

Ministry of Population and Environment (MoPE)
Department of Hydrology and Meteorology (DHM)
Community Based Flood and Glacial Lake Outburst Risk Reduction Project
CFGORRP

Terms of Reference

To undertake a study to assess and measure progress on Outcome Level Indicators of the Project.

1. Background

Community Based Flood and Glacial Lake Outburst Risk Reduction Project (CFGORRP) is a joint undertaking of the Government of Nepal (GoN), Global Environment Facility (GEF) and the United Nations Development Programme (UNDP). The project is being implemented by the Department of Hydrology and Meteorology (DHM) under the Ministry of Population and Environment (MoPE) as the lead Implementing Agency. Department of Water Induced Disaster Management (DWIDM), Department of Soil Conservation and Watershed Management (DSCWM) and Department of National Park and Wildlife Conservation (DNPWC) are the three collaborating partners of the project.

The CFGORRP/DHM has two outcomes: The First Outcome / Component I focuses on the Imja Glacial Lake Outburst Flood (GLOF) risk reduction in Solukhumbu, covering Chaurikharka, Namche, Khumjung and Juving VDCs including high risk settlements along the 50 km downstream of Imja Lake. Second Outcome / Component II is aimed at reducing the flood risk in Terai and Churia covering 8 VDCs namely Sarpallo and Nainhi in Ratu (in Mahottari district), Tulsipur and Pipra Pra Pi in Gagan (in Siraha district), Dighawa and Pakari in Khando (in Saptari district) and Hadiya and Jogidaha in Triyuga Watersheds (in Udayapur district).

The project has four outputs under each component. Outputs under component I include Water level of Imja Lake lowered through controlled drainage; Protocols for GLOF risk monitoring and maintenance of artificial drainage system of Imja Lake developed and implemented; Community-based GLOF Early Warning System developed and implemented and GLOF Risk Management Skills and Knowledge Institutionalized at Local and National Levels. Component II encompasses Sediment control and stabilization of hazard-prone slopes & river banks through structural and non-structural mechanisms; Flood Proofing of Water and Sanitation Systems in Selected VDCs in Target River Basins; Institutionalization of flood risk management skills and knowledge and Flood preparedness training for district and VDC representatives, NGOs, CBOs and local communities in 4 flood-prone districts.

CFGORRP/DHM has been working from the beginning of 2014 in the targeted Districts/VDCs and 2017 is the final year of project implementation. Project has implemented a set of structural and nonstructural activities in the targeted communities to reduce GLOF risk and Flood vulnerability of local people. Significant progress have been made in terms of achieving the outcome level targets by the end of 2016.

The structural measures include lake lowering construction works, installation and operationalization of automated, semi-automated and community based GLOF/Flood early warning systems (EWS), construction of embankment stretches, flood proofing drainage system (FPDS), elevated tube wells (ETWs), evacuation centers (ECs) and sediment trap measures. Under

nonstructural measures, formation, capacity building, equipping and operationalization of local level institutions like Local level Disaster Risk Management Committees (LDRMCs), Community level Disaster Management Committees (CDMCs) and Taskforces; capacity building trainings on GLOF/Flood risk management to the officials and representatives at local, VDC, district and national level have been completed. Vulnerable people in the project areas have been trained and sensitized on flood/GLOF risk reduction measures through a combination of activities including mock drill events, street drama demonstrations, publication and distribution of Information, Communication and Education (IEC) materials along with airing of radio programs, public service announcements and jingles by mobilizing local FM stations.

A total of 12,690 vulnerable people residing in high risk settlements along 50 km downstream from Imja Lake are the direct beneficiaries from GLOF component. Furthermore, 74,992 tourists, trekkers, guides and porters visiting Khumbu region are also expected to benefit. Similarly, 59,062 vulnerable population residing in the eight VDCs in Terai are expected to directly benefit under component II. CFGORRP emphasizes and pays special attention to the differential vulnerabilities of men, women, children, the elderly and any other marginalized groups, while executing its activities.

The internal monitoring system of the project is basically focused more on collecting and analyzing the output level data and information. The project underwent its mid-term evaluation (MTR) in April 2016 and the terminal evaluation is expected to take place in July 2017. However, an assessment of the project's progress at the outcome level indicators needs to be done through an independent study.

Hence, CFGORRP/DHM intends to undertake a study to measure progress on outcome level indicators under both components.

2. Objectives of the Assignment

The main objective of this assignment is **to assess and measure** the progress made on outcome level indicators under both components.

