

Terms of Reference

CONSULTANCY SERVICE SUPPORT TO DEVELOPMENT OF NATIONAL FRAMEWORK FOR CLIMATE SERVICES AND SUPPORT TO SECTORAL WORK GROUPS

(Contract ID No: PPCR/DHM/S/QCBS-37)

November, 2015

1. Introduction

This Term of Reference (ToR) is for a consulting firm to lead to the development of a National Framework for Climate Services (NFCS) in Nepal. During this assignment the consultant will carry out national consultations with stakeholders and potential users of climate services in collaboration with the Department of Hydrology and Meteorology (DHM) and moderate the early steps of sectoral working groups to contribute to the NFCS. The final outcome of the assignment is an Action plan for NFCS, which DHM and sectoral stakeholders are committed to. Sustainability of the outcome is essential and the consult is to plan and provide training to the DHM key climate service experts to be able to continue the work after the assignment. The consultations on NFCS are to be carried out in collaboration with World Meteorological Organization (WMO) and follow the guidelines of WMO to develop the NFCS.

2. Background

2.1 Pilot Program for Climate Resilience – Building Resilience to Climate Related Hazards

Nepal is the fourth most climate-vulnerable country¹ in the world, because of its challenging topography, poor and resource-dependent population and weak institutional capacity. Therefore Nepal is selected to be one of the countries for *Pilot Program for Climate Resilience* (PPCR) administered by Asian Development Bank, The International Finance Corporation and The World Bank. [^{2,3}]

The project *Building Resilience to Climate Related Hazards* (BRCH)⁴ is one of the projects funded through PPCR. The objective of BRCH-project is to enhance government capacity to mitigate climate related hazards by improving the accuracy and timeliness of weather and flood forecasts and warnings for climate vulnerable communities, as well as developing agricultural management information systems services to help farmers mitigate climate related production risks.

The project comprises four components as briefly described below.

- A. Institutional strengthening, capacity building and implementation support of DHM;
- B. Modernization of observation networks and forecasting;
- C. Enhancement of the service delivery system of DHM; and
- D. Creation of an agriculture management information system (AMIS).

¹ <http://maplecroft.com/about/news/ccvi.html>

² <https://www.climateinvestmentfunds.org/cifnet/?q=country/nepal>

³ <http://ppcr.moste.gov.np/>

⁴ <http://www.worldbank.org/projects/P127508/building-resilience-climate-related-hazards?lang=en>

Component A: Institutional strengthening, capacity building and implementation support of DHM - This component aims to develop and /or strengthen DHM's legal and regulatory frameworks, improve institutional performance as the main provider of weather, climate and hydrological information for the nation, build capacity of personnel and management, ensure operability of the future networks, and support project implementation.

Component B: Modernization of the observation networks and forecasting - This component aims to modernize DHM observation networks, communication and ICT systems, improve hydro meteorological numerical prediction systems and refurbish DHM offices and facilities.

Component C: Enhancement of the service delivery system of DHM - The objective of this component is to enhance the service delivery system of DHM by creating a public weather service that provides weather and impact forecasts, and information services for climate-vulnerable communities and the key weather dependent sectors of economy.

***Sub-Component C.4** is Establishment of a National Climate Service. This ToR is specifically target to its' part C.4.2. Support for the development of a National Framework for Climate Services and sectoral working groups.*

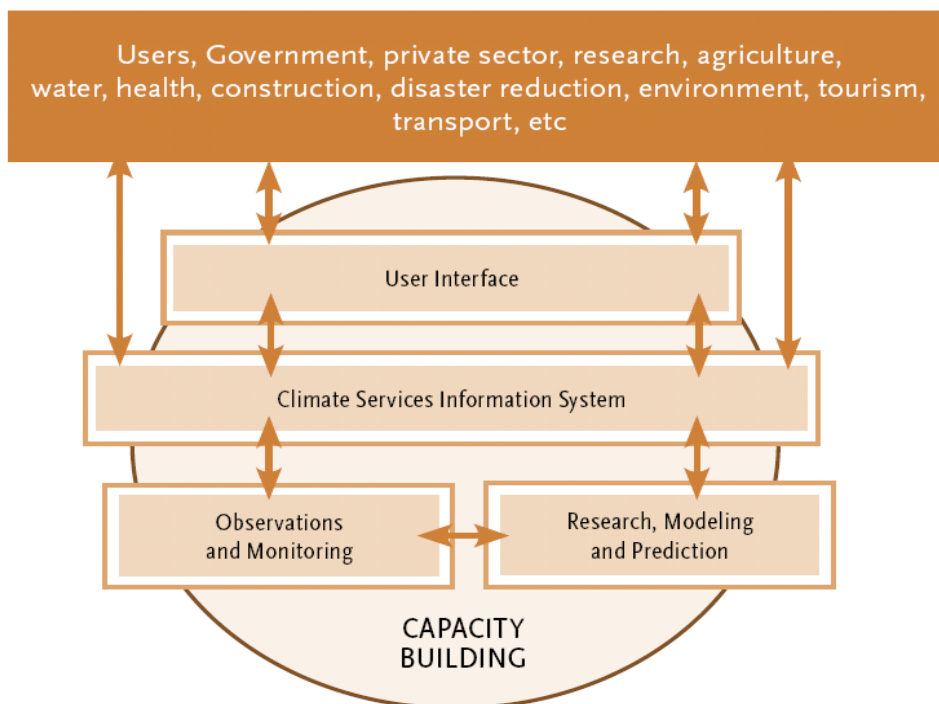
Component D: Creation of an agriculture management information system (AMIS) - The objective of this component is to provide critical and timely agro-climate and weather information to farmers in order to increase productivity and reduce losses from meteorological and hydrological hazards.

