



Incorporating Gender and Poverty Analysis in the Climate Public Expenditure and Institutional Review: A Methodological Note

Draft

October 29, 2014

Lead Authors

Anit N. Mukherjee

With contributions from:

Tom Beloe, UNDP Governance, Climate Change Finance and Development Effectiveness Advisor

Kevork Baboyan, UNDP Governance and Public Finance Specialist

Joanne Manda, UNDP Climate Change Finance Specialist

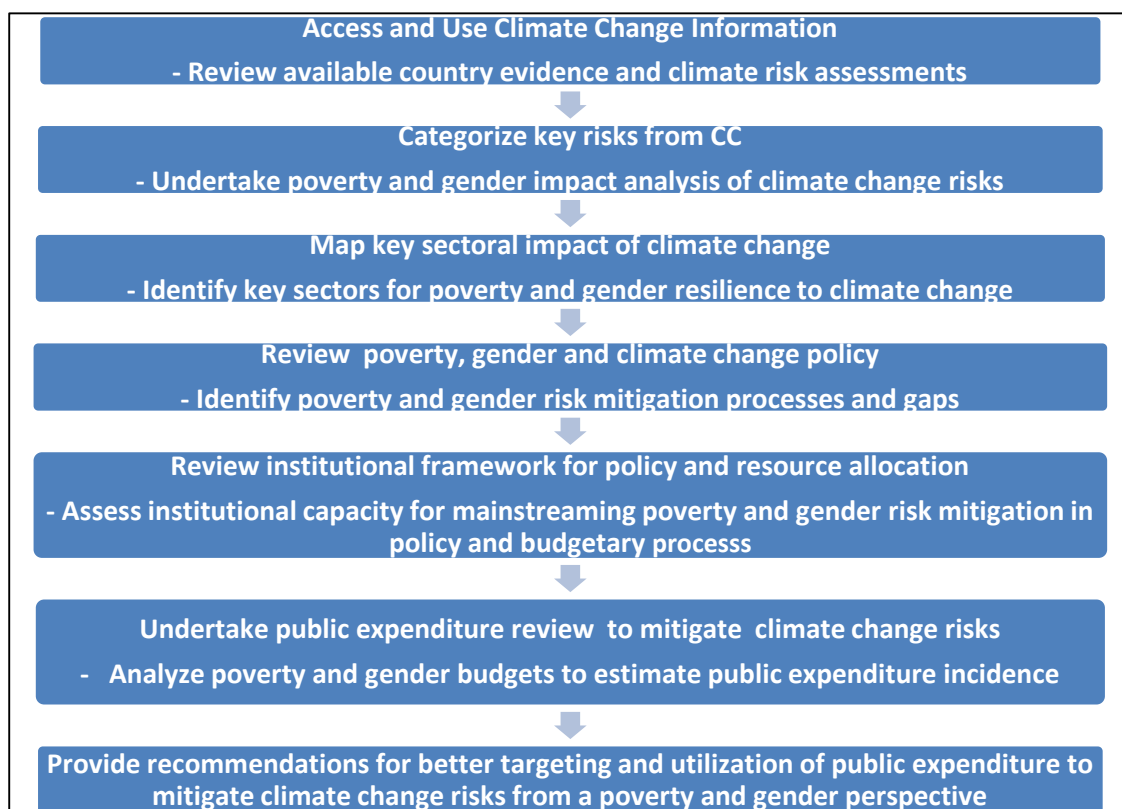
Ashley Palmer, UNDP Governance of Climate Change Finance Specialist

Paul Steele, UNDP Environment Advisor

Summary

This paper outlines the methodology to carry out a Climate Public Expenditure and Institutional Review (CPEIR) incorporating poverty and gender impact of climate change. The paper is intended to serve as a guide for country level studies which seek to determine how public expenditure can help increase resilience of men and women, especially the poor and the vulnerable, given the reality of a changing climate.

The methodological note first outlines a risk assessment and vulnerability framework. The framework reviews existing studies of climate impact at the country level and undertakes a poverty and gender analysis of climate risk. It then identifies key policies that determine the effectiveness of climate change response to reduce poverty and gender-related vulnerabilities. This is followed by an examination of the strengths and weaknesses of the institutional environment to mitigate gender and poverty impact of climate change. Finally, the note provides options for undertaking a climate public expenditure review from a gender and poverty perspective, depending on the country budgetary institutions, data availability and level of disaggregation by gender and poverty. The key steps are summarized below.



Gender and poverty analysis will provide support for climate related policy and institutional reform and enable better targeting of public expenditure to increase climate resilience.

“Climate change financing creates an opportunity to address long-standing equity issues, including gender inequality and other forms of social injustice, and can help facilitate and build upon ongoing processes for promoting equality, fairness and justice in the global economy.” (UNDP, 2011)

1. Introduction

The delivery of climate finance in ways that strengthen gender equity and promote poverty reduction is increasingly being recognized in the global discourse on the mitigation and adaptation response to climate change. The gender dimension addresses the differential impact of climate change on women and men, while recognizing that both are affected by it. The poverty dimension addresses the disproportionate impact of climate change on the poor, especially in rural, agricultural, coastal and marginal communities. The magnitude of the impact calls for a transformative approach which would use climate finance as a catalyst for a more inclusive model of development, both in policy and in practice.

A gender-sensitive approach to climate finance is increasingly being used by donors to better address potential gender inequalities that could result from climate change. The Green Fund for Development (GFD) in its mandate states that “the Fund will strive to **maximize the impact of its funding** for adaptation and mitigation, and seek a balance between the two, while **promoting environmental, social, economic and development co-benefits** and **taking a gender-sensitive approach.**”

There is increasing evidence that a climate-sensitive development approach has significant ‘double wins’ for both poverty alleviation and gender equality. Recent analysis from climate impact models indicate that a 2-4°C rise in global temperatures would adversely impact agricultural production, reduce crop yields and fish stocks, increase competition for water resources and affect economic activity in coastal cities through a secular rise in sea levels and frequent extreme weather events such as floods and cyclones in South and South-east Asia.¹

¹ World Bank (2013). *Turn Down the Heat: Climate Extremes, Regional Impacts and the Case for Resilience*

Countries that undertake ‘climate-smart’ development policies, however, will be able to counteract most of the negative impacts of long-term climate change and maintain GDP growth momentum. Social impact models of climate change predict that lives can be saved, jobs created, crops protected, energy use enhanced and emissions reduced if the right policy mix is adopted.²

The effectiveness of a development strategy incorporating climate change depends on the policy framework, national and local institutions, and public expenditure. An enabling policy framework recognizes that climate change is a long-term developmental issue that needs to address its impact on poverty and gender and therefore needs a multisectoral approach. The capacity of national and local institutions is critical for implementing this strategy, which will also determine the effectiveness of public expenditure in targeting sectors and activities that will have the greatest impact on climate resilience. It is, therefore, important to recognize that there are three policy and institutional pillars that determine the extent of ‘double wins’ from the point of view of development policy. These are: i) poverty alleviation, ii) gender equity and iii) climate change resilience.

The set of policies are intersecting – poverty and gender policies overlap especially in countries of South Asia which has witnessed increased feminization of poverty.³ At the same time, a fairly large body of research has also confirmed the disproportionate impact of climate change on the poor, especially rural women from marginalized communities living in areas particularly vulnerable to climate change.^{4,5} From the policy, institutional and public expenditure standpoint, these linkages need to be identified and analysed for meaningful policy recommendations. Figure 1 provides a schematic diagram to illustrate the case.

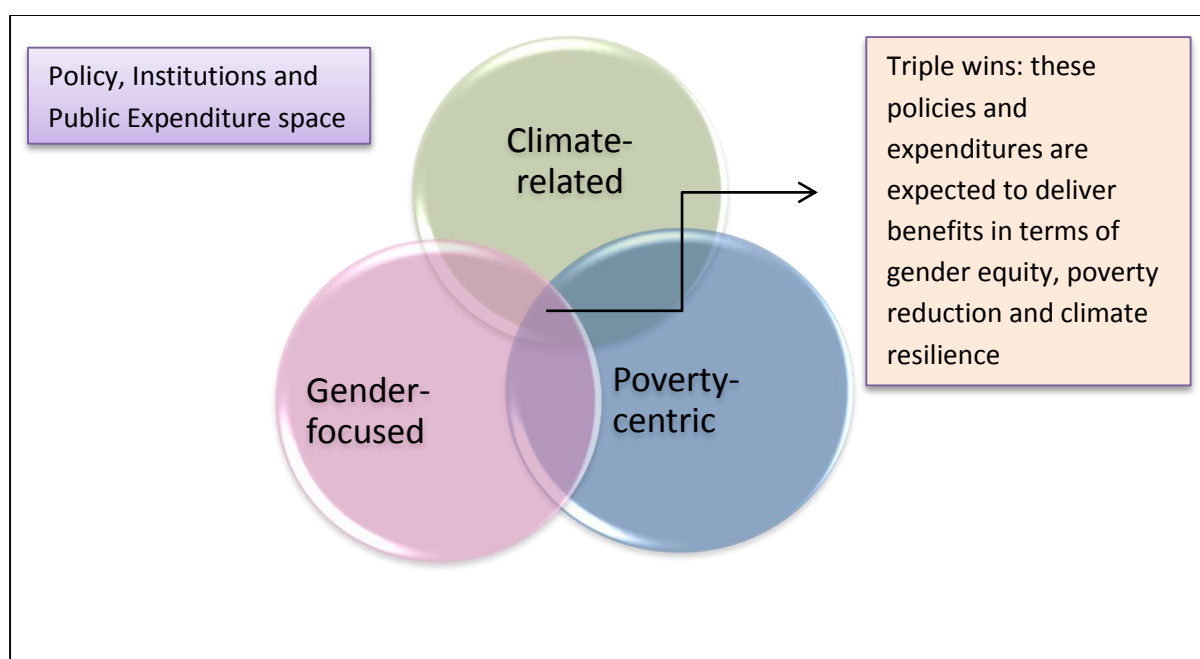
² World Bank (2014). *Climate-Smart Development: Adding up the benefits of actions that help build prosperity, end poverty and combat climate change*.

