**Expression of Interest (EOI)**

**Positions Available:**

1. **Glaciologist** – 1 position
2. **Glacio-hydrologist** – 1 position
3. **Remote Sensing & Geoinformation Specialist** – 1 position

**Background**

The **Sagarmatha Pollution Control Committee (SPCC)**, supported by The American Himalayan Foundation (AHF), in partnership with the **Cryospheric Society of Nepal (CSN)** and **Khumbu Pasang Lhamu Rural Municipality (KPLRM)**, is implementing the project **"Early Warning and Community-based Emergency Response Preparedness for GLOF Resilience in Thame and Downstream Villages."**

The project major objectives is to strengthen community resilience against **Glacier Lake Outburst Floods (GLOFs)** through the design, development and implementation of a technically robust, community-centered **Early Warning System (EWS)** and **Emergency Response Preparedness (ERP)** in Thame and downstream settlements, located in Solukhumbu, Nepal.

This initiative responds to the urgent need for improved preparedness following recent GLOF events, combining scientific expertise, engineering solutions and strong community engagement. SPCC seeks **three specialized consultants** to provide scientific, technical, and operational expertise in glaciology, glacier hydrology, and remote sensing/GIS for high-altitude environments.

**1. Glaciologist**

**Specific Responsibilities:**

- Assess the current condition and dynamics of glaciers and glacial lakes in the Thame region, with emphasis on identifying and evaluating GLOF-related hazards.
- Take part in field surveys and support the site selection and installation of the weather stations and hydrological stations.
- Provide technical recommendations for vendor selection, equipment procurement, instrumentation setup, and system installation for the Early Warning System (EWS).
- Collaborate with technical teams to ensure optimal configuration and maintenance of installed equipment.
- Lead and contribute to community consultation workshops focused on glacier-related hazards and the design of the Community-Based Early Warning System (CB-EWS).
- Provide expert input on technical specifications for EWS components and advise on procurement processes.

**2. Glaciohydrologist**

**Specific Responsibilities:**

- Conduct hydraulic and dam-break modeling of glacial lakes upstream of Thame to estimate potential flood hydrographs, lead times, and downstream flow characteristics.
- Use model outputs to develop hazard maps, identify safe zones, and recommend evacuation routes in collaboration with community stakeholders.
- Support pre-processing, quality control, and validation of hydrological datasets obtained from field stations and other sources.
- Provide technical recommendations for sensor selection, configuration, and maintenance of weather and hydrological monitoring stations.
- Participate in local consultation workshops to present modeling results and inform community preparedness and response planning.

**3. Remote Sensing & Geoinformation Specialist**

**Specific Responsibilities:**

- Acquire, process, and analyze satellite imagery and aerial datasets to update glacier and glacial lake inventories for the Khumbu Pasang Lhamu Rural Municipality.
- Apply remote sensing techniques to monitor glacier area changes, lake volume fluctuations, and indicators of potential instability.
- Develop GIS-based flood hazard and evacuation maps by integrating hydrological and hydraulic modeling results with topographic and community infrastructure data.
- Maintain and manage geospatial datasets relevant to GLOF hazard assessment and EWS planning.
- Provide technical guidance on geospatial data integration into the CB-EWS platform.
- Participate in consultation workshops to present hazard maps, explain spatial analysis findings, and incorporate stakeholder feedback.
- Deliver geospatial products, metadata, and mapping outputs in standardized formats for project partners and long-term archiving.

**Shared Responsibilities (All Positions)**

- Review existing early warning systems in high-altitude glacial environments and assess their applicability to the Thame region.
- Develop detailed technical specifications for a CB-EWS adapted to the local physical, social, and cultural context.

- Recommend suitable sensor technologies, communication protocols, and alert dissemination mechanisms (e.g., sirens, SMS, radio).
- Contribute to hazard mapping, safe zone identification, and evacuation planning activities.
- Provide training and capacity building for local staff and community members on data interpretation, system operation, and routine maintenance.
- Collaborate closely with SPCC, CSN, KPLRM, local communities, and relevant government agencies to ensure technical quality, local ownership, and long-term sustainability.
- Prepare progress updates, technical documentation, and final reports in accordance with project reporting requirements.
- Coordinate among a team of experts and stakeholders to collect, analyze available data and information useful for a sustainable community-based warning system.

**Qualifications and Experience**

**Glaciologist**

- Master's or PhD in Glaciology, Cryospheric Science, or a closely related discipline.
- Minimum of 7 years of professional experience in glacier monitoring in high-altitude environments.
- Demonstrated experience in conducting field-based glacier surveys, with substantial involvement in monitoring and assessing glacial hazards.
- Extensive field experience in remote and high-altitude conditions (above 4,500 m); prior experience in the Khumbu region is highly desirable.
- Excellent communication and training skills to support capacity building
- Fluency in Nepali is required; proficiency in the Sherpa language is considered an asset.

**Glaciohydrologist**

- Master's or PhD in Glaciology, Cryospheric Science, or related fields.
- Minimum 5 years of professional experience in glaciers, glacial lakes, glacio-hydrology, and GLOF hazard assessment.
- Proficiency in hydraulic and dam-breach modelling.
- Field experience in hydrological monitoring in high-altitude environments (above 4,500 m); prior work in the Khumbu region is preferred.
- Excellent communication and training abilities, capable of effectively conducting capacity-building workshops and engaging diverse stakeholders, including local communities and emergency responders.
- Fluency in Nepali required; knowledge of Sherpa language is an asset.

**Remote Sensing & Geoinformation Specialist**

- Master's or PhD in Glaciology, Remote Sensing, Geoinformatics, Geography, or a related discipline.
- Minimum 5 years of experience in satellite-based glacier and glacial lake monitoring, hazard mapping, and spatial data management.
- Proficiency in geospatial software (ArcGIS, QGIS) and remote sensing platforms (Google Earth Engine, SNAP, etc.).
- Field experience in high-altitude environments (above 4,500 m); prior work in the Khumbu region is preferred.
- Proven ability to produce hazard maps and evacuation plans for disaster risk reduction.
- Fluency in Nepali required; knowledge of the Sherpa language is an asset.

**For All Positions**

- Demonstrated experience working in mountainous or Himalayan contexts.
- Strong background in disaster risk reduction and/or climate adaptation projects.
- Excellent communication skills and a proven track record in community engagement.
- Ability to work collaboratively in multi-disciplinary teams under challenging field conditions.

**Submission of EOI**

Interested individual consultants should submit:

1. **Updated CV** highlighting relevant expertise and previous project experience.
2. **Brief technical approach and methodology** describing how the scope of work will be addressed.
3. **Examples of relevant work** or case studies (e.g., GLOF risk assessment, hazard mapping, modelling, EWS development).
4. **Contact details for at least two professional references** from similar assignments.

EOIs must be submitted within **7 calendar days** from the date of this announcement to: **info@spcc.org.np**

Only shortlisted candidates will be contacted for further steps in the selection process.