



TERMS OF REFERENCE

International Consultant

Assignment Title	Water resources assessments (flood risk mapping) of two rivers and surrounding areas in Kyaikmaraw township
Project	Governance for Resilience and Sustainability Project
Type of Contract	Individual Contract (International)
Contract Period	30 working days (October 2019 - January 2020)
Supervisor	DRR Specialist, Governance for Resilience and Sustainability Project
Location	Mawlamyine with frequent travel to field locations and Yangon
Country	Myanmar

A. BACKGROUND AND CONTEXT

UNDP Myanmar is implementing its Country Programme for 2018-2022. Integrated programming has guided the design of the new programme in order to better address the inter-linkages between peace-building, governance, natural resource management and disaster resilience, inclusive growth, and the vertical linkages between subnational and national governance levels.

The Governance for Resilience and Sustainability Project (GRSP), under the Sustainable and Inclusive Growth portfolio, is designed to help the Government of Myanmar implement recent policy reforms related to environmental governance, climate change and disaster risk reduction (DRR), to ensure that economic growth in Myanmar is more inclusive, resilient and sustainable. The project recognises that environmental degradation, when combined with natural disasters and effects of climate change, undermines the attainment of inclusive and sustainable growth. It also recognises that Myanmar's environmental assets present unique opportunities for green economic development, which can directly support women's economic empowerment and community resilience. Through GRSP, UNDP will continue to support the implementation of the new National Environmental Policy (NEP), Myanmar Action Plan for Disaster Risk Reduction (MAPDRR) and Myanmar Climate Change Policy and Climate Change Strategy and Master Plan (MCCSMP) at the Union and sub-national levels.

Since June 2019, torrential rains have brought flooding and landslides to 12 of Myanmar's 14 states and regions, causing enormous disruption and displacement among affected population. Mon State has been among the worst hit by August floods, alongside Karen State and Bago and Tanintharyi regions. The massive landslide that struck Thaphyu Kone village in Paung township in Mon State killed at least 75 people and injured 48. Damages to infrastructure such as roads, public facilities, bridges and dams were reported. Agriculture was very badly affected with paddy farms as the most affected. Disaster poses a more severe impact on the livelihoods of families engaged in agriculture, with small-scale farmers and casual workers being the most affected groups. Sediments, debris and sludge covered mostly of the

farms which threatens the readiness of the farms for cultivation during the winter season. All these pose challenges and undermines the ability of the affected population to recover fast from the flood disaster.

Considering the recurrence of flooding in Mon State and building on the early recovery work supported following the 2018 floods, UNDP Myanmar plans to complement the interventions already undertaken by the Government of Myanmar by analyzing causes of floods in Kyakmaraw township to support better management of water resources to minimize floods risks in the future and minimize water scarcity during the dry season. UNDP is looking for an international expert to conduct an analysis of two rivers in Kyakmaraw township that were the major cause of flooding this year. The analysis will include both technical and non-technical aspects as well as recommendations on structural and non-structural feasible interventions to prevent risks of future flooding. The expected scope of work should include an analysis of hydrological systems, identifying the issues related to water management that need to be addressed to improve water management during dry and wet seasons for the sustainability of local livelihoods and safety of the exposed communities and providing practical recommendations.

This support is part of the initiative 'Building Capacities for Resilient recovery – Phase 2' under GRSP that UNDP, along with the Department of Disaster Management (DDM), is currently implementing in the country. The initiative aims to strengthen national capacities and systems to plan and manage recovery processes. Strengthening national capacities can result in "building back better and safer" thus contributing to building the resilience of affected communities in the face of disaster and restoring sustainable development pathways.

B. SCOPE OF WORK, OUTPUTS AND DELIVERABLES

Under the overall supervision of the DRR Specialist and the Project Manager/Chief Technical Advisor, Governance for Resilience and Sustainability Project and in close coordination Head of field Office Mon, Kayin States and Taninthari Region, the international consultant will:

1. Review existing available information from different sources, including previous similar analysis conducted in the areas, if available.
2. Support the local government authorities of Kyakmaraw Township, in analyzing deep causes of flooding in August 2019, by conducting technical surveys of two rivers (Zami, Winyaw) for the sections crossing Kyakmaraw township (around 2 miles) and related flood affected areas. The analysis will include, but not be limited to, geomorphological and hydrological surveys of the area and cover at a minimum:
 - Land use survey
 - Definition of catchment-area polygons
 - Definition of the drainage / canal network with tide and river flow direction
 - Identification of natural and anthropic hydrological features, their functions and roles in the system of water discharge
 - review the existing data on the hydrological landscape, including any existing flood risk mapping
 - identify gaps and opportunities in the current approach that government departments are using for assessing, conserving and managing hydrological resources
3. Apply appropriate methodology for analyzing rivers' behavior (including appropriate modelling) and describe features during dry and monsoons season, relying on different sources
4. Collect and validate the information, by undertaking field survey and consultations with relevant authorities at township and villages' levels, experts and other involved stakeholders
5. Work in close consultation with townships authorities (e.g. irrigation, agriculture, land use department) as well as with concerned state level authorities (DDM)

6. Provide appropriate recommendations, including provisions and feasible structural and non-structural measures (including estimated costs) for local authorities to improve water management to reduce flooding risks during monsoon season and ensure water availability and accessibility during dry season. The recommendations should integrate issues related to inclusiveness and address both immediately available measures and those requiring further analysis. The proposed work is meant to feed into the relevant government department's ongoing flood preventative measures.

