified program designs were subsequently and effectively implemented, as observed by the evaluators in the Baine para (Dacope) resilient habitat project component.

The effectiveness of the initiated projects and programmes could be improved if the project designs undertook a more integrative approach (e.g. providing access to health services, livelihood considerations including IGAs, consideration of the value chains for the products, providing access to markets, empowering women and disadvantaged). Such efforts would have multiplied the benefits and made the projects more robust and sustainable.

All initiated projects have had the scope to include more marginalized groups of the population and could have contributed more to social justice and equity issues. There was a limited attempt at ‘agency-building’, but such opportunities were missed in general. In future programming, greater inclusion of marginalized populations (in terms of social class, gender, ethnicity, and religious minority) should be emphasized. In some project components, social justice issues and voices of the marginal, disadvantaged people were embodied; however, the nature of engagement was not very effective.

Cross-level linkages of institutional capacity building initiatives are weak and these deficiencies hamper the effectiveness of resilience raising mechanisms. This might have affected the development of a sense of ownership by implementing agencies and/or appropriate government departments (e.g., access to low carbon energy thematic area by the Ministry of Industries; Ministry of Power, Energy and Mineral Resources). Some projects were found to not be very proactive in creating space for intersectional, interagency relationships, and enhancing synergic capacities. For example, CDMP II could contribute more to capacity enhancement in other ministries and government departments, NGOs and CBOs. Ironically, CDMP II, on its own, could not implement the desired extent of activities within the project time period. The Evaluation Team observed that, consequently, variable rate of achievements with respect to intended results (outputs and/or outcomes by the initiated projects). Local level communities were not able to deliver in many cases, and therefore communities asked other NGOs directly to help them deliver. For UNDP it would have been more effective to include these NGOs directly, thus building sustained partnerships, trust and mutuality.

Technology choices in the energy projects were questionable, though the results achieved were commendable because the discussion was shifted towards more modern technologies, such as tunnel kilns instead of HHK and LEDs instead of CFLs. The effectiveness of this project thus lay less in promoting a specific technology but in triggering a process of discussion about kiln technology and EE appliance standards. In this regard, the projects’ effects went beyond what was originally intended.

**4.2.3 PROGRAMME DELIVERY *EFFICIENCY***

As noted earlier, the analysis of VfM was carried out for 4 selected project components, and methodology, and findings are presented in Annex XIII.

*Comprehensive Disaster Management Programme (CDMP-II)*: As efficiency how good economically resources or inputs (e.g., funds, expertise and time) are converted to results[[59]](#footnote-59), the focus of evaluation team is on assessing the extent to which resources have been used efficiently in terms of finance, human resources, and time investment until the time of evaluation (i.e., 2014). As of mid-2014 (in the 5th year), total budget utilization of CDMP II was low, both on a total and yearly basis – see Table 4.2.3.1) and ‘marginally unsatisfactory’ in its terminal year.

**Table 4.2.3.1: Fund utilization per year**

***Box 4.1 : CoreFamilyShelter for Building Resilient Habitat (CDMP-II)***

*“Now I am in [a] much better condition. For example here I got [a] house to live, [a] yard to grow vegetables, [a] source of clean drinking water. Previously I had to travel a long distance to collect drinking water from other people’s pond[s] and tube well[s]. They sometimes rebuked us, saying that we disturb them always, and sometimes they threw our water pot away. But we had no other option but to bring water from their ponds or tube well[s]. Now, we do not have those sorts of problem[s] with drinking water. I clean the water tank every year with cleaning powder. First we wash it with powder, then wash out all dirts with rain water and after cleaning we store [the] rain water. We learned those [skills] from training…we are very confident with the house [we] now live in. We grow vegetables at our yard, we sell them in [the] market, which is good enough for my family.Yet we [also] go for work for our better future…” -* Rashida Begum (30), Baine Para Resilient Habitat, Suterkhali Union, DacopeUpazilla, Khulna

*“During Cyclone Mohasen we did not go to [the] cyclone shelter; rather, other people took shelter at our home. I got training on what to do during [a] cyclone and if [a] warning goes on. I can get news on cyclones via [my] mobile and listen [to] weather news. I learned all these from training. Now I can go outside for work without worrying about my family members, as I have a good house and caring neighbours. Now, I am better than ever before…”\_\_Wajib Ali (55), Bain Para Resilient Habitat, Suterkhali Union, Dacope Upazila, Khulna.*

These are the words of two beneficiaries of the Core Family Shelter (Resilient Habitat) programme, which has adopted a community-managed disaster mitigation approach with comprehensive risk reduction and adaptation interventions that reduced vulnerability and provided more secure and dignified living for the coastal poor. This cost-effective and alternative approach strives towards sustainable solutions. The programme engages technology, physical and social infrastructure, local knowledge and social capital to complement available resources and promote DRR and CCA resilience through better living. In the event of major disasters, the at-risk communities thus avert mass displacement, destruction of assets, and expensive rehabilitation or reconstruction. Core Family Shelters help fortify and uplift the living conditions of a larger number of vulnerable communities.

The Comprehensive Disaster Management Programme (CDMP II) (2010-2014, US $75.24 Million) is piloting "Climate Resilient Habitat" development by building Core Family Shelters in Bainepara and Gazipara, two cyclone-affected villages of Sutarkhali Union under DacopeUpazila in Khulna District. Lessons learned from this pilot intervention will help build communities in southwestern Bangladesh that can withstand reoccurring disasters, fight back climate change impacts and achieve sustainable growth. Much of the community consists of internally displaced people and assetless coastal poor without livelihood options due to reoccurring disasters and climate change.

Core Family Shelters, as a component of CDMP II, were cyclone and salinity-resistant houses designed to withstand the worst recorded tidal surges from the last 100 years and 215 kph wind gusts. Plinths of community structures and core shelter households were raised above normal flood level to protect lives and assets. Alternative and diversified livelihood options were also integrated to ensure climate resilience. There is a common grazing field in each settlement, as livestock raising is one of the main livelihood options for the coastal poor. Also built were medium and small-sized dairy farms, ponds for aquaculture, backyard farms, and communal production centers for hand-looming, tailoring, handicrafts, baking, and gardening. Theses climate resilient habitats promoted the development of small-scale renewable energy sources such as solar panels and bio-gas plants to meet household energy needs. Besides developing ground water sources, the habitat piloted innovative ways of ensuring access to safe water including rain water harvesting tanks and solar power desalination panels. Special attention was given to the protection of the most marginalized and vulnerable groups. As a result of these CDMP II activities, the estimated **Value for Money is: Net Present Value (NPV) is Tk. 1183,000, the Benefit Cost Ratio (BCR) is 2.76:1, and Internal Rate of Return (IRR) is 20.30%.**

|  |  |
| --- | --- |
| **Year** | **Utilization (Spent Against Forecast)** |
| **2010** | 51% |
| **2011** | 31% |
| **2012** | 44% |
| **2013** | 84% |
| **2014** | 90% |

Source: CDMP-II Value for Money Analysis Report, 2015.

The project implementation agency expected to have spent 85% of its available funds by the termination of the program in December 2014. As the UNDP requirement is 96%, budget utilization falls substantially short, indicating inadequate financial planning and implementation capacity. The evaluation team concur with the observations of the DFID assessment that CDMP II has offered ‘good economy’ (e.g. lower management costs than some other UNDP projects) and exhibited numerous good practice examples over the years. In terms achieving programme results, most targeted outputs were achieved, as revealed by the key indicators (e.g., number of beneficiaries, skill development through training programmes). Also, due to CDMP II’s positive economic performance, output visibility, and earned reputation, new programmes in the country are adopting its lessons and principles (e.g. an over $14 m project on Seismic Risk Mitigation and Emergency Preparedness, $125 m project on Urban Resilience Project). The Evaluation Team recognizes that upon implementation of the entire project cycle, benefits of the CDMP II interventions, especially from Early Warning System and Core Family Shelters (see Box 4.1– VfM), would outweigh the costs, and provide extremely high value for money. This is more valid particularly for the Early Warning System (EWS) interventions. It is important to highlight here that clearer evidence is required to conclude on VfM definitively across all activities and/or components. It also requires close and effective monitoring of results and book keeping on output-based costing. DFID VfM assessment demonstrated the significance of output-based costing, which revealed varying performance by outcome area whereby outcome 1 has been slowest spender and outcome 5 has achieved highest utilization rate (Table 4.2.3.2).

**Table 4.2.3.2: Expenditure by Outcome Area, CDMP II, 2014**

|  |  |  |
| --- | --- | --- |
| **Outcome area** | **Expenditure as of End of 2014 ($)** | **Budget Utilization** |
| **Outcome 1 (institutionalization of DM)** | 1,997,376 | 58% |
| **Outcome 2 (LDRRF)** | 22,724,525 | 69% |
| **Outcome 3 (urban risk reduction)** | 10,661,564 | 80% |
| **Outcome 4 (early warning)** | 8,016,704 | 75% |
| **Outcome 5 (capacity building)** | 11,628,440 | 86% |
| **Outcome 6 (CCA)** | 1,166,469 | 81% |

Source: CDMP-II Value for Money Analysis Report, 2015.

*Early Recovery Facility (ERF)*: ER project interventions appear to be generally cost-effective. The unit cost of Disaster Resilient Core Family Shelters, for example, was quite competitive market price-wise at the time of implementation. However, the lessons learned from these shelter programmes indicate that linking the disaster shelter programmes with livelihood opportunities make then considerably more efficient and effective (as elaborated in Sub-section 4.1.1).Under the Kedarbazar Resilient Habitat programme at Kedarbazar, Padmapukur, 43 disaster resistant houses were constructed, at a cost of approximately US $211,754. At the time of its implementation, it was a very innovative initiative. These ‘resilient housing’ structures have provided a sense of dignity, safety and security against catastrophic cyclones and storm surges to the landless recipients. However, the evaluation team learned that the clay-tile roofs are prone to leakage,revealingpoor-quality construction; further, the staircases were of poor design and several children were injured falling through the gaps between steps. Subsequently, ERF provided white corrugated iron sheets to address the roof leakage problem.Even though the quality of ‘resilient houses’ has suffered, economically these shelters proved to be efficient, witha Benefit Cost Ratio (BCR) ofis 1.88:1.

*Poverty Environment Climate Mainstreaming (PECM):* All outputs have been delivered within the stipulated timeframe of 3.25 years. Necessary line allocations were adjusted, more was spent on Outputs 3 and 5 than the budgeted allocation, and the over- expenditure was adjusted by cuts in Output 1 and Output 6. The delivery efforts were conducted with respect to economic dimensions. Although the results can hardly be monetized, the PECM interventions tend to generate high Value for Money, particularly considering relatively small budget ($1.0 m).

***Box 4.2 : DisasterResilient Habitat (ERF)***

“*It was very helpful that UNDP built that house for us, which we could not afford, and [that] they also gave us 10,000 BDT cash. We do some fishery in the pond to meet our own demand, and occasionally we sell some. Ponds were damaged during Cyclone Aila, [and] we repaired them by ourselves. We think, if there is another cyclone like Aila, then we will not be swamp[ed] away. We can take shelter at our own home; the base of our home is constructed very strongly. We got training on health, on sanitation issues, and what should we do during disaster[s] and how should we prepare ourselves. Now we are [more] prepared than ever before…”* Alauddin Par (40), a beneficiary of Kedarbazar Disaster Resilient Habitat

Reflecting on changes made by the Disaster Resilient Habitat (DRH), constructed in 2011 and aiming to reduce risks and exposure to consequences of extreme natural events (such as, tidal surges, cyclones), Mr. Par expressed the above. The UNDP-supported DRH programme, as a component of the Early Recovery Facility (ERF) (2011-2015) project, intended to strengthen the community’s resilience and provide income-generating opportunities for community members in the village of KederbazarAdarsha Gram, situated in northeast Padmapukur union in Satkhira district. The village – known as Adarsha Gram - was established for 68 families with 43 households in 1987. In 2009, cyclone Aila completely destroyed the village and left the area inundated for months.

In order to restore the lives of these villagers and improve their coping ability, UNDP and BRAC, in cooperation with the Department of Architecture of BRAC University, extended their support to reconstruct the village’s infrastructure. Under the Early Recovery Facility (ERF) project, this initiative was carried out in cooperation with local inhabitants and administration between November 2009 and October 2011 by applying the concept of “build back better“after a disaster. The UNDP Early Recovery Facility (ERF) project promotes national ownership of the post-disaster early recovery process through the fullest possible engagement of national and local authorities in the planning, execution, and monitoring of recovery actions. The ERF Project is working towards establishing a coordinated early-recovery mechanism in Bangladesh by setting up a functional early-recovery mechanism, enhancing the capability of the government’s disaster management officials, and networking disaster management volunteers ready to respond during emergencies.

As a component of ERF, in the village of Kederbazar Adarsha Gram the concept of tile-covered structures elevated on pillars was applied to 43 houses with the intention of exploring new options for disaster-resilient habitats in exposed coastal areas. The estimated **Value for Money of the DRH is: Net Present Value (NPV) is Tk.** 468,000**, Benefit Cost Ratio (BCR) is 1.88:1, and Internal Rate of Return (IRR) is 10.50%.**

The adopted design, along with the fully participatory design and implementation concept, appeared viable and successful in the initial phase. However, the design exhibited some deficiencies due to extreme ‘physical exposure‘ of the location and ongoing usage of the structures. Over time, it became evident that the community was unable to properly maintain the infrastructure due to inadequate engagement with income-generating activities.

In order to ensure sustainability of the project and durably strengthen the community's resilience to disasters and climate change-induced vulnerability, UNDP intended to commit additional funds for structural rehabilitation, infrastructure improvement, and capacity building on WASH awareness and livelihood sensitization. This marked the beginning of phase II of the DRH project in Kederbazar.

Social power structures play a role in the state vulnerability of the poor. “*Because of shrimp farm[s] (gher) we the poor people are suffering most. For example, previously people cultivated paddy [and] from that we used to get straw as fuel for five to six months. Besides that, we produce vegetables around our homestead and used to work in the paddy field and carry paddy at farmers’ house, and they give us paddy which was enough for five to six months’ household demands of rice. Now we do not have that opportunity, now everybody is leasing their land to shrimp businessman. Shrimp farms (gher) contain salt water, and during cyclones salty water increases very rapidly. Moreover, because of salty water [from] shrimp farms we cannot grow vegetables, and our trees do not grow quickly. For earning, we have to look for our own way and many of us have to migrate to outside for seasonal works, even the females...”* Alauddin Par (40), a beneficiary of Kedarbazar Disaster Resilient Habitat.

The villagers exhibit resilience to these social stresses through migration and other adaptive measures while their vulnerability to disasters is reduced significantly by the DRH houses.

*Community Based Adaptation to Climate Change through Costal Afforestation in Bangladesh (CBACC-CF)*: Both the MTR and evaluation team observed that the project disbursement is relatively low at 76% as of 2014 (4th year of the project implementation period). Coastal communities have not only pursued regular, short-term and medium-term alternative income options, but also planted forest tree species on their dikes in order to reap long-term benefits. Planting trees and palms on dikes provided communities with long-term timber and mid-term fuel wood from branch pruning, as well as food (e.g., coconut) products. The project has until now been able to increase the average annual income of landless and marginalized groups through enhancing their adaptive capacity. The Triple F Model is an important component of the CBACC-CF project that provides very high value for money with a BCR as high as 5: 1. Many of the planned outputs are ahead of schedule, while others are generally regarded as secondary. The project overall has been efficient in achieving the targeted outputs; however, their sustainability and outcome results remain major concerns.

*Barrier Removal for Energy Standards and Labeling (BRESL)*: the BRESL Project was supposed to start in 2009, but finalization of TPP (approval) and hiring of Project Staff delayed implementation by almost 1 year. Therefore, project activities began in July 2010withthe nomination of a National Project Director (NPD) from BSTI under the Ministry of Industries (MoI). More than 85% of allotted funds have already been utilized by the project and it is likely that more than 90% (UNDP requirement) of targets will be met by the end of the project in 2015.

**Table 4.2.3.1: Actual launching and Mid-Term Review (MTR). In comparison with Scheduled launching and MTR period**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name of the project | Scheduled launching year | Actual  launching year | Scheduled  Mid-Term Review | Actual  Mid-Term Review | Remarks |
| Comprehensive Disaster Management Programme (CDMP-II) (2010-2014) | 2010 | 2010 | 2012 | 2012 | On time |
| Early Recovery facility (ERF) (2011-2015) | 2011 | 2011 | 2013 | 2014 | On time |
| Poverty Environment Climate Mainstreaming (PECM) (2010-2013) | 2010 | 2010 | 2012 | 2013 | Delayed |
| Community Based Adaptation to Climate Change through Coastal Afforestation in Bangladesh (CBACC-CF) (2009-2013) | 2009 | 2009 | 2011 | 2012 | Delayed |
| Barrier Removal for Energy Standards and Labeling (BRESL) (2006-2013) | 2009 | 2010 | 2013 | Not Yet | No Mid-Term Evaluation |
| Improving Kiln Efficiency in the Brick Making Industry (IKEBMI) (2009-2014) | 2009 | 2010 | 2012 | 2014 | Delayed |

***Box 4.3 : Triple F (Forest, Fish and Fruit) Model (CBACC-CF)***

*“The ditch and dyke (Triple F Model) has changed my life. I got fish spawn from [the] Fishery Department and as per their instruction we created [a] water body for fishery with rain water. I also got some seeds from [the] agriculture office and bought some by myself and I grow vegetables such as squash, pepper, melon, and palm. If I can work hard I can grow vegetable[s] all the year round... These ditches were given to us because we live close [to the] ditch and dyke, and can look after them. Besides, [Project personnel] gave to those who are poor, those of us [who] live on and close to river. Because of the difficulty of coming to the ditch during [the] rainy season often other people steal our fish and vegetables. But [the] ditch does not go under water unless there is another Cyclone like Sidr. From [the] ditch I earned 5000 BDT by selling squash at market and ate some squash worth 1000 BDT. It has become an additional income source for me. I was able to spend some money for my children, especially for their education, [and] bought some sweets for them. Moreover, for three months (Bengali Poush, Mag, Falgun) we do not have work in the field or fish in the river, no work in the area, then the ditch and dyke help us to earn and make a living…”* Tofazzol Hawlader (30), a Triple F model participant in Naltona Union, Barguna Sadr Upazila, Barguna.

*“Cyclone Sidr took away everything including my house and all assets. [The] ditch and dyke (Triple F model) helped me a lot [in] terms of my loss recovery. It has been five years since I was involved with [the] ditch and dyke model. Last year I sold vegetable of thirty thousand taka, this year I am sick that is why I could not do well. Ditch and dyke is good for me and also for our community…”* ShanuMollick (42), a project beneficiary of Sonatala village of Naltona Union, BargunaSadar, Barguna.

The Triple F (Forest, Fish and Fruit) model is an innovative and integrated land-use practice pioneered by the CBACC-CF project, which provides climate-resilient livelihoods for coastal communities living around the coastal forests. The model was implemented in the encroached, periodically-inundated and unproductive fallow lands behind the mangrove forests to develop participatory ownership and adaptation practices. The Triple F model was developed to explore new options for resource and income generation by integrating agriculture, forestry, fisheries and livestock in one system for continuous resource generation. It comprises resource generation measures that contribute to recurrent income generation, leading to livelihood sustainability and increased adaptive capacity for poor coastal communities. Consequently, the estimated **Value for Money of the Triple F Model per beneficiary household is: Net Present Value (NPV) Tk. 870,000, Benefit Cost Ratio (BCR) 4.88:1, and Internal Rate of Return (IRR) 50.90%.**

Under the UNDP-supported CBACC-CF project, the Triple F model is being implemented on 112 ha of fallow land as a pilot adaptation intervention in three coastal districts. In each hectare, eight ditches and nine dykes were developed and distributed to eight families on a ten-year land ownership agreement with renewal opportunities depending on beneficiary performance. Additionally, the project trains farmers to switch from single to double-cropping patterns, and provides a high-yield, salt-tolerant rice variety and improved fruit varieties. These strategies improve and diversify livelihoods, thus increasing the adaptive capacity of local communities and engaging community members. Building on the success of the project, the Government of Bangladesh is currently working to mainstream climate change resilience into national coastal zone management policies, including developing coastal land use policies that will make it easier to identify suitable lands for Triple F arrangement.

*Improving Kiln Efficiency in the Brick Making Industry (IKEBMI)*: Considerable delays occurred in the start-up of the IKEBMI project, but it was eventually implemented within the scheduled 5 years. However, the project produced fewer outputs than expected. Cooperation with one technology provider partially hampered the efficiency of the project as this provider was distracted by other contracts (e.g. a World Bank project). Also, it opened up the project to criticism because the focus was placed more on technology demonstration than on reaching a larger audience of potential stakeholders.

However, a comparative financial analysis between traditional and low carbon emission-based (Green Brick) brick making activities was carried out during this mid-term evaluation effort. It revealed that Green Brick making is more efficient than traditional methods, the BCR being 1.92: 1for Green Brick making compared to 1.48: 1 for traditional manufacturing. The NPV for Green Brick is Taka 87 million compared Taka 27 million for traditional brick manufacturing.

Due to limited access to budgetary and expenditure information of the sampled projects, an economic analysis, particularly with respect to Value for Money (VfM), was not possible. Instead, the evaluators, by taking a Case Study approach, focused on in-depth analysis of selected projected components. All VfM analyses of project components produced cost-benefit ratios larger than one.

***Box 4.4 : Green Bricks vs. Traditional Bricks***

*“Green brick making in improved tunnel kilns saves 35% coal [compared to] the traditional brick making kiln which ultimately [reduces] CO2 emission in [the] air. Traditional brick making industry owners need awareness and technological training about the benefits of the green brick making and [the] establishment of the improved kiln. [The] government should come forward in providing necessary support and incentives to establish improved tunnel kilns. [The] banking sector can play a big role in providing loans [for] establishing tunnel kiln (HHK) as [the] investment cost is more than Tk. 20 million. Consumers are also more interested [in buying] green bricks with higher prices than the traditional one”-*LiaquatHossain, Project Engineer, Universal Bricks (Green Bricks project), Dhamrai, Dhaka

Explaining the prospect of ‘Green Bricks’ that have been piloted by the “Improving Kiln Efficiency in the Brick Making Industry” (IKEBMI) (2009-2014, 3.0 m USD) project, these were the words of an engineer who was helping in the implementation of the programme. Branded as the GREEN Brick Project of UNDP Bangladesh, it is designed to remove barriers to the widespread adoption of energy efficient (EE) Brick kilns in the brick making industry (BMI). This project is providing better technology options to existing BMI entrepreneurs, replacing the traditional, highly-polluting kilns, exploring environment friendly brick making procedures, and initiating sustainable green business options. Traditional brick making operations are one of the largest sources of greenhouse gas emissions in the country, estimated at 6 million tons of carbon dioxide (CO2) annually. It is also a major source of land degradation and deforestation. The Green Brick Project to implement 15 demonstrations of energy efficient kilns over a five year period. It is expected to result in the direct energy savings of 314 kilotons of coal by the end of the project. Following this, direct greenhouse gas emission reductions next 15 years should be of 1,464 kilotons of CO2.

While the project built a significantly reduced number of demonstration facilities only, the outreach and public resonance of the project lead to a sustainable and lasting impact. The project triggered a discussion about this technology and ultimately led to legal action prohibiting the worst traditional kilns, mitigating some of the environmental consequences and opening minds to the possibilities of modern tunnel kilns.

This project paid special attention to the gender dimension. The work force at traditional kilns is 15% women, at HHK 23%. Separate sanitary facilities exist in the demonstration projects, but more importantly the project added awareness components in their work with brick kiln owners and provided explicit and specific monitoring information on gender balance. As work in HHK is not seasonal, these kilns do not employ migratory workers and thus offer employment to the local population. A crucial fact is that women are now more often permanent staff, and are paid directly even if their husbands work in the same plant. Out of 5 women who were giving birth, just 1 remained jobless while 4 said they were paid by the kiln owners during maternity leave, “a scenario quite unimaginable in the traditional system.” (Chisty, 2013)

A comparative financial analysis was carried out for both traditional and green brick making activities. It can be seen that Green Brick making is more efficient from financial point of view. BCR for Green Brick is estimated as 1.92 compared to 1.48 for traditional brick. NPV for Green Brick is estimated as Tk. 87 million compared to Tk. 27 million for traditional brick. The estimated **Value for Money for Green Bricks is: Net Present Value (NPP) is Tk. 87 Million, Benefit Cost Ratio (BCR) is 1.92:1, and Internal Rate of Return (IRR) is 10.5%, whereas the Value for Money for Traditional Bricks is: Net Present Value (NPV) is Tk. 24 Million, Benefit Cost Ratio (BCR) is 1.48:1, and Internal Rate of Return (IRR) is 6.9%.**

The sustainability of the project demonstration facilities is high; these are long-term investments. The 4 demonstration projects have already led to significant replication. Through triggering national discussion, the project might lead to the widespread adoption of even more environmental friendly technology. On the other hand, these new technologies will reduce the labor input and thus potentially cause income losses to migratory workers. In addition, most traditional kiln owners will not have sufficient capital resources to invest in new technologies, which are much more expensive than the traditional kilns. This will raise political resistance and ultimately put them out of business. The Bricks MTR finds that some challenges of the project might be associated with faulty assessments by the project implementer. The Review suggested that “lessons to UNDP in structuring partnerships, quality assurance, monitoring the “big picture” (in addition to the SMART indicators), and how to design demo projects” may all be derived from this experience.

Overall, the project was the first of a larger group of efforts to promote investments into more modern brick technologies – a trend that is going to continue.

**Synthesis of efficiency of project interventions**

The Benefit Cost Ratio of the two habitat-building approaches was significantly different. In the ERF ‘Resilient Habitat’ initiative, a lack of proper planning, design and facilities resulted in people “simply moving from one place to another”. In the CDMP II ‘Core Family Shelters’ project, lessons learned in ERF resulted in improved cost benefits. Among the financial benefits were reduced inventory losses in case of floods and storms, improved livelihood systems (e.g. livestock, fisheries), and rainwater harvesting. In addition, there were improved non-monetary benefits, such as overall better living circumstances leading to greater happiness, income generating opportunities, poverty reduction, access to veterinary services, and the empowerment of women.

The evaluators found that UNDP projects generally struggle with timely delivery. Design and approval times for projects were significantly too long, especially in the government pipeline. This significantly hampered the effectiveness of the projects. The only initiated project in the energy sector that can contribute to the outcome indicators is the SREPGen project. Its development began in 2011, and became effective in 2015 (year 1). Its contribution to the CPD outcome indicators would be marginal due to this long development time. Also, in case of CDMPII project development phase, there was a significant delay in the startup phase due to capacity bottlenecks and leadership problems in the government institutions (e.g., hiring of staff in the DMB).

**4.2.4 ENGAGEMENT WITH CROSS CUTTING THEMES – GENDER AND OTHER RELATED PERSPECTIVES**

The primary cross-cutting themes of concern in this evaluation are identifying and creating opportunities for gender equality within the scope of the projects and ensuring that human rights, geographical and socioeconomic disparity issues are addressed. These require assessment of the extent to which UNDP initiatives have considered mainstreaming a gender perspective in their design and implementation and determining whether both women and men have equal access to project benefits.

*Comprehensive Disaster Management Programme (CDMP-II)*:

Disaster and climate risk reduction projects usually create ample opportunities to address gender inequalities and to support conditions for more equitable benefits from vulnerability and risk reduction interventions. An assessment of the cross-cutting themes of CDMP II project by the Evaluation Team revealed that although some of the project activities have been dealing with issues of gender equality, benefits to disadvantaged groups, and some aspects of human rights (e.g. access to information, and resources), limited attention has been paid to address gender equality in the early years of implementation. However, in later years, CDMP II supported designated activities for women. For example, it worked with the Department of Women’s Affairs to develop a Risk Reduction Plan for 2013-18, an earthquake contingency plan,and a DRR tool kit. Gender equality has been advanced through the national Disaster Management Act and subsequent enforceable Rules (2014), which were drafted to ensure national and local representation of the Ministry of Women and Children Affairs/ Department of Women Affairs in disaster coordination and management committees. The Standing Orders on Disaster (SOD) spell out the responsibility of different agencies and ensure the representation of local government women members in local-level disaster management committees. However, it is evident that the female members of local-level disaster management committees are not effectively participating in the process[[60]](#footnote-60). Notably, social equity issues were not explicitly targeted by the project whereas disasters are known to augment marginalization and pauperization.

CDMP II can be regarded as a showcase of successful partnership development for intersectoral linkages among various government ministries and departments. Some of the activities involved non-government organizations, civil society organizations, and volunteers effectively; nonetheless, their scale was limited. The opportunity to cement enhanced partnership with community-based non-governmental institutions should not be missed, and be emphasized in future programming.

*Early Recovery Facility (ERF)*: ERF does not have a gender-equality focused designated Output, though two specific women-focused programmes were being implemented under Output 1 and Output 2.These addressed the under-representativeness of women in ERF stuff issue and training needs of the female DDM officials in ER. The resilience habitat intervention in Shyamnagar under the ERF project exhibited promise largely missed the potential to link people living at that community with development initiatives. The women at the local level complained about the design of the houses (the stairs are not conducive to use by pregnant women and toddlers), fresh drinking water remained a challenge, and no health or education programs were linked. After Cyclone Aila, land based production became difficult because of salinity intrusion; as males usually out-migrate during the lean season in search of employment, women back home face income insecurity resulting in erosion of family health. Limited efforts were made to understand whether men and women’s workload in the given community has increased and how these workloads could potentially be shared.

*Poverty Environment Climate Mainstreaming (PECM):* The PECM is one the most successful cross-cutting, integrative UNDP interventions, which has had profound effects on channeling budgeting for CCA, DRR and the environment, as well as on gender equality. In this regard, the example of the revised Development Project Proforma (DPP) can be cited here. DPP entails, in its “project detail” format, a description of the impact and specific mitigation measures regarding “gender, women, children, physically and mentally challenged person/excluded group’s needs” (among others). Target groups and potential benefits for different sectors of the target population must be spelled out in this DPP format. Sex disaggregated data for the target population needs to be furnished - especially concerning potential opportunities and constraints to women created by the project. The manual adopted a Gender Analysis Framework to systematically analyze gender relations within a community and identify issues and barriers facing women in the community. As another example, the Department of Women’s Affairs organizes training for their officials at different tiers on a regular basis. Climate change and environment and disaster risk reduction are among many subjects covered in this training. However, though mainstreaming gender in all development projects has been facilitated through the revised DPP manual, it has not yet been implemented - partially because there is a need to strengthen capacity on gender issues.

*Community Based Adaptation to Climate Change through Costal Afforestation in Bangladesh (CBACC-CF)*: The CBACC-CF project Outcomes does not include any gender-specific activities and results, while the intervention per se largely relates CCA to livelihood enhancement (in which women’s role is very prominent). However, some of the CBACC-CF project components engage women heavily in their implementation. For example, in the Triple F Model, women are largely engaged in the production system. However, the productive inputs are collected from the markets by male members while the women take the lead in maintaining production (specifically the Ditch and Dyke interventions at the coastal belt). The workload of the women consequently has increased enormously; they are taking the risk of entering the deep forest even in the rainy season. No work load sharing effort was made. The CBACC-CF project needs to reassess and re-focus on gender implications of local level interventions and create ‘space’ for women in decision-making.

*Barrier Removal for Energy Standards and Labeling (BRESL)*: Gender or poor population groups were not explicit components of this project.

*Improving Kiln Efficiency in the Brick Making Industry (IKEBMI)*: This project paid special attention to the gender dimension. The work force at traditional kilns is 15% women; at HHK, 23%. Separate sanitary facilities exist in the demonstration projects, but more importantly the project added awareness components in their work with the brick kiln owner and provided explicit and specific monitoring information on gender balance. As work in HHK is not seasonal, these kilns do not employ migratory workers and offer stable employment for the local population.

The evaluators observed and inferred that in some of the sampled projects where women were engaged, this occurs in a largely heuristic manner. There is no systematic or consistent approach to gender gap issues. In general, gender equality opportunities in the projects have not been prominent in the early documentation, and that there have been inadequate efforts to explore all reasonable opportunities to engage more women in project planning, decision-making and implementation of projects, particularly at the local community level.

In most interventions, nominal consideration was given to other disadvantaged groups (i.e. disabled people and ethnic minorities). For example, under the CDMP II project, issues of access to early warning systems by various socioeconomic classes remained unexplored.

The UNDP initiated projects did not pay adequate attention to the environmental and social implications of Bangladesh’s rapid industrialization and movement towards MIC status. Consideration of these cross-cutting aspects is crucial to make the results socially and environmentally feasible. For example, the fuller implementation of the IKEBMI project would push a considerable number of laborers and traditional kiln owners out of business unless they can mobilize increased financial capital.

**4.2.5 *SUSTAINABILITY* OF OUTCOMES, AND POTENTIAL FOR REPLICATION**

*Comprehensive Disaster Management Programme (CDMP-II)*: The high degree of success in institutionalizing and mainstreaming DRR and CCA by the CDMP II through policy, knowledge delivery and management, and advocacy work at the national level is likely to besustainable in the long run. The participation in and ownership of DRR and CCA, which were assisted by the CDMP II project activities, by the key government ministries and departments were exemplary. Maintaining the synergy of DRR and CCA in sectoral activities and budgeting, however, will require further support beyond 2014. This is more applicable because many key institutions are still evolving. As the mid-term review observed, CDMP’s primary Government of Bangladesh counterpart, namely the Disaster Management Bureau in the Ministry of Food and Disaster Management, has remained under-resourced and has limited capacity to provide further leadership in mainstreaming DRR and CCA in the country. The sustainability risk is high in a number of areas, which were found in the programme design and implementation. As the institutional capacity continues to be deficient at the sub-national and local level, as well as at the city corporations’ level, it will be necessary to underscore cross-scale (City corporation/district, *upazila,* union level) sustainable capacity and institution building. For example, urban volunteers were trained without provision for their institutionalization or a long term sustainability strategy. Re-fresher training would be required covering new technologies andrisk types. Without cross-scale institutionalizing of DRR and CCA, current achievements would face gradual degradation. The risk reduction activities funded directly by CDMP II through Local Disaster Risk Reduction Fund (LDRRF) could be made sustainable by strengthening the engagement and capacity building work with the Disaster Management Committees and local level institutions as well as by integrating DRR and CCA with local level livelihood security and enhancement programs.

*Early Recovery Facility (ERF)*: The Evaluation Team found that most of the ERF initiated interventions (e.g. capacity building and enhancement of DDM officials, hazard specific contingency plans, annual reporting provision on disaster response and recovery) are closely anchored within relevant units of DDM. Nonetheless, continuous updating and refreshing of knowledge and skills will be required to sustain ERF and its capacity. Sustainability of local programmes and their benefits will not be ensured without effective partnership with the local government and other development partners (e.g., reconstructed rural roads and embankments, health and education, Core Family Shelters). Resilience of the community could further be enhanced by integrating livelihood approaches.

*Poverty Environment Climate Mainstreaming (PECM):* Many achievements of the project are likely to sustain; however, as MTR recommended, a follow-on project is required to consolidate the gains made and build a constituency for change. Knowledge generated by the PECM project will indirectly help enhance resilience of the country as a whole and vulnerable communities in particular against climate change and natural disasters. It should also help manage natural resources more efficiently and effectively through environment friendly, low emission and climate resilient development.

*Community Based Adaptation to Climate Change through Costal Afforestation in Bangladesh (CBACC-CF)*: The recurrent income generation from continuous flow of resources has increased the adaptive capacity of the coastal communities to cope with climate change related shocks and disaster impact. The livelihood support is likely to sustain the Fish, Fruit and Forest (Triple F) Model in any anticipated conditions induced by climate change. Additional measures, focusing on enhancing management and technical capacities, are necessary to ensure the sustainability of the project interventions.

In line with the principles of the UNDP Adaptation Policy Frameworks (APF) and NAPA priority profile the type, the Triple F Model contributes to ongoing activities by the government and other donors who are actively working towards coastal development. This approach will ensure that the implementation of the NAPA priority profile is not undertaken in isolation but contributes to ongoing activities by government and other donors who are actively working towards coastal development. Institutional linkages are expected to continue strengthening through cross-functional community-based adaptation measures, which in turn will enhance the sustainability of project outcomes.

Once the viability of the applied adaptation interventions is proven and national and local adaptive capacity has increased, there will be further opportunities for up-scaling and replication in other coastal sites exposed to climate-induced hazards. As revealed in the MTR, the potential is high for this project to serve as a showcase and technical model for adaptation in coastal areas, provided that land ownership of the beneficiaries at the community level can be addressed and demonstrated technologies valídated.

*Barrier Removal for Energy Standards and Labeling (BRESL)*: The standards have found entry into the EE&C Master plan (March 2015). While they are not mandatory at this stage, they are scheduled to become so over time. Replication in the sense of widening the scope to more appliances and other areas of energy efficiency is possible and strongly recommended. Review and tightening of standards must be ensured and institutionalized between SREDA and BSTI.

*Improving Kiln Efficiency in the Brick Making Industry (IKEBMI)*: The sustainability of the project demonstration facilities is high, as these are long-term investments. The four demonstration projects have already led to significant replication. By triggering national discussion, the project might lead to the widespread adoption of even more environmental-friendly technology. However, these new technologies will reduce labor requirements and may thus potentially cause income losses to migratory workers. In addition, most of the brick kiln owners of the traditional kilns will not have sufficient capital resources to invest in the new technologies, which are much more expensive than the traditional kilns, without financial support from public and private institutions (e.g. banks).

**Synthesis of sustainability and replicability of project interventions**

UNDP initiated projects have demonstrated that sustainability is ensured through policy changes and institution building at the national level. However, all policy changes require continued attention, capacity building, institutionalization of volunteer training, refresher training, and technical competence development. This also includes the regular review of the set rules including updating of regulations, guidelines, manuals, and technical methods. The GoB should be able to rely on continued UNDP contribution and support (e.g., PECM- in particular TPP and DPP formats, BRESL, Green Bricks (Center for Excellence), CDPMII, ERF).

In local communities, project inputs have achieved commendable results. However, sustainability and replicability of these lessons learned and results would not occur without enhancing local government and community capacity. In future programming, it therefore will be important to link up with the local governments more closely. Thus far, this has not been done effectively and efficiently.

Deficiency in revenue generation or cost-recovery (full or partial) in project components is a key factor in the lack of sustainability and potential for replication in demonstration projects. As the most of the activities continuously rely on project financial subsidies, the process causes a distortion in the true cost of implementation of initiatives. Training for innovation and use of market forces will be necessary to address this issue. The communities should be directed to assemble savings to create assets. This question has not yet been adequately explored, but is crucial for sustainability and shock resistance (robustness of infrastructure, self-organization capacity) and resilience (bouncing back, adaptive capacity). Economies of scale and scope should be leveraged. This is evident from the experience of the Core Family Shelter in Bainepara, Dacope, which has been able to integrate more of the population in the physical and financial capital creation.

In respect to replication and scaling-up of demonstrated projects, development of a deep ‘sense of ownership’ by the respective government ministries and/or departments as well as the local institutions and communities is vital during the project cycle. GoB ministerial ownership in general was substantial for the initiated projects, though local government and community ownership was often lacking. For example, the cyclone storm surge embankment which was breached by Cyclone Aila in Shymnagar *upazila* was not reconstructed or repaired. To ensure the sustainability of results, future projects will need to emphasize the development of a ‘sense of ownership’ through effective engagement and sustained partnership.

**SECTION 5**

**CONCLUSIONS AND RECOMMENDATIONS**

This UNDP CDP 2012-16 mid-term outcome evaluation (outcome 3.1 and outcome 3.2) provides an assessment of UNDP CCED Cluster’s ongoing activities during 2012-14 as well as a set of recommendations for improving outcome performance and establishing a more relevant, effective, efficient, and sustainable country programme CCED areas (namely, climate change, the environment, disaster management and risk reduction, natural resource management, renewable and efficient energy, and the advancement of women). The conclusions and recommendations offered in this outcome evaluation report are based on the findings presented in Sections 2,3, and 4, and are expected to contribute both to the achievement of outputs and outcomes, and to assist a better strategic positioning of the UNDP during the upcoming 2017-2021 programme cycle. The following recommendations highlight only the most critical areas in which UNDP CCED Cluster can improve its visible contributions towards sustainable economic growth and development, environmental and natural resource sustainability, and energy security of Bangladesh.

**5.1 SUMMARY OF FINDINGS AND CONCLUSIONS**

**Overall CCED Portfolio**

This mid-term outcome evaluation was limited by inconsistencies and gaps in the CPD outcome statements and the indicators chosen to measure them. This has been affected by a complete lack of baseline data for a number of important indicators. As a result, the evaluators decided to use proxy indicators and apply the Theory of Change in order to draw conclusions.

The analysis of UNDP interventions and other activities in preceding sections has revealed that Bangladesh has made remarkable progress in mainstreaming climate change, environment and disaster management and poverty reduction. The Sixth FYP contains references to most of the policies, strategies and approaches that UNDP and its development partners have supported during the present UNDP country programming period in the CCED portfolio. These achievements, as detailed in Annexes XII.a and XII.b, can largely or partly be attributed to a dedicated and capable group of technocrats, and decision-makers at UNDP as well as government policy makers, NGOs, civil society and donors. These accomplishments should nonetheless be qualified with critical analysis. Lack of political stability and human security has hampered the implementation of economic and developmental activities in recent years and could adversely affect the pace of implementation of CCA, DRR, energy, and women’s empowerment activities in the country.

The evaluators recognize that the UNDP CCED Cluster has maintained a high profile for CCA and DRR, enhancement of community resilience, environmental protection, and community-based natural resource management initiatives in Bangladesh, creating an earned ‘credibility’ and ‘visibility’ for these roles and contributions. UNDP Bangladesh has managed to deeply and constructively engage with major key players throughout the country, although interventions to protect the environment and vital common property resources (e.g. fresh water and forests) have declined in recent years. The CCED Cluster has been able to stimulate stakeholders (e.g. CDMP II and ERF in the areas of mainstreaming DRR and PECM) at the national level, in NGOs and local communities, and in some cases the private sector. The CCED programmes during the 2012-14 period have supported priority policy development, development of action plans and strategies, guidelines and regulations, and community-based initiatives (afforestation and livelihood enhancement) in the areas of resilience habitat development, energy efficiency, and empowering women.

The UNDP CCED portfolio in Bangladesh has piloted innovative approaches to DRR and enhancement of community resilience, which in turn have contributed enormously to equitable economic growth and MDGs. While the portfolio is diverse and extends across multiple societal levels (local, regional, national and global), a number of common denominators - namely, policy advocacy, intersectoral linkage, innovation, and social mobilization - have assisted an underlying coherent and ‘team approach’ in this Cluster. However, this coherence has not always led to further coordination and communication with other UNDP portfolios, which needs to be addressed.

**UNDP CCED portfolio’s contributions to CPD 2012-16 outcomes centred on three threads:**

Most projects and partnership activities emphasized contributing to the institutionalization of CCA, DRR, and an integrative poverty-environment-climate nexus through mainstreaming of planning and budgeting;

UNDP played an ‘honest broker’ role between the international community/donors and the government and consistently engaged itself with policy support and advocacy that serves the broader interest of humanity and the national priorities of Bangladesh. In line with its comparative advantage as a neutral and trusted development partner, UNDP Bangladesh supported various forums and activities to garner assistance for channelizing resources, technical assistance, and knowledge. However, maintaining liaison with other UN agencies, international development partners, and donors has not been consistent and adequate to support multilateral development projects.

The UNDP CCED Cluster pursued community mobilization and benefitting community members (e.g. local landless and small landholders in the CBACC-CF project; landless in ERF Kedarbazar Resilient Habitat programme; brick field owners in the IKEBMI) and applied them as an underlying moral driver. These innovative initiatives and approaches have proven effective in strategically positioning UNDP to further contribute to the sustainable development approaches of the GoB and the people of the country.

The long development cycles observed for both energy standard and efficiency projects - 5 years from conception to implementation - endanger the relevance of these projects. While donors wait with significant funds to implement projects meeting the government’s current needs, those needs could very well change by the time a project is implemented. UNDP is currently in a good position to leverage its global stature and international networks for providing leadership in accumulating and sharing lessons learnt and innovative approaches to energy efficiency. In addition, UNDP Bangladesh has a distinct risk management and resilience-building profile which can also be leveraged in the area of energy security and the environmental and social risks of industrialization and growth.

Sustainability of results has generally been achieved through policy changes. However, all policy changes require continued attention, capacity building, institutionalization of volunteer training, refresher training, and technical competence development. The GoB should be able to rely on continued UNDP support (e.g. PECM - in particular TPP and DPP formats, BRESL, IKEBMI - Center for Excellence, CDPMII, ERF). In several cases, implementation partners have developed a sense of ownership (e.g. the Department of Disaster Management is sustaining the training of the CDMPII from their own resources).

In summary, the UNDP CCED Cluster has played key roles in CCA and DRR policy development, with potential for future development in ‘building and enhancing resilience’ as an overarching programme theme. It has earned considerable experience in CCA and DRR, but is still lacking in the areas of environmental protection and common property resources.

**Performance Rating**

The UNDP CCED projects were found by the evaluators to be ***highly relevant,*** as they cater to the urgent needs of the country and the priorities of the GoB. Most interventions and activities are appropriately designed to address critical CCA, DRR, and DM needs in Bangladesh. ***The projects that emphasize community engagement and the development of lasting guidelines, standards and policies have the greatest relevance to national and local contexts. However, there exist significant gaps in the coverage of pressing issues such as environmental and common property protection (governance, pollution, land-use practices, energy security).*** The evaluation team considers these issues extremely important as they pose a significant ‘risk’ to sustained development discourse, economic growth, and social development. On this basis, a reduction of the rating to ***marginally unsatisfactory*** would be justified. However, the cluster team, while equipped with first grade technical professionals, is small and has insufficient resources to address all these challenges. In addition, there was internal and external resistance to UNDP to addressing some of these ‘hot’ topics. The resulting ***relevance*** rating is thus ***satisfactory.***

***The extent of achievements is rated as satisfactory. However, the quality of the outputs is not always controlled. Some outputs are very good, like the various modalities developed in the course of the PECM. Other outputs, such as some of the knowledge product components of CDMPII, are of marginal quality.*** For examples, computers have been sitting unused in the district offices due to poor equipment choices or lack of trained technicians. Limited or no monitoring is being pursued to link community-based risk maps with local government and planning authorities so that further supports for DRR and CCA can be offered to the local government and communities.

***Generally, delivery on the policy level was more effective than on the ground.*** Timeliness of interventions was largely appropriate, in particular in the area of CC adaptation and disaster risk. However, the energy technologies currently promoted in the energy efficiency area are quickly becoming obsolete. While the activities in the ODS area are at least partially in advance of any international commitments made by Bangladesh, the implementation of other multilateral environmental agreements like the Minamata Convention has not yet begun. **Overall, an *effectiveness* rating of *marginally satisfactory* is given.**

***For all project components on which analysis was performed, Value for Money (VfM) was higher than one, implying that benefits surpassed cost of development and implementation. Overall, compared to international benchmarks, the efficiency in terms of funds invested and the value of benefits is very high. Therefore, a rating of satisfactory is given on efficiency of selected project components.***

***Notably, the CCED portfolio showcased both integrated and non-integrated approaches that demonstrated the superiority of integrated approaches with appropriate designs and materials in terms of VfM and non-monetary benefits.***

***In terms of the efficiency of delivery and management, a number of challenges were encountered, including long project development times and poor documentation and management of knowledge products.*** With adequate resource inputs, project management and delivery could have been much more efficient. Therefore, this area is rated *marginally unsatisfactory.* ***Overall, this results in a rating of marginally satisfactory for efficiency.***

Gender equality, empowerment of women, and human rights considerations are not as prominent in the CCED projects as they could be. Although efforts are being made to encourage implementation partners to do more regarding women’s and human rights, the UNDP strategy did not place sufficient emphasis on these issues.

***Many projects have achieved good or very good results, but the sustainability of the results is in question. While a final rating cannot be given as implementation of most of the projects are not yet fully implemented, it appears that a preliminary rating of marginally satisfactory for sustainability is justified, as the provisions that UNDP made for the continuation of several activities (e.g. energy efficiency in appliances, technology transfer in brick manufacturing) were largely inadequate.***

**Thematic Areas**

The comprehensive disaster management approach by the UNDP CCED Cluster has contributed to transformational institutional changes in disaster risk reduction, early warning, emergency response, and early recovery facility in Bangladesh. The effectiveness of such measures was reflected in the successful response and recovery from the effects of Cyclone Mohasen in 2013. However, the intervention focus has remained primarily on natural disasters events, with inadequate coverage of technological and anthropogenic emergencies.

The early recovery facility provisions have successfully been mobilized to institutionalize them at the national level. As tested during Cyclone Mohasen in 2013, these provisions appear satisfactory. However, a large-scale disaster comparable to Cyclone Sidr or a similar event has yet not been tested for ERF, and therefore its effectiveness cannot be assessed with a high degree of confidence. The evaluators, however, found that in Bangladesh, the concept of “emergency management” is embedded in both the sectoral approach (i.e. oil spills fall within in the jurisdiction of the Inland Water Transport Authority, and chemical spill with the Ministry of Industry) and the DM domain. Thus, an important knowledge gap exists, as in all developed countries *emergency management* (EM) is regarded as an intersectoral but independent portfolio in government policy. This is also appropriate in academia and other knowledge sectors. CCED interventions, particularly ERF, did not recognize this gap in knowledge and practice. There is a unique potential to contribute for UNDP to mainstream EM portfolio in government policy domain.

The UNDP CCED Cluster has made significant contributions during the ongoing programming period (2012-14) to DRR, CCA, and community-based coastal afforestation to improve NRM and energy efficiency - which are key to poverty reduction, climate change mitigation and adaptation, environmental sustainability, and energy security. Some of these contributions have generated transformational results, while others have the potential to support the national goals and aspirations of the people.

Most UNDP CCED Cluster interventions during the 2012-14 programming period were aligned with national development and the related planning priorities of the GoB. Nurturing close partnerships at different administrative levels and establishing a rapport with government ministries and departments, national and local NGOs, and CSOs has been a key tool in remaining a trusted and valued partner of the GoB and other non-government institutions. Coordination with donor agencies and international development partners working in Bangladesh has been steady during the programming period but some weaknesses do exist in terms of realizing the full potential of such partnerships and multilateral programme development.

Efforts to mainstream poverty reduction, climate change mitigation and adaptation, and the DRR nexus within the national planning system and government departments by UNDP generated measurable and visible results, with success being seen primarily at the national level in planning and budgeting provisions and activities. Mainstreaming such an integrative poverty-environment-climate approach among the sub-district and local level governments has yet to be addressed with necessary vigour.

The Community-Based Natural Resource Management (CBRM) approach adopted by the UNDP CCED Cluster has effectively supported the GoB in benefitting local community members. However, efforts to enhance the collective strength of poor and vulnerable populations were constrained by local vested interests. The focus of intervention targets was primarily on household-level needs; more intersectoral integration (e.g. with the Water Development Board, LGED, and DPHE) is required. For this reason, the full potential of *economies of scale* could not always be realized.

The UNDP CCED Cluster’s efforts in assisting the transfer of energy-efficient technology laid the groundwork for greener industry. UNDP coordination in providing technical assistance and building national and local capacity has produced noticeable results (e.g. the Brick Act). Nonetheless, mobilization and partnerships within the private sector requires strengthening.

While the outcome indicators were shaped according to government priorities, the current CCED portfolio is nominally contributing to the outcome indicators, as the energy sector in Bangladesh has developed faster than UNDP programming. The CCED portfolio has a strong focus on energy efficiency, which is highly relevant to Bangladesh. Both UNDP projects were able to trigger important discussions and developments in Bangladesh: the millennia-old tradition of brick kilns was questioned, and consumer standards and labels for energy efficient appliances were introduced. Through these two projects, UNDP has built a reputation as an innovator and specialist in energy efficiency.

UNDP is one of three agencies in Bangladesh that has access to the GCF (the other two being KfW and ADB). Significant upscaling of project volumes is expected. The UNDP CCED Cluster must take advantage of these emerging opportunities and challenges.

**5.2 STRATEGIC VISION AND FUTURE COUNTRY PROGRAMMING**

The outcome evaluation team believes that to effectively carry over the achievements and impacts of the current programming into the new SP and country programming cycles, an evidenced-based Strategic Vision should be developed. Based on the findings of this mid-term Outcome Evaluation, *Five Key Thematic Pillars* for developing a coherent strategic approach are proposed:

**Enhancing Community Resilience to Climate and Disaster Risk**

UNDP CCED’s contributions to mainstreaming DRR and CCA are recognized and praised by its partners. Lessons learned revealed that, in Bangladesh’s development context, DRR and CCA are most effective and efficient when the interventions are integrated with livelihood enhancement (e.g. Bainepara Resilient Habitat’s Core Family Shelter Program; Triple F Model). Such integration also pays off when it enhances community resilience. Therefore, in UNDP Strategic Planning and future programming, integration of DRR with livelihood security and human development should be emphasized. **For example, current emphasis community-oriented cyclone shelters should be redirected towards building core family shelters, which are considerably more cost-effective and promote a pro-poor economic growth approach.**Preliminary benefit-cost analysis has revealed that the benefits from building core family shelters outweigh the benefits considerably from constructing isolated community-based cyclone shelters for an equal cost-expenditure.