³ SIDA (2001). *Briefing Paper on the ‘Feminisation of Poverty’*, BRIDGE, Institute of Development Studies, University of Sussex, UK

⁴ OECD (2005). *Poverty and Climate Change: Reducing the Vulnerability of the Poor through Adaptation*

⁵ UNDP (2013). *Overview of Linkages between Gender and Climate Change*. Policy Brief No.1

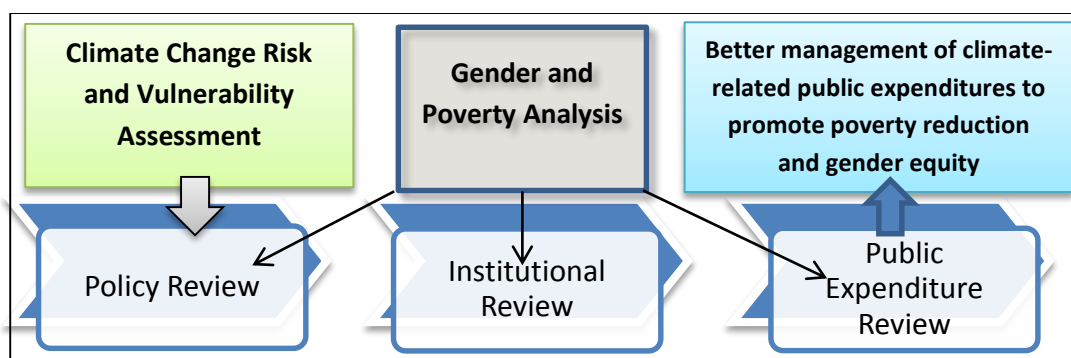
Figure 1: Convergence of Poverty, Gender and Climate Policies and Expenditure



This analytical framework can be used to extend the Climate Public Expenditure and Institutional Review (CPEIR) methodology to incorporate poverty and gender analysis. CPEIR has emerged as an important tool in analysing public resources invested by countries for climate change mitigation and adaptation activities and the institutions that determine its implementation. Several CPEIRs have been conducted in the Asia-Pacific region, covering countries as diverse as Nepal and Samoa. However, gender and poverty impact of climate finance has so far not been incorporated explicitly in the methodology. This note is an attempt to unpack the conceptual and practical elements that would help advance the methodology for a country and sub-national level gender sensitive and poverty focused CPEIR.

A pro-poor and gender-sensitive CPEIR should be based on the climate change risk and vulnerability assessment in the country to inform the analysis. The outcome should be a set of recommendations for countries to take action in order to mitigate risks and build resilience, especially for the poor and disadvantaged (Figure 2). Policies, institutions and public resources need to be proactively reoriented to address these current and emerging challenges posed by climate change.

Figure 2: Process Flow of CPEIR



In this context, the incorporation of gender and poverty assessments will lend more weight to the CPEIRs as a tool for policymaking. The steps are outlined below:

- i) Access and use country level climate change information as the baseline (review available country evidence and climate risk assessments).
- ii) Categorize key climate change risks (sea level rise, tidal floods, reduced water availability, drought due to changing rainfall pattern and intensity) and undertake their gender and poverty impact analysis.
- iii) Map key sectoral impacts (e.g.. food security, agriculture, energy, health, infrastructure, urban, housing etc.) of climate change and identify key sectors for poverty and gender resilience to climate change.
- iv) Review poverty, gender and climate change policy and identify poverty and gender risk mitigation processes and gaps.
- v) Review institutional framework for policy and resource allocation. Assess institutional capacity for mainstreaming poverty and gender risk mitigation in policy and budgetary processes.
- vi) Undertake a public expenditure review using data at the most disaggregated level possible to mitigate climate change risks and analyse poverty and gender budgets to estimate public expenditure incidence.
- vii) Provide recommendations for better targeting and utilization of public expenditure to mitigate climate change risks from a poverty and gender perspective.

The following sections provide guidance and examples for implementing the poverty and gender analysis in the CPEIR context.

2. Change Risk and Vulnerability Assessments of Gender and Poverty

Box 1: Key Questions for Climate Risk and Vulnerability, Gender and Poverty Analysis

- What is the rationale for undertaking climate risk and vulnerability analysis?
- What climate risk and vulnerability assessments exist currently?
- What poverty and gender equity data and analysis exists currently?
- How can climate risk assessment take into account poverty and gender analysis?
- What can we infer from an integrated analysis regarding the impact of climate change on men and women, especially the poor and the vulnerable?

2.1 Review of Country Evidence from Climate Risk Assessment

The Working Group on Adaptation (WG2) for the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC AR5) notes that “complex interactions among weather events and climate, dynamic livelihoods, multidimensional poverty and deprivation, and persistent inequalities, including gender inequalities, create an ever-shifting context of risk”. Therefore, “a focus on risk supports decision-making in the context of climate change”.

The IPCC AR5 WG2 report also indicates that there are common vulnerabilities across the Asia Pacific region. These are: (i) food insecurity due to the adverse impact on agricultural production related to changing weather patterns, (ii) disruption to both farm and non-farm livelihoods, (iii) depletion of forest and water resources resulting in increased competition for access, (iv) loss of assets due to extreme weather events and long term rise in sea levels, and (v) spread of communicable, especially vector borne diseases as well as other health-related adversities. From a gender perspective, these imply greater burden of unpaid work for women and increased time burden of all forms of work especially for women to ensure livelihood security.

We propose a risk assessment framework that would allow us to disaggregate the risk categories, their gender and poverty impact, and policy, institutional and public finance ramifications.

As a first step, we need to recognize that climate change will impact countries in different ways. It is important, therefore, to ground the CPEIR in existing and available evidence through a review of the literature, country reports and results from climate impact modelling undertaken by various agencies both nationally and

internationally. Box 1 provides an indicative list of key resources that collate such information at the regional and country levels. While gender and poverty considerations may not be explicit in the climate data, country level assessment reports provide the starting point for the analysis. This will be supplemented by country level poverty and gender assessments conducted by both national agencies often in collaboration with international development organizations.

Box 2: Climate Change Impact, Poverty and Gender Assessments Resources

International assessments:

UNDP Climate Change Country Profile

<http://www.geog.ox.ac.uk/research/climate/projects/undp-cp/>

World Bank Climate Risk and Adaptation Country Profile

http://sdwebx.worldbank.org/climateportalb/home.cfm?page=country_profile

Maplecroft Corp. Global Climate Change and Vulnerability Atlas:

<http://maplecroft.com/themes/cc/>

National Communications Support Program: <http://ncsp.undp.org/>

IPCC 5th Assessment Report 2014 – Impacts, Adaptation and Vulnerability

<http://www.ipcc.ch/report/ar5/wg2/> ; <http://ipcc-wg2.gov/AR5/>

IPCC AR5 Working Group2, Chapter 13 (Livelihoods and Poverty)

http://ipcc-wg2.gov/AR5/images/uploads/WGIIAR5-Chap13_FGDall.pdf

World Bank Living Standards Measurement Survey: <http://go.worldbank.org/IFS9WG7EO0>

UNDP MDG Goals Report: <http://www.undp.org/content/undp/en/home/mdgoverview.html>

UN Women Gender Responsive Budget Portal:

<http://www.gender-budgets.org/>

National Assessments:

Climate change– Ministry of Environment, Planning, Disaster Response etc.; Research institutions, Universities, Donor agencies

Poverty – Poverty Assessments / Participatory Poverty Assessments; National sample surveys; Demographic and Health Survey; National Plan documents; Donor country report; Country MDG/PRSP Reports

Gender – Ministry of Women’s Affairs, national women’s machineries; Country reports for the Commission on the Status of Women (CSW); Donor gender assessment reports

2.2 Undertaking Poverty and Gender Analysis of Climate Change Risks

UNDP adapted an existing climate risk framework developed for the private sector⁶ to build a climate risk gender and poverty impact assessment (provided in Table 1). The risks are broadly classified into seven different categories⁷: (i) Supply, (ii) Market, (iii) Operating, (iv) Recovery, (v) Socio-political, (vi) Domestic/time burden and (vii) Participant.

Supply and market risks are interrelated – any supply shock especially in the context of extreme weather events would be reflected in higher prices especially in food and energy. In the absence of adequate social protection, this has adverse economic impact on the poor both in urban and rural areas. Operating and recovery risks are exacerbated with adverse gender and poverty consequences as a result of both direct and indirect effect of climate change.

The last three categories are particularly relevant for a pro-poor and gender-sensitive CPEIR. Socio-political and domestic/time burden risks which are long-term in nature disproportionately affect women who are more vulnerable to adverse health outcomes, migration, conflict and burden of care. Building resilience of the poor and marginalized communities implies mitigation of participant risk, especially in relation to their ability to create, maintain and enhance asset ownership, including human capital. A climate-smart approach to development policy would therefore address these risks in order to increase resilience in the face of climate change.

⁶ Source: UNDP (2011), *Ensuring Gender Equity in Climate Change Financing*; Methodology adapted from Hart, Craig A. (2013), *Climate Change and the Private Sector*, New York: Routledge

⁷ The seven risks categories chosen by Hart (2007) to develop the a climate risk framework for the private sector and later adapted by UNDP to assess climate risk impact on the poor and vulnerable have been selected from a broader risk framework including 15 categories originally developed by Tinsley (2000).

Table 1: Climate Risk Impact Assessment on Gender and Poverty

Category of Risk	Description of Risk	Gender Impact	Poverty Impact
Supply Risk	Supply interruption; decreased access (food, water, public goods)	Exacerbates existing gender disparity in basic needs	Reduces access to basic needs in the absence of social protection
Market Risk	Demand and price increase; food and livelihood insecurity	Increases gender inequity in basic needs	Reduces purchasing power, requires coping mechanisms
Operating Risk	Loss of assets including shelter and livestock	Widens gender-based asset ownership gap	Pushes marginal households below poverty, deepens existing disparities
Recovery Risk	Impaired ability to recover asset losses after climate change related shocks	Skews asset ownership towards men; time cost of rebuilding asset base higher for women	Reduces chances of moving out of poverty; change in occupation with lower skill and reduced wages
Socio-political Risk	Adverse health and human development outcomes; Migration; Resource-related conflict; social disruption	Disproportionate impact of vector borne diseases on women and children; increase in female-headed households; bears the brunt of physical and social violence	Impoverishment due to increased healthcare cost; loss of livelihood; low skilled migration leads to deepening of poverty; loss of productive years due to conflict
Domestic/Time Burden Risk	Increased burden of unpaid work and time use for natural resource based livelihoods	Burden of unpaid and care work falls exclusively on women; reduced years of schooling for girl child; lower human development outcomes for girls	Less opportunity for productive work, especially for women; low returns to human development implies entrenched cycle of poverty
Participant Risk	Lack of financial stability; reduced credit worthiness; inadequate administrative and technical capacity	Increased gender bias in economic opportunity; institutions do not address gender inequities	Increased economic inequality; inadequate social protection mechanisms leads to socio-economic exclusion

Source: UNDP (2011), *Ensuring Gender Equity in Climate Change Financing*; Methodology adapted from Hart, C. (2007), *The Private Sector's Capacity to Manage Climate Risks and Finance Carbon Neutral Energy Infrastructure*, MIT. Also published in Hart, C (2013) *Climate Change and the Private Sector*, New York: Routledge

The risk framework indicates that climate change can deepen existing gender and economic inequalities in the absence of effective policies. It underscores the need

for both immediate action (eg. mitigating supply/recovery risk through better disaster management) and long term measures (eg. reducing time burden/participant risk through better public services and social protection) to address gender and poverty impact of climate change. The framework also helps to identify sectors and institutions (government as well as non-government) that can play a key role in increasing resilience while reducing existing inequalities. The risk framework, therefore, will help guide countries to prioritize interventions to reduce climate change risk for men and women, especially the poor and the vulnerable.