2.2 Framework for Climate Services at global and national level

The Global Framework for Climate Services (GFCS)⁵ was established in 2009 at the Third Climate Conference. The vision of the GFCS is "**to enable better management of the risks of climate variability and change and adaptation to climate change, through the development and incorporation of science-based climate information and prediction into planning, policy and practice on the global, regional and national scale.**"

The GFCS consists of five pillars: User Interface Platform; Climate Service Information System; Research, Modeling and Prediction; Observation and Monitoring; Capacity Building. The GFCS has four priority areas: agriculture and food security, water, health, and disaster risk reduction and the GFCS will be implemented on three levels: global, regional and national level.

⁵ <http://www.gfcs-climate.org/>



The aim of this assignment is to support and lead to the establishing the *National Framework for Climate Services* (NFCS) in Nepal and bridge the gap between climate science and the needs of users of climate information. Separate Concept Note is clarifying the GFCS and National Framework for Climate Service (NFCS) and elaborating how different components of BRCH-project will contribute to the NFCS.

In context of this assignment (BRCH sub-component C4.2) the focus will be especially in the User Interface and capacity building of the DHM to meet the users' needs for climate services. In order to successfully implement NFCS, the national stakeholders should be committed to the Framework, drive the process and design it in collaboration with DHM in the manner that addresses national needs and priorities. Outcome of this assignment will be an Action plan for the NFCS, which will guide the further steps of development of all five components.

10 Pre-requisites for a successful framework at the national level (according to WMO Guideline: Development of the Global Framework for Climate Services at the national level)

1. Provide a strong institutional anchorage for the Framework for Climate Services
2. Meet the demand for tailored climate service provision in the priority climate-sensitive sectors in the country (Agriculture & Food security, Health, Disaster Risk Management, Construction/Infrastructure/ Transport sector, etc.)
3. Build the capacity of the NHMS and other technical services to jointly elaborate salient climate products and services, building on pluri-disciplinary knowledge and expertise from each sector
4. Improve the Communication / widespread distribution of Climate Services
5. Diversify communication channels, use innovative channels to broadcast (aside from TV)

6. Modernize and increase the density of the national hydro-meteorological observing network, improving capacity to meet end-user needs
7. Improve collaborative climate research, towards more salient end-user driven climate research outputs
8. Develop and strengthen the Capacity of end-users to further appropriate and utilize climate services
9. Sustain the newly defined Framework for Climate Services at the national level
10. Engage all national stakeholders involved in the production, interpretation, communication and utilization of climate services in a national dialogue around climate service provision, to identify country needs and charter a course for the provision of user-tailored climate services at the national and sub-national levels.

2.3 National activities related to climate change

Improved climate services are especially needed in adaptation to climate change. Government of Nepal has launched *National Adaptation Programme of Action (NAPA) to Climate Change* in 2010. During the NAPA process six priority areas were identified: Agriculture and Food Security; Water Resources and Energy; Climate-Induced Disasters; Forests and Biodiversity; Public Health; Urban Settlement and infrastructure. In selected areas adaptation needs and actions were also prioritized, many of them require cross-sectoral collaboration and customized climate services.

Implementation of adaptation measures often takes place at local level. In 2012 the *National Framework on Local Adaptation Plans for Action (LAPA)* was released. It is expected that LAPA would lead to provision and the effective delivery of adaptation services to the most climate vulnerable areas and people.

The goal of *Climate Change Policy* (2011) is to improve livelihoods by mitigating and adapting to the adverse impacts of climate change, adopting a low-carbon emissions socio-economic development path and supporting and collaborating in the spirits of country's commitments to national and international agreements related to climate change.