**Building Intersectoral Emergency Management Capacity**

Bangladesh is seeking to become a Middle Income Country by 2021. However, rapid industrialization and urbanization, along with expansion of the manufacturing sector, will create new types of environmental risk. In this regard, the recent (February 2015) oil spill in the ecologically sensitive Sundarban mangrove areas and the proximity to earthquake-prone Himalayan faults underscores the need for emergency management capacity building, which presently is *inappropriately* viewed only as a sub-set of disaster preparedness and response. These knowledge and capacity gaps should be addressed through UNDP-led initiatives to disseminate and integrate information on emergency management. Mainstreaming ‘emergency management’ for ERF and sustainable development should be prioritized by UNDP in its Strategic Planning and forthcoming country programming.

**Pro-Growth Green Development through a Transition to Renewable Energy**

The longer-term trend of economic growth in Bangladesh indicates that the demand for energy will continue to rise with greater urbanization, industrialization, agricultural extension and population growth. This is a particularly crucial issue from a perspective planning view because the domestic natural gas supply would be diminished. Therefore, shifting the gear toward more to the renewable energy, acquiring more energy efficiency and linking energy use with vital natural resource conservation and environmental protection is a key Strategic Planning tool for the country. UNDP has already established a reputation for initiating technology transfer and labelling initiatives for energy efficiency; it is time for UNDP Bangladesh to also provide leadership in Pro-Growth Green Development by focusing on expansion of the renewably energy supply and efficient energy use in all economic sectors. In UNDP Strategic Planning and country programming, linking Pro-Growth Green Development motto with new products creation, locally appropriate technology, and employment in greener sectors will help the GGD address the country’s perspective plans and goals.

**Improving Environmental Health through Strengthening Environmental Governance**

Recognizing weak governance in the area of environmental management, the Sixth FYP 2011-15 underscores the need to address institutional capacity deficiencies in ensuring effective law enforcement, and addressing ill-defined responsibilities and lack of transparency and accountability. Such environmental governance and management deficiencies have had profound impacts on Bangladesh’s environmental health[[61]](#footnote-61). With respect to Bangladesh’s economic growth, air and water pollution, soil contamination, ecosystems sensitivity, and threats to human health, it is paramount that UNDP Bangladesh assists the GoB through technical assistance. In the recent past, the UNDP CCED Cluster has contributed significantly to the promotion of biodiversity conservation and ecosystem sustainability. Building on lessons learned from these interventions, UNDP should strategically position itself to lead initiatives for improving environmental health, with a focus on common property resources (such as industrial discharge into riverine ecosystems and water quality issues, pesticide and other chemical use in agriculture and their effects on runoff, and reduction of sulphur and carbon emission from coal based power utilities) to engage both in advocacy and mainstreaming these issues in the government planning system.

**Women’s Empowerment for Climate Change Adaptation, Environmental and Natural Resource Sustainability, and Energy Security**

Gender equality and women's empowerment have only recently been vigorously pursued by UNDP, and as a result significant numbers of new activities were observed among the implementation agencies. However, since gender equality is regarded as a cross-cutting theme, the necessary focus on this issue is inadequate. This gap is reflected in the lack of gender disaggregated data, female leadership, and necessary ‘space’ in intervention implementation, and the slow progress in cultural attitudes toward women.

UNDP Bangladesh assisted the GoB (since COP 13, Bali 2007) in facilitating global networking, research, and outreach on gender and climate change issues. In recent years, there have been numerous discussions regarding the role of gender dimensions in ‘loss and damage’, with emphasis on women’s activities beyond the market system. Similarly, in community-based coastal afforestation activities and core family shelters, women’s engagement in livelihood activities was addressed, though with mixed results. Dedicated projects on women should be added to the CCED portfolio so that funds and human resources can be dedicated to gender equality in the areas of CCA, environmental and natural resources sustainability, and energy security.

**5.3 RECOMMENDATIONS**

**Overall CCED Portfolio**

1. **UNDP needs to critically review and undertake appropriate measures to reconcile CPD outcome indicators with country programme outcomes, particularly in the future country programming**. The evaluation team concluded that the UNDAF/UNDP CPD outcomes were formulated too broadly, focusing on a *national scale change* and *impacts.* This is because in the UN system, the planning process requires the establishment of outcomes to be achieved over a five-year period.

With the currently used indicators for both outcomes 3.1 and 3.2, it is not possible to determine UNDP Bangladesh’s contribution to changes and outcomes. The available data are UNDP project intervention outputs/results, and it is hard to find causal links between these and national scale outputs when most UNDP interventions are limited to a fraction of the country’s territory and population. It is thus necessary to apply the Theory of Change, which emphasizes the formation of inferences based on analysis of causal links and the estimation of larger-scale outputs based on the overall performances of project interventions. These results can then be triangulated for validation using a mixed-method approach.

The resilience indicator should be broad in scope and conceptually straightforward, incorporating the fundamental dimensions of robustness, adaptive capacity to stress and shocks, and capacity to bounce back to a new ‘trajectory’. A list of resilience components is given in Annex X. Also, recommendations for refinement of current indicators are given in

Annex XVI.

***The evaluation team recommends that sufficient attention should be devoted to baseline measurement and monitoring of progress and results****.*

1. **In order to continue to contribute to nationally and internationally relevant development programmes in the areas of CCED, UNDP Bangladesh needs to strengthen further and coordinate its partnership more closely with government ministries, departments, and other private sector stakeholders.**This is critical because Bangladesh is approaching to become a middle-middle country very rapidly. Recent CCED projects were ***very good*** in terms of their ***relevance*** as they cater to the urgent needs of the country and the priorities of the GoB. However, there exist significant gaps in the coverage of pressing issues such as environmental and common property protection (governance, pollution, land-use practices, energy security).
2. For all project components on which analysis was performed, Value for Money (VfM) was higher than one, implying that benefits surpassed cost of development and implementation. Overall, compared to international benchmarks, the efficiency in terms of funds invested and the value of benefits is very high. Therefore, a rating of ***satisfactory (i.e. good)***is given on ***efficiency*** of selected project components. However, in terms of the ***efficiency*** of delivery and management, a number of challenges were encountered, including long project development times and poor documentation and management of knowledge products. With adequate resource inputs, project management and delivery could have been much more efficient. Therefore, this area is rated *marginally unsatisfactory.* Overall, this results in a rating of ***marginally satisfactory*** for ***efficiency***. **To address these issues, UNDP needs to formulate mechanisms for reducing project development duration, allocate required funds for baseline database creation for all interventions, and establish close monitoring of costs and results, and evaluation of the outcomes and impacts.**
3. **For assessing project intervention Value for Money (VfM), UNDP should adopt a longitudinal approach that examines the flow of costs and benefits over the whole lifetime of the investment**. VfM assessment commonly conducted in UNDP interventions provides mostly cross-sectional (one point in time) perspectivesconcerning financial money-worth issues, and thus consideration of project life-time cost and benefits is often ignored. The evaluation team recommends that UNDP should adopt a longitudinal approach which would include, but not be limited to, NPP, BCR, and IRR (at some appropriate discounting rate) for future programme and project assessment. This aspect is important, among other dimensions, for examining sustainability because a programme or project with a positive payback is expected to sustain better on its own. The evaluation team also recommends that UNDP should consider adopting more rigorous methodologies for economic and financial analysis. In this case, the PECM guidelines (GED-published Manual of Instruction for Project Analysis) can be a useful tool for UNDP to assess its own projects.
4. **The extent of achievements is rated as *satisfactory (i.e. good).* However, the quality of the outputs is not always controlled. Some outputs are very good, like the various modalities developed in the course of the PECM. Other outputs, such as some of the knowledge product components of CDMPII, are of *marginal quality*.** UNDP’s overall performance on the national policy level is ***more effective*** than on the local level. For example, limited or no monitoring is being pursued to link community-based risk maps with local government and planning authorities so that further supports for DRR and CCA can be offered to the local government and communities. **UNDP CCED interventions therefore need to target more effective programme delivery to strengthen sub-national and local governmental-level capacity (in CCA, DRR and other developmental activities).**In order to strengthen the sustainability of delivery at the local level, the evaluation team believes that UNDP should strengthen its sub-national (district and *upazila* level), local (union), and village-level institutions, and empower local governments and NGOs in terms of local delivery capacity.
5. **UNDP CCED interventions need to ensure greater programme benefit delivery to the poor, disadvantaged, and physically and mentally challenged populations.**Despite the successful delivery of national-level UNDP CCED Cluster interventions, effective empowerment of the poor, disadvantaged and the physically and mentally challenged has been limited. At the sub-regional and local government level, a ‘top-down’ governance philosophy is still predominant, which is a serious impediment to enhancing the resilience of poor, marginalized populations. More emphasis should be placed on building stronger partnerships and granting such vulnerable populations a ‘collective voice' to support social justice and participatory governance, and on fostering a ‘sense of ownership’. Also, the project planning process for local implementation should be more participatory and leverage the knowledge of locals and other development partners (including NGOs and CSOs).
6. **UNDP Bangladesh needs to reinvigorate its 'risk reduction' and 'building resilient communities' portfolio within the UNDP country office, and its partnerships with GoB ministries, donors and development partners**. In consideration of various emerging problems, issues and opportunities (such as the Green Climate Fund), UNDP Bangladesh needs to strategically consolidate and strengthen its CCED portfolio by keeping its focus on 'risk reduction', 'building resilient communities', and resource mobilization and allocation. UNDP should also pay further attention in the design of their projects to creating a sustained sense of ownership by the implementing partners. It should adopt a longer-term vision and support the government in mastering the challenges of fast economic growth, emerging inequity issues, and climate and disaster risks. With its strong reputation for risk and resilience expertise, 'reducing the risk of unwise growth' can serve as a general paradigm for all areas of the UNDP country program. Government interviewees and development partners have confirmed UNDP’s role as a trusted and neutral partner; it is thus ideally positioned to adopt the role of the government’s 'warning against unwise growth'. Such unmitigated rapid growth and globalization could prove extremely disruptive to Bangladesh’s natural resources, environment, and social structures.
7. **Specifically, UNDP should work with the government in areas with clear planning gaps. Several such gaps have been identified, from the lack of a cross- or intersectoral emergency management system to a lack of a vision for green industrialization and growth**. While it is clear to the GoB that more industrialization with low cost labor is expected, there are few efforts to clearly understand in which sectors this can happen. UNDP is in an excellent position to support the government in better defining this future and develop social and environmental risk mitigation measures.
8. **UNDP has become well known as an innovator and for stimulating discussion and the adoption of new technologies, especially in the areas of risk and resilience and in the brick industry**. There are few intergovernmental agencies that can play this role. Most local innovations, such as the ongoing ‘revolution’ in the solar sector, have emerged from private or NGO initiatives. UNDP should continue to nurture further innovation, and develop a specifically Bangladeshi path to green growth and development in a more sustainable society.
9. **UNDP should undertake strong measures to develop a systemic inventory of project knowledge and lessons learned, and ensure easy access to this information**. UNDP must recognize that projects can generate value-adding assets in terms of natural and social capital, partnerships, and professional reputation. The CCED portfolio should build upon these pre-existing assets. For example, in the energy sector UNDP has built a reputation as an innovator in energy-efficient technology and as a trusted collaborator with government institutions such as BSTI and SREDA. UNDP Bangladesh needs to allocate the necessary resources to maintain these assets, and strategically utilize its position and assets in support of donors and government interests and to leverage resources to sustain current and future projects.
10. **In the face of a rapidly changing global environment, UNDP needs to ‘think ahead' strategically and nurture innovative ideas in order to shorten long project cycles**. UNDP should anticipate long-term challenges that are not yet on the government’s radar but may become very important in the future. UNDP is in a good position to leverage its global network for sharing accumulated lessons learnt and innovative approaches that work well.
11. Many projects have achieved **good** or **very good** results; however, in many cases, the ***sustainability of the results*** is in question. While a final rating cannot be given as implementation of most of the projects are not yet fully complete, it appears that a preliminary rating of ***marginally satisfactory*** for **sustainability** is justified, as the provisions that UNDP made for the continuation of several activities (e.g. energy efficiency in appliances, technology transfer in brick manufacturing) were largely inadequate. **UNDP needs to strategically design project activities in such ways that would: i) ensure a ‘sense of ownership’ of intervention beneficiaries as well as among the stakeholders; and ii) develop a financial, human and physical resource-base to sustain post-project activities and impacts.**
12. **Gender equality, empowerment of women, and human rights considerations are not as prominent in the CCED projects as they could be. Although efforts are being made to encourage implementation partners to do more regarding women’s and human rights, the UNDP strategy did not place sufficient emphasis on these issues and needs significant improvement. To fill in these gaps, UNDP should adopt a systematic approach to address gender issues in CCED areas**.

All projects should be screened through a gender sensitive lens (as it is pursued through BCCSAP, 2009). In order to meet this objective, appointment of a gender focal point within the CCED cluster can be considered to coordinate among different thematic areas of the cluster for incorporating gender issues. However, caution should be taken as there is a risk of gender being regarded as a discrete thematic area. This may result in that gender-related activities may be left as only a focal point’s task. Validation of project gender empowerment potential should be carried out through more consultation with women's groups. Gender empowerment-related indicators should be used to monitor the project outcome. Gender segregated data (not only the number of beneficiaries or number of males or females consulted) needs to be generated. The UNDP CCED cluster should be engaged more with the global initiatives on gender and CC and DRR.

**Thematic Areas**

The UNDP CCED Cluster should enhance its leadership role by providing more clarity to CCA and DRR and their connections to community *resilience* and adaptability. As the concept of *resilience* is complex and often ambiguous, it should be thoroughly defined in the context of developing local CCA and DRR interventions in order to ensure useful results.

1. UNDP Bangladesh should review its ‘Build Back Better’ motto to incorporate the concept of risk reduction and resilience enhancement. In order to recognize the multidimensionality of the ‘resilience’ concept, UNDP Bangladesh should consider changing its motto from ‘Build Back Better’ to ‘Triple R - Rebuilding with Reduced Risk’. This should become the ‘mantra‘ of UNDP’s ERF and other activities.
2. UNDP’s approach to risk reduction and resilience enhancement should emphasize greater coordination among local and sub-national (*upazila* and district) government departments. Presently, most community-based climate change adaptation interventions focus on household-level activities. Incorporation of more community-level activities with greater cooperation of NGOs and CSOs will help leverage the benefits of economies of scale. Interventions should also incorporate other social development dimensions such as vocational and environmental training and issues such as early marriage, dowry, violence against women, and health.
3. UNDP should establish stronger links between CCA, DRR, and the enhancement of livelihood security. UNDP is one of three international/global agencies in Bangladesh with access to GCF (in addition to KfW and ADB). Significant opportunities exist for upscaling of project volumes. For example, a coastal housing project may include renewable energy technologies, efficient cook stoves, and afforestation to achieve such an objective.
4. UNDP should invest in generating further knowledge on more effective and efficient cyclone disaster prevention measures. Community shelters effectively save lives during severe cyclones, and the current policy design and implementation of DRR, which emphasizes effective early warning and risk reduction through both structural (cyclone shelters) and non-structural (public education and awareness campaigns) measures, is commendable. However, the evaluation team found that integrating structurally stronger housing for individual families with livelihood enhancement activities is extremely cost-effective and efficient. UNDP should pursue more research on this particular approach and work with the relevant government departments (e.g. the Planning Commission, Ministry of Disaster Management and Food, Ministry of Environment and Forests, and the Ministry of Finance) to initiate another phase of ‘paradigm shift‘ in risk reduction and disaster management.
5. UNDP Bangladesh needs to further improve on-the-ground delivery capacity of *more inclusive* community-based climate change adaptation interventions. In order to enhance the adaptation capacity of marginalized and poor people at the local level, generation of ‘collective voices’ is essential. Therefore, more efforts should be made to form planning organizations composed of marginalized, poor beneficiaries.
6. UNDP needs to maintain its focus on the niche area of energy efficiency standards and labels. SREDA’s EE&C Master plan emphasizes standards and labels not only for appliances but also for buildings, and plans to make currently-voluntary standards mandatory. In light of constant unsatisfied demands, UNDP should deliver effective support to BSTI and SREDA on the energy efficiency agenda, finding novel and sustainable solutions for more effective and efficient standard development, enforcement, and continuous review.
7. UNDP should continue supporting capacity building in the poverty-environment-climate nexus in partnership with the Government of Bangladesh. UNDP played a very effective leadership role in developing and supporting initiatives on poverty-environment-climate nexus mainstreaming. UNDP should specifically ensure the sustainability of already-built capacity within the government system technical support and human resource development opportunities are crucial to sustaining and enhancing the technical capacity of government personnel.

**REFERENCES**

**(CITED IN THE FINAL REPORT)**

Ahmed, A.U. 2004. *A Review of the Current Policy Regime in Bangladesh in Relation to Climate Change Adaptation, Reducing Vulnerability to Climate Change Project (RVCC).* CARE Bangladesh, Khulna.

Ahmed, A.U. 2005. Adaptation options for managing water related extreme events under climate change regime: Bangladesh perspectives. In Mirza M.M.Q. and Ahmed, Q.K. (eds.). *Climate Change and Water Resources in South Asia.*Balkema Press, Leiden, pp. 255-278.

Ahmed, A.U. and Neelormi, S. 2007. *Livelihoods of Coastal Fishermen in Peril: In search of Early Evidence of Climate Change Induced Adverse Effects in Bangladesh.* Centre for Global Change, Dhaka.

Ali, M.Y. 1997. *Fish, Water and People.* University Press Limited, Dhaka.

Asadullah, M.N., Savoia, A. and Mahmud, W. 2014. Paths to Development: Is there a Bangladesh Surprise? *World Development* 62: 138-154.

Choudhury, J.K. and Hossain, A.A.M. 2011.*Bangladesh Forestry Outlook Study.* Asia-Pacific Forestry Sector Outlook Study II, Working Paper Series, Working Paper No. APFSOS II/ WP/ 2011/ 33. FAO, Bangkok.

Cutter, S.L. et al. 2008.A place-based model for understanding community resilience to natural disasters.*Global Environment Change* 18:598-606.

General Economics Division. 2011. *Sixth Five Year Plan 2011-2015,* Part-1, Planning Commission, Ministry of Planning, Government of Bangladesh, Dhaka.

General Economics Division. 2011. *Sixth Five Year Plan 2011-2015,* Part-2, Sectoral Strategies, Programmes and Policies. Planning Commission, Ministry of Planning, Government of Bangladesh, Dhaka.

GED (General Economics Division). 2014. *Manual of Instruction for Preparation of Development Project Proforma*, Planning Commission, Ministry of Planning, Government of Bangladesh, Dhaka

Government of Bangladesh. 2009. *Bangladesh Climate Change Strategy and Action Plan (BCCSAP).*Government of the People’s Republic of Bangladesh, Dhaka.

Haque, M.M-Ul. 2013. *Impact of BaikkaBeel Sanctuary on Protection and Restoration of Fish Biodiversity and Enhancement of Local Livelihoods. Connecting communities and conservation: Co-management Initiatives Implemented by IPAC in Wetlands and Forests of Bangladesh.*East-West Centre, Hawaii, USA.

Khan, N.A. et al. 1999.The politics of the Bangladesh Environmental Protection Act.*Environment Politics* 8, 311-317.

Mahmud, W., Asadullah, M.N. and Savoia, A. 2013. Bangladesh’s Achievements in Social Development Indicators: Explaining the Puzzle. Policy Brief 31012, April 2013. International Growth Center.

Maplecroft, 2015. Verisk Maplecroft – New Products and Analysis. [http://maplecroft.com/about/news/ccvi.html], accessed on May 27, 2015.

Ministry of Disaster Management and Relief. 2015. A Value for Money Analysis Report, Final Version, Government of the People’s Republic of Bangladesh, Dhaka.

Ministry of Environment and Forests. 2005. *The National Biodiversity Strategy and Action Plan for Bangladesh.* Government of the People’s Republic of Bangladesh, Dhaka

Ministry of Environment and Forests (MoEF), 2005. *National Adaptation Program of Action (NAPA).*Government of the People’s Republic of Bangladesh, Dhaka.

Ministry of Environment and Forests. 2012. *Bangladesh Rio+20: National Report on Sustainable Development.* Government of the People’s Republic of Bangladesh, Dhaka

Ministry of Power, Energy and Mineral Resources. 2011. Power System Master Plan 2010. Government of Bangladesh, Japan International Cooperation Agency (JICA), and Tokyo Electric Company, Inc, (IDD-JR-011-029).

MOEF-UNDP. 2005. *National Adaptation Programme of Action, Bangladesh.*Ministry of Environment and Forests.Government of Bangladesh and UNDP, Dhaka.

Rahman, T. 2015: personal communication. Senior Sector Specialist, Energy, KfW Development Bank, KfW Regional Office Bangladesh, May 10, 2015.

SREDA (Sustainable and Renewable Energy Development Authority), Ministry of Power, Energy and Minerals. 2015. *Energy Efficiency and Conservation Master Plan up to 2010.* Power Division, Government of Bangladesh, Dhaka.

Twigg, J. 2007. Characteristics of disaster-resilient community: A Guidance note. Version-1 for the Department for International Development (DFID) disaster risk reduction and Interagency Coordination Group.

UNDAF. 2014. UNDAF Outcome/UNDAF Output Outcome 2: Vulnerable groups have improved access to economic opportunities and adequate social protection. Indicator: 2.5 Community Asset Score (CAS). http://un.org.np/protocol-sheet/outcome2.5.pdf

UNDP, no date (cited in Winderl, T. 2014.Evaluability Report of UNDP Country Programme Outcome 3.1 (Resilience) and 3.2 (Natural Resource Management and Low Carbon Energy).UNDP, Dhaka, Bangladesh).

UNDP. 2009. *Handbook on Planning, Monitoring and Evaluating for Development Results.* UNDP, New York. USA.

UNDP. 2011. Bangladesh - Country Programme Document (CPD), 2012-2016. [http://www.bd.undp.org/content/dam/bangladesh/docs/LegalFramework/Signed%20CPD-BGD\_2012-2016.pdf](http://www.bd.undp.org/content/dam/bangladesh/docs/legalframework/signed%2520cpd-bgd_2012-2016.pdf)

UNDP. 2011. *Assessment of Development Results (ADR): Bangladesh-Evaluation of UNDP Contribution.* 2011. Evaluation Office. UNDP, USA.

UNDP. 2012. *Empowered Lives: Resilient Bangladesh: Results Achieved with Our Partners, 2006-2011.* UNDP, Dhaka, p. 52. http://data.worldbank.org/indicator/EN.ATM.CO2E.PC

UNDP. 2013. *CDMPII, Annual Progress Report, 2013.* UNDP Bangladesh, Dhaka.

UNDP. 2014. SREPGen Project Document (signed). UNDP Bangladesh, Dhaka.

UNDP. 2014. *UNDP Strategic Plan, 2014-17.* http://www.undp.org/content/undp/en/home/librarypage/corporate/Changing\_with\_the\_World\_UNDP\_Strategic\_Plan\_2014\_17/

Winderl, T. 2014. Evaluability Report of UNDP Country Programme Outcome 3.1 (Resilience) and 3.2 (Natural Resource Management and Low Carbon Energy).UNDP, Dhaka, Bangladesh.

World Bank. 2015. accessed on 28 May (<https://www.google.com.bd/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=population%20growth%20rate%20of%20bangladesh>).

World Bank. 2000. *Bangladesh: Climate Change and Sustainable Development.* Report No. 21104-BD, Rural Development Unit, South Asia Region, The World Bank, Dhaka.

World Bank.2015. Data on World Bank, IBRD, IDA sites.[worldbank.org/index/AG.LND.ARBL.ZS], accessed on May 2, 2015.

World Bank Group. 2014. Lighting Global: IFC Partners with GIZ Bangladesh to increase Energy Access for Off-Grid Communities. [<https://www.lightingglobal.org/ifc-partners-with-giz-in-bangladesh-to-increase-energy-access-for-off-grid-communities/>], accessed on May 3, 2015.

**REFERENCES**

**(CITED IN ANNEXES)**

ADB (Asian Development Bank). 2006. *Bangladesh: Early Warning Systems Study*, Technical Assistance Consultant’s Report. Project Number: 38625 (TA 4562). Asian Development Bank, Dhaka.

Asian Development Bank. 2009. *The Economic Analysis of the Power System Expansion and Efficiency Improvement Investment Program in Bangladesh* (RRP BAN 42378). [http://www.adb.org/sites/default/files/linked-documents/37113-013-ban-ea.pdf] accessed on May 15, 2015.

Chisty, M.H.U. 2013.*Socioeconomic Profile, Profitability, and Replication Study on HHK Demo Plants: Final Report.*Green Brick (IKEBMI) Project, UNDP-GEF, UNDP Bangladesh, Dhaka.

GED (General Economics Division). 2014. *Manual of Instruction for Preparation of Development Project Proforma*. Planning Commission, Ministry of Planning, Government of Bangladesh, Dhaka

IEA (International Energy Agency). 2015.World Energy Outlook. WEO Electrification Database 2014.http://www.worldenergyoutlook.org/resources/energydevelopment/energyaccessdatabase/

IEA (International Energy Agency). 2015.World Energy Outlook. WEO Biomass Database 2014.http://www.worldenergyoutlook.org/resources/energydevelopment/energyaccessdatabase/

IFRC and RCS (International Federation of Red Cross and Red Crescent Societies). 2014. World Disaster Report 2014: Focus on Culture and Risk. [https://www.ifrc.org/Global/Documents/Secretariat/201410/WDR%202014.pdf], accessed on May 9, 2015.

Islam, K.M.N. 1997. *The Role of Perception, Warning and Human Factors in Flood Losses*. Research Report 152, Bangladesh Institute of Development Studies (BIDS), Dhaka.

Islam, K.M.N. 2011a. *Handbook of Flood Loss Potentials and Assessment Methods in Non-agricultural Sectors, A Case Study of Bangladesh*. VDM Publishers, Germany

Islam, K.M.N. 2011b. *Impacts of Urban Floods from Micro-Macro Level Perspectives: A case study of Bangladesh*. LAP LAMBERT Academic Publishing House, Germany*.*

Islam, K.M.N. and Mechler, R. 2007. *An Economic and Cost Benefit Analysis of Adaptation Options, Opportunities and Risks of Climate Change and Disasters*.IDS, Sussex University, UK.

Ministry of Disaster Management and Relief. 2015. A Value for Money Analysis Report, Final Version,Government of the People’s Republic of Bangladesh, Dhaka.

Ministry of Power, Energy and Mineral Resources. 2011. *Power System Master Plan 2010.*Government of Bangladesh, Japan International Cooperation Agency (JICA), and Tokyo Electric Company, Inc, (IDD-JR-011-029).

Ministry of Power, Energy and Mineral Resources, 2013.*500 MW Solar Power Programme.* Government of Bangladesh, Dhaka.

Nandi, P. 2014a.*Project cost effectiveness and efficiency through Value for Money Analysis*, FFF Model, Dhaka.

Nandi, P. 2014b.*Application of innovative CBA measures mainstreaming and transformation in coastal Bangladesh*, The Guardian, June.

ODI (Overseas Development Institute) and World Bank. 2015. Post 2015: What Comes after the MDGs?: “ODI and World Bank report finds that managing disaster risks can bring other benefits, even if catastrophe never strikes”. [http://post2015.org/2015/03/16/odi-and-world-bank-report-finds-that-managing-disaster-risks-can-bring-other-benefits-even-if-catastrophe-never-strikes/] Accessed on May 15, 2015.

Subbiah et al. 2008.*Background Paper on the Assessment of Early Warning Systems for Disaster Risk Reduction.*The World Bank, GFDRR.

SREDA (Sustainable and Renewable Energy Development Authority), Ministry of Power, Energy and Minerals. 2015. *Energy Efficiency and Conservation Master Plan up to 2010.* Power Division, Government of Bangladesh, Dhaka.

Twigg, J. 2007. *Characteristics of disaster-resilient community: A Guidance note.* Version-1 for the Department for International Development (DFID) disaster risk reduction and Interagency Coordination Group.

UNDP. 2014. *Human Development Report 2014: Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience.*[http://hdr.undp.org/sites/default/files/hdr14-summary-en.pdf], accessed on May 5, 2015.

Wörlen, C. 2011.a. *Transforming Markets for Sustainable District Heating in Poland – a Meta-Evaluation and Barrier Analysis.*Climate Change Evaluation Community of Practice Study.

Wörlen, C. 2011b.*Transforming Markets for Energy Efficient Products in Thailand – a Meta-Evaluation and Barrier Analysis.*28 p. Climate Change Evaluation Community of Practice Study.

World Bank. 2014. *South Asian Countries Show Potential for Accelerated Growth.*[http://www.worldbank.org/en/region/sar/publication/south-asian-countries-potential-accelerated-growth], accessed on May 16, 2015.

World Bank and IFC (International Finance Corporation). 2013.*Bangladesh Country Profile, 2013: Enterprise Surveys.*Enterprise Analysis Unit of the World Bank and the IFC. [http://www.enterprisesurveys.org/~/media/GIAWB/EnterpriseSurveys/Documents/Profiles/English/Bangladesh-2013.pdf], accessed on May 10, 2015.

**Annex I: UNDP CCED Project List, Budget (2012-2016) and Expenditure, 2012-2014**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Outcome | CPD Outcome | Project | Project Name | Donor Name | Starting Date | Ending Date | Budget 2012-2016 | | | Exp. 2012-2014 | % for the period 2012-2014 |
| **Budget** | **UNDP Contribution** | **Donor and HQ Contribution** |
| BGD\_  OUTCOME52 -  By 2016, populations vulnerabl**e** | **Outcome 3:1:** | 62536 | Coastal Afforestation | UNDP, SDC, GEF, Netherland | 01-Jul-08 | 30-Jun-15 | 6,249,352.00 | 888,655.00 | 5,360,697.00 | 3,936,847.09 | 63% |
| 73416 | CDMP Phase II | UNDP, DFID, EU, SIDA, DFAT, Norway | 01-Jan-10 | 31-Dec-15 | 63,898,351.00 | 3,438,064.00 | 60,460,287.00 | 46,567,420.30 | 73% |
| 77582 | Early Recovery Facility (ERF) | UNDP, BCPR, SDC, DFID, DFAT, Netherlands | 01-Jan-11 | 31-Dec-15 | 10,159,788.00 | 4,847,534.00 | 5,312,254.00 | 7,213,272.49 | 71% |
| 81303 | Integrating Community-based Ad | GEF | 01-Feb-12 | 31-Dec-13 | 83,983.00 |  | 83,983.00 | 45,104.66 | 54% |
| 92207 | Waterlogged Communities | UNDP | 15-Oct-14 | 13-Oct-15 | 150,000.00 | 150,000.00 |  | 12,549.18 | 8% |
|  | 42248 | Comprehensive Disaster Mgt. Pr | UNDP, DANIDA, UK, EU, DFAT, DFID, Netherlands, Norway | 01-Jan-03 | 31-Dec-10 | 176,448.00 | 27,827.00 | 148,621.00 | 1,931.83 | 1% |
|  |  | **Sub Total** | |  |  |  | **80,717,922.00** | **9,352,080.00** | **71,365,842.00** | **57,777,125.55** | **72%** |
| BGD\_  OUTCOME53 -  By 2016, vulnerable population Hierarchy | **Outcome 3.2:** | 45948 | Sustainable Land Management | GEF | 23-Jun-05 | 30-Jun-12 | 86,498.00 |  | 86,498.00 | 62,785.04 | 73% |
| 46281 | PIMS 2961 EA-SNC | GEF | 19-Nov-05 | 31-Dec-12 | 49,672.00 |  | 49,672.00 | 16,743.29 | 34% |
| 57386 | National ODS Phase-out Plan | MP fund | 03-Jul-07 | 30-Jun-12 | 44,993.00 |  | 44,993.00 | 40,105.34 | 89% |
| 62091 | Phase-out of CFC consumption | MP fund | 01-Jul-08 | 31-Dec-14 | 829,735.00 |  | 829,735.00 | 671,300.71 | 81% |
| 62270 60890 | PECM : Poverty Environment, HQ | UNDP, PEI | 20-Mar-08 | 31-Mar-14 | 884,040.00 | 884,040.00 | 417,366.00 | 670,126.06 | 76% |
| 74185 | Barrier Removal Energy Standard | GEF | 01-Jan-10 | 30-Jun-15 | 615,921.00 |  | 615,921.00 | 378,743.89 | 61% |
| 75326 | Improving BrickKiln Efficiency | UNDP, GEF, Netherlands | Jan-09 | 31-Dec-15 | 1,786,123.00 | 258,956.00 | 1,527,167.00 | 1,531,421.41 | 86% |
| 79998 | Bangladesh Green Dev. Programme | UNDP | 01-Oct-11 | 01-Dec-12 | 628,841.00 | 628,841.00 |  | 407,707.16 | 65% |
| 80108 | Sustainable Energy Generation | GEF | 01-Jan-12 | 01-Mar-13 | 253,410.00 |  | 253,410.00 | 69,356.27 | 27% |
| 80696 | Institutional StrengtheningODS | MP fund | 01-Jan-12 | 31-Dec-14 | 140,870.00 |  | 140,870.00 | 128,860.04 | 91% |
| 81038 | Conversion Cyclopentane technology | MP fund | 01-Jan-12 | 31-Dec-14 | 1,414,786.00 |  | 1,414,786.00 | 1,141,310.93 | 81% |
| 85864 | CCAC HFCFocal Area Initiative, HQ | MP fund | 05-Mar-13 | 31-Dec-14 | 63,694.90 |  | 63,694.90 | 20,305.10 | 32% |
| 88340 | PEI Bangladesh, HQ | UNEP | 06-Dec-13 | 31-Dec-15 | 131,101.00 |  | 131,101.00 | 45,259.53 | 35% |
| 83557 | Support to implement REDD+ | UNDP and REDD | 15-Jul-12 | 30-Jun-14 | 282,694.00 | 12,658.00 | 270,036.00 | 66,340.36 | 23% |
| 83901 | National Consultations, HQ | SPAIN | 01-Jan-13 | 31-Dec-13 | 48,773.00 |  | 48,773.00 | 48,771.23 | 100% |
| 85647 | Sustainable Environmental Gove | UNDP and Norway, Netherlands | 01-Mar-13 | 30-Jun-15 | 2,800,511.00 | 354,219.00 | 2,446,292.00 | 1,620,784.94 | 58% |
| 85938 | Expanding the PA system | GEF | 01-Mar-13 | 31-Oct-14 | 90,410.00 |  | 90,410.00 | 72,970.10 | 81% |
| 85997 | National Capacity Development | GEF | 01-Mar-13 | 04-Mar-14 | 25,000.00 |  | 25,000.00 | 22,547.58 | 90% |
| 86516 | Development of Sustainable Reneration | GEF | 01-Jan-14 | 31-Dec-18 | 2,144,330.00 |  | 2,144,330.00 | 3,256.49 | 0% |
| 86756 | Third National Communication t | GEF | 01-Sep-13 | 31-Aug-16 | 335,947.00 |  | 335,947.00 | 6,750.61 | 2% |
|  |  | 88463 | USAID Watershed (CHTDF) | USAID, UNDP | 01-Jan-14 | 31-Aug-17 | 8,817,209.00 | 60,405.00 | 8,756,804.00 | 284,257.35 | 3% |
|  |  | 90906 | ODS VII | MP fund | 01-Jul-14 | 30-Jun-16 | 130,000.00 | - | 130,000.00 | - | 0% |
|  |  | **Sub Total** | |  |  |  | **21,604,558.90** | **2,199,119.00** | **19,822,805.90** | **7,309,703.43** | **34%** |

**Annex II: Principles and Areas Covered by Guidelines (Following UNEG Ethical Guideline)**

***Independence:***The evaluators performed and considered all discussions/meetings with programme/project participants and beneficiaries without interference or “guidance” from third parties.

***Impartiality:*** The International Consultants had no previous connections to the programmes/projects being examined, and took responsibility for evaluating outcomes without any preconceptions or bias; the national consultants were aware of some of the programmes/projects but had no previous involvement.

***Transparency:***The evaluation process was framed, defined, and discussed with all participants, with no hidden agendas.

***Disclosure****:* Background, purpose and roles of evaluators were revealed to all participants at the beginning of deliberations and the neutrality of evaluators was maintained throughout.

***Rights and Confidentiality****:* The rights and confidentiality of information providers were maintained throughout the evaluation.

***Ethical Conduct****:* All evaluation processes and forms of engagement were carried out with respect and dignity, with adequate time was given to allow input from all participants.

***Partnership****:* During the process of evaluation, the programme/project participants and beneficiaries were considered as ‘partners’ in a collaborative and constructive capacity.

***Competencies and Capacities****:* The evaluators offered adequate experience, qualifications, and skills to the process to legitimize the evaluation observations and recommendations

***Credibility****:* Significant efforts have been made to establish clear linkages between observations and evidence, grounded in the documents review, data analysis and participation of all stakeholders in the evaluation).

***Utility****:* The evaluation observations and recommendations contribute to the implementation of immediate adjustments as the development of future programmes.

**Annex III: Evaluation Matrix for Six selected UNDP Projects**

**UNDP Country Outcome 3.1/UNDAF Outcome 5.1**

**Relevance**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Main Evaluation Question** | **Specific Evaluation Question** | **Indicator** | **Data Source** | **Data Collection Method** | **Selection of Respondent** | **Method of Data Analysis** | **Limitation/**  **Risk** |
| **Country Program Outcome 3.1/ UNDAF Outcome 5.1**  1. To what extent **UNDP’s key programmes/projects** are relevant to make vulnerable populations more resilient to the risks of climate change and natural disasters? |  | Annual average economic loss from natural hazards (e.g. geo-physical and climate-induced hazards) as a proportion of GDP in the last five years  Baseline 2011: 1.23%  Target 2016: 0.8%  Average annual number of loss of human lives and injuries (serious) due to natural hazards (geo-physical and climate-induced hazards)  Extent to which disaster and climate risk management plans are funded through national, local and sectorial development budgets (Rating Scale; 1-not adequately; 2-very partially; 3-partially; 4-largely)  % of total funds delivered by national, local, and development budgets to disaster and climate risk management plans would work better  Baseline 2011: 1 point (Not adequately)  Target 2016: 3 points (Partially)  Data Source:  # of community/union institutionalized disaster and climate risk management plans/action plans  gender distribution and equality dimension | Loss and Damage Report from Ministry of Disaster Management and Relief  Disaster and Climate Change Public Expenditure Report from Ministry of Disaster Management and Relief | Secondary | N/A | Quantitative and Qualitative Analyses | Data availability |
| 1.1 To what extent UNDP’s **CDMP-II project** is relevant to make vulnerable populations more resilient to the risks of natural disasters and climate change? | 1.1.1 To what extent CDMP-II project’s **resilient habitat** component is relevant to make vulnerable populations more resilient to the risks of natural disasters and climate change? | Number of constructed houses; number of solar panel installed; secondary embankment construction; water facilities; livelihood diversification; linkage with prevailing hazards (measuring physical resilience) | UNDP Country Office; CDMP-II Project Office; Field Study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Descriptive Statistics | Limited Scope of Quantitative Analysis |
| 1.1.2 To what extent CDMP-II project’s **water purification plant and water supply** component is relevant to make vulnerable populations more resilient to the risks of natural disasters and climate change? | Number of beneficiaries; reduced burden on women (reduced working hours); change in accessibility to drinking water during onset and post- disaster; incidence of health hazards (perceptional data) | UNDP Country Office ; CDMP-II Project Office ; Field Study | Secondary (Data base, reports) | - | Quantitative and Qualitative Analyses | Limited Scope for Validation |
| 1.1.3 To what extent CDMP-II project’s **urban risk reduction and volunteer mobilization** component is relevant to make vulnerable populations more resilient to the risks of natural disasters and climate change?  1.1.4 Whether any other risk assessment other than earthquake and fire (e.g. urban drought, excessive precipitation and water logging, and heat wave)? | Number of volunteers recruited and trained; Number of women volunteers recruited and trained; number of equipment procured by type; adequacy of the elements; community awareness and engagement | UNDP Country Office ; CDMP-II Project Office | Secondary (Data base, reports) | - | Quantitative and Qualitative Analyses | Limited Scope of Validation |
| 1.1.5 To what extent CDMP-II project’s **cell-based early warning system** component is relevant to make vulnerable populations more resilient to the risks of natural disasters and climate change? | Number of cell-phone users served by SMS; number of hit for weather information by cell phone users; percentage of population served; percentage of population aware about the SMS services; Lead time; degree of understandability of the message; type of hazards covered | UNDP Country Office ; CDMP-II Project Office | Secondary (Data base, reports) | - | Quantitative and Qualitative Analyses | Limited Risk |
| 1.2 To what extent UNDP’s **Early Recovery Facility (ERF) program** is relevant to make vulnerable populations more resilient to the risks of natural disasters and climate change? | 1.2.1 To what extent **ERF’s Restarting Income Generating Activities of HH with cash and materials (IGA)** component is relevant to make vulnerable populations more resilient to the risks of natural disasters and climate change? | Number of beneficiaries; type of materials provided; role in livelihood reconstruction and diversification | ERF Project office, UNDP; Field Study in Shyamnagar | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Potential deficiency in baseline data |
|  | 1.2.2 To what extent **ERF’s construction and reconstruction of Emergency Shelters (ES)** component is relevant to make vulnerable populations more resilient to the risks of natural disasters and climate change? | Number of ES constructed; number of ES reconstructed; linkage of ES with local livelihood provisions and development activities | ERF Project office, UNDP; Field Study in Shyamnagar | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Potential deficiency in baseline data |
| 1.3 To what extent UNDP’s **coastal afforestation project** is relevant to make vulnerable populations more resilient to the risks of natural disasters and climate change? | 1.3.1 To what extent **coastal afforestation project** component is relevant to make vulnerable populations more resilient to the risks of natural disasters and climate change? | Degree of alignment with coastal protection policy  Number of people provided livelihood  % of HH provided livelihood  Number of hectares of land under afforestation | UNDP Country Office;  FD  Project Office;  Field Study | Secondary (Data base, reports);  Interviews  FGDs  KIIs  Case Studies | Purposive | Descriptive Statistics | Limited Scope of Quantitative Analysis |
|  | 1.3.2 To what extent **FFF component** is relevant to make vulnerable populations more resilient to the risks of natural disasters and climate change? | Degree of alignment with coastal protection policy  Number of hectares of mangrove and non-mangrove species planted | UNDP Country Office;  FD  Project Office;  Field Study | Secondary (Data base, reports);  Interviews ,  FGDs,  KIIs,  Case Studies | Purposive | Quantitative and Qualitative Analyses | Limited Scope for Validation |
| 1.4 To what extent UNDP’s **PECM project** is relevant to make vulnerable populations more resilient to the risks of natural disasters and climate change? | 1.4.1 To what extent **PECM-CPEIRcomponent** is relevant to make vulnerable populations more resilient to the risks of natural disasters and climate change? | Degree of influence  **[Low-** Issues related to CPEIR little or not taken into consideration  **Moderate**  owned by several sectors  **High-**follow-up recommendations implemented  **Very high**- Investment in CC/DRR has increased] | UNDP Country Office;  FD  Project Office;  Field study | Secondary (Data base, reports);  Interviews,  FGDs,  KIIs,  Case Studies | Purposive | Descriptive Statistics | Limited Scope of Quantitative Analysis |

**Effectiveness**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Main Evaluation Question** | **Specific Evaluation Question** | **Indicator** | **Data Source** | **Data Collection Method** | **Selection of Respondent** | **Method of Data Analysis** | **Limitation/**  **Risk** |
| **Country Program Outcome 3.1/ UNDAF Outcome 5.1**  1. Compared to 2011, are vulnerable populations now more resilient against climate change **as a result of UNDP’s key programs/ projects**? |  |  |  |  |  |  |  |
| 1.1 Compared to 2011, are vulnerable populations now more resilient against climate change **as a result of CDMP-II**?  1.2 What holistic approach **CDMP-II** has taken to address urban hazards related to CC (excessive precipitation, water logging, and heat waves) (IE coordination among the implementing agencies) | 1.1.1 Compared to 2011, are vulnerable populations now more resilient against climate change **as a result of resilient habitat component of CDMP-II**?  1.1.2 What referenced projections have been used?  What type of indicators the project used to address climate change impacts and challenges? | Degree of resistance to withstand against storm and storm surge;  degree of adoption of diversified livelihoods and saline resistant crops;  availability of drinking water ensured;  carrying out risk assessment for different interventions under CC; | UNDP Country Office ; CDMP-II Project Office ; Field Study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Lack of specification about CC model |
|  | 1.1.3 Compared to 2011, are vulnerable populations now more resilient against climate change **as a result of water purification plant and water supply** c**omponent of CDMP-II**? | Trend of changing ground water level;  availability and acceptance by the community | UNDP Country Office ; CDMP-II Project Office ; Field Study | Secondary (Data base, reports) | N/A | Qualitative Analysis | Limited Scope of Validation |
|  | 1.1.4 Compared to 2011, are vulnerable populations now more resilient against climate change as a resultof **urban risk reduction and volunteer mobilization** c**omponent of CDMP-II**? | N/A | N/A | N/A | N/A | N/A | N/A |
|  | 1.1.5 Compared to 2011, are vulnerable populations now more resilient against climate change **as a result of cell-based early warning system component of CDMP-II**? | N/A | N/A | N/A | N/A | N/A | N/A |
| 1.3 Compared to 2011, are vulnerable populations now more resilient against climate change **as a result of Early Recovery Facility (ERF) program?** | 1.3.1 Compared to 2011, are vulnerable populations now more resilient against climate change as a result of **Restarting Income Generating Activities of HH with cash and materials (IGA) component** of Early Recovery Facility (ERF) program? | Percentage of population served;  Number of beneficiaries;  type of materials provided;  role in livelihood reconstruction and diversification | ERF Project office, UNDP; Field Study in Shyamnagar | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Potential deficiency in baseline data |
|  | 1.3.2 Compared to 2011, are vulnerable populations now more resilient against climate change as a result of **Early construction and reconstruction of Emergency Shelter (ES) component** of Early Recovery Facility (ERF) program? | Number of populations used the shelter;  how many times;  use of ES by the percentage of vulnerable population;  number of ES constructed; number of ES reconstructed | ERF Project office, UNDP; Field Study in Shyamnagar | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Potential deficiency in baseline data |
| 1.4 Compared to 2011, are vulnerable populations now more resilient against climate change as a result of **coastal afforestation Project**? | 1.4.1 Compared to 2011, are vulnerable populations now more resilient against climate change and disasters as a result of **coastal afforestation Project**?  1.4.2 Compared to 2011, are vulnerable populations now more resilient against climate change and disasters **as a result of FFF Project**? | Degree of target fulfilment  Quantity of carbon sink capacity  Degree of change in diversified livelihood improvement of community people  Degree of change in income enhancement of community people  Degree of change in resistance to withstand against storm and storm surge | UNDP Country Office  FD  Project Office Field Study | Secondary (Data base, reports);  Interviews  FGDs  KIIs  Case Studies | Purposive | Quantitative and Qualitative Analyses | Potential data limitation |
| 1.5 Compared to 2011, are vulnerable populations now more resilient against climate change **as a result of PECM**? | 1.5.1 Compared to 2011, are vulnerable populations now more resilient against climate change **as a result of PECM-CPEIR component?** | No of policies/strategies / plans approved in addressing CC or sustainable management of natural resources (Baseline  2010: 2 (Land zoning law; Village improvement Act)  Target: 4  No of recommendations addressed  No of documentation/analysis to address cc and climate expenditure  Environment, Climate and disaster vulnerability Index  [Baseline 2012 : N/A Target 2016: 20% vulnerability reduction in coastal districts] | UNDP Country Office  Project Office | Secondary (Data base, reports);  Interviews | Purposive | Quantitative and Qualitative Analyses | - |
| **2. Compared to 2011, are vulnerable populations now more resilient against natural disasters?** |  |  |  |  |  |  |  |
| 2.1 Compared to 2011, are vulnerable populations now more resilient against natural disasters **as aresult of CDMP-II**? | 2.1.1 Compared to 2011, are vulnerable populations now more resilient against natural disasters **as a result of resilient habitat component of CDMP-II**? | Type of hazards exposed to;  number of resilient habitat built; percentage of household coverage; extent of hazard withstand capacity; change in resisting cyclone , storm surges and floods | UNDP Country Office ; CDMP-II Project Office ; Field Study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Potential lack of baseline data |
|  | 2.1.2 Compared to 2011, are vulnerable populations now more resilient against natural disasters **as a result of water purification plant and water supply** c**omponent of CDMP-II**? | change in accessibility to drinking water during onset and post- disaster; incidence of health hazards (perceptional data) | UNDP Country Office ; CDMP-II Project Office ; Field study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Potential lack of baseline data |
|  | 2.1.3 Compared to 2011, are vulnerable populations now more resilient against natural disasters **as a result of urban risk reduction and volunteer mobilization** c**omponent of CDMP-II**? | Number of volunteers recruited and trained; Number of women volunteers recruited and trained; number of equipment procured by type; adequacy of the elements; community awareness and engagement; percentage of community population coverage | UNDP Country Office ; CDMP-II Project Office | Secondary (Data base, reports) | N/A | Quantitative and Qualitative Analyses | - |
|  | 2.1.4 Compared to 2011, are vulnerable populations now more resilient against natural disasters **as a result of cell-based early warning system component of CDMP-II**? | Number of cell-phone users served by SMS; number of hit for weather information by cell phone users; percentage of population served; percentage of population aware about the SMS services; Lead time; degree of understandability of the message; type of hazards covered | UNDP Country Office ; CDMP-II Project Office | Secondary (Data base, reports) | N/A | Quantitative and Qualitative Analyses | - |
| 2.2 Compared to 2011, are vulnerable populations now more resilient against natural disasters **as a result of Early Recovery Facility (ERF) program?** | 2.2.1 Compared to 2011, are vulnerable populations now more resilient against natural **disasters as a result of Restarting Income Generating Activities of HH with cash and materials (IGA) component** of Early Recovery Facility (ERF) program? | Percentage of population served; Number of beneficiaries; type of materials provided; role in livelihood reconstruction and diversification | ERF Project office, UNDP; Field Study in Shyamnagar | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Potential deficiency in baseline data |
|  | 1.3.2 Compared to 2011, are vulnerable populations now more resilient against natural disasters as a result of **Early construction and reconstruction of Emergency Shelter (ES) component** of Early Recovery Facility (ERF) program? | Number of populations used the shelter; how many times; use of ES by the percentage of vulnerable population; number of ES constructed; number of ES reconstructed | ERF Project office, UNDP; Field Study in Shyamnagar | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Potential deficiency in baseline data |
| 2.3 Compared to 2011, are vulnerable populations now more resilient against natural disasters **as aresult of PECM**? | 2.3.1 Compared to 2011, are vulnerable populations now more benefiting towards resilience against natural disasters **as a result of PECM-CPEIR Component?** | Amount of resources budgeted by GoB for DRR/CC adaptation against sectoral policies/plans  Baseline: 2010=$ 100m  Target-2016=$500m 2014 ? | UNDP Country Office  Project Office  Field study | Secondary (Data base, reports); Primary | Purposive | Quantitative and Qualitative Analyses | Potential data limitation |

