Contents

Rector’s statement 3

UNESCO-IHE at a glance 5
  Institutional profile 5
  Contribution to UNESCO programmes and activities 5
  Ties to Dutch water and education sectors 6
  Strategic directions 7
  Organizational structure 9
  Renewal of Operational and Cooperation Agreements 9
  Performance agreement 10
  Focal themes & affiliations 10
  Partnerships & networks 11

Education 13
  Students 15
  Educational developments 17
  Quality of education 18
  Relationship with the professional field 20

Research 21
  Research profile 21
  PhD fellows 23
  Research developments 23
  Quality of research 26

Capacity development 29
  Programme management 29
  Institutional strengthening 30
  Tailor-made training 30
  Policy advice 31

Home base 33
  Human resources 33
  Services 36
  Campus 38

Financial report 41

Fellowship Trust Fund 45

Annexes 47
  1 Educational statistics 48
  2 Short courses 49
  3 PhD fellows 52
  4 Research lines 57
  5 Publications 59
  6 Organizational chart of UNESCO-IHE 73
  7 Committees 74
  8 External Memberships 75
  9 Projects 80
  10 Partners 93
  11 UNESCO-IHE & Netherlands Alumni Associations 95
I am delighted to announce that the longstanding cooperation between UNESCO and the Netherlands in the establishment and further development of our Institute was renewed last December. By renewing this commitment, the Netherlands pledged to continue the base subsidy support for the Institute for the period 2014-2016 with an automatic extension until 2018, provided that the Institute successfully passes a mid-term evaluation. This is exciting news because the need for more trained professionals will only continue to increase dramatically in the coming years.

Our PhD programme, jointly implemented with partner universities, is an excellent basis for the establishment of the Graduate School on Water and Development. The Graduate School will be an essential element of the updated approach to the Global Campus. This initiative was adopted at the annual session of the Institute’s Governing Board last November, and will function as an international (partly virtual) school cooperating with various academic institutions in the world. The Institute will concentrate on strengthening its current partnerships and networks to achieve the principal objectives of the Global Campus initiative further, increasing the impact of our academic programmes with partners worldwide. The Governing Board decided to ‘upscale’ the current PhD model. This encompasses the implementation of joint PhD programmes with renowned universities worldwide based on the national legislation of the country of each partner university.

Another way that the Institute worked on increasing its impact in 2013, was by improving access to its specialist knowledge by launching initiatives such as the Graduate Professional Diploma Programme. This is meant for water professionals who wish to further specialize or re-direct their current career at a more flexible pace, and at much lower cost.

The UNESCO-IHE Alumni Award was given for the first time in 2013. The Award is to be given annually to an alumnus who can show an outstanding contribution to water management and proves to be a role model for their peers. Alumnus Michael Mutale from Zambia was the winner of the first UNESCO-IHE Alumni Award. Mutale was honoured for his efforts to empower water experts in decision making processes, his dedication to improving quality of life in Southern Africa and his efforts in solving water resources management challenges.

Last year, I was personally involved in the Post-2015 SDGs discussions and the Institute remains actively involved the in ongoing debate. The Institute played a key role in drafting a number of recommendations resulting from conferences and symposia held last year devoted to defining the new goals. The 5th Delft Capacity Development Symposium ‘From Rio to Reality’ in May, for instance, fed into the October Budapest Water Summit, bringing together key people at the political and technical level, paving the way towards the 7th World Water Forum in Daegu, Korea. We have always emphasized the need to develop Climate Adaptive Water Management, the protection of aquatic ecosystems, transboundary water issues and above all capacity development for the benefit of developing countries and countries in transition. Smarter goals need to be defined, but more importantly, we need to act upon achieving them.

Professor András Szöllösi-Nagy
Rector, UNESCO-IHE
Institutional profile

Vision
UNESCO-IHE envisions a world in which people manage their water and environmental resources in a sustainable manner, and in which all sectors of society, particularly the poor, can enjoy the benefits of basic services.

Mission
The mission of UNESCO-IHE is to contribute to the education and training of professionals, to expand the knowledge base through research, 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.

The Institute does so through generating and sharing excellent and novel knowledge, training future water leaders, establishing networks and building capacity all over the world.

Mandate
The Institute has the mandate to play a global role in training a new generation of water professionals, facilitating the development of capable organizations and providing an enabling environment for well-informed decision-making that will improve water management practices in an integrated fashion. Related academic activities are mostly done in collaboration with partners worldwide, with a specific focus on developing and transition countries.

Goals
In support of its mission, the Institute has three main goals:
- Develop innovation, provide new knowledge, and promote the uptake of technologies and policies that will address the issues of the global water agenda, in particular those related to the Millennium Development Goals (MDGs) and the post-2015 Sustainable Development Goals (SDGs);
- Seek, evaluate and facilitate responses for the sustainable management of water, to meet the needs of all sectors of society, particularly the poor;
- Strengthen and promote principles of good governance that drive institutional and management change to support the sustainable management of water.

Core activities
UNESCO-IHE carries out education, research and capacity development activities in the broad fields of water engineering, environment, water management, water supply and sanitation, and governance.

Education - UNESCO-IHE offers both degree programmes (PhD and MSc levels) and non-degree programmes (short courses, online courses and tailor-made training) for engineers, scientists and professionals from various disciplines working in the water, environment and infrastructure sectors. UNESCO-IHE is increasingly implementing its educational activities with partner institutes worldwide, making water education more accessible and affordable for an increasing number of students.

Research - The Institute’s research activities contribute to the knowledge base concerning the water environment, and complement its education and capacity development activities. The Institute’s links with the developing world provide an excellent opportunity to perform an almost constant reality check, since water issues faced by developing and transition countries require new and innovative solutions.

Capacity development - UNESCO-IHE provides capacity development services to knowledge institutes and water sector organizations around the world. Through these operations, the Institute increases its global impact and helps to build sustainable organizations that are equipped to properly manage water resources and deliver water services sustainably. Capacity development programmes comprise activities that focus on different levels – including the individual and organizational levels and the enabling environment – and on the development of a wide range of skills and competencies.

Contribution to UNESCO’s programmes & activities
UNESCO-IHE is an essential part of the UNESCO Water Family as a major pillar providing education and research. UNESCO-IHE directly contributes towards UNESCO’s mission in general, and to its medium term strategy which presented the strategic vision and programmatic framework for UNESCO’s action over the past six years (2008-2013) in all its fields of competence. Under
UNESCO-IHE Annual Report 2013

UNESCO-IHE at a glance

UNESCO’s overarching objective 2 Mobilizing science knowledge and policy for sustainable development, UNESCO-IHE plays a crucial role, in particular under the strategic programme objective 3 Leveraging scientific knowledge for the benefit of the environment and the management of natural resources and the strategic programme objective 4 Fostering policies and capacity-building in science, technology and innovation.

The Institute contributes by building institutional and human capacity in science and engineering in the water and environment field, with particular focus on activities that contribute to sustainable development. In order to achieve this goal, UNESCO-IHE implements capacity development projects that provide support to water sector institutions, and supports the set-up and strengthening of water education and research at local universities in developing countries and countries in transition. Because of UNESCO-IHE’s work, capacities and skills in the water field are reinforced in universities, research institutes, ministries and other water sector organizations, particularly those in developing countries and countries in transition. The Institute contributes towards strengthening the science-policy-society interface in original scientific research with respect to water.

The Institute is working towards improving the accessibility of tertiary water education by increasing the number of joint programmes offered in collaboration with partner institutions from the South, and by increasing the flexibility of the educational offerings in terms of distance education, funding modalities, and exchange of credit points. Capacities are built through hundreds of professionals from developing countries and countries in transition trained at the MSc level and in short courses on water related issues. In this manner, UNESCO-IHE directly contributes to reducing the scientific knowledge divide between and within developing countries and countries in transition and the so-called Global North.

UNESCO-IHE also contributes significantly to UNESCO’s two global priorities areas: Africa and gender equality. Through its capacity development, research and education services, UNESCO-IHE has a very successful history of supporting sustainable development in Africa through its large alumni network and long standing partner organizations. Likewise, the Institute contributes towards having water organizations that have an enabling environment for both women and men to contribute to and enjoy the benefits of sustainable development of water resources. Notably, around 90% of the participants of the education and training programmes of UNESCO-IHE are from developing countries and countries in transition; about 40% are female and about 40% are from Africa.

Through its different research themes, the Institute works towards the general goals of UNESCO’s International Hydrological Programme’s (IHP) to facilitate an interdisciplinary and integrated approach to watershed, aquifer management and water resources, and to promote and develop international research in hydrological and freshwater sciences. Linkages and coordination between IHP and IHE are further strengthened by the membership of six members of the Governing Board of UNESCO-IHE elected by the Intergovernmental Council of IHP. UNESCO-IHE also works towards spearheading research on topics central to the IHP, including the topics of climate adaptation, urban water management, transboundary groundwater, water governance, flood resilience and pro-poor sanitation. Within the IHP strategic plan (IHP-VII for 2008-2013), UNESCO-IHE contributed to almost all themes but particularly to theme 5, water education for sustainable development through promoting interdisciplinary and multidisciplinary curricula and research initiatives linked to water, joint courses and research, with a focus on innovation, among universities and other research institutions, including category 2 water centres and UNESCO water chairs.

Ties to Dutch water and education sectors

It is to be noted, that the programmes of the Institute cover a much larger field than that of IHP. Also, mention is to be made of the fact that the Institute is entirely extrabudgetary from the point of view of UNESCO.

Being firmly connected to the Dutch education and water sectors has always been a key feature for UNESCO-IHE. Cooperation with Dutch universities is influenced in part by the fact that all UNESCO-IHE professors hold an appointment at one of these universities. This ensures ties to the relevant chair groups at these universities and gives the professors the right to promote PhD degrees. The Institute also has joint staff appointments with Dutch universities, and many academic staff members give guest lectures at partner universities, and vice versa. The closest ties are presently to Delft University of Technology,
Wageningen University and VU University Amsterdam, with which UNESCO-IHE has bilateral agreements. Activities with partner universities include granting PhDs, holding places on MSc examination committees, conducting research and capacity development projects, sharing facilities, organizing shared classes and accepting each other’s students in courses.

UNESCO-IHE is an active member of the Platform for International Education, an association that promotes activities of the Dutch institutes for higher education in the field of institutional strengthening of education and research capacity in developing and transition countries. The Institute also collaborates with Dutch universities through its membership in the Socio-Economic and Natural Sciences of the Environment Research School (SENSE), a joint venture of the environmental research institutes of ten Dutch academic institutes.

The Institute’s ties to the Dutch water sector are equally important, as they provide access to specific knowledge and add to the Institute’s relevance in the Dutch socioeconomic context. Here again, links are defined mainly through guest lectures and cooperation in capacity development and research projects. UNESCO-IHE is a member of the Netherlands Water Partnership and part of the Technological Innovation Campus Delft, and individual staff members have affiliations with a variety of Dutch professional associations. Match-making activities are organized to facilitate contacts between the sector and UNESCO-IHE alumni.

Besides the obvious links to the international education, knowledge and science agenda of the Ministry of Education, Culture and Science, the Institute contributes directly to various objectives and programmes of the Government of the Netherlands. The DGIS - UNESCO-IHE Programmatic Cooperation (DUPC) is a special fund that contributes to the Dutch development cooperation and trade agenda with a view to further the ambitions of the Ministry of Foreign Affairs. This agenda is increasingly linked to the economic development agenda of the Ministry of Economic Affairs, as well as the “being connected” agenda of the Ministry of Infrastructure and Environment. In its academic and project work, UNESCO-IHE contributes directly to the Top Sector programme for water; significant contributions are also made to the Top Sector programmes for agriculture/food, life sciences and health, and energy.

### Strategic directions

#### Aim

Water is critical to the world’s prosperity and environmental sustainability and is expected to continue growing in importance over the coming decades. Meeting the global challenges requires a strong foundation of knowledge to enable well-informed decision-making and improve water management practices. This puts water issues very high on the international political agenda. Water is critical for the development for the post-2015 development agenda and the Sustainable Development Goals (SDG) as they are currently formulated.

The challenges for water education and capacity development are enormous. Global environmental changes will expose the future university graduates to water problems of unprecedented complexity and magnitude, as global and regional changes introduce new drivers and pressures on the systems that have not been experienced before. Positive feedback loops can reinforce and increase the existing complexity and magnitude. In relation to this, employers of water professionals expect their staff to continue learning throughout their professional lives to keep abreast of the latest knowledge and skills in the water sector. Continuous professional development (CPD) also known as lifelong learning, is essential – not only for employers, but also and especially for the individuals themselves and universities.

The water and environment sector faces specific capacity challenges. The projected personnel shortages and staff successions in developing countries and countries in transition are extremely critical for sustainable development. This issue must be addressed systematically by closing the gap: training young, ambitious and talented students as well as mid-career water professionals and providing a lifelong learning context that effectively transfers existing knowledge, generates new knowledge, and equips professionals with the skills and competencies they need in order to have an impact.

Therefore, the strategic aim of the Institute is to increase its impact and outreach over the next decade through the Institute’s growing stature as a world-class centre of water education, research, and capacity development. This is hoped to be accelerated by establishing the UNESCO-IHE Global Campus for Water and Development, a campus that will be largely virtual based on the existing cooperation with a great number of institutions.
UNESCO-IHE at a glance

Developments in 2013
The need for a strong knowledge base in water and environment and well-trained water professionals is always growing. This is reflected, for instance, in the increasing number of partners asking UNESCO-IHE for assistance or partnership, as well as in the number of professionals expressing interest in the various programmes. Many partners and stakeholders have asked UNESCO-IHE to scale up their academic activities and to offer more demand-responsive, innovative water education programmes at graduate level with a particular geographic focus on Africa, Asia, Latin America and the Middle East. The ‘8/10 syndrome’ also reflects this need: on average, eight out of ten qualified candidates had to be rejected in Delft over the past years due to limited resources. This has called into question the Institute’s classical business model (educating students only in Delft); in response, a new model strongly involving partner institutes around the globe was introduced and will be developed further in the coming years.

During the 13th session of the UNESCO-IHE Governing Board meeting in November 2013, discussions covered the Global Campus and PhD accreditation, both key components of the Strategic Directions. The aim was to decide how to move forward with both these initiatives, taking into consideration the views of all stakeholders, the long-term strategic directions and the fulfilment of the Institute’s mission. The Business Plan written in 2012 was updated to reflect their conclusions.

Regarding the Global Campus initiative, the Governing Board came to the conclusion that the Institute has in fact already been operating as a (virtual) Global Campus through its increased implementation of joint education programmes and joint project implementations. The Board agreed that the fundamental purpose of the Global Campus is to increase the impact of the Institute’s work, and as such concluded that the establishment of new Category 1 Institutes was not necessary. The focus should rather be on strengthening the existing partnership network in order to more efficiently and effectively carry out UNESCO-IHE’s mission. The Governing Board therefore supports strengthening its existing network of partner institutions by setting up a strong quality assurance system with selected partners that will arrive at a higher level of cooperation in the Institute’s activities. Whether or not some of these partners may aspire in due course to become UNESCO Category 1 Institutes in their own right would be entirely up to each partner. This approach allows the Institute to achieve its fundamental objectives from the Global Campus initiative:
- increase the attractiveness of its education programmes (in terms of flexibility, complementarities and international exposure);
- increase synergies through the sharing of resources;
- increase affordability for potential students;
- ensure stability and quality of local/regional education and research programmes.

The Governing Board also discussed in detail the initiative of acquiring the right for UNESCO-IHE to grant PhD degrees, carefully considering several different options in light of the views of UNESCO and the Government of the Netherlands. The Board reconfirmed its conviction that working in partnership is the most efficient way to successfully achieve the Institute’s mission, and decided to build on the status quo model in which full professors at UNESCO-IHE have a zero-hour appointment at a Dutch university and bilateral agreements are made regarding how to arrange the PhD candidate’s studies, supervision and defence. The Board also decided to extend this setup to renowned universities outside the Netherlands that have the right to grant PhD degrees based on their national legislation.

Valorization
UNESCO-IHE follows the broad definition of the VSNU Association of Universities in the Netherlands and the Dutch Ministry of Education, Science and Culture, but more explicitly defines its valorization efforts as in the UNPD definition: “the process through which individuals, organizations, and societies obtain, strengthen, and maintain the capabilities to set and achieve their own development objectives over time”. Valorization is essential for all three core activities and, eventually, leads to the utilization (uptake) of knowledge in practice through education and training, research and capacity development.

The commercialization of research results, which is usually part of a university’s valorization efforts, is not in line with the policy of the Institute regarding making knowledge freely available as much as possible. As a UNESCO institute, UNESCO-IHE only promotes and protects its intellectual property (developed knowledge) in exceptional cases. The Institute does not commercialize knowledge, nor does it establish spin-off companies or start-ups involved in the further commercial development of knowledge developed by the Institute.

To support the Institute in its valorization activities, which usually take place in partnerships, the former project
office was transformed into a more pro-active Liaison Office, which is an essential component in the valorization infrastructure of the Institute. On the one hand, the Liaison Office supports academic staff during all levels of project acquisition, implementation and reporting; on the other hand, it assists with the managerial, legal and financial aspects of collaborations with project partners, including non-academic parties such as businesses and entrepreneurs. This essentially transfers generated knowledge (inventions) to innovations, thus contributing to societal and economic challenges.

The Institute’s HRM policies and performance and development management cycle actively promote entrepreneurship, networking and the acquisition of funding for mainstream activities among staff. Special training courses for graduate students on such topics as project management and entrepreneurship are currently being developed as part of a transferable skills programme.

Organizational structure

Rectorate & roles
The day-to-day management of the Institute is handled by the Rectorate, which consists of the Rector, the Vice Rector of Academic and Student Affairs, and the Business Director.

The Rectorate reports to Governing Board of UNESCO–IHE about programme-related issues and is working together with the IHE Delft Foundation Board on financial matters. The Rectorate provides leadership to three Academic Departments and six Process Management Units.