For these tasks, the international consultant's inputs will be up to 30 working days.

During this assignment, the national consultant is expected to deliver:

1. Methodology with a detailed workplan
2. Detailed survey report, including hydrogeologic features
3. Recommendations, including provisions and feasible measures to improve water management for both reducing flooding risks and ensure water availability and accessibility during the dry season

The international consultant will be supported by a local DRR coordination associate, who will assist with organizing meetings, site visits and translation.

C. EXPERTISE AND QUALIFICATIONS REQUIRED

The successful applicant should have the following expertise and qualifications:

- A Master's degree in Environmental Studies, Risk Analysis, Water Management, Geology or a related field
- At least 10 years of relevant work, of which at least 5 in conducting hydrological surveys, risk assessments
- Previous experience in Myanmar
- Previous experience with UN agencies in similar assignments
- Proficiency in written and spoken English language

D. MANAGEMENT AND IMPLEMENTATION ARRANGEMENTS

- The consultant will report to the DRR Specialist, Governance for Resilience and Sustainability Project.
- The consultant is also required to comply with the UN security directives set forth under <http://dss.un.org>
- The consultant will be given access to relevant information necessary for execution of the tasks under this assignment;
- The consultant is responsible for providing their own laptop computers and mobile phones for use during this assignment; the consultant must have access to reliable internet connection
- Payments will be made upon submission of a detailed time sheet and certification of payment form, and acceptance and confirmation by the supervisor

E. DUTY STATION

- The consultant will be home-based with a mission Mawlamyine with frequent travel to townships in Mon state and Yangon, in Myanmar;
- Any necessary missions must be approved in advance and in writing by the supervisor

F. TIMEFRAME

The consultancy will be carried out for 30 working days between October 2019 and January 2020.

G. PAYMENT SCHEDULE

Interested persons are requested to submit their financial proposals quoting their **daily fees** noting the following conditions:

- a) Payments will be made upon submission of certification of payment form, and acceptance and confirmation by the supervisor

Deliverable No.	Description of deliverables	Timeline	Payment
Deliverable 1	Methodology, including detailed workplan	30 th October 2019	20%
Deliverable 2	Detailed survey report, including hydrogeologic features	30 th November 2019	50%
Deliverable 3	Recommendations	15 th January 2020	30%

H. RECOMMENDED PRESENTATION OF OFFER

Interested persons are requested to submit the following documents as part of their application:

- 1) **Brief description/ cover letter** of why the individual considers him/herself as the most suitable for the assignment. Please paste the letter into the 'Resume and Motivation' section of the electronic application
- 2) Duly accomplished **Letter of Confirmation of Interest and Availability** using the template provided by UNDP
- 3) **P11 Form** indicating all relevant experience as well as the contact details (email and telephone number) of the candidate and at least three (3) professional references. Please use the P11 form provided by UNDP
- 4) **Financial Proposal** that indicates the daily fees as per the template provided by UNDP

I. CRITERIA FOR SELECTION OF THE BEST OFFER

The following criteria shall serve as basis for evaluating offers:

Combined Scoring Method:

- Where the qualifications and methodology will be weighted a maximum of 70% and combined with the price offer which will be weighted a maximum of 30%

Technical Evaluation of Proposals:

- All applications comprising the information/documentation provided will be evaluated to ascertain the suitability of the applicants to carry out the assignment. Candidates who obtain the minimum of 49 points of the full mark (70 points) will be considered technically compliant and their financial evaluations will be evaluated thereafter. Applications will be scored as per the following breakdown (Total 70 points):
 - Educational background: 10 points

- A Master's degree in Environmental Studies, Risk Analysis, Water Management, Geology or a related field
 - Relevant Experience: 55 points
- At least 10 years of relevant work, of which at least 5 in conducting hydrological surveys, risk assessments
- Previous experience in Myanmar
- Previous experience with UN agencies in similar assignments
- Proficiency in written and spoken English language
 - Language skills: 5 points
- Excellent command of written and spoken English

Financial Evaluation of Proposals:

- The financial proposals of all the applicants who pass the technical evaluation will be scored. The maximum 30 points will be allotted to the lowest financial bid, and all other bids shall receive points in inverse proportion to the lowest fee e.g. $[30 \text{ Points}] \times [\text{USD lowest}] / [\text{USD other}] = \text{points for other proposer's fees}$

The contract shall be awarded to the applicant who receives the highest cumulative score.