

Bhutan: Preparation of the Strategic Program for Climate Resilience

Terms of Reference (TORs) for Individual Local Consultant to provide Technical Support for the Development of the SPCR Document

- Local Consultant -

1. BACKGROUND

Bhutan is a landlocked country nestled in the eastern Himalayas between China and India. Its population, estimated at approximately 768,577, is amongst the lowest in South Asia region. Almost 70 percent of the country's land area (38,394 square kilometers) is forested. Bhutan's stunning topography spans elevations from about 100 m in the south to 7,500 m in the north. The country has three distinct climatic zones: subtropical, alpine and temperate, which encompass numerous micro-climates due to dramatic variations in elevation and topography. Even though Bhutan is a net sequester of greenhouse gases (GHG), the effects of climate change and variability are becoming increasingly visible.

Bhutan is highly exposed to hydro-meteorological hazards such as floods, flashfloods, landslides, Glacier Lake Outburst Floods (GLOF), windstorms and cyclones. According to the International Disaster Database, the ten most significant natural disasters in Bhutan have all occurred in the last twenty years in terms of casualties and number of people affected. The 1994 GLOF event at the Luggye Tsho killed 21 people and damaged 91 houses and 1,781 acres of land. The heavy rainfall brought about by Cyclone Aila in 2009 caused Bhutan to incur an estimated loss of US\$ 17 million. The country is also increasingly experiencing prolonged and extreme droughts, which in turn increases the risk of loss of biodiversity, crop yield, agricultural productivity, and forest fires. Unseasonal and intense rainfall and hailstorms can destroy crops, devastating farmers who have no safety net. During the monsoon season, landslides are a major problem for the roads sector, a lifeline for Bhutan. With most of the rivers confined in narrow gorges, blockage of rivers by landslides risk formation of artificial dams that pose great danger to downstream assets such as hydro power. Extreme weather events have significant socio-economic consequences and adversely affect people's livelihoods and well-being, particularly marginal and poorer communities.

Intergovernmental Panel on Climate Change (IPCC AR5) projections for temperature and precipitation derived from 16 Global Climate Models indicate an increase of 2-3°C in the warmest temperatures in the medium term (2046-2065) and an increase of 3-5°C for the same in the long term (2081-2100). Overall, annual precipitation is projected to increase in the region with a likely decrease of 10 to 20% during December - February in the mid-term (2046-2065) and 20% to 50% increase in September – November in the long-term (2081-2100). In addition, glacier mass changes for 2006-2100 were projected by simulating the response of a glacier model to CMIP5 projections from 14 GCMs (Radić et al., 2013). Results for the Himalaya range between 2% gain and 29% loss to 2035; to 2100, the range of losses is 15 to 78% (with medium confidence)¹. Available observational data and literature also shows an increase in monsoon precipitation over the Himalayan range by the end of the century. Further, it also shows that in the last few decades, the Himalayan and the Tibetan plateau have warmed at a greater rate than in the last century (Gautam et. al, 2013). There

¹ Under RCP4.5, one of the four Representative Concentration Pathways (RCPs) or greenhouse gas concentration (not emissions) trajectories adopted by the IPCC for its fifth Assessment Report (AR5) in 2014.

is evidence of glacier retreat in the eastern and western Himalayas and expansion of glacial lakes is predicted to be the highest in Nepal and Bhutan.

Climate variability and change risks productivity and performance of key socio-economic sectors such as agriculture, hydropower, tourism, transport, infrastructure and water. Agriculture, livestock and forestry account for 16.77 percent of Bhutan's GDP; electricity and water supply account for 14.15 percent of GDP and construction accounts for 15.46 percent of GDP (Statistical Yearbook of Bhutan 2015, NSB, RGOB). Erratic and heavy rainfall are already impacting agricultural productivity. Farmers increasingly report instability in crop yields, loss in production, declining crop quality, and decreased water availability for farming and irrigation. Changes in precipitation is impacting the availability of water for drinking and energy production in the short, medium and long term, with cycles of flooding during monsoons and very low flows and drying streams during other seasons. Extreme weather events expose infrastructure assets (such as hydropower and road network) to increasing risk of floods and landslides, jeopardizing efficiency of operation.

