Department of Local Governance & Disaster Management

Ministry of Home Affairs

Royal Government of Bhutan

Terms of Reference

Hiring of Consulting Firm to Develop the Risk Information Guidelines

1. Background

The Royal Government of Bhutan is implementing the project "Strengthening Risk Information for Disaster Resilience in Bhutan"[1]. The objective of the project is to enhance Bhutan's capacity for risk-informed decision-making and development planning in targeted sectors. The Department of Local Governance and Disaster Management (DLGDM), Ministry of Home Affairs, is mandated to coordinate all disaster risk management-related issues in the country. The project has three components as follows:

- Component A. Development and Piloting of a Multi-Hazard Risk Decision Support System (MHRDSS)
- Component B. Strengthening Hydromet and Agromet Services Delivery
- Component C. Professionalization of Construction Industry for Green and Resilient Infrastructure Development

This ToR is a part of the Component A for which the The DLGDM collaborates with other Royal Government of Bhutan (RGoB) agencies to manage information relating to preparedness, response, recovery, and risk mitigation. Therefore, the Disaster Risk Information Guidelines will be a crucial tool for disaster management agencies, local governments, and other organisations that utilise risk information during, pre and post disasters, which will enhance mitigation, preparedness, and response. Currently, various information including those related to disaster risk is available but spread across different agencies. A significant obstacle is agencies working in silos, often leading to duplication of producing and collecting information. Further, data acquisition and sharing are hindered by restrictive procedures and a lack of clear policies. Overall, the absence of a centralised platform exacerbates the difficulties in managing and sharing data effectively. Addressing these issues is crucial for improving the overall efficiency and collaboration in data curation and delivery processes.

The Risk Information Guidelines is expected to establish a guideline for managing risks effectively and supporting informed decision-making related to disaster risk management through open and collaborative efforts among all relevant agencies. Moreover, the overarching goal is to bolster community resilience against disasters and vulnerabilities. The guidelines will promote the integration of innovative technologies, such as satellite imagery, GIS mapping, and social media advertisement and monitoring, to enhance the accuracy and timeliness of information for better evidence-based decision making. It will also advocate for open data practices, ensuring that critical and quality of information is assured and accessible to various stakeholders and beneficiaries.

[1] https://projects.worldbank.org/en/projects-operations/project-detail/P175081

2. Objective(s) of the Assignment

The aim of this assignment is to develop a Risk Information Guidelines and to establish a standardised framework for data acquisition, data storage and dissemination of disaster risk information. This guideline aims to promote efficient data sharing mechanisms, facilitate collaboration, minimise duplicated efforts, and enhance capacity building efforts across various stakeholders involved in disaster risk information management.

3. Scope of the Assignment

There are 8 major tasks under this assignment. Each key task and their respective sub-tasks are described below.

Task 1: Risk Identification

Sub-task 1.1 - Enlist the various disaster risks present in the country. DLGDM has carried out an activity on taking stock of past disasters based on news clippings. The consultant will support the structuring and formatting of the past disaster information compiled from the news clippings and formatting into geo-spatial data/information. The consultant will also carry out random checks for correctness and accuracies of the data.

Sub-task 1.2 - Categorize the disaster risks based on historical occurrences, frequency, and severity of impact.

Sub-task 1.3 - Collection of identified risks and the influence of climate change. Consider the type of risk information generated or compiled under the Strengthening Risk Information for Resilience (RIR) project[2] (viz. flood, landslide, fire, earthquake, windstorm) and risk information already available with DLGDM and other agencies. Indicate the degree to which climate change has been taken into account[3].

Task 2: Stakeholders Mapping

Sub-task 2.1 - Identify Risk Information through consultation with stakeholders and IAs. Compile the latest available risk data from stakeholders and establish clear understanding of the roles and responsibilities as per the SOP for technical agencies already developed under the RIR Project.

