Terms of Reference (ToR) for

Consultancy Services for Enhancing Flood Risk Awareness Using Virtual Reality

1. Background

The RAIN project, funded by Foreign, Commonwealth and Development Office (FCDO) and implemented by People in Need (PIN) in partnership with the Community Self Reliance Centre (CSRC), aims to enhance climate resilience in Nepal's Madhesh and Lumbini Provinces, regions frequently affected by floods and other climate-induced hazards. RAIN focuses on strengthening the capacity of vulnerable communities to better anticipate, prepare for, and respond to these risks. **One of the key sub themes of RAIN is the strengthening of Early Warning Systems (EWS) and the promotion of Early Action (EA) at the grassroots level.** This includes improvement of hazard forecasting, improving communication channels for early warnings, and fostering inclusive, timely decision-making. By linking warnings to clear, community-led preparedness actions, RAIN empowers Community-Based Organizations (CBOs) and local actors to reduce disaster impacts and enhance long-term adaptive capacity. The initiative also promotes local ownership and sustainability of EWS-EA through targeted training, coordination, and participatory planning processes.

2. Objective of the Assignment

To develop and deploy a Virtual Reality (VR) simulation model that enhances flood risk awareness**,** preparedness**,** and early action capacity among local governments, Community Disaster Management Committees (CDMCs), schools and vulnerable communities in Madhesh and Lumbini Provinces. The immersive tool will visually simulate flood scenarios and impacts through 360-degree views, display early signs of flooding, and train stakeholders in community-based flood early action and response using integrated early warning system (EWS) modules.

3. Scope of Work

The consultant/firm will:

a) Site Visit and Data Collection

- Conduct field visits to flood-prone municipalities, wards, and communities in consultation with the RAIN project team and local authorities.
- Collect topographic, hydrological, historical flood, and community vulnerability data as appropriate.

b) Immersive Flood Simulation Development

- Develop 360-degree immersive simulations of flood-prone settlements reflecting seasonal riverine and flash flood dynamics.
- Create flood inundation maps under different scenarios (return period) and display them in the VR environment.

- Embed these maps into the VR platform for first-hand simulation of household and community-level flood impacts.
- Showcase physical triggers and early signs of flood (e.g., rising river levels, backflow, embankment overtopping) as available in the project or from the field.

c) Integration of Early Warning and Early Action (EWEA)

- Disseminate sample messages of early warning messages via sirens, SMS, radios, and community volunteers.
- Incorporate information on early action measures—such as evacuation drills, sandbagging, livestock protection, relocation, safeguarding valuable assets, supporting people with disabilities, and school closures—into the VR experience.
- Ensure alignment with Nepal's official flood EWS (e.g., DHM's alert system) and local government protocols.

d) Testing, Training, and Roll-Out

- Facilitate user testing with CDMCs and local stakeholders.
- Finalize VR content based on feedback.
- Deliver an operational manual**,** training modules, and one complete VR kit (hardware + software) to the LEOC.

4. Deliverables

- Fully functional immersive Flood VR Simulation Tool using 360-degree view, integrated with flood inundation maps and EWS/EA content.
- One complete VR set (hardware + pre-installed content).
- Offline version of the tool for replication in areas without internet.
- Training and operational manual in Nepali and English.
- Field user testing report.
- Technical support for six months post-handover.

5. Qualifications and Experience

The firm/consultant must have:

- Minimum 5 years of experience in Disaster Risk Reduction and Flood Management.
- Proven record of designing immersive VR tools using 360-degree views, ideally for environmental or disaster contexts.
- Experience with GIS-based flood modelling and community-based early warning systems**.**
- Experience producing training manuals and conducting simulation training.
- Fluency in local languages and understanding of Madhesh Province's flood context is preferred.

6. Timeline

The assignment is required to be carried out from July 1 to September 30, 2025. A detailed work plan will be finalized in consultation with the RAIN project team.

7. Facilitation and Logistics

CSRC will:

- Facilitate access to stakeholders, communities, and technical data.
- Cover transportation for fieldwork.
- Provide additional VR sets as needed based on pilot outcomes.

8. Payment Terms

- 40% upon signing of the agreement.
- 60% after satisfactory completion of deliverables.
- All payments will be subject to tax deduction as per Government of Nepal regulations.

9. Application Process

Interested consultants/ firms should submit the following to the CSRC Office, Dhapasi-07, Tokha, Bhumighar on or before 18 June 2025, physically or electronic at the given email address: **landrights@csrcnepal.org**

- A cover letter explaining their interest and suitability for the consultancy.
- A technical proposal outlining the methodology, approach, and work plan.
- A financial proposal with a detailed budget.
- CV(s) of the consultant(s) highlighting relevant experience.
- At least two references from similar assignments.
- Company Legal Documents of registration
- PAN/VAT Certificate
- Latest Tax Clearance Certificate

10. Evaluation Criteria

CSRC will evaluate the submitted applications and select a consultant/ consulting firm, at its absolute discretion. Criteria that may be used includes but is not limited to the following:

Criteria	Weightage
Approach and Methodology to TOR	25%
Technical capabilities	35%
Financial proposal	40%
Total	**100%**

11. Disclaimer

CSRC reserves the right to accept or reject any/all applications or cancel the whole process without any necessary justification.