3. Review Poverty, Gender and Climate Change Policy

Box 3: Key Questions for Climate, Poverty and Gender Policy Analysis

- What are the key elements of climate resilience, poverty alleviation and gender equality policies?
- Does climate policy reflect the climate risk impact on gender and poverty?
- How does climate policy articulate poverty and gender related objectives more broadly?
- How do gender and poverty policy relate to the risk impact analysis and incorporate climate change related objectives?
- What synergies and contradictions can be identified in the three areas of policy?
- What sectoral linkages can be identified for effective implementation of pro-poor, gender responsive climate change policy framework?

Most countries in the world have come to recognize that climate change will play an important role in determining the direction of their development trajectory. As the IPCC AR5 WG2 report notes, climate change brings another layer of risk to the already existing ones that policymakers need to consider to determine their strategic choices to enhance economic growth and development. The report states that “managing climate change risk implies finding ways to build societies that are vibrant, secure, prosperous and resilient”.

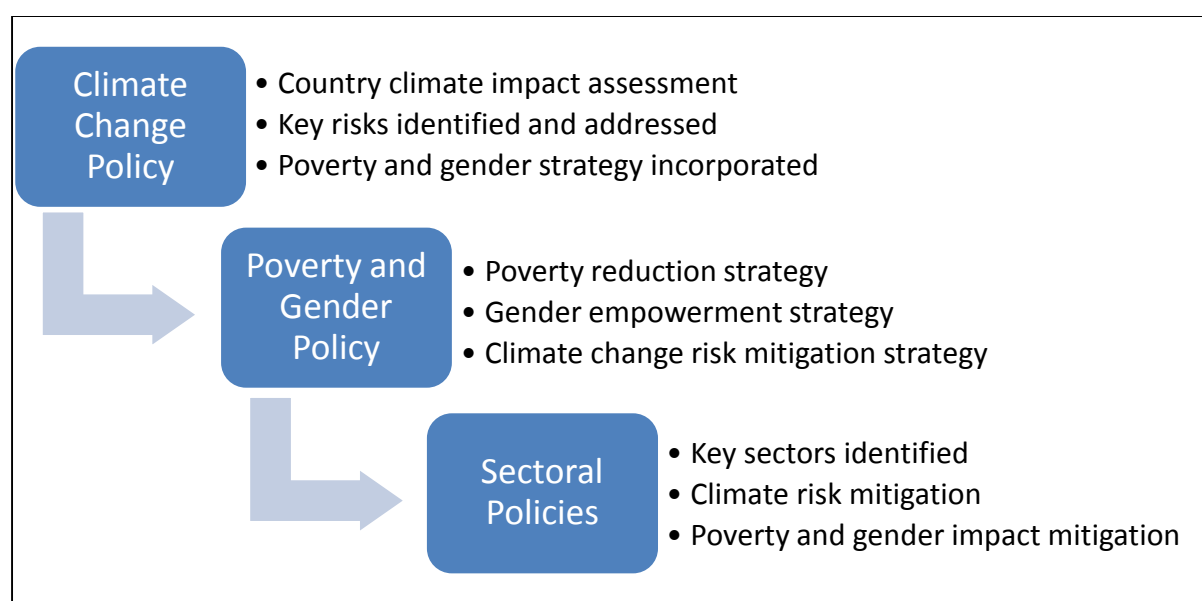
The policy framework for climate change has until now been framed in the context of the global debate on reducing greenhouse gas (GHG) emissions and the need to create a sustainable ‘green economy’. Increasingly, however, there is a realization that building climate resilience will have to be mainstreamed into sectoral policies, focused

on mitigating climate risks. Therefore, the policy framework calls for a multisectoral approach that will also facilitate a poverty and gender analysis of the climate change response.

Policy analysis would follow key steps outlined below (Figure 4).

- I. Climate change policy would be examined from the standpoint of risks identified, strategies for mitigation and incorporation of poverty and gender dimensions.
- II. Poverty and gender policy analysis would reveal the extent to which climate risks are mitigated in the policy framework.
- III. Sectoral policies would then be examined to identify the entry points for a broad strategic framework to mitigate climate risks, taking into account poverty and gender.
- IV. Finally, the multisectoral approach would be used to evaluate the institutional framework for climate risk mitigation and pro-poor, gender sensitive public expenditure priorities to implement an effective risk mitigation strategy.

Figure 3: Policy Analysis of Poverty, Gender and Climate Change



Example for Operationalizing Policy Analysis Steps:

We undertake a comparative review of the climate policy and action plans for Cambodia, Nepal and Bangladesh. All the three countries will be significantly affected by climate change over the next decades. Classified as least-developed countries, they face significant challenges to alleviate poverty and promote gender equity but will be expected to benefit from increased inflow of climate funds targeted largely at adaptation. It is in this context that the policy analysis would be helpful in identifying the key pathways for a strategic investment of resources to promote climate resilience while safeguarding economic growth and development. The key elements of the policies are summarized in Table 2.

Climate change policy in all the three countries - Cambodia, Nepal and Bangladesh - have elements that focus on gender and poverty impact of climate change. The strategy for operationalization, however, differs. Cambodia's policy focuses on key vulnerabilities and sectoral issues. Nepal's strategy emphasizes on the role of communities in mitigation and adaptation for climate change while recognizing all the vulnerable groups - the poor, women, children, marginalized communities etc. It also stipulates that 80 percent of funds should be spent by the local communities. Bangladesh's climate policy is the most explicit in putting gender and poverty at the heart of the climate change response. The policy also draws on the considerable work that Bangladesh has done in the field of gender and pro-poor budgeting, which can be used as instruments in the public expenditure analysis.

Example of Multi-sectoral Analysis of Climate Change, Poverty and Gender:

In the second step, we unpack the elements of climate change, poverty and gender policies to understand their cross-sectoral interdependence. To undertake this assessment, we need to review country-level policy framework and map the objectives to key sectors that have the greatest impact for enhancing climate resilience. Box 4 provides information on international and national resources for climate change, poverty and gender policy analysis.

Following this, we would examine whether they have mainstreamed gender and poverty. It will also provide the basis for sorting sectors according to their

relevance from the climate change perspective within the institutional and public expenditure analysis. This is illustrated Bangladesh in Table 3.

Box 4: Climate Change, Poverty and Gender Resources

International resources

Country National Communications to UNFCCC:

http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php

International Energy Agency Country Reports:

<http://www.iea.org/policiesandmeasures/climatechange/>

National Adaptation Program of Action (NAPA):

http://unfccc.int/adaptation/workstreams/national_adaptation_programmes_of_action/items/4585.php

Columbia Law School, Repository of Climate Change Policy Documents:

<http://web.law.columbia.edu/climate-change/resources/climate-change-laws-world>

IMF Poverty Reduction Strategy Papers (PRSP):

<http://www.imf.org/external/np/prsp/prsp.aspx#HeadingN>

UNFCCC – Linking Gender and Climate Change:

http://unfccc.int/gender_and_climate_change/items/7516.php

National resources

National Climate Change Policy and Action Plans (from MoE in most cases)

National Poverty Reduction Policy (Perspective Plans from Ministry of Planning)

National Gender Policy (Ministry of Women's Affairs; National Women's Machineries)

Budget Documents, Gender and Poverty Budget Statements (Ministry of Finance)

Policy statements related to fiscal management, decentralization, donor relations

Parliamentary legislation and court judgements especially for environmental regulation

Table 2: Summary of Climate Change Policy in Cambodia, Nepal and Bangladesh

Country	Climate Policy Objective	Poverty and Gender Strategy	Risks Addressed
Cambodia (Cambodia Climate Change Strategic Plan 2013-24)	“Reducing vulnerability to climate change impacts of people, in particular the most vulnerable, and critical systems (natural and societal)”	“The rural poor of Cambodia, the majority of whom are women, are most vulnerable to climate change impacts because of their high dependence on agriculture and natural resources. Therefore, there is a need to mainstream gender into climate change response measures.....in order for this cross-cutting issue to be supported by all government agencies, especially at the national and sub-national levels” (Cambodia CC Strategic Plan, Pg. 12)	Supply, Market, Operating, Socio-political
Nepal (Nepal Climate Change Policy, 2011)	“To improve livelihoods by mitigating and adapting to adverse impacts of climate change”	“Ensuring the participation of poor people, <i>Dalits</i> , marginalized indigenous communities, women, children and youth in the implementation of climate adaptation and climate change-related programmes...allocating at least 80 percent of available funds for field-level climate change activities” (pg.8, para 8.3.8)	Supply, Market, Operating, Recovery, Socio-political
Bangladesh (Bangladesh Climate Change Strategy and Action Plan, 2009)	“Pro-poor, climate resilient and low carbon development, based on adaptation to climate change, mitigation, technology transfer and adequate and timely flow of funds for investment, within an inviolate framework of food, energy, water, livelihoods and health security”	“The needs of the poor and the vulnerable, including women and children, will be prioritized in all activities implemented under the Action Plan.”	All relevant risks addressed

