

Terms of Reference

Providing Consulting Services for Development of Legal and Regulatory Framework for DHM Operations

**Department of Hydrology and Meteorology
Building Resilience to Climate Related Hazards Project
Kathmandu, Nepal**

November 2014

1. Introduction

Department of Hydrology and Meteorology (DHM) is an organization under the Ministry of Science, Technology and Environment, established with an objective to monitor hydrological and meteorological activities in Nepal. DHM is a government information provider for sectoral planning and also supplier of regular reliable and consistent data inputs for the sectors like water resources, agriculture, energy, aviation, transport, tourism, health and local development among others. The department is also responsible for:

- a. Issuing early warnings in the field of hydrology and meteorology;
- b. Probabilistic forecasting and warnings;
- c. Information in support of pre- and post-disaster response and relief operations in climate related hazards.

In light of these important DHM tasks, this Term of Reference (TOR) is prepared for a consulting firm to design, develop and establish a Legal and Regulatory Framework for the Department of Hydrology and Meteorology (DHM) in order to legally institutionalize the DHM in carrying out its regular works and services.

Project Background

Nepal is the fourth most climate vulnerable country in the world owing to her unique topography, largely poor and resource dependent population and, weak institutional capacity to manage the climate challenges it faces. Floods, droughts, and landslides are deadly and endemic. Moreover, the effects of climate change are expected to intensify extreme weather events and other climate risks in the region.

Recognizing the high levels of exposure to climate change risks, the Climate Investment Fund (CIF) selected Nepal as one of the nine pilot countries for the Pilot Program for Climate Resilience (PPCR) in 2009.¹ In Nepal, PPCR is administered by Asian Development Bank, The International Finance Corporation and The World Bank.

Government of Nepal has prepared a Strategic Program for Climate Resilience (SPCR), which was approved by Climate Investment Fund (CIF). SPCR, Nepal identified five projects for investment. Presently, out of five, four projects are being implemented in Nepal. The Building Resilience to Climate Related Hazards (BRCH) is one of the four projects funded through the Nepal Pilot program for Climate Resilience (PPCR) under the Strategic Climate Fund.

¹For more information on PPCR visit,

https://www.climateinvestmentfunds.org/cif/Pilot_Program_for_Climate_Resilience

The main objective of the 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 system services to help farmers mitigate climate-related production risks.

The above mentioned objectives would be achieved by establishing multi-hazard information and early warning systems, upgrading the existing hydro-meteorological system and agricultural management information system, and enhancing capacity of the government organizations. Activities funded through the project would help improve decision-making and planning in key climate vulnerable and water resources dependent sectors particularly agriculture, health, water and disaster management, and contribute to building climate resilience for communities at risk. The BRCH project became effective in June 2013 and is currently under implementation.

The BRCH project comprises of the following four Components:

- a. Institutional strengthening, capacity building and implementation support of Department of Hydrology and Meteorology (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).

DHM is responsible for the implementation of Components A, B and C. MoAD is responsible for the implementation of Component D. Component A includes three sub-components:

Sub-Component A.1: Institutional strengthening, this includes:

(1.1) DHM institutional development and strategic planning; (1.2) development and/or strengthening of a legal and regulatory framework for DHM operations, including development of standard operating procedures, assessment of new business models and enhancing public private partnerships; and (1.3) “twinning” operational support from advanced NMSs and WMO.

Sub-Component A.2: DHM Capacity Building, which includes:

(2.1) Development and implementation of a DHM capacity building program including (i) DHM personnel training and retraining, (ii) professional orientation for DHM senior staff; (iii) education in universities and training in WMO regional training centers; and (2.2) Implementation of training activities (workshops, round tables, etc.) for major users (i.e., agriculture, water resources management, health, energy, transportation).

Sub-Component A.3: Systems Design and Integration, Project Management and Monitoring, which includes:

(3.1) Provision of support for detailed design, procurement and implementation of DHM systems (General Consultant/Integrator); (3.2) Project management, reporting, monitoring and evaluation for Components A, B and C (which are the components managed by DHM); (3.3) Development of a needs assessment and design for air quality, water quality and sediment monitoring networks; (3.4) Development of design documents for reconstruction/refurbishment of DHM's headquarters and regional offices; and (3.5) Support for environmental and social due diligence and protection.

The first component, Institutional strengthening, Capacity building and Implementation Support of Department of Hydrology and Meteorology 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.

Development and/or strengthening of a legal and regulatory framework for DHM operations, including development of standard operating procedures (SOP), assessment of new business models and enhancing public private partnerships is one of the sub-components of component (A) out of which development and/or strengthening of a legal and regulatory framework for DHM operations is one of the primary tasks that should be carried out for Institutional Strengthening in legal aspects, which is directly linked with every facet of DHM hydrological and meteorological activities by formulating the rule and regulation on hydrological and meteorological regular services nationally and internationally.