**Efficiency**

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| **Main Evaluation Question** | **Specific Evaluation Question** | **Indicator** | **Data Source** | **Data Collection Method** | **Sampling/**  **Selection of Respondents** | **Method of Data Analysis** | **Limitation/**  **Risk** |
| **1. To what extent were the relevant programme/project outputs delivered in time and in good quality?** |  |  |  |  |  |  |  |
| 1.1 To what extents were the **CDMP-II** programme outputs delivered in time and in good quality? |  |  |  |  |  |  |  |
|  | 1.1.1 To what extents were the **CDMP-IIresilient habitat component** outputs delivered in time and in good quality? | Potential loss savings (value for money);  degree of duplication and redundancy | UNDP Country Office ; CDMP-II Project Office ; Field study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Potential lack of baseline data |
|  | 1.1.2 To what extent were the **CDMP-IIof water purification plant and water supplycomponent** outputs delivered in time and in good quality | Number of beneficiaries and percentage of households to the local community;  whether water quality improved;  pre and post intervention cost (installation and maintenance cost) | UNDP Country Office ; CDMP-II Project Office ; Field study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Potential lack of baseline data |
|  | 1.1.3 To what extent were the **CDMP-IIurban risk reduction and volunteer mobilizationcomponent** outputs delivered in time and in good quality | Potential loss savings from quick recovery | UNDP Country Office ; CDMP-II Project Office ; | Secondary (Data base, reports); | N/A | Qualitative Analyses | Lack of real time data |
|  | 1.1.4 To what extents were the **CDMP-IIcell-based early warning system component** outputs delivered in time and in good quality? | Potential loss savings | UNDP Country Office ; CDMP-II Project Office ; Field study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Data limitation |
| 1.2 To what extents were the **ERF programme** outputs delivered in time and in good quality? | 1.2.1 To what extent were the **ERF’s restarting Income Generating Activities of HH with cash and materials (IGA) component** outputs delivered in time and in good quality? | Duration of delivery (after how many days the cash and materials were supplied after the disaster event);  level of satisfaction | Field Study in Shyamnagar; ERF Project office, UNDP; | Primary (FGDs, KIIs, Case studies); Secondary (Data base, reports); | Purposive | Quantitative and Qualitative Analyses | Potential deficiency in baseline data |
|  | 1.2.2 To what extent were the **ERF’s construction and reconstruction of Emergency Shelter (ES) component** outputs delivered in time and in good quality? | Capacity to withstand severe cyclone and storm surges; when the ES was built-was it before a major disaster or after | Field Study in Shyamnagar; ERF Project office, UNDP; | Primary (FGDs, KIIs, Case studies); Secondary (Data base, reports); | Purposive | Quantitative and Qualitative Analyses | Potential deficiency in baseline data |
| 1.3 To what extents were the **afforestation component** programme outputs delivered in time and in good quality? | 1.3.1 To what extents were the **afforestation component** outputs delivered in time and in good quality?  1.3.2 To what extent were the **FFF** outputs delivered in time and in good quality? | Degree of target fulfilment  Number of beneficiaries, training and trainers  % of beneficiary households to the local community  Pre and post intervention  HH Income  Contribution of Project in potential income enhancement | UNDP Country Office  FD  Project Office  Field Study | Secondary (Data base, reports);  Interviews,  FGDs,  KIIs,  Case Studies. | Purposive | Quantitative and Qualitative Analyses | Potential lack of baseline data |
| 1.4 To what extent were the **PECM Programme** outputs delivered in time and in good quality? | 1.4.1 To what extent were the **CPEIR** outputs delivered in time and in good quality? | Time and target of Study completed  No of policy changes  No of recommendations addressed  Degree of influence  **[Low-** Issues related to CPEIR little or not taken into consideration  **Moderate**  owned by several sectors  **High-**follow-up recommendations implemented  **Very high**- Investment in CC/DRR has increased] | UNDP Country Office  FD  Project Office Field study | Secondary (Data base, reports);  Interviews | Purposive | Quantitative and Qualitative Analyses | Potential lack of baseline data |
| **2. To what extent did UNDP ensure value for money?** |  |  |  |  |  |  |  |
| 2.1 To what extent did **CDMP-II** ensure value for money? | 2.1.1 To what extent did **CDMP-IIresilient habitat component** ensure value for money? | value for money | UNDP Country Office ; CDMP-II Project Office ; Field study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Data limitation |
|  | 2.1.2 To what extent did **CDMP-IIwater purification plant and water supplycomponent** ensure value for money? | value for money | UNDP Country Office ; CDMP-II Project Office ; Field study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Data limitation |
|  | 2.1. 3 To what extent did **CDMP-IIurban risk reduction and volunteer mobilization** ensure value for money? | value for money | UNDP Country Office ; CDMP-II Project Office ; Field study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Data limitation |
|  | 2.1.4 To what extent did **CDMP-IIcell-based early warning system component** ensure value for money? | value for money | UNDP Country Office ; CDMP-II Project Office ; Field study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Data limitation |
| 2.2 To what extent did **ERF** program ensure value for money? | 2.2.1 To what extent did ERF’s **restarting Income Generating Activities of HH with cash and materials (IGA)** componentensure value for money? | Potential lives and assets saved | ERF Project office, UNDP; Field Study in Shyamnagar | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies); | Purposive | Quantitative and Qualitative Analyses | Potential deficiency in baseline data |
|  | 2.2.2 To what extent did ERF’s **construction and reconstruction of Emergency Shelter (ES)** componentensure value for money? | Potential lives and assets saved | ERF Project office, UNDP; Field Study in Shyamnagar | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies); | Purposive | Quantitative and Qualitative Analyses | Potential deficiency in baseline data |
| 2.3 To what extent did **coastal afforestationproject** ensure value for money? | 2.3.1 To what extent were the **coastal afforestation component** outputs ensured value for money?  2.3.2 To what extent were the **FFF** outputs ensured value for money? | Value for money-Value of produce & cost of activity  (Cost benefit)  Attribution of the Project  Value for money-Value of produce & cost of activity  (Cost benefit)  Attribution of the Project | UNDP Country Office  FD  Project Office Field Study | Secondary (Data base, reports);  Interviews  FGDs  KIIs  Case Studies | Purposive | Quantitative and Qualitative Analyses | Potential data limitation |
| 2.4 To what extent did **PECM** ensure value for money? | 2.1 To what extent did **CPEIR component** ensure value for money? | [value for money-Proxy]  No. of plans s/strategies policies drafted in favour of low emissions green growth  Baseline 2010: TBD Target TBD  No of policy changes  No of government investment projects incorporating PECM indicators in project design and implementation  Baseline 2010: 5 Target 30  No of policies/strategies / plans approved in addressing CC or sustainable management of natural resources (Baseline  2010: 2 (Land zoning law; Village improvement Act)  Target: 4 | UNDP Country Office  FD  Project Office | Secondary (Data base, reports);  Interviews | Purposive | Quantitative and Qualitative Analyses | Potential data limitation |
| **3. Has there been any duplication of efforts among UNDPs own interventions and interventions delivered by other organizations or entities in contributing to the outcome?** |  |  |  |  |  |  |  |
| 3. 1 Has there been any duplication of efforts among **CDMP-II’s** own interventions and interventions delivered by other organizations or entities in contributing to the outcome? |  | Extent of duplication and redundancy | UNDP Country Office ; CDMP-II Project Office | Secondary (Data base, reports); | N/A | Quantitative and Qualitative Analyses | Data limitation |
| 3.2 Has there been any duplication of efforts among **ERF’s** own interventions and interventions delivered by other organizations or entities in contributing to the outcome? |  | Percentage of ES in relation to total ES built by all agencies | ERF Project office, UNDP; Field Study in Shyamnagar | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies); | Purposive | Quantitative and Qualitative Analyses | Possibility of data unavailability |
| 3.3 Has there been any duplication of efforts among **coastal afforestation’s** own interventions and interventions delivered by other organizations or entities in contributing to the outcome? |  | Number of other agencies involved in the similar type of work  Degree of duplication/redundancy | UNDP Country Office  FD  Project Office Field Study | Secondary (Data base, reports);  Interviews  FGDs  KIIs  Case Studies |  | Quantitative and Qualitative Analyses | Potential data limitation |
| 3. 4 Has there been any duplication of efforts among **PECM’s** own interventions and interventions delivered by other organizations or entities in contributing to the outcome? |  | Extent of duplication and redundancy | UNDP Country Office  FD  Project Office) | Secondary (Data base, reports);  Interviews | N/A | Quantitative and Qualitative Analyses | Potential data limitation |

**Sustainability**

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| **Main Evaluation Question** | **Specific Evaluation Question** | **Indicator** | **Data Source** | **Data Collection Method** | **Sampling/**  **Selection of Respondents** | **Method of Data Analysis** | **Limitation/Risk** |
| **1. What indicators are there that the CDMP-II components are being replicated?** |  |  |  |  |  |  |  |
| 1.1 What indicators are there that the **CDMP-II** components are being replicated? | 1.1 What indicators are there that the CDMP-II **resilient habitat** component is being replicated? | Number of other agencies involved in the similar type of work | UNDP Country Office ; CDMP-II Project Office ; Field study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Data limitation |
|  | 1.2 What indicators are there that the CDMP-II **water purification plant and water supply** component is being replicated? | Number of other agencies involved in the similar type of work | UNDP Country Office ; CDMP-II Project Office ; Field study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Data limitation |
|  | 1.3 What indicators are there that the CDMP-II **urban risk reduction and volunteer mobilization** component is being replicated? | Number of other agencies involved in the similar type of work | UNDP Country Office ; CDMP-II Project Office ; Field study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Data limitation |
|  | 1.4 What indicators are there that the CDMP-II cell**-based early warning system component** is being replicated? | Number of other agencies involved in the similar type of work | UNDP Country Office ; CDMP-II Project Office ; Field study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Data limitation |
| 1.2 What indicators are there that the **ERF components** are being replicated? | 1.2.1 what indicators are there that the ERF’s **restarting Income Generation Activities of HH with cash and materials (IGA)** component are being replicated | Availability of emergency fund (if any) | ERF Project office, UNDP; | Secondary (Data base, reports) | Purposive | Quantitative and Qualitative Analyses | Potential deficiency in baseline data |
|  | 1.2.2 what indicators are there that the ERF’s **construction and reconstruction of Emergency Shelter (ES)** component are being replicated | Any community initiative to build new ES; any NGO initiative to build new ES | ERF Project office, UNDP; | Secondary (Data base, reports) | Purposive | Quantitative and Qualitative Analyses | Potential deficiency in baseline data |
| 1. 3 What indicators are there that the **coastal afforestation** COMPONENT are being replicated? | 1.3.1 What indicators are there that the **afforestation component** is being replicated?  1.3.2 What indicators are there that the **FFFcomponent** is being replicated? | Number of other agencies involved in the similar type of work  Attribution of the Project  Magnitude of maintenance cost;  provision of maintenance cost;  community engagement;  Investment Recovery system  Greater access and control over resources by men and women and by disadvantaged group;  sex disaggregated impact;  Participation and leadership in decision making process as well as other cycles of the project;  Degree of empowerment | UNDP Country Office  FD  Project Office Field Study | Secondary (Data base, reports);  Interviews  FGDs  KIIs  Case Studies | Purposive | Quantitative and Qualitative Analyses | Potential data limitation |
| 1.4 What indicators are there that the **PECM** components are being replicated? | 1.1 What indicators are there that the **CPEIR component** is being replicated? | Number of other agencies involved in the similar type of work  Degree of duplication/redundancy | UNDP Country Office  FD  Project Office | Secondary (Data base, reports);  Interviews  FGDs  KIIs  Case Studies | Purposive | Quantitative and Qualitative Analyses | Potential data limitation |
| **2. What indicators are there that the outcome will be sustained after external funding ends?** |  |  |  |  |  |  |  |
| 2.1 What indicators are there that the **CDMP-II** outcome will be sustained after external funding ends? | 1.1 What indicators are there that the CDMP-II **resilient habitat** component will be sustained after external funding ends? | Magnitude of maintenance cost; provision of maintenance cost; community engagement; greater access and control over resources by men and women as well as by disadvantaged groups; sex disaggregated data; stronger participation and leadership in decision making process as well as other cycles of the project; increasing sense of empowerment | UNDP Country Office ; CDMP-II Project Office ; Field study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Data limitation |
|  | 1.2 What indicators are there that the CDMP-II **water purification plant and water supply** component will be sustained after external funding ends? | Extent of community contribution and engagement; greater access and control over resources by men and women and well as by disadvantaged group | UNDP Country Office ; CDMP-II Project Office ; Field study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Data limitation |
|  | 1.3 What indicators are there that the CDMP-II **urban risk reduction and volunteer mobilization** component will be sustained after external funding ends? | Extent of community contribution and engagement; involvement of advocacy group and media; up-scaling by government agencies | UNDP Country Office ; CDMP-II Project Office ; Field study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Data limitation |
|  | 1.4 What indicators are there that the CDMP-II **cell-based early warning system component** will be sustained after external funding ends? | Upscaling provision by government; level of partnership between public and private sector; | UNDP Country Office ; CDMP-II Project Office ; Field study | Secondary (Data base, reports); Primary (FGDs, KIIs, Case studies) | Purposive | Quantitative and Qualitative Analyses | Data limitation |
| 2.2 What indicators are there that the **ERFoutcomes** will be sustained after external funding ends? | 2.2.1 What indicators are there that the ERF’s **restarting Income Generation Activities of HH with cash and materials (IGA)** component will be sustained after external funding ends? | Availability of national emergency fund (if any) | ERF Project office, UNDP; | Secondary (Data base, reports) | Purposive | Quantitative and Qualitative Analyses | Potential deficiency in baseline data |
|  | 2.2.2 What indicators are there that the ERF’s **restarting construction and reconstruction of Emergency Shelter (ES)** component will be sustained after external funding ends? | Provision of funding ES in national development plan | Availability of emergency fund (if any) | ERF Project office, UNDP; | Secondary (Data base, reports) | Purposive | Quantitative and Qualitative Analyses |
| 2.3 What indicators are there that the **coastal afforestation** outcomes will be sustained after external funding ends? |  | Magnitude of maintenance cost; provision of maintenance cost; community engagement; greater access and control over forest resources by men and women as well as by disadvantaged groups; sex disaggregated data; stronger participation and leadership in decision making process as well as other cycles of the project; increasing sense of empowerment | Forest Department project office; Field study in Naltona | Secondary and primary | Purposive | Qualitative |  |
| 2.4 What indicators are there that the **PECM outcome** will be sustained after external funding ends? | 1.1 What indicators are there that the **PECM-CPEIRcomponent** will be sustained after external funding ends? | No of trainers  No of cases/sectors mainstreamed  No of analyses  (LGI Analysis, Institutional Analyses, Expenditure review)  No of follow-ups  Support for follow-ups | UNDP Country Office  FD  Project Office | Secondary (Data base, reports);  Interviews  FGDs  KIIs  Case Studies | Purposive | Quantitative and Qualitative Analyses | Potential data limitation |

**UNDP Country Outcome 3.2/UNDAF Outcome 5.2**

**Relevance**

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| **Main Evaluation Question** | **Specific Evaluation Question** | **Indicator** | **Data Source** | **Data Collection Method** | **Selection of Respondent** | **Method of Data Analysis** | **Limitation/**  **Risk** |
| **Country Program Outcome 3.2/ UNDAF Outcome 5.2**  1. To what extent are **UNDP’s key programmes/ projects** relevant to increase benefits from better natural resource management and access to low carbon energy? | What are the activities taken to achieve the target | # of Government policies, strategies or plans approved in support of sustainable management of natural resources  Baseline 2012: 18  Target 2016: 22  # of additional union/community and population served by the new policies/strategies or plans in support of sustainable management of natural resources  # of MW generated from renewable sources  Baseline 2011: 72 MW  Target 2016: 800 MW  change in % share of power (MW) generated from renewable energy to total energy generation from all sources  gender distribution and equality dimension | Government Gazettes and Review of Ministerial Reports  Statistics from Power Division, Ministry of Power, Energy and Mineral Resources | Secondary | N/A | Quantitative and qualitative | Data unavailability |
| 1.1 To what extent UNDP’s **Green Brick project** is relevant to increase benefits from better natural resource management and access to low carbon energy? | 1.1.1 To what extent UNDP’s **Green Brick project’s establishment of demonstration project** is relevant to increase benefits from better natural resource management and access to low carbon energy?  1.1.2 Activities taken under this activity?  How it is different from other brick project? | National level Emission data and target for potential mitigation.  Achievement in terms of mitigation.  Energy intensity needed as compared to traditional brick making unit.  Extension in time frame in carrying out brick making activity.  Ratio of worker needed to produce per”000” brick  Workers’ salaries and benefits as compared to traditional brick units.  Any social aspect to address.  Change in energy sources. | Project office at UNDP and Pilot.  Field visit to Dhamrai | Secondary (review documents) and  Primary ((KIIs, FGDs) | Purposive | Quantitative and qualitative |  |
| 1.1.3 Gender related activities  How does the project address gender?  What type of activities carried out?  Any Gender analysis Done?  Types of indicators the project consider for its flagship | Number of men and women employed in demonstration project  Changing ratio for men and women workers in the demo project as compared to traditional brick unit.  Salaries and benefits for men and women in demo field as compared to traditional units. Heath benefits for men and women?  Any social aspect to address? | Project office at UNDP and Pilot. | Field study, KII, FGD, secondary documents | purposive | Quantitative and qualitative |  |
| 1.1.4 Policy related activities  Activities taken | Any take up from the project in policy?  Greater awareness regarding energy efficient brick making among policy makers, stakeholders. | Project office at UNDP and Pilot. | Visit, KII, FGD, review documents | purposive | Quantitative and qualitative |  |
| 1.2 To what extent UNDP’s **PECM project** is relevant to increase benefits from better natural resource management and access to low carbon energy? | 1.2.1 To what extent UNDP’s **PECM-CPEIR project** is relevant to increase benefits from better natural resource management and access to low carbon energy? | Degree of alignment with energy policies; degree of alignment with coastal zone management. | UNDP country office; FD project office; KIIs and case study | Secondary sources and primary sources (KIIs and case study) | purposive | Quantitative and qualitative | Data availability |
| 1.3 To what extent UNDP’s **BRESL project** is relevant to increase benefits from better natural resource management and access to low carbon energy? | 1.3.1 What are the activities taken?  Where the activity stands in terms of national LCD pathway.  Pathway towards sustainable energy development till 2030. | Organizations and stake holders involved. Appliances considered.  Target and achievements. | Project office at UNDP | Visit, KII, FGD, review documents |  | Quantitative and qualitative |  |

**Effectiveness**

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| **Main Evaluation Question** | **Specific Evaluation Question** | **Indicator** | **Data Source** | **Data Collection Method** | **Selection of Respondent** | **Method of Data Analysis** | **Limitation/**  **Risk** |
| **Country Program Outcome 3.2/ UNDAF Outcome 5.2**  1. Compare to 2011, to what extent do vulnerable populations now benefit more from better natural resource management? |  |  |  |  |  |  |  |
| 1.1 Compare to 2011, to what extent do vulnerable populations now benefit more from better natural resource management **as a result of Green Brick Project**? | 1.1.1 Compare to 2011, to what extent do vulnerable populations now benefit more from better natural resource management **as a result of Green Brick Demo Project**? | National level Emission data and target for potential mitigation.  Achievement in terms of mitigation.  Energy intensity needed as compared to traditional brick making unit.  Extension in time frame in carrying out brick making activity. | Project office at UNDP and Pilot project. | Field study, KII, FGD, secondary documents  review | Purpose | Quantitative and qualitative | - |
|  | 1.1.2 Compare to 2011, to what extent do vulnerable populations now benefit more from better natural resource management **as a result of Green Project’s gender activities**? | Health services.  Salaries and other benefits.  Security.  Fixed working hours.  Leave.  Nature of job (permanent/ temporary) | Project office at UNDP and Pilot project. | Field study, KII, FGD, secondary documents  review | Purpose | Quantitative and qualitative | - |
| 1.2. Did vulnerable population benefit from NRM: environmental governance and low carbon green development from **PECM project?** |  | No of govt investment projects incorporating PECM indicators in project design and implementation  Baseline 2010: 5 Target 30  No of plans/strategies/polices drafted in favour of low emissions/green growth  Energy generated from renewable sources (Basline-2010: 42MW Target 2016: 85MW)  % reduction in ozone depleting substances/greenhouses | UNDP Country Office  FD  Project Office  Field study | Secondary (Data base, reports);  Interviews | N/A | Qualitative Analysis | Limited Scope of Validation |
| 1. 3 Compare to 2011, to what extent do vulnerable populations now benefit more from better natural resource management **as a result of BRESL Project**? |  | Contribution to LCD.  Any skill training organized for women and men workers?  Any attempt to encourage women entrepreneurship?  Adoption of technology by the market. | Project team, desk review. | KII, Desk Review | Purposive | Quantitative and qualitative |  |
| 2. Compare to 2011, to what extent do vulnerable populations now benefit more from better access to low carbon energy? |  |  |  |  |  |  |  |
| 2.1 Compare to 2011, to what extent do vulnerable populations now benefit more from better access to low carbon energy **as a result of Green Bricks project**? | 2.1 Compare to 2011, to what extent do vulnerable populations now benefit more from better access to low carbon energy **as a result of Green Bricks Demo project**? | Potential Impact on price of brick | Project office at UNDP and Pilot | Field study, KII, FGD, review of secondary documents | Purposive | Quantitative and qualitative |  |
|  | 2.2 Compare to 2011, to what extent do vulnerable populations now benefit more from better access to low carbon energy **as a result of Green Bricks projects’ gender activities**? | Gender sensitivity | Project office at UNDP and Pilot | Field study, KII, FGD, review of secondary documents | Purposive | Quantitative and qualitative |  |
| 3. Did vulnerable population benefit from NRM: environmental governance and low carbon green development from **PECM project?** |  | No of government investment projects incorporating PECM indicators in project design and implementation  Baseline 2010: 5 Target 30  No of plans/strategies/polices drafted in favour of low emissions/green growth  Energy generated from renewable sources (Basline-2010: 42MW Target 2016: 85MW)  % reduction in ozone depleting substances/greenhouses | UNDP Country Office  FD  Project Office  Field study | Secondary (Data base, reports);  Interviews | N/A | Qualitative Analysis | Limited Scope of Validation |

**Efficiency**

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Main Evaluation Question** | **Specific Evaluation Question** | **Indicator** | **Data Source** | **Data Collection Method** | **Sampling/**  **Selection of Respondent** | **Method of Data Analysis** | **Limitation/**  **Risk** |
| 1. 1 To what extent were the **Green Bricks project component** outputs delivered in time and in good quality | 1.1 To what extent were the **Green Bricks Demo project component** outputs delivered in time and in good quality | Number of quality brick produced per unit cost as compared to traditional units. | Project office at UNDP and Pilot | Field Visit, KII, FGD, review of documents | Purposive | Quantitative and qualitative |  |
| 1. 2 To what extent were **the BRESL project component** outputs delivered in time and in good quality |  | Price of products standardized.  Value for money. | Project office at UNDP and Pilot. | Field Visit, KII, FGD, review of documents | Purposive | Quantitative and qualitative |  |
| 2**. To what extent did UNDP ensure value for money?** |  |  |  |  |  |  |  |
| 2.1 To what extent did UNDP’s **Green Bricks project** ensure value for money? | 2.1.1 To what extent did UNDP’s **Green Bricks Demo project** ensure value for money?  Any initiative linked to carbon Market? | Value for money  Carbon value | Project office at UNDP and Pilot | Field Visit, KII, FGD, review of documents | Purposive | Quantitative and qualitative |  |
|  | 2.1.2 To what extent did UNDP’s **Green Bricks project’s gender related activities** ensure value for money? | Social benefit cost analysis | Project office at UNDP and Pilot | Field Visit, KII, FGD, review of documents | Purposive | Quantitative and qualitative |  |
| 3. Has there been any duplication of efforts among UNDP’s own interventions and interventions delivered by other organizations or entities in contributing to the outcome? |  |  |  |  |  |  |  |

**Sustainability**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Main Evaluation Question** | **Specific Evaluation Question** | **Indicator** | **Data Source** | **Data Collection Method** | **Sampling/**  **Selection of Respondent** | **Method of Data Analysis** | **Limitation/Risk** |
| 1. What indications are there that the outcome will be sustained after external funding ends? |  |  |  |  |  |  |  |
| 1.1 What indications are there that **the Green Brick project** will be sustained after external funding ends? | 1.1.1 What indications are there that **the Green Brick Demo project** will be sustained after external funding ends?  Any potential conflict in terms of national strategy for energy?  Types of activities to make it sustainable. | Cost effectiveness.  Investment loss for  Frequent changes in policy shifts.  Number of replication.  Incentives given to take up new technology. | Project office at UNDP and Pilot | Field Visit, KII, FGD, review of documents | Purposive | Quantitative and qualitative |  |
|  | 1.1.2 What indications are there that **the Green Brick project** gender related achievements will be sustained after external funding ends? | Policy shift.  Replication.  Awareness among brick makers, cost effectiveness, eases of replication. Awareness by the enactment authorities. Involvement of women activist groups. Involvement of media in this regard. | Project office at UNDP and Pilot | Field Visit, KII, FGD, review of documents | Purposive | Quantitative and qualitative |  |
| 1.3 What indications are there that **the BRESL project** will be sustained after external funding ends? |  | Policy shift.  Incentives given to entrepreneurs, market. | Project office at UNDP and Pilot. | KII, review of documents | Purposive |  |  |

**Annex IV: List of Contacts, Schedules and Meetings**

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Activities | Time | Contacts and Interviewees |
| December 15, 2014 | Meeting and discussion with UNDP CCED Cluster | **10:00 AM** | **KhurshidAlam,** Assistant Country Director  **BlertaCela,** Assistant Country Director  **M. Aminul Islam,** Senior Advisor  **Miyuki Fujii,** Monitoring and Evaluation Analyst  **A.KM. Mamunur Rashid,** Climate Change Specialist  **Alamgir Hossain**, Program Analyst Environment & Energy  **Mohammad SifayetUllah**, Program Analyst Disaster Management  **Luke Parsons,** Climate Change Adaptation and Disaster Risk Reduction Officer  **Ahmadul Hassan,** Project Manager, Integrated Water Resource Management Programme |
| December 17, 2014 | Skype meeting and discussion with UNDP about energy and low carbon emission projects | **1:00**  **PM** | **M. Aminul Islam,** Senior Advisor  **Miyuki Fujii,** Monitoring and Evaluation Analyst  **Alamgir Hossain**, Program Analyst Environment & Energy |
| December 17, 2014 | Meeting with UNDP about PECM project | **2:00**  **PM** | **A.KM. Mamunur Rashid,** Climate Change Specialist |
| December 18, 2014 | Meeting with UNDP about Community Based Adaptation to Climate Change through Coastal Afforestation Project | **2:00**  **PM** | **ParameshNandy,** Project Manager, Community Based Adaptation to Climate Change through Coastal Afforestation Project |
| December 18, 2014 | Meeting with UNDP CCED Cluster | **4:30**  **PM** | **M. Aminul Islam,** Senior Advisor |
| December 19, 2014 | Meeting with UNDP programming in Bangladesh and CCED Cluster | **9:00**  **AM** | **KhurshidAlam,** Deputy Country Director |
| December 21, 2014 | Meeting with UNDP about Early Recovery Facility Project | **9:00**  **AM** | **SeetaGiri,** Project Manager, Early Recovery Facility  **Mokther Hossain,** M &ESpecialist, Early Recovery Facility |
| December 21, 2014 | Meeting with UNDP about CDMP-I and PECM project | **11:30**  **PM** | **A.KM. Mamunur Rashid,** Climate Change Specialist |
| December 23, 2014 | Depart Dhaka for Syamnagar, Satkhira | **4:00**  **PM-11:00**  **PM** |  |
| December 24, 2014 | Depart Syamnagar for Padma Pukur  **Visit Resilient Habitat (ERF Project) (Field activities FGDs, KII and Case study etc)**  Depart for Khulna | **7:00**  **AM**  **9:00 AM-**  **3:00**  **PM**  **6:00**  **PM** | **HumayunKabir,** Site Facilitator, SHUSHILON |
| December 25, 2014 | Depart for Dacope**(CDMP-II)(Field activities FGDs, KII and Case study etc)**  Depart Dacope for Khulna | **7:00**  **AM**  **4:00**  **PM** | **Man Bahadur Thapa,** Programme Specialist, CDMP-II  **Satu Biswas**, Coordinator, SHUSILON |
| December 26, 2014 | Depart for Barguna  **Visit BargunaSadar-NaltonaCBACC-CF Project (Field Activities FGDs, KII and Case study etc)**  Meeting with UNO BargunaSadar | **6:30**  **AM**  **5:00**  **PM**  **8:30**  **PM** | **Shahinur Rahman,** Community Development Associate  **Md. Abul Hashem Miah,** Community Development Assistant  **Mr. Golam Mohammed Bhuyan**, UNO, BargunaSadarUpazila |
| December 27, 2014 | **Visit BargunaSadar-SonadangaCBACC-CF Project (Field Activities FGDs, KII and Case study etc)**  **Visited HBA Model** | **8:00**  **AM**  **4:30**  **PM** | **Shahinur Rahman,** Community Development Associate  **Md. Abul Hashem Miah,** Community Development Assistant |
| December 28, 2014 | Meeting with Fisheries Department of BargunaSadar;  Meeting with District Disaster Management and Relief Office, Barguna;  Meeting with Department of Agriculture and Livestocks, BargunaSadar  Depart Barguna for Patuakhali | **10:30**  **AM**  **12:00**  **PM**  **1:30**  **PM**  **6:00**  **PM** | **Mr. MD. Kamruzzaman,** Assistant Director  **Mr. Abu Bakkar Siddique,** District Disaster, Relief and Rehabilitation Officer  **Mr. AshokKumar Halder**, Deputy Director, Agricultural Extension Division  **Mr. Mostafizur Rahman**, Livestock Officer |
| December 29, 2014 | Meeting with Faculty of Disaster Management;  Attended a conference on “Knowledge Sharing on Disaster and Natural Resources Management” at Patuakhali Science and Technology University (PSTU) (CDMP-II)  Visited Cyclone Shelter, Dhumki (CDMP-II)  Depart for Dhaka | **9:30**  **AM**  **10:00**  **AM**  **1:30**  **PM**  **6:00**  **PM** | **Professor A.KM.Mostafa Zaman,** Dean, Faculty of Disaster Management  **Professor Dr. Shams-Ud-Din,** Vice-Chancellor, PSTU  **Dr. Abdul Ahad Biswas**, Associate Professor, Faculty of Disaster Management |
| January 1, 2015 | Meeting with Department of Disaster Management, Ministry of Disaster Management and Relief, and CDMP-II | **10:45AM**  **1:00**  **PM** | **Mohammad Abdul Wazed,** Director General & Additional Secretary  **Muhammad Abdul Qayyum**, National Project Director, CDMP-II & Additional Secretary |
| February 9, 2015 | Meeting with Ministry of Finance, Economic Relations Division (UN), Sher-e-Bangla Nagar, Dhaka | **11:00 AM** | **Md. Ashadul Islam,** Additional Secretary  **Md. Monirul Islam,** Joint Secretary  **Mohammad Iftekhar Hossain,** Senior Assistant Secretary |
| February 15, 2015 | Preliminary evaluation observations were presented to UNDP | **10:00**  **AM** | Paulin Tamesis, Country Director, UNDP BangladeshNic Beresford, Deputy Country Director, UNDP Bangladesh **KhurshidAlam,** Assistant Country Director  **BlertaCela,** Assistant Country Director  **M. Aminul Islam,** Senior Advisor  **Miyuki Fujii,** Monitoring and Evaluation Analyst  **A.KM. Mamunur Rashid,** Climate Change Specialist  **Alamgir Hossain**, Program Analyst Environment & Energy  **Mohammad SifayetUllah**, Program Analyst Disaster Management  **Luke Parsons,** Climate Change Adaptation and Disaster RiskReduction Officer  **Ahmadul Hassan,** Project Manager, Integrated Water Resource Management Programme |
| February 18, 2015 | Meeting with Ministry of Power, Energy & Mineral Resources, Room 1114, Level 11, BiddutBhaban, Dhaka, Bangladesh | **11:30**  **AM** | **Siddique Zobair,** Joint Secretary and Member (Energy Efficiency) Sustainable and Renewable Energy Development Authority (SREDA)  **Md. Monwar Hasan Khan,** Project Manager, Development of Sustainable Renewable Energy Power Generation (SREPGen) |
| February 19, 2015 | Breakfast meeting with donors, civil society organizations and government officials at Hotel Lake Castle, Gulshan-2, Dhaka  Field visit to Universal Bricks, Green Bricks project site at Dhamrai, Dhaka | **8:00 AM**  **11:30**  **AM** | **Colum Wilson,** DFID Bangladesh  **Helen King,** DFID Bangladesh  **Dr. Haseeb Md. Irfanullah**, IUCN Bangladesh  **DilrubaHaider**, UN Women  **Dr. Sultan Ahmed**, Joint Secretary, Director NRM  **Harun Rashid**, ILO Bangladesh  **Md. ShamsulAlam**, Deputy Chief Conservator of Forest, Bangladesh Forest Department  **QuaziSarwarImtiaz Hashmi,** ADG, DoE  **Anwar Hossain**, Programme Specialist, UNICEF  **RomenaParvin**, DFAT, Australian High Commission, Bangladesh  **Shahnaz Zakari,** USAID  **Morshed Ahmed,** Norwegian Embassy  **Nyske Janssen**, ILO  **Fran Martin**, DFID Bangladesh  **SunitaGiri,** UN RCO  **Mika Kanervavuori**, UN RCO  **SyedaMeherunnesaAfsana**, BCAS  **Md. Mizanur Rahman**, BCAS  **Manfred Fernholz**, Delegation of EU to Bangladesh  **Magnus Andre**, Embassy of Sweden  **Michael Stevens,** Embassy of the Kingdom of Netherlands, Bangladesh Nic Beresford, Deputy Country Director, UNDP Bangladesh **Md. Amanullah Bin Mahmood,** Monitoring Officer, IKEBMI project  **Mr. Liaquat Hossain,** Project Engineer  **Mr. Kabir Hossain,** Manager Universal Bricks  **Mr. Alamgir Hossain,** Accountant, Universal **Bricks** |
| May 10, 2015 | Meeting with KFW Development Bank, Road #90, House #10/C, Gulshan-2, Dhaka-1212, Bangladesh  Meeting with Asian Development Bank (ADB), Plot E-31, Sher-e-Bangla Nagar, Dhaka-1207 | **9:00**  **AM**  **12:15**  **PM** | **Tazmilur Rahman,** Senior Sector Specialist, Energy, KfW Development Bank, KfW Regional Office Bangladesh  **S. M. Mehedi Ahsan,** Sector Specialist for Resilient Cities, KfW Development Bank, KfW Regional Office Bangladesh  **Md. Saidur Rahman**, Project Officer (Energy), Bangladesh Resident Mission |
| May 11, 2015 | Meeting with International Finance Corporation (IFC) World Bank Group,  United House, 10, BirUttam Mir ShawkatSarak, Dhaka-1212. | **1:30**  **PM** | **Mohan Seneviratne,** Principal Industry Specialist, Resource Efficiency, Climate Business Department  **ChandrasekarGoviudarajalu,** Resource Efficiency, Climate Business Department |
| May 12, 2015 | Meeting with Japan International Cooperation Agency,Uday Tower (7th Floor), Plot No. 57 & 57/A, Gulshan-1, Dhaka | **11:30**  **AM** | **Yushi Nagano,** Representative (Power, Transport, PFM Sector/Loan Portfolio Management |
| May 13, 2015 | Meeting with Deloitte-Catalyzing Clean Energy in Bangladesh, USAID Contractor, House #14 (2nd Floor), Road # 32, Gulshan-1, Dhaka-1212, Bangladesh | **8:00**  **AM** | **Craig VanDevelde,** Chief of Party |
| May 13, 2015 | Meeting with The World Bank, World Bank Office Dhaka, Plot E-32, Agargaon, Sher-e-Bangla Nagar, Dhaka-1207, Bangladesh | **10:30**  **AM** | **ZubairK M Sadeque,** Senior Energy Finance Specialist, South Asia Sustainable Development |
| May 14, 2015 | Meeting with GIZ, Road 90, House 10/C, Gulshan-2, Dhaka 1212, Bangladesh | **3:30**  **PM** | **Jan-HendrikSöhlemann**, Monitoring Advisor Sustainable Energy for Development (SED) |
| May 20, 2015 | Meeting with Food and Agriculture Organization of the UN (FAO), House #37, Road #08, Dhanmondi R/A, Dhaka-1205, Bangladesh | **10:00**  **AM** | **Mike Robson,** FAO Representative in Bangladesh |

**Annex V: List of Selected Documents Reviewed**

|  |
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| **List of Documents Reviewed** |
| **1. Sixth Five Year Plan of Bangladesh-Part-1, 2 & 3** |
| **2. National Strategic Documents** |
| -The Millennium Development Goals, Bangladesh Progress Report 2012  -Brick Manufacturing and BrickKiln Setting up (Control) Law, 2013  -Climate Change Strategy and Action Plan 2009  -Climate Fiscal Framework  -Disaster Management Act (draft) Eng  -Economics of Adaptation to Climate Change-Bangladesh 2010-World Bank  -Energy and Poverty in Bangladesh 2007  -Indicator Framework for Inclusive and Resilient Development  - The Millennium Development Goals Declaration  -National Plan for Disaster Management 2010-2015  -National Sustainable Development Strategy (NSDS) 2010-2021  -Perspective Plan of Bangladesh 2010-2021  -Progress Report on the Implementation of the HFA  -Public Expenditure for Climate Change  -SE4ALL Rapid Assessment and Gap Analysis  -Standing Orders on Disaster  -Sustainable and Renewable Energy Development Authority Act 2012  -Towards Resilient Development |
| **3. Country Program Outcome 3.1/UNDAF Outcome 5.1: *By 2016, populations vulnerable to climate change and natural disaster have become more resilient to adapt to risk*** |
| a) 3rd National communications to UNFCCC  -Project Document 3rd National Communication to UNFCCC |
| b) Comprehensive Disaster Management Programme phase-II  -Signed Project Document CDMP, Phase II  -Assessment Stakeholders’ Role Mahasen  -Bangladesh volunteerism  -CDMP Impact Assessment Report 2013  -CDMP Mid-Term Final Report  -Local Level Hazard maps  -Rana Plaza Assessment Report Final  -Rapid assessment LDRRF interventions in flood affected districts Sep 2014  - Revised TOR of Early Recovery Cluster 2012  -CDM-II Case Studies 1-5  -CDMP-II Success Stories 2014 |
| c) Coastal Afforestation  -Signed Project document  -EKN - UN Project Document Full Building Community Resilience IWM  - Annual Results Report2012  -Mid Term Evaluation Report-2012  -Progress Report 2014 Char FassionBhola  -Progress Impact Report 2014 Barguna  -Progress Impact Report Noakhali  -Impact Assessment of GOB Officials on Capacity Building and CBA Measures - Noakhali  - Impact Assessment of GOB Officials on Capacity Building and CBA Measures –Barguna  - Impact Assessment of GOB Officials on Capacity Building and CBA Measures -Chittagong  - Impact Assessment of GOB Officials on Capacity Building and CBA Measures -Bhola |
| d) Early recovery facilities  -Signed Project Document  -Feb 2014 Revised Project document  -Early Recovery Programmes Lesson Study 2012  -ERF Mid Term Report 2014 |
| **4. Country Programme Outcome 3.2/UNDAF Outcome 5.2: *By 2016, vulnerable populations benefit from better natural resource management and access to low carbon energy*** |
| a) Bangladesh Green Development Program  - Initiation Plan-2011 |
| b) Barrier Removals for Energy Standards & Labeling (BRESL)  -Project document  -Project Result Report (Annual) (2012-2014) |
| c) CHT watershed Co-management  - 2013-08-30 Watershed CS Agreement with USAID |
| d) Conversion Cyclopentane (Walton)  - Project Document  - HFC Survey Final Report |
| e) Development of sustainable renewable energy power generation  - Project Document |
| f) Expanding the protected area aquatic ecosystem  - Project Document- Expanding the Protected Area System to incorporate  Important Aquatic Ecosystems |
| g) Green Bricks-IKEBMI  - Signed Project Document Brick Making Industries  - Annual Result Report 2012  - Annual Progress Report 2011  - Socio-Economic Baseline Study on Brick Making Industries (BMI) of Bangladesh  - GENDER in Focus Completion Report 2014  - Socio-Economic Profile, Profitability and Replicability Study on HHK Demo Plants Report -2013 |
| h) Poverty Environment Climate Mainstreaming (PECM)  - Signed Project Document  - UNDP Final Mid Term Evaluation report-2013 |
| i) Support to implement REED+  - Signed IP Bangladesh  - Bangladesh REDD+ Readiness Roadmap 2012 |
| j) Sustainable Environmental Governance Program  - Signed IP SEGPP |
| **5. UNDP & UNDAF Documents** |
| - 2014 Final Annual Results Compact format  -Assessment of Development Results-Bangladesh: Evaluation of UNDP  Contribution 2011  - Country Programme Document - Bangladesh 2012-2016  - Empowered Lives Resilient Bangladesh – 2012  - Country Programme Evaluation Plan 2012-2016  -Bangladesh Final ROAR 2012  - Bangladesh Final ROAR 2013  -Report on the Post-2015 Development Agenda for Bangladesh-2013  -Resilient Bangladesh: UNDP Bangladesh Annual Report 2013/2014  -UNDAF for Bangladesh 2012-2016  -UNDAF Action Plan 2012-2016 for Bangladesh  -UNDAF Bangladesh Progress Report-2012  -Changing with the World: UNDP Strategic Plan 2014-2017  - Results Oriented Annual Reporting (ROAR) 2014 |

**Annex VI: Macroeconomic Performance by Development Indicators, Bangladesh, 2000-2014**

The purpose of this review is to make an assessment ofthe macroeconomic performance of Bangladesh (2010-2014) (In this analysis, ‘all years’ refer to corresponding financial years). Where feasible, a comparative analysis of the performance between two distinct periods, 2000-10 and 2010-14 was carried out. Incidentally, the reference period for this review nearly coincides with the period for Sixth Five Year Plan - SFYP (2011-15). The historical sizes of growth indicators such as GDP, Savings and Investment for up to 2014 are shown in Tables VI.1 and VI.2. Trend analyses of selected macroeconomic indicators between two periods, 2000-10 and 2010-14 are shown in Table VI.3. The indicators included are GDP, per capita GDP, Investment (Public and Private), Savings, Human Poverty Index (HPI), Human Development Indices, and Enrolment in schools (Primary and Secondary). The analysis could not be made comprehensive in areas where data were not available or yet to be made available.

**Table VI.1: GDP, Savings and Investment in Bangladesh, 2010-2014.**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Fiscalyear** | **Crore Tk** | | | | | | | | | |
| **GDP**  **Market P** | **GDP**  **Constant P** | **GNI**  **Current P** | **Per Capita**  **Market P** | **Per Capita**  **Constant P** | **Investment** | **Public**  **Inves-tment** | **Private**  **Invest-ment** | **Domestic**  **saving** | **National**  **Saving (Incl remittance)** |
| 2000 | 237086 | 204930 | 245799 | 18508 | 15998 | 54590 | 17570 | 37010 | 42394 | 54761 |
| 2001 | 253546 | 215735 | 262388 | 19519 | 16608 | 58540 | 18380 | 40150 | 45628 | 56809 |
| 2002 | 273201 | 225261 | 285744 | 20760 | 17117 | 63240 | 17400 | 45840 | 49605 | 64038 |
| 2003 | 300580 | 237101 | 317163 | 22532 | 17774 | 70350 | 18630 | 51720 | 56010 | 74752 |
| 2004 | 332973 | 251968 | 350526 | 24628 | 18637 | 79990 | 20620 | 59370 | 65046 | 84719 |
| 2005 | 370707 | 266974 | 389635 | 27059 | 19487 | 90920 | 23010 | 67920 | 74195 | 95804 |
| 2006 | 415728 | 284673 | 442935 | 29952 | 20510 | 102480 | 24930 | 77550 | 84176 | 115036 |
| 2007 | 472477 | 302971 | 507752 | 33604 | 21548 | 115590 | 25730 | 89860 | 96160 | 135424 |
| 2008 | 545822 | 321726 | 594212 | 38330 | 22593 | 132130 | 27040 | 105090 | 110851 | 164912 |
| 2009 | 614795 | 340197 | 670696 | 42635 | 23592 | 149840 | 28900 | 120940 | 123504 | 181812 |
| 2010 | 694324 | 360845 | 758928 | 47524 | 24698 | 169510 | 34820 | 134690 | 139553 | 208405 |
| 2011 | 796704 | 385050 | 869217 | 53868 | 26034 | 200380 | 44934 | 155440 | 154280 | 223653 |
| 2012 | 918141 | 409053 | 1007443 | 60563 | 26982 | 243690 | 59660 | 184040 | 223954 | 315047 |
| 2013 | 1037987 | 433720 | 1142479 | 67577 | 28237 | 276810 | 81490 | 197130 | 264196 | 366000 |
| 2014 | 1169581 | 460170 | 1270883 | 75069 | 29536 | 316673 | 80775 | 236097 | 316490 | 412613 |

Sources: Statistical Year Books (Various Years); Bangladesh Economic Review (Various Years); UNDP. 2014. Human Development Review 2014.

Table VI.1 (Contd)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Fiscal year** | **Growth rate of GDP**  **Market P (%)** | **Growth rate of GDP constant P (%)** | **Investment**  **as % of GDP** | **Public investment as % of GDP** | **Private**  **investment as % of GDP** | **Domestic**  **savings**  **as % of GDP** | **National**  **savings**  **as % of GDP** |
| 2000 |  |  | 23.03 | 7.41 | 15.61 | 17.88 | 23.10 |
| 2001 | 7.91 | 5.94 | 23.09 | 7.25 | 15.84 | 18.00 | 22.41 |
| 2002 | 6.94 | 5.30 | 23.15 | 6.37 | 16.78 | 18.16 | 23.44 |
| 2003 | 7.75 | 4.40 | 23.40 | 6.20 | 17.21 | 18.63 | 24.87 |
| 2004 | 10.02 | 5.30 | 24.02 | 6.19 | 17.83 | 19.53 | 25.44 |
| 2005 | 10.78 | 6.30 | 24.53 | 6.21 | 18.32 | 20.01 | 25.84 |
| 2006 | 11.33 | 6.00 | 24.65 | 6.00 | 18.65 | 20.25 | 27.67 |
| 2007 | 12.14 | 6.60 | 24.46 | 5.45 | 19.02 | 20.35 | 28.66 |
| 2008 | 13.65 | 6.40 | 24.21 | 4.95 | 19.25 | 20.31 | 30.21 |
| 2009 | 15.52 | 6.20 | 24.37 | 4.70 | 19.67 | 20.09 | 29.57 |
| 2010 | 12.64 | 5.70 | 24.41 | 5.01 | 19.40 | 20.10 | 30.02 |
| 2011 | 12.94 | 6.10 | 25.15 | 5.64 | 19.51 | 19.36 | 28.07 |
| 2012 | 14.75 | 6.70 | 26.54 | 6.50 | 20.04 | 24.39 | 34.31 |
| 2013 | 15.24 | 6.20 | 26.67 | 7.85 | 18.99 | 25.45 | 35.26 |
| 2014 | 13.05 | 6.03 | 27.08 | 6.91 | 20.19 | 27.06 | 35.28 |

**Table VI.2: Human Development Indices for Bangladesh, 2010-2014.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Fiscal**  **year** | **Primary**  **enrolment** | **Secondary**  **enrolment** | **Sanitation access** | **Water**  **access** | **HPI** | **HDI** |
| 2000 | 15766176 | 7646885 | 43.40 | 96.50 | 40.30 | .453 |
| 2001 | 15784416 | 7887010 | 36.90 | 90.70 | 43.30 | .510 |
| 2002 | 15570360 | 8162134 | 39.90 | 96.70 | NA | .509 |
| 2003 | 15450013 | 8126362 | 42.50 | 97.30 | NA | .509 |
| 2004 | 15245114 | 7503247 | 39.00 | 97.40 | 40.50 | .530 |
| 2005 | 16225658 | 7398552 | 43.30 | 97.80 | NA | .494 |
| 2006 | 16385847 | 7419179 | 45.00 | 97.40 | 44.20 | .440 |
| 2007 | 16312907 | 7119464 | 61.20 | 97.80 | 40.50 | .450 |
| 2008 | 16001605 | 6819748 | 62.20 | 98.30 | NA | .460 |
| 2009 | 16539363 | 7356793 | 62.70 | 98.10 | NA | .460 |
| 2010 | 16957894 | 7465774 | 63.50 | 98.10 | 32.28 | .539 |
| 2011 | 18432499 | 7510218 | 63.60 | 98.20 | 31.62 | .549 |
| 2012 | 19003210 | 7937235 | NA | NA | 30.10 | .554 |
| 2013 | NA | NA | NA | NA | 30.63 | .558 |
| 2014 | NA | NA | NA | NA | 30.15 | .624 |

Sources: Statistical Year Books (Various Years); Bangladesh Economic Review (Various Years); UNDP. 2014. Human Development Review 2014.

**Table VI.3: Trend analysis of selected macroeconomic indicators between two periods, 2000-10 and 2010-14, Bangladesh**

|  |  |  |
| --- | --- | --- |
| **Variable** | **Trend (2000-10)** | **Trend (2010-14)** |
| GDP Market Price | .110 | .131 |
| GDP Constant (1995-96) Price | .058 | .061 |
| GNI Constant (1995-96) Price | .116 | .130 |
| Per Capita Market Price | .070 | -.016 |
| Per Capita Constant rice | .017 | -.010 |
| Domestic saving | .124 | .218 |
| National saving | .142 | .186 |
| All Investment | .117 | .157 |
| Public | .067 | .228 |
| Private | .134 | .136 |
| HPI | -.028 | -.017 |
| HDI | -.003 | .031 |
| Primary enrolment | .007 | .057 |
| Secondary enrolment | -.011 | .031 |
| Sanitary access | .057 | .002 |
| Water access | .004 | .001 |

Sources: Statistical Year Books (Various Years); Bangladesh Economic Review (Various Years); UNDP. 2014. Human Development Review 2014.

**Economic Growth**

According to BBS, Bangladesh achieved 6.1 to 6.7 percent real GDP growths in 2010-11 and 2011-12; these were achieved even though the global financial market was facing serious challenges. However, the growth rate declined to around 6 percent during 2012-14 although growth projections were set out in the Medium Term Macroeconomic Framework (MTMF) as around 7 percent for 2013-14. In comparison, the world economic growth has been around 3 to 3.6 percent around this period.

Substantial growth in agriculture (around 3%), industry (around 10%) and service sector (around 6%) has contributed to the overall GDP growth. The share of agriculture, industry and service sectors has been approximately 20, 30 and 50 percent, respectively.

In agriculture sector, there was a consistent positive growth over the last few years. Considerable government support such as subsidy, power supply for irrigation, flow of agricultural credit, and the innovation of new varieties of salinity/weather tolerant seeds contributed significantly to achieving sustainable growth in the agriculture sector.

In absolute terms, the real GDP (at constant 1995/96 price) was about Tk. 3608 billion in 2010, which increased by about 1.3 times in 2014 (Table VI.1). The per capita GDP (constant price) rate of increase was 1.7 percent during the period 2000-10 but it appears to have declined during the period 2010-14 by 1.0 percent (Table VI.3).

**Savings**

On the savings front, Bangladesh has been making good progress in recent years. The domestic savings rate (as a share of GDP) has been rising, benefiting from a supportive demographic transition, where the share of working population has been steadily rising.

Domestic savings gradually increased, from 20.1 percent of GDP in 2010 to 27.1 percent of GDP in 2014. Because of positive growth in remittance inflows, national savings also increased to as high as 35.3 percent of GDP in 2014 from 30.0 percent of GDP in 2010 (Table VI.1).

The trend rate of domestic savings has been very impressive during 2010-14 (as high as 21.8%) as compared to that during 2000-10 (12.4%). Similarly, the corresponding trend rates of growth for national savings (domestic plus remittances) were 14.2 and 18.6 percent during 2000-10 and 2010-14 respectively (Table VI.3).

In fact, since 2000 the rapid growth of remittances has created a significant amount of inflow of private transfers, which rapidly raised the national savings rate.

**Investments**

One of the major problems that the Bangladesh economy is facing today is the relatively slow progress of the overall level of investment in the domestic economy. However, following steady increases in savings, the investment rate as a share of GDP seems to have stabilized at around 24 percent of GDP in 2010, and making a gradual increase to reach around 27 percent in 2014 (Table VI.1). However, the challenge remains -- to increase this rate to around 32 percent over the SFYP period.

In absolute terms, the amount of investment was about Tk. 1695 billion in 2010, which increased by about 1.9 times in 2014. Similarly, public and private investments increased by 2.3 and 1.8 times in 2014 respectively, compared to those in 2010. The domestic savings was Tk. 1396 billion in 2010, which increased by 2.3 times in 2014 compared to that in 2010.

In percentage terms, similar features can be noticed. For example, the overall investment as a percentage of GDP in 2010 was 24.4, which increased to 27.1 in 2014. More specifically, public investment was 5.01 percent of GDP in 2010, which increased to 6.9 percent in 2014. Private investment was 19.4 percent of GDP in 2010, which increased to 20.2 percent in 2014. However, the private investment growth rate remained nearly stagnant, 13.4 percent during 2000-10 and 13.4 percent during 2000-14 (Table VI.3).

The share of private investment stood at 19.4 percent of GDP while that of public investment was only 5.0 percent in 2010. The private and the public investments slightly increased to the extent of 20.2 and 6.9 percent of GDP in 2014 respectively.Although private sector investment has been increasing at a pace slightly above the rate of GDP growth, a decline in public investment in relation to GDP largely offsets that gain, keeping total investment broadly at a low level in relation to GDP.

In regard tothe trend rate of growth indicating corresponding performance, it is apparent that most of the performance indicators show a positive growth between the two periods, 2000-10 and 2010-14 (Table VI.3). The overall investment growth rate in 2010 was 11.7 percent compared to 15.7 percent in 2014. Likewise, the public investment growth rate during 2000-10 was 6.7 percent compared to as high as 22.8 percent in 2010-14 (Table VI.3).

It is notable here that, despite the good performance in increasing the saving and investment rates, these rates are much below those found in the faster growing economies of East Asia and in India.

**Public Expenditure**

The estimated government expenditure stood around 16 percent of GDP in 2010 which is expected to be around 20 percent of GDP in 2014. Against this, expenditure on ADP is planned to be increased from 4 percent of GDP in 2010 to 7.0 percent of GDP in 2014 (data on this are inadequate). In this regard, priority has been given to foreign assistance to achieve this.