Governing Board of UNESCO-IHE
The Governing Board comprises members elected by the Intergovernmental Council of The International Hydrological Programme of UNESCO as well as representatives of government ministries, international organizations, universities and the private sector, appointed by the Director-General of UNESCO. The Governing Board is responsible for the programme and activities of UNESCO-IHE and ensures that these contribute to achieve the broader UNESCO policies and strategies established by the General Conference of UNESCO.

For a complete list of Governing Board members, refer to Annex 7 - Committees.

Foundation Board
The IHE Delft Foundation Board provides the buildings and facilities that UNESCO-IHE needs to implement its programmes, and employs most of the staff that is seconded to UNESCO-IHE. This Board is responsible for safeguarding the continuity of the Institute’s operations by providing the resources.

For a complete list of Foundation Board members, please refer to Annex 7 - Committees.

Academic departments
UNESCO-IHE has three Academic Departments with academic staff responsible for education, training and research programmes. These are the Departments of Environmental Engineering and Water Technology, Water Science and Engineering, and Integrated Water Systems and Governance. Each Academic Department is composed of Chair Groups, each of which is formed around a particular discipline or specialisation.

To see how the Academic Departments relate to the Chair Groups, please refer to Annex 4 - Research Lines.

Process Management Units
The work of the Academic Departments is supported by the Institute’s Process Management Units. These include Central Services, the Education Bureau, Finance, Human Resource Management, IT, and the Office of the Rector.

UNESCO-IHE’s Organizational Chart can be viewed in Annex 6.

Renewal of Operational and Cooperation Agreements
UNESCO-IHE Institute for Water Education was established in 2003 as a UNESCO ‘Category I Institute’ jointly by UNESCO and the Government of the Netherlands, effectuated by the signing of the following three agreements:

For a complete list of Governing Board members, refer to Annex 7 - Committees.
UNESCO-IHE at a glance

- UNESCO and the Kingdom of the Netherlands signed the Seat Agreement;
- UNESCO and the Dutch Ministry of Education signed the Operational Agreement;
- UNESCO and the IHE Delft Foundation signed the Cooperation Agreement.

The agreements include internal rules that guarantee functional autonomy to achieve the Institute’s objectives. Both the Operational Agreement and the Cooperation Agreement were renewed in 2013.

Focal themes & affiliations

UNESCO–IHE centres its education, research and capacity development programmes on the focal themes of:
- Safe Drinking Water & Sanitation
- Water-Related Hazards & Climate Change
- Water & Ecosystems Quality
- Water Management & Governance
- Water, Food & Energy Security
- Information & Knowledge Systems

In addition, important emerging areas are addressed in the education and research programmes, including water conflict management, climate and global change adaptation, and urban water systems. The thematic priorities are well embedded in ongoing international programmes, including UNESCO’s IHP-VIII (2014-2020) programme, ICSU’s Future Earth, and IAHS’ Panta Rhei. Progress in these themes will be essential to contribute to addressing the Grand Challenges formulated by the EU Horizon 2020 programme. The critical importance of thematic programme is confirmed by the interest of philanthropic donors, leading to large research and capacity building programmes financed by e.g. the Bill and Melinda Gates Foundation and Rotary International.

UNESCO-IHE is linked to various research and innovation programmes, such as the NWO programme on urbanizing deltas, MVI water (NWO), initiatives related to the Top Sector for Water, Water Mondial, the Knowledge Platform Water for Development, etc. Furthermore, the Institute pays particular attention to the following themes of the Dutch Government’s policies on development cooperation and trade in its education, research, capacity development and valorization programmes:

Water, with a focus on four sub-themes:
- Water efficiency for agriculture;
- Water management and deltas;
- Drinking water and sanitation;
- Water governance.

Food, with a focus on three sub-themes:
- Food & Business: Global Challenges;
- Food & Business: Applied Research;
- Food & Business: Knowledge Management.

Security and the Rule of Law, with a focus on:
- Water Diplomacy;

Gender, an overarching theme with various links to water management.

Performance agreement

At the end of 2011, the Dutch Minister for Education, Culture and Science signed a letter of understanding with Dutch universities on the implementation of the strategic agenda described in Quality in Diversity. Consequently, the universities are required to arrange that their own strategic plans state their intentions to achieve the agreed targets for quality and profiling. To monitor related progress, the Dutch Ministry of Education, Culture and Science (OCW) started signing detailed individual medium-term performance agreements with each university in mid-2012, covering educational quality and success rates, educational and research profiles and valorization. The agreements with the various Dutch universities apply to the 2013-2016 period.

During the negotiations of the Operational Agreement between OCW and UNESCO, the Ministry proposed to use a similar set-up for UNESCO-IHE. This is reflected in the renewed operational agreement between the Government of the Netherlands and UNESCO for the 2014-2018 period under Article 1.2, stating that the Institute’s funding for 2017 and 2018 will be subject to an evaluation in early 2016 of the Institute’s performance in education, research and knowledge valorization in assisting developing countries and countries in transition.

In order to comply, UNESCO-IHE started drafting a performance agreement in 2013, including the various indicators that will be included in the Institute’s evaluation. The final performance agreement will be ready in early 2014. This 2013 Annual Report already reports on the relevant indicators in the draft performance agreement.
Partnerships & networks

‘Working in partnership’ is the general approach at UNESCO-IHE. The majority of the activities are done in partnership, mainly with partners from developing countries and countries in transition. Partners are often other academic institutions, but also include government ministries and departments, companies and private sector organizations, water boards and water utilities, municipalities, NGOs, UNESCO centers and other UN/ international organizations.

Bilateral partnerships

At present, UNESCO-IHE has cooperation agreements with 86 institutional partners worldwide. The following institutional agreements were signed or renewed in 2013.

For a full list of UNESCO-IHE’s Cooperation Agreement partners, as well as Joint Education and Joint Research partners, please refer to Annex 10 - Partners.

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<tr>
<th>Signed</th>
<th>Partner</th>
<th>Goal</th>
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<tr>
<td>January 2013</td>
<td>University of Amsterdam (UvA)</td>
<td>PhD promotions arrangements, joint research and education activities and staff exchange.</td>
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<tr>
<td>March 2013</td>
<td>Organisation of American States (OAS)</td>
<td>OAS covers 25% of the tuition cost for up to four online sanitary engineering professional courses.</td>
</tr>
<tr>
<td>April 2013</td>
<td>National Water Authority (ANA), Nicaragua</td>
<td>Support to MSc research in Nicaragua and possible support to full or partial PhD research for Nicaraguan citizens.</td>
</tr>
<tr>
<td>April 2013</td>
<td>World Meteorological Organization (WMO)</td>
<td>Co-financing of MSc fellowships for 2 to 3 selected candidates per year.</td>
</tr>
<tr>
<td></td>
<td>Dura Vermeer, signed originally September 2004, renewed in May 2013</td>
<td>Sponsoring of a part-time Chair in Flood Resilience.</td>
</tr>
<tr>
<td>May 2013</td>
<td>University of Arizona</td>
<td>Agreement to pursue training of Rand Water employees in UNESCO-IHE MSc and PhD programmes, joint project submissions, regular short courses and tailor-made training courses.</td>
</tr>
<tr>
<td>May 2013</td>
<td>University of Atacama, Chile</td>
<td>Collaboration in MSc on water supply engineering with focus on desalination at the University Atacama, capacity development for the centre for desalination and water reuse, staff exchange, short courses and laboratory setup.</td>
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<td></td>
<td>WaterNet Trust, originally signed May 2008, renewed in May 2013</td>
<td>Cooperation in capacity building in integrated water resources management in Southern Africa, through strengthening the capacity of the WaterNet Trust and its members and through joint education and research, including exchange of credits and lecture notes, joint publications, interactions of students in MSc and PhD programmes.</td>
</tr>
<tr>
<td>June 2013</td>
<td>YACHAY E.P.</td>
<td>Initiate a process of dialogue focused on the establishment of points of common interest, designing a roadmap in order to formalize a relationship of mutual cooperation and benefit.</td>
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<td></td>
<td>Eidgenössische Anstalt für Wasserversorgung, Abwasserreinigung und Gewässerschutz (EAWAG), originally signed July 2008, renewed in July 2013</td>
<td>Co-supervision, hosting and sponsoring by EAWAG of three UNESCO-IHE MSc students during the research phase of their studies.</td>
</tr>
<tr>
<td>July 2013</td>
<td>Rand Water Academy</td>
<td>Agreement to pursue training of Rand Water employees in UNESCO-IHE MSc and PhD programmes, joint project submissions, regular short courses and tailor-made training courses.</td>
</tr>
<tr>
<td>August 2013</td>
<td>Universidad Nacional Autónoma de México, Institute of Engineering (UNAM)</td>
<td>Promotion of research and increased capacity in the field of water resources, academic exchange, development of technical activities of mutual interest, establishment of a network of scientists, information, knowledge and technology transfer.</td>
</tr>
<tr>
<td>September 2013</td>
<td>King’s College London, University of London</td>
<td>Staff exchange for the purpose of lecturing or consultation, exploration of further collaborative activities.</td>
</tr>
<tr>
<td>November 2013</td>
<td>Ramsar Convention of Wetlands &amp; Charles Sturt University (RAMSAR)</td>
<td>Arrangements for the establishment of a Ramsar Chair in the Wise Use of Wetlands.</td>
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</tbody>
</table>
UNESCO-IHE aims to equip graduates with the knowledge, skills and competencies they need in order to address current and future challenges for sustainable local, regional and global water management, with a particular focus on a development context. Countries in the global South often face acute challenges involving sustainable use of natural resources, potable water supply, sanitation services and governance structures. The vision has been translated into PhD, Master’s and non-degree programmes that address these complex challenges for the water and environment sector and target mid-career professionals, mainly from developing and transition countries.

UNESCO-IHE students learn in an international atmosphere, gaining insights from best practices in various regions of the world. They are encouraged to develop an integrated approach in their work with the aim of achieving sustainable solutions, taking into account the multidisciplinary aspects of challenges they will encounter during their career.

The UNESCO mandate granted to UNESCO-IHE for training water professionals who will contribute to integrated water management provides a far-reaching and ambitious context for its educational programmes. The programmes are firmly rooted in fundamental principles of inclusive and sustainable water management. They embrace interdisciplinary approaches and are adaptable in order to address the trans-disciplinary challenges inherent to many water issues involving a diverse range of actors, cultures and attitudes. The academic programmes are student-centred. They incorporate a well-balanced range of didactic approaches, and link theoretical and applied knowledge with the skills and adaptability to apply that knowledge across diverse settings. Some MSc specializations are offered in partnership with other institutes.

The Institute’s education programmes are highly profiled and focus on water. UNESCO–IHE offers both degree programmes (MSc and PhD levels, the latter in collaboration with partner universities) and non-degree programmes (short courses, online courses, the Graduate Professional Diploma Programme and tailor-made training) for engineers, scientists and professionals from various disciplines working in the water, environment and infrastructure sectors.

UNESCO-IHE offers four fully accredited International Master of Science programmes, with a total of 16 specializations.

The Delft-based MSc specializations take 18 months, of which the first year consists of modules taught at UNESCO-IHE in Delft. After successful completion of these modules, the student does individual research for a six-month period.

The joint programmes are MSc specialisations developed with and offered in collaboration with international partner institutes; many more have been added in recent years. These joint programmes last 18 to 24 months, and part of the programme is given at one of the partner institutes, located in another country.

Delivering education jointly with partners offers content, including region-specific knowledge and perspectives, that UNESCO-IHE cannot cover on its own. Sometimes having parts of the programme delivered by partners reduces financial costs for the student/sponsor, as total fees and costs of living are generally lower than for a fully
MSc programmes & specializations

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<tr>
<th>MSc PROGRAMME IN ENVIRONMENTAL SCIENCE</th>
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<tbody>
<tr>
<td>Environmental Planning and Management</td>
<td>Db</td>
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<tr>
<td>Environmental Science and Technology</td>
<td>J</td>
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<tr>
<td>Environmental Technology and Engineering</td>
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<td>Environmental Technology for Sustainable Development</td>
<td>J</td>
</tr>
<tr>
<td>Limnology and Wetland Management</td>
<td>J</td>
</tr>
<tr>
<td>Water Quality Management</td>
<td>Db</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MSc PROGRAMME IN URBAN WATER AND SANITATION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanitary Engineering</td>
<td>J</td>
</tr>
<tr>
<td>Urban Water Engineering and Management</td>
<td>J</td>
</tr>
<tr>
<td>Water Supply Engineering</td>
<td>J</td>
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</table>

<table>
<thead>
<tr>
<th>MSc PROGRAMME IN WATER MANAGEMENT</th>
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<tr>
<td>Water Conflict Management</td>
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<td>Water Quality Management</td>
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<td>Water Resources Management</td>
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<td>Water Services Management</td>
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<table>
<thead>
<tr>
<th>MSc PROGRAMME IN WATER SCIENCE AND ENGINEERING</th>
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<tbody>
<tr>
<td>Ecohydrology</td>
<td>J</td>
</tr>
<tr>
<td>Flood Risk Management</td>
<td>J</td>
</tr>
<tr>
<td>Hydraulic Engineering and River Basin Development</td>
<td>Db</td>
</tr>
<tr>
<td>Hydraulic Engineering - Coastal Engineering and Port Development</td>
<td>J</td>
</tr>
<tr>
<td>Hydraulic Engineering - Land and Water Development</td>
<td>J</td>
</tr>
<tr>
<td>Hydroinformatics - Modelling and Information Systems for Water Management</td>
<td>J</td>
</tr>
<tr>
<td>Hydrology and Water Resources</td>
<td>J</td>
</tr>
</tbody>
</table>

**Joint Programme Partners map**

[Map showing countries with joint programme and Delft-based MSc specializations]
Delft-based programme. For students originating from the partner’s country/region, social costs may be lower as well. As a result, UNESCO-IHE MSc degrees become more accessible.

See the Joint Programme Partners map for an overview of partner institutes worldwide.

13 out of 16 specializations are currently offered in partnership as joint degree or double/multiple degree programmes. Of these, ten specializations are offered together with partners from the global South. The three other joint specializations are Erasmus Mundus programmes.

The Institute offers a programme of short courses, both face-to-face (in Delft) and (increasingly) on-line. Most of the face-to-face courses are modules within the MSc programmes, where the short course participants mix with the MSc students. This facilitates peer learning for both groups. It also allows short course participants, by taking the module exam, to earn ECTS credits and build up a portfolio for an MSc degree.

Over the course of ten years, UNESCO-IHE has increased the diversity, accessibility and quality of its educational offerings, while maintaining development relevance. It has done this primarily through expanding staff capacity in the social sciences, developing educational partnerships, expanding its on-line offerings and through staff development.

The Institute has also been successful in mobilizing fellowship opportunities from many sources in addition to the Netherlands Fellowship Programme. Notable examples are the Bill and Melinda Gates Foundation and Rotary International.

Students

In 2013, 225 students started their MSc studies, which is a slight decrease as compared to last year. Comparatively fewer students were enrolled that year in programmes jointly implemented with partner institutes, including Erasmus Mundus, although the current trend indicates that an increasing percentage of our students will be studying in joint programmes. 30% of all MSc students enrolled in the joint modalities, a 10% decrease from 2012.

185 students completed their MSc study in 2013 and a total of 1837 applications were received for the MSc programmes. The latter demonstrates that the Institute’s programmes are in high demand. In the 2010-2013 period, about 180 students on average graduated from the Institute at the MSc level each year. In addition, in each year during the same period, hundreds of professionals participated in one of the short courses offered by the Institute, increasingly also participating in online courses. Despite the fact that many of these programmes and courses are related to engineering and technology, around 40% of students are female.
Performance indicators education

<table>
<thead>
<tr>
<th>Quality of education</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1 MSc student success rate (%)</td>
<td>91</td>
<td>89</td>
<td>94</td>
<td>93</td>
</tr>
<tr>
<td>E2 Student satisfaction (1-5 scale)</td>
<td>3.57</td>
<td>3.91</td>
<td>3.95</td>
<td>3.83</td>
</tr>
<tr>
<td>E3 Teaching staff quality (% UTQ)</td>
<td>4.8</td>
<td>13.5</td>
<td>20.2</td>
<td>26.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Development relevance and valorization</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>E5 MSc graduates per year (No.)</td>
<td>176</td>
<td>189</td>
<td>175</td>
<td>184</td>
</tr>
<tr>
<td>E6 Short course participants per year (No.)</td>
<td>307</td>
<td>389</td>
<td>359</td>
<td>378</td>
</tr>
<tr>
<td>E7 On-line course participants per year (No.)</td>
<td>34</td>
<td>74</td>
<td>105</td>
<td>122</td>
</tr>
<tr>
<td>E8 MSc programmes intake (% from d/t countries)</td>
<td>93</td>
<td>83</td>
<td>86</td>
<td>90</td>
</tr>
<tr>
<td>E9 Short courses intake (% from d/t countries)</td>
<td>89</td>
<td>94</td>
<td>93</td>
<td>89</td>
</tr>
<tr>
<td>E10 On-line courses intake (% from d/t countries)</td>
<td>62</td>
<td>72</td>
<td>59</td>
<td>65</td>
</tr>
<tr>
<td>E11 Online course offering (No.)</td>
<td>2</td>
<td>3</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Efficiency</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>E15 Teaching/management/coordination input (hrs/module)</td>
<td>253</td>
<td>257</td>
<td>248</td>
<td>251</td>
</tr>
<tr>
<td>E16 MSc thesis supervision input (hrs/graduate)</td>
<td>92</td>
<td>93</td>
<td>94</td>
<td>87</td>
</tr>
</tbody>
</table>

Quality of education

E1 MSc student success rate: being the percentage of students in the Delft-based programmes that has graduated by 1st August (i.e. 21.5 months after enrolling in the 18-months programme).

E2 Student satisfaction: being the overall judgment of the students in the Delft-based MSc programmes on a scale 1 (low) to 5 (high).

E3 Teaching staff quality: being the percentage of academic staff on the payroll with a University Teaching Qualification or equivalent (on 31 December).

Development relevance and valorization

E5 Number of graduates MSc programmes: being the total number MSc students graduating in this year.

