

TERMS OF REFERENCE (ToR)

Glacio-Hydrology Specialist

Action Area: A – Managing Cryosphere and Water Risks

Strategic Group: 1 – Reducing climate and environmental risks

ToR

About ICIMOD

The Hindu Kush Himalaya (HKH) region stretches 3,500km across Asia, spanning eight countries – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan. Encompassing high-altitude mountain ranges, mid-hills, and plains, the zone is vital for the food, water, and energy security of up to two billion people and is a habitat for countless irreplaceable species. It is also acutely fragile, and vulnerable to the impacts of the triple planetary crisis of climate change, pollution, and biodiversity loss.

The International Centre for Integrated Mountain Development (ICIMOD), based in Kathmandu, Nepal, is an international organisation established in 1983, that is working to make this critical region greener, more inclusive and climate resilient. For more information, read our [Strategy 2030](#) and explore our [website](#).

Position overview

We are seeking an experienced and accomplished scientist for the role of Glacio-Hydrology Specialist. This role will be under our Action Area on Managing Cryosphere and Water Risks in Strategic Group 1 – Reducing climate and environmental risks. The position offers a unique opportunity to make a substantial impact in addressing the risks associated with cryosphere change across the Hindu Kush Himalayan (HKH) region.

The ideal candidate should be motivated and able to lead and coordinate ICIMOD's work on the cryosphere-hydrology interface and build wider understanding of responses to the implications of cryosphere change for water and energy resources, infrastructure, ecosystems, and livelihoods across the HKH. This role requires a strong track record in carrying out scientific research, building analytical and risk assessment tools and techniques in this area, and building the capacity of our partners in these skills.

The successful candidate will have good representational and networking skills, and a strong track record in managing research, and leading complex projects. The incumbent will be a skilled leader with good communication skills, managing in-house teams and coordinating partners from within the HKH and international institutions. The post will also play a pivotal role in the capacity development of both ICIMOD staff and key partners in relevant aspects of the cryosphere. Additionally, the role will contribute to science communication, collaborating with our in-house communications professionals to effectively communicate the implications of risks associated with cryosphere change and water resources to a range of audiences, including regional and international policy and decision-makers.

Responsibilities

The Glacio-Hydrology Specialist will be responsible for delivering results in line with the commitments we have made in our [Strategy 2030: Moving Mountains](#) and our [Medium-Term Action Plan V \(2023–2026\): Embracing Change and Accelerating Impact](#).

- Contribute to and further develop cryosphere and mountain hydrometeorological monitoring, analysis and modelling activities and regional capacity building together with

the cryosphere and other teams at ICIMOD and with national, regional, and international partners.

- Organise, lead, and participate in capacity-enhancement activities related to field activities at high altitude with regional and international partners.
- Organise, lead, and participate in regional and national training courses, workshops, and seminars on glaciological, mountain hydrological and meteorological topics.
- Lead the development and application of hydrological models with the capability to represent cryohydrological processes, integrate remote sensing and *in situ* data, and use downscaled climate change scenarios to assess water availability at basin and sub-basin scales.
- Provide insight on and participate in studies in the effects of climate changes on the cryosphere, implications for downstream water availability, and assist in the analysis of water availability scenarios on the sub-basin scale; consider what such changes may mean to society in general, people's livelihoods and ecosystems.
- Manage, evaluate and analyse glaciological and hydrological data; take responsibility for internal quality control at ICIMOD and data distribution to partners.
- Conduct dialogues with national and international stakeholders in connection with the implementation of project activities and contribute to the science-policy dialogue on glacier and snow hydrology, including the production and dissemination of policy briefs, issue briefs and other relevant outreach material.
- Actively participate in and contribute to ICIMOD activities and discussions related to climate change, cryosphere and hydrology. Work as a team player within ICIMOD by supporting related activities and promoting institutional goals.
- Conduct and contribute to scientific studies on changes in the cryosphere in the HKH region, including by writing and publishing reports, scientific publications and news articles. Collaborate with the ICIMOD Communications team to effectively disseminate research updates and publications.
- Collaborate with our business development and resource mobilisation team to develop research proposals for external funding, manage and coordinate project activities, generate reports to donors, and liaise with scientists, partners and donors, actively representing the cryosphere work at ICIMOD nationally and internationally.

Person Specification/Competencies

ESSENTIAL

1. A candidate should possess a PhD with a research focus on glacier hydrology, snow hydrology, snow science, or glaciology, ideally with a minimum of 5 years of relevant experience. Alternatively, candidates with a Master's degree should have at least 8 years of experience in these fields.
2. Proficiency in using hydrological models specific to glacier-covered or snow-covered regions to simulate glacier melt, snowpack dynamics, and runoff generation processes.
3. Capability to develop custom model components or modules to represent key processes in glacier or snow hydrology models, such as snow accumulation and melt, or permafrost interactions.
4. Physical fitness to do fieldwork under demanding conditions and experience in performing fieldwork in remote regions and at high altitude.

5. Experience in establishing, operating and maintaining hydrological and meteorological instruments, conducting river discharge measurements and managing hydrometeorological data and performing relevant analysis.
6. Research and complex project management experience, including planning, monitoring and progress reporting.
7. Experience in programming/statistical analysis techniques such as R, Python etc.
8. Excellent research and communication skills exemplified by a track record of publishing peer-reviewed journal articles.
9. Experience and ease in working with multidisciplinary teams, particularly with international or regional agencies, and in working with colleagues and collaborators from a range of national and cultural backgrounds.

PREFERRED

1. Experience with relevant models and data assimilation for hydrological analysis in glacier and snow-covered catchments (e.g. SPHY, TOPKAPI, J2000, PyGEM).
2. Knowledge of geographic information system (GIS) and remote sensing techniques.
3. Experience in cryosphere-related hazards.
4. Experience of working in the Hindu Kush Himalaya region.

Reporting and supervising

The Glacio-Hydrology Specialist will report directly to the Intervention Manager – AAA1 (Cryosphere) and under the overall guidance of Co-ordinator of Action Area A (Managing Cryosphere and Water Risks).

Location

You will be working in a cross-cultural, impact-oriented environment at ICIMOD's head office in Kathmandu, Nepal. Occasional travel in the HKH region will be required.

Kathmandu is a lively and exciting place to live. People are friendly, living costs are comparatively inexpensive, food is delicious (with a range of local and international cuisines), and there are good local and international schools and a low crime rate. Nepal offers amazing trekking trails, white water rafting, and safaris, combined with a rich culture and charming yet lively nightlife.

Duration

Until December 2026, with a probation period of six months. There is a possibility of extension subject to performance and ICIMOD's future funding levels.

Remuneration

This is an international position at ICIMOD. The starting annual gross salary for this position is USD 39,720/- (negotiable based on experience and qualifications). Gross salary comprises of basic salary, provident fund, family/post adjustment allowance, and child/dependency allowances. Salaries and benefits at ICIMOD are competitive compared with other international organisations. We offer a comprehensive benefits package which includes insurances (medical, life and accidental),

children's education grant for maximum 2 children below 18 years of age, severance pay, paid leave (30 holidays and 10 public holidays per year) and day care facility.

For expatriates, there is a tax exemption in Nepal; they are responsible for their home country's tax payments. Expatriate staff are entitled to housing allowance, annual home leave ticket, shipment of personal effects, and an installation and repatriation allowance.

ICIMOD's core values

Our core values are integrity, neutrality, relevance, inclusiveness, openness, and ambition. These values are an expression of our culture and are central to the guiding beliefs and principles of our work and behaviour. Our core values will lie at the heart of ICIMOD operations and delivery. They will underpin everything we do and frame how we work with our partners. They reflect our founding intentions and the balances we seek to hold, while equipping ourselves for the future.

Diversity, equity, inclusion, and safeguarding

ICIMOD's human resource selection process is based on the qualifications and competence of the applicants. As an employer, ICIMOD is committed to promoting diversity, equity, and inclusion, and offers equal opportunities to applicants from all backgrounds and walks of life, including but not limited to gender, age, national origin, religion, race, caste, ethnicity, sexual orientation, disability, or social status. ICIMOD strongly encourages applications from all eligible applicants, especially women, from all parts of the HKH region.

ICIMOD is dedicated to establishing and upholding a safe and nurturing work environment, where all its employees can participate fully and meaningfully without fear of violence, harassment, exploitation, or intimidation. Any type of abuse or harassment, including sexual misconduct [including child abuse], by our staff, representatives, or stakeholders is not condoned or tolerated.

Method of application

Applicants are requested to apply online before **August 04, 2024** (11:59 PM Nepal Standard Time) through [ICIMOD Vacancy Application Portal](#).

Only shortlisted candidates will be notified.