Rationale

The Department of Hydrology and Meteorology (DHM) is the main agency which has a mandate from Government of Nepal to monitor all the hydrological and meteorological activities in Nepal. Responsibilities include the monitoring of river hydrology, climate, agrometeorology, sediment, air quality, water quality, limnology, snow hydrology, glaciology, and wind and solar energy. Early warning of weather and floods also fall under DHM. General and aviation weather forecasts are regular services provided by DHM.

As a member of the World Meteorological Organization (WMO), DHM contributes to the global exchange of meteorological data on a regular basis. DHM actively participates in the programs of relevant international organizations, such as, the UNESCO's International Hydrological Program (IHP) and WMO's Operational Hydrology Program (OHP). In the past, DHM has hosted several regional and international workshops, symposia, seminars and meetings on different aspects of meteorology, hydrology, sediment, water quality and snow hydrology. The department is also a focal point for the Intergovernmental Panel on Climate Change (IPCC) and for the meteorological activities of the South Asian Association for Regional Co-operation (SAARC). The International Civil Aviation Organization (ICAO) has recognized DHM as an authority to provide meteorological services for international flights.

The Principal Activities of DHM among others include

- a. Collect and disseminate hydrological and meteorological information for water resources, agriculture, energy, and other development activities.
- b. Issue hydrological and meteorological forecasts for public, mountaineering expedition, civil aviation, and for the mitigation of natural disasters.
- c. Conduct special studies required for the policy makers and for the development of hydrological and meteorological sciences in the region.
- d. Promote relationship with national and international organizations in the field of hydrology and meteorology

With these vast and important work areas where DHM plays a key role in the provision of weather, hydrological and climate related services, at present, it does not have a policy or a legal framework to guide its activities. There are no acts or related provisions - to carry out hydrometeorological related activities by other national organizations including NGOs and international organizations and other DHM's field of work. DHM is presently working only on Cabinet's decision. So it has become very urgent that a legal framework for DHM should be established to make DHM stand on legal platform.

2. Objectives

The main objective of this assignment is to prepare a comprehensive Legal and Regulatory Framework of DHM for its smooth operation, expansion of its services and establishing DHM as an authority in hydrological, meteorological and climate services.

3. Tasks/ Scope of the Services

In consultation with DHM and with other stakeholder organizations, draft the legal and regulatory framework for DHM. Scope of the services are outlined as under but not limited to:

- Review current legal and regulatory framework for DHM, review formats and processes for development of legal and regulatory frameworks in Nepal including those that may govern DHM operations. Review good practice examples of international legal and regulatory framework for hydromet related laws and regulations and WMO guidelines;
- Review the legal framework relating to the delivery of hydromet services developed by countries like China, Germany, USA and Australia among others. Review closely the German Legal framework (Law on the Deutscher Wetterdienst of 1998). The review of international experience should highlight good practice examples.
- Undertake consultation with relevant stakeholders and users in Nepal
- Based on international experience and discussions with stakeholders, develop law that codifies the responsibilities of DHM offices at the international, national and sub-national levels, and mandates of other government agencies and organizations, which are affected by hydro-meteorological hazards, ensuring timely and effective responses that will help users to mitigate weather-related disasters.
- The legal framework document should clearly state the objective of the law; clarify mandates of responsible government entities with respect to construction and management of meteorological and hydrological facilities and observation network. It should clarify legal issues related to provision of weather service to users (public, private etc), provision of services related to hydrological and meteorological monitoring and observation, weather, services related to aviation, hydrological and flood forecasting, and delivery of climate services; it should also clarify legal issues related to issuance of severe weather warnings and alerts including warnings and alerts related to weather, water and climate related risks and hazards.
- The legal framework should clarify the activities of non-governmental agencies, individuals and organizations of other countries, regional organizations and others with respect to installation of hydromet stations and delivery of hydromet services in Nepal.
- It should incorporate the importance of cost-return based and commercialized services for self-financing of the DHM operations and research in the delivery of hydromet services and allow for innovating commercialization of services.

- The legal framework should clarify legal responsibilities related to the mitigation of hydro meteorological disasters and assess or give climate outlooks and support or contribute to long term climate risks clarifying roles and responsibilities at the national and sub-national levels.
- The legal framework should clarify legal responsibilities in case of violations in the provisions of the law.
- In coordination with DHM and other relevant agencies, organize series of consultations to get feedback on draft legal document.
- Identify a list of relevant regulations that need to be developed and develop terms of references for follow up consultancies
- Finalize the draft Legal and Regulatory Framework based on consultations and comments received.
- The final document should be based on best international practice and also take into account the context and user needs of Nepal. It should be prepared in a consultative manner.