E6 Number of short course participants: being the total number short course participants (including tailor made courses, refresher courses etc, i.e. all courses for which participants receive a diploma) in this year.

E7 Number of online course participants: being the total number of participants that followed an accredited online module/course in this year. Note that the total number of online participants has been much high (>200), but the modules were not accredited. The ambition is to significantly increase the number of accredited modules to assurance the quality.

E8 MSc programmes intake from d/t countries: being the percentage of registered MSc students originating from developing/transition countries.

E9 Short courses intake from d/t countries: being the percentage of participants in accredited short face-to-face courses originating from developing/transition countries.

E10 Online courses intake from d/t countries: being the percentage of participants in accredited online courses originating from developing/transition countries.

E11 Online course offering from d/t countries: being the number of accredited online courses offered.

Efficiency

E15 Teaching and management/coordination input: being the average number of academic staff person hours spent per taught module in the MSc programmes.

E16 MSc thesis supervision input: being the average number of academic staff person hours spent per graduate on thesis research supervision.
The success rate for the MSc programmes is high: on average, some 90% of students obtain their MSc degree within 21.5 months. Student satisfaction rates are also high: the overall student assessment of the quality of the programmes is close to 4 on a scale of 1 (low) to 5 (high).

Nevertheless, some students leave earlier for personal reasons, while other students fail to obtain an MSc degree because either they do not pass taught modules, or fail in the final thesis defence. In such circumstances, a Certificate of Post-graduate Studies for the taught part of the programme can be awarded, if a minimum of 54 ECTS credit points have been accumulated. This approach allows us to maximize the potential achievement for every student who enrols in a programme.

The complete overview of MSc student numbers can be found in Annex 1 - Educational Statistics, while the overview of short course and online course participants is in Annex 2 - Short Courses.

Educational developments

Monitoring efficiency of MSc programmes

A benchmarking system to monitor the efficiency of the MSc programmes was introduced in 2013, which enables continuous monitoring of expenditures (time and out-of-pocket costs) and, consequently, facilitates better management. The system is beginning to deliver benefits (increased efficiency) without compromising the quality of the programmes.

UNESCO-IHE Advanced Class Programme

In 2013, the process of starting up an Advanced Class Programme kicked off, with the aim of stimulating and rewarding the Institute’s excellent MSc students.

The Advanced Class Programme is meant for ambitious and talented MSc graduates who have achieved a high standard of academic excellence and who are judged to be able to make a high impact in their field of study after returning to their home countries.

The Advanced Class Programme offers these students the opportunity to undertake activities such as writing a scientific article for submission to a peer-reviewed journal or developing a proposal for submission to a donor for PhD research or a capacity building project. This can be done by extending their stay in The Netherlands after graduation.

The educational development of the MSc graduate will continue through a training programme designed for their specific activity which will benefit their future careers. Optional training courses on technical writing for a scientific article or project proposal, writing popular scientific articles, presentation training, ethics and gender in science, career development and project acquisition are envisaged.

Graduate Professional Diploma Programme

The Graduate Professional Diploma Programme (GPDP) was launched in 2013 to offer better access to the Institute’s specialist knowledge, as well as providing increased flexibility to water professionals who wish to specialize further, or to re-direct their current career. To qualify for the diploma, participants successfully complete a set of modules tailored to their needs in a personal study plan, either online or face-to-face in Delft. The online courses can be followed part-time at a much lower cost, without interrupting a day-time career.

The programme receives fellowship support from the Bill and Melinda Gates Foundation and the Organisation of American States, among others. Immediately after the launch of the programme, a contract was signed with the National Water Supply and Drainage Board of Sri Lanka, enrolling 20 of its staff in the programme.

In this initial phase, the GPDP is limited to the field of Sanitary Engineering and Sanitation. Over time, it will be possible to study for the diploma in other fields, as plans are underway for additional GPDPs in Water Supply Engineering, Water Treatment Technology, Urban
Water Networks, Flood Risk Management, and Cleaner Production and Residuals Management. In the meantime, ideas for collaboration are being developed with partners in South Africa, India, Brazil and Uganda, among others.

OpenCourseWare
At the start of the Open Education Week in March 2013, UNESCO-IHE launched its OpenCourseWare (OCW) platform for the general public. The Institute aims to make all of its educational materials available as OCW by 2017, in the form of lecture videos, notes and presentations.

OpenCourseWare is free and open digital publications of high-quality educational materials at the college and university level. These materials are organized as courses, and often include course planning materials and evaluation tools as well as thematic content. OCW are free under an open license and can be accessed via the internet. OCW is in line with UNESCO-IHE’s commitment to sharing knowledge with others in the water sector and beyond in order to contribute to solving water problems the world is facing.

Courses developed for the OCW platform in 2013 include Hydrology and Hydraulics, Urban Drainage and Sewerage, Ecological Sanitation, and Computational Hydraulics. The material includes lecture notes, taped lecture videos and presentations.

Creative Commons adopted
In 2013, UNESCO-IHE decided to apply the non-commercial Creative Commons license to UNESCO-IHE education materials and open courseware resources. This enables these materials to be disseminated and developed freely, in line with its mission and as a signatory to the Berlin Declaration on open access.

Water Management MSc programme study profiles developed
Flexible study profiles were developed for the MSc programme in Water Management. Students will be able to compose their own study trajectory from 2014 onwards. The aim of maximizing flexibility in the Water Management programme and providing career-oriented advice, thus increasing the impact of their education on the water sector.

The taught part of the programme starts with the foundation phase, in which students are exposed to the different disciplines in the water management domain, and concludes with an integration phase that ensures that students get hands-on experience with integrated approaches and multidisciplinary collaboration.

Between the foundation and integration phase, students can compile a study profile from a wide range of available courses and thesis research topics to ensure that the educational programme is fully aligned with their professional needs. Mentors will guide them in selecting a suitable tailor-made study profile by reflecting on their knowledge, skills and career options. The coaches know a great deal about the needs of the water sector in various parts of the world. Students’ employers will also be consulted in the guidance and counselling process.

Students can opt for one of the four thematic study profiles: water resources management, water services management, water conflict management, or water quality management.

Quality of education

Accreditation
In 2013, all four of UNESCO-IHE’s MSc programmes successfully passed the programme accreditation process by the Netherlands-Flemish Accreditation Organisation (NVAO). This means that the four programmes are re-accredited as per 1 January 2014. Accreditation will initially remain valid for a three-year period, to be extended to six years following a positive outcome of the NVAO-conducted institutional audit. This audit took place in the autumn of 2013, resulting in a verdict ‘positive with conditions’. NVAO will assess whether those conditions will have been met towards early 2015.
Approval of joint degrees
The Netherlands-Flemish Accreditation Organisation (NVAO) approved the transformation of four existing joint Master specializations into Joint Degree specializations, allowing UNESCO-IHE and its partners to issue joint degrees, from 2014 onwards. This development makes UNESCO-IHE a front-runner in offering joint degrees, in particular with partners outside the Netherlands.

The NVAO approval was given in the framework of the re-accreditation of UNESCO-IHE’s four Master programmes; these specialisations are part of those programmes.

These four joint degree specializations are:
- Urban Water Engineering and Management with AIT Bangkok, Thailand
- Environmental Technology for Sustainable Development with AIT Bangkok, Thailand
- Environmental Technology and Engineering with the Institute of Technology, Czech Republic and the University of Ghent, Belgium
- Limnology and Wetland Management with BOKU, Austria and Egerton University, Kenya

They each have their own examination regulations agreed between the partners, and will be managed by Joint Management Committees.

Granted right to issue UTQ certificates
In line with Dutch universities, the University Teaching Qualification (UTQ) was introduced on a compulsory basis in 2010, while didactic training in special topics is increasingly being offered to teaching staff.

The VSNU Association of Dutch Universities formally granted the Institute the right to issue University Teaching Qualifications (UTQ) certificates after a thorough review of the programme by an external team of auditors. The first-ever UNESCO-IHE UTQ diploma award ceremony was held in June. The staff members that received a UTQ diploma prior to this did so after a course given by the UTQ programme of the Delft University of Technology. Having a recognized UTQ programme is a positive indicator for the quality of our educational system, and will also allow the Institute to invite staff from partner universities to participate.

Didactic approach
Knowledge integration is crucial to sustainable water management, and all programmes emphasize its importance. Professionals in the water sector are increasingly required to be specialists in their own field or discipline, whilst also having a basic knowledge of adjacent and connecting fields. This combination of in-depth specialist knowledge supplemented by basic general knowledge is referred to as a ‘T-shaped’ competency profile. While individual programmes and their specializations vary in the mix of academic content across component disciplines, they all include teaching and exercises in broader awareness. UNESCO-IHE aims to develop graduates with a T-shaped profile of specialized knowledge, cross-linked with multidisciplinary awareness and understanding supported by various other competencies.

Students enrolled in the Master’s programmes come from diverse backgrounds in terms of country of origin, academic background and age. Teaching and learning at UNESCO-IHE need to accommodate this diversity. Due to the policy of targeting mid-career professionals, many students require time to adjust to being in a learning environment after what may be a number of years away from formal education.

The programmes explicitly take into consideration that conventional teaching is still very common in the higher education system of many of the students’ countries of origin. The programmes accommodate this through a gradual transition towards more student-centred learning. The core modules are designed to create space to bring all students to the required level in the specialization phase. Moreover, preparation materials are offered to students who need to upgrade their knowledge in a particular field, and additional reading is offered to provide extra input for more advanced students.

Depending on the specific learning objectives of the modules, suitable didactic approaches are selected for active learning. The approach often involves a mixture of traditional lectures with practical exercises, laboratory experiments, tutorials, workshops, self-study, essay writing and field trips. Assessment methods are aligned with the module objectives.

To adequately reflect individual performance within the group, student-peer assessments were introduced on the more extensive group assignments. The link between learning objectives, activities and assessment
is increasingly shared with the students at the beginning of the module so that they are aware of the rationale for learning activities and assessment.

Terms of Reference for decisions & advisory bodies
Terms of Reference for all decision-making and advisory bodies concerning the Institute’s education were revisited and updated versions were adopted in 2013. The Terms of Reference describe the educational responsibilities and tasks for the Rectorate, Academic Board, MSc Programme Committees, MSc programme coordinators, Examination Board, Education Development Committee, and Education Coordination Committee.

Relationship with the professional field

A crucial component of the graduate education offered at UNESCO-IHE is the solid connection with the professional field, since bridging academic education and professional practice contributes to accomplishing the vision on education. The close relationship with the professional world spurs graduates to elaborate on day-to-day issues, analyse alternative solutions, assess the impacts of decisions and thus, eventually, to develop critical and independent thinking. The importance of these ties to the professional field in achieving the Institute’s vision on education is highlighted not only by the number of activities that facilitate the contact with the field during the programme, but also by the intake criteria in selecting students who are mid-career professionals in their field, and thus have access to direct and continuous feedback regarding the needs of the professional world.

Contacts with the professional field are ensured by various activities and means that UNESCO-IHE has put in place over the years. The main links between the academic environment at UNESCO-IHE and the professional community can be summarized as follows:

- Guest lecturers with a specific expertise are invited from the international academic environment or from the professional field; guest lecturers contribute as professionals in the field and expose students to the needs and problems of the real world.
- Technical visits in the Netherlands show students the Dutch water sector, its culture and Dutch traditions related to water management.
- International field trips provide insights into professional practices in countries other than the Netherlands, where water governance, water resources management and engineering tradition have a different background and culture.
- Activities during the fieldwork and group work modules offer students themselves an opportunity to act as professionals in their field of study. Students work in groups in which different specializations are represented, playing a role as consultants and interacting with peers, colleagues and lecturers. The fieldwork requires students to act in the field, collect/analyse/interpret data, apply theories that have been discussed in class, and face issues involving of data, poor data quality, etc.
- There are various events at UNESCO-IHE during which students can meet professionals and companies working in their field of interest. UNESCO-IHE offers a wealth of lunch seminars, delivered by guest lecturers, visiting professors, UNESCO-IHE staff members and professionals who provide detailed descriptions of ongoing research, projects or consultancy activities.
- Many research projects carried out at UNESCO-IHE are driven by or carried out in collaboration with the professional community. This can be either represented by engineering companies, governmental and non-governmental agencies (in the graduate’s country of origin as well as in other countries) for such purposes as data collection, data analysis, support in field surveys, modelling, or the basis for decision-making/policymaking.
- Students themselves represent a vibrant contact with the real engineering, management and scientific world, as they have several years of practice in their field of expertise. As such, the peer-to-peer relationship itself is a rich source of confrontation and knowledge sharing.

An interesting finding from the last Alumni Tracer Survey, which is highly correlated with the relationship between education and the professional community, is related to the expansion of their professional networks through UNESCO-IHE. Alumni were asked to rate the extent to which their professional life benefits from the contacts made at UNESCO-IHE and about their contacts with UN and Dutch organizations. 50% of the respondents from Europe, North America and Oceania have worked for or with a Dutch organization, especially in the role of partner or consultant; almost 25% of the respondents from Africa and Asia have worked for or with a Dutch organization, especially in the role of partner.
Research

Context

Research skills are among the fundamental competencies that UNESCO-IHE seeks to strengthen in its PhD fellows, graduate students and institutional partners. Building the research skills of individuals and institutional partners in the developing world brings benefits far beyond the immediate outcome of the MSc or PhD theses. Skilled researchers and research institutions can empower developing countries and countries in transition to address their own needs and problems through independent research. In addition, they facilitate the assimilation and adaptation of new ideas and technologies developed worldwide.

Research profile

Being able to assess problems (particularly water-related) and perform research on developing possible solutions is a major objective of UNESCO-IHE’s activities. The research domain of the Institute encompasses various disciplines of water engineering and environmental and social sciences and concentrates on six main research themes that contribute to the knowledge base concerning the water environment. The Institute is primarily involved in applied research, and in fundamental research to a lesser extent.

UNESCO-IHE is the largest international graduate water education and research facility in the world, with around 20 post-doctoral researchers and more than 250 MSc researchers active at the Institute in 2013, as well as 139 registered PhD fellows. The Institute’s research activities complement its education and capacity development activities.

The majority of the PhD fellows and graduate students, as well as the partners with whom UNESCO-IHE carries out most of the research projects, are from developing countries and countries in transition. The Institute’s links with the developing world provide an excellent opportunity to perform an almost constant reality check, since water issues faced by these countries require new and innovative solutions.

Research is demand-driven; research questions usually relate to real-world problems with high societal relevance. It is characterized by the following values:

- Scientific excellence: contributing to the creation of new developments through ground-breaking research with potential of having immediate practical applications; receiving world-wide recognition.
- High social impact: clear societal relevance of research themes and projects, as water is principally a societal issue, particularly in developing countries.
- Solution-driven: focus on producing new knowledge and using/adapting existing knowledge to help solve major water-related problems.
- Interdisciplinary and transdisciplinary: The research cuts across water science & engineering disciplines to environmental sciences and into dimensions of management, governance and economics, supported by latest ICT developments, computer-based modelling and the development of decision support tools. Interdisciplinary approaches and ‘system thinking’ are prerequisites for developing solutions to complex water problems. The involvement of stakeholders/experts from outside the research groups (transdisciplinarity) is essential for the demand-driven character and effective uptake of research results.
- Collaboration and partnerships: Research is carried out in collaborative networks and partnerships. Partner engagement significantly strengthens the research programme by broadening the intellectual scope of
### Performance indicators research

**Quality of research**

<table>
<thead>
<tr>
<th>Quality of research</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1 Publication outputs (No.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Peer-reviewed journal article</td>
<td>184</td>
<td>187</td>
<td>268</td>
<td>254</td>
</tr>
<tr>
<td>- Books</td>
<td>4</td>
<td>6</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>- Book chapters</td>
<td>33</td>
<td>25</td>
<td>40</td>
<td>26</td>
</tr>
<tr>
<td>- Conference papers</td>
<td>119</td>
<td>150</td>
<td>143</td>
<td>197</td>
</tr>
<tr>
<td>- H-index of the Institute</td>
<td>58</td>
<td>58</td>
<td>58</td>
<td>59</td>
</tr>
<tr>
<td>- Citation count</td>
<td>12,742</td>
<td>13,066</td>
<td>13,246</td>
<td>13,623</td>
</tr>
<tr>
<td>R2 Staff meet SENSE (SEP) criteria (No.)</td>
<td>14</td>
<td>17</td>
<td>23</td>
<td>39</td>
</tr>
<tr>
<td>R3 Academic staff with PhD (%)</td>
<td>80</td>
<td>79</td>
<td>81</td>
<td>89</td>
</tr>
<tr>
<td>R4 Scientific presentations (No.)</td>
<td></td>
<td></td>
<td>average 183</td>
<td>317</td>
</tr>
</tbody>
</table>

**Development relevance and valorization**

<table>
<thead>
<tr>
<th>Development relevance and valorization</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>R6 PhD students (No.)</td>
<td>129</td>
<td>123</td>
<td>131</td>
<td>139</td>
</tr>
<tr>
<td>R7 PhD graduations per year (No.)</td>
<td>7</td>
<td>10</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>R8 Journal articles with partners d/t countries (%)</td>
<td></td>
<td>average 73</td>
<td></td>
<td>80.5</td>
</tr>
<tr>
<td>R9 Outreach presentations (No.)</td>
<td></td>
<td>average 34</td>
<td></td>
<td>42</td>
</tr>
<tr>
<td>R10 International academic staff (%)</td>
<td>46.1</td>
<td>48.8</td>
<td>47.8</td>
<td>46</td>
</tr>
<tr>
<td>R11 PhD graduates from d/t countries (%)</td>
<td></td>
<td>average 93</td>
<td></td>
<td>93.8</td>
</tr>
</tbody>
</table>

### Quality of research

**R1** Publication outputs: The scientific impact of the research is measured through:

- (i) the number of peer-reviewed journals articles per year,
- (ii) the number of books (excluding PhD theses) per year,
- (iii) the number of book chapters per year,
- (iv) the number of papers in conference proceedings per year,
- (v) the H-index of the Institute count (cumulative), and
- (vi) the citation count (cumulative);

(v) and (vi) are based on the SCOPUS data base (that includes the vast majority of peer-reviewed journals articles from 1996 onwards).