Table 3: Analysis of Poverty, Gender and Climate Change Policy, Bangladesh

Climate Policy	Poverty Policy	Gender Policy	Sectoral Linkages
Achieve pro-poor, resilient and low carbon economic growth and development	Increased income for the poor, protection of livelihoods and access to essential services	To give women the rights to wealth and resources earned through income, credit, land and market management. To give full and equal opportunity to women in health, education, training, income generating training,	Planning, finance, research and development, law, women's empowerment, CSOs
Climate change modelling at national and sub national levels; Macro-economic and sectoral impact of climate change	Use data for evidence-based planning and monitoring of policy impact	Create gender focal points in key ministries, gender disaggregated data and gender budget	Planning, agriculture, infrastructure, human development, women and child development
Food security through improved agricultural practices, efficient resource use, environmental conservation	Improve agricultural productivity, use of natural resources, access to market and credit	Special focus on rural, poor women engaged in agriculture, livestock and fisheries	Agriculture, land use, irrigation, water resources, research and development, financial services, private sector
Provision safe drinking water, housing, health services and employment to increase climate change resilience	Investment in infrastructure and human development focusing on backward regions and communities.	Infrastructure and social protection policies to place particular emphasis on gender and social inclusion	Infrastructure, health, social services, social protection, human development, local governments, NGOs
Particular emphasis on mitigating the effects of natural disasters by taking a gender and poverty centric approach	Reduce livelihood risk from natural disasters for the poor particularly in areas and populations with high vulnerability	Ensuring safety, security and livelihood of women before, during and after natural disasters	Disaster risk reduction, disaster response, emergency services, social security, CBOs, local governments

Sources: 1. Sixth 5-year Plan 2011-15, Government of Bangladesh; 2. Bangladesh Climate Change Strategy and Action Plan, 2009; 3. National Women's Development Policy, 2011

The analysis in Table 3, above, allows us to identify the common threads in climate, gender and poverty related policy. By linking these policies then to key sectors and associated ministries (in the fourth column of the table) we are able identify those ministries and agencies most likely to be managing programmes that provide triple

wins in terms of delivering poverty reduction, promoting gender equity and increasing climate resilience (as per Figure 1, page 5).

The analysis shows us for example that in the areas of livelihoods and income generation, data management and planning; agriculture; disaster management and infrastructure development (particularly in rural areas) there are significant synergies between the poverty reduction strategy, gender empowerment and climate change mitigation policies. Not presented here but an important part of this analysis will also be to identify where there might be contradictions in climate, poverty and gender policy – for example in relation to agricultural practices that may not be sustainable or green energy policy that might not be pro poor etc.

4. Review of Institutional Framework for Climate Change, Gender and Poverty Risk Mitigation

Box 5: Key Questions for Climate, Poverty and Gender Institutional Analysis

- What are the key institutions implementing climate change response?
- Do they have the appropriate mandate?
- Have they appropriately mainstreamed poverty and gender?
- What are the existing gaps (powers, resources, capacity)?
- What are the coordination mechanisms between climate change institutions, government departments and agencies? How does it affect climate response at national and local levels?
- Is it inclusive? Does it accommodate key stakeholders, especially civil society organizations?
- How does existing institutional framework address poverty impact and gender equity of climate change?

In most countries, institutional arrangements for climate change response are still evolving. The Ministry of Environment (MoE) has the mandate to play the lead role in policy formulation, coordination and implementation. As climate finance increases in scale and climate change is viewed more as a developmental issue, the ‘whole of government’ approach will become more relevant.

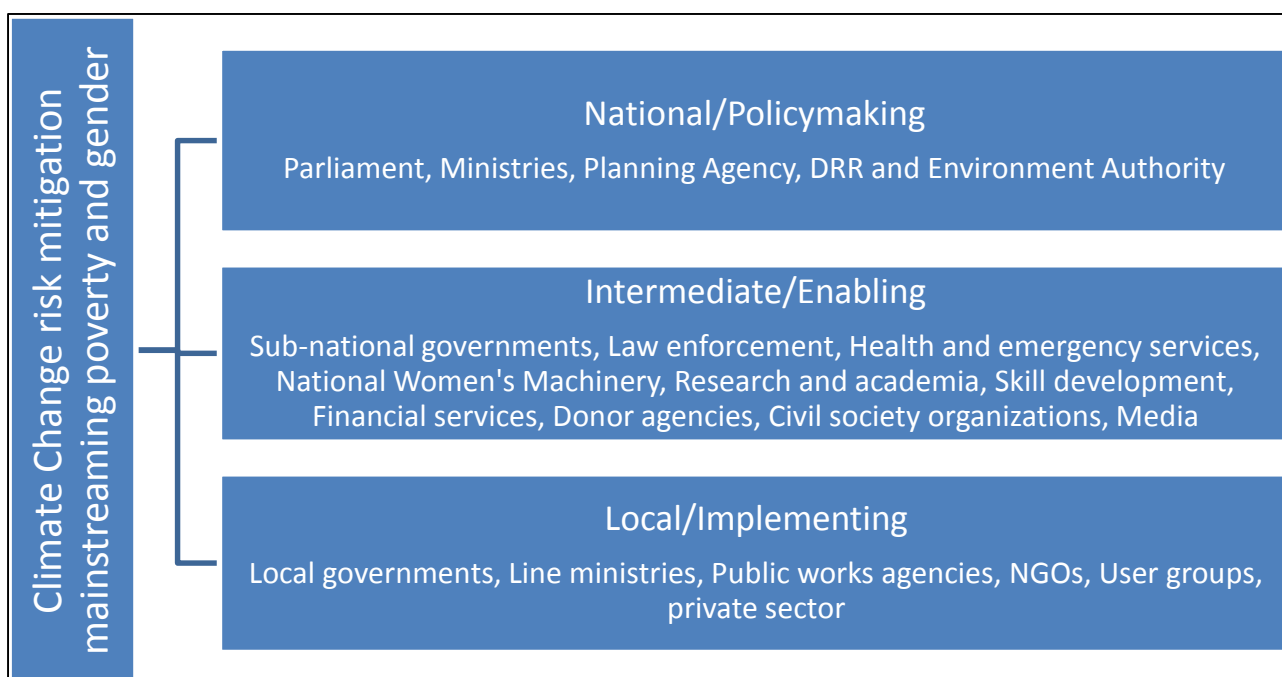
Institutional analysis of pro-poor and gender-sensitive CPEIR should be undertaken using a methodological framework that addresses the questions in Box 5. In terms of specific issues, the institutional analysis within CPEIR needs to take into account the challenge of mitigating climate risks especially for the poor and taking the

gender impact into account. This analysis would need to go beyond the ministries/agencies which are directly related to climate change (Box 6). The multisectoral approach needs to consider issues of coordination, planning and allocation in a broader framework to effectively analyse poverty and gender impact of climate change. Some key issues are:

- a. *Policy Coordination*: Adopting a 'whole-of-government' approach for mitigating climate risk; ensuring that gender and poverty are mainstreamed into sectoral policy; mapping key stakeholders (ministries, agencies, donors, CSOs) for better coordination
- b. *Planning Process*: Incorporating climate change risk mitigation in long-term planning objectives; mainstreaming gender and poverty in key sections in the final plan; ensuring effective institutional arrangements for implementation
- c. *Financial Allocation*: Analysis of resource needs for climate change, gender and poverty over the medium and long term; earmarking resource allocation within existing mechanisms such as Medium Term Budgetary/Expenditure Framework (MTBF/MTEF); preparation of a comprehensive Climate Fiscal Framework taking into account medium and long-term climate risk assessment and impact on poverty and gender
- d. *Performance Evaluation*: Incorporating climate risk mitigation in monitoring and evaluation framework; analysis of gender and poverty impact of climate finance; improving accountability of policy and implementation through internal (administrative) and external (community/civil society) mechanisms

Disaggregation of institutions by levels of operation provides a complementary method to analyse their effectiveness in addressing climate change risks. Institutions can be classified as national/policy, intermediate/enabling and local/implementing. Some institutions such as the National Disaster Management Authority may work at all levels. However, there is a need to coordinate between intermediate institutions such as emergency and law enforcement as well as local institutions such as frontline health services, NGOs and local governments. This is explained in Figure 4 below.

Figure 4: Institutional Framework for Climate Change Risk Mitigation



At the national level, the national development agency is the key institutional driver of the multisectoral response to climate change. In almost all countries surveyed, the ministry of local government is the implementing agency for climate funds which cut across gender and poverty. However, the involvement of elected or appointed local governments in climate finance is limited – primarily due to the limited powers devolved to them which mostly focus on poverty alleviation and the centralization of climate finance at the national level. Since foreign sources of funding form a significant proportion of available resources especially for climate change, development partners play a key role in the multisectoral response by playing a critical coordinating role in the case where national coordination mechanisms are weak.

At the local level, the space available to the civil society and non-government organizations depend to a large extent on the overall institutional environment, including democratic governance, inclusion of various stakeholders in the development process, voice of civil society in ensuring public accountability, and the access to information and a free media. In our pilot countries, Bangladesh and Nepal would fall at one end of the spectrum with strong civil society engagement, Cambodia and Vietnam would fall at the other end while Thailand would be somewhere in between.

Institutional arrangements vary significantly depending on the country context. It can be at different points in the spectrum regarding democratic decision making, decentralization, fiscal independence, governance capacity etc. From the CPEIR point of view, the critical element to evaluate in institutional arrangement for climate change is the extent of mainstreaming of poverty and gender in key institutions. The best case scenario is that poverty and gender are already mainstreamed into policy, planning, budgetary and implementation processes which will enable the country to better address climate change risks in a pro-poor and gender sensitive manner.

Following the risk mitigation framework, an institutional evaluation would be undertaken to identify mandates, mainstreaming and gaps. Since little published literature exists in this field, it can be undertaken using a combination of a) review of policy documents, b) situational assessment, c) key informant interviews and d) media report analysis. These would be used to populate the following table to create a matrix of institutional strengths and weaknesses to address key climate change risks.

Box 6: Institutional Review

Key Institutions: Constitutional bodies such as parliamentary committees especially related to planning, poverty reduction, gender empowerment; National Women's Machineries; National Planning Agency; Ministries in charge of fiscal and climate change policy (finance, environment, energy, water etc.); National and Sub-national level coordinating bodies, especially donor agencies, Civil Society Organizations working on issues of gender, poverty and climate finance.

Key Institutional Reforms: Decentralization, service delivery, fiscal reform, subsidy reform, budget transparency, outcome and gender budgeting. These will be tracked using government documents and project/program level reports from national CSOs and international donor agencies (DFID, GIZ, SIDA etc.) and contextualized for climate change analysis.