4. Consultant's Qualification and Experience

- At least 10 Years of experience in providing consultation services in structuring legal and regulatory framework including in the area of weather/water/disaster risk management. International experience would be an advantage. internationally.
- At least 5 years' experience with working on legal and regulatory issues and processes in Nepal
- Ability to interface with the Government officials, relevant research centers, and other stakeholders working with groups that support the use of hydromet disasters and climate information for improved disasters and climate risk management;
- Understanding and knowledge of WMO guidelines and practices as well as hydro-met regulatory frameworks in other countries will be an asset.

5. Staffing Requirements

I. Key professional/Experts (Team Leader)

- i. International Legal expert-1
- ii. National Legal Expert-1
- iii. International Hydro-met Expert- 1
- iv. National Hydro-met Expert - 1
- v. Research Associate- 1

The consultancy will require in-country presence of the International Staff for at least 50 percent of their contracted time.

II. Minimum and preferred Qualification & Experience

i. International Legal Expert (Team Leader)

- a. Minimum of Master's Degree in Law with additional degree on Environmental Law/ Water Law/Hydrology/Meteorology. Ph.D. preferred.
- b. Proven legal and professional experiences on hydromet/water related legal policy/framework review and formulation.
- c. 15 years of legal and professional practice, legal research and review including at least 3 completed assignments of law reforms and or drafting of legislations preferably in hydromet/water related areas.
- d. Excellent communication skills; and excellent knowledge of English language (both spoken and written).

ii. International Hydro-met Expert

- a. Master's degree in hydrology/meteorology; additional law degree will be an advantage; Ph. D preferred. Experience and knowledge in both Hydrology and Meteorology will be an asset.
- b. At least 15 years of experience in related field.
- c. Excellent communication skills; and excellent knowledge of English language (both spoken and written).

iii. National Legal Expert

- a. Minimum of a Master's Degree in Law preferably in Water Law
- b. 15 years of legal and professional practice, legal research and review including 5 years in law reform and drafting of legislations preferably in hydromet/water related areas.
- c. Excellent communication skills; and excellent knowledge of English and Nepali Language (both spoken and written).

iv. National Hydro-met Expert

- a. Master's degree in hydrology/meteorology; additional law degree will be an advantage; candidates with knowledge of both hydrology and meteorology will be preferred.
- b. At least 8 years of experience in related field.
- c. Excellent communication skills; and excellent knowledge of English language (both spoken and written).

v. Research Associate

- a. At least Bachelor's Degree in law, environment law and or related field.
- b. At least 5 years of experience in research and report writing.
- c. Excellent knowledge in written and spoken English.

6. Expected Outputs

1. A comprehensive Legal and Regulatory Framework for DHM in English and Nepali both
2. About 15 pages analytical report based on the review carried out as part of this consultancy
3. List and Terms of References (TORs) for associated regulations that need to be developed.

7. Client's Input to the Consultant

At the request of the Consultant, the DHM (and MoAD) shall provide the following documents:

- a. Project briefing.
- b. Description of current organizational structure and financial system of DHM, available legal and regulatory documents.
- c. Project Appraisal Report (PAD), results of missions and other World Bank materials, related to preparation and implementation of the Project;
- d. Facilitate meetings with other relevant departments, ministries, and private sector relevant to DHM services.

8. Performance and Reporting Requirement

The Consultant should,

- a. Submit inception report to set out analytical framework and methodology for undertaking the project work within 3 weeks from the date of signing the contract.
- b. First draft legal and regulatory framework within 3 months from the date of signing the contract
- c. Organize consultation meetings at the national and local levels
- d. Second draft incorporating all the comments and feedbacks within 5 months from the date of signing the contract.
- e. Final draft of the legal and regulatory framework in English and Nepali within 6 months from the date of signing the contract.

10 hard copies(5 in English and 5 in Nepal) and one electronic copy of all the draft reports should be submitted)

9. Timeframe

The total duration of the project is 6 months.

Payment Methods/ Modalities

- a. The consulting firm shall be paid 20% of the total amount after submission and acceptance of inception report by the client.
- b. 25% shall be paid after submission of draft legal document and draft review report
- c. 25% shall be paid after organization of consultations and submission of second draft report and revised legal document
- d. Remaining 30% shall be paid after submission and acceptance of all final deliverables.
- e. The Consulting firm shall be responsible for all taxes and duties including income tax applicable as per Government of Nepal rules and regulations.

10. Consultant's Selection Method

The consultant shall be selected on the basis of CQS method and consistent with the World Bank's Consultant Selection Guideline, 2011, and on the basis of required qualifications and related experiences.