**R2** Number of staff meeting the SENSE (SEP) requirements: The number of academic staff members that meet the requirements to be member of a research school like SENSE (in line with Standard Evaluation Protocol (SEP) by KNAW/VSNU/NWO from 2009).

**R3** Academic staff with PhD: The percentage of academic staff members holding a PhD degree employed on 31 December of the respective year.

**R4** Number of scientific presentations: The number of oral presentations at scientific conferences per year.

### Development relevance and valorization

**R6** Number of PhD students: The number PhD students registered at the Institute and (co-) supervised by its academic staff members.

**R7** PhD graduations per year: The number of graduating PhD researchers per year.

**R8** Publications with partners from the d/t countries: The number of journal articles with jointly published with partners/co-authors from developing countries and countries in transition.

**R9** Number of outreach presentations: The number of oral presentations at science-policy fora (e.g. SWW, WWF, etc.) or to the general public.

**R10** % International staff: The percentage of international academic staff members employed on 31 December of the respective year.

**R11** % PhD graduates from d/t countries: Percentage of PhD graduates per year that originate from developing countries and countries in transition.
research topics and combining facilities and other resources.

- Accountability: The Institute is accountable to its partners for the quality, productivity, and societal relevance of its research activities. Research activities eventually lead to tangible results on the ground.

Societal relevance and impact for development are essential to the Institute’s mission. Significant efforts have been made to create economic and societal value with research results by supporting their use and uptake in practice. We have observed considerable success in facilitating policy dialogues and providing advisory services at local, national, regional, and global levels. The Institute is highly visible in the water research and related science-policy arenas and has a favourable reputation.

**PhD fellows**

The PhD programme at UNESCO-IHE has been growing rapidly, from about 70 PhD fellows in 2007 to almost 140 PhD fellows registered in 2013. The number of PhD fellows continues to increase every year, as do the number of PhD graduations. Hundreds of applications are received every year.

A record number of UNESCO-IHE PhD fellows obtained their doctoral degree in 2013. In total, 17 PhD fellows from 12 different countries successfully defended their PhD thesis. More than half of these fellows come from Sub-Saharan Africa.

Fellows represent more than 40 different countries, with more than 90% coming from developing countries and countries in transition. Almost 40% of PhD fellows are female. Over half of the PhD fellows are in a sandwich construction, carrying out research in their region of origin supported by local supervisors, an approach that is consistent with the Institute’s mission.

*More information on the PhD graduations and the registered PhD fellows, including the subjects of their theses, can be found in Annex 3.*

Most PhD fellows are not employed but rather funded with fellowships from various donors. UNESCO-IHE PhD graduates are often bound for careers in academic institutions or high-level professional positions in their home countries. The PhD programme is of key importance for the capacity building mission of the Institute.

The Institute does not have the right to award PhD degrees according the Dutch Higher Education Act, so PhD defence ceremonies are always held in collaboration with an internationally renowned university. This partnership construction means that the defence is co-chaired by both Rectors, and the PhD degree has the logos and signatures of the partner university and UNESCO-IHE. These partnerships with universities support the quality of the PhD programme, as all UNESCO-IHE professors have a formal appointment with a university, and the PhD fellows are registered at one of the universities and can use their facilities.

PhD fellows are expected to be able to generate new knowledge by conducting independent research and also to communicate effectively – both with academic peers and with broader society – and exercise professional and ethical responsibility and integrity. It is the philosophy of UNESCO-IHE that PhD fellows develop what is known as a T-shaped competency profile, with in-depth knowledge of their research topic as well as a breadth of knowledge in related disciplines and other competencies.

**Research developments**

**New themes**

Due to the exclusive focus on water in a development context, the research agenda of the Institute deviates from that of a traditional university in the Western world. New research themes were developed to harmonize research activities across the Institute and to increase visibility. Since early 2013, the following six research themes form the research agenda of the Institute:

- **Safe Drinking Water & Sanitation** - Research addresses ways to improve access to safe, sufficient, and affordable water for people to meet basic needs for drinking, sanitation and hygiene, to safeguard health and well-being, and to fulfill basic human rights.

- **Water-Related Hazards & Climate Change** - Water-related hazards such as floods, droughts, and pollution are increasing in frequency and intensity around the globe due to population growth and effects of climate and other environmental changes. Our research contributes to better understanding of multiple stressors and the development of integrated solutions.
In addition to the established themes outlined above, UNESCO-IHE is also growing in important emerging areas, such as water conflict management, water diplomacy, climate and global change adaptation, urban water systems and coastal systems, and knowledge management and innovation for addressing water-related challenges.

The Institute’s research lines, and how they relate to the Academic Departments and Chair Groups, are presented in Annex 4 - Research Lines.

Publications
As a signatory to the Berlin Declaration, UNESCO-IHE promotes open access (OA) publication. UNESCO-IHE encourages its academic staff to publish their research as open access. To this end, an internal OA incentive fund was created to fund open-access initiatives. Open access publication has a greater advantage in increasing the citation factor from users who are able to access
the literature freely without having to rely on a paid subscription, and ensures research data becomes available to a worldwide audience.

The publication output of the Institute remained stable. The number of peer-reviewed journal articles as well as book chapters decreased, and there were no books published in 2013. However, the number of conference papers increased markedly, and there was an increase in PhD theses, in line with the general trend.

Annex 5 gives a full overview of publications produced at UNESCO-IHE in 2013.

Thematic cooperation
The research agenda of the Institute is reflected in other research themes in important national and international institutions and programmes. At the international level, the research agenda of the Institute is linked to ongoing programmes, such as the post-2015 development agenda including the formulation of the Sustainable Development Goals, World Water Council, IAHS’ new Scientific Decade Panta Rhei (2013 - 2022), ICSU’s Future Earth, and IWA’s Key Theme. Progress in the themes will also be essential for addressing the Grand Challenges formulated by the EU Horizon 2020 programme.

Nationally, UNESCO-IHE is linked to various research and innovation programmes, such as the NWO/WOTRO programme on urbanizing deltas and conflict and cooperation over natural resources (CoCooN), MVI Water (NWO ‘responsible innovations for water’), initiatives related to the TopSector Water, Water Mondial, and Knowledge Platform on Water for Development.

The Institute’s research agenda is firmly embedded within the Dutch cluster of water-related knowledge and research organizations through joint projects and Memoranda of Understanding with key organizations such as Deltares, WETSUS, IRC, and KWR (Water Cycle Research Institute). UNESCO-IHE collaborates intensively with the Dutch partner universities. The Institute’s research themes also align with the themes of Dutch government policies on trade and development cooperation.

In November, the Institute’s first Erasmus Mundus Joint Doctorate PhD Defence took place, in the Erasmus Mundus Environmental Technologies for Contaminated Solids, Soils and Sediments (ETeCoS3) Joint Doctorate Programme. ETeCoS3 is a multidisciplinary and inter-sectorial consortium coordinated by the University of Cassino in Italy, and also includes Université Paris-Est in France as well as UNESCO-IHE.

UNESCO-IHE became a full member of the Water Supply and Sanitation Technology Platform (WssTP). The platform is recognized by the European Commission and by national governments as the reference point for research and technology in the water sector. WssTP has a strong network of members and contributors involved in its activities, including delivering strategic vision for research and producing evidence-based reports identifying future research needs.

Research funding
The critical importance of our thematic research programme is evidenced by donor funding by the Government of the Netherlands, the European Commission, national research councils, development banks, and the private sector, but also by philanthropic foundations that sponsor large research and capacity-building programmes, including the Bill and Melinda Gates Foundation (focus on sanitary engineering), Vitens Evides International (focus on water services management), and Rotary International.

In 2013, UNESCO-IHE acquired a substantial number of research projects from competitive funding sources, including multilateral and bilateral agencies, NGOs, and private sector organizations.

UNESCO-IHE was in the lead for the ‘Endowed Professorial Chair in Climate Change Impacts and Coastal Risks’, funded by the AXA research fund for 1.4 million euros.

Under the European Commission’s Framework Programmes, UNESCO-IHE has acquired several research projects as a partner in consortia. In addition, the Institute is lead partner in a major integrated research project entitled ‘Preparing for Extreme and Rare Events in Coastal Regions (PEARL)’ (€ 6 million, 2013-2016).

Nationally, the Institute excelled in the highly competitive programme in ‘Urbanizing Deltas of the World’, run by the Netherlands Organization for Scientific Research (NWO), and was granted two project consortia in which it takes the lead: ‘Understanding the dynamics of flood risk to enhance resilience in urbanizing deltas in Bangladesh’ and ‘Strengthening Strategic Delta Planning Processes
Bangladesh, the Netherlands and beyond’. Furthermore, a project entitled ‘Investing in land and water: turning new climate finance mechanisms into tools for cooperation’ was awarded to the Institute in the equally competitive NWO CoCoOn programme.

Programmatic cooperation with the Directorate-General for International Cooperation (DGIS) began in 2008. This collaboration includes research related to capacity development. The internal UNESCO-IHE Partnership Research Fund (UPaRF) was founded to facilitate such research. Besides financial resources from the DGIS collaboration, UPaRF also contains base funding from the Dutch Ministry of Education and Science. This fund promotes interdisciplinary and cross-core research projects with partners, and focuses on the themes of integrated management of water supply and sanitation, sustainable management of aquatic ecosystems and land use, water allocation and decision processes in river basins, and mitigation of and adaptation to climate change. In 2013, six projects were funded, bringing the total UPaRF portfolio to 51 research projects with more than 50 partner institutes in 37 countries.

UNESCO-IHE remained very active in other research programmes as well. In 2013, the Institute’s research activities were also funded by various agencies, including the Bill and Melinda Gates Foundation, the Dutch Ministry of Infrastructure and the Environment, the European Commission through their EuropeAid and FP7 programmes, the Netherlands Organization for Scientific Research - Science for Global Development (NWO-WOTRO), NL EVD Internationaal and several private sector organizations, as well as various national governments.

Annex 9 - Projects contains a complete list of projects started, ongoing or finished in 2013, including funding agencies and partners.

Quality of research

Grants & awards
UNESCO-IHE employees and PhD researchers have been awarded several prizes and academic awards in 2013. These include the L’Oreal-UNESCO Award for Women in Science 2013, the professorial chair endowed by the AXA fund, and many best paper and best poster awards at international conferences. PhD fellowships have been awarded with Schlumberger Faculty of the Future Awards, ISF Awards (Sweden), and Fulbright Fellowships (USA).

SENSE review
UNESCO-IHE is a member of the Research School for SocioEconomic and Natural Sciences of the Environment (SENSE). This Dutch research school focuses both on the natural sciences and on socio-economic fields of environmental research. SENSE is accredited by the Royal Netherlands Academy of Sciences (KNAW), and brings together excellent academic research groups from nine universities and research centres.

In 2013, the number of academic staff members that meet the membership requirements for the SENSE research school increased to 39.

The Institute has started preparing for the SENSE review taking place in 2014. These preparations included the start of writing self-evaluation reports at the Institutional and Chair Group level for the 2007 – 2013 assessment period.

Revised PhD regulations
The regulations and guidelines of the PhD programme were revised in 2013, and the PhD handbook was updated along with policies for authorship and plagiarism. The review and revisions of these documents led to stricter admission criteria, a formal PhD proposal defence in front of a committee, an explicit annual go/no-go decision and the installation of a Supervisory Team (ST). The ST comprises the promoter, the mentor, and up to three other PhD-level professionals, including external members. These changes are expected to lead to improved overall performance results in future.

Increasing research capacity
The salience of the research programme is demonstrated by a constant stream of visiting scientists who give seminars, as well as guest lecturers, policy makers and government officials, including heads of state, who attend workshops, project meetings, and conferences. This makes the Institute a vibrant place that acts as an internationally recognized hub of knowledge development and sharing hub in the water and development field. The many visitors help keep the research programme up to date and focused on real-world problems.
Recent developments have resulted in greater research capacities in emerging fields that are critical for the Institute to stay abreast and ahead of emerging problems in water related research.

An extraordinary professorial chair was created in 2013 in the Aquatic Ecosystems group, called the Ramsar Chair for Wise Use of Wetlands, in collaboration with Charles Sturt University (Australia) and the Secretariat of the Ramsar Convention of Wetlands. An associate professor position was created in 2013 in collaboration with NGO WASTE in order to better address the connections between solid waste and water in the developing world.

The quality and scientific relevance of the Institute’s research is indicated by the strong reputation of some staff members in specific fields, as well as their involvement in international science programmes and committees. Staff members are involved in the editorial boards of most major water journals and have sat in many relevant steering committees of international science programmes and conferences and advisory boards, including IWA, IAHR, IAHS/PUB, ICID, WMO-CHy, EGU, DIVERSITAS, Stockholm World Water Week, World Water Council, European Innovation Platform on Water, International Wetlands Forum, and the Boussinesq Center of Hydrology.

*For more detailed information, please refer to Annex 8 - External Memberships.*

The percentage of academic staff members with a PhD rose from 81% (2012) to 89% (2013). Five staff members were working on their PhD study, and Ms. Kaspersma successfully defended her PhD on ‘Competences in context knowledge and capacity development in public water management in Indonesia and the Netherlands’. The number of scientific publications produced by the Institute’s academic staff continued to grow. This year showed an especially notable increase in the number of journal articles, with a total of 268 in peer-reviewed journals.

*Annex 6 contains a complete list of publications.*

A new Human Resources Performance & Development Management System was developed and implemented that strengthens academic leadership and sets specific academic and outreach targets for every staff member. Promotions are based on achieving high academic outputs, as well as on involvement in the scientific community and outreach/societal impact.

**Societal relevance & valorization**

The societal relevance of the research is central to UNESCO-IHE’s mission. The lion’s share of the Institute’s research is carried out with a wide range of both academic and non-academic partners at local, regional, and international levels, including government agencies, NGOs and private sector organizations. These partnerships serve to firmly embed the Institute’s research into policy and application contexts, directly relevant to the developing world.

The Institute’s policy is to interact in productive ways with stakeholders and key actors in the countries in which it works to jointly identify research needs, conduct research and discuss the implications of outcomes. Therefore, the research agenda concentrates on themes that are both scientifically and socially relevant: relevant to socio-economic development, to sustainability, to poverty, (in) equality, governance, conflict resolution, global warming, quality of life, and cultural and spiritual values of water. A number of PhD research projects are linked to capacity development projects. Research findings are directly integrated into the education programmes, for instance as case studies.

The Institute defines valorization as the process of supporting the utilization (uptake) of knowledge in practice to create economic and societal value. It pursues this objective through education, research and capacity-building efforts as well as in its engagement in policy dialogues (e.g. formulation of the Sustainable Development Goals, OECD Initiative on Water Governance).

Producing well-trained water professionals through education and research programmes is seen as the greatest asset in its valorization activities. Many UNESCO-IHE alumni have a significant impact in their home countries, and often take on senior positions, as was found in the 2012 Alumni Survey. The Institute maintains close ties with the alumni who are important stakeholders and local advocates for the research programme.

The commercialization of research results, which is usually part of a university’s valorization efforts, is not in line with the Institute’s policy of making knowledge freely available as much as possible. As a UNESCO Institute, UNESCO-IHE promotes and protects its intellectual property (e.g. patents) only in exceptional cases. Scientific findings are made available to a wider audience through interactions with media and publications in non-academic
outlets. The Institute’s outlets include the website, social media, UPDATE magazine and various online newsletters, which also aid in the dissemination of research results.

The Institute ensures that research results are applied in policy formation, incorporated into management and/or decision-making tools, or outreach events. UNESCO-IHE employees contribute as advisors to several governmental and non-governmental commissions, high-level panels and authorities, including ministries around the world.
Capacity development

Context

UNESCO-IHE provides capacity development services to knowledge institutes, water sector organizations, knowledge networks and UNESCO member states. Through these operations, the Institute increases its global impact and helps to build sustainable organizations that are equipped to properly manage water resources and deliver water services to all communities. Services include institutional development projects, tailor-made training for organizations and individuals, policy advice, and intermediation between science and policy-making. These activities focus on different levels – such as the individual level, the organizational level and the enabling environment – and on the development of a wide range of skills and competencies.

Programme management

UNESCO-IHE manages programmes with an umbrella function, encompassing funding for more than one project with overarching goals. Examples of programme management involving the Institute include the Asian Development Bank programme, the cooperation with the Dutch Ministry of Infrastructure and Environment, and the DGIS UNESCO-IHE Programmatic Cooperation (DUPC), which includes the UNESCO-IHE Partnership Research Fund (UPaRF).

More information on DUPC and UPaRF can be found in Chapter 3 - Research.

The programmatic cooperation between the Asian Development Bank (ADB) and the Institute manages a fund of USD 2.5 million to support water operations in ADB’s Developing Member Countries (DMCs) and ADB staff. The cooperation supports ADB’s water operations in its developing member countries (DMCs) by providing expert guidance during project preparation and implementation, developing and implementing education, training and capacity development, and supporting knowledge networking programs among (DMC) clients, partners, and knowledge hubs. The first phase of this programmatic cooperation ends in mid-2014, with nineteen projects currently running. In 2013, negotiations started on the second phase of the cooperation, which will entail a budget of USD 7.5 million.

A highlight within this cooperation was the 2nd Asia-Netherlands Water Learning Week held in June, which brought together leaders in dialogue opportunities and knowledge sharing on ‘Building Cooperation for Green Cities in Secure River Basins’. The Learning Week was attended by project teams from Bangladesh, India, Indonesia, People’s Republic of China, and Vietnam. Five project teams – consisting of members from the government, corporate and private sector, civil society and development finance and partner agencies active in ADB-financed projects in Asia – shared their experience with the Dutch in an intensive programme focusing on how to leverage results from collaborative approaches in water investment projects for cities and river basins.