**Human Development**

**Primary and Mass Education**

The Government has given high priority to strengthen primary education, and accordingly it has been making an increased allocation of resources to this sector. For example, in 2010-11, an amount of Tk. 3151 crore was allocated to the primary education sub-sector. Subsequently the corresponding allocation was Tk. 5778 crore in 2014-15, showing an increase of more than 83 percent. The Government is committed to ensure 100 percent enrollment of the children (who have reached the age of attending school) and to eradicate illiteracy by the year 2014. There is an increasing trend in the enrolment of female students in primary schools. In 2010, the male-female ratio among students was 55:45. Currently, the ratio is about 50:50.

Primary enrolment in 2010/11 was about 16,958 thousands which increased to 19,003 thousands in 2012/13, recording an increase of around 12.1 percent (updated data are not available yet). Regarding the trend rate of growth indicating corresponding performance, it can be seen that the overall enrolment growth rate during the period 2000-10 was only 0.7 percent compared to 5.7 percent during 2010-14 (Table VI.3).

**Secondary and Higher Secondary Education**

The allocation on secondary and higher secondary education subsector in 2010 was Tk. 911 crore, which increased to Tk. 1,859 crore in 2014, recording an increase of around 104 percent.

Secondary enrolment in 2010/11 was about 7,466 thousands, which increased to 7,937 thousands in 2012/13, recording an increase of around 6.3 percent. Regardingthe trend rate of growth, it is observed that the overall enrolment growth rate of secondary education during the period 2000-10 was in fact negative (-1.1%), compared to a positive growth of 3.1 percent during the period 2010-14 (TableVI.3).

**Poverty Alleviation**

In the pursuit of development, poverty alleviation is an overriding agenda in Bangladesh. Because of the effective interventions by the Government, absolute poverty has been declining. In addition, Human Development Reports (HDR) of UNDP reveal that Bangladesh scored 0.292 in the Multidimensional Poverty Index (MPI) in 2011, which improved to 0.237 in 2013.

**Trends of Poverty**

The rate of income poverty (measured by CBN considering upper poverty line) declined from 48.9 percent to 40.0 percent during the period from 2000 to 2005. The rate of income poverty declined from 40.0 percent to 31.5 percent during the period from 2005 to 2010. The poverty reduction rate per year was recorded at around 1.7-1.8 percent during 2000-2010. But the rate of reduction of poverty is higher in rural areas (1.7%) than in urban areas (1.4%). In fact, the decline in headcount ratio was greater than population growth during the 2005-2010 period, which led to a decline in the absolute number of the poor people. The trends of poverty are shown in the following table (TableVI.4):

**Table VI.4: Trend of Income Poverty in Bangladesh**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Head Count Ratio – using Upper Poverty Line** | | | | |
| **2000** | **2005** | **2010** | **Annual Change**(%)  (**2000 to 2005**) | **Annual Change** (%)  (**2005 to 2010**) |
| National | 48.9 | 40.0 | 31.5 | - 1.8 | - 1.7 |
| Urban | 35.2 | 28.4 | 21.3 | - 1.4 | - 1.4 |
| Rural | 52.3 | 43.8 | 35.2 | - 1.7 | -1.7 |

**Source:** Household Income and Expenditure Surveys (HIES), 2010.

In 1991, the national HCR of poverty was 56.7 percent. In about 20 years, it recorded 25.2 percentage points reduction. Bangladesh is close to achieving the MDG of halving the poverty incidence by 2015. In order to reduce the poverty rate to 25 percent by 2013 and 15 percent by 2021 as set out in Vision 2021, the Government has prepared a perspective plan (2010-21) and the Sixth Five Year Plan (SFYP) for implementation.

GED estimates reported in SFYP reveal that national poverty will be reduced to 24.4 and 22.7 percent in 2014 and 2015 respectively (Table VI.5).

**Human Poverty Index (HPI) and Human Development Index (HDI)**

The Human Poverty Index (HPI), which is an indication of the extent of deprivation (longevity, knowledge and a decent standard of living), registered slight improvement in Bangladesh. The trend rate of change registered from -2.8 percent during the period 2000-10 to -1.7 percent during 2010-14.

The performance in terms of Human Development Index (HDI) (a composite statistic of life expectancy, education, and income indices) has been impressive in that it registered an improvement during 2010-14 to the extent of 3.1 percent compared to that during 2000- 10 (slight decline to the extent of 0.3 percent).

**Water and Sanitation**

Improvement in access to water and sanitation has continued in both the periods; however, the extent of progress has been much higher during the earlier periods than in the later periods. This was because of the influence of the lower base figures in the earlier periods than in the later periods (in fact, it already reached a high proportion) (Table VI.2).

**Table VI. 5: Poverty estimates for 2011 to 2015**

|  |  |
| --- | --- |
| **Year** | **HCR-UPL** |
| 2011 | 29.69 |
| 2012 | 27.95 |
| 2013 | 26.21 |
| 2014 | 24.47 |
| 2015 | 22.73 |

Source: GED estimates reported in SFYP.

Compared to that in the period 2000-10, the significant progress in respect of eradication of poverty during the period 2010-14 is said to be possible due to, among others, decline in population growth rate and changing population structure, increase in wage income, improved infrastructural and telecommunication connectivity and internal migration.

**Attainment of Millennium Development Goals (MDGs)**

Eradication of extreme poverty and hunger by 2015 is one of the prime goals set out in the UN MDGs. It is revealed from the report titled ‘Millennium Development Goals (MDGs): Bangladesh Progress Report’ that in terms of achieving Goal 1, along with some other important goals, Bangladesh has made consistent progress. The following table provides a snapshot of progress that Bangladesh has achieved till now (Goal 1):

**Table VI.6 : Attainment of MDGs (Goal 1) At a glance**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Goals, Targets and Indicators (revised)** | **Base year**  **1990/1991** | **Status** | | **Target by 2015** |
| **Goal 1: Eradicate Extreme Poverty & Hunger** | | |
| Target 1.A: Halve the proportion of people below poverty line by 2015 | | | | |
| % of population below national upper poverty line(2122 kcal.) | 56.6 | 31.5 (2010) | | 29.0 |
| Poverty Gap Ratio, percent | 17.0 | 6.5 | | 8.0 |
| % of poorest quintile in national consumption | 6.5 | 8.85 | | N.A. |
| Target 1.B: Achieve full and productive employment and decent work | | | | |
| Employment to population ration, Percent | 48.5 | 59.3 | | For all |
| Target 1.C : Halve the proportion of people who suffer from hunger by 2015 | | | | |
| Prevalence of underweight children under five years | 66.0 | 45 | | 33.0 |
| Proportion of population below minimum level of dietary energy consumption, percent | 28.0 | 19.5 | | 14.0 |

**Source:** Bangladesh Bureau of Statistics, 2011; UNDP, 2011.

**Conclusion**

In conclusion, our examination of the trend rate of growth indicating corresponding performance has revealed that most of the performance indicators show a positive growth during both the periods, 2000-10 and 2010-14; however, generally the progress is significantly and distinctly higher in the later period.

Bangladesh has made good progress not only in income poverty but also in human poverty, through increasing equitable access to education, reducing dropouts, and implementing a number of quality enhancement measures, particularly in primary education. It has already achieved gender parity in primary and secondary school enrolment. It is in the process of implementing a comprehensive National Education Policy (2010) to achieve its comprehensive objectives. The present challenges include attaining the targets of primary education completion rate, increasing adult literacy rate and improving quality of education.

**Annex VII.a: GDP Growth in South-Asian Countries**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Country | GDP Growth Year | | | |
|  | 2011 | 2012 | 2013 | 2014 |
| Bangladesh | 6.7 | 6.5 | 6.0 | 6.1 |
| Bhutan | 8.1 | 5.6 | 6.0 | 6.8 |
| India (Factor cost) | 6.7 | 4.5 | 4.7 | 5.6 |
| Maldives (CY) | 6.5 | 1.3 | 3.7 | 4.5 |
| Nepal | 3.9 | 4.6 | 3.5 | 5.2 |
| Pakistan | 3.6 | 3.8 | 3.7 | 4.1 |
| Sri Lanka | 8.2 | 6.3 | 7.3 | 7.8 |

Note: These real GDP growths estimated and projections are based on respective country FYs unless otherwise noted (CY) (Source: World Bank, 2014, http://www.worldbankorg/en/region/sar/publication/

south-asian-countries-potential-accelerated-growth)

**Annex VII.b: Total Number of People Reported Killed and Affected by Disasters by Country (1994-2013)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name of the Country | Total Number of People Killed | | Total Number of People Reported Affected | |
| 1994-2003 | 2004-2013 | 1994-2003 | 2004-2013 |
| Bangladesh | 11,259 | 11,881 | 50,508,051 | 76,395,387 |
| India | 69,300 | 46,078 | 697,323,825 | 170,233,654 |
| Indonesia | 8,194 | 181,979 | 8,513,312 | 10,807,067 |
| Myanmar | 423 | 139,597 | 352,338 | 3,320,929 |
| Nepal | 3,200 | 2,531 | 654,615 | 2,810,255 |
| Pakistan | 6,374 | 82,150 | 19,348,757 | 47,324,932 |
| Sri Lanka | 705 | 35,893 | 5,802,518 | 7,526,033 |
| Thailand | 2,023 | 10,585 | 28,467,123 | 63,059,551 |

Source: IFRC and RCS. 2014. World Disaster Report 2014.

**Annex VIII: UNDP CPD Indicator 2012-2016 under Consideration**

| **Current Indicators** | **Proposed Changes/New Indicators** | **Reasons** |
| --- | --- | --- |
| **Outcome 3.1: By 2016, populations vulnerable to climate change and natural disaster have become more resilient to adapt to risks** | | |
| 3.1.1. Environment, climate and disaster vulnerability index | 3.1.1. Annual average economic loss from natural hazards (e.g. geo-physical and climate-induced hazards) as a proportion of GDP in the last five years  Baseline 2011: 1.23%  Target 2016: 0.8%  Data Source: Loss and Damage Report from Ministry of Disaster Management and Relief | The proposed indicator is better formulated to monitor and report on the outcome statement. No index was carried out for 2012-2013. |
| 3.1.2. Community Asset Score for disaster risk and reduction | 3.1.2. Extent to which disaster and climate risk management plans are funded through national, local and sectorial development budgets (Rating Scale; 1-not adequately; 2-very partially; 3-partially; 4-largely)  Baseline 2011: 1 point (Not adequately)  Target 2016: 3 points (Partially)  Data Source: Disaster and Climate Change Public Expenditure Report from Ministry of Disaster Management and Relief | The proposed indicator is formulated to monitor and report on the outcome statement. It is also aligned with UNDP global Strategic Plan 2014-2017. The methodology of the current indicator was not related to UNDP’s work (more WFP specific). However, this is to be further discussed and finalized by the cluster. |
| **Outcome 3.2: By 2016, vulnerable populations benefit from better natural resource management and access to low carbon energy** | | |
| 3.2.1. # of Government policies, strategies or plans approved in support of sustainable management of natural resources  Baseline 2010: 2  Target 2016: 4  Data Source: Annual desk review of key national reports from sectoral ministries | 3.2.1. # of Government policies, strategies or plans approved in support of sustainable management of natural resources  Baseline 2012: 18  Target 2016: 22  Data Source: Government Gazettes and Review of Ministerial Reports | Only the baseline and the target are proposed to be updated to be aligned with the national strategic goals. These changes were also made in the UNDAF Pillar 5 indicators in 2013. |
| 3.2.2. # of MW generated from renewable sources  Baseline 2010: 42 MW  Target 2016: 85 MW  Data Source: Desk review of key national reports | 3.2.2. # of MW generated from renewable sources  Baseline 2011: 72 MW  Target 2016: 800 MW  Data Source: Statistics from Power Division, Ministry of Power, Energy and Mineral Resources | Only the baseline and the target are proposed to be updated to be aligned with the national strategic goals. This follows the changes made in the UNDAF Pillar 5 indicators in 2013. |

**Annex IX: An Overview of Energy Sector in Bangladesh – Opportunities for UNDP**

**Summary**

For Bangladesh, energy security is an important consideration for economic growth but also for social development. Renewable energy and energy efficiency are important strategies to enhance energy security. There are significant opportunities in the both sectors. Many actors are already active in renewable energy sector and UNDP is one of them with its recently kicked-off SREPGen project. However, in the field of energy efficiency, UNDP has a more unique reputation for developing energy efficiency standards for consumer appliances and technology transfer in the brick industry, acquired through the two projects included in detail in this evaluation. UNDP can and should build on these established strengths, and expand them topically, for example through the following activities:

* Adjustment of the work program and potentially also the expected outcomes of the SREPGen project to fill urgent needs, e.g. in donor coordination and policy implementation support;
* Expansion of the work with SREDA to the field of energy efficiency, building on BRESL and IKEBMI, with the main objective of the implementation of the EE&M Master Plan; and
* Initiation on a dialogue on Green Growth and technology transfer, triggering of technology transfer in a second industrial area, and its social and environmental consequences**.**

UNDP’s most important impact on Bangladesh will remain in the area of triggering innovation, supporting government in policy formulation and implementation, and in aligning government priorities with policies and donor programs. Therefore, it is also recommended to reformulate the outcome indicators to reflect a broader set of outcomes that are more relevant to the UNDP program.

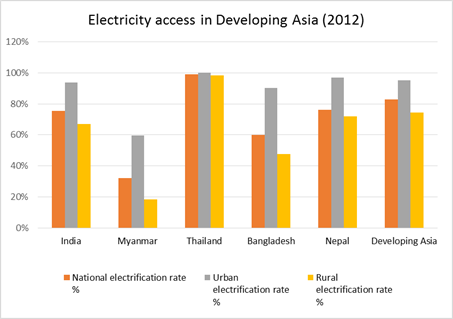
**Introduction**

Bangladesh’s energy use per capita is very small relative to other nations. The major fuels used are domestic natural gas and fuel wood. On its way to a middle income country on an industrialization route, energy consumption is scheduled to rise significantly. Energy security is an important consideration for the economic growth but also for social development. Depending on the path taken, the environmental risks and social are considerable. An environmental risk is increasing pressure on the natural resources, increasing pollution and increasing GHG emissions. One of the social risks is an increasing divide between social groups.

**Energy access compared to neighbouring states**

The UNDP country program defines access to low carbon energy as one of its outcome indicators. As indicated in Figure IX.1 based on data from the IEA electrification database for 2012, Bangladesh has the second-lowest electrification rate in the region after Myanmar, at 60%. While in cities, 90% of households enjoy access to the grid, in rural areas this number is below 50%.

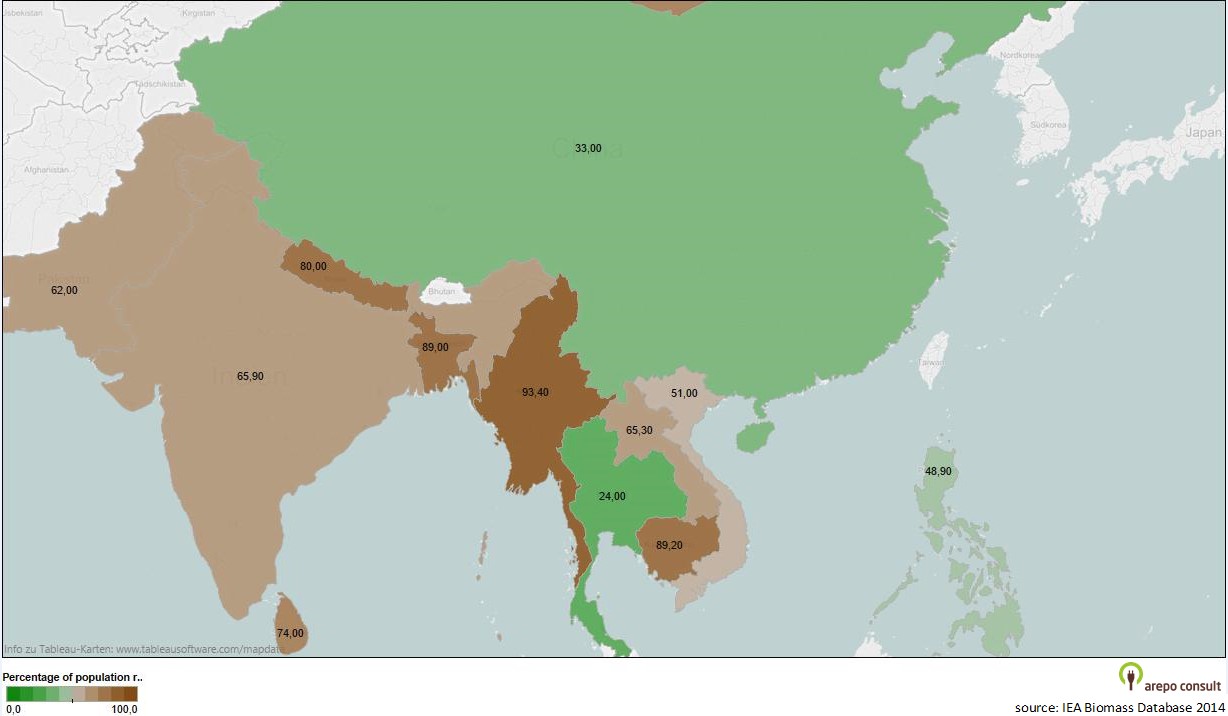
Figure IX.1: Regional comparison of electrification rates (source: IEA Electrification Database 2014)



The government of Bangladesh with the help of strong development finance institutions like ADB and the World Bank is constantly adding new transmission and distribution lines to the grid in order to connect new households. In addition, concerted efforts are taking place to provide rural households with solar home systems. While no comparative figures for the countries in the region are available, the Bangladeshi support scheme has provided by now more than 3 million solar home systems, and every month another 50.000 systems are added. This is the highest rate of addition observed in any country (cf. WB 2014).

Still, most people rely on fuel wood for their cooking – with all environmental and health risks that are associated to it. Figure IX.2 illustrates the dependence on fuel wood for the region.

Figure IX.2: Regional comparison of fuel wood use for cooking (source: IEA Biomass Database 2014)



In fact, almost 90% of the population use fuelwood for cooking, more than in any other South Asian country, and only exceeded by Myanmar. Statistical and comparable data on the relative efficiency of these cook stoves, and on the reliability and utility of the solar home systems are currently not available.[[62]](#footnote-62)

**Energy supply**

The power sector in Bangladesh is comparatively small – less than 10 GW provide the electricity for the part of the population and industry that has access to the grid. All currently operating large scale power plants are run by natural gas. Power outages are frequent. According to the 2013 Bangladesh Enterprise Survey by the Enterprise Analysis Unit, companies in Bangladesh suffer ten times as many outages (more than 60) in a typical month compared to the average for all countries with Enterprise Survey data (less than ten). The duration of the typical outages in Bangladesh is however much shorter (less than one hour) compared to the average for all countries with Enterprise Survey data (between two and three hours).[[63]](#footnote-63)The World Bank estimates that the economic loss in the private and trade sector due to power outages is about 4% of sales.

The fear that the natural gas deposits will be exhausted in the next 20 years has been voiced repeatedly. The official policy for expanding the power sector is characterized by “all of the above”. The specific expansion plans – adding 14 GW until 2020 and another 15 GW until 2030 according to the Power System Master Plan 2010 - rely mainly on coal power (in 2030: total generation capacity: 39 GW, of which 20 GW coal-based generation capacity).[[64]](#footnote-64) National coal reservoirs exist but social and environmental concerns might prohibit their exploitation. Therefore, the current plans foresee coal imports and large scale coal power plants at the coast with the associated port facilities. A nuclear power treaty with Russia is interpreted by many interview partners to serve more a political purpose. Most international financial institutions (WB, KfW, ADB) are currently focusing on up-scaling Open Cycle Gas Turbines to Combined Cycle power plants by adding a steam turbine, as well as other measures that enhance the efficiency of the power sector, e.g. upgrading of transmission and distribution infrastructure, and smart metering. ADB also finances new construction of new gas power plants. Some actors (e.g. the IFC PACT project) also have identified a significant potential of cogeneration of heat and power at captive industrial facilities.

The most important source of energy in Bangladesh is biomass. Fuel wood is used for cooking, water boiling, probably also some industrial applications and many productive uses off the grid. The off-grid sector is very large. In the last 10 years, however, positive developments in this sector have vastly outpaced expectations: Currently about 3.000.000 solar home systems[[65]](#footnote-65) are in operation in the rural areas, and about 40.000 to 50.000 systems are added on a daily basis. The biggest donor program supporting this, the WB’s REREDII programme, started in 2012 with the overall expectation of 550.000 SHS only. While initially subsidy-based, the subsidy for SHS over 30 kW is scheduled to expire as significant cost reductions has been achieved.[[66]](#footnote-66) The program is managed through the national institution IDCOL, the Infrastructure Development Company Limited, which also provides for relatively tight quality control. Worldwide, this is the most successful private sector provided off-grid electrification effort, and offers a large number of interesting lessons that can be transferred to other countries.

But despite this extraordinary development, only 10% of the off-grid households have been provided access to electricity through this program. In addition, the program has been criticized for reaching only certain tiers in the rural populations that are able to afford these systems. The poorest of the poor are not reached with this program.

For these, a solar lantern program has now been developed. Solar lanterns over 1800 lumen-hours (typically around 4-5 W) will be promoted through IDCOL with a financing mechanism. An IFC program, Enlighten. Asia Bangladesh, will collaborate with producers of lanterns of smaller capacity, currently for this no loan program is envisioned. Whether or not a subsidy will be provided for this program, is still under negotiation but the likely scenario is one which provides 20 USD subsidy per lantern under the IDCOL program, and a pro-rata smaller subsidy for the smaller lanterns. The UNDP SREPGen programme has been under development since 2011 but started this year, and currently includes a component on solar lanterns that is expected to reach over 440.000 households in 2 years. In order to minimize duplication with the IDCOL and IFC initiatives adjustments are recommended and currently discussed between UNDP and SREDA.

IDCOL also offers loans for other technologies, among them domestic biogas and solar mini-grids. Significant activity arises in the field of solar water pumping where KfW supports comparatively large systems for agricultural irrigation of 10 – 25 kW sizes. These are difficult to place as their solar arrays require significant space. GIZ has deployed around 200 smaller solar systems for drinking water supply. In the area of biogas, according to their website, IDCOL had financed 33,000 systems until April 2014, with the target of 100,000 by the end of 2018. Several actors describe technical and techno-economic challenges in this area, as operations are not as simple as the operation of solar systems, and the long-term maintenance is not secured in the current IDCOL scheme. Technology wise, simple fixed-dome systems constitute the majority of the systems, while more flexible, airtight and integrated systems would be available on the market. In contrast to the SHS area, standardization is underdeveloped in the field of biogas.

Less often discussed is the development of solar power plants that feed to electricity into the grid. The Sustainable and Renewable Development Authority’s (SREDA) solar plan of 500 MW envisions 165 MW on the grid: solar parks of 135 MW will be installed in different locations; Roof-top solar power solutions of about 30 MW[[67]](#footnote-67). According to the discussions with SREDA, there have been several tracks on which this target will be achieved. Particularly dynamic is the track of large solar parks. On the basis of the approved applications for PPAs, SREDA expects a total installation of on-grid solar capacity in this segment of 220 – 260 MW. Among these are some projects on government land of 30 MW, 60 MW and 55 MW, but as there are issues with the availability of land, several initiatives have developed in the private sector. The largest planned power plant is a 100 MW investment by SunEdison. According to SREDA the biggest challenge for this segment is land availability. Other interviewees doubt the quality and robustness of the projects due to a potential lack of quality feasibility studies required for financing.

No comprehensive assessment of the renewable energy potential in other areas (wind, biogas, biomass, waste-to-energy, hydro) has taken place. For lack of gradient, hydro potential is generally considered low to non-existent except for the CHT area. The potential for wind power generation is also dismissed by most stakeholders, although it is generally accepted that the measurements taken so far have not been at the correct heights and no wind map exists so far. Wind mapping has been initiated -- a development in the near future seems possible but would require a strong and collaborative effort. Interest seems low. Most stakeholders point to the availability of biomass. It is to be expected that through more efficient cookstoves and an increasing number of biogas facilities the pressure on the fuel wood resource will be significantly reduced so that biomass-based power generation can be a valid proposal. Quantitative and reliable assessments are distinct barrier to effective policy making and investment activity in this area.

**Energy use**

While Bangladesh’s energy footprint is small, there are significant opportunities for saving energy through higher energy efficiency and conservation. Energy efficiency and conservation help mitigate the current energy crisis and reduce the need for investments in generation capacity and thus enhance energy security.

Generally, there are a number of means to influence the efficiency of energy use.[[68]](#footnote-68) Energy efficiency efforts typically attempt to replace energy using equipment or processes with more energy efficient equipment. Important tools for this are energy efficiency standards (Minimum Energy Performance Standards, MEPS), capacity building and financing for the manufacturers for designing and manufacturing more energy efficient appliances, capacity building and financing for the retailers to procure more efficient equipment and advise the end-user on their use. It is also very important that users of these appliances are aware of the meaning of the energy star label, and of the opportunity and life-cycle costs of the more energy efficient appliances – many of these will require higher investments which is a deterrent for Bangladeshi buyers, no matter if they are businesses or private households. A full discussion of the potential barriers to energy efficiency market transformation as well as a discussion of the Thai experience in this field can be found in Woerlen[[69]](#footnote-69),[[70]](#footnote-70).

Figure IX.3: Primary energy consumption by sector (as of 2013 – 2014, from EE&C Master Plan)

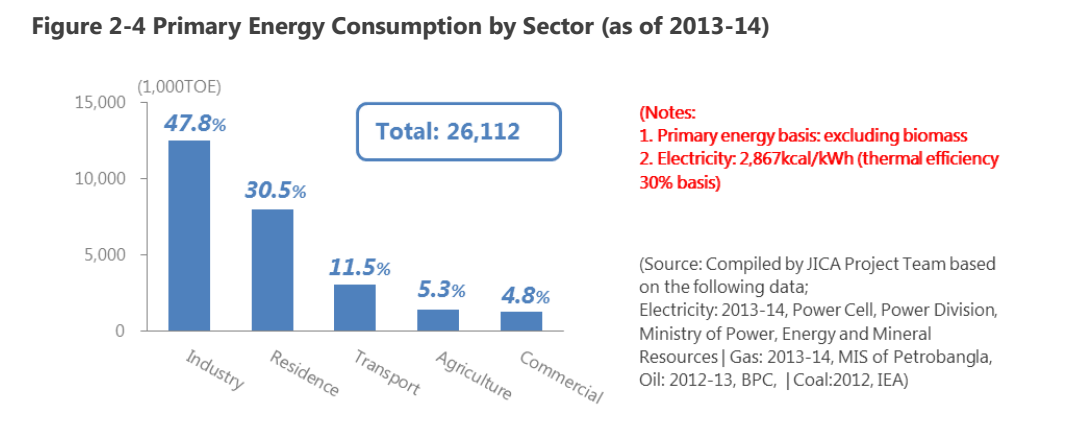
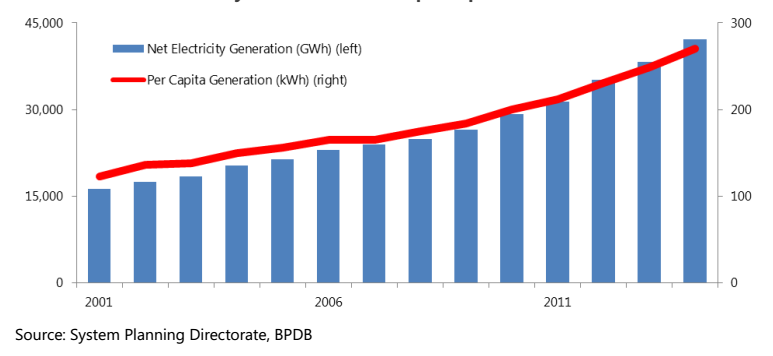
Primary energy consumption in Bangladesh is dominated by industry (cf. Figure IX.3). A third of primary energy is used in households, and 5 % in agriculture and the service sector respectively. Transportation is a comparatively small share of the primary energy consumption. In contrast, electricity consumption is dominated by the residential segment (

Figure IX.4).

Figure IX.4: Grid electricity generation amount per Capita (from EE&C Master Plan)



Currently, the majority of the electricity is consumed in Bangladesh’s residential sector (51% according to the EE&C Master Plan). As the share of total electricity used by industry is so much smaller than the share of industry in primary energy consumption, it can be assumed that many industrial processes are currently fueled by direct combustion and might be replaced by electricity applications in the course of further industrialization. As the economy grows, so will industrial energy growth. As household wealth levels rise, so will the degree of equipment with electric appliances and household electricity consumption. The scenario in the Energy Efficiency Master Plan (cf.

Figure IX.4) keeps the current relative shares of electricity consumption constant, for lack of better information. In particular, there is no clear government vision on the sectors in which growth is expected.

Energy efficiency and savings potentials exist in all energy consuming sectors. In the following sections, potential growth patterns and the sectoral energy efficiency potentials are discussed, in order to understand better if UNDP’s activities in energy efficiency were targeting the right sectors.

The intended path for energy efficiency policy of Bangladesh has been recently formulated in the Energy Efficiency and Conservation Master Plan that SREDA developed with support from JICA. A significant number of ambitious measures are presented, and SREDA is obviously counting on donor support in terms of technical and financial assistance for many of these. Here obvious and important opportunities for UNDP arise as it is one of few agencies with reputation and profile in this area. It will be the major document to vet UNDPs position and future options against.

**Households**

SREDA estimates that 36% of the current energy in this sector can be saved through energy efficiency measures. The highest savings are expected for the areas of building temperature control and lighting. Energy efficient fans are equipped with energy efficient motors which are an important component in many applications. Other important areas of power consumptions mentioned in the EE&C Master Plan are food refrigeration and television.

There is significant overlap between the energy efficiency potential in the household and the commercial sector –here, too, 50% of the energy is used for air conditioning / temperature management and 35% for lighting. Again the focus on electric appliances is well placed, and the same appliances or cross-appliance technologies (like motors and pumps) are used in many areas.

UNDP with the BRESL project has played a beneficial role in introducing standards to the national arena and building up capacity for this at the BSTI. With the BRESL project, UNDP placed itself in the position to be able to leverage the partnerships with both SREDA and BSTI. The areas for improvement are obvious (cf. BRESL case study):

* Many of the products (e.g. in the area of efficient fans) have not yet made it to the market.
* If they have, they found little acceptance (with the exception of the ubiquitous CFL) as consumers are not yet aware of the energy efficient appliances, and particular of the energy and cost savings.
* The appliances covered so far come from the highest energy consuming areas but coverage is not complete. For example, LED lighting has not been included and with CFLs only a share of the expected savings of 50% can be achieved. Other energy applications have not been tackled at all.
* The standards are still voluntary and need to be made mandatory (as envisioned in the Master Plan).
* They need constant review and adjustment to the best performing appliances on the market.

The sheer magnitude of the energy consumption in building temperature control – which is expected to rise significantly as wealth levels increase – demonstrates the importance of the building energy efficiency standards. In the EE&C Master Plan, a separate section is devoted to buildings energy efficiency. Higher efficiency of buildings is achieved mainly through regulations (Change in the National Building Code) and enforcement through the local governments. This will challenge these governments significantly. Generally, the area of building energy efficiency has been flagged by interviewees as extremely difficult, which is also confirmed by the international experiences.

**Box IX.1: Energy efficiency off the grid**

In off-grid locations, energy efficiency is even more important as it can lead to lower investments and more affordable energy services. A number of activities are already underway:

The high fuel wood consumption in Bangladesh is probably not very sustainable, which is why more efficient cookstoves have been an area of GIZ (Bujundara stove) and IDCOL. Currently, USAID is also trying to move the markets for rocket stoves.

KfW is working on solar water pumping for agricultural irrigation. These pumps require comparatively large solar arrays (10 – 30 m²) which poses challenges in many sites. Therefore the pumps have also been optimized for energy efficiency so that the solar panels can be minimized.

SHS as well as solar water pumping systems often come with DC appliances which in some cases are optimized for energy efficiency. CLASP works together with GIZ on DC appliances. This is important as the electrification will also bring new appliances to the country side – in addition to TV, radio and communication technology.

Overall, this is an important are of work that is directly pro-poor. However, many other donors are already active in this field, so that no significant role for UNDP in the specific energy projects is immediately obvious. However, linking energy into other UNDP community and pro-poor initiatives is of high relevance, potentially in cooperation with any of the active agencies. For example, GIZ has developed autonomous solar drinking water supply systems that are securing drinking water supply in times of flooding.

**Green Growth**

On its way to Middle Income Status, Bangladesh will be increasing the pressure on natural resources as well as energy security. Adopting the paradigm of Green and Inclusive Growth and acting early can help mitigate potential negative consequences and avoid a number of negative effects that have been observed during rapid growth periods in many other parts of the World. The following sections discuss three examples where energy efficiency and protection of natural resources can be combined with support of UNDP, building on its established strengths of triggering technology transfer and energy efficiency standard development as well as support to policy makers. UNDP should start a dialogue with the Government of Bangladesh on the feasibility of these projects, in order to prepare the foundation for long-term sustainability in the coming country programme and the one following.

**AGRICULTURE, FISHERIES, AND FOOD PROCESSING**

Significant growth of energy consumption can be expected here. Given that fish is one of the most important sources of protein in Bangladesh, the energy used for refrigeration and freezing is currently very limited. With increasing wealth and export orientation of this industry, the energy used for these purposes will grow. Similarly, refrigeration and freezing of fruit and crops will also increase. This has the potential co-benefit of reducing food waste. In the interest of energy security, care should be taken to provide and promote the most efficient appliances. If it is done well, chemical preservatives (formalin) inputs into agriculture can be reduced as well, saving not only the energy to produce and distribute it but also the water and energy used to wash it off the produce, as well as benefit public health and reduce pollution. Therefore, promoting extremely energy efficient cooling appliances in particular to the food processing industries is a highly relevant area for both, energy and food security as well as green growth in this area.

**INDUSTRIAL ENERGY EFFICIENCY**

Bangladesh’s economic growth is based on relatively electricity-unintensive industries in the manufacturing (garment) sector has led to rising energy consumption but also reduced energy intensity of the economy, which is a good start. However, increased growth might change this picture as more energy intensive industries might be added (e.g. for providing construction materials like cement and glass). Unfortunately, no national industrialization and growth strategy exists that would help to understand the future energy demands. This in itself is a risk to energy security.

In addition, it is to be expected that there will be a shift in the energy sources used towards electricity, away from directly burning fuel in industry, but also households, as well as increasing motorization and use of information and communication technology in manufacturing. Therefore the growth of (formal) energy and electricity consumption and GHG emissions will probably be more than proportional to economic growth, and industrial energy efficiency is a very important area for focus.

There are a number of energy efficiency measures for industry that can be applied across industrial sectors. SREDA’s EE&C Master Plan proposed to focus on Designated Large Consumers who have to implement energy efficiency measures. The Master Plan proposes to oblige them to operate energy management systems, have designated energy managers and set and implement energy savings targets, documented in an annual energy report. Currently, USAID is working with SREDA on energy audits and has trained around 70 Certified Energy Auditors across sectors. The 100 or so energy audits from companies that were available from that work served as a basis for the development of the EE&C Master Plan.

**INDUSTRIAL TECHNOLOGY TRANSFER AND BUSINESS MODEL DEVELOPMENT**

In addition, UNDP should draw on its specific experiences in triggering technology transfer, in particular resulting from the IKEBMI project. While the brick industry in Bangladesh was extremely traditional until very recently – in fact it was not even under the regulatory purview of the Ministry of Industry – there are other industries that can benefit significantly from technology transfer and the introduction of new business models that combine energy efficiency with energy security and reduction of environmental impact.

One of the most important industries in Bangladesh is the export oriented garment and textile industry, with about 4500 factories. IFC’s PACT project provides walk-through and in-depth audits for some of the 1700 facilities in Washing-Dying-Finishing (WDF). These are characterized by high consumption of water, chemicals and energy. Their location in clusters would make joint investments into combined heat and power generation as well as effluent treatment plants cost effective investments. However, joint planning and financing would require facilitation from an outside partner and a demonstration of the viability of joint operations or a joint service provider as a business model.

Other industries with high environmental impact and high energy consumption are operating in Bangladesh as well, including the chemicals, pharmaceuticals and fertilizer industries, iron and steel (re-)rolling and cement and clinker production. If the bricks project can find a way how to institutionalize the technology transfer process, and turn it into a mechanism that ensures continuous technology improvement throughout the industry, this holds great promise for all of these industries.

Waste management is another area of growing importance. The energy sector offers two good illustrations for these challenges: Lead acid batteries from Solar Home Systems are sold after about 2 years of use to the local unregulated recycling industry which recycles the lead into “new” batteries and often disposes of the lead-containing acid in uncontrolled holes in the ground. This leads to uncontrolled heavy metal pollution of the area with the ensuing environmental and health hazards. Similarly, CFLs contain traces of highly toxic mercury. As Bangladesh has recently ratified the Minamata Convention for which the GEF is a financial mechanism, this lends itself for UNDP action.

**Opportunities for UNDP in Bangladesh**

1. ***Support to SREDA for renewable energy***

The current SREPGen project is an excellent opportunity for UNDP to support a young government agency in providing efficient and effective action in this area. The project kick-off has already determined the first steps, while identifying activities in the previously designed work program that have been made redundant by the fast developments in this sector.

While Bangladesh is a World leader on Solar Home Systems, other renewable energy sources have not enjoyed the same level of attention. Wind and biomass are to some degree already covered by activities under the SREPGen and it should be reviewed carefully if strengthening the efforts in these areas might make the support even more effective. While biomass is also seen as an area of potential action by some of the donors, wind is not considered relevant by many. Biogas could benefit from opening up the scope of technologies supported by IDCOL under advice of SREDA.

The gap is even more obvious in the area of solar water heaters. This is part of the buildings section of the EE&C Masterplan, and also partially alluded to in the discussions within the SREPGen project. This are can be very promising. An explicit market introduction push would be necessary, drawing among other things on some of UNDP’s world global experiences in this area.

Waste-to-energy has been mentioned by many other development partners as an important and neglected area for activity. In addition, several donors pointed to the challenges faced by the need for battery recycling which is required by the IDCOL Solar program but not be enforced until now.

1. ***Support to SREDA for energy efficiency***

The EE&C Master Plan acknowledges that the speed of its implementation is limited by the “administrative capacity” needed for implementation (p. 23). UNDP’s continued support to this sector is therefore very important. With the founding of SREDA it has taken on a central position in the efforts for more energy efficiency in Bangladesh and should be supported in its role as this central hub. Specifically, it is recommended that UNDP support SREDA in the following area:

* The need for donor coordination is specifically expressed in the EE&C Master Plan (p. 34) and UNDP is very well positioned, as has been confirmed by the donors directly.
* Collaborative efforts of BSTI and SREDA on energy efficiency standards and labels for as many appliances as possible, starting with those that are widely used and thus responsible for large energy consumption like refrigerators and TVs, but also including appliances that are more relevant for alleviating household chores, but might not be very popular in BD yet like LED, rice cookers, food blenders, microwaves or washing machines
* Support SREDA in its efforts to make the existing standards mandatory, enforce them and provide for regular review and tightening
* Establishment of additional testing labs and the testing procedures that are proposed in the EE&C Master Plan (p. 48)
* Filling gaps by addressing other barriers, like consumer awareness campaigns, “sticks and carrots” to domestic appliance manufacturers, tax breaks for the importation of energy efficient appliances,
* Development of business models (drawing on the lessons from the renewable energy field) to make energy efficient appliances affordable for the poor,
* Significant and systematic support in the implementation of the Designated Large Consumer scheme as well as the benchmarking system that they are proposing. Large amounts of data will be generated in these schemes that need appropriate processing and can provide the basis for powerful outreach to industry.
* Support SREDA in its beginning work on the enforcement and review of the building code, including on government and donor coordination,
* Support SREDA in capacity building for energy managers and auditors as well as buildings energy efficiency specialists.
* Support SREDA in building capacity in the financial market for providing concessional loans for energy efficient buildings.
* Support the public sector in implementing energy efficiency in their appliance purchase, construction, renovation and facility management activities, with financial and capacity buildings support. This includes not only office buildings on every level of government but also public service institutions like schools and hospitals (GCF funding).
* Support SREDA in the MRV of the energy sector.

All of this will only be relevant if UNDP acts fast in this area. Potentially, these activities can be started in the form of an addition to the current SREDA program, and by adding a second UNDP staff in the SREDA for energy efficiency. On that basis, an application for larger funds should from the GCF be prepared as soon as possible.

As the BRESL has demonstrated, saving electricity is a direct contribution to Bangladesh’s energy security. If the indicators of the Country Outcome Programme are reformulated in terms of households’ equivalents as proposed, these measures would directly contribute to the outcome indicators.

1. ***Initiation of a dialogue on Green Growth and technology transfer on the way to Bangladesh as a middle income country.***

Industrial energy efficiency is an important field and the EE&C Master Plan sets out ambitious activities that will require a large effort. Again, UNDP has collected some experience with industry, and can leverage it here. While SREDA will be an important player as discussed in the previous section, sectoral efforts with a focus that is broader than sustainable energy should also be triggered. Along the lines discussed, strategic discussions with private sector stakeholder, the government and also IFC can be started to find the right entry points and industries to support.

It is very important for this strand of activity that the IKEBMI project succeeds in institutionalizing the Center for Excellence. Such sectoral centers can serve as focal points to get Bangladesh connected to international technology standards, while maintaining a focus specifically on the challenges found in Bangladesh, for example in terms of inclusive growth, gender and marginalized populations – or populations that are newly threatened by marginalization through increasing industrialization.

However, there are also other ways for supporting sustained green growth, for example by providing business models for coordinated investment in waste and waste water treatment as well as CHP facilities. UNDP is in a unique position to facilitate the development of these models as a neutral and trusted partner of governments and NGOs. The overlap to the standardization efforts is also evident.

1. ***Leveraging synergies within the portfolio***

Several of these themes can be combined with other activities existing in the UNDP CCED portfolio. This is particularly relevant in the rural areas and with rural livelihoods, e.g. in agriculture and fisheries. If there are synergies with other parts of the Cluster portfolio, these should be leveraged. In India, for example, business models for solar-fueled community cooling facilities are being developed which might also be applicable in Bangladesh.

**CASE STUDY**

**BRESL – Barrier Removal to the Cost-Effective Development and Implementation of Energy Efficiency (BRESL)**

**2006 - 2013**

**General project background:**

The Regional Project Barrier Removal to the Cost-Effective Development and Implementation of Energy Efficiency Standards and Labeling (BRESL) was aimed at rapidly accelerating the adoption and implementation of energy standards and labels in Asia, in order to bring about energy savings and thus contribute to the eradication of extreme poverty (e.g. through reducing energy costs or enhancing energy security). Coordinated from HQ in China, it attempted to harmonize test procedures and standards across 5 countries (Pakistan, Bangladesh, Thailand, Vietnam, and China).

Project was implemented as regional project. Most appliances are imported to Bangladesh (like to most other of the project countries) from China. A harmonization leads to a situation in which the risk is that China produces worse quality for export to Bangladesh than for use in China thus helping consumers save money spent on inferior quality appliances (e. g., on repairs and replacements). In addition, due to the rapid growth and inadequacy of the national energy system in Bangladesh, energy efficient appliances help save energy and mitigate energy shortage increases.

Before the project in 2006, no minimum energy performance standards existed in Bangladesh, and labels existed for residential fans, incandescent light bulbs and tube lamps only (Project document). Since the National Energy Policy in 1996, the Bangladesh Standards and Testing Institute had responsibility for the implementation of standards and labels.1 m USD of GEF funds were topped up be 2 m USD of GoB funds which indicates that the project was also of high relevance for the government. This was confirmed by interview with SREDA (Interview with MoI EE cell is still outstanding).

**Implementation arrangements**

The projects was implemented through the Ministry of Industry’s BSTI (Bangladesh Standards and Testing Institute).Project implementation started only in 2010 as “finalization of TPP (approval), Administrative order of each initiation and hiring of project staff took almost 1 year” (Matrix on Project status). Therefore, project activities have been started from July 2010 by nominating one National Project Director (NPD) from BSTI under Ministry of Industries (MoI).

**Impacts:**

In 2013, minimum standards and labels for 6 energy-efficient products (Room air-conditioners (A/Cs), Refrigerators, Electric fans, Electric motors, Ballasts for fluorescent tubes, and Compact Fluorescent Lamps (CFLs)).were adopted by the government (UNDP ROAR 2012-2013). The reduction in energy demand is estimated to equal the electricity needs of 100,000 households. “UNDP provided technical to the Standards and Testing Institute to establish and test equipment standards. UNDP supported national media campaigns for consumers that showcased environmental and household budgetary benefits. UNDP also assisted manufactures through capacity-building and technology transfer. As a result, 62 manufactures updated their product lines and met the new standards (BRESL Survey 2013)”(UNDP ROAR 2012-2013).

In terms of changing consumer behavior the project has not yet been very effective.. Public demand for efficient appliances seems low but slowly rising (e.gen 2014). Assessment is limited by lack of MTR or TE.

The project has resulted in some institutional change, for example the creation of an Energy Efficiency Cell in the Ministry of Industry. Testing facilities were established and support BSTI in the implementation and enforcement of the standards. Thus some of the preconditions for effective EE standards applications have been created*.*

The standards have found entry into the EE&C Master plan (March 2015). While they are not mandatory at this stage, they are scheduled to become mandatory over time. While this is a great success, it must be kept in mind that two challenges remain: even if they are mandatory they might be only weakly enforced. And as technology development progresses, these standards need regular review and tightening. It is not clear from the documentation that this mandate is included in either the EE Master plan or the mandate of the EE Cell and whether it is a task for the BSTI or the SEDA.

Another open questions with respect to the effectiveness and sustainability is the question whether the energy efficiency standards can and will be effectively enforced once they are binding. This implies that all appliances that are on a market are in compliance with the standards.

Thirdly, for lasting and full impact it is necessary to constantly amend the list of appliances with mandatory energy efficiency standard. The original project document identified 22[[71]](#footnote-71) appliances. BRESL created EE standards for 6 of these projects, which leaves another 16, and the list leaves out important appliances like water pumps or all information, communication and entertainment techno (e.g. TVs). In addition, while the project provided a voluntary CFL standard, the relevant light source today is already the LED.

**Gender dimension, disadvantaged social groups and cross-cutting issues:**

Gender was not an explicit dimension in this project. Energy efficiency standards and labels typically do have very limited gender aspects. On the other hand, in this case considerations for disadvantaged social groups could have been integrated in three ways. The push for off-grid energy is introducing a specific strand of energy efficient appliances, in particular DC appliances, that can be used with solar systems. This has been disregarded in the project. The choice of products did also not focus on appliances that are important for food preparation, like rice cookers, water heating etc. These two dimensions and the specific requirement of the Bangladeshi market could have been included in the choice of appliances. In addition, the project reports show that significant barriers for the market uptake of energy efficient appliances are the higher investment costs for these appliances (even if the total cost of ownership might be cheaper in the long run due to the electricity savings). These are in many cases only affordable by the richer tiers. Combination with financing schemes could make these affordable to a broader range of groups. Due to the international nature of the project, the choice of appliances was not fully in the hands of the country office. But in a next phase these considerations could be included. As the project was not contributing to the outcome indicators of the country program, this did not negatively affect the rating.

**Role of the private sector:**

In this project, the private sector played an important role. Many of the products are in fact manufactured to a significant degree in Bangladesh. Therefore, the project also provided direct assistance to manufacturers to invest in upgrading their facilities for the production of energy efficient appliances, and achieving star ratings (Cf. e.gen 2014). The project provided support to manufacturers of energy efficient appliances on the marketing and advertising strategies. Extensive consultations took place through which UNDP should have a reliable network of private sector partners in the area of appliances and components.

**Special aspects:**

An interesting aspect is the comparison with the standardization work going on under the rural energy access programs. It is probably fair to say that the benchmark for effective standards in Bangladesh is the standardization and quality assurance work conducted by IDCOL’s Technical Standards Committee. While this is not an official government institution, their standards are the basis for IDCOL financing which basically means that all systems on the market automatically adhere to these standards. While it can be argued that this is much harder to achieve for established mass market appliances that are imported according to international standards and the IDCOL-affected appliances are more specialized for the off-grid market, one must recognize that the off-grid market in Bangladesh comprises more than 60 million people and each month 50.000 SHS systems are installed in Bangladesh under enforcement of the IDCOL standards. The future work on energy efficiency standards – which will be done under SREDA just like the IDCOL work – should try to leverage the experience from both standardization strands to come up with a lean but effective standardization and enforcement mechanism.

During the project implementation, the national Sustainable and Renewable Energy Development Authority has been created and tasked with the supervision of energy efficiency. It has published an Energy Efficiency And Conservation Master Plan in March 2015, which puts significant importance on energy efficiency standards and labels. UNDP is already supporting SREDA with a project on renewable energy. It would be very important to continue the work in the standards and labels area in the context of a similar project with SREDA, that possibly also comprises building energy efficiency.

**Project-specific documentation used for this assessment:**

* Project document (2006)
* Interview with Program Manager Alamgir Hossain
* Interview with Project Manager ShahjahanChaudhury
* Project monitoring documents for period 2012 to 2014
* UNDP ROAR 2012-2013
* EE Master plan (March 2015)
* E.gen (2014) Report on several components of a market research and data collection consulting contract
* Matrix on Project status provided by UNDP CO

**Not available so far:**

* Final and comprehensive project report
* Interview with EE Cell at Ministry of Industry

**CASE STUDY**

**The IKEMBI (Green Bricks) project**

**2006 / 2009 - 2014**

**General project background:**

The project addressed an important sector of the rural economy of Bangladesh. 8000 traditional brickkilns operate on a seasonal basis relying mainly on about 2 million migratory labor. The inefficient traditional brick burning process in sum constitutes one of the biggest stationary sources of Green House Gases in Bangladesh. The project to introduce a more robust but also more costly brick oven design that can be operated year round was initiated by a Chinese technology supplier who approached the UNDP to modernize this sector with the so-called Hybrid-Hoffmann-Kiln technology, including some mechanization of the preparatory steps in terms of clay mixing and brick molding.

**Project implementation**

The project was implemented by a PMU at the UNDP offices. It experienced significant delays, in particular between the end of the PDF-B phase in 2007 and the start of the project in 2010. One reason given for that by the mid-term review are differences over the UNDP fee. The project intended to showcase the technology in 15 demonstration projects, of which 4 were completed and one or two are operating as of the time of the midterm-review (end 2014),

The MTR attests a too strong focus on these demonstration projects. Some, but maybe not enough effort went into training of staff, for example from the Chinese technology supplier. Active media and outreach led to a high visibility of this project. The project also took some extra effort to monitor and enhance the social and health situation of the workers. It implemented a specific small gender subcomponent, which included visit by a doctor to the kiln, separate toilet facilities, and a strong emphasis on the gender aspect in the monitoring activities of the program management.

Implementation challenges were manifold. For once, the project design envisioned an unreasonably high number of demonstration plan, ignoring the potential risks for fast project implementation and corruption. Overall, the project has led until now to one demonstration kiln that has been in continuous operation, another one that has been built but not operated and several approved not unbuilt facilities.

Secondly, after the initial successes, the main contractor was approached by other development agencies to help them also develop brickkiln projects (including the WB) which distracted him from the UNDP project. Overall, there have been between 40 and 62 HHKs (sources diverge) built after the initial triggering of the discussion and first demonstration built by UNDP. While this leads to frustration and bad ratings on the UNDP project as their immediate output targets are not fulfilled, these funds can now – as recommended by the mid-term review – be spent on more “soft support” in the form of capacity building, policy advice, mitigation of social and environmental concerns and continuing the search for the technology most appropriate for Bangladesh.

The aspect to criticize most strongly about the bricks project is the choice of technology: While offering significant improvements about the current practice in terms of productivity, energy efficiency and labor conditions (see below), HHK is still a technology from the early days of industrialization. A number of the efficiency enhancing components, like the semi-automatic brick molding or the use of recovered heat for drying, could theoretically also be implemented in the traditional kilns and might lead to higher quality output there.

**Impacts:**

Frequent visits to the demonstration plants – in particular to the demonstration plant from the PDF-B phase - by parties interested in the technology demonstrate the high level of interest in the technology and in technological development in this sector. (cf. Annual Results Report 2012, 2013). A number of impacts have been demonstrated:

1. Investments: Currently there are over 50 non-project HHKs in Bangladesh, over $50 million from private-sector investors. At least 9 HHKs have been supported by the CDM through the World Bank (WB Implementation Status Report 2010). For more than half of the non-project HHKS a causal link to the UNDP project has been demonstrated (Chisty 2013). The Mid-term Review reasons that in actuality more such causal links might exist. UNDP claims that the enterprises followed a ‘decent work’ model with improved working conditions, reasonable salaries, working hours, leave, and women-friendly facilities. (ROAR 2012 – 2013).
2. Policy / legislation: The Brick Manufacturing Control Act of 2013bans the use of timber and agricultural top soil for bricks, which will reduce deforestation, enhance food security and reduce GHG emissions. Again, Chisty (2013) provided a causal link from the UNDP project via a non-UNDP project that has significantly influenced the policy development process.
3. The more efficient burning processes results in GHG emission reductions: “In 2013, green brick enterprises reduced carbon emissions by 100,000 tons (UNDP, 2013, Socio-economic Survey).”(ROAR 2012 – 2013)

Thus, UNDP overall demonstrated a successful technology transfer approach. Follow-up and scale-up activities are taken on by the CASE project of the World BankThe ADB as well as Bangladesh Bank and IDCOL have initiated credit lines for investments into more efficient kilns.