Sub-task 2.2 - Identify Stakeholders (as owners or producers and users or consumers) of the disaster risk information or data enlisted in Task 1. The producers/owners will include, inter alia, the Department of Human Settlement (e.g., floods, earthquake) and Department of Surface Transport (e.g., landslides)

[2] https://projects.worldbank.org/en/projects-operations/project-detail/P175081

[3] The objective is not to evaluate climate change impacts quantitatively, but rather to provide a qualitative explanation of how climate change will affect future risks.

under the Ministry of Infrastructure and Transport, the Department of Geology and Mines (e.g., geohazards including landslides and earthquake) under the Ministry of Economic Affairs, the National Center for Hydrology and Meteorology (e.g., floods), and the National Land Commission Secretariat (NLCS), the users/consumers will include decision makers, media and the general public.

Sub-task 2.3 - Define roles and responsibilities for the disaster risk information or data producers or owners in regard to Task 2.2 conforming to relevant prevailing policies and documents (such as the Disaster Management Act 2013, Geospatial Information Policy, National Spatial-Data Infrastructure (NSDI) project, e-Gov Policy, Climate Change Policy, Hydromet Policy, Data Sharing Guidelines, Standards, Strategies, Roadmaps, Action Plans, SOPs, etc.). \Identify the level of effort needed (e.g., in terms of fraction of a full time employment) for each role and responsibilities.

Sub-task 2.4 - Identify gaps in the disaster risk data, formats and sharing. Propose solutions to bridge these gaps.

Task 3: Stakeholder consultation to present the findings from Task 1 and 2 and validate disaster risks to be considered for RIG Development

Involve all pertinent stakeholders in the field of disaster risk information and ensure compliance with ESS 10: Stakeholder Consultation and Information Disclosure within the World Bank Environmental and Social Framework.

Task 4: Data Standardisation and Sharing

Sub-task 4.1 - Retrieve lists of datasets from each agency and standardise data (metadata, format and structure) format including maintaining the data currency.

Sub-task 4.2 - Classify the Risk Data /Information into open, common, and restricted categories as per GI policy to facilitate sharing.

Sub-task 4.3 - Identify friendly risk information sharing platforms both at national and agency level like Geo-Portal under NSDI, DRM Portal under DLGDM and other web-portals. Identify these platforms and determine which datasets can be shared on each platform, as well as how they can be interfaced.

Sub-task 4.4 – Recommended thematic visualisation of the Risk Data /Information and spatialisation of all possible Risk Data /Information and mandate compliance to data standards.

Task 5: Ensure integration of geospatial information technology in disaster risk data management

Sub-task 5.1 - Develop a mechanism (written instructions / technical documentation) for integrating remote sensing and Geographic Information System (GIS) data with non-spatial data into a unified platform/system, emphasising interactive mapping.

Task 6: Stakeholder Engagement and Validation

Sub-task 6.1 Present the outcomes of all the tasks to IAs and relevant stakeholders for feedback and suggestions and validation.

Task 7: Develop Risk Information Guideline.

The risk information guideline will encompass key topics such as identification of disaster risk, stakeholder mapping with roles and responsibilities, friendly data standardisation and sharing, and ensure integration of geospatial information technology in disaster risk data management. All outputs from Task 1 to Task 6 should be embedded in the development of the Risk Information Guidelines.

Task 8: Knowledge Transfer and Capacity Buildings

Sub-task 8.1 A training or workshop on the methodology adopted to develop RIG, about data standards and sharing to all stakeholder, and strategies for sustainability.