Table 4: Institutional Matrix for Climate Risk Mitigation, Gender and Poverty

	Evaluation Parameters	Critical Gaps
Policy and Administration	<ul style="list-style-type: none"> • Is the national Parliament an independent legislative body? • Do parliamentary committees have powers of oversight over executive decisions? • How many committees discuss poverty and gender issues? • How many committees discuss climate change issues? • Are there elected sub-national and local governments? • Have administrative and fiscal powers been devolved to sub-national governments? 	Capacity constraints at all levels, lack of devolution etc.
Planning	<ul style="list-style-type: none"> • Are poverty and gender mainstreamed in national plans? • Do the plans have climate risk resilience as an objective? • How many sectors identified in the climate change policy are included in the plan? • How many ministries are responsible for climate change response? • Do these ministries have separate mandates to implement programs? 	Climate not explicit in planning, narrow focus on few ministries, limited mandate
Mainstreaming and Coordination	<ul style="list-style-type: none"> • How many ministries have mainstreamed poverty and gender? • How many of these ministries have gender focal points? • How many of them have climate change cells? • Is there an inter-ministerial high level committee on climate change? • How many ministries are involved? What are the key ministries? • How frequently does it meet? • Are the decisions binding on all ministries? 	Climate cells not empowered, lack of coordination with gender focal points
Allocation and Expenditure	<ul style="list-style-type: none"> • Are plan allocations reflected in budgetary allocations? • Are budgetary allocations accountable and transparent? • Is there outcome/performance budget? • Does the country have poverty tags in budgetary allocations? • Does it produce gender budget statements? • What proportion of budget is developmental expenditure? • What proportion of development budget is from donor funding? • What proportion of the national budget is devolved to sub-national and local governments? • How many ministries undertake climate change related expenditure? • How many ministries have earmarks for climate change resilience? • Is expenditure based on climate change risk assessment? 	Lack of budget transparency, dependence on donor resources, climate change risks not factored into resource allocation

The CPEIR institutional analysis therefore can be extended to understand the gender and poverty linkages using Table 4 as a mapping tool. In the ideal situation, one would expect the set of intersection between poverty, gender and climate-focused institutions

to grow. This can be achieved by listing intermediate and implementation institutions and assessing their mandates related to climate change, gender and poverty. An indicative list of key institutions is provided in Box 6.

In addition, it also provides a list of parallel processes at the country level which will be complementary to climate change risk mitigation. These include decentralization (Nepal), subsidy reform (Indonesia), outcome budgeting (Bangladesh) and Climate Change Fiscal Framework (Cambodia). Each of these have implications for public expenditure on climate change and the extent to which key risks are addressed through increased and better targeting of budgetary allocations, especially for poverty and gender.

5. Gender and Poverty Analysis of Climate Public Expenditure

Box 7: Key Questions for Climate, Poverty and Gender Public Expenditure Analysis

- What are the trends in public expenditure generally and specifically for climate change actions?
- Does the country produce a gender budget? Does it undertake poverty analysis of public expenditure?
- What are the main sources of funding for climate change actions? What role do international sources of climate finance play?
- Is public expenditure allocation targeted at mitigation of risks and increasing climate change resilience?
- Where is climatechange related expenditure happening across government ministries/departments/agencies?
- Is activity level data available from government Chart of Accounts/ budget documents? If so, does it have climate weights?
- What is the poverty impact of climate change expenditure? Can we determine whether it mitigates gender inequities of related to climate change?

5.1 Determining Climate Relevance of Public Expenditure

Determining the quantum of public expenditure that is directly or indirectly related to climate change mitigation and adaptation is an emerging area of policy work. The core issue is that at present, there is no internationally recognized definition of climate expenditure. The CPEIR approach broadly follows the OECD definitions for climate change mitigation and adaptation activities both at a conceptual and sectoral level.

However, the present system of government accounts does not have climate as a functional category.

The public expenditure analysis would first need to determine what constitutes climate expenditure, the relevance of programs that are explicit in their climate objectives and then estimate the amount of public expenditure for mitigating climate risks. The poverty and gender analysis would then indicate how much of this expenditure is pro-poor and gender sensitive.

In the CPEIR analysis, there is an inherent tension between strict inclusion criteria on the one hand and loose exclusion criteria on the other. Strict inclusion criteria limits the scope of the CPEIR and will most likely produce low figures for climate finance indicators, such as climate change expenditure as a percentage of GDP. Loose exclusion criteria may result in listing programs whose link with climate change is tenuous at best. Therefore, the CPEIR would provide an inflated estimate of the share of public expenditure and not be meaningful for public policy advocacy purposes.

As Budlender (2014) notes, “in terms of efficiency and effectiveness, it probably makes more sense to concentrate on ministries with larger overall budgets and/or those that have an important role to play in addressing climate change issues. An exercise that is limited in scope might be of better quality and may gain better commitment from the relevant government officials than one that is too wide ranging. One obvious way of limiting scope is to focus on the ministries that can contribute most to mitigation and adaptation rather than trying to find each and every allocation, no matter how marginal, that contributes in some way”.

The first step is to understand the relevance of allocations to the objective of increasing climate resilience. This involves categorization of relevance of climate expenditure and using it to determine relative weights. A comparison of Cambodia and Bangladesh categorizations of relevance is provided in Table 5.

Table 5: Comparison of Climate Expenditure Relevance Criteria

Cambodia	Bangladesh
<p><u>High Relevance:</u> Programs that have a clear primary objective of delivering concrete and visible outcomes that improve climate resilience or contribute to mitigation, eg. Renewable energy, forestry, disaster risk management and disaster response, climate resilient agriculture, infrastructure and water management with explicit climate proofing objective, health expenditure directly associated with climate sensitive diseases;</p> <p><u>Mid Relevance:</u> Programs either have secondary objectives related to building climate resilience, or are mixed programs with a range of activities that are not easily separated but include at least some that promote climate resilience, eg. Irrigation, biodiversity and conservation, livelihood security targeted at vulnerable communities, conventional energy that reduce dependence on forest products;</p> <p><u>Low relevance:</u> Programs that are limited to indirect adaptation and mitigation, eg. general infrastructure, administrative expenditure, roads, communication, urban development etc.</p>	<p><u>Strongly relevant:</u> Concrete, direct and potentially highly visible outcome/effect due to investment activity which is fundamental in the design of the activity, with an explicit objective of mitigation and/or adaptation (Climate weight: 75%+)</p> <p><u>Significantly relevant:</u> Remarkable and somewhat concrete and potentially visible outcome/effect - objectives important but not one of the principal reasons for undertaking the activity. (50 – 74 %)</p> <p><u>Somewhat relevant:</u> Indirect with some potential effect, for example, rehabilitation of embankments, polders, water logging land use change; also poverty reduction, livelihood enhancement, awareness building (Climate weight: 25 – 49%)</p> <p><u>Implicitly relevant:</u> Not related to climate objective, but may provide enabling conditions, for example, expanded road and rail network, social protection schemes etc. (Climate weight: 0-24%)</p>

5.2 Identifying Sectoral Impact of Climate Change Risks

Second, in order to undertake a gender and poverty analysis of climate public expenditure, we use the climate risk impact assessment methodology in Table 1. The risks can be mapped onto specific sectors, and would therefore indicate correspondence between climate, gender and poverty relevance. For example, disaster risk reduction has high relevance for all the three parameters, while health services and livelihood which are not directly linked to climate change will have high relevance for both gender and poverty. Similarly, irrigation may have mid-relevance for climate and gender, but has high relevance for poverty by preventing crop failures. As noted by Budlander (2014) above, this will allow us to focus on key sectors/ ministries which have the largest impact on climate change, taking into account poverty and gender considerations.

Using the country risk assessment and risk analysis framework in Table 1, we can categorize activities which directly increase climate resilience and ones which are general. Key sectors include infrastructure, roads, health and livelihood and social protection. Climate relevance weights will be higher for infrastructure projects such as laying of storm drains and watershed which address long term impact of excess or deficit of rainfall as a consequence of climate change. Similarly, raising the height of roads and strengthening of bridges in low lying areas threatened by long term sea level rise will have higher climate relevance, compared to general expansion in the road network in the country. A gender and poverty analysis should be carried out to determine the respective relevance weights. In general, both infrastructure and social services have high poverty relevance. Climate proofing increases gender relevance for infrastructure while it remains high for social services. An illustrative mapping is provided in Table 6 below:

Table 6: Mapping Sectoral Relevance – Illustrative example

Sector	Climate Relevance	Gender Relevance	Poverty Relevance
Environment and Forest	Hi	Hi	Hi
Agriculture	Hi	Hi	Hi
Disaster Risk Reduction	Hi	Hi	Hi
Water Resources	Hi	Hi	Hi
Irrigation	Mid	Mid	Hi
Renewable Energy	Hi	Mid	Mid
Infrastructure (fully climate proofed)	Hi	Hi	Hi
Infrastructure (non-climate)	Low	Mid	Hi
Road Improvement (climate proofed)	Mid	Hi	Hi
Roads (general)	Low	Mid	Hi
Health (climate sensitive diseases)	Hi	Hi	Hi
Health (General)	Low	Hi	Hi
Livelihoods and Social Protection (of CC vulnerable)	Mid	Hi	Hi
Livelihoods and Social Protection (general)	Low	Hi	Hi