Still, a number of open questions remain. For example, a significant scale-up of capacity building activities is necessary for the appropriate operation of the HHK While the project has triggered an interesting development, challenges also lie in a significant range of diversity of the sector, and its high level of informality. For example, the responsible project officer at UNDP estimates that only 5% of the kilns in Bangladesh are suited for the specific technical and financial characteristics of the chosen technology. While the traditional brick manufacturers do not avail of the necessary capital to invest in HHK technology, HHKs themselves might not be able to compete against the more modern tunnel kilns which are again an order of magnitude larger in size.

**Social and cross-cutting aspects:**

**Employment aspects**

The MTR notes that the new brickkiln technology offers significantly fewer jobs than the traditional way of brick making. On the other hand, an assessment of the socio-economic profile of the project revealed a number of advantages of the HHK for occupational health and safety as well as income situation[[72]](#footnote-72). The level of permanent positions in HHK is at 64% and much higher than in the traditional kiln. The need for skilled labor is also shifted upwards to 57%. Instead of only 20% now 49% of the workforce is local which has positive impacts on family coherence and child wellbeing. While hiring through middlemen which limits the applicability of labor laws is still a prevailing practice, most laborers are now receiving a monthly payment (instead of payment on the basis of jobs completed), although for men this does not result in higher average salaries during the working season of traditional kilns. Income spent on food is 2.5 times higher than in the baseline kilns, signifying lessened concerns over the nutritional status of the workforce.

**Gender dimension**:

A gender study commissioned by the project found that while there are still income differences between male and female workers this might have to do more with the type of work that women are mostly providing (stacking bricks)[[73]](#footnote-73). The more specialized tasks are typically provided by men. For the same work, the pay is usually similar for both sexes. A crucial fact is that women are now more often permanent staff, and are paid directly even iftheir husbands work in the same plant. Out of 5 women who were giving birth, just 1 remained jobless while 4 said they were paid by owners during pregnancy leave -“a scenario quite unimaginable in the traditional system.” [[74]](#footnote-74)

The gender-related activities and successes of the project also were disseminated to other brickkilns. The Annual Results Report 2012 specifies for example that around 300 Brick Mill Owners participated on workshops on the topic “How Gender Matters”.

**Private sector engagement dimension**:

The project was initiated and borne by one private sector entity who was pursuing commercial interest in the promotion of the specific technology (HHK) but was comparatively less successful than other such entities. The Bricks MTR finds that some of the challenges of the project might be associated with faulty assessments by the project implementer and suggest that “lessons to UNDP in structuring partnerships, quality assurance, monitoring the “big picture” (in addition to the SMART indicators), and how to design demo projects may all be derived from this experience.”

The sole implementation through a private sector entity might also have reduced the visibility of the policy impact. If policy makers are unaware of UNDP’s involvement in this issue, obviously UNDP’s policy influence has also not been leveraged in this project. In parallel to the work with the kiln industry through the private sector partner, a policy dialogue should have been searched that might also have been suitable to develop solutions for the social, gender and potential environmental aspect of the project.

**Sustainability:**

**Overall, the project was the first of a larger group of efforts to promote investments into more modern brick technologies – a trend that is going to continue.**

The ADB, the World Bank, IDCOL and a number of national institutions are now providing financing to more modern brickkiln investments, including tunnel kilns (which is the technology used in Europe).

**Mechanics of technology transfer require constant learning and strategy adjustment**:

The MTR holds a number of examples for how Technology Transfer is a convoluted, stepwise and slow process full of incomplete and hardly traceable feedback cycles. For example, one of the government representatives responsible for the Brick Making Act did not confirm influence of the UNDP project on the Act, as “they” learned about the project only long after the initiation of the legislative process. However, the project that inspired him was in itself influenced by the project.

Similarly, the focus on just one technology might have limited implementation speed and impact of the project, and a broader variety of technologies should be promoted in the future. The focus on one technology, one provider and one promoter is criticized in the MTR and among UNDP project officers as well as by the evaluation team. However, without some initial focus on a narrowed subset of problems, the success of the project would also have been more questionable and the offering of a broader palette of technologies and promoter might have been impossible or at least diluted the approach. Still, after the (very long) PDF-B period, in which the first and most effective demonstration plant was built, this step could have been taken immediately which might have multiplied the impact of the project.

Currently, the UNDP strives to institutionalize a Center of Excellence for Brick technology. This could be a place for continued discussions about the future of the sector, but will need to be much more independent of market participants than the project was so far. The Center will have to play the role of a platform for technology-focused discussions, and potentially donor coordination, policy advice as well as technical capacity building, while at the same time remaining a place for constant monitoring of market trends as well as the social and environmental consequences of transforming the bricks industry in Bangladesh.

**Annex X: Components of Resilience by Thematic Area**

|  |  |
| --- | --- |
| Thematic area | Components of resilience |
| 1. Governance | * Policy, planning, priorities and political commitment. * Legal and regulatory systems * Integration with development policies and planning * Integration with emergency response and recovery * Institutional mechanisms, capacities and structures; allocation of responsibilities * Partnerships * Accountability and community participation * Gender equality and women empowerment * Institutionalization and mainstreaming * Achievements and weaknesses in programmes |
| 2. Risk assessment | * Hazards/risk data and assessment * Vulnerability and impact data and assessment * Scientific and technical capacities and innovation |
| 3.Knowledge and education | * Public awareness, knowledge and skills * Information management and sharing * Access to information * Education and training * Cultures, attitudes, motivation * Learning and research |
| 4. Risk management and vulnerability reduction | * Environmental and natural resource management * Health and well being * Sustainable livelihoods * Safety net and social protection * Financial instruments * Physical protection; structural and technical measures * Planning regimes |
| 5. Disaster preparedness and response | * Organizational capacities and coordination * Early warning systems * Preparedness and contingency planning * Early recovery facility * Emergency resources and infrastructure * Emergency response and recovery * Participation, voluntarism, accountability |

Source: After Twigg. 2007.

**Annex XI: Gender Marker for UNDP CCED Cluster Projects2014-15**

|  |  |  |  |
| --- | --- | --- | --- |
| BGD Outcome | Project ID | Project name | Gender Marker |
| Outcome 3.1 | **62536** | Coastal Afforestation | GEN2 |
|  | **73416** | CDMP Phase II | GEN2 |
|  | **77582** | Early Recovery Facility (ERF) | GEN1 |
|  | **81303** | Integrating Community-based Ad | GEN0 |
|  | **92207** | Waterlogged Communities | GEN1 |
| Outcome 3.2 | **45948** | Sustainable Land Management | GEN2 |
|  | **46281** | PIMS 2961 EA-SNC | GEN2 |
|  | **57386** | National ODS Phase-out Plan | GEN1 |
|  | **62091** | Phase-out of CFC consumption | GEN0 |
|  | **62270** | PECM : Poverty Environment | GEN2 |
|  | **74185** | Barrier Removal Energy Standard | GEN0 |
|  | **75326** | Improving BrickKiln Efficiency | GEN2 |
|  | **79998** | Bangladesh Green Dev. Program | GEN2 |
|  | **80108** | Sustainable Energy Generation | GEN0 |
|  | **80696** | Institutional StrengtheningODS | GEN0 |
|  | **81038** | Conversion Cyclopentane techno | GEN1 |
|  | **83557** | Support to implement REDD+ | GEN1 |
|  | **85647** | Sustainable Environmental Gove | GEN1 |
|  | **85938** | Expanding the PA system | GEN0 |
|  | **85997** | National Capacity Development | GEN0 |
|  | **86516** | Development of Sustainable Ren | GEN1 |
|  | **86756** | Third National Communication | GEN1 |
|  | **88463** | USAID Watershed Co management | GEN3 |
|  | **90906** | ODS VII | GEN0 |

**Annex XII.a: Output Achievements in CCA and DRR (Outcome) by UNDP Interventions during 2012-2014 and a Qualitative Assessment**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **2012** | | | | | |
| **Significant Output Achievements** | **Indicators** | **Project Intervention** | | **Evaluation Remarks** | |
| * **Disaster Management Act 2012** | Institutionalization through legislative measure (1) | CDMP-II | | Good progress in strengthening management and governance structure in DM | |
| * **Incorporation of DRR/CCA in sectoral plans and guidelines** | Adoption by 13 Government ministries | CDMP-II &  PECM | | Remarkable institution building effort and success in DRR/CCA areas: adoption of DRR/CCA in local level development initiative and implementation is largely missing (i.e., bottom up approach from Union Parisahd) | |
| * **Development of disaster volunteerism** | 15000 urban volunteers mobilized (e.g., no fatality in the target areas affected by landslides by 2012) | CDMP-II | | An innovative effort in much needed rapidly growing towns and cities; sustainability would be a challenge | |
| * **Improved access to early warning, mechanisms to reach shelters, and better access to first aid/relief goods/services** | Coverage of additional 10.6 million people; enhanced awareness among local government officials and community members on DRR and CCA | CDMP-II | | Strengthened local capacities to prepare for cyclone disasters and risk arising climate change | |
| * **Indicator framework for pro-poor, environment friendly, low emission, and climate resilient development developed by planning commission** | Published Government documents | PECM | | Systematic monitoring helps country move towards climate resilient development | |
| * **Strengthening of early warning capacity through capacity building of the Flood Forecasting and Warning Center** | Lead time flood forecast for the Brahmaputra Basin extended from 3 to 5 days; existing flood forecasting model upgraded | CDMP-II | | Improved flood forecasting lead time: Built capacity but some gaps remain (e.g., North-East region) | |
| * **Scaling –up of disaster management and earthquake drill in schools** | 30,000 primary schools and 268 secondary schools organized earthquake drills | CDMP-II | | Introduction of disaster and earthquake drills in schools as an innovative idea and practice: further scaling-up is needed | |
| * **Development of “Guidelines for humanitarian assistance programme implementation”.** | Institutionalization of effective and efficient humanitarian response in times of crises | ERF | | Enhanced efficiency in delivering and responding to humanitarian needs | |
| **2013** | | | | | |
| * **Introduction to vulnerability index and community asset score** | Applied in 19 coastal districts | | CDMP-II | | Stepping towards developing an effective tool for measuring DRR; commendable coverage (100%) of all vulnerable coastal districts. However how these indices will be applied to local level planning and implementation has not been explicitly addressed. |
| * **Extension of coverage of early warning systems** | 112 million people received and access early warning and disaster related information; 10,000 disaster management focal point equipped | | CDMP-II | | Further coverage of (e.g., North-Eastern region) early warning system (EWS) for flash flood is needed; EWS need to consider low intensity cyclone: sustainability of focal point capacities should be examined |
| * **Mobilization of volunteers through using cell-based EWS; collaboration with the Bangladesh Scouts** | Government capacity to mobilize additional 1 million volunteers to help emergency management (1.1 million people were evacuated during cyclone Mohasen) | | CDMP-II | | Evacuation capacity enhanced; sustainability would be a challenge |
| * **Local level funding schemes for reducing natural disasters and climate change risk introduced** | 1200 schemes were implemented benefiting 3million vulnerable people (45% women) | | CDMP-II | | Good coverage, particularly women; local level resource capacity built: scaling-up needed |
| * **DRR and CCA education programs and curriculum introduced for human resource development** | 18 million students (8-17 years old covered); incorporation of disaster risk and CC into 39 text books; few universities and training institutions infrastructure and academic capacity built | | CDMP-II | | Students work as a change agent for the society in DRR and CCA areas; likely to have played a role in triggering transformational change |
| **2014** | | | | | |
| * **Disaster risk reduction of vulnerable population at the local level** | Nearly 2.8 million people, of which 47% were women) benefitted from disaster resilient jobs and livelihood opportunities created through DRR schemes (e.g., embankments, shelters, ponds, roads). | | CDMP-II | | Both physical exposure to natural hazards and social vulnerability were addressed, with large scale population coverage. Scaling up will help to enhance resilience. |
| * **Intersectoral integration for building disaster-resilient villages was achieved** | Establishment of disaster-resilient model villages, construction of environment-friendly housing and promotion of safe agricultural practices | | CDMP-II | | Linking DRR intervention with sustainable livelihoods for enhancing resilience has demonstrated promising outputs and outcomes. |
| * **Early warning system improved and vulnerability reduction enhanced** | Flood forecast coverage was expanded by the Flood Forecasting and Warning Centre | | CDMP-II | | Commendable progress achieved in improving early warning of floods; however, coverage of floodplains was limited. Also, response of potential flood affected population to early warning needs to be monitored, and any deficiency needs to addressed |
| * **DRR in urban areas through addressing chronic flooding, water logging was achieved** | a)Reduction of disaster risk in urban areas benefitting 80,000 residents, of which 50% were women  b) 26, 500 urban volunteers were trained to act as first responder during disasters  c) Seismic risk maps to assist informed planning and design of disaster-resilient urban buildings were prepared | | CDMP-II | | Attention to urban disaster risk and vulnerability was given, which is usually ignored. Initiative for scaling up is needed in light of country’s present trend of rapid urbanization |
| * **Climate finance framework adopted** | Published Government documents | | PECM | | Enables planning tracking and monitoring of climate finance in the government budget; enhanced governance |
| * **Mainstreaming disaster and climate risk reduction across all sectors was attempted, and successfully implemented.** | Across all sectors of government portfolios, policies and mechanisms for disaster and climate risks have been formulated. For examples, the Ministries of Finance and Agriculture increased their budget for climate finance; the Ministry of Agriculture supported the adaptation of existing farmers’ field schools; the Department of Disaster Management developed 9 enforcement rules to operationalized the Disaster Management Act | | PECM &  CDMP-II | | Sustainability institutionalization of disaster and climate risks reduction across all sectors will require sustained human resource development, new knowledge creation and promotion of best practices. Championing ministry/department to promote and sustain disaster and climate risk reduction should be supported financially, technically and politically, particularly to monitor the status of disaster and climate risk reduction activities in various ministries and government departments. |

**Annex XII.b: Output Achievements in NRM and Energy (Outcome) by UNDP Interventions during 2012-2014 and a Qualitative Assessment**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **2012** | | | | | |
| **Significant Output Achievements** | **Indicators** | **Project Intervention** | | | **Evaluation Remarks** |
| * **Development and adoption of NSDS 2011-2021** | Published Government documents | UNDP CCED Cluster | | | Impacted national planning process |
| * **Voluntary policy for energy efficiency standards for variety of products piloted, 3 manufacturers awarded EE labels for CFL** | Published in gazette | BRESL | | | First steps towards energy efficiency at households level |
| * **Policy dialogue leading to SREDA Act** | Published Government documents | BRESL | | | Contribution to institutionalizing renewable energy capacity in the government |
| * **REDD+ readiness road map finalized and approved** | Published document | REDD+ | | | First step towards REDD+ financing |
| * **CFC use in MDIs phased out** | Leading companies in Bangladesh has retrofitted 7 HFC based formulations available | MDIs | | | Voluntary phased out is significant achievement |
| **2013** | | | | | |
| * **Brick manufacturing control Act** | Published in gazette on 20.11.2013 | | IKEBMI | | Leading to reduced environmental impacts of brick making industry |
| * **52 Brick enterprises invested in HHK** | Project survey | | IKEBMI | | Leading to reduced environmental impacts of brick making industry |
| * **Enhanced sales of energy efficient products** | Project survey;  $ 6.5 million EE products sold, 62 manufacturers updated product line | | BRESL | | Significant electricity savings equivalent to consumption of 100, 000 households |
| * **Bangladesh becomes eligible for UN-REDD funding** | Acceptance by the UN REDD policy board | | REDD+ | | Accessing to more climate finance facilitated |
| * **Ozone Act bans use of CFC in MDIs** |  | | ODS | | Legal guarantee makes results sustainable |
| * **Coastal afforestation likely to have reduced carbon emission: enhanced income, employment and livelihood opportunities; act as protection from tidal surges** | 2500 ha added to the total of 8550 ha of coastal forest, benefitting 800,000 (cumulative) vulnerable women; 4380 HHs receiving direct support | | CBACC-CF | | Economically and financially viable, with positive linkage effect in other sustainability dimensions; food security, nutrition, and poverty reduction |
| * **Community based adaptation plan developed** | Pilot projects being implemented | | CBACC-CF | |  |
| **2014** | | | | | |
| * **Standard and testing institute strengthened ; resource allocated for establishing an energy efficiency cell, Government of Bangladesh** | Additional standards | | BRESL | Expansion to new products; institutionalization of energy efficiency | |
| * **Enhanced sales of energy efficient products** | 2.3 million  CFLs and 5000 0 energy efficient fans were manufactured and sold, offsetting 180 MW and 1000 ton GHG | | BRESL | Energy efficient product becoming popular | |
| * **Rules on ODS passed** | Published in gazette | | ODS | Legal guarantee makes results sustainable | |
| * **Scaling-up of FFF model** | 9 coastal districts were covered involving 100,000 people | | CBACC-CF | Good progress: needs to further scale-up to 7 coastal districts | |

**Annex XIII: Value for Money (VfM) Analysis for Selected Project Components**

The concept of Value for Money (VfM) is widely used for economic efficiency and effectiveness analysis; however, it is a debatable domain. Most commonly, it includes an assessment of the cost of running the program intervention, its efficiency (the outputs it achieves for its inputs) and its effectiveness (the extent to which it has achieved outcomes). There are various approaches to economic efficiency analysis, and each approach has its own merits and limitations. Each approach provides a perspective of the assessment of the relationship between costs and benefits. One such approach is known as Cost-Benefit Analysis.

A Cost-Benefit analysis (CBA) is an evaluation of alternatives by identifying the cost and benefits of each alternative in monetary terms, and adjusting for time. This method can be used to identify if a course of action is worthwhile in an absolute sense; that is, whether the costs outweigh the benefits. It is best used when the majority of the benefits can be converted to monetary values or when those that cannot be converted are unimportant or are similar among the alternatives considered.

**BCA/ VfM for selected UNDP Projects – Analytical Framework**

This evaluation approach focused on the cost and benefits of projects or activities associated with resilience building and ‘green development’ (in terms of natural resource management and access and utilization of low carbon energy) outcomes. The issue of inquiry was whether the project interventions were worth the investments.

Considering the scope, time, and resources available for the mid-term outcome evaluation, the Value for Money (VfM) assessment tool was employed for four selected project components that were implemented through the coordination of UNDP: i) disaster resilient habitat (in *Kederbazar Adarsha Gram*) under Early Recovery Facility; ii) disaster resilient habitat (in *Bain Para*) – reducing vulnerability through integrating sustainable livelihood under CDMP II; and the Triple F (Forest, Fruit and Fish) model in *Naltona* union under the *Community-based Adaptation to Climate Change through Coastal Afforestation project.*

It is important to recognize that VfM assessment can only provide the cross-sectional perspectives concerning money-worth issues and project life-time costs and benefits, without considering project life-time costs and benefits. Considering this limitation, this Evaluation explored prospect of adoption of a longitudinal approach, which would include, but not be limited to, Net Present Value (NPP), Benefit Cost Ratio (BCR), and Internal Rate of Return (IRR).

**Summary of financial analyses [[75]](#footnote-75)**

A summary of the financial analysis for selected UNDP projects is presented in TablesXIII.1 and XIII.2, while detailed results are presented in Tables XIII.3 to XIII.7.

A comparative financial analysis is carried out for both ERF habitat and CDMP II habitat (Table XIII.1). It can be seen that CDMP II habitat is more efficient from a financial point of view than the ERF habitat. The BCR for CDMP II habitat is estimated as 2.76 compared to 1.88 for ERF habitat. The NPV for CDMP II habitat is estimated as Tk. 1183 thousands while it is Tk. 468 thousands for ERF habitat.

The financial analysis carried out for the FFF Model (under CBACC-CF**)**reveals that the FFF Model is very efficient from a financial point of view (Table XIII.1). The BCR for the FFF Model is estimated as high as 4.88. The NPV for FFF is estimated as Tk. 870 thousands.

**Table XIII.1: Financial analysis: Habitat (ERF & CDMP) and FFF Model (under CBACC-CF)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| District | Project Name | **Financial Analysis[[76]](#footnote-76)** | | | |
| Discount rate (%)**[[77]](#footnote-77)** | NPV  (000 Tk.) | BCR | IRR (%) |
| Satkhira | ERF: Kedarbazar Resilient Habitat, Shyamnagar, Satkhira | 12 | 468 | 1.88 | 10.50 |
| Khulna | CDMP-II: Baine Para Resilient Habitat, Dacope, Khulna | 12 | 1183 | 2.76 | 20.30 |
| Barguna | FFF models: BargunaSadar, Barguna | 12 | 870 | 4.88 | 50.9 |

A comparative financial analysis is also carried out for both traditional and Green Brick making activities (Table XIII.2). It is apparent that Green Brick making is more efficient than the traditional one. The BCR for Green Brick is estimated as 1.92 compared to 1.48 for traditional brick. The NPV for Green Brick is estimated as Tk. 87 million compared to Tk. 24 million for traditional brick interventions.

**Table XIII.2: Financial analysis: Green Brickvs. traditional brick**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Project Name | **Financial Analysis** | | | |
| Discount rate (%) | NPV(million TK) | BCR | IRR (%) |
| Green Brick | 12 | 87 | 1.92 | 10.5 |
| Traditional brick | 12 | 24 | 1.48 | 6.9 |

**Detailed Results**

**Early Recovery Facility (ERF): Resilient Habitat, Shyamnagar, Satkhira (2011 - 2015)**

The ERF Project has been working towards establishing a coordinated early recovery mechanism in Bangladesh through setting up a functional early recovery mechanism, capacity building of government’s disaster management officials, and networking of DM volunteers ready to respond during emergency.

Under the Early Recovery Facility (ERF) Project, 43 shelters were constructed to serve a long-standing facility supporting early recovery after a disaster. The shelters were designed with the help of BRAC, and in consultations with thelocal stakeholders.

The financial analysis carried out for ERF Resilient Habitat reveals that such habitat (having a few livelihood elements) is relatively less efficient than the CDMP II habitat (which has adopted an integrated approach, containing a number of livelihood elements) from a financial point of view. The BCR for ERF habitat is estimated as 1.88 compared to 2.76 for CDMP habitat. The NPV for ERF habitat is estimated as Tk. 468 thousands (Table XIII.3).

**Table XIII.3 : Financial analysis: ERF habitat**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Discount rate | 12% |  | **ERF-Kedarbazar Resilient Habitat, Shemnagar** | | | | | |
| Year | Calendar Year | Costs | Benefits | Net benefits: benefits-costs | Discounted costs | Discounted benefits | Discounted net benefits |  |
| 1 | 2011 | 384112 | 0 | -384112 | 384112 | 0 | -384112 |  |
| 2 | 2012 | 19206 | 89000 | 69794 | 17148 | 79464 | 62316 |  |
| 3 | 2013 | 19206 | 93450 | 74244 | 15311 | 74498 | 59187 |  |
| 4 | 2014 | 19206 | 98123 | 78917 | 13670 | 69842 | 56171 |  |
| 5 | 2015 | 19206 | 103029 | 83823 | 12206 | 65477 | 53271 |  |
| 6 | 2016 | 19206 | 108180 | 88974 | 10898 | 61384 | 50486 |  |
| 7 | 2017 | 19206 | 113589 | 94383 | 9730 | 57548 | 47817 |  |
| 8 | 2018 | 19206 | 119269 | 100063 | 8688 | 53951 | 45263 |  |
| 9 | 2019 | 19206 | 125232 | 106026 | 7757 | 50579 | 42822 |  |
| 10 | 2020 | 19206 | 131494 | 112288 | 6926 | 47418 | 40492 |  |
| 11 | 2021 | 19206 | 138068 | 118862 | 6184 | 44454 | 38270 |  |
| 12 | 2022 | 19206 | 144972 | 125766 | 5521 | 41676 | 36155 |  |
| 13 | 2023 | 19206 | 152220 | 133014 | 4930 | 39071 | 34141 |  |
| 14 | 2024 | 19206 | 159831 | 140625 | 4402 | 36629 | 32228 |  |
| 15 | 2025 | 19206 | 167823 | 148617 | 3930 | 34340 | 30410 |  |
| 16 | 2026 | 19206 | 176214 | 157008 | 3509 | 32194 | 28685 |  |
| 17 | 2027 | 19206 | 185025 | 165819 | 3133 | 30182 | 27049 |  |
| 18 | 2028 | 19206 | 194276 | 175070 | 2797 | 28295 | 25498 |  |
| 19 | 2029 | 19206 | 203990 | 184784 | 2498 | 26527 | 24029 |  |
| 20 | 2030 | 19206 | 214189 | 194983 | 2230 | 24869 | 22639 |  |
| 21 | 2031 | 19206 | 224899 | 205693 | 1991 | 23315 | 21323 |  |
| 22 | 2032 | 19206 | 236143 | 216937 | 1778 | 21857 | 20080 |  |
| 23 | 2033 | 19206 | 247951 | 228745 | 1587 | 20491 | 18904 |  |
| 24 | 2034 | 19206 | 260348 | 241142 | 1417 | 19211 | 17793 |  |
| 25 | 2035 | 19206 | 273366 | 254160 | 1265 | 18010 | 16745 |  |
|  | **Sum** | **845056** | **3960678** | **3115622** | **533618** | **1001280** | **467662** | NPV |
|  |  |  |  |  |  |  | **1.88** | B/C ratio |
|  |  |  |  |  |  |  | **10.5%** | Estimated internal rate of  return |

**CDMP-II: Resilient Habitat, Dacope, Khulna (2010 – 2014)**

CDMP II constructed 58 resilient habitats under a land area of 7.4 acres. By adopting an integrated approach, the project activities included the construction of a rainwater tank, solar panel, livestock-poultry for household use and ponds for community use.

Results presented in Table XIII.4indicate that CDMP II habitat is more efficient compared to ERF Resilient Habitat from a financial point of view. The BCR for CDMP II habitat is estimated as 2.76 compared to 1.88 for ERF habitat. The NPV for CDMP II habitat is estimated as Tk. 1183 thousands while it is Tk. 468 thousands for ERF habitat.

**Table XIII. 4: Financial analysis - CDMP habitat**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Discount rate | 12% | **CDMP II-Baine Para Resilient Habitat, Dacope** | | | | | | |
| Year | Calendar Year | Costs | Benefits | Net benefits: benefits-costs | Discounted costs | Discounted benefits | Discounted net benefits |  |
| 1 | 2010 | 484350 | 0 | -484350 | 484350 | 0 | -484350 |  |
| 2 | 2011 | 24218 | 165000 | 140782 | 21623 | 147321 | 125698 |  |
| 3 | 2012 | 24218 | 173250 | 149032 | 19306 | 138114 | 118807 |  |
| 4 | 2013 | 24218 | 181913 | 157695 | 17238 | 129482 | 112244 |  |
| 5 | 2014 | 24218 | 191008 | 166790 | 15391 | 121389 | 105998 |  |
| 6 | 2015 | 24218 | 200559 | 176341 | 13742 | 113802 | 100060 |  |
| 7 | 2016 | 24218 | 210586 | 186368 | 12270 | 106690 | 94420 |  |
| 8 | 2017 | 24218 | 221116 | 196898 | 10955 | 100022 | 89067 |  |
| 9 | 2018 | 24218 | 232172 | 207954 | 9781 | 93770 | 83989 |  |
| 10 | 2019 | 24218 | 243780 | 219562 | 8733 | 87910 | 79176 |  |
| 11 | 2020 | 24218 | 255969 | 231751 | 7798 | 82415 | 74618 |  |
| 12 | 2021 | 24218 | 268768 | 244550 | 6962 | 77264 | 70302 |  |
| 13 | 2022 | 24218 | 282206 | 257988 | 6216 | 72435 | 66219 |  |
| 14 | 2023 | 24218 | 296316 | 272098 | 5550 | 67908 | 62358 |  |
| 15 | 2024 | 24218 | 311132 | 286914 | 4955 | 63664 | 58708 |  |
| 16 | 2025 | 24218 | 326689 | 302471 | 4425 | 59685 | 55260 |  |
| 17 | 2026 | 24218 | 343023 | 318805 | 3950 | 55955 | 52004 |  |
| 18 | 2027 | 24218 | 360174 | 335956 | 3527 | 52457 | 48930 |  |
| 19 | 2028 | 24218 | 378183 | 353965 | 3149 | 49179 | 46029 |  |
| 20 | 2029 | 24218 | 397092 | 372874 | 2812 | 46105 | 43293 |  |
| 21 | 2030 | 24218 | 416947 | 392729 | 2511 | 43224 | 40713 |  |
| 22 | 2031 | 24218 | 437794 | 413576 | 2242 | 40522 | 38280 |  |
| 23 | 2032 | 24218 | 459684 | 435466 | 2001 | 37989 | 35988 |  |
| 24 | 2033 | 24218 | 482668 | 458450 | 1787 | 35615 | 33828 |  |
| 25 | 2034 | 24218 | 506801 | 482583 | 1596 | 33389 | 31794 |  |
|  | **Sum** | **1065582** | **7342830** | **6277248** | **672871** | **1856306** | **1183435** | NPV |
|  |  |  |  |  |  |  | **2.76** | B/C ratio |
|  |  |  |  |  |  |  | **20.3%** | Estimated internal rate of return |

**Community Based Adaptation to Climate Change through Coastal Afforestation in**

**Bangladesh (CBACC-CF) (2006-2010) - Forest, Fish and Fruit (FFF)**

The Community Based Adaptation to Climate Change through Coastal Afforestation (CBACC-CF) project has been working with climate change-vulnerable coastal communities in Bangladesh to explore new options for income generation and improved livelihoods. The project is being implemented by integrating climate change adaptation and mitigation concerns with expanded livelihood options, ensuring the long-term sustainability of climate change response by communities. Currently, the project is piloting in 14km of Bangladesh’s highly vulnerable coastline.

One component of CBACC-CF has been the development of the “Forest, Fish and Fruit” (or “Triple F”) model, a mound and ditch model that comprises short, medium, and long term resource generation and diversification options that help communities along the coast to adapt to climate risks. The FFF model uses a combination of protective and productive vegetation, mound and ditch land structures, and a fish nursery pond to create multiple sources of income and climate risk protection for the long run.The benefits to communities are broadly as follows:

**a. Forest:** Planting forest trees and palms provides communities with long-term timber, mid-term fuel-wood from branch pruning and also food products, and also gives protection to the surrounding land and people from climatic impacts, including through reduction of greenhouse gas emissions as well as from tidal and storm surges.

**b. Fish:** By excavating ditches, community members can produce fish and generate income. Harvesting rain water into the ditches also ensures a regular water supply to plantations on the mounds; they also increase water security by offering a reservoir for all seasons.

**c. Fruit:** Quick growing and early yielding fruit trees and vegetables are planted on the mounds. They are providing considerable income and food production.

The financial analysis carried out for the FFF Model (under CBACC-CF**)** exhibit that the FFF Model is ‘highly efficient’ from a financial point of view (Table XIII.5). The BCR for the FFF Model is estimated as high as 4.88. The NPV is estimated as Tk. 870 thousands **[[78]](#footnote-78).**

**Table XIII.5: Financial analysis : FFF model**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Discount rate | 12% | **FFF model\_ Barguna** | | | | | | |
| Year | Calendar Year | Costs | Benefits | Net benefits: benefits-costs | Discounted costs | Discounted benefits | Discounted net benefits |  |
| 1 | 2009 | 118151 | 0 | -118151 | 118151 | 0 | -118151 |  |
| 2 | 2010 | 13650 | 87319 | 73669 | 12188 | 77963 | 65776 |  |
| 3 | 2011 | 13650 | 90671 | 77021 | 10882 | 72282 | 61401 |  |
| 4 | 2012 | 13650 | 95698 | 82048 | 9716 | 68116 | 58400 |  |
| 5 | 2013 | 13650 | 103924 | 90274 | 8675 | 66046 | 57371 |  |
| 6 | 2014 | 13650 | 111723 | 98073 | 7745 | 63395 | 55649 |  |
| 7 | 2015 | 13650 | 119874 | 106224 | 6916 | 60732 | 53816 |  |
| 8 | 2016 | 13650 | 127634 | 113984 | 6175 | 57735 | 51561 |  |
| 9 | 2017 | 13650 | 135781 | 122131 | 5513 | 54840 | 49327 |  |
| 10 | 2018 | 13650 | 144336 | 130686 | 4922 | 52049 | 47127 |  |
| 11 | 2019 | 13650 | 153319 | 139669 | 4395 | 49365 | 44970 |  |
| 12 | 2020 | 13650 | 162751 | 149101 | 3924 | 46787 | 42863 |  |
| 13 | 2021 | 13650 | 172654 | 159004 | 3504 | 44316 | 40812 |  |
| 14 | 2022 | 13650 | 183053 | 169403 | 3128 | 41951 | 38823 |  |
| 15 | 2023 | 13650 | 193971 | 180321 | 2793 | 39690 | 36897 |  |
| 16 | 2024 | 13650 | 209601 | 195951 | 2494 | 38293 | 35800 |  |
| 17 | 2025 | 13650 | 221847 | 208197 | 2227 | 36188 | 33961 |  |
| 18 | 2026 | 13650 | 234706 | 221056 | 1988 | 34184 | 32196 |  |
| 19 | 2027 | 13650 | 248207 | 234557 | 1775 | 32277 | 30502 |  |
| 20 | 2028 | 13650 | 262383 | 248733 | 1585 | 30464 | 28880 |  |
| 21 | 2029 | 13650 | 277268 | 263618 | 1415 | 28743 | 27328 |  |
| 22 | 2030 | 13650 | 292897 | 279247 | 1263 | 27110 | 25847 |  |
| 23 | 2031 | 13650 | 309308 | 295658 | 1128 | 25562 | 24434 |  |
| 24 | 2032 | 13650 | 326539 | 312889 | 1007 | 24095 | 23087 |  |
| 25 | 2033 | 13650 | 344632 | 330982 | 899 | 22705 | 21806 |  |
|  | **Sum** | **445751** | **4610096** | **4164345** | **224407** | **1094888** | **870481** | NPV |
|  |  |  |  |  |  |  | **4.88** | B/C ratio |
|  |  |  |  |  |  |  | **50.9%** | Estimated internal rate of  return |

**Other indirect benefits**

Apart from protection, both habitats and the FFF-Model also generate a number of direct and indirect benefits, which were not factored in our analysis. Consideration to these likely benefits should be given in decision-making. Quantification of social benefits, which are largely intangible, is extremely difficult. Some of the important social benefits of adaptation to climate change and disaster risk reduction are:

* Avoidance of loss of human lives and livestock,
* Reducing stress and sufferings of flood victims, and
* Poverty reduction through employment generation and multiplier effects.

In project intervention decision-making, consideration to the social benefits should be given primarily by using qualitative data (where quantitative data are scanty).

The projects, particularly the FFF-Model, generate a significant number of employment opportunities, largely for the disadvantaged groups -- particularly for women. Such increase in employment takes place especially during the construction phase on project intervention. Additionally, during the repair and maintenance phase, some additional employment is also created. These linkage effects have some positive implications for the reduction of poverty in society.

**Improving Kiln Efficiency in the Brick Making Industry (2009-2014)**

Traditional brick making operation is one of the largest sources of greenhouse gas emissions in the country, estimated to be in the order of 6 million tons of carbon dioxide (CO2) annually. It is also a major source of land degradation and deforestation.

The Green Brick making project was designed to remove barriers to the adoption of energy efficient kilns (specialized ovens for brick making). It aimed to implement 15 demonstrations of energy efficient kilns in a five year period. It was expected to result in the direct energy savings of 314 kilotons of coal by the end of the project (end 2014). Following this, direct greenhouse gas emission reductions over next 15 years should be of 1,470 kilotons of CO2.

A comparative financial analysis is carried out for both traditional and Green Brick making activities**[[79]](#footnote-79)** . It is revealed that Green Brick making is more efficient from a financial point of view. The BCR for Green Brick is estimated as 1.92 compared to 1.48 for the traditional brick. The NPV for Green Brick is estimated as Tk. 87 million compared to Tk. 24 million for traditional brick interventions.

**Table XIII.6: Financial analysis - Green Brick**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Discount rate | 12% | **Green Brick** | | | | | | |
| Year | Calendar Year | Costs | Benefits | Net benefits: benefits-costs | Discounted costs | Discounted benefits | Discounted net benefits |  |
| 1 | 2015 | 76083000 | 0 | -76083000 | 76083000 | 0 | -76083000 |  |
| 2 | 2016 | 2500000 | 16500000 | 14000000 | 2232143 | 14732143 | 12500000 |  |
| 3 | 2017 | 2500000 | 17325000 | 14825000 | 1992985 | 13811384 | 11818399 |  |
| 4 | 2018 | 2500000 | 18191250 | 15691250 | 1779451 | 12948172 | 11168722 |  |
| 5 | 2019 | 2500000 | 19100813 | 16600813 | 1588795 | 12138912 | 10550116 |  |
| 6 | 2020 | 2500000 | 20055853 | 17555853 | 1418567 | 11380230 | 9961663 |  |
| 7 | 2021 | 2500000 | 21058646 | 18558646 | 1266578 | 10668965 | 9402388 |  |
| 8 | 2022 | 2500000 | 22111578 | 19611578 | 1130873 | 10002155 | 8871282 |  |
| 9 | 2023 | 2500000 | 23217157 | 20717157 | 1009708 | 9377020 | 8367312 |  |
| 10 | 2024 | 2500000 | 24378015 | 21878015 | 901525 | 8790957 | 7889431 |  |
| 11 | 2025 | 2500000 | 25596916 | 23096916 | 804933 | 8241522 | 7436589 |  |
| 12 | 2026 | 2500000 | 26876761 | 24376761 | 718690 | 7726427 | 7007736 |  |
| 13 | 2027 | 2500000 | 28220599 | 25720599 | 641688 | 7243525 | 6601837 |  |
| 14 | 2028 | 2500000 | 29631629 | 27131629 | 572935 | 6790805 | 6217869 |  |
| 15 | 2029 | 2500000 | 31113211 | 28613211 | 511550 | 6366379 | 5854830 |  |
| 16 | 2030 | 2500000 | 32668871 | 30168871 | 456741 | 5968481 | 5511740 |  |
| 17 | 2031 | 2500000 | 34302315 | 31802315 | 407804 | 5595451 | 5187646 |  |
| 18 | 2032 | 2500000 | 36017431 | 33517431 | 364111 | 5245735 | 4881624 |  |
| 19 | 2033 | 2500000 | 37818302 | 35318302 | 325099 | 4917876 | 4592778 |  |
| 20 | 2034 | 2500000 | 167818302 | 165318302 | 290267 | 19484842 | 19194575 |  |
|  | **Sum** | **123583000** | **632002649** | **508419649** | **94497442** | **181430980** | **86933538** | NPV |
|  |  |  |  |  |  |  | **1.92** | B/C ratio |
|  |  |  |  |  |  |  | **10.5%** | Estimated internal rate of  return |

Note: Benefits to or cost of environment (e.g., carbon emission or energy efficiency) is not accounted for.

**Table XIII.7: Financial analysis : Traditional brick**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Discount rate | 12% | **Traditional brick** | | | | | | |
| Year | Calendar Year | Costs | Benefits | Net benefits: benefits-costs | Discounted costs | Discounted benefits | Discounted net benefits |  |
| 1 | 2015 | 45666666 | 0 | -45666666 | 45666666 | 0 | -45666666 |  |
| 2 | 2016 | 750000 | 6500000 | 5750000 | 669643 | 5803571 | 5133929 |  |
| 3 | 2017 | 750000 | 6825000 | 6075000 | 597895 | 5440848 | 4842953 |  |
| 4 | 2018 | 750000 | 7166250 | 6416250 | 533835 | 5100795 | 4566960 |  |
| 5 | 2019 | 750000 | 7524563 | 6774563 | 476639 | 4781996 | 4305357 |  |
| 6 | 2020 | 750000 | 7900791 | 7150791 | 425570 | 4483121 | 4057551 |  |
| 7 | 2021 | 750000 | 8295830 | 7545830 | 379973 | 4202926 | 3822952 |  |
| 8 | 2022 | 750000 | 8710622 | 7960622 | 339262 | 3940243 | 3600981 |  |
| 9 | 2023 | 750000 | 9146153 | 8396153 | 302912 | 3693978 | 3391065 |  |
| 10 | 2024 | 750000 | 100646153 | 141500000 | 270458 | 36294012 | 36023554 |  |
|  | **Sum** | **52416666** | **162715361** | **151902542** | **49662853** | **73741489** | **24078636** | NPV |
|  |  |  |  |  |  |  | **1.48** | B/C ratio |
|  |  |  |  |  |  |  | **6.9%** | Estimated internal rate of  return |

**CDMP-II (2010-2014)**

In 2015, CDMP II project proponents carried out an analysis of the Value for Money for some of the project’s components. In the following, a review of pertinent studies and a comparative analysis of our results are provided.

**Flood Forecasting and Warning System (FFWS)**

The vulnerability of Bangladesh’s population to natural disasters, particularly to cyclones and floods is well-recorded. According to the World Bank estimates, Cyclone Sidr (2007) cost Bangladesh a total of US $1.7billion, affecting 2.3m households.[[80]](#footnote-80)Cyclone Aila (2009) affected nearly 1 million households. Currently, there are approximately 19.5m and 3m flood prone households resided in four major river basins and coastal areas of Bangladesh, respectively. In this regard, the formulation and dissemination of flood forecasting and cyclone warning are extremely important as they help in reducing disaster impact through protecting lives and properties.

Warning has some direct damage-reducing effects, as those who believe warning message are able to considerably reduce inventory damages. A BIDS study has revealed that, depending on the type of flood, an average householder succeeds in moving up to 54 percent of their inventories to safer places in a normal warning system[[81]](#footnote-81). Even some structural damages can also be avoided. With the increased lead time, the percentage of inventories moved to safer places increases, which in turn enables avoidance of damage systematically.An Asian Development Bank study found that communities can save more than 70 percent of their movable resources/capital goods, if they get five days advance warning for flood events**[[82]](#footnote-82)**.

CDMP II Report asserts that an effective Early Flood Warning System (EFWS) can give a very high BCR, up to 558, which appears to be unusually high -- this figure indicates that very high returns can be expected by investing in EFWS**[[83]](#footnote-83).** In other case studies, the BCR is estimated to be around 260. This signifies that for every dollar invested in flood early warning, one could expect an estimated $260 return. Even if some sensitivities are taken into account, the investment in EFWS would give a‘very high’ return (BCR up to as high as 197).

**Cyclone Preparedness Programme (CPP)**

According to the CDMP II Report (2015), the cost of recruitment of CPP volunteers, equipment, and training has been around $1.8m.Assuming a frequency of 10 years for the magnitude of Cyclone Sidr, annual potential damage is estimated as $170m**[[84]](#footnote-84)**. According to the estimate of this Evaluation, it is revealed that a dollar investment would provide a dividend of $85 (without discounting)**[[85]](#footnote-85)**. When discounted (at 12% rate),the BCR stands as around 39**[[86]](#footnote-86)**. The Net Present Value of benefits (NPV) is estimated as over $521m.

Similar studies have consistently supported the above case studies, and concluded that investing in DRR is highly cost-effective, and that value added from non-structural DRR (e.g. early warning system) interventions to risk management is even higher. A recent argument put forward by the Overseas Development Institute and the World Bank is that investing in DRR brings ‘triple dividends’.[[87]](#footnote-87) The dividends also stem from the investments in building resilience, which brings social or environmental spin-off benefits. Examples for these benefits could be shelters being used for multiple community-based economic, social and educational activities, such as for the purpose of schools for local children or youth or a women’s training centre for human resource development.

**Table XIII.8: Financial analysis - Cyclone Preparedness Programme (CPP)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Discount rate | 12% |  | **CPP (m $)** | | |  |  |  |
| Year | Calendar Year | Costs | Benefits | Net benefits: benefits-costs | Discounted costs | Discounted benefits | Discounted net benefits |  |
| 1 | 2015 | 1.80 | 0 | -1.80 | 1.80 | 0.00 | -1.80 |  |
| 2 | 2016 | 1.89 | 85.00 | 83.11 | 1.69 | 75.89 | 74.21 |  |
| 3 | 2017 | 1.98 | 89.25 | 87.27 | 1.58 | 71.15 | 69.57 |  |
| 4 | 2018 | 2.08 | 93.71 | 91.63 | 1.48 | 66.70 | 65.22 |  |
| 5 | 2019 | 2.19 | 98.40 | 96.21 | 1.39 | 62.53 | 61.14 |  |
| 6 | 2020 | 2.30 | 103.32 | 101.02 | 1.30 | 58.63 | 57.32 |  |
| 7 | 2021 | 2.41 | 108.48 | 106.07 | 1.22 | 54.96 | 53.74 |  |
| 8 | 2022 | 2.53 | 113.91 | 111.38 | 1.15 | 51.53 | 50.38 |  |
| 9 | 2023 | 2.66 | 119.60 | 116.94 | 1.07 | 48.31 | 47.23 |  |
| 10 | 2024 | 2.79 | 125.58 | 122.79 | 1.01 | 45.29 | 44.28 |  |
|  | **Sum** | **23** | **937** | **915** | **14** | **535** | **521** | NPV |
|  |  |  |  |  |  |  | **39.06** | B/C ratio |
|  |  |  |  |  |  |  | **4116%** | Estimated internal rate of return |

**Analytical Approach**

**The ERF-Resilient Habitat vs. theCDMP II- Habitat**

|  |  |  |
| --- | --- | --- |
| **Economic efficiency calculations** | |  |
| **Definition** | **Efficiency criteria** |
| Approach | Before-After, With-Without - Loss and damage to house and properties avoided = Benefits | Used Standard damage data sets for floods and Storm surges[[88]](#footnote-88) |
| Description | Calculation of efficiency in terms of **net present value (NPV), B/C ratio, or expected internal rate of return**. Important to discount costs and benefits over time. |  |
| Inputs | Costs of project | e.g., Earthwork, Structure, Rainwater harvester, Solar power provision. |
|  | 0 & M | 5% |
|  | Potential loss/damage avoided = Benefits | Livestock  Sanitary provision,  Inventories, TV, Showcase, Almira, electronics. |
|  | Lifetime | 25 years |
|  | No. of Habitats | 43 for ERF, 58 CDMP habitats |
|  | No. of people served | 200 for ERF, 300 for CDMP |
|  | Discount rate | 12% |
|  | Assumed changes in exposure and thus losses | 5% |

**3-F Model**

|  |  |  |
| --- | --- | --- |
| **Economic efficiency calculations** | |  |
| Definition | Efficiency criteria |
| Approach | Before-After, With-Without - Income benefits :Forest, Fish, Fruits/Vegetables | Field investigation; Nandi[[89]](#footnote-89),[[90]](#footnote-90)and Islam and Mechler.[[91]](#footnote-91) (2007) |
| Description | Calculation of efficiency in terms if **net present value (NPV), B/C ratio, or expected internal rate of return**. Important to discount costs and benefits over time. |  |
| Inputs | Costs of project | e.g. Cleaning, Demarcation, Dyke Construction, Raising & Planting Seedling for both vegetable and fruit; Land is free |
|  | 0 & M | 5% |
|  | Potential loss/damage avoided = Benefits | Income benefits from forests (fuel+timber), fish and fruits /vegetables based on field investigation, and Nandi.[[92]](#footnote-92)  Carbon capture is considered in this analysis for those plants which survived after 15 years (considered 15% of those planted originally). The plants are assumed to exist for 10 years after that. So carbon capture is considered to continue for 10 years.  Carbon sink in this analysis is considered to include only above-ground sink, without considering ground storage capacity. The amount of carbon sink per ha is estimated as 100 tons per ha annually(drawn on Nandi. [[93]](#footnote-93),[[94]](#footnote-94) |
|  | Lifetime | 25 yrs |
|  | Discount rate | 12% |
|  | Assumed changes in exposure and thus losses | 5% |

**Broad Assumptions and Limitations**

Avoidance of potential loss due to floods, cyclones, storm surges is deemed to be one of the major benefits of the newly constructed habitats. In respect to flood loss estimates and a calculation of the benefits of their avoidance require data on a number of flood dimensions:

a) Frequency of flooding,

b) Depth of flooding,

c) Duration of flooding,

d) Land levels and height of habitat floors, and

e) Susceptibility of building materials to water.

These dimensions have profound implications for the designing of flood protection structures and for formulating flood response strategies.

Considerations were given to the inadequacy of baseline data (with-without situation). In the analysis, the depths and duration of flooding are assumed as follows (based on quick survey and Islam[[95]](#footnote-95):

**Important assumptions taken**

|  |  |  |  |
| --- | --- | --- | --- |
| **Flood return periods** | **Prob. baseline** | **Average depth (above floor level) (Meter)** | **Duration of flooding (days)** |
| 2 Year | 50% | Floors not inundated, only courtyard flooded | 7 |
| 5 Year | 20% | 0.30 | 7 |
| 10 Year | 10% | 0.61 | 14 |
| 20 Year | 5% | 1.22 | 14 |

* + - * Frequency of cyclone/storm surge taken as 5 = 20% Base Prob. Potential damages from both floods and storms are factored into this analysis.
      * The standard potential flood loss data base generated by Islam[[96]](#footnote-96)has been used in the value of loss avoidance vis-à-vis benefits of protection. Data on costs of construction were collected from relevant project documents.
      * The analyses carried out were from a financial point of view. Given the scope of the study, economic analyses per se were not possible, which needed the incorporation of appropriate conversion factors to convert to economic costs and benefits.

**Limitations**

It is noteworthy here to indicate some of the limitations of the economic efficiency and effectiveness analyses carried out in the present Evaluation study. These are as follows:

* + - * Own labor of beneficiaries was not incorporated in this financial analysis.
      * Price of land was not incorporated (given free) in this financial analysis. In economic analysis per se, this variable should be incorporated.
      * For linkage effects, 5% exposures were assumed
      * O & M assumed to be 5%
      * Benefits to or cost of the environment were not accounted for; however, the value of carbon captured is incorporated (in case of the FFF Model) (drawn on Nandi[[97]](#footnote-97),[[98]](#footnote-98)).