To address these risks and develop a long-term strategic program to address climate resilience, the GNHC of the Royal Government of Bhutan (RGOB) sought support from the Climate Investment Fund (CIF) in developing a Strategic Program for Climate Resilience (SPCR). Bhutan became one of ten countries globally to become eligible for CIF's Pilot Program on Climate Resilience (PPCR) to develop its SPCR. The SPCR is a country-owned and led framework identifying vulnerabilities and priorities for mainstreaming climate resilience into development planning and investment, which will support the country to formulate its long-term vision on climate resilience, including in the private sector. The value added of the SPCR process is that it builds on previous and ongoing initiatives such as the NAPAs, NAP, and activities within climate dependent sectors such as water, urban resilience, preparedness and disaster management while contributing to the planning for the 12th Five year plan and its expected progress towards SDGs, and the implementation of its Nationally Determined Contribution (NDC). It will (a) provide a framework for a long-term programmatic approach for mainstreaming resilience into development planning in Bhutan, (b) put in place a coordination mechanism and process of engagement on climate issues that build on existing institutional arrangements in the country, (c) support RGOB in contributing to its National Key Results Areas (NKRAs) and also to its planned progress on SDGs, while aiding the country in monitoring key performance indicators that track resilience related to its NKRAs, (d) develop a roadmap and builds necessary capacity and investment opportunities that could be undertaken not only in the short term, but also in the medium and longer term and (e) identify areas where climate resilience could be enhanced through private sector participation.

The process is led by GNHC and is being supported in a coordinated by Multilateral Development Banks (MDB), including the World Bank as the lead MDB, International Finance Corporation (IFC), and Asian Development Bank (ADB). The SPCR is being developed through an organized and participatory process, and includes consultations with national and local government stakeholders, nongovernmental organizations (NGOs), academia, and the private sector. It is adding to the capacity of Bhutanese government institutions and experts engaged in the process by providing opportunities to identify, prioritize, and address some of the key challenges and barriers for greater resilience. It involves stocktaking on policy, institutional capacity, and investments that have been undertaken; identifying priorities and strategies; defining key agencies; allocating tasks among agencies; and developing a results framework (RF) to track progress. This RF will be aligned with the NKRAs and its KPIs, and will allow reporting on the PPCR core indicators, monitored annually. These include proposed climate related performance indicators for four NKRAs in the

draft 12th FYP (July 2018-June 2023): (i) healthy ecosystem services maintained; (ii) carbon neutral, climate and disaster resilient development enhanced; (iii) water, food and nutrition security ensured; (iv) livability, safety and sustainability of human settlements improved.

The SPCR builds on policy and analytical work previously completed or underway and is designed to lay out a strategic framework and program for investment to be potentially funded by multilateral or bilateral development institutions or climate funds. The SPCR document is expected to provide a long-term vision for addressing climate resilience, outline country priorities, and articulate a program of investments to achieve its goals.

2. DESCRIPTION OF THE ASSIGNMENT

2.1 Objective

The overall objective of the assignment is to support the Government in preparing the SPCR, in accordance with the CIF guidance and align with the government's national development priorities for carbon neutral and climate resilient development. The selected local consultant will provide technical support in developing the SPCR document, which would include a strategic framework for integrating climate resilience into national development plan, a results Framework and a roadmap of investment plan covering the short, medium and long term perspectives.

While a Lead Consultant hired by the Government will lead developing the SPCR document, the local consultant will work closely with the Lead Consultant and the GNHC, which is leading the preparation of the SPCR, and support a consultative process with stakeholders and MDBs (World Bank is lead MDB) under the guidance of GNHC.