The third phase of the cooperation with the Ministry of Infrastructure and Environment continued with increasing success and appreciation from both parties. The programme provided seed money for funding of 14 projects, responding to the strategic needs of the Institute and the Ministry. The Ministry and UNESCO-IHE also started the process of formulating the new Memorandum of Understanding for the 2015-2018 time frame.
Institutional strengthening

Boosting Effectiveness in Water Operator Partnerships (BEWOP) is a five-year research and outreach initiative aimed at boosting the effectiveness of Water Operator Partnerships (WOPs) around the world. Launched in September 2013, BEWOP is a collaboration between UNESCO-IHE and UN-Habitat’s Global Water Operators’ Partnership Alliance (GWOPA), the organization leading the global WOPs movement. BEWOP aims to address a potential paradox of the WOPs approach: operators are uniquely placed to share their experience and technical expertise with their peers, yet they sometimes lack the teaching capacity to effectively transfer their knowledge and the ability to manage the partnership process. BEWOP’s goal is to strengthen knowledge transfer and change processes in WOPs in order to maximize the potential for operational improvement in water operators.

In 2013, UNESCO-IHE continued to expand its portfolio on NICHE capacity development projects by successfully acquiring three new projects in Indonesia, Ethiopia and Mozambique. UNESCO-IHE has the lead position in the winning consortia of all three projects. The current NICHE portfolio at UNESCO-IHE consists of 21 projects, with a project proposal acceptance rate of 84%.

The Institute continued advisory and capacity development support to the HidroEX International Centre for Education, Capacity Building, and Applied Research in Water in Brazil. Activities included short courses in Brazil, Mozambique, Uruguay, and Argentina. Three students with full MSc fellowships began their programmes. Two full PhD researchers, two sandwich PhD researchers, and five postdoctoral researchers began research at the Institute with support from HidroEx and the Brazilian National Council for Scientific and Technological Development (CNPq).

The Bill and Melinda Gates Foundation (BMGF) funded a project called ‘Sani-UP: Stimulating Local Innovation on Sanitation for the Urban Poor in Sub-Saharan Africa and South-East Asia’; acquired in 2011, the project has a total budget of USD 11.1 million, part of which is output-based funding. It is the largest research and capacity-building project for pro-poor sanitation ever conducted and includes a total of 5 post-doc researchers, 20 PhD fellows, 60 MSc students, 500 online course participants and 130 man-years of research. It is executed with eight partners from developing countries. By the end of 2013, five post-doc researchers and 20 PhD fellows were active, 39 MSc students found co-funding, and over 150 online course participants received certificates. In October 2013, all PhD fellows and post-docs gathered in Nairobi for a one-week workshop and conference on the research progress. The novel ‘emergency Sanitation Operation System’ (eSOS) concept and smart eSOS toilet were amongst the highlights. Also, the first award ceremony of the Graduate Professional Diploma Programme (GPDP) in Sanitation and Sanitary Engineering took place in Croatia. The GPDP, developed with BMGF funding, is attended by more than 50 professionals. The BMGF approved the second progress report, resulting in the third output-based funding payment.

Two large EuropeAid-funded projects, one on food security and the other on the environment, started in Cuba. The objective of ‘Proyecto REAL’ is to contribute to strengthening the Cuban food production and aquaculture sector through resource optimization and recovery in the food processing industries. The aim of the ‘MAS AGUA PARA TODOS’ (More Water for All) project, on the other hand, is to introduce innovative practices in urban water cycle management in Cuba to contribute to the adaptation and mitigation of the climate change effects on water scarcity. These two capacity development projects led by UNESCO-IHE allow the Institute to have a relatively large presence in the country’s water sector.

‘Capacity Development for Performance Improvement of water utilities in secondary urban centres in East Africa’ is an ongoing project. On the one hand, it is aimed at improving the operational performance of three East African utilities: Kenya’s Rift Valley Water Services Board in Kenya, Rwanda’s Electricity, Water and Sanitation Authority, and Tanzania’s Dar es Salaam Water and Sewerage Company. On the other, it aims to strengthen the capacity development skills of Uganda’s National Water and Sewerage Corporation in the thematic areas of governance and management, revenue enhancement and services provision to the poor.

*All institutional strengthening projects started or running in 2013 can be found in Annex 9 - Projects.*

Tailor-made training

In 2013, tailor-made training was funded by a variety of donors, including the development banks, the DGIS -
UNESCO-IHE Programmatic Cooperation, the Dutch Ministry of Infrastructure and Environment, the European Commission and the NUFFIC through its foundation and NFP programme.

An example of long-term tailor-made training is the course on river basin planning and management for ten staff members from Madhya Pradesh Water Resources Department on River Basin Planning and Management, which commenced in 2013. The participants join the regular MSc modules of the water management programme, and additional components were tailored to cater to the specific needs, ensuring that the training objectives were achieved. The course covers a range of theory, including modelling and planning tools and methods. It will eventually guide participants to develop river basin plans for the Tons and Sindh sub-basins in India, using a participatory and integrated water management approach. The preliminary plans will be presented to a wider audience in a symposium and be subjected to external peer review by leading experts.

The ENPI Mediterranean Environment programme started in 2010 as part of Horizon 2020, a project which aims at de-pollution of the Mediterranean Sea, and was successfully completed in 2012. The project built capacity in the sanitation sector of fourteen Mediterranean countries where about 3000 professionals were trained through 150 national, sub-regional and regional courses. UNESCO-IHE delivered a total of thirty short courses on urban waste-water treatment in fourteen countries, training about 1000 professionals. Based on the success of the project, the EU awarded a two-year extension of the project in 2013. The extension includes additional short courses and the preparation of an online course on wastewater treatment.

Each year, UNESCO-IHE organizes refresher courses for UNESCO-IHE alumni. The courses cover themes that are directly relevant and important to the region and the participants. In 2013, five refresher courses were held with over 100 participants. Four of these courses were held in Africa – in Sudan, Uganda, Ghana and South Africa – and one was held in South America, in Brazil. A little under half of the participants were female.

Refer to Annex 2 for more details on these refresher courses. An overview of all tailor-made training courses can be found in Annex 9 - Projects.

Policy advice

UNESCO-IHE has become a key player in global fora, contributing to shaping the water and development agenda for the next decade by co-organizing policy-oriented meetings, such as the Water Security and Peace Dialog at the Peace Palace in November, the New Nile Perspectives in May, and the Budapest Water Summit in October.

The Institute also participated in many activities related to UN International Year of Water Cooperation, led by UNESCO, with the objective of raising awareness of the potential for increased cooperation and of the challenges facing water management in light of the increased demand for water access, allocation and services.

The World Water Day 2013 celebrations were organized by the United Nations and the Government of the Netherlands, and took place on the 22nd of March. UNESCO-IHE staff members, MSc students and PhD fellows represented the Institute at the World Water Day events in The Hague, at the World Youth Parliament for Water Conference, and at the World Forum. The UN High Level Forum assembled in The Hague, discussing water cooperation as an essential means to achieve a water-secure world. The programme of the day involved political and governmental leaders and members of the UN High Level Panel on the Post-2015 Development Agenda, and included inspirational speeches, presentations and interactive discussions. A series of thematic sessions also gave the opportunity to reflect on the different dimensions of water cooperation, and brought new ideas and innovative approaches from different sectors of society.

The Institute is playing a central role in co-defining one of the Sustainable Development Goals (SDGs, successor of the MDGs in 2015 onwards) on water, which covers water supply and sanitation as well as water resources in its specific targets. Water supply, sanitation and water resources are affected not only by climate change, rising demands for water and increasing pollution of sources, but also by weak human, organizational and institutional capacity. Although it is vitally important to the sustainable attainment of water-related SDGs, capacity development had not yet been included in the debates.

In February, UNESCO-IHE convened an expert meeting on capacity development and water-related SDGs. The meeting gathered 25 international experts to contribute the Institute’s expertise in water sector capacity development.
to current formal and informal debates that are taking place in the course of formulating SDGs. The meeting focused on indicators for measuring progress with water-related capacity development.

In May, about 220 participants from 60 countries gathered at the 5th Delft Symposium on Water Sector Capacity Development in Delft, organized by UNESCO-IHE in collaboration with the Asian Development Bank, CapNet UNDP, the Dutch Ministry of Foreign Affairs and Vitens-Evides International. The theme of the Symposium, which meets about every five years, was ‘Developing capacity from Rio to reality: Who is taking the lead?’ The participants used the meeting to discuss the SDGs, targets for progress, and the intended scope to include all countries, in preparation for further development and discussion of goals at the Budapest Water Summit held in October.

One common view at the Symposium was that insufficient emphasis had been placed on capacity development as a central component of the SDGs. Without a coordinated flow of efforts and expertise from governments, sector professionals and educational institutions, energy spent on water projects could be wasted due to mismanagement and low competence levels. Education alone does not equate to capacity development, because training only targets individuals. Many students who receive training return to organizational settings that have not evolved, and are then limited in their ability to apply new knowledge.

A direct, tangible output from the 5th Delft Symposium was the agreement between Nyenrode University in the Netherlands and the International Water Centre in Brisbane, Australia that they would collaborate with UNESCO-IHE to set up an ‘International Water Leadership Program’.

The Budapest Water Summit was held in October with the principal objective of taking stock of the various developments in preparing the water-related goal for the post-2015 development agenda. The Rector of UNESCO-IHE was the Chair of the International Programme Committee as well as that of the Drafting Group, placing the Institute as one of the key players in the process of drafting and finalizing the Budapest Water Summit Statement. One of the main recommendations coming out of the Summit was for the UN General Assembly to support a single overarching, dedicated and comprehensive SDG on water and sanitation. This goal should strive for a ‘Water-Secure World’ and clearly address how this goal is connected to the other SDGs.

In June, the first Water Integrity Forum was jointly organized by the Water Integrity Network, UNESCO-IHE Institute for Water Education and the Water Governance Centre. It was attended by more than 100 water and integrity experts from more than 60 organizations across the world. The Forum took stock of progress made in addressing integrity challenges and helped in forging coalitions for expanding the base and increasing the pace on water integrity. It brought the problem of corruption out of the closet and into the open, raising the stakes to address this challenge.

Alumnus Michael Mutale from Zambia received the first-ever UNESCO-IHE Alumni Award. This annual award is given to an alumnus who is at the peak of her or his career and has proven to be a role model for other water professionals by showing an outstanding contribution to water management. Mutale was honoured for his dedication to improving the quality of life in Southern Africa and his efforts in solving water resource management challenges.

An overview of all policy development and advisory services projects can be found in Annex 9 - Projects.
Home base

Context
UNESCO-IHE Institute for Water Education brings together employees, students and partners from all corners of the world on the 14,000 square metres of its premises in the historical city centre of Delft. The Institute is more than just its physical accommodations; it is also the people that work, study and meet there, as well as all the services it provides employees, students, participants and visitors and its partners across the globe.

Human resources

To achieve the human resources requirements of the Institute, the specific human resource management objectives are to:
- Maintain or, if needed, improve its role as an attractive national and international employer in the academic world and to attract scientific staff of the highest calibre through recruitment and hiring, international mobility, and remuneration;
- Create an environment in which employees are continually encouraged and enabled to develop their technical and personal professional skills, through performance and development, and appraisal;
- Maintain healthy and good employer/employee relations by creating a safe and constructive work environment, through occupational health and safety management and diversity;
- Ensure that human resource management policies and practices are always up to date and meet all legal requirements, through labour legislation, employee benefits and insurance schemes.

UNESCO-IHE adheres to the Collective Labour Agreement for Dutch Universities and has a diverse range of HRM policies in place that apply to all staff, focusing on performance and development management, recruitment, hiring and termination, performance review and remuneration, health and safety (ARBO), work relations, employee benefits and insurance schemes, and international mobility and diversity.

Employee demographics
The total number of staff has been steadily increasing over the past ten years, which is in line with the overall growth of the Institute in terms of budget and number of projects.

Academic staff members comprise 51% of the total employee population. Staff that directly supports Education and Academic processes, such as those working at Student Affairs, the Education Bureau and the laboratory, make up 22% of the employee population. The remaining 27% of employees support management processes, including e.g. finance, HRM, project support, communications and IT.

Breakdown of employee population
In line with the Institute’s mandate and international student population, UNESCO-IHE employees have become increasingly international over the past decade. This trend is expected to continue and may even accelerate. As a consequence, staff demographics have become more diverse. Diversity as such encompasses a range of factors, including origin, age, gender, race, cultural heritage, education, physical ability, appearance and many other factors.

The percentage of female staff remained stable over the last three years, but the percentage of women as academic staff members has shown particularly significant growth over the past six years. Currently, this percentage is slightly below the average of Netherlands-based academic organizations. However, an internal comparison with the percentage of women employed at the different academic levels at Delft University of Technology shows that the percentage of female academic staff can be considered high for an institute with a strong orientation towards technology and engineering.

The Institute has a pool of more than 350 national and international guest lecturers from government agencies, partner universities and research institutes at its disposal. Guest lecturers account for some 30% of all contact hours in the taught part of the programmes. Guest lecturers are hired to contribute their expertise and/or experience in a specific professional field.

Performance and Development Management
The new Performance and Development Management (PDM) system, which was introduced in 2013, strengthens academic leadership and provides a clear and transparent career development system with standardized academic levels and related requirements. It is expected that the new PDM system will help to better manage career development expectations.

UNESCO-IHE makes use of strategically embedded career planning. This means that the Institute’s strategic objectives determine the course and direction of a department or a process management unit and, ultimately, the individual’s development opportunities.

In 2013, UNESCO-IHE defined two new academic career tracks:
- Academic-scientific. The position of lecturer/researcher is the entry level for the academic career track. The division between education and research can differ per job, per chair group and per person, while knowledge & capacity development is always a minor part of the position.
- Knowledge and capacity development management. In the positions where knowledge and capacity development play a major role (>50%), other competencies and knowledge are required. The education and research components remain relevant in this position (minimum 10% each).

The PDM system provides clear job descriptions and numeric and qualitative standards for all academic staff, who have to perform in the fields of education, research and knowledge, and capacity development in accordance with these criteria, specified per academic level. Promotions of academic staff are based on achieving high academic outputs, as well as on involvement in the
scientific community and outreach/societal impact.

Promotions depend on fixed criteria and the evaluation of individual performance. A nomination advisory committee is convened in the case of a promotion to the level of professor or associate professor. Formal reassessment takes place every five years; underperformance may result in demotion.

Staff training
UNESCO-IHE encourages employees to further improve their education skills and competencies by providing funds or subsidizing educational expenses and granting time off during normal working hours. For study leave, an employee may be granted a maximum of one half-day study leave per week, unless it would prevent satisfactory performance in his/her normal job. For further development, an employee has the option of taking two development days per year, which the employee can use to work on his/her long-term employability in terms of career development and to focus on future positions.

The percentage of academic staff members with a PhD went up from 81% (2012) to 89% (2013). Five staff members were working towards a PhD degree, and one successfully defended her PhD thesis.

The University Teaching Qualification (UTQ) is now a requirement for all academic staff. UNESCO-IHE runs its own UTQ training programme, which has recently been audited by the VSNU and is now recognized as being at same level as that of Dutch universities. To date, 26.1% of academic employees have obtained their UTQ.

In 2013, the Institute provided in-house training for managers on using the new Performance and Development Management system, as well as gender sensitivity training.

Recruitment
Quality assurance for employees starts with recruitment. UNESCO-IHE has standardized recruitment processes for all levels of staff. The recruitment policies are subject to the Dutch NVP recruitment code, which guarantees a non-discriminatory and objective procedure for all. The current recruitment policies were updated in 2013.

Hiring internationally recognized academic staff requires knowledge of international mobility, supportive relocation policies, and knowledge of relevant immigration and administrative procedures. In 2013, UNESCO-IHE trained an HR advisor in this field. UNESCO-IHE is a recognized partner in expatriate employer networks; as such, the Institute can make use of special support services and networks in the region, making it easier for newly recruited international staff and their families to set up home in the Netherlands. The process of developing a solid international relocation policy was started in 2013, and is planned for implementation in the course of 2014.

Internal consultation
At UNESCO-IHE, internal consultation between management and staff members, PhD fellows and MSc students is institutionally arranged through the Works Council, the PhD Association Board, and the Student Association Board respectively.

The Works Council (WoC) represents the interests of the staff in matters such as policy, working conditions, the general state of affairs, and important institutional decisions, and consults with or advises management on these matters.

The mandate of the PhD Association Board is to represent the PhD community and to facilitate cooperation with the supervisory teams, UNESCO-IHE management and outside parties, and to be a voice on issues important to the academic and overall well-being of PhD fellows.

The Student Association Board represents the Institute’s MSc students in all matters related to UNESCO-IHE, and discusses views and suggestions on course-related matters and student welfare with the UNESCO-IHE management.

Code of Conduct
UNESCO-IHE endorses a culture in which people work together on the basis of mutual respect. Such an environment implies that good manners are the norm, including collegiality, respect for and interest in each other. Codes of Conduct developed at the Institute intend to ensure a pleasant and motivating work and study environment, with respect for people and facilities, and also regulate an adequate response to undesirable behaviour.

All employees, guest lecturers, staff from third-party organizations, course participants, trainees and visitors of the Institute are required to comply with these policies by observing the guidelines in the Codes of Conduct. To aid
transparency, all Codes of Conduct are published on the website.

Besides internal Codes of Conduct, UNESCO-IHE also adheres to the Code of Conduct with respect to international students in Dutch higher education, which guarantees the quality of higher education provided to international students.

Services

Sustainability

Secured printing and follow-me printing were introduced during implementation of the new print management system, Uniflow. Copy, print and scan rights were linked to personal access control cards. This led to a severe reduction of paper waste.

UNESCO-IHE asked Carbon Matters, an independent consultancy, to establish the carbon footprint of the Institute. In 2013, Carbon Matters completed the analysis of the current operations, providing insight into energy usage. The main areas with potential for reduction involve building-related energy consumption. After comprehensive energy consumption analysis and benchmarking, the Institute intends to embark on the path towards low-energy, or potentially even energy-neutral operations in future. A long-term action plan to that effect will be developed in 2014.