Specific objectives of the assignment includes:

- Develop a detailed methodological framework with approaches and tools to measure the progress made under outcome level indicators.
- Based on the approved methodological framework, conduct field study covering both components to track the progress against the targets on outcome level indicators.

3. Scope of Works

The scope of works include inter-alia, but not limited to the followings:

- Undertake a desktop review of project document, annual progress reports and other relevant documents to have a clear understanding of project outcomes, progress on indicators and targets.
- Design a methodological framework for the study, including the appropriate selection of representative samples for conducting households (HHs) survey; prepare guiding questions/checklists and questionnaires to undertake HH surveys, Focus Group Discussions -FGDs and Key Informant Interview-KII.

- Based on the methodological framework, develop appropriate tools and questionnaires so as to capture information in areas related to people's perception/understanding/knowledge/capacity building /awareness etc. under the broader domain of climate change adaptation and GLOF/flood risk management initiatives undertaken by the project, in a bid to assess and measure the achievement made on outcome indicators.
- Prepare and submit an inception report encompassing study methodology and time frame for endorsement from CFGORRP/DHM
- Undertake field study to collect necessary information as per the approved methodological framework as prescribed in the inception report. Analyze the data/information and develop a draft report for sharing with CFGORRP/DHM, UNDP and project partners to solicit feedbacks and comments.
- Finalize and submit the report after incorporation of comments and feedbacks and in consultation with CFGORRP/DHM.

The outcome level indicators, targets and baseline is hereunder:

Outcome	Indicators to be assessed	Targets	Baseline
<p>Outcome 1 : Risks of human and material losses from Glacial Lake Outburst Flooding (GLOF) events from Imja Lake reduced</p>	<p>1.1. Average depth of Imja lake</p>	<p>1.1. Average depth of lake kept below dangerous levels by ensuring average water depth during spring and summer months is at least 3 meters or more below the baseline level prior to the construction of the channel.</p>	<p>Updated baseline data: Average water depth of Lake is 58.8 m and highest water depth was 149.8 m in October 2014 90% of the community have heard about GLOF about GLOF risk but are not prepared for it (Source: Regional GLOF Risk Reduction Project)</p>
	<p>1.2 Percentage of high risk settlements of Imja GLOF Impact Zone residents (including women, children and elderly people) with a clear understanding of how the EWS works and what to do in the event of a GLOF</p>	<p>1.2. 100% residents from Solukhumbu district of the high risk settlements of the GLOF Impact Zone (within 50 km of outlet) understand how the EWS works and know what to do during the event of a GLOF, including men and women and elder residents.</p>	<p>NA</p>
	<p>1.3 Number of targeted institutions with increased capacity to minimize exposure to GLOF risks</p>	<p>1.3.a. Number of representatives from Solukhumbu DDRC, Sagarmatha National Park, the Imja GLOF Risk Management Committee, and CBEWS Taskforces trained to manage and minimize GLOF risks.</p> <p>1.3.b. No. & type of information materials disseminated to local and non-local people (i.e. tourists) by different agencies on GLOF risks, risk reduction measures and what to do in the event of a GLOF.</p>	<p>No local institution to address or understand the potential risks from GLOF. Limited access to information as well as Government level institution in the Khumbu region (Imja lake and surrounding) to address or disseminate GLOF risks.</p>

		1.3.c. By the end of the project, DHM is operating a GLOF Risk Monitoring System and has a mechanism in place to communicate GLOF risk warnings to MoHA and NEOC.	
Outcome 2 Human and material losses from recurrent flooding events in 4 flood-prone districts of the Terai and Churia Range reduced	2.1. Number of additional people provided with access to safe water supply and basic sanitation services	2.1. At least 70% population in 3 districts/6 VDCs have access to 24 elevated tube wells and/or a flood proofing drainage system.	Existing tube wells in 8 VDCs get flooded during the flooding season hindering the access to safe drinking water for 59,062 population residing in the villages. Water supply/drainage system in 8 VDCs gets flooded making it difficult for 59,062 population.
	2.2. Number of people and value of their material assets covered by a CBEWS in the four target project districts	2.2. 100% of the population covered by CBEWS in all target flood prone river basins	There are no EWS in the 4 project target districts; 3 VDCs (Mahisthan, Hattilet and Aurahi) communities in Mahottari district (Janagha River) have been trained in CBEWS UNDP/CDRMP programme
	2.3. Number of targeted institutions with increased capacity to minimize exposure to flood risks in the Terai & Churia Range	2.3.a. By the end of the project, at least 8 gender sensitive Local Disaster Risk Management Plans (LDRMPs) prepared by the Village Disaster Risk Management Committees in the Terai & Churia Range. 2.3.b. By the end of the project, at least two vulnerable VDCs of four districts will have CBEWSs and which are being effectively maintained by local communities (including women) under the leadership of the Village Management Committees.	Weak system for flood risk management. DWIDP currently focuses only on construction works. Limited trained staffs in DWIDP on flood risk management. DDRC is mostly involved in rescue and relief for post disaster work and their activity in the targeted districts is limited.