2.2 Scope of Work

The local consultant shall support: i) the Lead Consultant in developing the SPCR; ii) GNHC in leading a consultative and participatory process under the guidance of GNHC. The detailed scope of work includes the following:

- (i) Support the Lead Consultant to coordinate day-to-day communications with the GNHC, line Ministries, local governments, the private sector, and the NGOs, as required, and assist in the preparation of a stakeholder engagement plan to facilitate the preparation of the SPCR;
- (ii) Support the Lead Consultant to review key documents (including plan, policy and strategic documents for different sectors, mission documents, commitments made under NDC and Bhutan's national communications to the UNFCCC, National Strategy and Action Plan for Low Carbon Development, NAPA 2006 and 2012, among others), assessment of policies, institutional capacity and organizational arrangements, discussions with stakeholders from different sectors, and using the draft outline for the SPCR (in Annex);
- (iii) Provide essential technical, institutional, regulatory and strategic policy inputs to the Lead Consultant and GNHC, as required, on all aspects of preparation of the SPCR;
- (iv) Support the expert review process to ensure timely completion of the review and responses into the SPCR document;

- (v) Support the GNHC in reviewing and supervising, in consultation with the World Bank Task Team, the implementation of the procurement and work plan for the preparation of the SPCR and technical studies, and reviewing draft documents including ToRs, procurement package, evaluation of consultant's proposals, and deliverables produced under that work plan to enhance quality;
- (vi) Attend meetings, events, or consultations organized by the GNHC, line Ministries, National Steering Committee or a Technical Working Groups of the SPCR development, and brief the result of each event, findings, and recommendations to the GNHC, the Lead Consultant and MDBs;
- (vii) Support the GNHC in organizing country visits by the Lead Consultant or joint missions by MDBs, including meeting arrangements, coordination with line Ministries, local Governments, other stakeholders, preparation of meeting materials (agenda, presentations, etc.), as required, and any other logistical support required by the GNHC; and
- (viii) Help the GNHC with preparation of delivering briefings, updates and presentations to the National Steering Committee, and CIF's PPCR committee, as required.

2.3 Expected outputs and deliverables

The expected outputs of the consultancy are the following:

- Summary of comments on the SPCR document during the validation with stakeholders and expert review².
- Inputs to select chapters of the SPCR document.
- Technical review notes on ToRs for technical studies, procurement package, and consultant's proposal and deliverables as per procurement plan prepared by the GNHC;
- Meeting notes for consultations or stakeholder meetings for SPCR preparation and technical studies, organized by the GNHC, National Steering Committee or Technical Working Groups;
- Technical review and comments on the draft SPCR prior to submission to the PPCR Committee;
- and Semi-weekly progress reports on the SPCR preparation and technical studies.

3. EXPERTISE REQUIRED

The consultant shall meet the following minimum requirements:

- Advanced degree in the field of development policy, economics, climate change, natural resources or other relevant field.
- At least 10 years of experience with strategy development, policy support, monitoring and evaluation, technical operations in areas of climate change, water, environment and natural resources.

² One of the requirements as a part of the submission to CIF's PPCR sub-Committee is that the SPCR has to be technically reviewed by an expert (CIF has a roster of technical experts).

- Proven capacity to coordinate inter-ministerial cooperation and sharing of information between government agencies, and the private and NGO sectors.
- Proven experience in advising government and/or multilateral development banks on climate change policy at a senior level.
- Strong capability to analyze policies, regulatory frameworks, barriers and the like, related to sectoral sustainable development approaches.
- Familiarity with the Climate Investment Funds' Pilot Program on Climate Resilience and the SPCRs would be an asset.
- Excellent writing, analytical and communications skills demonstrated by a list of publications/presentations.
- Experience working with MDB's is an advantage.

4. DURATION AND REPORTING

The consultancy will be for a duration of 90 days from June 8, 2017 onwards. The consultancy will involve significant presence in Bhutan with stakeholder consultations in Thimphu and at the district level.

The consultant will report to GNHC and provide semi-weekly (twice a week) updates on progress made. The consultant will also work closely with the lead consultant in conducting the assignment. GNHC will support the consultant in the organization of the consultative meetings and by providing office space and facilities, and in accessing key documents and reports.