In the renewed contract with the caterer, Sodexo, agreements were made on sustainability. These agreements included a stipulation that 90% of used packaging materials could be recycled, and that at least 40% of the products used are organic or have a sustainability label. The Aspresto coffee machine was built according to 100% natural and ethical guidelines, and part of the revenue from every cup is donated to the Sodexo Foundation to fight hunger.

The contract with the waste collector, Avalex, was renewed. Preparations were made to start separate collection of plastic, paper and other waste in the restaurant area.

In the refurbishment of the auditorium, sustainable products such as FSC wood and energy-efficient lights were used as much as possible.

Communicating results

Employees engaged in research often actively engage in making scientific findings available to a broader, non-expert audience, through interactions with media and publications in non-academic outlets such as Water21,
H2O, AsiaWater, UNESCO’s A World of Science, blogs, and other internet fora. In collaboration with project partners, UNESCO-IHE researchers also disseminate research findings in local languages.

*Please refer to Annex 5 for the complete overview of publications produced in 2013.*

UNESCO-IHE redesigned its website in 2013. The website is fully responsive and optimized for use on mobile devices, and the navigation has been simplified. One of the main improvements is the possibility to apply online for all educational offerings, including the MSc programmes.

A monthly online newsletter was created to keep the public up-to-date on the Institute’s educational, research and capacity development activities. Subscribing can be done by entering a valid email address at the bottom right of any UNESCO-IHE web page.

UNESCO-IHE continued to provide news about the Institute’s activities through regular outlets such as the Institute’s own website, social media, UPDATE magazine and various online newsletters.

UNESCO-IHE is contributing to society by co-organizing policy-oriented meetings, such as the Water Security and Peace Dialog at the Peace Palace in The Hague, the New Nile Perspectives, and the Budapest Water Summit. The human resources policy was adjusted to include targets for tangible societal contributions for every academic staff member; good performance on this item is a prerequisite for promotion.

*Some of the societal impact attained by staff members is shown in Annex 8, which shows a list of external memberships.*

**Creative Commons**

As a signatory to the Berlin Declaration on open access and in line with its mission, UNESCO-IHE aims to disseminate its knowledge and supports open access as a new standard for scholarship and research. To insure that copyright legislation is being observed, UNESCO-IHE has adopted the Creative Commons (CC) legal framework, allowing for the free dissemination of works.

In 2013, the Rectorate decided to apply the non-commercial Creative Commons (CC BY-NC) license for UNESCO-IHE education materials, open courseware resources and all information disseminated through the UNESCO-IHE website. In essence, this license allows others to remix, tweak, and build upon this work non-commercially, and although their new works must also acknowledge UNESCO-IHE and be non-commercial, they do not have to license their derivative works on the same terms.

**Fundraising strategy**

UNESCO-IHE will still strive to maximize and maintain the subsidy from the Dutch Government that is the core part of the five-year Operational Agreement between UNESCO and the Dutch Government. At the same time, the Institute will make a serious effort to diversify its funding base by maximizing the use of other funding options to reduce mid-term and long-term financial dependency on Dutch funding.

In 2013, a start was made with the formulation of a fundraising strategy. Fundraising for major donations (both from individuals and from organizations) is part of this strategy, and 2014 will be a pilot year for this approach. Of course, the Institute has received gifts from the private sector and foundations in the past, but there has never been an active approach to fundraising.

**Student administration**

The intake of MSc students for the 2013-2015 period was once again quite high; 228 students enrolled, 80 of them in joint programmes. The growing number of students in joint programmes means logistics have become increasingly complicated, entailing multiple arrival and departure dates, registrations and introduction days. This factor creates complications for efficient housing planning and increases administrative work and student services.

**Information Technology**

Employees and students are provided with laptop computers, offering flexibility in working locations, connecting to the Institute’s network and running required applications. For the students, the laptop is the place where all the information they collect during their study – educational materials, e-books, data, models, tools – is stored. The network connects students, employees and our partners to facilitate joint education and research as well as administrative purposes.
The robustness, availability and reliability of the backend infrastructure has been improved by virtualizing nearly all the equipment, making the applications and data independent of the physical hardware it runs on. Redundancy has been added for servers, power supply and several network components. The power supply has been upgraded to include both battery and generator backup.

The wireless network connection can be accessed by Eduroam users. Eduroam is an initiative in which education and research centres worldwide share each other’s wireless networks for internet connectivity.

Network facilities have been improved by creating a network connection to the SURFnet network of the Dutch higher education sector. This network offers redundant access to the internet. Cooperation with SURF, one of the market leaders in this segment, provides the opportunity to access state-of-the-art network facilities that connect national education and research networks worldwide. SURF is also interested in capacity building on the network site, thus facilitating our partners in developing and transition countries.

Off-campus access to internal applications and information is offered by means of a virtual private network, supporting 100 simultaneous connections.

The AFAS system personnel administration system was introduced in 2013 to increase the efficiency of administrative processes pertaining to timekeeping, leave and personnel.

Safety
A new Emergency Response policy and plan was developed. New members joined the Emergency Response Team (ERT), bringing the total to 25 trained personnel. An ERT exercise and a company-wide evacuation were held.

Risk Inventory and Evaluation was carried out among staff in 2013, within the framework of the Working Conditions Act. Actions that were identified are planned for implementation in the coming years.

Electrical equipment was inspected in 2013, and several repairs were done on large installations based on the outcome of an extensive thermal investigation.

In order to create a safe work environment on the roof, safety systems were placed on two of the roofs. More roofs will be secured in the coming years.

A new access control system was implemented to improve the security of the building. The receptionists were trained in its operation.

Campus

Hosting a UNESCO Centre on Water
IGRAC, the International Groundwater Resources Assessment Centre at UNESCO, has been an in-house partner since 2011. In 2013, the Knowledge Platform on Water for Development joined the Institute as an in-house partner. The aim of the Knowledge Platform, initiated by the Dutch Ministry of Foreign Affairs, is to improve the quality of policy implementation in international cooperation in the field of water through the exchange and development of knowledge.

Student housing
Student housing availability is no longer a commodity; careful planning is required. In 2013, the cost of student housing was cut by 40% through careful coordination, and by cutting subsidies on rent. During peak periods, alternative accommodations were used, including hotels or rooms located in The Hague or on Delft University of Technology premises. Regulations were developed to prevent the ad-hoc booking of accommodations, and are strictly enforced.

Research facilities
The existence of and access to appropriate multidisciplinary research facilities are considered essential for the Institute’s success in achieving excellence in water research and education.

The Institute has a Water Lab on its premises for hydrochemistry, process technology, microbiology, aquatic ecology and soil science, including six qualified staff members and various equipment for experimental lab and field work. Researchers also have access to hydraulic labs at Delft University of Technology and at Deltares, as well as various other hydrochemical laboratories though partners. The vast majority of the field sites are in the tropics; our local partners possess a range of other research facilities and infrastructure.
The Institute has a library that provides access to over 35,000 printed titles and over 11,000 peer-reviewed electronic journals plus other digital resources. The services provided and access to literature are up to modern standards and very much appreciated by all researchers. Cooperation agreements have been signed with partner libraries at Delft University of Technology, the Institute for Social Studies at Erasmus University in Rotterdam, and UNESCO HQ in Paris.

**Refurbishment**

The refurbishment of the auditoria in 2013 offered an opportunity to modernize the audiovisual equipment, including full audio and video recording capabilities and video-conferencing features. The most important elements are that lectures can be recorded, can be joined by others from a remote location (on a passive or interactive basis), and that remote speakers can join a lecture. This enhances online education and live-streaming and broadcasting of events.

The sanitary facilities were also upgraded. This brings the refurbishment of the complete facilities of the Institute to a conclusion, with the exception of the small auditorium.

**Restaurant**

The restaurant facilities were successfully upgraded in 2013. The catering contract was re-procured in accordance with European procurement regulations. Six caterers were invited to participate; after evaluating the offers of price and quality, the new contract was awarded to Sodexo.
Financial report

Context

UNESCO-IHE financial operations in 2013 showed a marked increase in revenues and a modest increase in expenditures, as compared to 2012. The total turnover increased to just over €36 million. The overall result shows a surplus of €91,000. The overall result includes a cash settlement of €1,830 K on the Collar Swaption with ABN AMRO Bank. Since this one-off payment does not correlate with the 2013 operations, the operating result of 2013 shows a surplus of €1,921 K. This corresponds to an operational result of 5% against turnover. The main challenges are still securing financing for fellowships and replenishing the general reserves to guarantee continuity of operations.

Income

The income of the Institute originates from three main sources:
1. The base subsidy from the Dutch Ministry of Education;
2. Tuition fees from MSc students, short-course participants and PhD fellows;
3. Project revenues.

Other income sources are minor and include revenues from renting out conference and laboratory facilities and student housing to third parties and PhD graduation grants received from Dutch universities for joint graduations.

The subsidy from the Ministry of Education remained at the level of 2012, but includes a marginal indexation (0.1%) compared with 2012. For 2014 through 2016, IHE secured the base subsidy at its current level, excluding indexation and subject to approval by Dutch Parliament. The Dutch Ministry will decide in 2016 about the level of funding for 2017 and beyond, basing its decision on an evaluation of IHE performance in education, research and valorization of knowledge.

Besides the base subsidy from the Ministry of Education, our main resources of income (in % of our total project and tuition fee income) are:

<table>
<thead>
<tr>
<th>Donor (main types of income)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUFFIC Foundation (fellowships, short course, capacity development)</td>
<td>26</td>
</tr>
<tr>
<td>Dutch Ministry of Foreign Affairs (all project types and fellows)</td>
<td>15</td>
</tr>
<tr>
<td>European Commission (research and fellows)</td>
<td>12</td>
</tr>
<tr>
<td>Asian Development Bank (capacity development and advisory)</td>
<td>4</td>
</tr>
<tr>
<td>Fundação Renato Azeredo (capacity development, advisory, fellows)</td>
<td>4</td>
</tr>
<tr>
<td>Bill and Melinda Gates Foundation (fellows and short courses)</td>
<td>3</td>
</tr>
<tr>
<td>The Rotary Foundation (fellows)</td>
<td>1</td>
</tr>
<tr>
<td>IFAD (capacity dev., fellows and research)</td>
<td>1</td>
</tr>
<tr>
<td>Dutch Ministry of Environment and Infrastructure (capacity development)</td>
<td>1</td>
</tr>
<tr>
<td>Deltares Foundation (fellows, all project types)</td>
<td>1</td>
</tr>
<tr>
<td>Florida International University (capacity development, research)</td>
<td>1</td>
</tr>
<tr>
<td>ANII, Neso Indonesia, Delft University of Technology (fellows, research)</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

The marked increase in income from the EC is one of the first outcomes of IHEs actions towards diversification of funding.
The EC PF7 and Erasmus programmes came to an end, and the first calls of the new programmes opened end 2013 and beginning 2014.

UNESCO-IHE Annual Report 2013

Building, facilities and other indirect or overhead costs. Expenditures concern general items such as staff costs, the Institute’s main activities, while non-programme expenditures concern general items such as staff costs, building, facilities and other indirect or overhead costs.

Expenditures
UNESCO-IHE makes a distinction between programme expenditures and non-programme expenditures. Programme expenditures relate to the direct outputs of the Institute’s main activities, while non-programme expenditures concern general items such as staff costs, building, facilities and other indirect or overhead costs.

Income from tuition fees increased significantly (14%), due to an increase in MSc students per year (17%) and an increase in the intake of PhD fellows (14%). We secured donors for 260 fellowships for the 2012-2014 MSc cohort and 228 fellowships for the 2013-2015 cohort, compared with the average of about 200 fellows per cohort on previous years. Education-related expenditures increased by 17% due to these increased number of MSc fellowships and PhD fellows (149 versus last year 131) and the stipends related to these increased numbers.

Project income from research, non-degree courses, advisory projects and capacity development projects was 9% higher in 2013; direct project costs related to this income increased by 4%. This resulted in a net improvement in project fee income of 20%. This is in line with the improvement of the average project rate by 15% and the increase in academic staff by 4%, and a slight decrease in productivity/billability of 0.3% (4 hours per academic staff member).

Programme expenditures are therefore directly linked to the revenue items (education, training, projects) mentioned in the income section.

Non-programme expenditures showed a marginal reduction (2%) in 2013 compared with 2012.

The staff and management costs increased by 6%. Salary costs increased by 6% due to 5% more staff (with juniors replacing seniors), 2% increase in the Collective Labor Agreement (CAO) for the Dutch Institutions for Higher Education, 1% raise in social security contribution and the incremental pay raises. The total average number of staff throughout the year, including seconded staff from outside, increased by 7.5 FTE, of which 2.9 academic staff (billable). Overall, management expenditures increased by 6%, due to a decline in number of shared seconded staff, increase in the additional allowance (€16) owing to an increase in short missions, and more outside seconded staff. These increases were partly compensated by lower costs for staff festivities and staff training.

The overall costs for operation and maintenance of the building decreased by 35%. This is due to the postponement of the final pay-off in the lease, which did not include redemption in 2013. The interest costs on the SWAP linked to the lease ended at the end of 2012. The costs of running the facilities increased by 17%. Depreciation of the new IT systems and equipment in the
2009-2012 refurbishment, an one-off penalty fee due to a more favorable contract with a new copier, and increased costs in laboratory consumables explain the rise. The latter is due to the increased laboratory activities due to the significant rise in student numbers (MSc and PhD) and special programme participants (ad-hoc visitors). In future years, IHE will investigate options for introducing lab fees for incidental users and PhD fellows.

Education-related costs decreased by 21% as a result of lower costs for unoccupied student housing due to the increased number of participants. Including the lowered amount for sub-rental income on student housing, we saved €236 K. Acquisition and marketing costs were markedly lower (7%) than in 2012, in line with several saving measures introduced in 2013.

General costs increased by 3%, due to hired consultancy services for the new auditorium, foreign VAT issues, the selection of a new multifunctional contract, and activities to determine EC Horizon 2020 options. The overall payment practices of our debtors have improved. Interest revenues increased marginally (0.3%). With the postponement of the final lease amount, we kept €4 million extra on deposit accounts.
### Statement of income and expenditures in Euros * 1,000

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ministry of Education subsidy</td>
<td>10,689</td>
<td>10,677</td>
</tr>
<tr>
<td>Tuition fees</td>
<td>14,029</td>
<td>12,356</td>
</tr>
<tr>
<td>Projects</td>
<td>11,174</td>
<td>10,228</td>
</tr>
<tr>
<td>Other</td>
<td>451</td>
<td>430</td>
</tr>
<tr>
<td><strong>Total income</strong></td>
<td>36,343</td>
<td>33,690</td>
</tr>
<tr>
<td><strong>Programme expenditures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition expenses (stipends, guest lecture, etc.)</td>
<td>9,493</td>
<td>8,594</td>
</tr>
<tr>
<td>Projects</td>
<td>7,031</td>
<td>6,780</td>
</tr>
<tr>
<td><strong>Total programme expenditures</strong></td>
<td>16,525</td>
<td>15,374</td>
</tr>
<tr>
<td><strong>Non-programme expenditures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff and management</td>
<td>12,980</td>
<td>12,281</td>
</tr>
<tr>
<td>Buildings</td>
<td>1,888</td>
<td>2,882</td>
</tr>
<tr>
<td>Facilities</td>
<td>1,491</td>
<td>1,281</td>
</tr>
<tr>
<td>Education-related costs</td>
<td>920</td>
<td>1,158</td>
</tr>
<tr>
<td>Acquisition and marketing</td>
<td>325</td>
<td>349</td>
</tr>
<tr>
<td>General costs</td>
<td>447</td>
<td>433</td>
</tr>
<tr>
<td>Interest</td>
<td>-154</td>
<td>-154</td>
</tr>
<tr>
<td><strong>Total non-programme expenditures</strong></td>
<td>17,897</td>
<td>18,231</td>
</tr>
<tr>
<td><strong>Operating result</strong></td>
<td>1,921</td>
<td>85</td>
</tr>
<tr>
<td>Extraordinary charges / appropriations from Fellowship Trust Fund</td>
<td>-1,830</td>
<td>-3</td>
</tr>
<tr>
<td><strong>Overall result</strong></td>
<td>91</td>
<td>81</td>
</tr>
</tbody>
</table>

### Balance sheet in Euros * 1,000

<table>
<thead>
<tr>
<th></th>
<th>31 Dec 2013</th>
<th>31 Dec 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed assets</td>
<td>5,121</td>
<td>4,299</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>2,425</td>
<td>2,401</td>
</tr>
<tr>
<td>Cash and banks</td>
<td>17,566</td>
<td>14,205</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>25,112</td>
<td>20,905</td>
</tr>
<tr>
<td><strong>Equity and liabilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equity</td>
<td>2,025</td>
<td>1,936</td>
</tr>
<tr>
<td>Fellowship Trust Fund</td>
<td>262</td>
<td>258</td>
</tr>
<tr>
<td>Provision</td>
<td>556</td>
<td>304</td>
</tr>
<tr>
<td>Current liabilities</td>
<td>22,269</td>
<td>18,407</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>25,112</td>
<td>20,905</td>
</tr>
</tbody>
</table>
The UNESCO-IHE Fellowship Trust Fund (FTF) was created to raise funds from private and public organizations, companies, alumni and other (individual) benefactors for partial or full sponsorship of an individual’s studies at UNESCO-IHE. This support enables water professionals who possess the intellectual stamina and ability, but lack the proper funding, to receive graduate education at UNESCO-IHE. Every contribution is directed towards its equivalent value in terms of output.

In 2013, the FTF provided financial support to one student whose name and country of origin is listed in the adjoining Financial Statement. The student was enrolled in an MSc study in the academic period 2013-2015, and was only partially supported by the Fellowship Trust Fund. We thank the sponsors for their generous contributions to the Fund that will enable students to further or finalize their academic programme at the Institute.