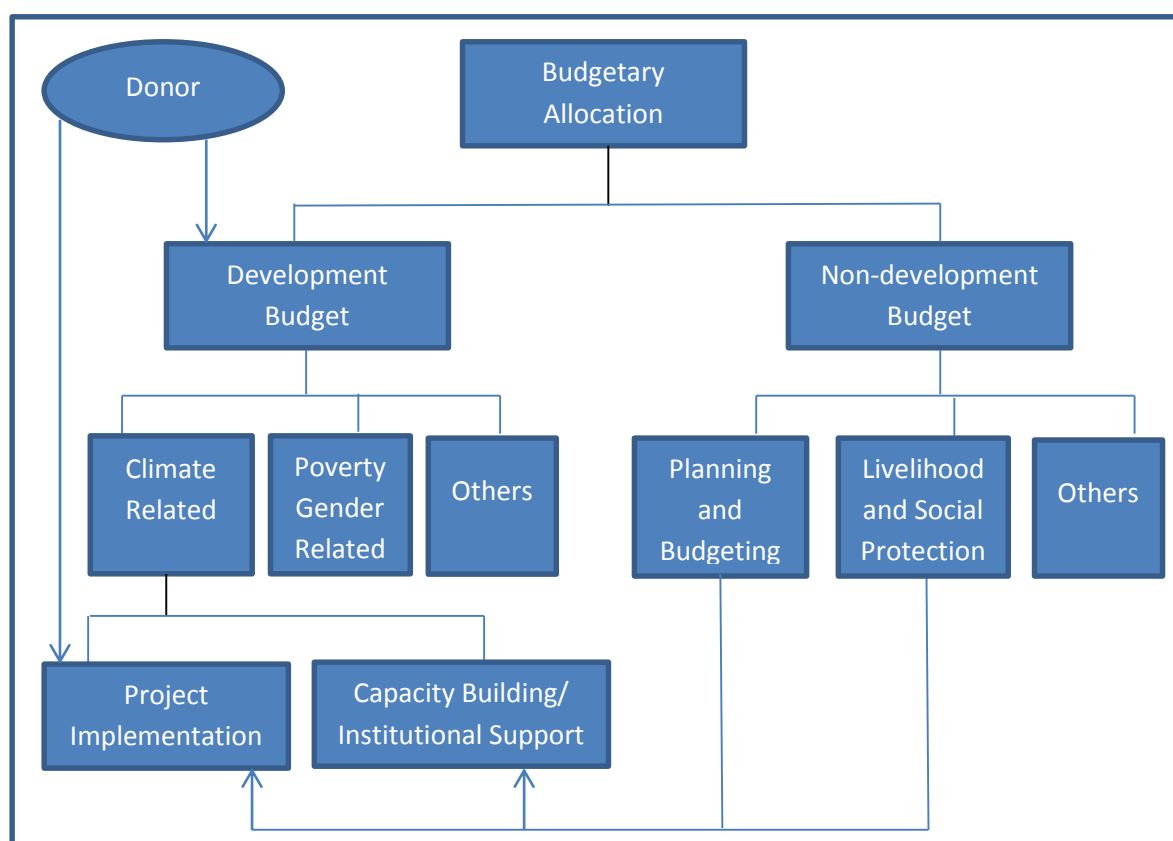
Source: Adapted from Cambodia CPEIR, 2013, Figure 11, Pg.42

5.3 Classifying Climate Change Expenditure for Poverty and Gender Analysis

Following the determination of the priority sectors, we can identify programs that address climate risks in a pro-poor and gender-sensitive manner within the budgetary framework. Although specific terminology for budgetary classification can differ across countries, most government budgets can be disaggregated into developmental and non-developmental categories. The former largely constitutes investment, while the latter consists mostly of recurrent expenditure. The important point to note is that expenditure on climate change will comprise of both development and non-development expenditure. This is true of gender and poverty related expenditure as well.

The structure of climate, gender and poverty expenditure is detailed below:

Figure 5: Budgetary Flows for Climate, Gender and Poverty Expenditure



An added layer especially for climate expenditure is the significant role played by donors and international climate finance accessed by the country. Some countries such as Bangladesh also have trust funds which provide financing for risk mitigation projects either directly or through government ministries or departments. The same is the case

for donor funds. Therefore, the CPEIR analysis needs to account for off-budget transfers as well and undertake a poverty and gender analysis of these fund flows.

While development and non-development expenditure can be disaggregated from budget documents, mapping donor resources proves a challenge. This is because of the multiplicity of donors with their own systems and processes which determine the amount of resources spent on projects and the level at which the expenditure takes place. Specifically, the public expenditure review would map donor resources pooled with government allocation and that which goes off-budget directly to implementing agencies.

The summary table for Bangladesh, which has good expenditure tracking systems, shows that more than three-quarter of climate resources are spent by the government with the remaining amount from donor contribution. Within government resources, roughly equal share comes from development and non-development expenditure. Donor portfolio has changed significantly over three years until 2010/11 – over 80 per cent is in the form of loans, up from less than 60 per cent.

Table 7: Sources of Funding of Programmes with a Climate Dimension

	2009/10	2010/11	2011/12
GoB – Non Development	38.60%	38.90%	39.00%
GoB – ADP	38.00%	38.60%	38.60%
Donor – Loans	13.50%	14.00%	18.50%
Donor – Grants	9.90%	8.50%	3.80%
Total Climate	100.00%	100.00%	100.00%
GoB v Donor	%	%	%
GoB	76.60%	77.50%	77.60%
Donor	23.40%	22.50%	22.40%
	100.00%	100.00%	100.00%
Proportions of Donor Funds	%	%	%
Loans	57.80%	62.30%	82.80%
Grants	42.20%	37.70%	17.20%
	100.00%	100.00%	100.00%

Source: CPEIR Bangladesh, 2012

5.4 Gender and Poverty Analysis of Climate Public Expenditure – Country Options

Depending on the availability and level of disaggregation of public expenditure data, there are several options that can be chosen for undertaking gender and poverty analysis.

Option 1: Implement CPEIR drawing on existing Gender and Poverty Budget/expenditure analysis at the ministry level

- Climate impact assessments are available.
- Gender and poverty analysis of climate risk is carried out and sectors mapped.
- Budgetary codes can be collected from the Chart of Accounts.
- Detailed project level data not available.
- Climate weights assigned and climate expenditure tagged by budget institution.
- Gender and poverty budget / expenditure analysis with ministry-wise data is available.

Gender and poverty share of climate public expenditure are calculated ministry-wise. This will provide a range within which each ministry's expenditure can be attributed as pro-poor and gender sensitive.

Option 2: Implement CPEIR incorporating the implementation of gender and poverty budget analysis

- Climate impact assessments are available.
- Gender and poverty analysis of climate risk is carried out and sectors mapped.
- Budgetary codes can be collected from the Chart of Accounts.
- Detailed project level data for both development and non-development expenditure is collected and tabulated.
- Climate weights assigned and climate expenditure tagged by budget institution.
- Need to prepare gender and poverty budget / expenditure analysis at the project and/or ministry level using weights determined through a consultative process (e.g. expert workshop).

Option 3: Implement CPEIR drawing on existing poverty and gender analysis of the budget/ expenditures to project levels

- Climate impact assessments are available.
- Gender and poverty analysis of climate risk is carried out and sectors mapped.
- Budgetary codes can be collected from the Chart of Accounts.
- Detailed project level data for both development and non-development expenditure is collected and tabulated.
- Climate weights assigned and climate expenditure tagged by budget institution.
- Gender and poverty budgets are already available with project level expenditure data.

Poverty and gender incidence of climate public expenditure can be estimated through aggregation from project level data in this case. This will provide the most comprehensive assessment of poverty and gender impact of climate public expenditure.

Illustrative Example: Bangladesh

We illustrate the gender and poverty analysis of public expenditure by using the CPEIR database and budgetary data from the Ministry of Finance, Government of Bangladesh. Bangladesh has conducted a CPEIR in 2012 and finalized its Climate Fiscal Framework in June 2014. The country has also taken a lead in producing comprehensive poverty and gender budgets annually. Therefore, from the ministry-wise estimates of climate finance expenditure, we can apply the respective gender and poverty budget shares to estimate pro-poor and gender sensitive resource allocation for improving climate resilience (Option 1). The aggregate ministry-wise data is summarized in Table 8.

Table 8: Climate Public Expenditure, Gender and Poverty Analysis - Bangladesh

Ministry	Total Budget 2011-12 (Lakh Tk)	% Climate (A)	% Gender (B)	% Poverty (C)	% CC Expenditure Share
Ministry of Environment and Forest	123,100	66.58	41.01	79.16	9.0%
Ministry of Water Resources	222,800	33.73	49.24	69.60	8.2%
Women and Children Affairs Ministry	123,600	33.61	85.37	87.37	4.6%
Defense Ministry	11,574	32.31	3.92	33.01	0.4%
Prime Minister's Office	50,600	28.09	24.30	56.82	1.6%
Rural Development and Cooperative Division, Local Government Ministry	80,200	26.61	70.02	84.38	2.3%
Ministry of Home Affairs	7,720	25.27	9.57	50.19	0.2%
Ministry of Expatriates Welfare and Overseas Employment	23,100	24.00	28.33	52.33	0.6%
Ministry of Food, Disaster Management and Relief	708,600	20.79	69.84	96.91	16.2%
Planning Division, Ministry of Planning	116,400	19.22	48.82	97.60	2.5%
Local Government Division, Local Government Ministry	1,090,900	18.68	47.41	88.86	22.4%
Ministry of Agriculture	740,600	18.66	38.40	84.64	15.2%
Ministry of Chittagong Hill Tracks Affairs	56,000	16.25	80.75	98.66	1.0%
Ministry of Shipping	65,300	14.30	15.72	45.77	1.0%
Ministry of Fisheries and Livestock	97,700	11.86	33.61	71.65	1.3%
Ministry of Power, Energy and Mineral Resources	115,100	10.33	30.16	65.59	1.3%
Social Welfare Ministry	203,900	8.85	42.58	44.97	2.0%
Roads and Railway Division, Ministry of Communication	745,000	6.43	26.11	52.32	5.3%
Housing and Public Works Ministry	150,800	5.76	12.46	40.86	1.0%
Health and Family Welfare Ministry	8,869	4.89	45.37	63.01	0.0%
Ministry of Land	67,400	3.87	10.91	59.21	0.3%
Primary and Mass Education Ministry	895,600	2.50	44.25	74.74	2.5%
Public Administration Ministry	97,800	2.31	9.58	43.38	0.2%
Ministry of Civil Aviation and Tourism	29,600	2.30	10.06	48.85	0.1%
Commerce Ministry	16,400	1.49	31.28	42.05	0.0%
Textile and Jute Ministry	19,800	0.89	24.16	52.56	0.0%
Education Ministry	1,085,000	0.65	29.88	71.90	0.8%
Bank and Financial Institute Division, Ministry of Finance	23,800	0.45	15.44	79.48	0.0%
Science, Information and communication Technology Ministry	51,000	0.44	31.88	51.50	0.0%
Cultural Ministry	23,600	0.35	12.95	31.60	0.0%
Industry Ministry	62,600	0.31	32.45	63.05	0.0%
Power Division, Ministry of Power, Energy and Mineral Resources	716,000	0.18	38.30	77.37	0.1%
Youth and Sports Ministry	68,800	0.01	13.39	27.51	0.0%
Total/ Average Weights	7,899,263	0.12	0.41	0.74	100.0%

Source: Unit level Climate Project database; Budget Brief, Poverty and Gender budgets, Government of Bangladesh, 2013-14

The data from Table 8 indicates that for Bangladesh, 60 per cent of climate relevant expenditure is from four ministries (local government, agriculture, disaster management and water resources). The top 10 ministries make up 90 per cent of all

climate relevant expenditure, with the rest distributed across 47 other ministries/agencies. The share of ministries in total climate expenditure seems to reflect their roles and responsibilities in mitigating the risks from climate change. The data also shows that ministries that are most climate relevant (climate relevance weight > 12 percent; which is the average climate weight) have high poverty centric expenditure incidence (poverty relevance weight > 74 percent which is the average poverty weight of total spending in Bangladesh). Climate relevant expenditure through a total of eleven ministries, therefore, have high poverty incidence as illustrated in table 9.