**Annex XIV: Six Selected UNDP Projects Evaluation Matrix by Criteria**

**Evaluator’s observation and assessment, based on evaluation criteria, of the selected six UNDP projects** (information for each of the selected climate change adaptation, disaster management, natural resources management and low-carbon energy project was procured from documents, reports, field observation, participant interviews and focus group discussions):

|  |  |
| --- | --- |
| Project | Relevance |
| Project: Comprehensive Disaster Management Program (CDMP) Phase II  Project Start Date: January 1, 2010  Project End Date: December 31, 2014  Partners: DFID, EU, SIDA, Norway, AusAid, Bangladesh Government & UNDP  Fund: 75.24 Million USD | The goal of CDMP Phase II was to institutionalize a newer approach by promoting a paradigm shift from relief and rehabilitation strategy to more focused activities in risk reduction, by incorporating a multi-hazard framework Operationally, the project aimed to reduce vulnerability to adverse natural and anthropogenic events through technical assistance in risk reduction and comprehensive disaster management activities. These goals directly fit into national priorities to reduce Bangladesh’s vulnerability to disasters and climate change risks, as elicited in the SFYP, 2011-15. The six outcomes of the project were designed to address priority issues relating to Bangladesh’s DRR capacity, and to contribute to strengthen GoB institutions other stakeholders to engage with disaster management in general. As elicited in the MTR, the project’s think-tank role in DM has been materialized through developing analyses, policy and guidelines formulation and implementation that fulfilled the national priority areas and influenced significantly key policies and practices of several institutions. Overall, in the role of providing a ‘platform’ to bring new ideas, knowledge and institutions together to push the DRR/CCA agenda, CDMP II functioned as a catalyst. For example, CDMP II played a vital role in developing the climate change cell in the MoEF, and former has subsequently become independent. In perspective of adding value, CDMP II or similar projects should facilitate creating more ‘space’ for other institutions. The project design has incorporated very relevant components in all major hazard areas, including cyclones, tidal surges, floods, climate change and variability, earthquakes, fire, toxic chemical spill, and gas leakage, to achieve its goals. The multi-level (national, regional and local) coverage has made the project design more relevant to the noted SFYP, 2011-15 priorities. For examples, at the national level, the project assisted formulation and enactment of the Disaster Management Act 2012. At the district level, Resource Centres were established to create relevant knowledge material inventory. However, achievement in creating usable new knowledge, based on evidence-based research and lessons learned from disaster management experience was limited. Relevant to local climate change and disaster vulnerability and risk reduction, it has been claimed that approximately 2.8 million people, of which 47% were women), have been covered to provide benefits from disaster resilient jobs and livelihood opportunities under the DRR schemes (e.g., embankments, shelters, ponds, roads). The Evaluation Team agree with the MTR that, in terms of the operational role, it was too ambitious to try to reach out all or most of the local communities, at the union level, as well as to attempt to address all disaster risk related needs of these communities. A much closer engagement with DMCs is needed to ensure that the project’s own designing and implementation of activities are aligned and coordinated with other key projects.  Overall, CDMP II has succeeded in functioning as a needed national platform to facilitate and assist all key institutions to mainstreaming DRR and CCA, as well as strengthen, albeit on a limited scale, delivery of risk reduction outcomes for at-risk local communities. |
| **Effectiveness** |
| CDMP Phase II project was grounded on the successful implementation of the CDMP Phase I (2004-09) project, and therefore primarily was an incremental effort. This has facilitated CDMP Phase II project to become reasonably effective in designing and implementing activities and achieve outputs consistent with targeted outcomes, though it’s engagement with GoB machinery at multi-scale (district, upazila and union) has been ‘sporadic’, and in many cases interactions occurred after prolonged gaps (e.g. several years) .Capacity deficiency of DMCs at the sub-national and local level was observed during the field visits. It was also observed where implementation support was sought from local NGOs, planning and delivery was substituted, though without a permanent solution to capacity deficiency.  Commendable effectiveness has been observed by the Evaluation Team in achieving Outcome 1 and Outcome 5 which focussed on professionalizing disaster management system and mainstreaming and institutionalizing disaster risk reduction, with visible and measurable national impacts. For examples, both CDMP-II and PECM project interventions can be linked with the fact that DRR and CCA policy directives have been incorporated effectively within the planning and budgeting processes of 12 partner ministries of the Government of Bangladesh by 2014. As well, technical capacities of relevant departments and ministries, including Bangladesh Meteorological Department in early warning formulation and dissemination, Flood Forecasting and Warning Centre in expanding the lead time in flood forecasting, Bangladesh Fire Service and Civil Defence in quick response capacity, Department of Public Health Engineering in better land-use planning, were significantly enhanced in a timely manner. Varying extent of the outputs and outcomes was achieved in Outcomes 2,3,4 and 6. Although the project activity targets were specified in correspondence with outputs and outcomes throughout the project design, the implemented activities and outputs were not well coordinated with targets. For example, Outcome 2.2 targeted communities in 2000 unions in high-risk districts would become well-conversant of risks and vulnerabilities and risk reductions options , and benefitted from structural and non-structural risk reductions and adaptation interventions. The progress reports cited that since 2010, a total of 1865 schemes have been implemented with 99,226 interventions. More close annual monitoring and a method of incorporation of the feedback to catch-up with the lags as well as required resource and scheduling adjustments would make the implementation and achievement of outcomes more effective. In terms of overall effectiveness, the Evaluation Team rank it ‘highly effective’. |
| **Efficiency** |
| As efficiency measures the performance of how good economically resources or inputs (e.g., funds, expertise and time) are converted to results (UNDP, 2009), the focus of evaluation team is up on assessing the extent to which resources have been used efficiently in terms of financial, human resources, and time investment until the time of evaluation (i.e., 2014) to achieve the intended results. Up to mid-2014 (in the 5th year), total budget utilization of CDMP II was low, both totally at 75%, and year by year-wise – see (Annex 1.A)and ‘marginally satisfactory’ in perspective of its terminal year.  The project implementation agency expected to have spent 85% of the available funds by the termination of the program in December 2014. As UNDP requirement is 96%, budget utilization falls short substantially, indicating inadequate financial planning and implementation capacity. The Evaluation Team concur with the observation of DFID assessment conclusion that CDMP II have offered ‘good economy’ (e.g., lower management costs that some other UNDP projects as well as exhibited numerous good practice examples over the years. In terms achieving programme results, most targeted outputs were produced, as revealed by the key indicators (e.g., number of beneficiaries, skill development through training programmes). Also, due it CDMP II’s positive economic performance, outputs visibility and earned reputation, new programmes in the country are adopting its evidence and experience (e.g., an over $14 m project on Seismic Risk Mitigation and Emergency Preparedness, $125 m project on Urban Resilience Project). The Evaluation Team recognizes that up on implementation of the entire project cycle, the CDMP II interventions, benefits from them, especially from Early Warning System and Core Family Shelters, would outweigh the costs, and provide positive and extremely high value for money. This is more valid particularly for the Early Warning System (EWS) interventions. It is important to highlight here that more clear evidence is required to conclude on VfM definitively across all activities and/or components through close and effective monitoring of results and bookkeeping on output-based costing. DFID VfM assessment demonstrated the significance of output-based costing, which revealed varying performance by outcome area whereby outcome 1 has been slowest spender and outcome 5 has achieved highest utilization rate(Annex 4.G). |
| **Cross-cutting themes (gender and other related perspectives)** |
| The disaster and climate risk reduction projects usually create ample opportunities to activate initiatives that addresses gender inequalities and to support conditions for more equitable benefits from vulnerability and risk reduction interventions. An assessment of the cross-cutting themes of CDMP II project by the Evaluation Team revealed that although some of the project activities have been dealing with the issues of gender equality, benefits specifically to the disadvantaged groups, and some aspects of human rights (e.g., access to information, and resources), limited attention has particularly been given to address gender equality in the early years of implementation. However, in the later years, CDMP II supported designated activities of women. For example, it worked with the Department of Women Affairs to develop a Risk Reduction Plan for 2013-18, earth quake contingency plan and DRR tool kit. Gender equality has been advanced through the national Disaster Management Act and subsequent enforceable Rules (2014), which were drafted to ensure national and local representation of the Ministry of Women and Children Affairs/ Department of Women Affairs in the disaster coordination and management committees. Standing Orders on Disaster (SOD) spells out the responsibility of different agencies and ensure the representation of local government women members at the local level disaster management committees. However, it is evident that the female members of local level disaster management committees are not effectively participating in the process (CDMPII, Annual Progress Report, 2013). Notably, social equity issues were not explicitly targeted by the project whereas disasters are known to augment marginalization and pauperization.  CDMP II can be regarded as a show case of successful partnership development for intersectoral linkages among various government ministries and departments. Some of the activities involved non-government organizations, civil society organizations, and volunteers effectively; nonetheless, their scale was limited. The opportunity to cement enhanced partnership with community-based non-governmental institutions should not be missed, and be emphasized in future programming. |
| **Sustainability and potential for replication** |
| The high degree of success in institutionalizing and mainstreaming DRR and CCA by the CDMP II through policy, knowledge delivery and management, and advocacy work at the national level is likely to sustain in the long run. The participation in and ownership of DRR and CCA, which were assisted by the CDMP II project activities, by the key government ministries and departments were exemplary. Keeping the synergy for DRR and CCA in sectoral activities and budget, however will require further support beyond 2014. This is more applicable because many key institutions are still evolving. As the mid-term review observed, CDMP’s primary Government of Bangladesh counterpart, namely the Disaster Management Bureau in the Ministry of Food and Disaster Management, has remained under-resourced and has limited capacity to continue to provide leadership in mainstreaming DRR and CCA in the country. The sustainability risk is high in number of areas, which were found in the programme design and implementation. As the institutional capacity continues to be deficient at the sub-national and local level, as well as at the city corporation’s level, it will be necessary to underscore cross-scale (City corporation/district, upazila, union level) sustainable capacity and institution building. For example, urban volunteers were trained without a provision of their institutionalization, and long term sustainability strategy. Re-fresher training would be required with new technology, knowledge and newer type of risk, and without cross-scale institutionalizing DRR and CCA, the current achievements would face gradual degradation.  The risk reduction activities funded directly by CDMP II through Local Disaster Risk Reduction Fund (LDRRF) could be made sustainable by strengthening the engagement and capacity building work with the Disaster Management Committees and local level institutions as well as by integrating DRR and CCA with local level livelihood security and enhancement programs. |
| Project: Early Recovery Facility (ERF)  Project Start Date: January 1, 2011  Project End Date: December 31, 2015  Partners: SDC, AusAid, UNDP, BCPR  Fund: 10 Million USD | **Relevance** |
| The Early Recovery (ER) initiative intends to enable disaster affected communities and institutions (chiefly, government) to recover quickly through responsive and flexible response by assessing, and planning for recovery and delivery of ER intervention. Guided by development principles that aim to build on humanitarian programmes and catalyze sustainable development opportunities, ER intends to minimize gaps between end relief and long-term recovery and overall humanitarian needs. The UNDP ERF project is directly aligned with Bangladesh’s National Plan for DM, and was built upon an earlier DRF project. The project interventions of the ERF project in the area of capacity building have been found to be effectively complementing the UNDP funded CDMP II project’s goals and activities. The expected Outcomes (which include i) coordinated early recovery mechanism in place; ii) early recovery innovation are locally developed and tested; iii) national scale emergency and early recovery needs are complemented; iv) early recovery procedures are sustained; v) early recovery policies and standards are developed and applied) were appropriately designed to institutionalize coordination of early recovery assessment, planning and response in the country; this has effectively promoted early recovery agenda in Bangladesh. As ER encompasses the restoration of basic services, livelihoods, shelter, governance security and rule of law, environment and social dimensions quickly, project interventions including construction of Core Family Shelters, providing Cash for Work, Cash for Training and Cash Grants in the Bangladesh context have been recognized to be highly relevant as well as effective in the rural Bangladesh context. |
| **Effectiveness** |
| The ERF has provided crucial support to the implementation of the Disaster Management Act 2012, by contributing to capacity building in the newly created Department of Disaster Management. In addition, ERF has assisted enhancing capacities of humanitarian actors including the partner NGOs, particularly by facilitating various training programmes on early ER. In 2014, the ERF is left with only one more year for implementation, and therefore, an early assessment of effectiveness can be attempted. The Evaluation Team found out that, in terms of achieving targeted outputs in a timely manner, ERF made commendable progress as it has already attained 80-90% of outputs by 2014, and it is likely to achieve 100% of targeted Outputs in all but one area by 2015 at termination.As elaborated in the LCG-DER progress reports, one of the most conspicuous contributions of ERF has been the support to implementation of LCG-DER priorities during 2012-14. Overall, programmes were able to perform ‘very well’ when they mobilized knowledge and built capacity of the partners. However, internal business processes were not always optimum to achieve them as ER has not been adopted in its core business processes. The fixed disbursement of funds schedule constraints the implementation partners, as pre-financing arrangement may cause an ‘exclusion risk’ of good NGOs participating in the bidding process. As noted in the MTR, UNDP’s capacity and size at the field level (district, sub-district) were not balanced against the requirements to accelerate partner’s capacity and functions. Such deficiency often left weaknesses in programme implementation. For example, the beneficiaries of the Resilient Habitat program at Kedarbarazar, ShyamnagarUpazila remained highly vulnerable to cyclonic storm surges due to breaching of an embankment which was not repaired. |
| **Efficiency** |
| ERF project interventions appear to be generally cost-effective. The unit cost of Disaster Resilient Core Family Shelters, for example, was quite competitive market price-wiseat the time of its implementation. However, the lessons learned from these shelter programmes indicated that linking the disaster shelter programmes with livelihood opportunities make them considerably efficient and effective. Under the Kedarbazar (Shyamnagar) Resilient Habitat programme, 43 disaster resistant houses were constructed, at a cost of approximately US $211,754. At the time of its implementation, it was a very innovative initiative. These ‘resilient housing’ structures have provided a sense of dignity and safety and security against catastrophic cyclones and storm surges to the landless recipients. However, the Evaluation Team was informed and observed that the clay-tile roofs of the houses have had seepage problem revealing a poor quality of roof construction; further the stairs to move upstairs were of poor design as several children were injured from falling through the gaps. Subsequently, ERF provided white corrugated iron sheets to address the roof leaking and seepage problem as an ad-hoc solution.Even though the quality of ‘resilient houses’ has suffered, economically these shelters proved to be efficient where Benefit Cost Ratio (BCR) is 1.88: 1. |
| **Cross-cutting themes (gender and other related perspectives)** |
| ERF does not have a gender equality focussed designated Output, though two specific women-focused programmes were being implemented under Output 1 and Output 2 that addressed the proportion of women in ERF stuff issue and training needs of the female DDM officials in ER. The resilience habitat intervention in Shyamnagar under ERF project exhibited promise largely missed the potential to link people living at that community with development initiatives. The women at the local level complained about the design of the houses (the stairs are not conducive for pregnant women and toddlers), fresh drinking water remained a challenge, no health and education program were linked. As nominal livelihood options were provided, and after Aila, land based production became difficult because of salinity intrusion, male usually out migrate during the lean season of employment and women back home face income insecurity resulting in health erosion of the family members. Limited efforts were made to understand whether the workload by men and women in the given community has increased and how to share such workload. |
| **Sustainability and potential for replication** |
| The Evaluation Team found out that most of the ERF initiated interventions, e.g., capacity building and enhancement of DDM officials, hazard specific contingency plan, annual reporting provision on disaster response and recovery, are closely anchored within relevant units of DDM. Nonetheless, continuous updating and refreshing knowledge and skills will be required to sustain ERF and its capacity. Sustainability of local programmes and their benefits will not be ensured without effective partnership with the local government and other development partners (e.g., reconstructed rural roads and embankments, health and education, Core Family Shelters). Resilience of the community could further be enhanced by integrating livelihood approaches. |
| Project: Poverty Environment Climate Mainstreaming (PECM)  Project Start Date: July, 2010  Project End Date: September, 2013  Partners: UNDP and UNDP-UNEP PEI  Fund: 1.00 Million USD | **Relevance** |
| The Project aims to ensure integration of climate change and environmental considerations into development planning and budgeting processes. PECM is highly relevant to the Government of Bangladesh’s policies and priorities, UNDP policies and global priorities, and the needs of people especially those most likely to be affected by climate change. Relevant to policies and actions such as BCCSAP, as it highlighted the need to strengthen organizations and institutions to meet the challenge of climate change. PECM is also relevant to International climate change negotiations, disaster risk reduction and response. |
| **Effectiveness** |
| A large number of activities/documents demonstrate the project to be highly effective. Poverty-Environment-Climate (PEC) linkages mainstreamed into UNDP programmes**.**PEC issues integrated into key national and sectoral planning documents. Technical brief has been provided to incorporate PEC Nexus issues in the DPP and TPP format, Delta Plan 2100 and PEC Nexus related clauses have been addressed in the ADP Guideline.PEC nexus issues integrated into Monitoring and Evaluation (M&E) framework of 6th Five Year Plan, National Perspective Plan and National Sustainable Development Strategy (2010-21).  PEC nexus issues integrated into Country Investment Plan for the Agriculture Sector and the Annual Development Programme (ADP) Guidelines.Development Project Proforma (DPP) and Technical Project Proforma (TPP) formats revised to include PEC issues in development planning and appraisal processes. New guidelines for preparing the Annual Development Programme and Development Project Proforma, which include an Indicator Framework, have been approved, which should result in more PEC-focused investment projects. Manual of Instruction for preparation of PEC inclusive DPP and TPP developed and published. Indicator Framework for Pro-poor, Environmental Friendly, Low Emission, and Climate Resilient Development prepared with an appropriate monitoring and review mechanism. Climate Public Expenditure and Institutional Review (CPEIR) prepared and published. A new Climate Fiscal Framework has been developed by the Ministry of Finance, making it possible to track government’s performance on PEC mainstreaming.GED implemented a Local Climate Fiscal Framework, for use by local government. |
| **Efficiency** |
| All the outputs have been delivered within stipulated time. Although the results can hardly be monetized it would undoubtedly give high value for money, particularly in respect of relatively small amount of budget ($1.0m). |
| **Cross-cutting themes (gender and other related perspectives)** |
| The PECM is one the most successful cross-cutting, integrative UNDP interventions that have generated profound effects on channeling budgeting for CCA, DRR and environment, along with implication for gender equality. In this regard, the example of the revised Development Project Proforma (DPP) can be cited here. DPP entails, in its “project detail” format , a description of effect/impact and specific mitigation measures thereof in any on “gender, women, children, person with disability/excluded group’s needs” (among others). Target groups and potential benefits to different sectors of the target population are required to be spelled out in this DPP format. Sex disaggregated data for target population needs to be furnished-especially potential opportunities and constraints created by the project to women have to be identified. The manual adopted Gender Analysis Framework to systematically analyze gender relations within a community and identify issues and barriers facing women in the community. As for another example, the Department of Women Affairs organizes training for their officials at different tiers on a regular basis. Climate change, environment and disaster risk reduction are new thrust of thematic areas they focus on, along with other pertinent issues. However, though mainstreaming gender in all development projects has been facilitated through revised DPP manual, along with mainstreaming climate change, environment and disaster risk reduction, it has not yet been implemented. Partially because of the fact that there is a need to strengthen capacity on gender issues and using gender lens. |
| **Sustainability and potential for replication** |
| Many achievements of the project will sustain but as Steve Jones and Ranadhir Das (2013) suggested, a follow-on project will be needed to consolidate the gains made and build a constituency for change.Knowledge generated by the Project will indirectly help enhance resilience of the country as whole and vulnerable communities in particular against climate change and natural disasters. It should also help manage natural resources more efficiently and effectively. through Environment Friendly, Low Emission and Climate Resilient Development |
| Project: Community-Based Adaptation to Climate Change through Coastal Afforestation in Bangladesh (CBACC-CF)  Project Start Date: March 2009  Project End Date: April, 2013  Partners: GEF Climate Change Adaptation, SDC, EKN  Fund: 7.55 Million USD | **Relevance** |
| CBACC-CF project is highly relevant to the Government of Bangladesh’s policies and priorities, UNDP policies and global priorities, and the needs of coastal people most affected by climate change. It is a priority project of Bangladesh under National Adaptation Programme of Actions (NAPA) confronting climate change impacts, and currently in implementation in vulnerable four coastal areas It is also relevant to Bangladesh Climate Change Strategy Action Plan (BCCSAP). It is aligned with Coastal Development Strategy and Coastal Development Policy. |
| **Effectiveness** |
| The CBACC-CF project shows significant effectiveness in promoting climate-resilient development in the coastal areas of Bangladesh, especially to reduce the vulnerability of coastal communities to the impacts of climate change-induced risks. The Evaluation Team found out that, in terms of achieving targeted outputs in a timely manner, CBACC-CF made commendable progress as it has already attained 100% of outputs except model demonstration (75%) by 2014, and it is likely to achieve 100% of targeted Outputs in all area by 2015 at termination. The project enhanced resilience of coastal ecosystems through increasing forest coverage, creating livelihood diversification practices through innovative land use technique (e.g., Triple F model) to vulnerable communities, and mainstreaming women’s role in climate change adaptation. Resilience of protective ecosystems was enhanced through different types of afforestation interventions and diversification of livelihood strategies. Meanwhile, more than 8,500 ha of mangrove plantation and coastal afforestation interventions were undertaken. More than 200 ha dike plantation activities were undertaken, including implementation of the Triple F Model. The project has crucial support in drafting Climate Resilient Coastal Zone Policy Recommendations for 4 sectoral policies and development of framework for mainstreaming mechanism for climate resilient policy which is now underway. As noted in the MTR, there is a general lack of self-help motivation and genuine ownership (e.g., land tenureship and lack of cooperatives) to currently sustain many of the individual and group outputs. It is not apparent that the necessary level of technical capacity and beneficiary ownership has yet been reached to assure sustainability although this is achievable. |
| **Efficiency** |
| 1. The CBACC-CF project interventions generally appear to be efficient in time and cost. It delivered all outputs in stipulated time which provided high value for money. Both the MTR and the Evaluation Team observed that the project disbursement is relatively low at 76% in 2014 (4th year of project implementation period). Coastal communities have not only pursued regular, short-term and medium-term alternative income options, but also planted forest tree species on their dike for long-term benefits. Planting trees and palms on dikes provided communities with long-term timber and mid-term fuel wood from branch pruning, as well as food (e.g., coconut) products. The project has until now been able to increase average annual income of landless and marginalized groups through enhancing significant level of adaptive capacity. The Triple F Model is an important component of CBACC-CF project which provides a very high value for money, BCR being as high as 5: 1.Many of the planned outputs are ahead of schedule, and some other are generally regarded as secondary. The project overall has been efficient in achieving the targeted outputs; however, their sustainability and outcome results remain major concerns. |
| **Cross-cutting themes (gender and other related perspectives)** |
| The CBACC-CF project Outcomes do not include any gender specific activities and results, while the intervention per se largely relates CCA linking with livelihood enhancement (in which women’s role is very prominent). However, some of the CBACC-CF project components engage women heavily in their implementation. For example, in the Triple F Model, women are largely engaged in production system. However, the productive inputs are collected from the markets by the male members where the women take the lead to maintain the production (specifically the Ditch and Dyke interventions at the coastal belt). The workload of the women consequently has increased enormously; they are taking the risk of getting into deep forest even in the rainy season. No work load sharing effort was made. The CBACC-CF project needs to reassess and re-focus on gender implications of the local level interventions and create for ‘space’ for women in the decision-making. |
| **Sustainability and potential for replication** |
| The recurrent income generation from continuous flow of resources has increased the adaptive capacity of the coastal communities to cope with climate change related shocks and disaster impact. The livelihood support is likely to sustain the Forest, Fish and Fruit (Triple F) Model in any anticipated conditions induced by climate change. Additional measures, focussing on enhancing management and technical capacities, are necessary to ensure the sustainability of the project interventions.  In line with the principles of the UNDP Adaptation Policy Frameworks (APF) and NAPA priority profile the type, the Triple F Model contributes to ongoing activities by the government and other donors who are actively working towards coastal development. Institutional linkages are expected to continue to be strengthened through cross-functional community-based adaptation measures, which in turn will enhance the sustainability of project outcomes.  The capacity-building components of the project will empower stakeholders at all levels - from community members, to district authorities, to policymakers - with a greater understanding of climate change risks, adaptation options, and enhanced adaptive capacity.  The project will further generate adaptation benefits by facilitating the integration of climate risk into existing poverty reduction and rural development strategies, especially as they pertain to coastal regions. Once the viability of the applied adaptation interventions is proven and national and local adaptive capacity has increased, there will be further opportunities for up-scaling and replication in other coastal sites exposed to climate-induced hazards. Learning and knowledge-sharing is promoted through project activities, including contributions to the Adaptation Learning Mechanism so that government ministries and other organizations are able to access and leverage the knowledge and resources developed through the CBACC-CF. National and international dialogue forums will continue to provide opportunities for identifying similarly vulnerable areas within and outside of Bangladesh where a similar approach may be suitable for use. |
| Project: Barrier Removal for Energy Standards &Labelling (BRESL)  Project Duration (2006-2013)  Project Start Date: July, 2010  Project End Date: June, 2015  Partners: GEF- Climate Change Mitigation  Fund: 0.65 Million USD | **Relevance** |
| The project theme, i.e. appliance standards, is extremely relevant, and part of the government policy at the time of project initiation as well as today. Before the project in 2006, no minimum energy performance standards existed in Bangladesh, and labels existed for residential fans, incandescent light bulbs and tube lamps only. Since the National Energy Policy in 1996, the Bangladesh Standards and Testing Institute had responsibility for the implementation of standards and labels. 1 m USD of GEF funds was topped up be 2 m USD of GoB funds which indicates that the project was also of high relevance for the government. However, the choice of the appliances and the long implementation time is raising doubts about the relevance of the specific standards and labels. |
| **Effectiveness** |
| 62 manufactures have updated their product lines and met the new standards. In terms of changing consumer behaviour the project has not yet been very effective. Public demand for efficient appliances seems low but slowly rising (e.gen 2014). The supervision and monitoring of the standards is unclear, currently the standards are voluntary only (although the EE&C Master plan provides for stepwise introduction of mandatory standards). Assessment is limited by lack of MTR or TE. |
| **Efficiency** |
| BRESL Project was supposed to start in 2009, but for finalization of TPP (approval), Administrative order of each initiation and hiring of Project Staff took almost 1 year. Therefore, project activities have been started from July 2010 by nominating one National Project Director (NPD) from BSTI under Ministry of Industries (MoI). Overall costs of the projects in Bangladesh 3 million USD. |
| **Cross-cutting themes (gender and other related perspectives)** |
| Gender or poor population groups were not explicit dimensions in this project. |
| **Sustainability and potential for replication** |
| The standards have found entry into the EE&C Master plan (March 2015). While they are not mandatory at this stage, they are scheduled to become mandatory over time. Replication in the sense of widening the scope to more appliances and other areas of energy efficiency is possible and recommendable. Review and tightening of standards needs to be ensured and institutionalized between SREDA and BSTI. |
| Project: Improving Kiln Efficiency in the Brick Making Industry (IKEBMI)  Project Start Date: April, 2009  Project End Date: March, 2014  Partners: GEF- Climate Change Mitigation  Fund: 3.00 Million USD | **Relevance** |
| The traditional Brick Kiln Industry in Bangladesh is one of the biggest stationary sources of CO2 emissions. 2 million migratory workers are employed in 8000 traditional kilns in Bangladesh, using a technology that is several thousand years old. The significant social and environmental challenges of this industry make this project highly relevant. |
| **Effectiveness** |
| While the project built a significantly reduced number of demonstration facilities only, the outreach and public resonance of the project lead to a sustainable and lasting impact. The project triggered a discussion about this technology and ultimately led to legal action prohibiting the worst technology, mitigating some of the environmental consequences and opening the minds for the actual modern technology of tunnel kilns. This is actually better than the intended effect because the HHK technology is not up to modern standards. |
| **Efficiency** |
| The project took 4 years for development and approval. It was implemented within scheduled 5 years but - it produced fewer outputs than requested. Cooperation with one single technology provider was partially hampering the efficiency of the project as this provider was distracted by other contracts (e.g. World Bank project). Also, it opened the project for criticism. However, from a purely economic point of view, a comparative financial analysis between the traditional and low-carbon emission based brick (Green Brick) making activities was carried out in this mid-term evaluation effort. It has revealed that Green Brick making is more efficient that the traditional one, as BCR for Green Brick is 1.92: 1 whereas it is 1.48: 1 for the traditional brick manufacturing. The NPV for Green Brick is Taka 87 million compared Taka 27 million for the traditional brick manufacturing activities. |
| **Cross-cutting themes (gender and other related perspectives)** |
| This project paid special attention to the gender dimension. The work force at traditional kilns is 15% women, at HHK 23%. Separate sanitary facilities exist in the demonstration projects. But more importantly the project added awareness components in their work with the brick kiln owner and provided explicit and specific monitoring information on gender balance. As work in HHK is not seasonal, these kilns do not employ migratory workers but offer employment for the local population. |
| **Sustainability and potential for replication** |
| The sustainability of the project demonstration facilities is high – these are long-term investments. The4 demonstration projects have already led to significant replication. Through triggering the national discussion, the project might lead to replication on even more environmental friendly technology. On the other hand, these new technologies will reduce the labor input and thus potentially cause income losses to the migratory workers. In addition, most of the brickkiln owners of the traditional kilns will not have sufficient capital resources to invest in the new technologies which are much more expensive than the traditional kilns. This will raise political resistance and ultimately put them out of business. |

**Annex XV: Selected Project Progress Report for Six Interventions upto December 2014**

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| List of Selected Projects for Mid-Term Evaluation |
| Country Program Outcome 3.1/UNDAF Outcome 5.1:  *By 2016, populations vulnerable to climate change and natural disaster have become more resilient to adapt to risk* |
| 1. Comprehensive Disaster Management Programme (CDMP-II) (2010-2014)  2. Early Recovery Facility (ERF) (2011-2015)  3. Community Based Adaptation to Climate Change through Coastal Afforestation in  Bangladesh (2006-2010) (EKN 2012-2015) |
| Country Programme Outcome 3.2/UNDAF Outcome 5.2:  *By 2016, vulnerable populations benefit from better natural resource management and access to low carbon energy* |
| 4. Barrier Removal for Energy Standards & Labeling (BRESL) (2010-2014)  5. Improving Kiln Efficiency in the Brick Making Industry (IKEMBI) (2009-2014)  6. Poverty Environment Climate Mainstreaming (PECM) (2009-2012) |