### Financial statement FTF

<table>
<thead>
<tr>
<th></th>
<th>Euros</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fund on 1 January 2013</strong></td>
<td>258,886</td>
</tr>
<tr>
<td><strong>Gifts</strong></td>
<td></td>
</tr>
<tr>
<td>Stichting Meyboom</td>
<td>20,611</td>
</tr>
<tr>
<td>Membrane Tech. Vanessa Brusius</td>
<td>75</td>
</tr>
<tr>
<td>Membrane Tech. Sergios Ribeiro</td>
<td>75</td>
</tr>
<tr>
<td>Interest</td>
<td>3,282</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>24,043</td>
</tr>
<tr>
<td><strong>MSc fellowships</strong></td>
<td></td>
</tr>
<tr>
<td>Badruz Zaman, 2014-2015, Indonesia</td>
<td>20,611</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20,611</td>
</tr>
<tr>
<td><strong>Fund on 31 December 2013</strong></td>
<td>262,318</td>
</tr>
</tbody>
</table>
Annexes
## Annex 1

### Educational statistics

Registered degree programme participants for the academic year 2013-2014

<table>
<thead>
<tr>
<th>Programme</th>
<th>Source of funding</th>
<th>Region of origin</th>
<th>Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full NFP</td>
<td>Co-financed NFP</td>
<td>Other</td>
<td>Africa</td>
</tr>
<tr>
<td>MSc Programmes 2012-2014</td>
<td>95</td>
<td>0</td>
<td>165</td>
<td>114</td>
</tr>
<tr>
<td>Water Science and Engineering</td>
<td>36</td>
<td>0</td>
<td>66</td>
<td>36</td>
</tr>
<tr>
<td>Water Management</td>
<td>10</td>
<td>0</td>
<td>19</td>
<td>11</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>33</td>
<td>0</td>
<td>39</td>
<td>32</td>
</tr>
<tr>
<td>Municipal Water and Infrastructure</td>
<td>16</td>
<td>0</td>
<td>41</td>
<td>35</td>
</tr>
<tr>
<td>MSc Programmes 2013-2015</td>
<td>76</td>
<td>0</td>
<td>149</td>
<td>100</td>
</tr>
<tr>
<td>Water Science and Engineering</td>
<td>25</td>
<td>0</td>
<td>66</td>
<td>30</td>
</tr>
<tr>
<td>Water Management</td>
<td>16</td>
<td>0</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>20</td>
<td>0</td>
<td>34</td>
<td>28</td>
</tr>
<tr>
<td>Urban Water and Sanitation</td>
<td>15</td>
<td>0</td>
<td>32</td>
<td>22</td>
</tr>
<tr>
<td>PhD programmes 2013</td>
<td>30</td>
<td>3</td>
<td>106</td>
<td>47</td>
</tr>
<tr>
<td>Total</td>
<td>201</td>
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## Annex 2

### Short courses

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<td>Aquatic Ecosystems: Processes and Applications</td>
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<td>Cleaner Production and the Water Cycle</td>
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| Percentage                                            | 100%         | 38.4%        |

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| Percentage                                            | 100%         | 35.7%        |
Regional refresher course participants

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## PhD fellows

### Promotions

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<tr>
<td>Mr. Mabiza</td>
<td>Zimbabwe</td>
<td>Integrated water resources management, institutions and livelihoods under stress</td>
<td>vd Zaag</td>
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<td>Mr. Seyoum</td>
<td>Ethiopia</td>
<td>Framework for dynamic modelling of urban floods at different topographical resolutions</td>
<td>Solomatine</td>
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<td>Mr. Ansa</td>
<td>Ghana</td>
<td>The removal of faecal coliforms in waste stabilization pond systems and eutrophic lakes</td>
<td>Gijzen/ Lubberding</td>
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<td>Mr. Khatri</td>
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<td>Risk and uncertainty analysis for sustainable urban water systems</td>
<td>Vairavamoorthy</td>
<td>01/May/13</td>
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<td>Mr. Li</td>
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<td>Adaptive multi-reservoir-based flood control and management for the Yellow River. Towards a next generation software system</td>
<td>Mynett/ Popescu</td>
<td>03/May/13</td>
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<td>Mr. Love</td>
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<td>Mr. Sanchez Torres</td>
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<td>Mr. Mburu</td>
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<td>Amy / Lens</td>
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### Registered PhD fellows

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<td>Beyond structuralism to explain the effectiveness of knowledge and capacity development in water supply. towards an actor-interaction oriented perspective</td>
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<td>Partnerships between water operators as a vehicle for capacity development and change</td>
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<td>Mr. Abel</td>
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<td>Assessment of Soil Aquifer Treatment (SAT) for multiple contaminant removal and its applicability in developing countries</td>
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<td>Mr. Salifu</td>
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<td>Fluoride removal from drinking water</td>
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<td>Mr. Kim</td>
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<td>Municipal wastewater treatment using algae and bacteria at MBR process(based on MLE process)</td>
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<td>Ms. Mersha</td>
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<td>Gupta</td>
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<td>Irvine</td>
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<td>Irvine</td>
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<td>Governance of wetlands in Africa with focus on Rwanda</td>
<td>Irvine</td>
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<td>Rwanda</td>
<td>The importance of denitrification for nitrogen retention in a sub-tropical catchment</td>
<td>Irvine</td>
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<td>Zambia</td>
<td>The fate of cobalt, copper and lead in two wetlands in Zambia</td>
<td>Irvine</td>
</tr>
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<td>Kenya</td>
<td>Wetland ecosystem integrity in relation to exploitation for livelihoods in Nyando wetlands, Kenya</td>
<td>Irvine</td>
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<td>Peru</td>
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<td>Irvine</td>
</tr>
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<td>Rwanda</td>
<td>Rehabilitation of sediment and nutrient retention functions in wetlands of Migina catchment, Rwanda</td>
<td>Irvine</td>
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<td>Netherlands</td>
<td>under construction</td>
<td>Kennedy</td>
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<td>Low chemical consuming UF, RO for desalination</td>
<td>Kennedy</td>
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<td>Anaerobic methane oxidation with nitrate as electron acceptor</td>
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<td>Ghana</td>
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<td>Italy</td>
<td>Anaerobic oxidation of methane in the presence of different electron acceptors</td>
<td>Lens</td>
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<td>Anaerobic oxidation of methane by sulfate reduction</td>
<td>Lens</td>
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<td>Republic of Korea</td>
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<td>Mycogenic production of elemental selenium nanoparticles</td>
<td>Lens</td>
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<td>Mr. Isildar</td>
<td>Turkey</td>
<td>Metal recovery from electronic waste</td>
<td>Lens</td>
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<td>India</td>
<td>Biogenic production of selenium nanoparticles</td>
<td>Lens</td>
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<td>Thailand</td>
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<td>Lens</td>
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<td>India</td>
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<td>Lens</td>
</tr>
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<td>Lens</td>
</tr>
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<td>Colombia</td>
<td>Microalgae for wastewater biotreatment and biomass recovery</td>
<td>Lens</td>
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<td>Mexico</td>
<td>under construction</td>
<td>Lens</td>
</tr>
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<td>Romania</td>
<td>Biorecovery of selenium from inorganic wastewaters</td>
<td>Lens</td>
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<td>Design criteria for coastal cities</td>
<td>Roelvink / Zevenbergen</td>
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<td>Roelvink / Wright</td>
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<td>Indonesia</td>
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<td>Gezira scheme, Sudan</td>
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<td>Ibuokota (DKI) Jakarta</td>
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<td>Schultz</td>
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<td>region of Ethiopia</td>
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<td>Ethiopia</td>
<td>Drought assessment and forecasting for the Upper Blue Nile Basin by</td>
<td>Solomatine</td>
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<td>physical and social sensors</td>
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<td>the former Yugoslav Republic of Macedonia</td>
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<td>Solomatine</td>
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<td>Indonesia</td>
<td>Integrating multiple sources of information and hydrological modelling to</td>
<td>Solomatine</td>
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<td>reduce uncertainty in operational water management</td>
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<td>Solomatine</td>
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<td>Solomatine</td>
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<td>problems: robustness, efficiency, interactivity</td>
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<td>Optimal integration of heterogeneous uncertain data into water models</td>
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<td>Flood risk mapping under uncertainty: Application to Sungai Johor Basin,</td>
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<td>Malaysia</td>
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<td>Solomatine</td>
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<td>communication</td>
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<td>Solomatine</td>
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<td>Solomatine + Jonoski</td>
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<td>flood management</td>
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<td>in Mekong Delta, Vietnam</td>
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<td>An integrated approach for adapting agriculture and water management to</td>
<td>Uhlenbrook</td>
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<td>global change. Case study of a Himalayan River Basin in Nepal</td>
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<td>River morphology and eco-hydrology of the Dinder National Park (DNP)/</td>
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<td>Sudan</td>
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<td>Ms. Hu Yurong</td>
<td>China</td>
<td>Assessment of climate change and its impacts on hydrological processes and</td>
<td>Uhlenbrook</td>
</tr>
<tr>
<td></td>
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<td>water resources in the Yellow River source region, China</td>
<td></td>
</tr>
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<td>Space-time patterns of hydrological processes and water resources in</td>
<td>Uhlenbrook</td>
</tr>
<tr>
<td></td>
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<td>Rwanda, with special focus on the meso-scale Migaa catchment</td>
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<td>Uganda</td>
<td>Spatial-temporal dynamics of flow regime and water resources in the upper</td>
<td>Uhlenbrook</td>
</tr>
<tr>
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<td>Mara basin, Kenya</td>
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<td>Uganda</td>
<td>Hydrological aspects of alternative sanitation solutions in slum areas in</td>
<td>Uhlenbrook</td>
</tr>
<tr>
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<td>African mega-cities</td>
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<td>Uruguay</td>
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<td>Uhlenbrook</td>
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<tr>
<td>Arechavaleta</td>
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<td>scales</td>
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<td>Malaysia</td>
<td>Assessment and modelling of large-scale hydrological variability in Peninsular Malaysia</td>
<td>Uhlenbrook</td>
</tr>
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<td>Quantitative assessment of groundwater and surface water interactions in</td>
<td>Uhlenbrook</td>
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<td>Erdos plateau, China</td>
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<td>Mr. Gebrekristos</td>
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<td>Impact of improved land management practices on hydrology in Blue Nile River Basin / up-scaling of hydrological model</td>
<td>Uhlenbrook/Savenije</td>
</tr>
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<td>Egypt</td>
<td>Climate change and development impacts on groundwater resources in the Nile Delta, Egypt</td>
<td>Uhlenbrook/Solomatine</td>
</tr>
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<td>On optimising the operation of the multi-reservoir system in the Eastern Nile basin considering water and sediment fluxes</td>
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</tr>
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<td>Ms. Saraiva Okello</td>
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<td>Bridging the gaps between hydrology, land use and water management using tracers and water resources modelling in the Incomati Basin</td>
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</tr>
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<td>Participatory decision making for sustainable integrated water resources management. Strengthening stakeholder ownership using a collaborative modeling approach</td>
<td>v Beek/Janoski</td>
</tr>
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<td>Decision support system for managing underground water related assets (water distribution)</td>
<td>Varinavamoorthy</td>
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<td>Mr. Sanchez Ralda</td>
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<td>The use of information and communication technologies, to warn poorer women and men in anticipation to more extreme weather events and floods</td>
<td>van Dijk</td>
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<td>vanLier</td>
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<td>vanLier</td>
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<td>Water governance in São Francisco river basin - Brazil</td>
<td>vd Zaag</td>
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<td>vd Zaag</td>
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<td>Ms. Metzker Netto</td>
<td>Brazil</td>
<td>Knowledge creation in networks dynamics, in terms of water resources management</td>
<td>vd Zaag</td>
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<tr>
<td>Mr. Muanda</td>
<td>Congo</td>
<td>Understanding the organisation of sanitation services in informal settlements of South Africa</td>
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<tr>
<td>Mr. Smit</td>
<td>Netherlands</td>
<td>Institutional analysis of water resources management in the Blue Nile river basin, Ethiopia and Sudan</td>
<td>vd Zaag</td>
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<td>Mr. Verma</td>
<td>India</td>
<td>Groundwater recharge movement in India</td>
<td>vd Zaag / Uhlenbrook</td>
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<td>Mr. Owusu-Ansah</td>
<td>Ghana</td>
<td>Near-real time monitoring of flows in the Volta basin using variational data assimilation</td>
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<td>Mr. Yalew</td>
<td>Ethiopia</td>
<td>Integrated assessment of land use and water resources management in the upper Blue Nile River Basin</td>
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<td>Ms. Mwelwa</td>
<td>Zambia</td>
<td>Flow, morphology and vegetation in the Middle Zambezi: a study of spatial and temporal scales</td>
<td>Wright</td>
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<tr>
<td>Mr. Nairain</td>
<td>Germany</td>
<td>Computer modelling for the optimisation of low-head hydropower schemes</td>
<td>Wright</td>
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<tr>
<td>Ms. Rogelis Prada</td>
<td>Colombia</td>
<td>Operational flood forecasting, warning and response for multi-scale flood risks in developing cities</td>
<td>Wright</td>
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<tr>
<td>Mr. Worku</td>
<td>Ethiopia</td>
<td>Integrated management of water resources and optimal reservoir release for energy, irrigation and ecosystem services. A case Study of the Omo-Ghihe Basin</td>
<td>Wright /vdZaag</td>
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<tr>
<td>Ms. Ahmed</td>
<td>Bangladesh</td>
<td>Application of resilience to flood risk management on Dhaka</td>
<td>Zevenbergen</td>
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<td>Ms. Anema</td>
<td>Netherlands</td>
<td>Building community resilience to floods in urban contexts</td>
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<tr>
<td>Ms. Bacchin</td>
<td>Italy</td>
<td>Adaptive waterscapes - exploring water resilient urban environments. The role of urban planning and design in the performance of urban water</td>
<td>Zevenbergen</td>
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<td>Mr. Nilubon</td>
<td>Thailand</td>
<td>Urban flood risk analysis and management using relational urbanism model: A case study in Ayutthaya historic city (under UNESCO), Thailand</td>
<td>Zevenbergen</td>
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<td>Mr. Olthuis</td>
<td>Netherlands</td>
<td>Adaptive wet slums</td>
<td>Zevenbergen</td>
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<tr>
<td>Mr. Radhakrishnan</td>
<td>India</td>
<td>Development and application of Real-in-options (RIO) accounting tools for storm water management and flood safety</td>
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<td>Mr. Salinas Rodriguez</td>
<td>Bolivia</td>
<td>Adaptation tipping points and opportunities for flood resilience and water sensitivity</td>
<td>Zevenbergen</td>
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<tr>
<td>Mr. Veerbeek</td>
<td>Netherlands</td>
<td>A comparative study of the effects of current and future urban growth on surface runoff in large metropolitan areas</td>
<td>Zevenbergen</td>
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## Annex 4

### Research lines

<table>
<thead>
<tr>
<th>Integrated Water Systems and Governance Department</th>
<th>Water Science and Engineering Department</th>
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<tr>
<td><strong>Chair Group</strong></td>
<td><strong>Research line</strong></td>
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<tr>
<td>Water Management</td>
<td>Biophysical and social dimensions of water systems</td>
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<td></td>
<td>Institutional and economic dimensions of water systems</td>
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<td>Integrative instruments and interventions</td>
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<tr>
<td>Hydroinformatics</td>
<td>Data, modelling, uncertainty and risk</td>
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<td></td>
<td>Systems engineering, optimization and integration</td>
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<td>Collaborative decision making and Internet-based computing and learning</td>
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<td>Knowledge and Capacity Development</td>
<td>Analysing the dynamics of professional knowledge dissemination and access to the global knowledge pool</td>
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<td>Investigating the nature, extent and boundaries of citizen observatory contributions to improved knowledge flows and their implications for water governance</td>
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<td>Assessing the economic and social value of knowledge and capacity development</td>
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<td></td>
<td>Understanding the determinants for the effectiveness of knowledge and capacity development, and developing measuring metrics. The focus is, for the moment, on water supply utilities and Water Operator Partnerships</td>
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<td>Analysing the dynamics of the learning, competence building and innovation systems for the water sector. Getting an operational grip on competence and skill building and organisational assessments, for the purpose of developing capacity development strategies</td>
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<tr>
<td>River Basin Development</td>
<td>River morphodynamics (topographic changes of river bed and river corridor)</td>
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<td>Ecohydrodynamics (interaction riparian vegetation-river and large floating debris)</td>
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<td>Impacts of training and rehabilitation projects on rivers</td>
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<td>Kite Aerial Photography (KAP) and Unmanned Aerial Vehicles (UAV) for landscape change detection</td>
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# Research lines

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<td>Environmental Engineering and Water Technology Department</td>
<td>Groundwater treatment</td>
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<td>Surface water treatment</td>
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<td>Desalination and water reuse</td>
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<td>Water transport &amp; distribution</td>
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<td>Water Supply Engineering</td>
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<td>Pollution Prevention and Resource Recovery</td>
<td>Cleaner production and pollution prevention</td>
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<td>Solid waste management</td>
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<td>Resource recovery (water, nutrients, minerals, energy, new materials)</td>
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<td>Ecotechnologies (anaerobic digestion, natural treatment systems, photobioreactors)</td>
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<td>Sanitary Engineering</td>
<td>Advanced nutrient removal processes</td>
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<td>Wastewater treatment processes development and modelling</td>
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<td>Use of seawater in sanitation</td>
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<td>Resources oriented sanitation</td>
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<td>Sanitation provision to the urban poor</td>
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<td>Low cost wastewater collection and treatment</td>
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<td>Anaerobic treatment of wastewater and sanitary slurries</td>
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<td>Faecal sludge management</td>
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<td>Emergency sanitation</td>
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<td>Hybrid systems for sewage treatment in developing countries</td>
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<td>Asset management of urban water infrastructure Flood and disaster risk management</td>
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<td>Model-based multi-objective optimization of urban water systems</td>
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ABSTRACTS


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18

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Uwamariya V (2013) Adsorptive removal of heavy metals from groundwater by iron oxide based adsorbents. CRC Press, Leiden


Zhu X (2013) Web-based virtual environment for decision support in water systems. CRC Press, Leiden


9

Technical reports


Developing approach and procedures to support the Advanced Centre of Integrated Water Resource Management (AC-IWRM) and the Network of Asian River Basin Organisation (NARBO) for water management; A Discussion Document for the Asian Development Bank (ADB), July

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10

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- Tineke Huizinga-Heeringa
- Tomoharu Hori
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- Carlos Lopez Vazquez, per 1 Oct
- Charlotte de Fraiture, Chair, per 1 Oct
- Dimitri Solomatine, until 1 Oct
- Erick de Jong
- Jan Nonner, until 1 Oct
- Maarten Blokland
- Nemanja Trifunovic, until 1 Oct
- Nynke Jo Smit (external), per 1 Oct
- Peter Kelderman, until 1 Oct
- Piet Lens, per 1 Oct
- Susan Graas, per 1 Oct

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- Erik de Ruyter
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- Patricia Trambauer

**Cultural Ambassadors**

- Artists, events and cultural institutions appointed as Cultural Ambassadors of UNESCO-IHE to call for good water management and advocate the urgent need for well-trained water managers throughout the world.

