

JOB DESCRIPTION
Hydrologist and Water Systems Scientist
- School of Environment and Sustainability
(SES)

Who are we?

The Indian Institute for Human Settlements (IIHS) is a national education, research, practice, and capacity development institution committed to the equitable, sustainable and efficient transformation of Indian cities and settlements.

The School of Environment and Sustainability (SES) at IIHS and its Long-term Urban Ecological Observatory (LTUEO), the first such mega-city observatory in the world, focus on the sustainable transformation of diverse human settlements and the social-ecological-technical systems they are part of in the face of global change, especially urbanisation and climate change. The SES and LTUEO work on cutting edge scholarship and knowledge, education, and practice focused on solutions to wicked and complex environment and sustainability problems within the context of a rapidly urbanising India.

For more information, please see <http://www.iihs.co.in>

What are we looking for?

We are looking for an emerging scholar in hydrology and water resources who can work with IIHS faculty and researchers on mechanistic and semi-empirical hydrologic modelling and monitoring of green and blue water with special focus on spatial and temporal surface and ground-water dynamics.

This work will help support cross-scale water research, policy and practice from sustainable management of water on the IIHS campus, long-term instrumented catchments in the Western Ghats, lakes and rivers in urban, peri-urban, rural and semi-wild ecosystems in India to our global work for the [IPCC](#), [IPBES](#) and the [Global Commission on the Economics of Water](#) (GCEW).

Prospective applicants should demonstrate interest and skills in the design and testing of nature-based solutions as part of the integration of blue, green, and grey infrastructure across the rural, peri-urban, and urban continuum. They will need to showcase quantitative and analytical rigour through their ability to conduct mechanistic and semi-empirical modelling on water systems and water bodies, linking ground and surface-water; contribute to salient and policy relevant scientific peer-reviewed publications; and participate in decision making for sustainable management of water in our campus as well as other water systems where we work.

The selected candidate will work with faculty within the SES and LTUEO as well as other Schools at IIHS, building on ongoing and emerging academic, research and practice work in water systems, ecology, and ecosystem services at multiple scales of governance and management. This will require spending quality time on the IIHS Kengeri Campus, along with providing hydrology/ hydrogeology-related support on other IIHS projects.

Qualifications

Applicants should hold a B.Tech in Civil Engineering and have an M.Tech / PhD in hydrology. They would have a proven research and publication record with at least three relevant publications in noted peer-reviewed journals.

Applicants should have a demonstrated depth and breadth of knowledge in various methodological approaches and techniques across water systems with exposure to modelling of surface and ground-water dynamics using mechanistic models and semi-empirical/statistical methods; the ability to generate insights by analysing large secondary geo-spatial data sets; the ability to design studies and generate novel primary and field data including from instrumented catchments and sensors; and proficiency in using Python and/or R. Candidates must be interested in, and capable of, field work and work with instrumented catchments and systems.

Ideal candidates will have some knowledge of the urban systems, as well as the ability to engage with policy-facing questions.

What will you be expected to do?

You will use appropriate mechanistic and semi-empirical hydrologic models to understand and communicate the dynamics of the water cycle and water budget in our Kengeri campus to inform adaptive decision making on water management. You will conduct measurements (e.g., rainfall-runoff in our water systems and pumping tests on bore-wells) for tracking hydrologic processes over space and time. You will work with scientists and practitioners to develop a diverse portfolio of evidence-based insights on management of water at various spatial scales and levels of governance from local, regional, national to global.

What do we offer?

Our growing body of cutting-edge research and practice offers opportunities that encompass water, ecological and infrastructural systems at local to national scale with active participation and contributions to international science-policy forums such as [IPCC](#), [IPBES](#) and [GCEW](#).

Our collective faculty experience and scholarship on water, ecology, sustainability science, climate science and urban sciences offers an unparalleled opportunity for professional development. You will be part of a high-performance interdisciplinary team with access to established partners and collaborators from across the world.

You will have access to the first mega-city LTUEO in the world and IIHS' cutting-edge Geospatial Lab, Urban Informatics Lab, Word Lab, and Media Lab.

We offer a flexible, inclusive, and diverse work environment across our campuses and diverse field sites and projects that provide the biophysical, social-ecological, and technical basis for application of ecological/water economics at scale.

We offer compensation that's commensurate with qualifications and demonstrated experience and skills, along with a range of benefits and support.

What interests should you have?

Ideal candidates would have an interest in the creation and application of diverse knowledge and practices to address water systems and hydrology in relation to environmental and sustainability challenges in an integrated manner. They will be quantitatively and analytically at the cutting edge in terms of using modelling as well as statistical-stochastic approaches in studying water systems.

Openness to interdisciplinary, collegial, and collaborative teamworking, along with excellent interpersonal and communications skills, are essential.

The ability and interest to communicate in peer-reviewed journals and communicate in mainstream and social media is desirable.

Where will you be based?

You will be based in Bengaluru but may be required to travel to other campuses and field sites and projects across India and abroad as needed.

Anything else you should know?

Review and Assessment - The role and performance of this position shall be subject to normal review and assessment systems at IIHS.

Diversity Policy - IIHS is an equal opportunity employer that encourages women, people with disabilities and those from economically and socially excluded communities with the requisite skills and qualifications to apply for positions.

How to apply?

To be considered for this opportunity, please upload your CV and fill the online application form by clicking [here](#). (You can also click on the "Apply Now" button at the end of the Job Description displayed on the website).

Ensure that your CV includes the names of three referees. Alongside, also upload send your CV and a letter of intent outlining your fit with the JD.

In case of questions?

Please write to us at hr@iihs.co.in if you need any clarifications while filling the online application form.



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