4. Duration of assignment and delivery schedule

The duration of the assignment will be for six (6) months since the signing of the contract. Details of delivery schedule is as below:

S/No	*Deliverable*	*Deliverable duration (from contract signing)*
1	Acceptance of inception report with an outline of the risk information guidelines	1 weeks
2	Presentation from task 1 and task 2 to all stakeholders and confirm the risks to be considered to develop RIG	10 weeks
3	Report submission from task 1, 2 and 3 to DLGDM, MoHA.	11 weeks
4	Report submission from task 4, 5 and 6 to DLGDM, MoHA	21 weeks
5	Submission of draft report on RIG	23 weeks
6	Submission of final guidelines	25 weeks
7	Knowledge transfer and capacity building of the Task 8	26 weeks
	Total	26 weeks

5. Requirements for Key Experts, and Project Personnel

Organisational Attributes:

DLGDM is seeking submissions from suitably qualified national consulting firms with demonstrable track records or relevant project success.

In addition to meeting the specifications of the Key Experts, the Consultant's organisation or JV must demonstrate the following attributes:

- Deep domain knowledge and experience in DRM and decision-making for risk reduction.
- Understanding of multi-hazard risk assessment and risk communication.
- Experience/potential in successfully delivering and managing assignments similar in nature involving the same or similar technologies.
- Experience in developing risk information guidelines, or other similar guidelines that have similar scope as the Risk Information Guidelines in this assignment.
- Familiarities and experience with relevant international standards.

- Experience in government stakeholder engagement and implementation of effective capacity-building programmes.
- Team leader should have a minimum of 10 years of disaster risk management or analysis in Bhutan or similar countries; familiarities with disaster risk assessment and management in Bhutan, and its surrounding institutional and decision-making context".

Key Experts:

The national consulting firm is required to propose a team that meets the following criteria.

S.N.	Key Expert Role	Candidate minimum qualifications	Expected input
1	Team Leader (National/Internationati onal), (Disaster management Specialist)	M. Tech in Civil Engineering or equivalent, specialised in Disaster Management or a Disaster Risk Management Specialist Minimum of 10 years of relevant work experience	6 months
2	National Data Scientists/Analytics (National/International)	Masters/Bachelors in Data Science or equivalent Minimum of 5 years of work experience- masters Minimum of 10 years of work experience- Bachelors	3 months
3	National ICT Specialist	Masters/Bachelors in Information and Communication Technology Minimum of 5 years of work experience- masters Minimum of 10 years of work experience- Bachelors	2 months

4	GIS Expert (National/International)	Masters/Bachelors in Geographic Information System Minimum of 5 years of work experience	2 months

All members of the team must confirm their commitment and availability to conduct the assignment in person.

6. Presentation of Price

The Consultant is expected to present a lump sum price.

7. Pre-proposal Questions

Questions can be sent to this email address [stshewang@moha.gov.bt] before the specified deadline for questions.

8. Implementation Arrangements

Consultant Responsibilities:

The Consultant's Team Leader will be the principal contact and will be expected to be readily available during project implementation.

The Consultant shall be responsible for all aspects of the performance of services as set forth in the components of this TOR.

The Consultant will work closely with DLGDM, and will report to the DLGDM. Payments to the firm will be contingent on signoff from the DLGDM Task Team Lead. The World Bank may review the reports for quality assurance in which case, the reports shall be shared with the WB team.

Contractual Terms:

The contract is to be awarded on a lump sum basis.

Working Language:

The working language for this project shall be English for communication. All final deliverables shall be in English.

9. Inputs to be provided by the DLGDM

DLGDM and RGoB agencies will be responsible for the following provisions:

- A focal officer for the assignment at DLGDM, who will help coordinate and organise meetings and stakeholder workshops with relevant stakeholders.
- Access to all relevant information, including relevant reports already produced from the RIR project.
- Senior-level oversight and guidance from DLGDM.
- Official correspondences with other stakeholders for requesting information, and coordination purposes.
- All the available data related to Task4 and Task 5 will be compiled and provided, however if necessary access to the geonode or the Bhutan DRM Portal (which will be in the development phase) will be provided.

10. Selection method

The consultant will be selected following the Quality and Cost Based Selection method as set forth in the World Bank Procurement Regulations for IPF Borrowers, November 2020.