4. Methodology

The Service Provider (SP) is expected to devise a methodological framework and tools for undertaking the study after review of project result resource framework, project document and M&E plan. The study will be a combination of quantitative and qualitative assessment for tracking the progress on indicators. The SP will be responsible for orienting the enumerators on data collection tools. SP shall consult with project team while devising checklists and questionnaires for household survey, FGG and KII. However, the presence of coordinator is a must for conducting Focus Group Discussion. The FGD shall be used to collect information and also to triangulate the data and information based on the targets of each individual indicators. Reporting format will be discussed and finalized in consultation with PMU team.

CFGORRP/DHM envisions a methodological approach to carry out assessment study for each outcome. However, potential service provider is expected to propose the approach and methodology and will be discussed and agreed in mutual consultation and consent

Outcome I

1.1. Average depth of lake kept below dangerous levels by ensuring average water depth during spring and summer months is at least 3 meters or more below the baseline level prior to the construction of the channel.

Carry out desktop review of progress reports and Key Informant Interview with technical experts from the project and Nepal Army to assess the progress on this indicator.

1.2. Percentage of high risk settlements of Imja GLOF Impact Zone residents (including women, children and elderly people) with a clear understanding of how the EWS works and what to do in the event of a GLOF

1.3.b. No. & type of information materials disseminated to local and non-local people (i.e. tourists) by different agencies on GLOF risks, risk reduction measures and what to do in the event of a GLOF

For these targets on indicators, Focus Group Discussion each at 12 high risk settlements shall be organized. The participants include residents from 12 high risk settlements along 50 km stretch of Imja Dudh Koshi River corridor and nearby other settlements of Imja Impact Zone including the Taskforce members and LRPs. Questionnaire for the FGDs shall be devised so as to capture and assess progress on both targets.

For indicator target **1.3.b.** KII with project personnel, taskforce members, LRPs and Himal FM shall be needed to cross verify the production and dissemination of related IEC materials.

1.3.a. Number of representatives from Solukhumbu DDRC, Sagarmatha National Park, the Imja GLOF Risk Management Committee, and CBEWS Taskforces trained to manage and minimize GLOF risks.

Number of representatives from Sagarmatha National Park, the Imja GLOF Risk Management Committee, and CBEWS Taskforces trained to manage and minimize GLOF risks: Focus Group Discussion with trained people at Namche (one event) and with Taskforce members & LRPs (5 FDGs) encompassing vulnerable settlements shall be organized.

1.3.c. By the end of the project, DHM is operating a GLOF Risk Monitoring System and has a mechanism in place to communicate GLOF risk warnings to MoHA and NEOC.

KII with project personnel, DHM focal persons and with the service provider shall be organized.

Outcome II

2.1.a. At least 70% population in 3 districts/6 VDCs have access to 24 elevated tube wells and/or a flood proofing drainage system:

Conduct HHs survey to assess vulnerable people's access to elevated tube wells. A total of 10,734 households reside in the project areas. A representative sample size of 3-5% from the beneficiary households needs to be taken from the flood/inundation affected settlements to measure the accessibility of potable drinking water from elevated tube wells (ETWs). For the ETWs, study shall be conducted in all eight VDCs of four districts.

For the FPDS, household survey shall be carried out in the Nainhi VDC and Pipra Pra Pi VDCs, by taking the representative sample. Sample size will be 3-5% of total households. The set of questionnaire will be devised to measure the accessibility and effectiveness of ETWs and FPDS in the project areas.

Households that are close to the ETWs & FPDS and from the inundation/flood affected settlements shall be considered while taking samples.

Conduct 8 FDGs, one at each VDCs with the affected vulnerable communities and document the effectiveness and benefits of the ETWs and FPDS.

2.2.b. 100% of the population covered by CBEWS in all target flood prone river basins

2.3.b. By the end of the project, at least two vulnerable VDCs of four districts will have CBEWSs and which are being effectively maintained by local communities (including women) under the leadership of the Village Management Committees.