Ministry of Science, Technology and Environment (MoSTE) maintains *Nepal Climate Change & Development Portal*⁶. The aim of the portal is to serve as a gateway to climate change knowledge, opportunities, people, organizations, and networks.

2.4 Climate services of Department of Hydrology and Meteorology (DHM)

The climate service of DHM has characteristics of category 1 and 2 climate service, which means that DHM Climate service provides a set of basic and essential climate services such as climate data delivery, basic climate statistics, some climate monitoring products and

⁶ <http://www.climatenepal.org.np/main/?p=home>

seasonal outlooks. In the Climate Data Portal⁷ there are also available interpolated data from observations and downscaled climate scenario data, prepared by foreign experts. The DHM climate service present own capability to produce advanced climate services is limited. The most important present climate services prepared by DHM own experts can be seen online on DHM web-pages⁸. Important objective of this assignment is to improve dialogue between climate service of DHM and users of climate information and, thus, initiate the development of customized climate services.

The aim during the BRCH-project is to develop DHM Climate Service to the level of category 3. Thus, it would have capacity to develop and deliver customized climate services, be able to provide downscaled climate scenarios for Nepal and have resources to raise awareness of climate change. Important part of the work will be provision of climate information for NAP and Climate policy, as well as, for climate risk assessment and management.

3. Objectives

The main objective of this assignment is to establish a National Framework for Climate Services (NFCS) in Nepal and sectoral working groups within the framework. The work will be done in close collaboration with DHM. The guidelines of WMO to develop GFCS at national level should be applied and good examples of national level progress in other countries should be utilized when appropriate. [⁹]

4. Scope of the work

In order to achieve the aim the consultant will conduct national consultations with stakeholders and potential users of climate services together with DHM. The consultant will also moderate and follow up the early steps of sectoral working groups to be established during consultations. The final outcome will be the Action plan for the NFCS, which DHM and sectoral stakeholders are committed to.

The work within this assignment will target towards provision of customized, user-friendly climate services. It should avoid duplicating earlier work, but instead, build on already existing information about needs of society for climate services, present climate policies and action plans such as NAPA and LAPA. The baseline studies on present status of DHM climate services, outcomes of preliminary stakeholder meetings, and relevant development plans prepared in BRCH-project so far by the Meteorological and Climate Service Expert (MCSE) will be available for the use of the consult, in order to effectively conduct this assignment.

The objective comprises of the following tasks (but not limited to the following).

⁷ <http://dhm.gov.np/dpc>

⁸ <http://dhm.gov.np/climate>

⁹ http://www.gfcs-climate.org/national_workshops

4.1 Mapping of stakeholders and selection of participants for the national consultation workshop – preparatory phase (2-3 calendar months)

In order to successfully develop NFCS, all relevant stakeholders should be involved to the process. They should include decision-makers, sectoral users of climate information both on national and local level, climate scientist and climate service providers. The consultation should include representatives from different ministries, research institutions, private sector agencies, as well as, NGOs. The National Framework should be able to utilize the information and services available on global or regional level and, on the other hand, NFCS in Nepal would contribute to international collaboration. Therefore also some regional institutions should be involved in the consultations. Awareness rising and role of media are important in mainstreaming climate information into decision-making at various levels and sectors of society. The selection of participants for the consultation will be done in collaboration with the DHM.

4.2 Training to the DHM climate experts

Sustainability of the development of the NFCS is critical part of the assignment. The climate service of DHM will have a key role in the implementation and continuous development of NFCS. Therefore the consultant is to provide training to the DHM climate service experts on the specific aims of the National Consultation Workshop in Nepal and skills for running interactive stakeholder meetings. The consultant is to share the expertise and lessons learned throughout the process in order to ensure that DHM experts can smoothly continue the work after the assignment. Therefore the consultant is to include into the proposal documents for this assignment a plan for short (1-2 days) training, which will be conducted by the consultant prior to the Workshop (see 3.3.) and will include basic concepts of GFCS, interactive methods to be used in National Consultation Workshop in user dialogue, and in collecting and utilizing user feedback, and simple practice for media interviews related to NFCS. The consultant is also to describe in the proposal documents how to involve climate experts of DHM into the consultation throughout the whole process.