**STATUS OF THE CDMP-II PROJECT OUTPUTS**

| *Program Title:*  ***Comprehensive Disaster Management Programme (CDMP-II) (2010-2014)*** | **Baseline End-2009** | **2010-2015 Targets** | **Progress in 2014** | **Plan for 2015** |
| --- | --- | --- | --- | --- |
| **OUTCOME 1: The development of strong, well-managed and professional institutions in Bangladesh which are able to implement a comprehensive range of risk reduction programmes and interventions at national level, as well as contributing to regional actions and international learning and best practice.** | | | | |
| **Output 1.1** Approved and implemented policy and legislative framework to guide disaster management reforms and programmes | | | | |
| 1.1.1 Disaster Management Act is enacted and the derivative policies and regulations are adopted | * SOD revised * NDMP produced, * DM Act drafted | * 7 rules * 5 SOD products | * Final editing of English version of DM Act 2012 incorporating MoDMR feedback is in progress * Seven Rules envisaged by the DM act 2012 have been drafted by CDMP has been accepted by MoDMR; Ministry forwarded four rules to the Ministry of Law for review. | * Published English version of DM Act * Finalized 7 Draft DM Rules * Published SOD Bangla version |
| 1.1.2 Implementing / sectoral / thematic guidelines as provided by the DM Act and SOD are formally endorsed by the IMDMCC | * General Guide to Practice Guide on DRR&CCA mainstreaming in the planning and appraisal process | 7 guidelines | * Development of Emergency Response Management and Multi-Agency Disaster Incident Management Guidelines has been initiated | * Published English version of the Cyclone Shelter Guideline * Published National Incident Management guideline |
| 1.1.3 95% of development projects from 10 key ministries meet the requirements of the ECNEC decision | * ECNEC Decision in 2007 on inclusion of risk assessment and lessons learned in DPP and ECNEC meeting working paper | * Revised DPP template * 200 Govt. officials trained on revised DPP (under Output 5.1) | * Reported in 5.1.1 |  |
| * Output 1.2 MoDMR structure and skills improved to help the execution of revised Allocation of Business functions | | | | |
| 1.2.1. MoDMR structural adjustment is implemented according to the AOB and DM Act | * Concept Note on MoDMR/MoDMR Organizational Reform | * Rules for establishment of Department of Disaster Management, National DM Training and Research Institute; National DM Volunteer Corps drafted * Establishment of National DM Training and Research Institute | * Draft DM Rules have been finalized by MoDMR and vetting from the Ministry of Law has been completed. * Draft organogram, recruitment rules and the schedule of staffing of the DM Research and Training Institute has developed; review of the draft is on-going. * Draft “Volunteer Institution Framework” prepared and submitted by short-term consultant. * Improved the draft on rules for Disaster Management Fund based on ministry feedback | * Finalized rules for DM training and research institute * Finalized Disaster Volunteer Organization Framework and Guidelines |
| 1.2.2 Capacity development of MoDMR& DDM professionals |  |  | * Finalized the ToR for consultant on capacity needs assessment, forwarded to UNDP for online advertisement (UNDP Website) | * Finalized needs assessment report on Capacity development of MoDMR& DDM professionals |
| 1.2.3. MoDMR Professional development programme based on AOB is implemented | * MoDMR revised AoB * Draft MoDMR Professional Development Strategy | * 60 MoDMR staff trained on DRR&CCA | * A draft training module is shared with MoDMR | * Trained 30 professionals on on AOB and modern concepts of DM |
| * Output 1.3 Strengthened collaborative partnerships, information management and liaison capability | | | | |
| 1.3.1 DER Secretariat & DRR Platform Secretariat are fully operational elements of the MoDMR | * DER Secretariat with WFP/UNDP | * DER Secretariat established and operational with MoDMR | * Activity dropped, inter-ministerial coordination committee will lead the activity. |  |
| 1.3.2 HFA monitoring, reporting and post-HFA system is operational | * Regular HFA reporting | * HFA monitoring reports | * Inputs provided to MoDMR on Post 2015 (HFA) agenda for CBDRR and other priority area for building resilience community and nation to be presented at CBDM policy workshop in China. * The draft report on contribution to HFA2 Asia Pacific from Bangladesh is prepared and sent to UNISDR by DDM, MoDMR. * Shared Bangladesh country position and the outcome of Prep Com 1 meeting (held in Geneva) with the interagency task team of HFA2. * Draft HFA report (2013-2015) shared with MoDMR; being finalized for publication incorporating MoDMR inputs. | * Finalized the Post -2015 Framework (HFA2) through consultation workshops for submission to UNISDR |
| 1.3.3 Fully operational NGO Coordination mechanisms | * Regular NGO Coordination meetings * No. of coordinated programme intervention | * 4W database | * Data collection format for 4W database developed and shared with partners/stakeholders; Data generation process is in progress. |  |
| * Output 1.4 Decentralised capacity building and professional development structures established and providing quality support | | | | |
| 1.4.1 National DM Training and Education strategies developed under CDMP I fully implemented | * National DM Training and Education strategy documents developed and partially implemented * Established Centre for Disaster Management and Vulnerability Studies under Dept. of Sociology, DU | * 240 research grants for university scholars * 160 post graduate studies sponsored * 5 updated training manuals | * Provided partial grants support to 20 students of 1st batch undergraduate students of DM faculty of PSTU for research. 20 students submitted research papers and achieved graduation certificate | * Supported completion of DM Post Grad studies of at least 80 GoB officials |
| 1.4.2 BDMERT is fully functional and providing demonstrated quality DRR & CCA training and education services | * Established BD disaster management education, research and training (BDMERT) Network with 21 public training and academic institutions * Trained 235 university teachers and public training institutes’ faculties on DRR&CC as trainers * 125 DRR&CC diploma graduates and research grant recipients | * Network with 41 institutions * 30 reference corners * 700 titles of books procured and distributed * 28 institutions with revised curricula * 475 GoB officials trained on DRR&CCA * 22 sponsored events | * GIS and RS lab procurement completed in BRUR, 45 police officers orientated on current development of Disaster Management institutional framework and role of police in Disaster Management in a workshop held on 22 April at the Police Staff College Bangladesh venue * A seminar titled “Disaster Preparedness and Response System in Bangladesh” held in Defence Services Command and Staff College, Mirpur Cantonment where 214 Defence Personnel oriented on the course out of which 162 are Bangladeshi and 52 are overseas officers from 22 friendly countries. * A course titled “Disaster and Risk Governance” have been incorporated in the Public Administration Department under the University of Dhaka on September 15, 2014 | * BDMERT Network secretariat established * 4 more universities/ academic institutions supported to establish DRR & CCA programme –curriculum development. |
| 1.4.3 National standards on DRR & CCA capacity building is adopted by the national task force and BDMERT | * 5-daylong professional DM training module and 14-weeks diploma course curricula on DRR&CC * Trained around 800 BCS cadre officials and disaster professionals | * Revised DMC training manual * 5 standardized training modules * Training certification system | * Review of training module completed and submitted to DDM. |  |
| 1.4.4 Internet-based training is implemented |  | * 12 E-learning centres * 1500 e-module graduates | * A total of 11 E-learning Centre established. * Interactive e-learning facilities are also available online (<http://elearning.cdmp.org.bd/>). So far, 3258 online hits (913 unique entries) recorded in the e-learning site.222 persons enrolled in the platform. * IEC material developed; 5000 sticker printed and disseminated. E-learning has been promoted through Prevention web and Relief web network (online) | * Graduated at least 1000 participants of the E-learning courses |
| Output 1.5 Sustained MoDMR and sectoral ministries capability to effectively contribute to international and regional initiatives | | | | |
| 1.5.1 Bangladesh leadership and participation in regional and international forums on DRR & CCA such as Global Platform, AMCDRR, etc. | * MoDMR participation in the international forums were regular * BD attended all the COP/MOP/UNFCCC meetings | * 2 overseas mission are sponsored | * Knowledge materials displayed in the 8th CBA Conference in Nepal. Poster titled “Financing DRR” was displayed. * Two papers presented in national conference on CBA (19-20 April 2014); * Facilitating the coordination of Bangladesh participation in 6th AMCDRR; Bangladesh delegates organized 14 different events included side/pre-conference, plenary, bi-lateral dialogue and also took part in the session as panelist. * Facilitated MoDMR participation in WCDRR side event. * Contributed in drafting of post-2015 DRR framework | IEC materials developed for showcasing in WCDRR and AMCDRR |
| Output 1.6 ‘Knowledge Services Centre’ established and providing efficient quality KM service to disaster management | | | | |
| 1.6.1 National knowledge management programme on DRR & CCA in operation, covering actual and virtual community of practices, and internet based knowledge portal | * Developed and installed the DMIN Portal within DMIC | DM Library established   * 1000 Knowledge products uploaded | * The online DM Library (E-Library on DM & CC) facility is improved through incorporation of D-space software and search engine; the E-Library officially launched by the Honorable Minister of MoDMR and it is now accessible for all ([www.dmic.org.bd/e-library](http://www.dmic.org.bd/e-library)); currently there are 312 knowledge materials available in the e-library. * 7 persons from DDM & CDMP have been trained on D-Space and Vu Find software installation, configuration and operation of DM library and data entry. * E-library has been promoted through UN-SPIDER, Relief-Web, DeSHARY network (online) | * 500 knowledge products uploaded in E-Library * E-Library promoted through electronic and print media |
| 1.6.2 District resource centres established and operational |  | * 64 district resource centres | * Established 24 additional district resource centers in non-CDMP districts; provided physical resource (book-selves etc.); Establishment of 40 district resource centers in CDMP districts completed earlier. * Proved 6 different knowledge materials to the 64 district resource centre |  |
| 1.6.3 National DRR & CCA communication strategy including the involvement of media and community radio developed and implemented |  | * National DRR& CCA communication strategy * mass media dept. of 3 universities integrated DRR&CCA modules * 15 press clubs trained * 10 multi-media campaigns * 1200 radio sets procured and distributed * 10 content modules of local community radio | * First draft of the National Communication Strategy on DRM reviewed by CDMP professionals and forwarded to PIB for fine-tuning. PIB is planning to organization a wider consultation meeting among the stakeholders (including MoDMR, DDM and MoI). * Local level Journalists Training on DRR and CCA completed in 12 Districts (Kurigram, Dhaka, Chittagong, Bagerhat, Jessore, Khulna, Sirajgonj, Rangpur,Sylhet, Cox’s Bazar,GaibandahSatkhira and Rajshahi) * Training manual on DRR & CCA and 10 hazard specific reference materials for journalist have been developed. * Development of DRR-CCA content for community radio programme is on-going, 14 Community Radios submitted the first rough cut productions (42 radio programs, 1 docudrama and 2 magazine programs from each station), rough cuts are in review phase. * Organized Training of Trainers (TOT) on DRR and CCA based radio programming; a training primer has been developed to facilitate training for the community radio broadcaster; | * National Communication Strategy finalized * Included DRR & CCA in curricula of Mass Communication and Journalism Departments in one university * 5 training conducted for local press clubs |
| * Output 1.7 Quality and Accountability Assurance and Outcome Monitoring | | | | |
| 1.7.1 Assessment/ evaluation of CDMP interventions (Result survey, impact/rapid assessment, case studies); LDRRF independent process monitoring; Final evaluation of CDMP |  | * M&E system progressively geared towards more results monitoring | * LDRRF independent process monitoring (by third party-MIDAS) completed; Review of the final report completed; finalization of the report is in progress. | 6 small scale monitoring studies/surveys completed |
| * Output 1.8 A functioning national system of information collection / reporting from the local level (PIO / DRRO), for analysis, dissemination and decision making, has been established within MoDMR / DDM, to enable better coordination and use of resources for disaster management | | | | |
| 1.8.1 Develop disaster information management strategy |  | * Disaster Information Management Strategy agreed and in place | * Development of Disaster Information Management Strategy in progress by international consultant. | * Disaster information management Strategy finalized |
| 1.8.2 Develop an effective online reporting system to connect Dhaka (DDM) with the Upazila level (MIS) |  | * Online reporting system established * Situation reports circulated by MODMR (NDRCC) |  | * Online reporting system established * Situation reports circulated by MODMR (NDRCC) |
| 1.8.3 Strengthen analysis capacity and dissemination of disaster information (for MoDMR, DDM, DM Committees) |  | * MoDMR-DDM officials/DM committees trained * Communication mechanism in place |  | * MoDMR-DDM officials/DM committees trained * Communication mechanism in place |
| 1.8.4 Strengthen coordination mechanisms between DDM & DM Community |  | * Digital communication & practice network for DM Community members |  | * Digital communication & practice network for DM Community members |
| 1.8.5 Prepare and print knowledge management products and disseminate as stated in SOD and DM Act |  | * Info-pack produced and communicated | * Drafted ToR for consultants to develop Info Pack on DRR & CCA * Distribution of 4500 knowledge products completed among academic institutes, DM practitioners, relevant NGOs and district resource centers. * Draft Bangla version SOD printed | * Info-pack produced and communicated |
| 2.1.1 300 unions incorporate DRR & CCA into Union Development Planning |  | * 300 Union Development Plans | * Draft DRR/CCA screening tool developed to revise the “Union Development Planning (UDP) incorporating DM guideline” of the LGRD through incorporation of DRR&CCA considerations, organized a workshop to share with LGD and other stakeholders. The checklist for incorporation of DRR&CCA in the ADP was translated in to English and shared with UNDP. * One day orientation program for 100 UDMC on the checklist was planned with outcome 1. Planning meeting held with NILG | 300 UDMCs oriented to incorporate DRR & CCA into their development plan |
| 2.1.3 DMC Manual of Operation is published and disseminated through DMC refresher training of 500 DMCs | * 3-day IDM training module * 28,000 trained DMC members in 16 districts | * 500 DMCs trained on DMC Operational Manual | * Completed distribution of 22,500 copies of published DMC Operational Manual. * MoU and Financial Agreement signed with NILG to conduct DMCs trainings in 15 districts and 180 Unions. NILG already organized six ToT for DDMC members in Patuakhali, Jhalokathi, Lalmonirhat, Gaibandha, Nilphamari and Pirojpur district, process of organizing Union level trainings initiated. . | * 200 DMCs trained |
| * Output 2.2 Focused risk reduction and adaptation support provided to vulnerable communities through expansion and integration of CRA/RRAP within local level planning | | | | |
| 2.2.1 Revised CRA Guidelines adopted by MoDMR | * CRA Guideline developed and adopted, * TOT on CRA guideline provided to all DRROs and PIOs | * Revised CRA Guideline | * Published 200 copies of English version of the CRA guidelineand uploaded in E-Library for wider Dissemination. |  |
| 2.2.3 Small-scale structural works identified by CRA/RRAP are financed through the LDRRF mechanism | * 800 small scale structural works implemented under CDMP I | 3,000 small scale structural work schemes (with budget from 2.5.3)  20 comprehensive interventions | * Total number of rural schemes initiated in 2014 is 185. Since 2010, total of 1865 schemes have been implemented with 99226 interventions of which 1007 schemes completed up to 2014. | 200 new schemes implemented |
| 2.3.1 Disaster risk reduction strategy for microfinance sector including the code of conduct developed and adopted by MRA and/or PKSF | * Micro-insurance study conducted and weather indexed insurance concept note developed in CDMP I | * DRR&CCA inclusion strategy for MF sector | * Microfinance strategy on incorporation of DRR & CCA has been completed; |  |
| * Output 2.5: Facilitated the community level risk reduction through an established LDRRF Mechanism. | | | | |
| 2.5.1 LDRRF is adopted by the GoB as one of disaster management financing schemes; Piloting DM Fund mechanism including capacity building of local institutions and community on DM fund implementation |  | * DM Fund Guideline * Assessed training and communication needs to implement DM fund * Number of local institutions oriented on DM Fund management system | * By-law for Local Disaster Risk Reduction Fund is revised incorporating pre-disaster issues and the final draft has been reviewed by the law ministry (forwarded by MoDMR). The feedbacks are being addressed. * Finalized ToR of consultant (company) for drafting the DM Fund management guidelines, train government officials and assist district authority to establish district DM Fund mechanisms; shared with DG, DDM. A joint field mission (DDM and CDMP) visited Bhola and Jessore; the ToR is shared with districts authorities (DC and other officials) to gather their feedback | * Finalized the By-laws for Local Disaster Risk Reduction Fund and approved by MoDMR * Training and communication needs of local level institutions on DM fund assessed |
| 2.5.2 Disaster and climate resilient habitats/villages adopted by GoB as a model for comprehensive disaster management |  | * 5 resilient habitats * 50 cluster village projects | * Progress reported under 2.2.3 |  |
| 2.5.3 Different models and modalities of disaster risk reduction partnership are implemented |  | * 500 unions implementing LDRRF schemes * 3000 LDRRF schemes * 3 m beneficiaries | * Progress reported under 2.2.3 |  |
| * Output 2.6. Produce and disseminate awareness and promotional materials to advocate the lessons learnt and best practices if rural risk reduction | | | | |
| 2.6.1 At least 40 case studies produced and disseminated  2.6.2 At least one lessons learnt event conducted annually | * Compendium of LDRRF good practices under CDMP I * 3 video documentaries of CDMP I by CDMP | * 40 case studies * 1 lessons learnt event per year | * Completed recruitment of a national consultant to document the process of the model case for replication and scaling up. | * 20 case studies completed * 1 lesson learned event organized |
| * OUTCOME 3: Reduced risk to urban populations through structural and non-structural interventions, improved awareness of natural hazard events and the piloting of urban community risk reduction methodologies that target the extreme poor | | | | |
| * Output 3.1 Expansion of earthquake risk assessment and contingency planning and improved response in five new districts | | | | |
| 3.1.1 City and land use plans in six municipalities are revised based on findings of earthquake assessments | * Standard Methodology on earthquake risk assessment developed and applied for DCC, CCC and SCC * Risk Assessment reports, maps, and contingency plans for DCC, CCC and SCC * Equipped GSB, BUET, DU with required earthquake risk assessment instruments * Hands on training provided to professionals of GSB, BUET and DU | * 6 city plans containing earthquake risk considerations   6 active fault maps   * Databases for 2 cities on detailed building infrastructure   2 risk integrated city development plans  32 trained UDD professionals on GIS  Earthquake risk atlas for Dhaka and Chittagong | * Final product ( a catalogue) have been prepared for 6 cities (Dinajpur, Bogra, Rajshahi, Mymenshing, Tangail and Rangpur) with the findings from the seismic assessment study * Additional field survey for seismic vulnerability mapping is completed in 2 cities (geological maps for extended city area in in Rangpur and database preparation in Chittagong); Final report submitted, incorporating comments of TAG and CDMP reviewers. * Completed attribute data collection for unions (rural), 3D image digitization and town model preparation. * Hydro-geological and geophysical engineering survey completed and survey report submitted to CDMP * Population study, socio economic study, survey of development activities, traffic study, hazard study also completed. * UDD received the Asian Townscape Award 2014 (awarded by UNHABITAT) for developing the Land use plan for Mymensingh | * Stratetegic land use plan for Mymensingh Town Developed |
| 3.1.2 Retrofitting capacity of PWD strengthened |  | * Three model seismic retrofitting assessments * PWD Retrofitting cell * 30 PWD professionals trained on seismic retrofitting | * Retrofitting assessment has been completed for 3 key buildings (Building No. 1 & 4 of Bangladesh Secretariat and Dhaka Medical College Hospital); the completion report submitted to CDMP. * Procurement and handover of equipment’s for PWD Retrofitting Cell (laptops, tech publications/ books, software) is completed | * PWD Retrofitting Cell Established & operationalized |
| 3.1.3 Contingency plans developed and simulation exercises conducted in the six municipalities | * National and agency level contingency plans * Trained 95 officials from fast responding institutions on incident command system | * Earthquake contingency plans for 6 cities/towns * 50 earthquake response drills/simulations * 50 ward contingency plan | * Validation workshop on Earthquake contingency plan in Dhaka City Corporation (North), Chittagong and Sylhet completed. Ward level contingency plan (for 10 wards) of Sylhet City Corporation inaugurated by the city Mayor. * 6 city level contingency plan completed by ADPC; the report is being finalized incorporating CDMP feedback Preparation of Bangla version of the contingency plans initiated. |  |
| 3.1.4 Land elevation assessment conducted and risk reduction action plan developed for one city |  | * Landslide hazard assessment conducted * Landslide management strategy developed | * The activity dropped as ADPC prepared a strategy when they prepared the landslide inventory. | Landslide management strategy Developed |
| 3.1.6 Urban disaster response capacities are strengthened by FSCD |  | * 25 model fire stations established. * Bangladesh FSCD Institute is established. * 8 specialized rescue teams operational. * Equipment for 5000 volunteers at 25 stations. * 200 FCSC fire inspectors trained. | * Rescue items for establishing 10 model fire stations already procured and handed over to FSCD * Tender for construction of model station in 10 different locationhas been re-advertise; first tender was cancelled after reviewing the tender evaluation report by CDMP, the tender was cancelled. FSCD now retendered the advertisement. | * 10 model fire stations constructed and equipped |
| * Output 3.2 Support to city corporations and municipalities to increase awareness & response for urban hazard risk across a range of key target audiences in selected cities | | | | |
| 3.2.1 100 municipalities implement the Safer City Campaign |  | * 100 municipalities oriented about LG SAT * 100 municipalities implementing Safer City Campaign | * 135 Mayors have been oriented on LG SAT (During 2014) |  |
| 3.2.4 Construction professionals trained and certified by GoB | * 200 trained mason and bar binders and the training module | * 2420 construction professionals trained & provided training certificate by GoB | * The project period expired (completed training of 1940 professional out of targeted 2420) |  |
| 3.2.5 Religious leaders have been trained | * 3-day TOT to the 25 religious leaders (imams) on structural and non-structural earthquake vulnerability and evacuation and the training module | * 500 Imams trained | * MoU signed with MoRA; training manual developed by Imam Training academy * ToT completed with technical support from CDMP | * 650 religious leaders Trained |
| * Output 3.3  Community-based CRA/RRAP and mitigation works piloted in 45 densely populated wards | | | | |
| 3.3.1 Urban CRA guidelines developed and published | * No standard CRA methodology for urban context | * Urban CRA guideline | * Urban CRA guideline finalized and published * Translating of the same guideline in Bangla is in progress | * 300 copies of UCRA guideline in Bangla Printed |
| 3.3.2 Ward level CRAs conducted and RRAPs produced |  | * 45 ward CRA and RRAP | * 3 ward level CRA conducted in ward-33, 34 & 35 of Dhaka City Corporation in collaboration with ActionAid, validation workshop completed * Plan to conduct 22 more UCRA in 11 municipalities/City Corporations dropped. | * 22 Urban CRA and RRAPs produced |
| 3.3.3 At least 30 ward level projects implemented through LDRRF | * Small scale piloting of different INGOs | * 45 ward level LDRRF projects in five cities/ municipalities | * Construction of 100 unit house has been completed under the 1st phase of DRH project at Gopalganj Municipality in association with UPPR and Gopalganj Municipality; * Gopalgonj Municipality completed construction of 19 more houses under 2nd phase; * New contract signed with Motlob Municipality to implement small scaled DRR project in 5 wards. * Construction of RCC drain in Mymensingh&Chalna municipality completed * Completed facility improved for community people beside temple on the top of Zadipahar, Cox’sbazar. * Re-excavation of U-drains in Sylhet City Corporation is in progress (79%) * Construction of RCC Drain in Swandip Municipality is in progress 40% * Canal Re-excavation and walkway construction under AlamdangaPouroshava is in progress 75% | * 20 ward level LDRRF projects completed |
| * Output 3.4  Ward level contingency planning institutionalised in Dhaka, Sylhet and Chittagong | | | | |
| 3.4.2 Ward simulations conducted with FSCD engaging urban volunteers |  | * 50 ward drills | * Initiated discussion with strategic partner to conduct urban risk reduction campaigns (earthquake simulation drills, dramas etc.). | * 6 Urban risk reduction campaigns conducted |
| 3.4.3 Registered volunteers of 45 targeted wards trained on contingency planning |  | * 50 wards with contingency plan training for volunteers |  | * 500 urban volunteer trained on ward contingency plan |
| * OUTCOME 4: Improved overall effectiveness and timeliness of disaster preparedness and response in Bangladesh by strengthening early warning systems, national management capacity and coordination facilities at all levels. | | | | |
| * Output 4.1 Improved and more effective early warning, response and relief management in 40 high-risk districts | | | | |
| 4.1.1 PM Disaster Management Cell strengthened | * Legal provision under revised SOD | * PM DM Cell connected with NDRCC, BMD, FFWC, district and Upazila DMICs through internet and audio-visuals | * Procurement of equipment (Monitor, Digital sender, Projector) completed, installed at AFD, 20 handWoki will be delivered on January. Waiting for the permission from BTRC. | * PM DM Cell connected with NDRCC, BMD, FFWC, district and upazila DMICs through internet and audio-visuals |
| 4.1.3 National DM Volunteer Institute in place; and development of option papers | * Trained 38,000 CPP and 1000 urban volunteers | * National volunteer organisation framework developed and endorsed by MoDMR | * Reported in 1.2.1 | * Disaster Volunteer Organization Framework and Guidelines Developed |
| 4.1.4 Coordination national hubs are established and/or strengthened | * EOC at DMRD * Established DMIC at national, 64 district and 235 Upazila DRRO and PIO offices | * EOC at DMIC under DDM is fully operational * NDRCC under MoDMR is fully operational | * Renovationof central DMIC server room completed. |  |
| 4.1.5 Remote sensing and space technology application are integrated into the mechanisms of early warning system |  | * SOP for receiving remote sensing data flow in place * 3 GIS and remote sensing training courses organized * 1350 union level GIS maps developed * 485 Upazilas having D Form baseline and vulnerability database | * Second draft of the SOPs submitted by the consultant, Reviewed by CDMP & DDM personnel and provided feedback to consultant. * Completed publication of 1134 Union maps,distribution to Union is under process. | * SOP for receiving remote sensing data flow developed |
| 4.1.6 DM Plan/ contingency plans for 40 targeted districts and their corresponding Upazilas and unions developed and implemented |  | * 40 districts with operational DM plan/ contingency plans developed and adopted * Upazilas with DM plan/ contingency plans developed and adopted | * Final DM Plan of 10 Districts and 48 Upazilasdelivered to the respective district/upazila authority. * Most the DM Plans uploaded in the District/Upazila web-portal. Partner NGOs are coordinating with the respective district/upazila authority to upload the remaining DM plans. * DM Plans (Bangla & English version) are uploaded in E-library. * A lesson learned workshop on DM Plan with partner organizations held on 10 December, 2014; the stakeholders submitted their written feedback and suggestion which will be used to conduct any future DM plans. | * Another 30 districts DM Plan (CDMP pilot districts) developed |
| 4.1.8 Response preparedness specialised training conducted in the targeted 40 districts |  | * 50 training workshops on disaster response preparedness * 6 airports with contingency plan to respond to emergency |  | * 1 airport contingency plan developed |
| 4.1.9 Schools are safe from disaster vulnerability |  | * 70,000 primary and secondary schools, and madrasas, organizing earthquake safety drills per year * 1500 school teachers, master trainers, Upazila Education Officers and Upazila Instructors trained on earthquake safety drill * 30 master trainers on school drills developed | * IDMVS-Dhaka University has been contracted for conducting the training programme * The training mannual (5 days/3 days/1 day training) on Disaster Management for Master Trainer/School Teaches/Education Officers finalized incorporating feedback from the dissemination workshop (held on 30 Nov, 2014), feedback from CDMP, which earlier reviewed by the TAG members; the mannual is ready for printing. * Development of video content on for of the training of the school earthquake training in progress, received video content for the students, video for ToT in developing stage. * Distributed School EQ equipment to 1000 schools &Madrasha of Chittagong, Sylhet, Mymensingh&Rangpur. | * 300 Master trainers for training of school teachers and educations officers on earthquake drill. * 1500 school teachers and educations officers trained on earthquake drill * Earthquake drill. Organized in 2000 schools at divisional level. |
| * Output 4.2 Effectiveness of community warning systems in high risk flood and cyclone districts improved and expanded. | | | | |
| 4.2.2 Community flood early warning system established in six districts | * Storm surge and inundation maps for coastal districts * 3777 Formal and informal Cyclone shelters database * Economic risk appraisal study report of the coastal industries * Experience of different early warning and community alerting system piloting under CDMP I | 2 million people covered by flood early warning systems | * MOU signed with Ansar and VDP for development and implementation of flood preparedness programme (FPP), official lunching of FPP organized. 30 Master trainers identified. Basic training of 4 batches has been completed (120 personnel). 2 local level workshops completed in Sirajganj and Gaibandha districts. * 4 modules developed (Module on Basic training, ToT, Volunteer training, Special training) * Completed printing of IEC materials development (Flip chart, Handbook for Volunteer, Poster, Audio script, Flag). * Completed basic training for 466 participants (260 in Sirajgonj& 206 in Gaibandha) in 16 batches. * Orientation meeting for 94 UDMC (45 in Gaibandha and 49 in Sirajgonj District) completed. * Completed Special training for Union leaders, Ansar, UISC of 470 Participants (225 in Gaibandha& 245 in Shirajgonj) | * 12000 Ansar and VDP members trained on flood early warning |
| 4.2.3 Public awareness programme to complement the early warning system conducted in the flood districts |  | * 3 awareness tools on flood preparedness developed and disseminated through mass media | * Developed and dissemination of awareness tools on flood preparedness has been merged with activity 4.2.2. * Supported organizing NDPD: Organized round table discussion on the role of media in disaster management; published and distributed poster on fire safety through FSCD and UPPR in the high vulnerable areas; |  |
| 4.2.4 Further strengthened and operational CPP – expanded to cover 100% coastal districts, 6500 new volunteers recruited, refresher training organized, equipment supplied, regular drills held | * 38,000 trained and equipped CPP volunteers | * 6,540 new CPP volunteers recruited * 13,000 CPP volunteers trained, including refresher training * 13,000 CPP volunteers equipped * 15 mock drills / demonstrations arranged | * Training manual prepared for TOT of 30 CPP Officials; ToT for 24 officers have completed. * 2670 CPP volunteers trained (4 days training) in 17 centers of BashkhaliUpazila, 24 centers of RamgatiUpazila and 18 centers of HatiyaUpazila (Each centers trained 45 CPP volunteers). * Organized 4 workshops in Baharchara, Katharia, Saral&Shilkup Union of BashkhaliUpazila with participation of UDMC and CPP leaders. * Training completed for 15 VHF operators. * Completed installation of 21 Antenna mast in Khulna * 897 signal mast installations completed in 5 upazilas (Assasuni&Shyamnagar-Satkhira, Dacope&Koyra-Khulna, Mongla-Bagerhat) * Procurement of equipment completed, which include 21 VHF and 6 HF Radio sets had completed and delivered to CPP personnel. | * 5000 newly recruited CPP volunteers trained in targeted six upazilas |
| 4.2.5 Improved household emergency response preparedness of at least 1 million vulnerable families in 40 targeted districts |  | * 1 m families covered by emergency preparedness support including IEC materials * 4 pilot programmes on community and household preparedness | * Procurement of emergency preparedness equipment completed. * Emergency preparedness equipment distributed to Gosairhatupazila of Shariatpur district, Borhan Uddin upazila of Bhola district, Galachipa&Dashminaupazila to Patuakhali district, Muladiupazila of Barisal district * 6,000 Life Buoys delivered to Cox’sBazar&Patukhali DRRO office. |  |
| * Output 4.3 DMIC/DMIN fully operational and providing 24/7 information management and alerting capability. | | | | |
| 4.3.1 485Upazilas connected to the DMIC/N portal | * DMIC/ICT Strategy * Functional national DMIC connected with 64 districts and 235 high riskUpazilas | 485 Upazilas connected with central DMIC/N | * Polycom Audio Conference system installed in the conference room of 26 DC offices. * Distribution of 75 Fax machines is under process. * Procurement of Laptop, Desktop, wifi , Printer, Scanner for MoDMR Completed | * . DMIC upgraded |
| 4.3.2 DRRO and PIO office staff received basic ICT/ DMIC induction training | * Trained DRROs and PIOs on the use of ICT | * 500 DRRO and PIO office staff trained on basic ICT/ DMIC induction training | * 22 nosDRRo and PIOs received ICT training * Evaluation of EoI completed for development of DMIN software. * Evaluation for DMIN hardware completed. |  |
| 4.3.4 Disaster management information/resource centres are established to receive and circulate the product of DMIC to the stakeholders and the community |  | * Link of district DM Resource centre with DMIC national portal in 64 districts | * Reported in 1.6.2 |  |
| 4.3.6 Six network operators engaged in IVR and/or cell broadcasting and/or SMS for disaster early warning; Popularizing mobile-based early warning dissemination | * Draft early warning cell broad casting policy * Pilot experience of the early warning cell broadcasting in flood and cyclone area | * 6 network operators with a dedicated telephone number using IVR with updated disaster risk information * 60 million people covered by early warning (IVR/SMS/ cell broadcasting) through network operators | * IVR is functional with 6 mobile operators; newspaper advertisement published to popularize the IVR. Radio and TV advertisement is under development. * Functionality & Updating assessment of IVR is on-going; held meeting with third party consultant (Field buzz) to assess the problem related to IVR functionality. | * IVR promoted through electronic and print media |
| * OUTCOME 5: Improved disaster-proofing of development programming, and enhanced technical capacity to incentivize positive long-term changes in planning and investment decisions, in targeted ministries. | | | | |
| * Output 5.1 Facilitating Mainstreaming DRR and CCA across sectors / MSU | | | | |
| 5.1.1 DRR and CCA considerations institutionalized - DPP format revised, DRR and CCA mainstreaming and institutionalizing guideline developed | * ECNEC Decision for inclusion of risk assessment and lessons learned in the DPP format * General Guide to Practice on DRR&CCA mainstreaming in the planning process | * 25 CDMP focal points with ministries and departments * 13 TAG with ministries and departments * Revised DPP format in place * DRR & CCA mainstreaming guideline in place | * Organized one coordination meeting with the partner department / ministries * Focal Points are playing active role for implementation of the PIP |  |
| 5.1.2 Sector specific DRR and CCA mainstreaming guidelines developed, DRR and CCA Focal Points established in all development ministries |  | * General guidelines on DRR & CCA mainstreaming * 200 users trained | * 4 policies of DAE, DLS, DOF reviewed. * Mainstreaming Guidelines for DAE, DLS, DoF prepared; 3 Consultations with DAE, DOF and DLS held to review the Draft Guidelines | * Mainstreaming guidelines for DAE, DLS, DOF developed * 600 staff trained on Mainstreaming guidelines |
| 5.1.3 Training for 200 planning cadre officials on DPP format |  | * 200 Planning Cell officials trained | * CDMP II and GED signed MOU to conduct training for 200 planning cadre officials on DPP format; * Training module developed and training provided to (125 participants) | * 80 Professionals trained on DPP format |
| * Output 5.2 Disaster Management issues are incorporated in the books of primary to higher secondary levels / NCTB | | | | |
| 5.2.1 Contents of textbook chapters for different classes developed, incorporating DRR & CCA | * Education sector inventory * National DM Education strategy document developed under CDMP I * Reconnaissance study and materials for inclusion of DM section in the text books of grade VI-IX * Working and learning experience with NCTB and NAEM under CDMP I on the same | * Revised 39 text books of class II to XII incorporating DM&CC materials | * Incorporation of DRR & CCA issues in 4 subjects (Agricultural Studies, Geography, Biology first paper & Islamic Studies 2nd paper) of higher secondary textbooks has been completed; publication of the books completed. * Conducted a study tour in Philippine for sharing knowledge on incorporation of DRR issues in textbook; review of secondary materials collected during the study tour to incorporate in the supplementary learning materials in progress. * Organized 4 Divisional workshop on awareness raising for incorporation of DRR and CCA in curriculum and role of Teachers and education department |  |
| 5.2.2 Ten story books, five rhymes, three novels prepared | * Reconnaissance study and materials for inclusion of DM section in the text books of grade VI-IX | * 10/5/3 and types of supplementary reading materials | * Preparation of supplementary learning materials in progress, manuscripts of 27 books from 27 writers received by NCTB and being reviewed by editing panel, so far 15 books have been updated. Draft submitted to CDMP for review | * 18 Supplementary Learning Material published |
| 5.2.3 Facilitators’ guidebook and participants’ handbook developed |  | * Facilitators’ guidebook and participants’ handbook | * Activity has been dropped (conducted by Directorate of Secondary and Higher Education -DSHE) |  |
| 5.2.4 300 trainers/MoE officials/PTI/HSTI/SMC/BMTTI of 70 schools in seven divisions trained |  | * 300 teachers and Govt. officials trained | * Activity has been dropped (conducted by Directorate of Secondary and Higher Education -DSHE) |  |
| 5.2.5 Guidebook for safer institute and a facilitators’ guidebook developed |  | * Safe school construction guidebook | * Activity has been dropped (conducted by Directorate of Secondary and Higher Education -DSHE) |  |
| 5.2.6 Engineers/officials of EED and MoE trained |  | * 50 engineers/ guidebook users trained | * Activity has been dropped (conducted by Directorate of Secondary and Higher Education -DSHE) |  |
| * Output 5.3 Strengthened BMD’s Early Warning Capacity / BMD | | | | |
| 5.3.1 BMD skill score increased from 0.4 to 0.5; hazard specific baseline developed; increased lead time of early warning forecast models are time and location specific | * Upgraded BMD’s field observatories and established data management software in CDMP I * Cleaned last 30 years weather and temperature data | * Weather forecast model downscaled to upazila level * Baseline cleaned climate database established | * Initiated process for procurement of equipment * Floated tender for installation of Computational hardware | * High Performance Computer (HPC)/software Procured and installed |
| 5.3.2 Increased number of communication ways (TV, radio, mobile phone, community radio, print and electronic media); meteorology officers trained to present forecasts in a user friendly way |  | * 5 communication ways used | * Data updating continue * Internet System established in different divisions and outer stations of the BMD; connection established with Storm Warning Centre (SWC) and is functional. |  |
| 5.3.3 Accessible database for archiving and sharing established |  | * Online database | * Data updating continue * Weather data archiving by CDMS in server of SWC; maintenance work is on-going * Weather information data being uploaded regularly. |  |
| 5.3.4 Training and awareness raising workshops conducted | * BMD’s trained professionals | * 10 awareness /orientation events * 460 BMD officials trained | * 131 metrological personnel received skill development training | * 4 staff trained on use of High Performance Computer (HPC) |
| Output 5.4 Strengthened FFWC Early Warning Capacity / FFWC. | | | | |
| 5.4.1 Extended lead time to flood forecast up to 5 days and communicated through flood bulletin, fax, website, email & WAPDA building | * Improved base under CIFAP project to increase early warning lead lime | * Improved prediction model | * Data updating continue * Newly developed 5-day lead-time deterministic flood forecast model is being updated (calibration and validation); draft Final Report for the extended lead time forecast submitted by the consultant (IWM). | * Improved flood lead-time (3-days to 5-days) precision assessed. |
| 5.4.2 Established flash flood forecast in daily FFWC activity |  | * Daily flash flood forecasts | * Experimental Flash Flood Forecast has been generated and disseminated to selected users like BWDB offices, DDMC (Sylhet &Sunamgonj), DMIC-CDMP, NGOs and development partners from last week of March-2014. |  |
| 5.4.3 Specified flood warning location updated on FFWC website |  | * Updated website | * Regular data uploading continue * Development and troubleshooting of FFWC website is in progress. * LAN coverage completed with new instruments, equipment and cable connection. Now routine maintenance is in progress. * Wi Fi coverage has also been increased |  |
| 5.4.4 Increased number of user friendly communication ways for flood forecasts (TV, radio, mobile phone, community radio, print and electronic media) |  | * 5 communication ways used |  |  |
| 5.4.5 Professionals trained to enhance institutional & professional capacity |  | * 200 professionals trained on the precision of early warning prediction of flood | * Total 115 FFWC professionals trained |  |
| Output 5.5a Strengthened DAE capacity for adaptation of livelihoods to climate change | | | | |
| 5.5.1 Technical working groups formed and functioning (26 at district/regional level, 52 at Upazila level); | * Established institutional framework for local level adaptation to climate change agricultural options | * 79 working groups formed * 150 meetings held per year | * Organized TAG meeting |  |
| 5.5.2 Action plan on DRR/CCA finalized; DM cell established at DAE; DAE officials trained |  | * Action plan in place * 460 DAE officials trained | * Training organized on “DRR and CCA in Agriculture” for 120 DAE Officers * Training on “DRR-CCA and CFS Operation” for 43 Agricultural Extension Officers’ (AEO) * Study tour for 13 officials of DAE to Sri Lanka to learn about early warning systems. * Based on the learning’s and findings, developed two projects on CCA technologies in agriculture sector. * Published one Climate Field School (CFS) Training Module. * A draft “Disaster and Climate Risk Management in Agriculture” Plan of Action of DAE, Ministry of Agriculture is developed. * Disaster and Climate Risk Management in Agriculture Guideline (Bangla version) Developed * 6 Video documentaries developed on Climate Field School, Integrated Homestead Farming, Dry Seed bed technology, floating garden, DCRMA Project activities and Mini pond technology. |  |
| 5.5.3 DAE-HQ control room strengthened; 26 risk prone district DAE offices equipped with ICT network; DAE officials and SAAOs trained on ICT; CERDI and ATI staff trained | * Trained professionals | * 27 offices equipped * 60 DAE Officials and SAAOs are trained on ICT * 80 CERDI and ATI staff trained | * Provided ICT equipment’s (Laptop-52, scanner-52, printer-52 and internet modem-52) to the 52 upazilas; 21 photocopiers and 5 multimedia projectors to the 26 project districts. * Conducted three batches training on “Information, Communication, Technology (ICT) and its application in Disaster and Climate Risk Management in Agriculture Sector” for 46 Agricultural Extension Officers’ (AEO). * Functional network of DAE head quarter control room with the district and upazila level DAE Offices under DCRMA project established. * A total of 510,625 visitors visited website of DCRMA Project for collecting/ review CCA and DRR related information on Agriculture. |  |
| 5.5.4 Existing Farmers Field Schools (FFS) strengthened |  | * 156 FFS by type of input/support * 20 adaptation options adopted | * A total of 26 batches training on different technologies Minipond and vegetable cultivation (5) and Dry seedbed preparation for raising Boro seedling” (21) were conducted for 1040 farmers. * A total of 50 farmers in 5 batches received training on mushroom production. * Organized 4 batches of training for 150 farmers (CFS and community) on Vermi-compost and suitable vegetable cultivation (2 batches) and Mini pond and vegetable cultivation on embankment (one batch). * A total of 1716 (11 sessions/CFS) Climate Field School sessions were conducted in 156 Climate Field School. * A total of 156 Climate Field School Field Day were organized in 156 Climate Field School. * Organized 11 exchange visits on Climate Field School where 99 farmers, 33 SAAO’s and 11 monitoring officers visited Climate Field School activities. * Organized 22 awareness and advocacy meetings on CCA and DRR; and 2520 CFS farmers, community farmers and local elite persons, local leader actively participated. * A total of 560 agri-machineries like paddy/wheat reaper-26, Low lift pump-66, rice weeder-156, foot pump-156, Guti Urea Applicator-156 distributed tamong CFS members. | * Climate Field Schools established as local level registered organization |
| 5.5.5 Introduction of small-scale weather monitoring equipment at CFS/FFS clubs |  | * 156 CFS/FFS clubs with weather monitoring equipment | * Provided 364 small weather monitoring equipment like Rain gauge-208 (156 CFS and 52 upazila) and humidity + temperature meter-156 to CFS and Upazila DAE Offices. |  |
| 5.5.6 Five national level workshops conducted |  | * 5 national level workshops |  |  |
| 5.5.7 Best practices on DRR options published |  | * 5 types of materials published |  |  |
| 5.5.8 An active platform for DAE practitioners established and functionalized |  | * Platform in place | * Dropped |  |
| 5.5.9 List of identified risk specific options for crops, integrated farming, livestock, fisheries and forestry sectors developed | * Agricultural climate change adaptation menu for different hazard zones | * 50 risk specific options identified | * 10 Resilient Agricultural Model village (jointly by DAE, DLS and DoF) established * 500 demonstrations were implemented by 100 farmers of 10 Resilient Agricultural Model Village (RAMV) in Rabi/2013-14 and Kharif-I/2014 by DAE. * 100 duck distributed by DLS * 400 farmers training in model village by DLS |  |
| 5.5.10 Risk specific options tested in farmers’ fields, covering 200 unions of 52 Upazilas in 26 districts |  | * 50 risk specific options tested * 200 unions with options tested | * A total of 1063 demonstrations of different adaptation technologies were implemented by 1357 CFS and community farmers in Kharif-I/2014 and Kharif-II/2014 Cropping season. |  |
| 5.5.11 LACC options replicated in 52 FFS, being demonstrated |  | * 20 options tested per year | * Demonstrations established in all 52 upazilas under the 26 districts for Kharif-I and Khariuf-II season (2014). * A total of 160 demonstrations on FYM, Mung bean, seed storage, turmeric cultivation, vegetables cultivation using sex pheromone were implemented by 250 farmers. |  |
| 5.5.12 Farmers’ plot demonstrations with options implemented |  | * 5200 demonstration plots |  |  |
| * Output 5.5b Strengthened DoF DRR & CCA capacity | | | | |
| 5.5.13 Action Plan and a book on disaster and climate risk management developed, policy incorporating DRR/CCA developed, plan of action disseminated to all offices |  | * Climate Change Risk Reduction Action Plan | * Development of DRR & CCA Action Plan completed |  |
| 5.5.14 Training module published and participants trained |  | * Published training module * 250 staff trained * 2500 farmers trained | * Training module for training of DoF officers has been completed * Completed training of 209 DoF officer * 650 farmers received training on short term safe aquaculture |  |
| 5.5.15 Risk assessment and impact assessment report published |  | * Published assessment report | * Development of Impact Assessment of Climate Change on Fisheries completed; reviewed by experts through a validation workshop; initiated process for publication. |  |
| 5.5.16 DRR & CCA mainstreaming guideline published |  | * DRR & CCA mainstreaming Guideline | * Development of climate change mainstreaming guideline completed |  |
| 5.5.17 Plan on climate change compatible fisheries developed | * Demonstrated experiences through other projects | * Plan on climate change compatible fisheries | * Activity has been dropped |  |
| 5.5.18 Climate change network established and knowledge shared among the stakeholders |  | * NS | * Development of Climate Cell framework and modalities in progress; waiting for ministry (MoFL) approval for set up CC cell |  |
| 5.5.19 Climate change model villages established |  | * 10 model villages | * As reported in 5.5.9 | * Performance of 10 Model village assessed |
| * Output 5.5c Strengthened DLS DRR & CCA capacity | | | | |
| 5.5.20 Action plan on DRR/CCA prepared, TWG functional, DM unit established | * Demonstrated experiences through other projects | * Action plan in place * DM cell in place | * Final Draft of Plan of Action on Disaster and Climate Risk Management for DLS Prepared and is being reviewed by the experts (and ministry has been approved) |  |
| 5.5.21 ICT network established |  | * ICT network in place | * ICT room operational |  |
| 5.5.22 Officials trained on bio-security management |  | * 600 officials trained | * 100 officials trained on bio-security management |  |
| 5.5.23 Technology identified and transferred to farmers |  | * 50 farmer awareness building campaigns * One booklet published * 200 DLS workers and volunteers trained on poultry & livestock treatment | * 13 upazila selected from nine district for demonstration and Farmers meeting * Training for local vaccinator planned and 60 Trainees identified * 20 Local Veterinary Assistant received training * 150 farmers received training on disaster and climate change through demonstration in Nalitabari,Kazipur and Kamarkhandupazila |  |
| 5.5.24 LACC options demonstrated to 500 farmers; three disaster proof villages developed risk resilient livestock enterprises |  | * 500 farmers oriented * 3 villages with risk resilient livestock enterprises | * Total 20 grass plot has been nursing to high yielding grass production. |  |
| * Output 5.6 Mainstreaming climate risk management with technical support to MoEF/DOE | | | | |
| 5.6.1 Technical input provided to GoB delegations at international CC related forums |  | * 5 technical papers developed | * Participation report of the “Conference of Parties (COP 19), Warsaw, Poland, 11-22 November, 2013” has been prepared * Bangladesh Position Paper for COP 20 prepared * Published the book on “United Nations Framework Convention on Climate Change (UNFCCC): A compilation of Major Documents and Decisions” and show-cased in COP 20, Lima, Peru * Director General of the Department of Environment visited the First United Nations Environment Assembly, 23-27 June, Nairobi, Kenya, technical support was provided from the CCC |  |
| 5.6.2 Sectoral DRR/CCA project proposals developed |  | * 4 sectoral DRR/ CCA project proposals developed |  | DRR & CCA Mainstreaming Guideline developed |
| 5.6.3 Database updated and shared | * Established climate change databases | * Online Database in place | * Online Climate Change Database is finalized and functioning * (<http://180.211.164.220/ccdb/Home.aspx>) * A three days Training on Web-enabled Climate Change Database (CCD) of DoE officials (Climate Change and IT Section) was held on 21-23 April 2014 at CEGIS for proper maintenance of the database by DoE * Consultation Workshop on “Continuous Update and Sustainability of the Web-enabled Climate Change Database (CCD)” was organized by DoE on 03 Nov. 2014. * CCC website has been updated with recent climate change negotiation information * Three (CC and Livestock; CC and Fisheries; and CC and Public Health) out of 6 sectoral booklets of CCKN on climate change issues has been finalized and printed, three more booklets (CC and Water; CC and Infrastructure; and CC and Biodiversity) are being prepared for review workshop and finalization * Preparation of four books on CC issues (International Climate Change Conferences: History, Development of the Convention and Major Decisions (2014); A Guide to Climate Finance (2014); Climate Change and Bangladesh: Annotated Bibliography (2014); and Bangladesh Achievements in Climate Change Adaptation and Mitigation (2014), are under process * More than 60 climate change related books have been purchased for enriching Climate Change Cell Library * Updated Factsheets of Climate Change Cell (20 factsheets) are in the process of editing and printing |  |
| 5.6.4 Organisations serviced with relevant knowledge | * Established climate change cell, library and climate change knowledge network * Climate change knowledge products and advocacy materials * Institutionalized climate change modelling and national modelling capacity built | * meetings of climate change knowledge network * 6 types of booklets published * 3 studies on climate change impact conducted | * Final Draft of the fisheries and livestock sector climate proofing guide has been sent to the core group members for final review * Preparation of a Mainstream Guide to Integrate DRR and CCA in the activities of the Department of Environment- is under process * Field testing of the revised final draft of the training manual “Coastal Zone Vulnerabilities to Climate Change and Adaptation Best Practices (Local Government Officials and NGO Workers)” held at RPATC, Chittagong during 7-8 September, 2014 * A comprehensive Training Manual on Climate Change Impacts in Bangladesh, Vulnerabilities and Adaptation Best Practices (For the Water Logged & Saline, Drought, Flood and Flash Flood Prone Areas’ Local Government Officials and NGO Workers)”- under preparation by the consulting firm * Revised Draft Final Report of the Sea Level Rise Trend Analysis Study reviewed by the core group members and the feedback addressed by the research organization. Revised copies of the report have been sent to expert group members for final comments. * Preparation of two documentaries entitled a) Tracking Climate-induced Displaced People and Visualizing their ultimate Lives and Livelihoods- Published and b) Climate Change Lecture for the Students of Class V-XII- under preparation * A revised ToR for “SLR and CC Impacts on Agricultural Sectors in the Coastal Zone of Bangladesh” has been prepared | * 4 Training module for Local Government officials on CCA developed |
| * Output 5.7 Ensuring Mainstreaming DRR in the Health Sector | | | | |
| 5.7.1 Health related total/comprehensive post-earthquake action plan for cities developed | * Health Sector Plan of Action with provision for health emergency preparedness component | * Action plan in place | * Post-earthquake action plan published |  |
| 5.7.2 Non-structural vulnerability assessment & guideline for hospitals developed |  | * Vulnerability assessment & guideline in place | * Non-structural vulnerability assessment Guideline published |  |
| 5.7.3 National Health Crisis Management Centre and Archive Centre established |  | * National Health Crisis Management Centre and Archive Centre in place | * Nationalized Health Crisis Management Center is formally opened and functional. | * Nationalized Health Crisis Management Center modernized with updated software |
| 5.7.4 Three makeshift hospitals in Dhaka, Chittagong and Sylhet established and provided with logistic support |  | * 3 makeshift hospitals | * Activity has been dropped |  |
| 5.7.5 Emergency preparedness and response (EPR) capacity piloted in three disaster prone Upazila health facilities |  | * 3 Upazila health facilities with EPR piloted |  |  |
| 5.7.6 Logistics improved with 50,000 blood bags and transfusion sets, 10,000 units of infusion fluid, 500 portable stretchers and 500 bags for dead bodies and various surgical materials |  | * 50,000 blood bags, 10,000 units of infusion fluid, 500 stretchers, 500 body bags |  |  |
| * Output 5.8 Enhanced skills and technical capability BFS and CD / FSCD | | | | |
| 5.8.1 30,000 urban volunteers trained for participation in search and rescue | * 1000 trained urban volunteers for DCC, SCC, CCC | * 30,000 urban volunteers trained | * 3208 new volunteer trained; Total number of volunteer stands at 26465 | * 1700 Volunteers trained |
| 5.8.2 Volunteer database in place |  | * Urban volunteer database maintained by FSCD | * Activity ongoing | * Database updated |
| 5.8.3 Light search and rescue equipment procured and installed | * Substantive Search and rescue firefighting equipment from DMB and CDMP | * 30 types of equipment procured |  |  |
| 5.8.4 FSCD professionals along with other relevant stakeholders trained for search and rescue operations; coordination mechanism established | * 28 trained faculty members on fire safety and evacuation * TOT to 48 FSCD officials on fire safety and evacuation | * 300 FSCD professionals trained |  | * 2 Jamboree held |
| 5.8.5 Communities, decision makers and local elite groups sensitized on urban disasters |  | * 10,000 persons trained * 131 urban communities covered by awareness programmes/events | * Dropped | * Project Completion Report finalized |
| * Output 5.9 Enhanced skills and technical capability of GSB | | | | |
| 5.9.1 GSB technical staff trained on installed equipment; GSB staff trained on hazard and vulnerability assessment and modelling | * Improved earthquake risk assessment capacity through technical engagement under CDMP I | * 48 GSB officials trained | * 10 personnel from GSB participated in a 5 days long in country training on “Active Faults Identification in Bangladesh” * 10 personnel from GSB completed month long field training on “Active Faults Identification in Bangladesh”. * 12 personnel from GSB (10) and related organization (2) received 3 days training on Active Fault Mapping. * 7 personnel of GSB have got training on Disaster Management in Philippine on 17-24 February 2014. |  |
| 5.9.2 Equipment to develop hazard related mapsprocured | * Earthquake risk assessment equipment support, training (on PS Logging, HAZUS, Active Fault Modelling, Seismic Microzonation mapping, Dynamic Measurement of Buildings), engagement in map production * Installed 20 accelerometers at different locations and managed by GSB | * 10 equipments | * Procured software for geophysical data processing and interpretation * Installation of 10 accelerometer completed |  |
| 5.9.3 Geological maps produced for 8 cities and disseminated to relevant GoB offices | * Equipped with required earthquake risk assessment instruments | * 24 types of maps generated by GSB | * Data base/GIS based 24 maps on geology, geomorphology and engineering geology of 8 cities are completed and submitted to the editing committee of GSB for approval |  |
| * Output 5.10 Ensuring Mainstreaming DRR in the DPHE | | | | |
| 5.10.1 DRR & CCA mainstreaming guideline for DPHE developed |  | * Guideline in place | * Developed TOR to outsource the development of DRR & CCA mainstreaming guide line for DPHE | * DRR CCA Mainstreaming Guideline developed |
| 5.10.2 84 deep tube-wells and 40 rainwater harvesters and 2 underground reservoirs installed |  | * 124 water options installed |  |  |
| 5.10.3 Sub-Assistant Engineers trained on DRR & CCA |  | * 100 engineers trained |  | * Training report on capacity building finalized |
| 5.10.4 Study on community-based drinking water supply in the face of climate change conducted |  | * Study | * Dropoed, CDMP (under M&E initiative) will conduct the study. |  |
| 5.10.5 Low-cost surface water purification systems (protected pond with PSF facility) piloted | * Engagement of local DPHE officials in LDRRF implementation monitoring and input support | * Pilot project implemented |  |  |
| 5.10.6 Lessons learnt workshop conducted at national level |  | * 40 participants in workshop conducted |  | * National Workshop Report and project completion report finalized |
| * Output 5.11 Mainstreaming DRR in the Land use planning / MoL | | | | |
| 5.11.1 Land Use Policy updated, incorporating DRR & CCA issues |  | * Updated Land Use Policy in place |  |  |
| 5.11.2 Improved MoL awareness on revised land use policy and land zoning at national and local level |  | * 100 MoL officials trained on revised land use policy |  |  |
| 5.11.3 Improved awareness about land zoning system and land zoning law amongst 10 pilot upazila and union level Land Ministry officers |  | * 10 sensitization workshops | * Completed validation in 4 districts (Laksmipur, Cox’s Bazar, Chittagong and Gopalgonj) |  |
| * Output 5.12 Mainstreaming DRR in women and children affairs development initiatives | | | | |
| 5.12.1 DRR & CCA Action Plan of Department of Women’s Affairs (DWA) developed |  | * DWA Action Plan in place | * Completed and published the Bangla version of the risk reduction action plan |  |
| 5.12.2 Contingency plan for DWA developed |  | * Contingency plan in place | * Earthquake Contingency Plan developed * Sharing workshop conducted |  |
| 5.12.3 Two priority options of the DWA Action Plan piloted |  | * 2 options piloted | * Selected 6 upazilas under two districts for implementation of priority options of DWA Disaster Risk Reduction Action Plan |  |
| 5.12.4 DWA officials trained on DRR & CCA |  | * 250 DWA officials trained | * 25 DWA officers received ToT; Plan prepared for field level training | * 200 officials trained |
| 5.12.5 DRR & CCA issues incorporated in DWA programmes and plans |  | * NS | * Draft Disaster Risk Reduction Tool-Kit developed and reviewed by CDMP * Drafted IEC materials | * Tool kit printed |
| * Output 5.13 MoDMR& DDM have initiated development of robust capacity to actively influence and support DRR mainstreaming across GoB | | | | |
| 5.13.1 Support MoDMR in establishing the DRR Cell and development of an advocacy strategy to support inclusion of DRR - CCA into sectoral policies and plans |  | DRR Policy and Practice Centre established  Advocacy Strategy paper approved by MoDMR and in practice | * Concept paper developed and draft shared | * DRR Policy and Practice Centre established * Advocacy Strategy paper approved by MoDMR and in practice |
| 5.13.2Provide support to the partners ministries for mainstreaming DRR-CCA in sectoral policy and planning |  | 13 ministries adopting DRR - CCA mainstreaming |  | * 4 Policies reviewed to incorporate DRR CCA * Revised Rules and responsibilities (for SOD) of different ministries for disaster management |
| 5.13.3. Support MoDMR to review NPDM 2010-15 and Draft NPDM 2016-20; support MoDMR promote resilience in 7th FYP |  | New NPDM 2016-20 in place;  DRR & CCA issues incorporated in 7th FYP | * Identification of consultants is under process for the MTR and drafting the NPDM for 2016-20 | * NPDM 2016-20 drafted * DRR & CCA issues incorporated in 7th FYP |
| * OUTCOME 6: Community-level adaptation to disaster risks from a changing climate is effectively managed. | | | | |
| * Output 6.1 Gaps bridged in community, institutions and climate science for improved and effective climate responsive CRA and RRAP initiatives. | | | | |
| 6.1.1 Disaster management officials and partners trained on CCA | * Climate change knowledge and information needs identified in CDMP I * 6 priority adaptation research conducted under CDMP I | * 200 officials and partners trained on CCA | * Completed two batches of training (52 participant’s); total 4 batches of training, 138 participants * CCA Training Manual (Climate Change Adaptation : A Trainer’s Handbook) printed | * 80 officials and partners trained on CCA |
| 6.1.3 Risk reduction projects incorporate CCA considerations |  | * Climate Lens * 1700 union factsheets | * Based on the increased requirement of information and data in the planning process and due to the limitation of earlier developed Climate Lens, the climate lens has been transformed and concept of Climate Risk Atlas has been adopted. * Union Fact Sheets have been completed; delivered to respective unions, upazilas and is available online |  |
| 6.1.4 Climate change community adaptation strategies implemented in the targeted districts |  | * 5 Community projects * 1 project each in 40 districts | * A total of 20 climate change adaptation schemes have been approved by CDMP technical committee. The schemes will be implemented through respective UzDMCs. Around 1600 people of 6 districts (Patuakhali, Barguna, Pirojpur, Khulna, Bagerhat and Gopalganj) will be benefited from the schemes. * MoU and Financial Contract signed and 1st instalment disbursed to implement Non-farm livelihood project with MothbariaUzDMC for implementation of a Scheme at Majher Char of MothbariaUpazila, PirojpurSadarUzDMC to implement two scheme at Das Para and Nikari Para of 1 No SikderMallik Union of PirojpurSadarUpazila. MoU& Contract signed with KalaparaUz of Patuakhali district and TaltoliUz of Barguna district. | * Implemented 15 non-farm adaptation schemes |
| Output 6.2 Contingency planning for vulnerable populations living in very high-risk areas. | | | | |
| 6.2.1 Policy briefs on disaster and climate induced internal displacement are deliberated among decision makers |  | * 6 policy briefs | * Published report on Trend and Impact Analysis of Internal Displacement due to Disasters and Climate Change’. | * Policy brief on internal displacement prepared. |
| 6.2.3 National strategy on the management of disaster and climate-induced internal displacement |  | * National strategy on climate displacement * Contingency Plan | * Hiring of short term consultant is in progress for development of a national strategy on the management of disaster and climate induced internal displacement. Candidate is already identified; formal contract to be awarded by UNDP. | * Completed 5 pilot projects considering internal displacement |
| Output 6.3 Disaster risk reduction with tools, techniques and methods developed on adaptation to climate change to enhance community resilience and policy advocacy | | | | |
| 6.3.1 Climate change parameters and trends associated with disaster hazards are established and disseminated | * Climate change knowledge and information needs identified under CDMP I * 6 priority adaptation research conducted under CDMP I | * 6 thematic studies on climate change parameters | * Field activity of the ‘Action Research on the Adaptation Test of Improved Fodder Varieties in the Coastal Area of Bangladesh’ is on-going. In order to capture authentic result, the contract has been extended up to June 2015 * Note to file has been submitted for NPD’s signature to cancel the contracts for two separate studies with CEGIS and Eusuf& Associate as Inception workshop and review meeting have not found the proposed methodology up to the expectation of CDMP. | * 1 thematic studies completed and published |
| 6.3.2 Adaptive tools, techniques and methods are developed to enhance community resilience (Risk Atlas, Adaptation toolkit) and translate both in Bangla |  | * Adaptation approaches and tools for local level planning and implementation | * Upazila Risk Atlas has been printed and planned for dissemination. * Adaptation Toolkit has been printed and delivered to CDMP II stakeholders and partners | * Multi-hazard risk Atlas developed for 28 upazilas |
| 6.3.3 Policy briefs are published to advocate the incorporation of disaster and climate change adaptation strategies |  | * 6 policy briefs | * Prepared and published 3 policy briefs (based on 3 completed studies). * Development of policy brief on internal displacement study initiated. |  |
| 6.3.4 National capacities to formulate, manage and advocate/ negotiate climate change adaptation is further strengthened and institutionalized |  | * National forum on the convergence of CCA, DRR and sustainable development * Guidelines on the convergence of CCA, DRR and sustainable development | * Brainstorming session was organized on 12 November 2014 to explore and gather ideas from the professionals as how to develop the CCA-DRR Convergence Guideline. * Note to file (NTF) has been prepared and submitted for approval for hiring the consultant to prepare CCA-DRR Convergence Guideline. | * Guidelines on the convergence of CCA, DRR and sustainable development. |
| 6.3.5 National development processes incorporate disaster and climate change considerations |  | * 6th Five Year Plan with DRR&CCA | . | Climate change considerations incorporated in the 7th Five Year Plan |

**STATUS OF THE ERF PROJECT OUTPUTS**

| **Outcome/Output** | **Target** | **Achievement and the 2015 Planned Outputs** | | | | **Estimated Final Outputs** | **Remarks/ Gaps** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Program Title:  ***Early Recovery***  ***Facility* (2011-2015)** |  | **Year 1**  **(2012)** | **Year 2**  **(2013)** | **Year 3**  **Current Status(2014)** | **Year 4 Projected**  **(2015)** |  |  |
| **Output 1: By 2015, an Early Recovery Facility is functional** | 1. 100% of ERF staff positions filled as per TORs by 2013. 2. 30% of ERF staff positions filled by women by 2014. 3. Business Continuity Plan for ERF in place by 2013. 4. 30 UNDP SURGE candidates readied to respond to emergencies by 2015. 5. 30% of UNDP SURGE candidates readied who are women by 2015. 6. Updated list of pre-qualified NGOs by 2012. | 1. 90% staff  2. 10%  3. Yes  4. 33  5. 26%  6. List of 50 NGOs prepared for NGO roster. | 1. 100% staff  2. 17%  3. Yes  4. 23  5. 26%  6. Yes, list updated. | 1. 100% staff  2. 30%  3. Yes  4. 31  5. 26%  6. Yes, list updating on going. | 1. 100%.  2. 30%  3. Updated based on current situation.  4. 31.  5. 30%  6. Updated list of pre-qualified NGOs. | 100% of project target for all indicators. |  |
| **Output 2: By 2015, national, district and upazila officials are better able to prepare, coordinate and manage emergencies and early recovery** | 1. 80% of DDM officials with capacity for early recovery approaches and methodologies by 2014. 2. 90% of female DDM officials with capacity for early recovery approaches and methodologies by 2014. 3. Handbook for DDM Officials published by 2013. Target 6 point.[[99]](#footnote-99) 4. 50 NGOs with capacity for early recovery approaches and methodologies by 2015 | 1. 30%  2. 10%  3. 0 points.  4. 50 NGOs have been pre-qualified to receive capacity building support. | 1. 80%  2. 82%  3. 2 points achieved.  4. 29 NGOs | 1. 94%  2. 86%  3. 4 points achieved.  4. 29 NGOs | 1. 94%  2. 90%  3. 6 points achieved.  4. 50 NGOs. | 100% of project target for all indicators. |  |
| **Output 3: By 2015, integrated and coordinated volunteer network ready to respond to local and national level disaster events** | 1. Progress towards a Handbook for Disaster Volunteers by 2014. Target 3 points. [[100]](#footnote-100) 2. 1200 disaster volunteers trained and readied for emergency response by 2015 3. 10% of trained volunteers mobilized through volunteer organizations during national emergency by 2015 4. Integrated database for volunteers organizations operational by 2014 | 1. 0 points.  2. Long-Term Agreement with  Bangladesh Scouts formalized.  3. Process initiated to deploy volunteers.  4. Process initiated to develop database. | 1. 0 points.  2. Training curriculum finalized for Bangladesh Scouts.  3. 1080 Bangladesh Scouts mobilized to support cold wave in Jan 2013.  4. Yes, database developed. | 1. 1 point  2. 348 volunteers.  3. None mobilised as no national emergency seen;  4. Yes, operational. | 1. 3 points.  2. 1200 disaster volunteers.  3. Based on national emergency, at least 10% of trained volunteers mobilised.  4. Yes, database operational. | 100% of project target for all indicators. |  |
| **Output 4: By 2015, Innovative community-based recovery solutions have been developed and tested** | 1. 50% of early recovery schemes incorporating “build back better” approach by 2015 2. 04 documented innovative community-based recovery solutions by 2015. 3. 02 regional workshops to share community recovery experiences per year by 2014 | 1. Disaster Resilient Habitat (DRH) in Kedarbazar, in Satkhira incorporated this approach.  2. ToR developed & procurement process completed.  3. No progress. | 1.‘Build Back Better’ concept has been incorporated in disaster resilient core family shelters in Koyra, Khulna  2. Video documentation on disaster resilient shelter is under process.  3. Planned for 2014 | 1. 100%  2. Video documentation on DRH done; Video documentary on Community Resilience Project in Koyra in progress  3. 01 in 2013 (Mahasen response lesson learned workshop in Bhola) | 1. 100% scheme of ERF adopt build back better approach  2. 03 documented solutions.  3. 01 regional workshop to share recovery experience. | 100% of project target for 1 & 3 indicators. 75% achievement for indicator 2. | Around 25% gap in case of documented community based solutions |
| **Output 5: National Emergency Response and Early Recovery have been supported** | 1. 10% of households affected by disasters that received livelihood recovery assistance by 2015. 2. 10% of households affected by disasters that received shelter assistance by 2015 3. 10% of pre-qualified NGOs engaged for early recovery interventions per year. | 1. Around 11,598 families, affected by southeast flood received livelihood supports.  2. 43 households of kedarbazar, Satkhira received shelters.  3. Process initiated to make roster of NGOs. | 1. 2,200 hhs in Mahasen affected area; 530 families tornado affected.  2. No new shelter in 2013.  3. 12% in 2013; 6 partner NGOs contracted in 2013. | 1. Flood in south-east: <10 in 2013  2. Mahasen: 30% achieved in 2013  3. Flood in south-east: 0; Mahasen: shelter assistance need addressed by DDM  4. 5% (1 NGO) in 2014; | 1. 10% HHs  2. 10% HHs  3. 10% NGOs | 100% of project target for all indicators. |  |
| **Output 6: Emergency response coordination supported through DER-LCG and national cluster system** | 1. Early Recovery Cluster TOR and membership list by 2012 2. Coordinated early recovery needs assessment and response plan led by Government by 2015 3. Shelter Cluster TOR and membership list by 2012 4. Coordinated shelter needs assessment and response plan led by Government by 2015 | 1. ER ToR and membership list prepared.  2. The needs assessment methodology was tested in July 2012 following the flood and landslide in the south-east Bangladesh.  3. ToR& membership list prepared.  4. Process initiated, consultation done. | 1. Achieved in 2012  2. Yes ( for Brahmanbaria tornado and Mahasen)  3. Achieved in 2012  4. Partially achieved (coordinated needs assessment achieved; coordinated response plan in progress) | 1. Achieved in 2012  2. Yes (Brahmanbaria tornado and Mahasen)  3. Achieved in 2012  4. Partially achieved (coordinated needs assessment achieved; coordinated response plan in progress) | 1. Continue support for Early recovery cluster  2. Government lead coordinated ER need assessment.  3. Continue support for Shelter cluster  4. Government lead coordinated Shelter need assessment. | 100% of project target for all indicators. |  |
| Output 7: Support to Bangladesh to Participate in Regional and Global Disaster Management Forums | 1. 5 GOB/CSO officials participated in regional/global DM forum per year by 2015 2. 1 early recovery lessons/publications shared in regional forums per year . | 1. 10 GOB officials visited Indonesia.  2. No progress. | 1. 01 CSO official.  2. No progress. | 1. 05 (5 in 2014).  2. 01 (second World Reconstruction Conference in Washington DC 2014). | 1. 05 officials.  2. At least, 01 lesson shared. | 100% of project target for all indicators. |  |
| Output 8: By 2015, Policies, Standards and Mechanisms for early recovery are in place | 1. Early Recovery Cluster guidelines endorsed by ER Cluster by 2014 2. Shelter guidelines endorsed by Shelter Cluster by 2014 3. Livelihood recovery strategy endorsed by ER Cluster by 2014 4. Standards for Shelter endorsed by Shelter Cluster by 2014 5. Early Recovery Needs Assessment provide real time lessons/guidance for DRR strategies and plans by 2014 | 1. ER guideline drafted and reviewed.  2. Shelter guideline drafted.  3. No progress.  4. Planned for next year.  5. Yes, for southeast flood. | 1. Early Recovery Cluster guidelines endorsed .  2. Shelter Technical Working Group done consultation and review of existing model.  3. No progress  4. Progressing  5. Yes (for Mahasen) | 1. Yes, achieved (2013)  2. Endorsement in progress.  3. Planned for 2015.  4. Draft being reviewed in 2014  5. Yes (Mahasen needs assessment provided DRR recommendations which were followed up with CDMP and relevant Government agencies) | 1. Already achieved.  2. Shelter Cluster guidelines endorsed.  3. Livelihood recovery strategy drafted and endorsed.  4. Standards for Shelter endorsed.  5. ER need assessment provide real time lesson. | 100% of project target for all indicators. |  |

**STATUS OF THE (CBACC-Coastal Afforestation) PROJECT OUTPUTS**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Outcome/Output** | **Project Target**  **(PT)** | **Achievement and the Outputs** | | | | | | | **Target Achieved** | **Remarks/ Gaps** |
| Program Title:  *Community Based Adaptation to Climate Change through Coastal Afforestation in Bangladesh (CBACC-CF)*  *(2009-2015)* |  | **Year 1**  **(2009)** | **Year 2**  **(2010)** | **Year 3**  **(2011)** | **Year 4**  **(2012)** | **Year 5**  **(2013)** | **Year 6**  **(2014)** | **Year 7**  **(Projected 2015)** |  | As per project document the CBACC-CF project was supposed to start in April 2009 but administrative order for its initiation was made on Nov. 12, 2009. Moreover, the implementing parties undertook field activities in July-Aug 2010 due to late nomination of Deputy Project Directors (DPDs) of different Govt. implementing parties. |
| Output 1:Coastal Afforestation (Mangrove) | 9000 | - | 350 | 2650 | 3000 | 2500 | 500 | Maintenance | 100% of Project Target (PT) |  |
| Output 2: Dyke Plantation (ha) | 112 | - | 10 | 30 | 40 | 32 | Maintenance | Maintenance | 100% of PT |  |
| Output 3:Mound Plantation  (ha) | 332 | - | 50 | 112 | 170 | Maintenance | Maintenance | Maintenance | 100% of PT |  |
| Output 4 :Strip Plantation (km) | 680 | - | 1 15 | 98 | 215 | 252 | Maintenance | Maintenance | 100% of PT |  |
| Output 5: Model Demo (ha) | 200 |  |  |  | 100 | 50 | Maintenance and nursery for 50ha | 50 | 75% of PT |  |
| Output 6: Training (Nos) | 12700 | - | 5640 | 6360 | 200 | 500 | - | - | 100% of PT |  |
| Output 7:Agricultural Demo  Training | Demo:  2860HH  Training 4000Nos | - | 223 | 220 | 243 | 867 | 707 |  | >100% of PT |  |
| - | 550 | 600 | 0 | 1950 | 2172 |  |
| Output 8: Fisheries Demo Training | - | 60 | 60 | 80 | 110 | 63 |  | >100% of PT |  |
| - | 60 | 60 | 80 | 160 | 180 |  |
| Output 9: Livestock Demo and Training | - | 0 | 216 | 152 | 146 | 336 |  | >100% of PT |  |
| - | 0 | 168 | 244 | 820 | 623 |  |
| Output 10: Resilience of Coastal Communities through Water Management | 180HH | - | - | - | - | - | 4.07 km Embankment with 8 Reservoirs | Maintenance | 100% of PT |  |

**STATUS OF THE BRESL PROJECT OUTPUTS**

| **Outcome/Output** | **Target** | **Achievement and the Outputs** | | | | | | | **Target Achieved** | **Remarks/ Gaps** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Program Title:**  ***Barrier Removal for Energy Standards and Labelling***  **(2010-2015)** |  | **Year 1**  **(July 2010 )**  **6 Month** | **Year 2**  **(2011)**  **1 Year** | **Year 3**  **(2012)** | **Year 4**  **(2013)** | **Year 5**  **(2014 )** | **Year 6**  **(June 2015)**  **6 Month** | **Year**  **7** |  | BRESL Project was supposed to start in 2009, but for finalization of TPP (approval), Administrative order of each initiation and hiring of Project Staff took almost 1 year. Therefore, project activities have been started from July 2010 by nominating one National Project Director (NPD) from BSTI under Ministry of Industries (MoI). |
| **Output 1**  **ES &L Policy Making Program** | 1.1.Standardization of 6 BRESL Products (AC, Refrigerator, Electric Motor, Electric Fan, CFL, & Electronic Ballast ) | Initial Stage | Process on going | Formulation of Bangladesh Standard (BDS) of 6 products completed | Revised through FS Report by National Expert (NE) | Finalized | Continuation | - | 100% of Project Target (PT) | - |
| 1.2. Star Label Assignment for 6 BRESL Products (AC, Refrigerator, Electric Motor, Electric Fan, CFL, & Electronic Ballast ) | Initial stage | Process on going | Process on going | Star label assignment of CFL & FAN completed | Star label assignment of Electronic Ballast (EB) completed | Process Continuation for new manufacturers of CFL, FAN & EB | - | 50% of PT | Lack of Lab Facilities for other 3 products (50%): AC, Refrigerator and Electric Motor. |
| **Output 2**  **ES&L Capacity Building Program** | 5 nos. International TWG (Technical Working Group) Meeting & Local 54 nos. TWG Meeting with 6 Counter Part Experts (CPE) & 4 National experts (NE) | 1 # Intl TWG,  Local#4  TWG | 1#Intl TWG,  Local #14 TWG | 1 #Intl TWG,  Local #12 TWG | 1 # Intl TWG,  Local #12 TWG | 1 #Intl TWG,  Local #12 TWG | - | - | 100% of PT | - |
| **Output 3**  **ES&L Manufacturer Support Program** | 30 nos. of Training /Workshop/Idea Exchange Meeting. | 2 nos. | 6 nos. | 7 nos. | 7 nos. | 8 nos. | - | - | 100% of PT | - |
| **Output 4**  **ES&L Regional Cooperation Program** | 6 nos. RPSC, 5 nos. TWG Meeting, 3nos. International Training and 1 no. Round Robin Testing | 1 # TWG | 1 # RPSC,  1 # TWG | 1 # RPSC,  1 # TWG,  3 nos. Intl. Training completed | 1# RPSC,  1 #TWG,  1 no. Round Robin Testing completed for Fan. | 1 #RPSC,  1#TWG. | 1# RPSC | - | 100% of PT | Inception Meeting of BRESL Project in 2009 (which was 1stRPSC Meeting). |
| **Output 5**  **ES& L Pilot Projects** | Case Study of Pilot Project (1 no.).  Full Pilot Project (1 no.) | - | - | 1 Case Study in GazipurKaliganj (Sep- Dec 2012) | - | 1 Full Pilot Project in Palash UZ at Narshingdi District (February-June 2014) | - | - | 100% of PT | - |