Table 9: Climate Relevant Ministries with High Poverty Incidence

	Poverty Incidence %	Climate Relevance %
Ministry of Environment and Forest	79.16	66.58
Ministry of Water Resources	69.60	33.73
Women and Child Affairs Ministry	87.37	33.61
Rural Development and Cooperative Division, Local Government Ministry	84.38	26.61
Ministry of Food, Disaster Management and Relief	96.91	20.79
Planning Division, Ministry of Planning	97.60	19.22
Local Government Division, Local Government Ministry	88.86	18.68
Ministry of Agriculture	84.64	18.66
Ministry of Chittagong Hill Tracks Affairs	98.66	16.25
Ministry of Fisheries and Livestock	71.65	11.86
Ministry of Power, Energy and Mineral Resources	65.59	10.33

The potential of climate relevant expenditures to have gender incidence seems however to be weaker. Only eight ministries with climate relevance higher than 12 percent have a gender incidence higher than 41 percent which is the average gender incidence of total spending in Bangladesh. Only three ministries - Ministry of Food, Disaster Management, Ministry of Women and Child Affairs and the Ministry of Chittagong Hill Track Affairs - meet the criteria for high gender incidence of at least 50 percent. These last two ministries represent, however, only 5.6 percent of total climate relevant expenditures.

Table 10: Climate Relevant Ministries with High Gender Incidence

	Gender Incidence %	Climate Relevance %
Ministry of Environment and Forest	41.01	66.58
Ministry of Water Resources	49.24	33.73
Women and Child Affairs Ministry	85.37	33.61
Rural Development and Cooperative Division, Local Government Ministry	70.02	26.61
Ministry of Food, Disaster Management and Relief	69.84	20.79
Planning Division, Ministry of Planning	48.82	19.22
Local Government Division, Local Government Ministry	47.41	18.68
Ministry of Chittagong Hill Tracts Affairs	80.75	16.25

The analysis also reveals that ministries in key climate change adaptation sectors such as agriculture and infrastructure have lower than average gender incidence.

Using this data, we can also estimate the range of overlap between climate expenditure on the one hand and poverty and gender on the other. The analysis above considered the poverty and gender incidences of ministries with high climate relevance (defined as higher than average climate relevance of 12 percent). If climate relevant expenditures in such ministries are more likely to have a positive impact on poverty or gender inequity, this could not be stated with certainty.

It is, therefore, important to verify whether the climate related expenditures are actually overlapping with expenditures that have a positive impact on poverty reduction and gender inequity. The formulae used to derive the minimum and maximum amounts of expenditures in a ministry that is or could be potentially be both (i) climate relevant and gender responsive and (ii) climate relevant and poverty-focused are explained in Box 8 and calculated in Table 11.

Box 8: Climate Relevant Expenditures with Poverty and Gender Co-Benefits:

Calculating the Overlap Range

Minimum Climate Relevant Expenditures with Gender-Co Benefits:

- ✓ Calculate the percentage of expenditures in a ministry that are not climate relevant,
- ✓ Calculate the difference between the percentage of gender relevant expenditures and non-climate relevant expenditures,
- ✓ If the difference is negative, gender weight is smaller than non-climate weight, we assume that all gender relevant expenditures overlap with non-climate expenditures (worst case scenario),
- ✓ Therefore, the minimum percentage of climate change expenditures that overlaps with gender is zero.
- ✓ If the difference is positive, gender weight is bigger than non-climate weight, then even if all the non-climate expenditures are gender positive, a minimum of climate relevant expenditures must have some gender significance and it will be calculated as the difference between the percentage of gender relevant expenditures and non-climate relevant expenditures.

Maximum Potential Climate Relevant Expenditures with Gender-Co Benefits:

- ✓ If the climate relevant weight is higher than the gender weight, we then assume as a best case scenario that all the gender expenditures are within climate expenditures, then the maximum estimate for gender responsive climate expenditures could be derived using simply the gender weight.
- ✓ If the climate relevant weight is lower than the gender weight, we then assume as a best case scenario that all the climate expenditures are within gender expenditures, then the maximum estimate for gender responsive climate expenditures could be derived using simply the climate weight.

The same method could be used for poverty.

Table 11: Climate Relevant Expenditures with Poverty and Gender Incidence

Ministry	Total Budget 2011-12 (Lakh Tk)	Climate and Gender		Climate and Poverty	
		Min %	Max%	Min %	Max%
Ministry of Environment and Forest	123,100	7.6	41.0	45.7	66.6
Ministry of Water Resources	222,800	0.0	33.7	3.3	33.7
Women and Child Affairs Ministry	123,600	19.0	33.6	21.0	33.6
Defense Ministry	11,574	0.0	3.9	0.0	32.3
Prime Minister's Office	50,600	0.0	24.3	0.0	28.1
Rural Development and Cooperative Division, Local Government Ministry	80,200	0.0	26.6	11.0	26.6
Ministry of Home Affairs	7,720	0.0	9.6	0.0	25.3
Ministry of Expatriates Welfare and Overseas Employment	23,100	0.0	24.0	0.0	24.0
Ministry of Food, Disaster Management and Relief	708,600	0.0	20.8	17.7	20.8
Planning Division, Ministry of Planning	116,400	0.0	19.2	16.8	19.2
Local Government Division, Local Government Ministry	1,090,900	0.0	18.7	7.5	18.7
Ministry of Agriculture	740,600	0.0	18.7	3.3	18.7
Ministry of Chittagong Hill Tracts Affairs	56,000	0.0	16.3	14.9	16.3
Ministry of Shipping	65,300	0.0	14.3	0.0	14.3
Ministry of Fisheries and Livestock	97,700	0.0	11.9	0.0	11.9
Ministry of Power, Energy and Mineral Resources	115,100	0.0	10.3	0.0	10.3
Social Welfare Ministry	203,900	0.0	8.9	0.0	8.9
Roads and Railway Division, Ministry of Communication	745,000	0.0	6.4	0.0	6.4
Housing and Public Works Ministry	150,800	0.0	5.8	0.0	5.8
Health and Family Welfare Ministry	8,869	0.0	4.9	0.0	4.9
Ministry of Land	67,400	0.0	3.9	0.0	3.9
Primary and Mass Education Ministry	895,600	0.0	2.5	0.0	2.5
Public Administration Ministry	97,800	0.0	2.3	0.0	2.3
Ministry of Civil Aviation and Tourism	29,600	0.0	2.3	0.0	2.3
Commerce Ministry	16,400	0.0	1.5	0.0	1.5
Textile and Jute Ministry	19,800	0.0	0.9	0.0	0.9
Education Ministry	1,085,000	0.0	0.6	0.0	0.6
Bank and Financial Institute Division, Ministry of Finance	23,800	0.0	0.5	0.0	0.5
Science, Information and communication Technology Ministry	51,000	0.0	0.4	0.0	0.4
Cultural Ministry	23,600	0.0	0.4	0.0	0.4
Industry Ministry	62,600	0.0	0.3	0.0	0.3
Power Division, Ministry of Power, Energy and Mineral Resources	716,000	0.0	0.2	0.0	0.2
Youth and Sports Ministry	68,800	0.0	0.0	0.0	0.0
Total/Weighted Average	7,899,263				

There are nine ministries providing climate related services with maximum poverty co-benefits of more than 20 percent. The number increases to sixteen if the criteria is reduced to 10 percent. The concerned ministries are highlighted in table 12:

Table 12: Climate Relevant Expenditures with Poverty co-Benefits

Ministry	Total Budget 2011-12 (Lakh Tk)	Climate and Poverty	
		Min %	Max%
Ministry of Environment and Forest	123,100	45.7	66.6
Ministry of Water Resources	222,800	3.3	33.7
Women and Child Affairs Ministry	123,600	21.0	33.6
Defense Ministry	11,574	0.0	32.3
Prime Minister's Office	50,600	0.0	28.1
Rural Development and Cooperative Division, Local Government Ministry	80,200	11.0	26.6
Ministry of Home Affairs	7,720	0.0	25.3
Ministry of Expatriates Welfare and Overseas Employment	23,100	0.0	24.0
Ministry of Food, Disaster Management and Relief	708,600	17.7	20.8
Planning Division, Ministry of Planning	116,400	16.8	19.2
Local Government Division, Local Government Ministry	1,090,900	7.5	18.7
Ministry of Agriculture	740,600	3.3	18.7
Ministry of Chittagong Hill Tracts Affairs	56,000	14.9	16.3
Ministry of Shipping	65,300	0.0	14.3
Ministry of Fisheries and Livestock	97,700	0.0	11.9
Ministry of Power, Energy and Mineral Resources	115,100	0.0	10.3

Similar analysis can be carried out for gender incidence of ministry-level expenditure. Ministry of Environment and Forests and the Ministry of Women and Child Affairs are two ministries providing climate related services with gender co-benefits with absolute certainty. However, a significant number of ministries seem to offer potential synergies between climate and gender including Agriculture, Local Government, Fisheries and Livestock, Rural Development and Cooperative, and Food, Disaster Management and Relief.

These potential synergies between climate and gender can be further quantified if detailed project level data along with climate weights are obtained (Option 3).