4.3 National consultation workshop

In the proposal documents for this assignment the consultant should include a preliminary plan on how to conduct the National Consultation Workshop (presentations, group work methods etc). The aims of the workshop are to

- Achieve common understanding on how to establish NFCS in Nepal: What will be the structure of NFCS and which organizations will participate on it, the role of DHM climate services as a hub of the Framework and setting an inter-ministerial steering group for the NFCS

- Draft a Memorandum of Understanding (MoU) to be signed by the institutions to be committed to the NFCS accordingly
- Agree about guidelines for the Action plan for the NFCS
- Collect information on users' needs for customized climate services
- Discuss and recommend arrangements for improved production, better access and sustainable operations for climate predictions and services to facilitate the flow of climate information from global and regional scales through the national and local scales
- Decide to establish sectoral working groups on priority areas in order to chart a roadmap for the effective development and application of climate services
- Draft a communication plan for the Framework including the roles, contents and target groups of climate portals in Nepal; MoSTE *Nepal Climate Change & Development Portal*, DHM online climate services and Climate Data Portal, and further portal development to be done under NFCS
- Agree about monitoring and evaluation of the development of NFCS

Presumably the priority areas for sectoral working groups would be the same as defined in NAPA, 2010: Agriculture and Food Security; Water Resources and Energy; Climate-Induced Disasters; Forests and Biodiversity; Public Health; Urban Settlement and infrastructure. However, in this context other priority areas can also be considered.

Elaborating Action plan (6 calendar months)

4.4 Sectoral working groups

Based on the consensus of the consultation workshop, sectoral working groups will be formed on priority areas. Hypothetically the priority areas would be the same as earlier have been identified in NAPA process but do not need to be limited into those. The consultant is to moderate the first steps of these sectoral working groups and guide the work towards feasible Action plan to develop customized climate services in the area and increase the utilization of climate services in practice. The working groups should include both sectoral and climate service experts.

The tasks of the working groups are to

- Identify users' needs for customized climate services in the area
- Assess the capacity needed in DHM to be able to provide these customized climate services
- Assess the capacity needed in the area to be able to best utilize the service
- Prepare a detailed work plan for above activities with clear roles and responsibilities, timelines, costs and finance mechanism
- Plan regular feedback and evaluation mechanism in order to ensure the sustainable implementation of the work plan

4.5 Action plan and closure meeting

In the end of the assignment the outcomes of working groups are to be compiled into an elaborated Action plan for the NFCS in Nepal including the structure of NFCS and engagement of stakeholders to the Framework. The consultant is to prepare recommendations for the step-by-step work plan to be continued within PPCR-BRCH. The Action plan should include also communication plan for the NFCS. The findings should be presented in the overall closure meeting to be arranged to the participants of the national consultation workshop (task 2.3.) and PPCR-BRCH representatives.

5. Client's Commitments

- Staff of the DHM/ PMU will provide basic organizational support to the Consultant.
- At the request of the Consultant, the DHM should provide the following documents:
- Information for all project objectives, including the information on status of observation networks, current climate services and information on ongoing development in DHM and the documentation prepared by MCSE within BRCH project
- Project Appraisal Document (PAD), results of missions and other World Bank materials, related to consultancy service;
- Information on present stakeholder's of DHM

6. General requirements for the Consulting Firm/ Service provider

- More than 10 years, preferably more than 15 years of experience in the field of climate service and research
- Experience in international climate consulting in developing countries related to development of climate services / climate research capacity/ adaptation to climate change. Experience in Nepal is preferred
- Experience related to GFCS including regional and national domains of GFCS
- Experience in building societal awareness to climate issues, including climate change will be an advantage;
- Experience on consultation related to climate service/ research / adaptation to climate change in Nepal will be an advantage.

7. Staffing Requirements

- International climate service expert, Team Leader (4 pm)
 - Expertise in climate service or climate research for more than 15 years

- Proven experience in GFCS related work and conducting user dialogue workshops
 - MSc in meteorology or preferably PhD in climate science
- The Team Leader shall spend 75 days in Nepal.
- National climate service expert (8 pm)
 - Expertise in climate services and climate research for more than 5 years
 - Proven experience in project work and organizing workshops
 - MSc in meteorology

8. Reporting

Reporting requirements shall be as follows:

- i. Inception Report
 - Within 1 month from signing the contract, prior to the national consultation workshop
- ii. Progress Report
 - Outcomes of the national consultation workshop
 - Within 1 month after the workshop
- iii. Final Report
 - At the end of the assignment

9. Expected Deliverables

- Reports listed above – Inception Report, Progress Report, Final Report
- Final Action plan for the NFCS
- Recommendation for further development of NFCS during the BRCH project and beyond

10. Payment Schedule

- 15 percent after submission and approval of Inception Report,
- 35 percent after submission and approval of Progress report
- 40 percent after submission of Final Report and Action plan
- 10 percent after the acceptance of Final Report and Action plan

11. Duration of Consultancy

9 calendar months

12. Consultant's Selection Method

- The selection method will be Quality Cost Based Selection (QCBS).
- The consultants will be selected following Quality and Cost Based Selection (QCBS, Technical 0.8, Financial 0.2) criteria.