



IHE DELFT Institute for Water Education offers graduate education in Delft, The Netherlands, and carries out research and capacity building projects all over the world. The mission of IHE Delft is to contribute to the education and training of professionals and to build the capacity of sector organizations, knowledge centres and other institutions active in the fields of water, the environment and infrastructure in developing countries and countries in transition.

IHE Delft has a permanent staff of 200 of which more than 100 are scientific staff, while about 250 guest-lecturers from academia and industry contribute to the educational programme. Each year 750 participants (incl. about 200 new MSc students per year) from all over the world attend the various regular and short courses at IHE Delft. The institute has an international staff & student community with English as working language.

Integrated Water Systems and Governance Department

The Integrated Water Systems & Governance Department covers a broad range of disciplinary knowledge – sociology, law, economics, public administration, political science, information technology, mathematics, hydrological and hydraulic modelling sciences, engineering, knowledge management and innovation studies. With our research we seek to contribute to a better understanding of what makes water systems sustainable, resource efficient, resilient and how they contribute to social and environmental justice, in particular in, but not limited to, the Global South.

IHE Delft is developing together with its partners IWMI and FAO an international framework for water accounting. The newly developed framework is referred to as Water Accounting Plus (WA+). An open-access data repository is under development (www.wateraccounting.org).

The Integrated Water Systems and Governance Department is looking for:

Lecturer Water Accounting – 1.00 FTE **38 hours**

Responsibilities

The candidate is responsible for developing and implementing concepts related to Water Accounting Plus (WA+) in the Global South. Water accounting integrates hydrological processes with land use, managed water flows and the services that result from water consumption in river basins. Its objective is to produce information that can help to achieve equitable and transparent water governance for all users and a sustainable water balance. Users can provide value assessments of certain processes, based on more accurate and systematic data sets than currently available.

While the WA+ concept is increasingly accepted in the field, implementing spatially explicit water accounts using open access remote sensing tools is under continuous development. Especially the determination of hydrological ecosystem services and sustainable water management practices need to be worked out in more detail. The water accounts are reported by means of fact sheets, tables and geographical maps. The validation of the chain of remote sensing algorithms requires field measurements, and IHE Delft is keen in quantifying and reporting the uncertainties of the standardized WA+ fact sheets.

The candidate will apply the WA+ framework by integrating earth observation satellite measurements with global hydrological models and GIS data layers to prepare water budgets for each land use class. Local measurements on rainfall, dam releases, water levels, discharges and withdrawals will be assimilated into the modelled data series. All WA+ data should be processed in a routine manner following a strict protocol.

The successful candidate is expected to co-develop the general procedures of water accounting and its validation, jointly with colleagues in the WA+ group and beyond. This includes innovative research solutions, and IHE Delft is encouraging staff members to develop scientific publications related to these

innovations. It is expected that the candidate assists students and provide lectures in water management related modules. There is a continuous request for Tailor-Made-Training courses, and the candidate should be available for international travel.

The successful candidate will:

1. Support and implement projects, adequately reporting progress
2. Be able to work and collaborate within a team
3. Conduct research and implement projects on WA+ analyses including:
 - Collecting and fusing spatially distributed data layers from earth observation satellites
 - Integrate satellite images with global hydrological models
 - Execute consistency checks and calibrate flows and fluxes with in situ measurement, where feasible
4. Prepare scientific publications in peer reviewed journals
5. Implement research and capacity building projects in the Global South
6. Assist with supervision of MSc students on topics related to WA+

Requirements

IHE Delft is searching for a candidate with at least a master degree in either (i) hydrology and water resources and/or (ii) irrigation water management with a particular interest in using remote sensing application. The candidate should have proven excellent analytical and communication skills, and have an interest in water resources. The candidate should have demonstrable programming skills in Python and QGIS. Overseas working or training experience is preferred, particularly in the Global South.

Terms of employment

This position is a temporary position for initially one year with a possibility for an extension, subject to available resources. The position is based in Delft, The Netherlands, with short missions abroad. A competitive salary is offered depending on qualifications and experience in accordance with the conditions of employment for Dutch Universities. The appointment implies entry into the Netherlands' Civil Service Pension Fund (ABP).

Information and application

Additional information can be obtained from Dr. Janez Susnik, Deputy Head of the Integrated Water Systems and Governance Department (+31 (0)15 215 2368) or Prof. Dr. Wim Bastiaanssen (w.bastiaanssen@un-ihe.org) or Dr Marloes Mul (m.mul@un-ihe.org).

Applications (in English) should respond specifically to the requirements and should be sent before **10 December 2018 (closing date)** including curriculum vitae, statement of teaching and research interests, motivation letter and the names and contact details of two contactable referees (*as one PDF file with your family name as the filename*), to IHE Delft, attn. Human Resource Management (E: recruitment@un-ihe.org), PO Box 3015, 2601 DA Delft, The Netherlands, stating vacancy-number **18-IWSG-09**.

Reactions from staffing agencies and other 3rd parties are not appreciated.