Table 13: Climate Relevant Expenditures with Gender co-Benefits

Ministry	Total Budget 2011-12 (Lakh Tk)	Climate and Gender	
		Min %	Max%
Ministry of Environment and Forest	123,100	7.6	41.0
Ministry of Water Resources	222,800	0.0	33.7
Women and Child Affairs Ministry	123,600	19.0	33.6
Prime Minister's Office	50,600	0.0	24.3
Rural Development and Cooperative Division, Local Government Ministry	80,200	0.0	26.6
Ministry of Expatriates Welfare and Overseas Employment	23,100	0.0	24.0
Ministry of Food, Disaster Management and Relief	708,600	0.0	20.8
Planning Division, Ministry of Planning	116,400	0.0	19.2
Local Government Division, Local Government Ministry	1,090,900	0.0	18.7
Ministry of Agriculture	740,600	0.0	18.7
Ministry of Chittagong Hill Tracts Affairs	56,000	0.0	16.3
Ministry of Shipping	65,300	0.0	14.3
Ministry of Fisheries and Livestock	97,700	0.0	11.9
Ministry of Power, Energy and Mineral Resources	115,100	0.0	10.3

A first attempt at granular analysis could be made by focusing on the ministries identified in Table 12 as presenting a high likelihood of climate relevant expenditures with gender co-benefits. The Bangladesh 2012 CPEIR database lists all the programs that are climate relevant. The next step would be to verify if these programs have also been categorized as gender responsive in the gender budget reports published on the Ministry of Finance of Bangladesh.

Examples of Ministry-wise Assessment of Project-level data:

Ministry of Food, Disaster Management and Relief could be potentially spending as much as 20.8 percent on climate relevant activities with gender co-benefits. A quick review of the CPEIR reveals that under Department of Food, two programs were selected as particularly climate relevant: i) Reconstruction of Damaged Food Warehouses and related infrastructures under Food Department, and ii) National Food Policy capacity strengthening programme. A review of the Gender Budget report published by the Finance Division reveals that in 2009-2010, 50 percent of the spending on the reconstruction of damaged food warehouses and related infrastructures under Food Division was gender responsive. Disaster Management and Relief Division also has a similar concentration of climate relevant programs that are also gender sensitive. These include the construction of small bridges, culverts and food and cyclone shelters

in disaster prone areas have received high climate relevance scores ranging from 20 percent to 90 percent. A parallel review of the gender report of the Disaster Management and Relief reveals that women are not only beneficiaries of such projects but are also involved in their construction in order to reduce their poverty levels and empower them.

Ministry of Local Government, Rural Development and Cooperatives is a key ministry with large proportion of climate relevant projects. The analysis in Table 13 reveals that the *Local Government Division* could be potentially spending up to 18.7 percent on climate relevant activities with gender co-benefits. A review of the programs selected in the CPEIR and the budget documents highlight the following programs:

- i) *Hygiene sanitation and water supply* projects were credited with a 30 percent climate relevance score. This program has important implications for women as noted in the Local Government Division Gender Report: “The poor people are the main beneficiaries of the distribution of safe water sources and sanitary latrines at free/minimum prices. These have reduced health hazards for the women substantially. Safe water supply will reduce the time spent by women in water collection freeing up time for other economic activities. Water source repair and maintenance training to women caretakers will improve the opportunities to maintain public property. As a result, their status in the family/ society will be increased.”
- ii) *Rural infrastructure development* projects were credited with a 30 percent climate relevance score. The Budget Gender report analyzed its gender impact as follows: “Employment opportunities of about 5.30 crore person days will be created for female workers through development and maintenance of rural infrastructure. This will raise the income of these female workers and ultimately their status both in society and family will be increased. Besides, women’s active participation in the afforestation committee will enable them in taking decisions and create women’s employment.”
- iii) *Small scale water resources development* projects were credited with a 40 percent climate relevance score: “Local beneficiaries are involved in the management of small scale water resources. One third positions of the water resources management committee are reserved for women. Besides, a maintenance subcommittee is also formed with one-third women members. Participation of women in water resources management helps eradicate poverty.”

Following Table 13, up to 26.6 percent of the expenditures in the *Rural Development and Cooperatives division* (RD CD) could be both building resilience to climate and benefit women

simultaneously. The disaggregated analysis using project level data and gender budget statement reveals the following climate and gender co-benefits:

Table 14: Climate and Gender Co-benefits of RD CD projects

Name of Project	Gender Incidence %	Climate Relevance %
One House, One Farm	90	40
Economic Empowerment of the Poorest in Bangladesh	90	50
Comprehensive Village Development Program	60	40
Participatory Rural Development Project	90	40
Employment Guarantee Scheme for the Hardcore Poor of the Northern Region	100	50
Livelihood Improvement of the Garo Community	100	25

The data for RD CD shows very high gender incidence with moderate-to-high climate relevance for major projects listed in Table 14. The Gender Budget report presents a detailed analysis of their gender impact as well. It states that: “About 60-70 percent beneficiaries are women in the RD CD implemented projects/programs. Living standard of about 6.8 lakh women through *One House One Farm Project* and about 1.5 lakh women through *Comprehensive Village Development Programme (Phase-2) Project* is being improved. Economic empowerment of 4 lakh women in chars, haors, water logged areas, cyclone prone coastal areas, monga-affected and poverty ridden hilly areas will be achieved through the project titled *Economic Empowerment of the Poorest in Bangladesh* which is expected to contribute significantly in women’s advancement.”

Therefore, Option 3 provides the most comprehensive assessment of gender and climate co-benefits. However, it requires detailed expenditure data along with climate and gender weights for each project. The analysis can be carried out for climate and poverty co-benefits if public expenditure data is available at the same level of disaggregation with corresponding poverty weights using the methodology described here. There is a trade off between rigour of the analysis and the intensity of time and effort needed to implement it.

Key Inferences from Gender and Poverty Analysis of Public Expenditure:

- The Ministry of Environment and Forest has the highest proportion of climate expenditure that relates to poverty (climate expenditure with co-benefits weight is equal to 45 percent). It also has the highest proportion of climate expenditure that relates to gender equity objectives. Further, more granular analysis would likely identify that there are programmes that deliver triple wins in terms of gender equity, poverty reduction and climate change resilience in MoEF.
- In absolute terms the largest expenditures with potential for triple wins reside in the Local Government Division, Rural Development and Cooperatives Division,

Ministry of Water Resources and Ministry of Food, Disaster Management and Relief. More disaggregated analysis would be needed to quantify the magnitude of the overlap between gender, poverty and climate change expenditure.

- Ministries with smaller budgets but strong potential for triple wins include Planning, Ministry of Women Affairs and Children and Ministry of Chittagong Hill Tract Affairs.
- Climate expenditure is currently being channelled to ministries which have direct implementation responsibility, comparatively little is spent on high level policy and advocacy though ministries of planning and finance or on social services through health, family welfare, education and social protection
- The initial analysis suggests that there is much stronger relationship between climate and poverty related expenditures than that for gender. Most climate relevant ministries have low gender budgets. This would suggest that the gender incidence of public expenditure needs to be improved in general and for climate relevant ministries in particular.

6. Recommendations for next steps in implementation poverty and gender analysis within CPEIRs

a) Why is a poverty and gender analysis of climate public expenditure needed?

Gender and poverty analysis adds more weight to CPEIR. As the consensus grows that climate change is a development issue, both countries and donors would like to know whether increases in climate expenditure is reducing poverty and addressing gender inequities. The extended CPEIR analysis would be well placed to address this client need in the future.

b) What are the pre-requisites for undertaking poverty and gender analysis?

Countries should have recent data on climate change impact and risk assessment. Availability and quality of budgetary and off-budgetary data is critical for expenditure analysis. Initial survey of data sources will help the consultant determine which of the options can be applicable and plan the study accordingly.

c) What are the key priorities for including poverty and gender analysis?

The main priority should be to build an inter-disciplinary team with the appropriate skill set to undertake the extended CPEIR analysis. This may require collaboration across government, research institutions, academia, CSOs and donor agencies. It is useful to have an advisory committee and organize an inception workshop with periodic follow ups throughout the project cycle. Other priorities include identifying government counterparts especially in the Ministry of Finance, undertaking data consistency checks and creating mechanism for consensus on estimates of poverty and gender especially when project level data are not available.

d) How should the poverty and gender analysis be used for advocacy?

The extended CPEIR would be of interest to a wide array of stakeholders within the country and also in the wider international community. However, there should be clear ownership of the document, preferably by the ministry of finance or planning which will act on the results and recommendations. The poverty and gender analysis should set the stage for policy and institutional reform to make climate public expenditure more effective and equitable.

e) Immediate next steps should include:

- **Pilot the implementation of an integrated climate, poverty and gender expenditure analysis in Bangladesh, drawing on existing climate, poverty and gender analysis of the budget / expenditures to project levels**
- **All future CPEIRs should include poverty and gender analysis as part of their analysis of climate risk and its translation into policy and expenditures.**
- **A revised CPEIR methodological note should integrate the methodology here outlined**

Bibliography:

- Budlender, D. (2014), *Tracking Climate Change Funding: Learning from Gender Responsive Budgeting*. International Budget Partnership, Washington D.C.
- Hart, C. (2007), *The Private Sector's Capacity to Manage Climate Risks and Finance Carbon Neutral Energy Infrastructure*, PhD Thesis, MIT.
- Hart, Craig A. (2013), *Climate Change and the Private Sector*, New York: Routledge
- Government of Bangladesh (2013), *Budget Brief, Gender and Poverty Budgets*
- Government of Bangladesh (2012), *Climate Public Expenditure and Institutional Review*
- Government of Bangladesh (2010), *Sixth 5-year Plan 2011-15*
- Government of Bangladesh (2011), *National Women's Development Policy*
- Government of Bangladesh (2009), *Climate Change Strategy and Action Plan*
- Government of Cambodia (2012), *Climate Public Expenditure and Institutional Review*
- Government of Nepal (2011), *Climate Public Expenditure and Institutional Review*
- IPCC (2014), *Report of Working Group II, Fifth Assessment Report*, Geneva
- OECD (2005), *Poverty and Climate Change: Reducing the Vulnerability of the Poor through Adaptation*
- SIDA (2001), *Briefing Paper on the 'Feminisation of Poverty'*, BRIDGE, Institute of Development Studies, University of Sussex, UK
- Tinsley, R. (2000), *Advancing Project Financing*. Euromoney Books
- UNDP (2011), *Ensuring Gender Equity in Climate Change Financing*
- UNDP (2013), *Overview of Linkages between Gender and Climate Change*. Policy Brief No.1
- World Bank (2013). *Turn Down the Heat: Climate Extremes, Regional Impacts and the Case for Resilience*. Washington, D.C.
- World Bank (2014). *Climate-Smart Development: Adding up the benefits of actions that help build prosperity, end poverty and combat climate change*. Washington, D.C.
-

This initiative is supported by:

