

Terms of Reference for

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**PROVIDING CONSULTING SERVICES  
FOR  
DEVELOPMENT OF LEGAL AND REGULATORY  
FRAMEWORK FOR DHM OPERATIONS  
(Contract identification No. : PPCR/DHM/S/CQS-13)**

**June 2015  
Kathmandu, Nepal**

## **1. 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.<sup>1</sup> 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). 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.

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).

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<sup>1</sup>For more information on PPCR visit,

[https://www.climateinvestmentfunds.org/cif/Pilot\\_Program\\_for\\_Climate\\_Resilience](https://www.climateinvestmentfunds.org/cif/Pilot_Program_for_Climate_Resilience)

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.

## **2. Rationale**

The 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 provider for hydro-met and climate related data, information and services for sectors like water resources, agriculture, energy, aviation, transport, tourism, health and local development among others. However, there is no legal and regulatory framework (including Act, Regulations and Standard Operating Procedure) for DHM. There is also a need to ensure that users have access to relevant information about weather and climate and that effective mechanism are in place to respond to user needs. DHM is presently working only on Cabinet's decision. So it has become very urgent that a legal and regulatory framework for DHM be established to make DHM stand on legal platform.

With support from the BRCH project, DHM intends to establish a pilot Early Warning System for floods and consequently a Multi-Hazard Early Warning System (MHEWS) to cover all climate and water related hazards.

Due to lack of Legal and Regulatory Framework this Term of Reference (TOR) is prepared to procure services from consulting firm to conduct a comprehensive study, design, develop and prepare a Legal and Regulatory Framework (including Act, Regulations and Standard Operating Procedure) for the smooth functioning of DHM. DHM is in need of establishing different cost recovery mechanisms to cover some of the cost of operations and services. However, there is no legal sanctity for such cost recovery system. So under the proposed legal and regulatory framework, adequate mechanism will be created to allow the DHM to recover the cost from the users of information/services.

The Department of Hydrology and Meteorology (DHM) is the main agency which has a mandate from Government of Nepal (Cabinet decision) to monitor all the hydrological and meteorological activities in Nepal. Responsibilities include the monitoring of river hydrology, climate, agro-meteorology, 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

- Collection and dissemination of hydrological and meteorological information for water resources, agriculture, energy, and other development activities.
- Issue hydrological and meteorological forecasts for public, mountaineering expedition, civil aviation, and for the mitigation of natural disasters.
- Conduct special studies required for the policy makers and for the development of hydrological and meteorological sciences in the region.
- 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.

### **3. Objective**

The main objective of this assignment is to prepare a comprehensive Legal and Regulatory Framework (Act, Regulations and Standard Operating Procedure), of DHM for its smooth operation, expansion of its services and establishing DHM as a legal and regulatory authority in hydrological, meteorological and climate services.

### **4. Scope of the Services**

The consulting firm should work in close collaboration with DHM and with other stakeholder organizations to draft the legal and regulatory framework for DHM. The work should be based on international experience and discussions with relevant stakeholders. The scope of the consultancy is to prepare a draft legal document which consists of Act, Regulations, and Standard Operating procedures that codifies the power, functions and responsibilities of DHM at the international, national and sub-national levels; and in relation to the relevant stakeholders, different sectors of the society, government enterprises, private sector and the general public. A draft version of the Act has been prepared and this may be considered and used as a basis to further develop and finalize the Act after further review and consultation.

The legal framework should clearly state the objective of the law; clarify responsibility of DHM with respect to the meteorological and hydrological infrastructure consisting of observation, monitoring, forecasting and weather, water and climate services targeted to serve the different livelihoods and the safety of the general public. More specifically, 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 related to weather, water and climate induced risks and hazards.

## **5. Tasks of the consultancy**

In consultation with DHM and with other stakeholder organizations, Consultant should undertake the following activities:

**Task 5.1** Review current policy, legal and regulatory frameworks that explicitly focus on the role and responsibilities of DHM. In addition to reviewing legislation and regulations that are applicable to DHM operations and services.

**Task 5.2** Review the legal framework relating to the delivery of services of National Hydrological and Meteorological Services (NMHSs) in other countries. At least five appropriate Legal and Regulatory Frameworks for hydro-met services from other countries including the review of WMO guidelines.

**Task 5.3:** Based on the tasks listed above, prepare a 10 page review paper summarizing key issues and findings. Develop an Act for DHM's services.

**Task 5.4** Identify all key DHM stakeholders including, but not limited to government departments, I/NGOs, private sector companies, consumer forums, etc.

**Task 5.5** In coordination with DHM and other relevant agencies, organize a series of consultations to get feedback on the draft Act and finalize the Act.

**Task 5.6** Prepare detailed Regulation and Standard Operating Procedure for DHM's services that need to be developed as part of the legal and regulatory framework. Finalize them based on further consultations.

## **6. Consulting firm's Qualification and Experience**

- At least 10 Years of experience in providing legal consulting services including the preparation of legal and regulatory framework;
- At least 5years' experience on legal and regulatory issues and processes including on environment and/or climate related laws;
- Ability to interface with the Government officials, relevant research centers, and other stakeholders working with groups that support the use of hydro-met 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.

## **7. Staffing Requirements**

### **Key professionals / Experts**

- Team Leader National/International (6 months)
- National Legal Expert-1(4 months)
- National Hydrology Expert-1 (2 months)
- National Meteorology Expert- 1 (2 months)
- Research Associate- 1 (6 months)

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

### **Minimum and preferred Qualification&Experience**

#### **I. Team Leader (National/International)**

- a. Minimum of Master's Degree in Law with additional degree on Environmental Law/ Water Law/Hydrology/Meteorology. In case, Team Leader is national, s/he should have international exposure or should have working experience with international consultants. Ph.D. preferred.
- b. Proven legal and professional experiences on legal policy/framework review and formulation.
- c. 15 years of experience on legal and professional practice, legal research and reviews including at least 3 years' experience on law reforms and or drafting of legislations preferably related to environment. International exposure / experience will be an advantage.
- d. Excellent communication skills; and excellent knowledge of English language (both spoken and written).

#### **II. National Legal Expert**

- a. Minimum of a Master's Degree in Law preferably in Environment Law or Water Law. Additional Degree on Business administration will be an advantage.
- b. 10 years of experience on legal and professional practice, legal research and review including in law reform and drafting of legislations.
- c. Excellent communication skills; and excellent knowledge of English and Nepali Language (both spoken and written).

#### **III. National Hydrology Expert**

- a. Master's degree in hydrology;
- b. At least 10 years of experience in the field of hydrology.
- c. Excellent communication skills; and excellent knowledge of English language (both spoken and written).

#### **IV. National Meteorology Expert**

- a. Master's degree in meteorology;
- b. At least 10 years of experience in the field of meteorology.
- c. Excellent communication skills; and excellent knowledge of English language (both spoken and written).

#### **V. Research Assistant**

- 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.

### **8. Deliverables**

- 8.1 Inception report covering the objective, scope of work, approach, process and expected deliverables from this consultancy.
- 8.2 10 page comprehensive report based on a review of at least five different countries who have successful Legal and Regulatory Frameworks for Hydrology and Meteorology services and also Nepal experience with recommendations for developing legal and regulatory services for DHM ( in English).
- 8.3 Legal and Regulatory Framework for Hydrology and Meteorology services for Nepal including a final draft of Act, Regulation and Standard Operating Procedure both in English and Nepali.

### **9. Client's Input to the Consultant**

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

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

### **10. Timeframe**

Total duration of the assignment is 6 months.

### **11. Payment Methods/ Modalities**

- The consulting firm shall be paid 15% of the total amount after submission and acceptance of inception report.



- 25% shall be paid after submission of draft Act and draft review report
- 30% shall be paid after organization of consultations and submission of second draft report, revised Act, draft regulation and SOP.
- Remaining 30% shall be paid after submission and acceptance of all final deliverables.
- The Consulting firm shall be responsible for all taxes and duties including income tax applicable as per Government of Nepal rules and regulations.

## **11. Consultant's Selection Method**

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