Annexes to the TOR

- ✓ Annex 1: SPCR Document Outline Framework
- ✓ Annex 2: SPCR process (figure)
- ✓ Annex 3: List of planned Technical Studies

Annex 1. Proposed Outline of SPCR

Chapter 1 – Introduction

- Key development challenges and priorities (5 yr plan, sdg's)
- Rationale for PPCR support
- Objective of the SPCR
- Consultative process (and Coordination mechanism) rest in annex (emphasis on gender, participation)
- Organization of the Report

Chapter 2 – Climate Risk and vulnerability (focus on gender throughout the chapter)

- Exposure and vulnerability to natural hazards
- Cyclones, intense rainfall, droughts, etc.
- Impacts (data)
 - Sector wise summariesClimate risks (variability, change)
 - Incl. projections

Chapter 3 – CC relevant policies, strategies and Institutional Assessment

1. Key Policies and strategies and mainstreaming of CC

2. Institutional analysis (incl gender)

Current mandates and priorities, capacity, and resources

3. Stocktaking of key CC related programs/investments/activities

Summary table

Chapter 4 – SPCR Framework and pillars

1. Intro to approach (transformational value added of strategic view of resilience, embedding in national planning, institutional capacity) Overall framework

- Pillar one
- Pillar two
- Pillar Three
- Governance and long term capacity development

2. Results Framework

3. Investment priorities and financing options

Chapter 5 – Private Sector's Engagement within the SPCR framework

(Potential on youth employment)

Chapter 6 – Outline of Investment Plan

1. Priority areas for investment and draft component concepts
2. Indicative resource envelope and sources of financing

3. Make a strong business case on why the priority area is proposed for financing
4. Preparation funding

For each concept:

- a. Background and context Objectives
- b. Results and indicators (RF in annex) Components
- c. Institutional arrangements Risks
- d. TORs for feasibility studies as needed