**STATUS OF THE IKEMBI PROJECT OUTPUTS**

| **Outcome/Output** | **Target** | **Achievement and the 2014 Outputs** | | | | | **Estimated Final Outputs** | **Remarks/ Gaps** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Program Title:  *Improving Kiln Efficiency in the Brick Making Industry (IKEMBI)*  (2009-2014) |  | Year 1  (2010) | Year 2  (2011) | Year 3  (2012) | Year 4  (2013) | Year 5  Status upon completion  (2014) |  |  |
| Output 1: Establishment of HHK demo plants | * 15 HHK demo (direct project supported) kiln by end of the project * 20 HHK replicated kiln by end of the project | 2 HHK demo kilns | 0 HHK demo kiln | 1 HHK demo kilns | 2 HHK demo kilns  47 HHK replicated kiln | 0 HHK demo kilns) | 5 HHK demo kiln  47 HHK replicated kiln | Another 6 HHK demo kilns are in pipelined (in different phase of establishment process) |
| Output 2: Carbon saving | * 314 k ton from direct project supported kilns * 527 kton from indirect (replicated) project supported kilns | 3 k tons | 6 kTon | 6 kTon | 3 kTon  76 kTon (estimate) | 76 kTon (estimate) | 18 kTon  152 kTon (Estimated) |  |
| Output 3: Associated activities for establishing HHK demo plants (techno-economic feasibility studies, baseline studies, requirement analysis, clay resources assessments, develop detail design and layout etc.) | For 15 HHK demo kilns by end of the project | For 2 potential HHK demo kilns | For 2 potential HHK demo kilns | For 3 potential HHK demo kilns | For 4 potential HHK demo kilns |  | Associated activities have been completed for 11 potential HHK demo kilns |  |
| Output 4: Capacity building for BMI production and managerial personnel | Total 700 production and managerial personnel will be trained by end of the project |  | 50 | 134 |  |  | Total 184 Production and managerial personnel have trained |  |
| Output 5: Involvement of bank and financial institutions disbursed loan for EEK | At least 10 banks/FIs by end of the project | 2 | 1 | 4 | 2 |  | Total 9 bank/FIs have disbursed loan for EEK |  |
| Output 5: Amount of investment to establishing EEK | Total 10.85 m. USD for establishing 15 HHK demo kiln by end of the project (from IIDFC)[[101]](#footnote-101) | 1.36 m. USD | 0.40 m. USD | 2.92 m. USD |  |  | 4.68 m. USD |  |
| Output 6: Support to potential entrepreneurs | Total 150 potential entrepreneurs by end of the project | 38 | 77 | 40 | 27 |  | Total 182 potential entrepreneur have received different support from the project |  |
| Output 7: Communication and awareness |  |  | 28 News/stories published in print and electric media | 69 News/stories published in print and electric media | 6 News/stories published in print and electric media |  | Total 200,000 have reached by conducting mentioned communication activities |  |
|  | 1 video documentary prepared | 2 video documentary prepared |  |  |  |  |
|  | 1 regional awareness campaign | 3 regional awareness campaign |  |  |  |  |
| Output 8: Policy related activities |  |  |  |  | Successfully provide support for revising brick act “Brick Manufacturing and BrickKiln Set-up (Control) Act, 2013” |  | Government approved the mentioned act in the end of 2013 |  |
| Output 9: Gender related intervention |  |  | Conduct 1 workshop with BBMOA | * Conducted 1 workshop with BBMOA Rangpur district * Conduct national level workshop with stakeholders |  |  | * Total 2 local and 1 national level workshop related to gender related requirement and intervention in BMI of Bangladesh | Mentioned activities are the gender related intervention for the first time in the BMI in Bangladesh. |
|  |  |  | * Provide health support to 26 female workers of HHK demo plants | * Containing health support to 26 female workers of HHK demo plants | Total 26 female workers received health facility over 7 months. |

**STATUS OF THE PECM PROJECT OUTPUTS**

| **Outcome/Output** | **Baseline in 2010** | **2010-2013 Targets** | | **Achievement at the end of project (2013)** | **Remarks/Gap** |
| --- | --- | --- | --- | --- | --- |
| Program Title:  *Poverty Environment Climate Mainstreaming*  *(PECM)* (July 2010-September 2013) |  |  | |  |  |
| **Outcome 1: Support the integration of climate change and environmental considerations into national development planning and budgeting processes** | | | | | |
| **Output 1.1:** Social and economic analysis of climate change on key development priorities  (e.g. agriculture, water, transport, gender and poverty status) developed and disseminated. | Socio-Economic Study Team not exist | Year 1 (2010 & 11): (1) Socio-Economic  Study Team (SEST) established, (2)  mapping exercise undertaken, and (3)  preliminary analysis of PEC Nexus in the ADP developed.  Year 2 (2012): Socio-Economic Study  reports in four selected areas developed and disseminated to key planning and development stakeholders.  Year 3 (2013): Socio-Economic Analysis  reports in four selected areas developed and disseminated to key planning and development stakeholders. | | * Socio-Economic Study Team (SEST) established and functional * Existence of Socio-Economic Study (Case Project Analysis from PEC Lens) report of climate change on key development priorities * (1) PECD nexus analysis completed for 22 selected case projects from ADP (2) Case project analysis on two selected projects from ADP has been completed through two field visits to the project site by case project team members from different sector of planning commission and agency * Number of events where results of the analysis are presented to key planning and development stakeholders * 12 feedback reports to the concerned project team have been disbursed and 2 of them positively replied and agreed to incorporate PEC Nexus issues in the revised DPP | ***Fully achieved*** |
| **Output 1.2**: Poverty-Environment- Climate (PEC) issues integrated into key national and sectoral planning documents. | PEC issues not comprehensively  integrated into existing national and  sectoral planning documents | Year 1 (2010 & 11): (1) Entry point for  mainstreaming identified and technical  briefs developed and disseminated  targeting specific entry points of  selected national and sectoral planning  processes.  Year 2 (2012): Technical briefs  developed and disseminated targeting  specific entry points of selected  national and sectoral planning  processes.  Year 3 (2013): At least three national  and one sectoral policies integrated  poverty-environment-climate linkages  through policy advocacy using the results of the analysis. | | * Technical brief has been provided to incorporate PEC Nexus issues in the draft DPP and TPP format, Delta Plan 2100. * PEC Nexus related four (04) clauses have been addressed in the ADP Guideline (2012-13). * 3 sub-output of national agricultural programme incorporated PEC Nexus issues. * PECD nexus issues integrated into Monitoring and Evaluation (M&E) framework of 6th Five Year Plan, National Perspective Plan (in English and Bangla) and National Sustainable Development Strategy (2010-21), the Country Investment Plan for the Agriculture Sector (2011) and the Annual Development Programme (ADP) Guidelines. | ***Fully achieved*** |
| **Output 1.3**: National level training, advocacy and knowledge management on PEC  mainstreaming improved through dissemination of analysis and findings (building on lessons  from national level analysis and field level up-scaling). | Planning Commission and other  relevant development agencies have  limited capacity to integrate PEC  measures into national planning and  budgeting processes | Year 1 (2010 & 11): Training needs  assessed, course outline developed, PEC Nexus curriculum developed and a pilot training of 24 planning and development stakeholders conducted  Year 2 (2012): Poverty-Environment Climate network established, PEC Nexus curriculum developed and training provided to at least 140 planning and development stakeholder  Year 3 (2013): At least 3 training workshops delivered with gender balanced participation and training provided to at least 60 planning and development stakeholders | | * CDMP has prepared a Memorandum of Understanding (MoU) to continue PECD nexus training in 2013 to train 200 public sector professionals from 4 key agencies: LGED, BWDB, DAE, and Roads and Highways. (2) PECM Training Impact Assessment conducted to examine achievements of training programme and identify improvements (3) Capacity Development Strategy developed for NPC on mainstreaming PEC nexus into national planning and budgeting, which has been submitted to GED for adoption. * Network has been functional and online platform created for sharing information among different members attended in the training sessions. * (1) PECD good practices identified from the selected case projects and documented regularly. (2) Scoping study completed on Resource Mapping of BhutiarBeel to identify gaps in existing wetland management practices and ways to promote sustainable natural resource management. | ***Largely achieved***  -No significant achievement in south-south learning and women trained in PEC mainstreaming. The training is being continued by CDMP and SSIP projects. |
| **Output 1.4**: Development Project Proforma (DPP) revised to include PEC issues in development planning and appraisal processes. | Planning Commission and other relevant development agencies have  limited capacity to integrate PEC  measures into national planning and  budgeting processes | Year 1 (2010 & 11): Current DPP reviewed with recommendations through  Consultations  Year 2 & 3(2012 & 2013): Revised DPP and developed guidelines approved by the Government | | * DPP and TPP format and guideline published by Planning Division addressed PEC Nexus issues provided by PECM Project, (2) Manual of Instruction for preparation of PECD inclusive DPP and TPP developed with a curriculum to follow, (3) Final Draft Indicator Framework for Pro-poor, Environmental Friendly, Low Emission, and Climate Resilient Development has been prepared accommodating all recommendations from the consultation workshop. * 07 recommendations for DPP and one recommendation for TPP format has been addressed in the final DPP and TPP format and guideline published by Planning Division. | ***Ffully achieved*** |
| **Output 1.5**: Current development budget (annual development programme: ADP) improved  to ensure adequate investment in PECM related purposes. | Current development budget does not ensure adequate investment in  PEC issues | Year 1 (2010 & 11): Current development budget system reviewed  Year 2 (2012): Measures and financing  needs for PECM purposes identified  Year 3 (2013): Development project  proposals for PECM purposes approved  in the ADP with an appropriate  monitoring and review mechanism | | * Current ADP reviewed to ensure adequate investment into PEC issues * Climate Public Expenditure and Institutional Review (CPEIR)   Completed   * GED is implementing Local Climate Fiscal Framework (LCFF) through forming study team consisting member from relevant ministries and agencies. * National CFF completed and approved by Finance Division. * Eight (08) Local level CFFs piloted in selected Unions of Bangladesh to produce eight (08) comprehensive local CFFs on managing climate finance and expenditure by LG. | ***Fully achieved*** |
| **Output 1.6**: Planning Commission strengthened to institutionalize climate mainstreaming process. | Planning Commission has limited  capacity to institutionalize PEC  mainstreaming process | Year 1 (2010 & 11): Needs and resources  assessed for the Planning Commission to  institutionalize climate mainstreaming  Year 2 (2012): Brief action plan on  institutionalizing climate mainstreaming  developed and approved/ mandate &  function identified/ staffing requirement  identified / existing expertise identified  Year 3 (2013): Planning Commission is  better able to mainstream climate change  across sectors. | | * Capacity Development Strategy developed for NPC on mainstreaming PEC nexus into national planning and budgeting, which has been submitted to GED for adoption. * Draft Institutional Architecture has been developed | **Partly achieved**  - Institutional  Arrangements for GED,  Planning Commission for PEC  Mainstreaming yet not started |
| **Outcome 2 : Enhance UN’s country assistance to provide effective support towards climate-resilient poverty reduction efforts** | | | | | |
| **Output 2.1**: Poverty-environment-climate linkages mainstreamed into UNDP programme. | Absence of coordination mechanism  for integration of PEC synergies in  UNDP Project/ Programme Planning  and Implementation Process | | Year 1 (2010 & 11): (1) Coordination gaps  in PEC mainstreaming within UNDP  programmes identified, (2) Appropriate  coordination mechanism developed and  operational, (3) At least three relevant  UNDP programmes identified and joint and complementary activities undertaken  Year 2 (2012): Joint and complementary activities undertaken with selected UNDP's programme/ projects.  Year 3 (2013): Joint and complementary  activities undertaken with selected UNDP's programme / projects | * Joint initiative of Local Climate Fiscal Framework is implementing by Union Parishad Governance Project (UPGP) and Upazilla Governance Project (UZGP). * CDMP agreed to support training of 200 planning professionals for PECD Nexus inclusive project design and submitted a MoU for signing agreement with GED. | ***Partly achieved***  - Coordination mechanism in UNDP project/ programme planning and  implementation process for effective  PEC mainstreaming yet not achieved |
| **Output 2.2:** Development partners aware and engaged in supporting PEC mainstreaming at  national and sub-national level. | Development partners do not  effectively fund PEC mainstreaming  work | | Year 1-3 (2010 - 13): Increasing number of key development partners engaged in the next phase of PECM programme | * Number of activities/ initiatives /events undertaken to support collaboration and follow-up on PEC mainstreaming in Bangladesh * Project supported disbursing CPEIR study, Perspective Plan and Sixth Five Year Plan. | ***Partly achieved.***  Three follow on projects are developed from PECM experiences: SSIP (by Planning Commission), IBFCR (Finance Division), and Local Resilience Programme (Local Government Division) |

**Annex XVI: Recommendations for Refinement of CPD Indicators**

**Proposed CPD Indicators**

The Evaluators highly recommend that further refinement of indicators for measuring progress towards CDP 2012-16 Outcome 3.1 is required. Changes in system or community resilience with respect to risk adaptation should focus not only on recovering potential loss from disasters but also the addition of inherent capacity to withstand stress, shocks, and disaster impacts. The evaluators’ specific recommendations are as follows:

***Outcome 3.1:*** “…by 2016, populations vulnerable to climate change and natural disasters have become more resilient to adapt to risks.”

***Proposed indicator for refinement****:* Changes in the percentage of total funds delivered by national budgets over 5 years to climate and disaster risk reduction and their effect upon economic losses and fatalities. This indicator should be complemented by counting numbers of union-institutionalized disaster and climate risk management plans supported by UNDP interventions.

***Outcome 3.2(1):*** “…by 2016, vulnerable populations benefit from better natural resource management.”

***Proposed indicator for refinement****:* Number of government policies, strategies or plans approved in support of sustainable management of natural resources. This should be complemented by counting number of marginal addition of unions and additional beneficiaries/ population served by the UNDP interventions in the area of natural resource management.

***Outcome 3.2(2):*** *“…*by 2016, vulnerable populations benefit from better access to low-carbon energy.”

***Proposed indicator for refinement****:* electricity generated and delivered in numbers of households (for energy savings: measurement of equivalents of household energy consumption e.g.100,000 for BRESL; for renewable energy: number of households that have purchased renewable energy equipment).

**Annex XVII: Terms of Reference (TOR)**

**Practice Area:** Environment and Energy

**Additional Practice Area:** Crisis Prevention and Recovery

**Unit/Cluster/Project:** CCED Cluster and RRMC

**Background:**

UNDP Bangladesh **Country Programme Document** (CPD) 2012-2016[[102]](#footnote-102) responds to the Government’s development priorities and vision of attaining middle income country status by 2021, as stated in the Outline Perspective Plan 2010-2021 and ongoing Sixth Five Year Plan (2011-2015). The present CPD focuses on three areas: (a) democratic governance and human rights; (b) pro-poor growth with equity; and (c) climate change, environment, disaster risk reduction and response.

In line with the Country Programme Evaluation Plan 2012-2016 agreed with the Economic Relation Division of the Ministry of finance, a mid-term outcome evaluation is carried out to assess UNDP’s support towards achieving **outcomes 3.1** and **3.2**:

* **By 2016, populations vulnerable to climate change and natural disaster have become more resilient to adapt to risks** *(Country Programme Outcome 3.1/UNDAF Outcome 5.1)*
* **By2016,vulnerablepopulationsbenefitfrombetternaturalresourcemanagementandaccesstolowcarbonenergy** *(CountryProgramme Outcome 3.2/UNDAFOutcome 5.2)*

To the present, Bangladesh remains off-track to meet MDG 7 (environment) with sub-par performance due to deforestation, growth of urban slums, biodiversity loss and pollution. About half of the population is dependent on a rapidly degrading natural resource base, including forests, for their livelihoods and only about 50 per cent of households have access to on-grid energy. Bangladesh’s latest MDG report noted several key challenges, such as efficiently using forest resources, developing water-efficient agricultural practices and establishing proper policies and regulation frameworks. These environmental threats, compounded by Bangladesh’s population pressure and institutional capacity constraints, can undermine its development potential as well as reverse recent hard-earned gains.

The geography and topography of Bangladesh make it one of the most vulnerable countries in the world to natural disasters, which have increased in frequency and severity as a result of the worsening impact of climate change. The poorest are the most severely affected as their adaptive capacity is relative lower. While better disaster preparedness strategies and practices have, over time, reduced the number of deaths, the loss of assets and livelihoods continues to increase (as much as 3 per cent of GDP), with women being most acutely affected. Climate change adaptation (CCA) and disaster risk reduction (DRR) are thus critical areas of concern for Bangladesh. UNDP programmes, current and past, continues to establish strong building blocks that would go to scale alongside wider adaptation and mitigation efforts in line with the Bangladesh Climate Change Strategy and Action Plan. Under the CPD Outcome 3.1 and 3.2, UNDP is focusing on developing the capacity of the Government to mainstream the climate-environment-poverty nexus into policy and planning frameworks across ministries, while augmenting community-based risk reduction and adaptation capacities. By 2013, Bangladesh has achieved notable developments in these outcome areas, including the development of an environment, climate and disaster vulnerability index, which has the capacity to measure the vulnerability and ability of people living in 19 coastal districts to cope with climate change and disaster. Also, Bangladesh has made major progress in promoting green development with policies that take into consideration the relationship between its national contexts and globally accepted frameworks and protocols. UNDP’s long-term advocacy and technical support to the Department of Environment, Ministry of Environment and Forest and Ministry of Industry were critical to achieving many policy successes.

The **estimated resource envelope** for the UNDP Bangladesh Country Programme 2012-2016 is **US$ 553.6** million, where indicative budgets of the Outcome 3.1 and 3.2 comprise **25.9%** (US$ 143.6 million) of the overall CPD envelop. Till July 2014, the Outcome 3.1 and 3.2 altogether have mobilized **78.0%** (US$ 112 million) of its planned budget from UNDP core resources as well as from its development partners.

**Objectives:**

**Evaluation Purpose:**

*purpose:* The purpose of this mid-term outcome evaluation is to **take stock of achievements to date, document lessons learned and propose ways to correct the course of intervention for the next two years of the country programme cycle**.

*TIMING:* The mid-term evaluation is conducted in the **second half of 2014** because it is the penultimate year to the MDG deadline, and the midway point of the 2012–2016 CPD/UNDAF. The timing is in line with the CPD/UNDAF Evaluation Plan 2012-2016, which foresees that UNDP Bangladesh undertakes a mid-term outcome evaluation on the CPD Outcome 3.1 and 3.2 in 2014. The timing of the evaluation also ensures that evaluation results will be key input into the UNDAF mid-term review scheduled for early 2015.

*utilization:* The evaluation results are to be utilized by not only UNDP Bangladesh but also by the government partners as well as other key development partners/donors. They will also become critical inputs to the **UNDAF mid-term review** scheduled in early 2015, where UNDP acts as lead agency in four UNDAF pillars and these outcomes contribute directly to UNDAF Pillar 5. The mid-term outcome evaluation also aims to **identify which UNDP approaches have worked well** and which have faced challenges, use lessons learned to improve future initiatives and generate knowledge for wider use at all levels (corporate, regional and country) and serve as a means of quality assurance and hold UNDP accountable for the resources invested in its work as well as for its national partners and stakeholders. Notably, the evaluation will become critical inputs for the alignment of UNDP’s new Strategic Plan (SP) 2014-2017[[103]](#footnote-103). Following the evaluation conclusions and recommendations pertinent to UNDP, UNDP Bangladesh will prepare a management response and implement follow-up actions through the UNDP Evaluation Resource Centre (ERC).

**Scope of work:**

**1. Evaluation Objectives and Scope**

*Objectives:*The mid-term outcome evaluation will primarily assist UNDP Bangladesh in assessing its effectiveness in **progressing towards the outcomes**. The evaluation will assess if populations vulnerable to climate change and natural disasters are now more resilient to adapt to risks compared to before 2012. The evaluation will also assess to what extent vulnerable populations now benefit from better natural resource management and access to low carbon energy compared to before 2012. This includes an assessment on the causal linkage if and/or by which outputs contribute to the achievement of the outcomes and the extent to which the planned outcome has been achieved and likely to be achieved by the end of 2016. It will assess both negative and positive factors that facilitate and/or hinder the progress in achieving the outcome including the external environment, weaknesses in design, management and resources. In addition, the evaluation will assess the **relevance, efficiency, effectiveness** and potential **sustainability** of UNDP’s interventions on resilience to climate change and natural disasters and on the benefit from natural resource management and access to low carbon energy.

*sCOPE:* The mid-term outcome evaluation covers a time span from **January 2012 -** the beginning of the CPD cycle - up to the outset of the evaluation. While the programmes/projects which are at policy level and/or with global compliance has a nation-wide coverage, project sites include socio-economically backward and disaster vulnerable **geographic areas** (cyclone, flood and drought-prone) districts for the field visit and data collection will be identified and selected given the available time for site visits and in consultation with the Climate Change, Environment and Disaster (CCED) Cluster of UNDP Bangladesh. While there have been 18 programmes/projects implemented under the outcome 3.1 and 3.2 during the CPD cycle, this evaluation focuses on **key programmes and projects** which contributed directly to achieving the outcomes. This includes projects and programmes that started prior to 2012 but continued into 2012 and beyond. The **primary stakeholders** include government institutes directly involved with project implementation: Ministry of Disaster Management & Relief, Ministry of Environment & Forests, Ministry of Power & Mineral Resources, Ministry of Agriculture, Ministry of Water Resources, Ministry of Land, Ministry of Fisheries and Livestock, Ministry of Industries, Forest Department in the Chittagong Hill Tracts (CHT). Other constituencies include private brick and pharmaceutical sectors, civil society organizations, academia and direct beneficiaries such as ethnic minorities.

**2. Evaluation Questions**

The following evaluation questions help define the information that the evaluation will generate. The evaluation questions are formulated and clustered to address the primary evaluation criteria[[104]](#footnote-104) and the effectiveness criteria will be weighted most from other criteria in this evaluation to demonstrate how UNDP initiatives have or have not contributed to the achievement of the outcome. The evaluation questions may be adjusted upon consultations and discussions with the programme cluster during the inception phase.

*Country Programme Outcome 3.1/UNDAF Outcome 5.1*

**By 2016, populations vulnerable to climate change and natural disaster have become more resilient to adapt to risks**

The outcome formulation contains different elements. That is why the outcome formulation needs to answer evaluation questions from at least two perspectives:

* resilience related to risks from *climate change*
* resilience related to risks from *natural disaster*

*Relevance of UNDP's involvement and approach:*

* **To what extent are UNDP's key programmes/projects *relevant* to make vulnerable populations more resilient to the risks of climate change and natural disasters?**

*Effectiveness in contributing to the achievement of the outcome:*

* **Compared to 2011, are vulnerable populations now more resilient against climate change?**
* **Compared to 2011, are vulnerable populations now more resilient against natural disasters?**
* **To what extent are these changes due to UNDP's interventions?**

*Efficiency in delivering outputs:*

* **To what extent were the relevant programme/project outputs delivered in time and in good quality?**
* **To what extent did UNDP ensure value for money?**
* **Has there been any duplication of efforts among UNDP’s own interventions and interventions delivered by other organizations or entities in contributing to the outcome?**

*Sustainability of the outcome:*

* **What indications are there that the outcome will be sustained after external funding ends?**

*Country Programme Outcome 3.2/UNDAF Outcome 5.2*

**By 2016, vulnerable populations benefit from better natural resource management and access to low carbon energy**

The outcome formulation contains different elements. That is why the outcome formulation needs to answer evaluation questions from at least two perspectives:

* better *natural resource management*
* better *access to low carbon energy*

*Relevance of UNDP's involvement and approach:*

* **To what extent are UNDP's key programmes/projects *relevant* to increase benefits from better natural resource management and access to low carbon energy?**

*Effectiveness in contributing to the achievement of the outcome:*

* **Compared to 2011, to what extent do vulnerable populations now benefit more from better natural resource management?**
* **Compared to 2011, to what extent do vulnerable populations now benefit from better access to low carbon energy?**
* **To what extent are these changes due to UNDP's interventions?**

*Efficiency in delivering outputs:*

* **To what extent were the relevant programme/project outputs delivered in time and in good quality?**
* **To what extent did UNDP ensure value for money?**
* **Has there been any duplication of efforts among UNDP’s own interventions and interventions delivered by other organizations or entities in contributing to the outcome?**

*Sustainability of the outcome:*

* **What indications are there that the outcome will be sustained after external funding ends?**

In addition, the evaluation should also consider if and how UNDP promoted **gender equality, human rights** and **human development** in the delivery of outputs.

**3. Methodology**

The suggested approach and method for conducting this evaluation is to use a **multi-level, mixed-method approach[[105]](#footnote-105).** This includescollecting both **quantitative and qualitative data sets** on multiple levels that will need to be validated and triangulated. The overall guidance on evaluation methodologies is found in the UNDP Handbook on Planning, Monitoring and Evaluating for Development Results.

It is for the evaluation team to examine and determine the **specific design and methods** for this mid-term outcome evaluation during the initial inception period in close consultation with the programme Cluster. During the inception phase, the evaluation team will elaborate a detailed methodology how to **answer each evaluation question**.

The following data collection methods and analysis should be applied, but not limited to:

* **Desk reviews** of relevant documents (CPD, UNDAF, relevant project documents, reports of relevant flagship projects, project surveys, studies relating to the country context and situation, evaluation reports, etc.)
* **Key informant interviews** and/or **focus group discussions** with beneficiaries or representatives of beneficiaries, government partners both at the central and local levels; development partners/donors including bilateral and multilateral partners ([AusAid](http://www.ausaid.gov.au/), [DFID](http://www.dfid.gov.uk/), [European Union](http://europa.eu/index_en.htm), [Norwegian Embassy](http://norway.org.bd/), [Sida](http://www.sida.se/English/)); other UN agencies, NGOs, and CSOs working to contribute to the same outcome; UNDP Country Office’s senior management, programme, and project staff, etc. The selection of interview partners should follow a deliberate *purposive sampling* strategy.
* **Direct observations** during visits to national implementing partners and field visits
* **Gap analysis and review** of national statistics as well as administrative and survey data collected by the programmes/projects and other stakeholders, including the CPD outcome indicators and the new corporate Strategic Plan[[106]](#footnote-106) (SP) 2014-2017 indicators; data and information from the [4W Database](http://www.dmic.org.bd/4w/), the [DMIC Portal,](http://www.dmic.org.bd/dmin/) [Cyclone shelter DB](http://www.cdmp.org.bd/csdb), [Union Fact sheet](http://www.dmic.org.bd/factsheet)s, [Inundation Map](http://www.dmic.org.bd/inmap)s, [CDMP Risk Management Information](http://www.cdmprm.org.bd/); review of the Profitability & Replication Study on HHK Demo Plants, UNDP 2013. The evaluation team is expected to review existing data sets from programmes/projects and the national statistics relevant to this outcome evaluation, and identify what/where the gaps exist for the CO in aggregating the data and monitoring the CPD and the Strategic Plan indicators for the rest of the monitoring cycles (till 2016 for the CPD and 2017 for the Strategic Plan).
* **International indices and databases** on resilience in case of climate change and natural disasters in Bangladesh
* Quantitative analysis of **budgets and expenditure reports** in ATLAS and project reports
* Administration of **surveys or questionnaires**, as applicable

The data collection methods should be participatory and inclusive of disadvantaged and marginalized populations. Major methodological limitations or limitations based on data collections should be noted in the final evaluation report.

**4. Evaluation Team Composition and Required Competencies**

The evaluation team will comprise **4 members**: one team leader, two evaluation experts and one data analyst. The presence of an international consultant is deemed desirable given the complexity and sensitivity of some of the issues concerned, and therefore to safeguard independence and impartiality of the evaluation.

**Supervision and performance evaluation:**

**1. Implementation Arrangement**

This evaluation is commissioned by UNDP Bangladesh. The **Climate Change, Environment Disaster (CCED)Cluster** in the Country Office will be responsible for coordinating and managing the evaluation throughout the entire process and provide the evaluation team any logistics and administrative support as needed. The **Results and Resource Management Cluster (RRMC)** will serve as quality assurance to provide overall technical guidance and ensure the corporate compliance of outcome evaluations. In order to guide the evaluation process and assure quality, an **evaluation reference group** is planned to be formed from approximately five members from the Cluster, the Country Office, key stakeholders, the Regional Bureau for Asia and the Pacific or the Independent Evaluation Office, where the members are asked to provide inputs on the ToR, selection of consultants, inception report, draft report and the final report.

**2. Evaluation Ethics**

Evaluations in UNDP will be conducted in accordance with the principles outlined in the UNEG ‘Ethical Guidelines for Evaluation’[[107]](#footnote-107). Evaluators should ensure to be in compliance with evaluation ethics and procedures to safeguard the rights and confidentiality of information providers during the designing, implementing and managing evaluation activities.

**Timeframe and deadlines:**

1. Comprehensive literature review and analysis of background data including project documents, project/Country Office/UNDAF progress reports, annual reviews, evaluation reports and other key documents
2. Briefing and kick-off meeting with UNDP staff from respective Cluster(s) and RRMC
3. Prepare and submit the inception report including the adjusted work plan, an evaluation matrix and other items as in the Companion Guide
4. Conduct data collection and analysis, interviews, site visits, stakeholder meetings, workshops, etc. in the country
5. Prepare and submit the draft evaluation report to UNDP
6. Debrief with key stakeholders and present key findings and recommendations; collect feedback from the debriefing workshop
7. Incorporate comments from key stakeholders, respective Cluster(s) and the government partners
8. Finalize and submit the final evaluation report and evaluation brief to UNDP

**Expected outputs/deliverables:**

The Evaluation Team is responsible for submitting the following deliverables to UNDP Bangladesh at the agreed work plan:

* **Inception Report:** An inception report should be prepared by the evaluators before going into the full-fledged **datacollection** exercise. It should detail the evaluators’ understanding of what is being evaluated and why, **showing how each evaluation question will be answered** by way of: proposed methods, proposed sources of data and data collection procedures. The inception report should elaborate and finalize the two **evaluation matrices** for outcome 3.1 and 3.2 and a proposed **schedule of tasks, activities and deliverables**, designating a team member with the lead responsibility for each task or product. The inception report provides the programme Cluster and the evaluators with an opportunity to verify that they share the same understanding about the evaluation and clarify any misunderstanding at the outset. The inception report should follow the structure proposed in the UNDP Outcome-Level Evaluation: A Companion Guide, Annex 1, p.31*[[108]](#footnote-108).*
* **Draft Evaluation Report:** The evaluation report should follow the structure outlined in the UNDP Outcome-Level Evaluation: A Companion Guide, p. 29-30. The programme Cluster and key stakeholders in the evaluation should review the draft evaluation report to ensure that the evaluation answers in depth all evaluation questions and backs up the arguments with credible and sufficient quantitative and qualitative evidence. The draft evaluation report should not exceed **40 pages** without annexes.
* **Presentation:** Debriefing with stakeholders to present key findings and recommendations and collect feedbacks
* **Final Evaluation Report:** The final report will reflect the comments and feedback from stakeholders, including feedback provided during the presentation.
* **Evaluation Brief**: A concise summary of the evaluation findings in plain language that can be widely circulated. This can be in a form of a PowerPoint presentation or a two-page briefing document.
* **Data Review Report**: The report is a supplementary document to the final evaluation report describing, but not limited to, 1) an analysis and findings on data gaps and availability of independently verifiable sources in monitoring the CPD and the Strategic Plan indicators among existing national statistics, administrative and project data sets relevant to this CPD outcome evaluation and 2) recommendations on how to maximize the use of existing project data and how to harmonize or fill in the gaps of data and information between now and 2016/2017 (the CPD and the Strategic Plan respectively). The report should not exceed **10 pages** without annexes.

**Inputs:**

UNDP Bangladesh will provide office space and transport to field sites and will also arrange meetings and consultations to ensure access to key stakeholders. The CCED Cluster will provide key documents and data relevant to the evaluation. No laptop will be provided.

1. UNDP. 2011. Bangladesh - Country Programme Document (CPD), 2012-2016. [http://www.bd.undp.org/content/dam/bangladesh/docs/LegalFramework/Signed%20CPD-BGD\_2012-2016.pdf](http://www.bd.undp.org/content/dam/bangladesh/docs/legalframework/signed%2520cpd-bgd_2012-2016.pdf) [↑](#footnote-ref-1)
2. UNDP. 2014. *UNDP Strategic Plan, 2014-17.* http://www.undp.org/content/undp/en/home/librarypage/corporate/Changing\_with\_the\_World\_UNDP\_Strategic\_Plan\_2014\_17/ [↑](#footnote-ref-2)
3. Winderl, T. 2014, Evaluability Report of UNDP Country Programme Outcome 3.1 (Resilience) and 3.2 (Natural Resource Management and Low Carbon Energy).UNDP, Dhaka, Bangladesh. [↑](#footnote-ref-3)
4. UNDP, no date (cited in Winderl, T. 2014, Evaluability Report of UNDP Country Programme Outcome 3.1 (Resilience) and 3.2 (Natural Resource Management and Low Carbon Energy). UNDP, Dhaka, Bangladesh). [↑](#footnote-ref-4)
5. Ibid, p.3. [↑](#footnote-ref-5)
6. Maplecroft, 2015. Verisk Maplecroft – New Products and Analysis. [http://maplecroft.com/about/news/ccvi.html], accessed on May 27, 2015. [↑](#footnote-ref-6)
7. World Bank, 2015.accessed on 28 May (https://www.google.com.bd/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=population%20growth%20rate%20of%20bangladesh). [↑](#footnote-ref-7)
8. Ahmed, A.U. and Neelormi, S. 2007. Livelihoods of coastal fishermen in peril: In search of early evidence of climate change induced adverse effects in Bangladesh. Centre for Global Change, Dhaka. [↑](#footnote-ref-8)
9. Ahmed, A.U. 2005. Adaptation options for managing water related extreme events under climate change regime: Bangladesh perspectives. In M.M.Q. Mirza and Q.K. Ahmed (eds.). *Climate Change and Water Resources in South Asia.*Balkema Press, Leiden, pp. 255-278. [↑](#footnote-ref-9)
10. General Economics Division, Government of Bangladesh. 2011. Sixth Five Year Plan FY2011-2015. Part-2. Dhaka: Planning Commission, p. 475. [↑](#footnote-ref-10)
11. MOEF-UNDP. 2005. *National Adaptation Programme of Action, Bangladesh.*Ministry of Environment and Forests.Government of Bangladesh and UNDP, Dhaka. [↑](#footnote-ref-11)
12. World Bank, 2000. Bangladesh: Climate Change and Sustainable Development. Report No. 21104-BD, Rural Development Unit, South Asia Region, The World Bank, Dhaka. [↑](#footnote-ref-12)
13. Junaid K. Choudhury and Md. Abdullah Abraham Hossain. 2011.Bangladesh Forestry Outlook Study. Asia-Pacific Forestry Sector Outlook Study II, Working Paper Series, Working Paper No. APFSOS II/ WP/ 2011/ 33. FAO, Bangkok. [↑](#footnote-ref-13)
14. The National Biodiversity Strategy & Action Plan for Bangladesh, 2005.Ministry of Environment and Forests.Dhaka. [↑](#footnote-ref-14)
15. World Bank, 2015, data.worldbank.org/index/AG.LND.ARBL.ZS. [↑](#footnote-ref-15)
16. Ali, M.Y. 1997. Fish, Water and People. University Press: Dhaka [↑](#footnote-ref-16)
17. Haque, M.M-Ul. 2013. Impact of BaikkaBeel Sanctuary on Protection and Restoration of Fish Biodiversity and Enhancement of Local Livelihoods. Connecting communities and conservation: Co-management Initiatives Implemented by IPAC in Wetlands and Forests of Bangladesh.East-West Centre, Hawaii, USA. [↑](#footnote-ref-17)
18. Bangladesh Rio+20:National Report on Sustainable Development. 2012. Ministry of Environment and Forests. GoB, Dhaka. [↑](#footnote-ref-18)
19. Ahmed, A.U. 2004. A Review of the Current Policy Regime in Bangladesh in Relation to Climate Change Adaptation, Reducing Vulnerability to Climate Change Project (RVCC), CARE Bangladesh, Khulna, 58 p. [↑](#footnote-ref-19)
20. MOEF-UNDP. 2005. National Adaptation Programme of Action, Bangladesh Ministry of Environment and Forests. GoB, and UNDP, Dhaka. [↑](#footnote-ref-20)
21. Ibid, p.20. [↑](#footnote-ref-21)
22. Khan, N.A. et al. 1999.The politics of the Bangladesh Environmental Protection Act.Environment Politics, vol, 8, 311-317. [↑](#footnote-ref-22)
23. World Bank Group. 2014. Lighting Global: IFC Partners nwith GIZ Bangladesh to increase Energy Access for Off-Grid Communities. [<https://www.lightingglobal.org/ifc-partners-with-giz-in-bangladesh-to-increase-energy-access-for-off-grid-communities/>], accessed on May 3, 2015. [↑](#footnote-ref-23)
24. Mahmud, W., Asadullah, M.N. and Savoia, A. 2013. Bangladesh’s achievements in Social Development Indicators: Explaining the Puzzle. Policy Brief 31012, April 2013. International Growth Center. [↑](#footnote-ref-24)
25. Asadullah, M.N., A. Savoia, and W. Mahmud. 2014. Paths to Development: Is there a Bangladesh Surprise? *World Development* 62: 138-154. [↑](#footnote-ref-25)
26. UNDP. 2012. Empowered lives: resilient Bangladesh: Results achieved with our partners, 2006-2011. UNDP, Dhaka, p. 52. [↑](#footnote-ref-26)
27. http://data.worldbank.org/indicator/EN.ATM.CO2E.PC [↑](#footnote-ref-27)
28. Assessment of Development Results (ADR): Bangladesh-Evaluation of UNDP Contribution. 2011. Evaluation Office. UNDP, USA. [↑](#footnote-ref-28)
29. UNDP. 2011. Bangladesh - Country Programme Document (CPD), 2012-2016. [http://www.bd.undp.org/content/dam/bangladesh/docs/LegalFramework/Signed%20CPD-BGD\_2012-2016.pdf](http://www.bd.undp.org/content/dam/bangladesh/docs/legalframework/signed%2520cpd-bgd_2012-2016.pdf), p.3. [↑](#footnote-ref-29)
30. Ibid, p.30. [↑](#footnote-ref-30)
31. UNDP. 2011. Bangladesh - Country Programme Document (CPD), 2012-2016. [http://www.bd.undp.org/content/dam/bangladesh/docs/LegalFramework/Signed%20CPD-BGD\_2012-2016.pdf](http://www.bd.undp.org/content/dam/bangladesh/docs/legalframework/signed%2520cpd-bgd_2012-2016.pdf) [↑](#footnote-ref-31)
32. Ibid, p. 23. [↑](#footnote-ref-32)
33. Assessment of Development Results (ADR): Bangladesh-Evaluation of UNDP Contribution. 2011. Evaluation Office. UNDP, USA. P.64 [↑](#footnote-ref-33)
34. For example, BCCSAP has provided crucial technical support to drafting the ongoing Climate Resilient Coastal Zone policy recommendations for 4 sectoral policies and formulations of a framework for mainstreaming mechanism for climate resilient policy. [↑](#footnote-ref-34)
35. Referring to US tons (1 US ton = 2000 pounds) [↑](#footnote-ref-35)
36. 1 kiloton is 1000 metric tons or 2.204 million pounds [↑](#footnote-ref-36)
37. The Community Asset Score measures the increase in the ‘facility and infrastructure’ assets that enable a community, and the households living within it, to begin restoring and rebuilding livelihoods, during recovery phases after conflicts, disasters, and shocks. ‘Facility and infrastructure’ assets should be accessible to most members of the community, and are managed and maintained by the community members themselves (UNDAF. 2014. UNDAF Outcome/UNDAF Output Outcome 2: Vulnerable groups have improved access to economic opportunities and adequate social protection. Indicator: 2.5 Community Asset Score (CAS).http://un.org.np/protocol-sheet/outcome2.5.pdf). [↑](#footnote-ref-37)
38. Ibid, p.30. [↑](#footnote-ref-38)
39. Ibid, p.3. [↑](#footnote-ref-39)
40. Twigg, J. 2007. Characteristics of disaster-resilient community: A Guidance note. Version-1 for the Department for International Development (DFID) disaster risk reduction and Interagency Coordination Group. [↑](#footnote-ref-40)
41. Cutter, S.L., L. Barnes, M. Berry, C. Burton, E. Evans, E.Tate, and J.Webb. 2008. A place-based model for understanding community resilience to natural disasters. *Global Environment Change* 18:598-606. [↑](#footnote-ref-41)
42. Community Asset Score data sheet, provided by UNDP Bangladesh CCED Cluster, December 2014. [↑](#footnote-ref-42)
43. ROAR 2012-14, UNDP CCED Cluster, 2014. [↑](#footnote-ref-43)
44. Ibid, p.3. [↑](#footnote-ref-44)
45. Ibid, p.3. [↑](#footnote-ref-45)
46. UNDP. 2011. Assessment of Development Results (ADR): Bangladesh-Evaluation of UNDP Contribution. 2011. Evaluation Office. UNDP, USA. [↑](#footnote-ref-46)
47. Ministry of Power, Energy and Mineral Resources. 2011. Power System Master Plan 2010. Government of Bangladesh, Japan International Cooperation Agency (JICA), and Tokyo Electric Company, Inc, (IDD-JR-011-029). [↑](#footnote-ref-47)
48. Ibid, p.3. [↑](#footnote-ref-48)
49. UNDP. 2014. SREPGen Project Document (signed). UNDP Bangladesh, Dhaka. [↑](#footnote-ref-49)
50. Rahman, T. 2015: personal communication. Senior Sector Specialist, Energy, KfW Development Bank, KfW Regional Office Bangladesh, May 10, 2015. [↑](#footnote-ref-50)
51. SREDA (Sustainable and Renewable Energy Development Authority), Ministry of Power, Energy and Minerals. 2015. Energy Efficiency and Conservation Master Plan up to 2010. Power Division, Government of Bangladesh, Dhaka. [↑](#footnote-ref-51)
52. Ibid, p.66. [↑](#footnote-ref-52)
53. Government of Bangladesh. 2009. *Bangladesh Climate Change Strategy and Action Plan (BCCSAP).*Government of the People’s Republic of Bangladesh, Dhaka. [↑](#footnote-ref-53)
54. UNDP. 2011. Assessment of Development Results (ADR): Bangladesh-Evaluation of UNDP Contribution. 2011. Evaluation Office. UNDP, USA. [↑](#footnote-ref-54)
55. General Economics Division. 2011. *Sixth Five Year Plan 2011-2015,* Part-1, Planning Commission, Ministry of Planning, Government of Bangladesh, Dhaka. [↑](#footnote-ref-55)
56. Ibid, p.14. [↑](#footnote-ref-56)
57. UNDP. 2013. CDMPII, Annual Progress Report, 2013. UNDP Bangladesh, Dhaka. [↑](#footnote-ref-57)
58. UNDP. 2009. Handbook on planning, monitoring and evaluating for development results. New York. USA. [↑](#footnote-ref-58)
59. Ibid, p.23. [↑](#footnote-ref-59)
60. Ibid, p. 20. [↑](#footnote-ref-60)
61. Environmental health encompasses the aspects of human health and disease that are determined by factors in the environment. It also refers to the theory and practice of evaluating and controlling factors in the environment and particular ecosystems that potentially affect human health adversely (e.g., respiratory diseases, allergies, neuro-toxicity and neurological impairment, gastro-intentional diseases, developmental and congenital abnormalities, acute and chronic poisoning) (General Economics Division. 2011. *Sixth Five Year Plan 2011-2015,* Part-2, Sectoral Strategies, Programmes and Policies. Planning Commission, Ministry of Planning, Government of Bangladesh, Dhaka). [↑](#footnote-ref-61)
62. Currently, the UN SE4All initiative is in the process of a systematic stocktaking using a multi-tier access framework so that starting in 2016, higher comparability will be achieved. [↑](#footnote-ref-62)
63. Enterprise Analysis Unit of the World Bank and the IFC: Enterprise Survey: Bangladesh 2013. [↑](#footnote-ref-63)
64. Ministry of Power, Energy and Minerals. 2011. Power System Master Plan 2010. [↑](#footnote-ref-64)
65. Some interview partners referred to 4 million, some other sources mentioned 2 million. [↑](#footnote-ref-65)
66. Confirmed by WB [↑](#footnote-ref-66)
67. Bangladesh Ministry of Power Energy and Mineral Resources: 500 MW Solar Power Programme, 2013 [↑](#footnote-ref-67)
68. Important energy efficiency measures need to take place in the power sector, i.e. in making generation, transmission and distribution of electricity more efficient. These are discussed in the energy supply section. [↑](#footnote-ref-68)
69. Wörlen, C. 2011a.: Transforming Markets for Sustainable District Heating in Poland – a Meta-Evaluation and Barrier Analysis. Climate Change Evaluation Community of Practice Study. [↑](#footnote-ref-69)
70. Wörlen, C. 2011b.Transforming Markets for Energy Efficient Products in Thailand – a Meta-Evaluation and Barrier Analysis.28 p. Climate Change Evaluation Community of Practice Study. [↑](#footnote-ref-70)
71. It did comprise 23 appliances but the Kimchi refrigerator is considered irrelevant for Bangladesh. [↑](#footnote-ref-71)
72. Chisty, M.H.U. 2013.*Socioeconomic Profile, Profitability, and Replication Study on HHK Demo Plants: Final Report.*Green Brick (IKEBMI) Project, UNDP-GEF, UNDP Bangladesh, Dhaka. [↑](#footnote-ref-72)
73. Ibid 24-25. [↑](#footnote-ref-73)
74. Ibid 24.. [↑](#footnote-ref-74)
75. A note of caution is in order here considering that these analyses, based on broad assumptions, are tentative. These results are tentative because such analyses are highly data demanding, which are beyond the scope of this short-term evaluation.We should not rely too much on the absolute figures here; rather what is more important is the trend revealed in the results. [↑](#footnote-ref-75)
76. In this analysis, sensitive analysis was not carried out. One of the reasons for this was that the benefit cost ratios have already been estimated as ‘very high’. In addition, many indirect and intangible benefits could not be estimated while cost estimates were quite comprehensive. [↑](#footnote-ref-76)
77. A discount rate of 12% is usually used in financial and economic analyses of development projects by GoB and also by donor agencies. For example,the World Bank’s application (See GED’s Manual of Instruction, prepared under PECM). The Asian Development Bank also applied 12% discount rate in the economic analysis (of the power system expansion and efficiency improvement) investment program in Bangladesh (RRP BAN 42378), following the ADB Guidelines for the Economic Analysis of Projects [http://www.adb.org/sites/default/files/linked-documents/37113-013-ban-ea.pdf] accessed on May 15, 2015. [↑](#footnote-ref-77)
78. Apart from income benefits from forest, fish and fruit, benefits by way of carbon capture from trees have been taken into account in the analysis (drawn on Nandi P 2014a & 2014b). [↑](#footnote-ref-78)
79. One should take note that this analysis is based on broad assumptions, and the results are tentative. This is because an analysis with firm results is highly data demanding, which is beyond the scope of this short-term evaluation. The figures depict only a trend. [↑](#footnote-ref-79)
80. Subbiah, A.R. et al. 2008. Background Paper on the Assessment of Early Warning Systems for Disaster Risk Reduction. Bangkok, Thailand: The World Bank, GFDRR. [↑](#footnote-ref-80)
81. Islam K M (2011b). Impacts of Urban Floods from Micro-Macro Level Perspectives, A case study of Bangladesh, LAP LAMBERT Academic Publishing, House, Germany. The study examined various types of floods : major river flood, flash flood and tidal flood, also in terms of, among others, residential sector by loss/damage components .such as structure, inventories, livestock, income and employment. [↑](#footnote-ref-81)
82. ADB (2006). “Bangladesh: Early Warning Systems Study”, Technical Assistance Consultant’s Report, Project Number: 38625 (TA 4562). [↑](#footnote-ref-82)
83. The study examined Cyclone Sidr and 2007 floods in Bangladesh as case studies (Subbiah et al. 2008, The World Bank) [↑](#footnote-ref-83)
84. Cyclone Sidr (2007) cost Bangladesh an estimated $1.7bn (according to World Bank), affecting 2.3m household. [↑](#footnote-ref-84)
85. Assuming 50% of total damages would be saved, annual potential damage is estimated as $85m [↑](#footnote-ref-85)
86. Value of human losses has not been incorporated in this analysis. [↑](#footnote-ref-86)
87. “ODI and World Bank report finds that managing disaster risks can bring other benefits, even if catastrophe never strikes”

    [http://post2015.org/2015/03/16/odi-and-world-bank-report-finds-that-managing-disaster-risks-can-bring-other-benefits-even-if-catastrophe-never-strikes/] Accessed on May 15, 2015. [↑](#footnote-ref-87)
88. Islam, K.M.N. 2011a. *Handbook of Flood Loss Potentials and Assessment Methods in Non-agricultural Sectors: A case study of Bangladesh*, VDM Publishers, Germany.See also GED’s Manual 201, Planning Commission, Dhaka. [↑](#footnote-ref-88)
89. Nandi, P. 2014a.*Project cost effectiveness and efficiency through Value for Money Analysis*. FFF Model, Dhaka. [↑](#footnote-ref-89)
90. Nandi, P. 2014b.*Application of innovative CBA measures mainstreaming and transformation in coastal Bangladesh*.The Guardian, June. [↑](#footnote-ref-90)
91. Islam, K. M. N. and Mechler, R. 2007.*An Economic and Cost Benefit Analysis of Adaptation Options, Opportunities and Risks of Climate Change and Disasters*.IDS, Sussex University, UK. [↑](#footnote-ref-91)
92. Nandi, P. 2014a.*Project cost effectiveness and efficiency through Value for Money Analysis*. FFF Model, Dhaka. [↑](#footnote-ref-92)
93. Nandi, P. 2014a.*Project cost effectiveness and efficiency through Value for Money Analysis*. FFF Model, Dhaka [↑](#footnote-ref-93)
94. Nandi, P. 2014b.*Application of innovative CBA measures mainstreaming and transformation in coastal Bangladesh*.The Guardian, June. [↑](#footnote-ref-94)
95. Islam, K.M.N. 2011a. *Handbook of Flood Loss Potentials and Assessment Methods in Non-agricultural Sectors: A case study of Bangladesh*, VDM Publishers, Germany. [↑](#footnote-ref-95)
96. Ibid.See also GED Manual for Instruction, 2014. [↑](#footnote-ref-96)
97. Nandi, P. 2014a.*Project cost effectiveness and efficiency through Value for Money Analysis*. FFF Model, Dhaka [↑](#footnote-ref-97)
98. Nandi, P. 2014b.*Application of innovative CBA measures mainstreaming and transformation in coastal Bangladesh*. The Guardian, June [↑](#footnote-ref-98)
99. Scale from 0 to 6: a) handbook for DDM officials published -2 points, b) handbook includes gender sensitive disaster preparedness and response – 1 point, c) handbook includes risk reduction – 1 point, d) handbook includes emergency preparedness – 1 point, e) handbook includes early recovery – 1 point [↑](#footnote-ref-99)
100. Scale from 0 to 3: a) handbook for disaster volunteers published -2 points, b) handbook includes gender sensitive disaster preparedness and response – 1point [↑](#footnote-ref-100)
101. As per ProDoc expected financing amount was 10.85 m. USD from IIDFC but they have not financed for any project supported HHK demo plant, mentioned amounts received from other commercial banks and financial institutions [↑](#footnote-ref-101)
102. http://www.bd.undp.org/content/dam/bangladesh/docs/LegalFramework/Signed%20CPD-BGD\_2012-2016.pdf [↑](#footnote-ref-102)
103. http://www.undp.org/content/undp/en/home/librarypage/corporate/Changing\_with\_the\_World\_UNDP\_Strategic\_Plan\_2014\_17/ [↑](#footnote-ref-103)
104. The traditional DAC criterion of impact (changes in people’s lives and development conditions at global, regional and national levels) is not going to be used as it is beyond the scope of outcome evaluations and UNDP initiatives are pitched at the policy level. [↑](#footnote-ref-104)
105. See *Introduction to Mixed Methods in Impact Evaluation*, Bamberger M., 2000, Impact Evaluation Notes, No. 3. August 2012, http://www.interaction.org/sites/default/files/Mixed%20Methods%20in%20Impact%20Evaluation%20(English).pdf [↑](#footnote-ref-105)
106. http://www.undp.org/content/undp/en/home/librarypage/corporate/Changing\_with\_the\_World\_UNDP\_Strategic\_Plan\_2014\_17/ [↑](#footnote-ref-106)
107. http://www.uneval.org/papersandpubs/documentdetail.jsp?doc\_id=102 [↑](#footnote-ref-107)
108. http://web.undp.org/evaluation/documents/guidance/UNDP\_Guidance\_on\_Outcome-Level%20\_Evaluation\_2011.pdf [↑](#footnote-ref-108)