Conduct FGDs with the local people, taskforce, CDMCs and LDRMCs members about the CBEWSs, its usefulness and significance for reducing flood risks. A total of 10 FGDs two each at Sarpallo, Mahottari, Tulsipur-Sirhaha, Dhigwa-Saptari and Jogidaha & Hadiya-Udayapur districts will be conducted. During the FDGs, the effectiveness and sustainability aspects of early warning system shall also be explored and documented. Peoples' and committee's view on sustainability aspects of CBEWSs shall be explored and assessed. In case of Sarpallo, Mahottari and Tulsipur, Siraha, the effectiveness and sustainability aspects of Community Based Flood Early Warning System, a semi-automated EWS shall also be assessed.

2.3.a. By the end of the project, at least 8 gender sensitive Local Disaster Risk Management Plans (LDRMPs) prepared by the Local level Disaster Risk Management Committees in the Terai & Churia Range.

Carry out the KII with members of LDRMCs & CDMCs, officials from district and VDC level line agencies, and District Project Officers and Coordinators from the project.

* Representation of all caste and ethnic groups and women shall be ensured while taking sample and participants for household survey and FDGs.

5. Assignment Coverage

The individual indicators will determine the sites of study. However, the study will cover all the project targeted 12 VDCs under both components spread across in five districts. The assessment shall encompass all level of beneficiaries and stakeholders to generate and solicit opinions and perceptions ranging from local, district and national level line agencies.

6. Guidance and Supervision

The Service Provider shall work under the overall guidance and supervision of National Project Director (NPD) and National Project Manager (NPM), and in close consultation with Monitoring & Evaluation Officer (M&E O), Senior Technical Advisor (STA) and Gender and Social Inclusion Specialist (GSIS) and the Project team based at Field Coordination Office, Lahan.

7. Assignment Duration

The duration of this assignment is of 8 weeks including the submission of final report.

8. Expertise required for the assignment

The assignment requires the following team of expertise.

Human Resource	Qualification and Experiences
Team Leader (1 person)	A Master's degree in a social science or a relevant subject with over 10 years of professional working experience in undertaking evaluation and assessment studies. Sufficient work experience in the areas of Disaster Risk Management or Climate Change and a clear understanding of the socio-economic context of the eastern Terai, Churia and high mountain region is a must. Sound knowledge and experience in devising methodological framework/ tools for data collection and good analytical and report-writing skills is a must.
Field Coordinators (2 - one for each component)	A Bachelor's degree in any discipline with at least 3 years of working experience in collecting socio-economic data, preferably from rural areas of terai and high mountain region For Terai districts, communication skills in Maithli will be a distinct advantage.
Enumerators (10) Two in each district	Intermediate/SLC with experience in collecting socio-economic data Enumerators shall be selected preferably from respective VDCs or districts during field survey with command in local language Bio data/details of the enumerators shall be included in the annex of final report

9. Deliverables

The time duration for this assignment will be for a period of 8 weeks including preparation, field survey and preparation and submission of final report. The contract will be deliverable-based and payment will be made after submission of the deliverables as specified in the contract agreement. An original copy of final report (hard & soft) is to be provided by the service provider.

Deliverables Table

Deliverables	Timeline (March-May, 2017)	Payment	Remarks
1. Submit one copy of inception report with clear description of proposed work methodology including methodological frameworks for data collection/analysis with anticipated deliverables within the stipulated timeframe.	Within 1 week after contract signing.	40% of the contract amount	
2. Presentation of preliminary findings of field survey and submission of draft Outcome Assessment Study report	Within 7 weeks after contract signing.	30% of the contract amount	The project team shall provide inputs in the draft report
3. Submission of final Outcome Assessment Study report with detail annexes (both hard and soft copies)	Within 8 weeks	30% of the contract amount	

10. Mode of Payment

The service provider shall be paid in three installments upon request with tax invoices:

- First Installment: 40% of the contract amount shall be paid upon submission of inception report with detail research methodology framework and plan with tax invoice
- Second installment: 30% of contract amount shall be paid upon submission of draft Outcome Assessment Study report with tax invoice
- Third/Final Installment: 30% of the contract amount shall be paid upon completion and submission and acceptance of final report with tax invoice.

11. Documents Required:

Following documents are required along with the financial quotation

- Detail technical and financial proposal in two separate sealed envelope.
- Copy of PAN/VAT registration certificates
- Copy of renewed registration and recent year Tax clearance certificates
- Evidence of prior relevant experiences
- Detailed working methodology including working schedule and CV of proposed personnel