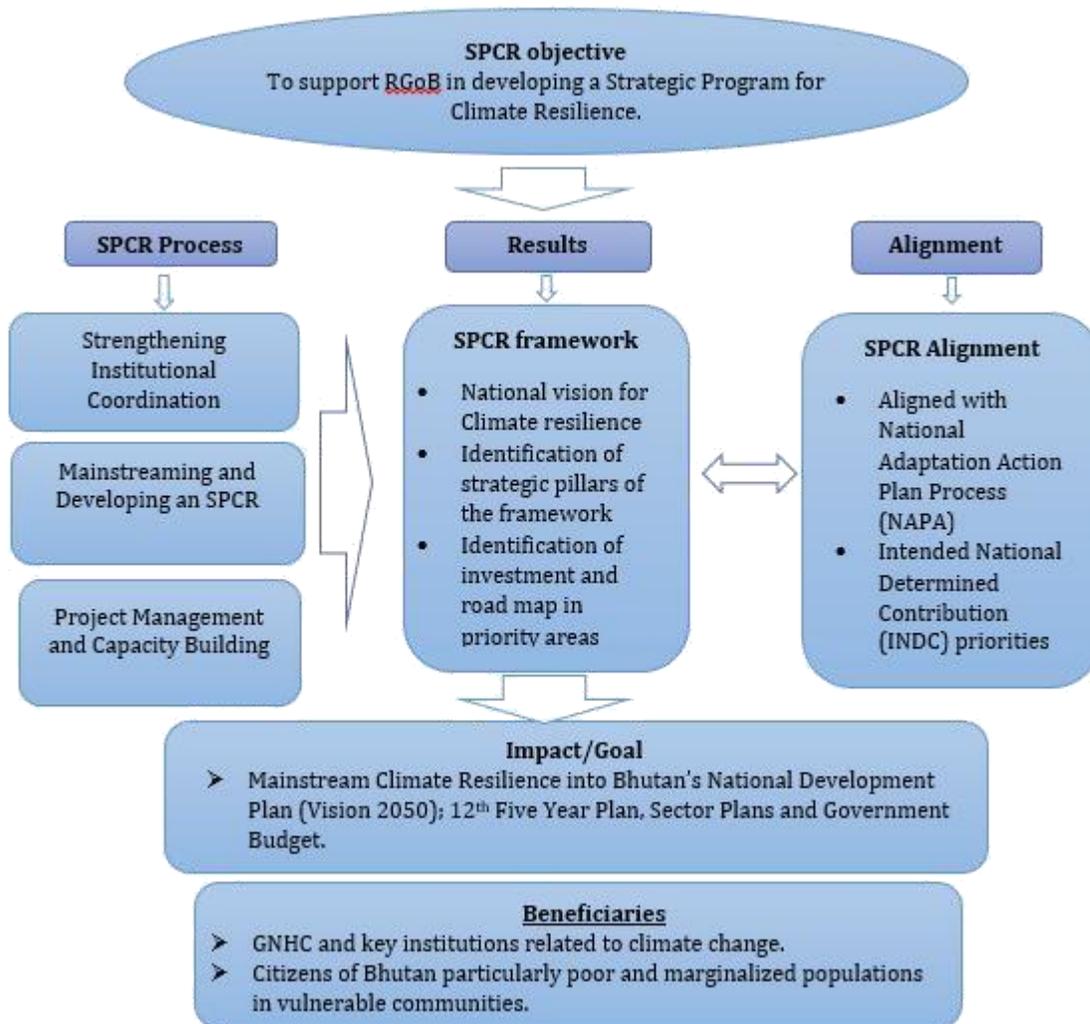
Annexes

i) SPCR Framework and Process; (ii) Results Framework and Methodology (including mapping to PPCR

Core Indicators and 12th FYP NKRA's Resilience related KPIs); (iii) Note on climate vulnerability in key sectors (sector summaries) (iv) Summary of Technical Studies including risks and potential impacts to the productivity and assets in critical sectors and preparation activities, and TORs for Technical Studies;

(v) Stocktaking of climate related investments and activities (including matrix of DP supported activities) with summary of lessons learned (vi) Summary of key policies, strategies and institutions (vii) Ongoing and potential climate mitigation activities; (viii) List of private sector stakeholder engagements, (ix) References and bibliography, (x) Consultations and Participatory Process (including gender aspects), and list of participants; etc.

Annex 2 - Bhutan SPCR Process



Annex 3: List of technical studies as a part of SPCR preparation

Annex 3. List of planned technical studies as a part of SPCR preparation

Sl.. No.	Preparation of SPCR and Technical Studies (titles to be further modified)	Lead Agency	Indicative budget in USD
	Preparation of the SPCR – Review of existing literature, gap analysis, consultations, institutional analysis, framework development, development of roadmap and investment strategy.	Gross National Happiness Commission	100K
Pillar 1: Enhancing Information Base for Hydromet Services and Climate Resilience			
1	Climate vulnerability mapping and risk identification and services	National Center for Hydrology and Meteorology (NCHM)	250K
Pillar 2: Preparedness, Food and Water security			
2	Analysis of climate impact on water scarcity and development implementation plan for critical watersheds	Watershed Management Division, Department of Forests and Park Services, Ministry of Agriculture and Forests	200K
3	Assessment of flooding hazards, DEM, flood mitigation options for flood vulnerable districts (southern belt)	Flood Engineering Management Division, Department of Engineering Services, Ministry of Works and Human Settlements	250K
Pillar 3: Sustainable Growth and Resilient Infrastructure			
4	Climate Smart Urban Planning and Development	Department of Human Settlements, Ministry of Works and Human Settlements	100K
5	Private sector for Climate Resilience	Gross National Happiness Commission	100K
Cross cutting pillar: Strengthening Governance, Institutional Coordination and Human Resource Capacity			
6	Human resource capacity analysis and curricula development for climate, meteorology and hydrology	Jointly led by NCHM and NEC	50K