- Ap Verheggen sculptor
- Catherine Massin performance / visual art / writing
- DeSingel International Arts Centre
- Festival van Vlaanderen - OdeGand
- Gastprogrammering Het Muziektheater
- Gill Garoetti photographer
- Handelaarsconsortium Gent
- Les Ballets C de la B
- Lucien den Arend sculptor
- Marjorie Ryerson photographer and orchestrator
- Rotterdam Philharmonisch Orkest
- Slagerij van Jampen
- Troubelyn | Jan Fabre performing arts

**Honorary Fellows**

- The UNESCO-IHE Honorary Fellowship award is bestowed in recognition of persons of distinction who have either made major contributions to the work of IHE or earned distinction for activities associated more widely with the context of IHE’s mission.

- 2012 Prof. J.A. Cunge
- 2011 Prof. J.P. O’Kane, PhD
- 2010 Prof. D.P. Loucks
- 2004 Prof. W.J. Cosgrove
- 1999 Prof. M. Abu Zeid, PhD
- 1998 Prof. W.A. Segeren, MSc
- 1998 R. Moochiar, MSc
- 1996 Prof. J.W.M. la Rivière, PhD, MSc
- 1993 M.F. Strong, PhD
- 1992 Prof. J.C.I. Dooge
- 1990 Prof. L. Huisman, PhD, MSc
- 1985 Prof. L.J. Mostertman, MSc
- 1978 Prof. W.F.J.M. Krul
- 1968 Prof. J.Th. Thijsjen, MSc
Abraham Mehari Haile  
Senior Lecturer in Land and Water Development  
- Secretary of the ICID working group on Drought.  
- Secretary of the Spate Irrigation Network.  
- Member of ICID working group on On-farm.

Alessandra Crosato  
Senior Lecturer in River Morphology and River Engineering:  
- Member of Programme Committee of the Netherlands Centre for Riverstudies (NCR).  
- Member of World Water Council (Dutch leading group on River Morphodynamics and related engineering).  
- Member of scientific committee RCEM International Conference on River Coastal and Estuary Morphology.  
- Member of IAHR.  
- Member of European Mechanics Society.  
- Member of editorial Board of the International journal Water Management.  
- Member of organization board of the 37th World Congress IAHR 2015.  
- Guest editor International journal Advances in Water Resources (Elsevier).

Andras Szöllösi-Nagy  
Rector  
- Member of the Board of Governors of the World Water Council.  
- Member of the Bureau of the Governing Board of the World Water Council.  
- Member of the International Steering Committee of the 7th World Water Forum.  
- Co-Chair of the Political Processes Commission of the 7th World Water Forum.  
- Chair of the International Programme Committee of the Budapest Water Summit.  
- Chair of the Drafting Committee of the Budapest Water Summit.  
- Board member of the Stockholm Environmental Institute.  
- Board member of the Prince Sultan Bin Abdulaziz International Water Prize.  
- Honorary Member of the American Water Resources Association (AWRA).

Ann van Griensven  
Associate Professor of Hydrology and Water Quality  
- Served on the editorial board of the Hydrology and Earth System Sciences, HESS (since 2012).  
- Served on the editorial board of the Environmental Modelling and Software (since 201).  
- Guest editor of the journal wires-water.

- Board member of the international Environmental Modelling and Software Society (since 2012).  
- Board member of Soil and Water Assessment (SWAT) foundation (since 2012).  
- Board member of the Belgian committee for UNESCO-IHP (since 2013).  
- Board member of the OpenMI executive committee (since 2010).  
- Member of technical committee for the ASABE Water Quality Conference Planning Committee, Bari (2012).  
- Chaired and convened a session at EGU.  
- Representative of Belgium in EurAqua (the European Network of Freshwater Research Organisations (since 2012).  

Anne van Dam  
Associate Professor of Environmental Systems Analysis  
- Member of Editorial Board of Aquaculture.  
- Volume Editor, Wetlands Encyclopaedia (Springer).  
- Guest Editor Special issue in papyrus wetlands for Wetland Ecology and Management.  
- Refereed ten peer reviewed articles.  
- Observer on the Ramsar Scientific and Technical Review Panel

Ali Dastgheib  
Senior Lecturer Port Development  
- Member of the International Organisation on Waterborne Transport (PIANC).  
- Member of the International Cooperation commission of PIANC.  
- Member of the Centrum voor Kustonderzoek (NCK).

Arthur Mynett  
Professor of Hydraulic Engineering  
- IAHR Vice President and Council Member, International Association for Hydro-environment Engineering and Research.  
- Chair Local Organizing Committee, IAHR2015 World Congress Delft - The Hague.  
- Adjunct Professor, Chinese Academy of Science Research Centre on Eco-environmental Studies, Beijing, China.  
- Visiting Professor, Sichuan University, Chengdu, China.  
- Visiting Scientist, Nanjing Hydraulic Research Institute, Nanjing, China.  
- Member of the Governing Board, Netherlands Centre for River Research (NCR).  
- Member of the Governing Board, Netherlands Centre for Coastal Research (NCK).  
- Member of the Royal Netherlands Institute of Engineers (KIVI).  
- Member of the International Association of Hydrological Sciences (IAHS)  
- Member of the International Water Association (IWA).  
- Member of the UK Institute of Civil Engineers (ICE).  
- Member of the American Society of Civil Engineers (ASCE-EWRI).  
- Member of Editorial Boards: ENMO (Environmental Modeling and Assessment), HYP (Hydrological Processes), JHI (Hydroinformatics), ISP (Ship Building Progress), Journal of Hydraulic Research (IAHR), Journal of Hydraulic Engineering (ASCE), Journal of Water Management (ICE).  

Assela Pathirana  
Senior Lecturer in Urban Drainage and Sewerage  
- Member of International Working Group of the IWA/AHAR Joint Committee on Urban Drainage.  
- Member of International Scientific committee of 13th international conference on Urban Drainage.

Erik de Ruyter van Steveninck  
Senior Lecturer Aquatic and Marine Ecology  
- Board member of CapNet.  
- Member of AcroporaNet

Berta Fernández Álvarez  
Quality Manager  
- NVAO Certified Accreditation Secretary/Coordinator.

Branislav Petruševski  
Associate Professor of Water Supply Engineering  
- Member of the scientific committee of the 5th International Congress of Arsenic in the Environment (11-16 May 2014)  
- Chairman of the Work Group Water of the Dutch - Serbian Business Council

Carol Keuls  
Advisor Knowledge Management  
- Editor UNESCO-IHE project experiences and results for book IWRM in Central Asia (to be published in 2013, in English and Russian).

Carlos Lopez-Vazquez  
Senior Lecturer in Wastewater Treatment Technology  
- Associated Editor of Water Science and Technology (since 2011).  
- Member of the International Water Association.

Charlotte de Fraiture  
Professor of Hydraulic Engineering for Land and Water Development  
- Member of Steering Committee of the Water Land & Ecosystems (WLE) research program under the CGIAR umbrella.  
- Member of international jury for the Stockholm Junior Water Prize.  
- Chair of the Netherlands Commission on Irrigation and Drainage (NethCID).
- Editor of the Water Resources and Rural Development (new Elsevier journal).
- Guest editor of special issue of the journal Agricultural Water Management.

Chris Zevenbergen
Professor of Flood Resilience of Urban Systems
- Member Advisory Board Universiteitssfonds Delft.
- Member of the Board Netherlands Water Partnership (NWP)(2004-2009).
- Member of the Board Co-operative Program on Water and Climate (CPWC)(2010).
- Member of the Board of Clean Tech Delta (CTD).
- Member Advisory Body Environmental Science Group / Wageningen University and Research Centre.
- Member Advisory Committee Rotterdam Climate Proof (RCP).
- Member of the Review Board of the Dutch Delta Program (2013).
- Member of the editorial board of Journal of Flood Risk Management.
- Member of the editorial board of the Journal of Water Conservancy and Hydroelectric Engineering (JWCHE).
- Member Advisory Board IBuild.
- Member of the Review Committee Future Mega Cities.
- Member of the Scientific Committee of ICDFMS.
- Member of the Advisory Committee Delta of Times of Climate Change II.
- Chairman of the Dutch WODC Advisory Committee on “Meetbaarheid van Veerkracht”.
- Chairman ICAADE 2015 International Conference on Amphibious Architecture, Design and Construction.

Damin Brdjankovic
Professor of Sanitary Engineering
- Chairman of the IWA SG Environmental Engineering Education.
- Member of the International Editorial Board of IWA Journal of Water, Sanitation and Hygiene for Development.
- Chairman of the Program Committee of IWA YWP conference in Kiev, Ukraine.

Dano Roelvink
Professor of Coastal Engineering and Port Development
- Member of Deltares Science Council.
- Chairman of organizing committee of NCK Summerschool, Texel.

Dimitri Solomatine
Professor of Hydroinformatics
- Associate editor of Journal of Hydroinformatics.
- Editor of the Hydrology and Earth System Sciences (HESS) Journal.
- Co-editor of the Springer Book Series “Earth Systems Data & Models”.
- Chairman of the European Geosciences Union (EGU) Subdivision on Hydroinformatics.
- Convener of the Session on Hydroinformatics at EGU Assembly.
- Member of the Scientific Advisory Committee of the 5th Delft Symposium on Water Sector Capacity Development (28-31 May 2013).
- Guest Editor of Water Policy, Special Issue on Leadership in Knowledge and Capacity Development (2013) 15(Suppl.2).

Hydraulic Research
- Member of the European Geosciences Union.

Erwin Ploeger
Head of the Education Bureau
- Co-Chair of the Platform International Education (PIE).
- Member of the OCGD, the ‘Stichting Opleiding Civiel Ingenieurs’.
- Member of the Editorial Board of Transfer Magazine.

Ewoud Kok
Marketing Officer
- Member of Dutch Higher Education Network for International Marketing (Dheinim).

Frank van den Meulen
Associate Professor of Integrated Coastal Zone Management
- Member of the advisory committee of two large Management Authorities that manage the dunes of South- and North Holland Provinces.

Giuliano Di Baldisserre
Senior Lecturer in Hydroinformatics Systems
- Member of the Editorial Board of the International Journal of Hydr. Science and Technology.
- Member of the International Scientific Organizing Committee of the International Conference on Flood Management (ICDFMS).
- Member of the Scientific Organizing Committee of the EGU Leonardo Conference.
- Convened and chaired sessions of sessions at EGU General Assembly.
- Reviewed papers for many international journals, including Water Resources Research, Journal of Hydrology, and Water Policy.

Greet Vink
Business Director
- Stichting Instituut for Postgraduate International Education in the Netherlands.
- Technologische Innovatie Campus Delft.
- Delft Blue Technology.
- Delft International Advisory Board.
- Stuurgroep Valorisatieprogramma Delta-technologie en Water (VPdelta).
- Stichting Onderwijs Civiel Ingenieur voor Bedrijfsleven en Overheid.
- International Community Platform (ICP).
- Klankbord-groep-Horizon 2020 Bioeconomy.
- Klankbord-groep-Horizon 2020 People.
- Acting member European Innovation Platform Water.
- UNESCO focal point gender.

Guy Albers
Professor of Capacity Building
- Member of the organizing committee of the 5th Delft Symposium on Water Sector Capacity Development.
- Guest Editor of Water Policy, Special Issue on Leadership in Knowledge and Capacity Development (2013) 15(Suppl.2).

Han Lügtening
Professor of Ports and Waterways
- Member of the Dutch Committee of EIA.
- Member of the International Organisation on Waterborne Transport (PIANC).
- Member of the Board of the Dutch Section of PIANC.
- Member of the Board of Sohar Industrial Port Complex, Oman.
- Visiting Professor at the University of Stellenbosch, South Africa.
- Visiting Professor at Wuhan University of Technology, Wuhan, China.

Hans van der Kwast
Lecturer in Ecological Modelling
- Member of Koninklijk Nederlands Aardrijkskundig Genootschap (KNAG, Royal Dutch Geographical Society).
- Member of Vakvereniging Fysische Geografie (VVFG).
- Member of OSGeo.nl.
- Chair of scientific committee of the Open Water Symposium.
- Member of scientific Committee GMES and Africa Long Term Management of Natural Resources Workshop, Sharm el-Sheikh, Egypt.

Hendrik Cloutling
Lecturer in Environmental Planning and Management
- Member of the German Association for Environmental Impact Assessment.

Leonardo Alfonso
Lecturer in Hydroinformatics
- Member of the European Geosciences Union (EGU).
- Member of Latinauq (Latin-American network of Water Researchers).
- Member of LaRedC (Colombian Network of Qualified professionals), leader of the Water Network Group.

Ioana Popescu
Associate Professor of Hydroinformatics
- Member of IAH (International Association of Hydro-Environment).
- Member of EGU (European Geosciences Union).
- Member of RWRA (Romanian Water Association).
- Chair of the Education and Professional Development Section of IAH (2009-2014).
- Technical Committee Member of 10th Hydroinformatics Conference, 2012, Hamburg, Germany.
- Technical Committee Member of the IAH 2013 Congress, Chengdu, China.
- Scientific Committee Member of the Conference WATER 2012, Constanta, Romania.
- Scientific Committee Member of the Conference Ecolimpulse 2012, Timisoara, Romania.
- Organiser of Theme E. Education in Hydraulic Engineering, at IAH Congress 2009, Vancouver.
- Organiser of the Special workshop on Young professionals at IAH Congress 2011, Brisbane.
- Organiser of the Special workshop on Young professionals at IAH Congress 2013, Chengdu.
- Co-organiser of the Special workshop on Decision Support Systems, at BALWOIS
Jules van der Loo
Professor of Environmental Engineering
- Member of the editorial board of Environmental Science and Policy (IF 2.978)
- Member of International Advisory Committee IWA Journal of Water, Sanitation and Hygiene for Development (since 2011).
- Support development and establishment of Delft Urban Water.

Juliette Terlaak
Manager Human Resources
- Member of the International Community Platform (ICP).
- Member of Coordinationgroep Universitaire Rechtspostille (CUR).
- Member of Economische Agenda Delft (EAD) Expat Project Team.

Ken Irvine
Professor of Aquatic Ecosystems
- Member of Editorial Board of Aquatic Conservation: Marine and Freshwater Sciences.
- Volume Editor, Wetlands Encyclopedia (Springer).
- Guest Editor Special Issue in papyrus wetlands for Wetland Ecology and Management.
- Advice to River Basin Shannon to Dublin transfer scheme, Ireland.
- Advice to the Sustainable Water Network (SWAN) on changes to the EU Common Agricultural Policy.

Krishna Prasad
Senior Lecturer in Land and Water Development
- Member of International Network for Participatory Irrigation Management - Nepal (INPIM).
- Member of Nepal Engineers’ Association.
- Member of Nepal Engineering Council, Nepal.
- Member of Academic Development Committee, Open University Nepal.

László Hayde
Senior Lecturer in Irrigation Engineering
- Vice President Honorary, International Commission on Irrigation and Drainage (ICID).
- Chairman of the European Regional Working Group of ICID.
- Member of the Working Group on History of Irrigation, Drainage and Flood Control of ICID.
- Member of the International Water History Association (IWA).
- Member of the Deutsche Wassergeologie Gesellschaft (DWhG).

Lucía Brandimarte
Senior Lecturer in Hydraulic Engineering & River Basin Development
- Member of the IAHR.
- Member of the IAH.
- Member of EGU.

- Convened and chaired session at EGU General Assembly.

Maarten Blokland
Associate Professor; Water Services Management
- Member GWOPA Steering Committee (elected to represent the Alliance Partners).
- GWOPA = Global Water Operators’ Partnership Alliance.

Martha Siefel
Associate Professor of Environmental Biotechnology
- Member International Association of Solid Waste.

Maria Kennedy
Professor of Water Treatment Technology
- Member of the Editorial board of Desalination and Water treatment.
- Member of the editorial board of Desalination.
- Member of the editorial board of Applied Water Science.
- Member of the organization/scientific committee for three international conferences.
- Member of the Board of Directors of the European Desalination Society (EDS).
- Member of the Science and Technology Board of the EU-Joint Programming Initiative (JPI) on Water.
- Member of the USAID Desalination Innovation Committee (2013/2014).
- Member of the Aquatech Technology Innovation Committee at Aquatech Amsterdam (2011 - 2015).
- Member of International Desalination Association (IDA).
- member of International Water Association (IWA)

Mariska Ronteltap
Senior Lecturer in Sanitary Engineering
- Secretary of the IWA Specialist Group on Resource Oriented Sanitation.
- Representative in the Dutch Nutrient Platform meetings.

Marloes Mul
Senior Lecturer in Water Resources Management
- Guest editor of the Journal of Physics and Chemistry of the Earth.
- Member of the curriculum review and quality control committee of the WaterNet Trust.
- Member of the curriculum finance committee of the WaterNet Trust.

Meine Pieter van Dijk
Professor of Water Services Management
- Associate member National Advisory Council for the Environment & Infrastructure.
- member of the Advisory Committee of the Small & medium enterprise Impact Fund in Arusha, Tanzania for three years till 2016.
- Member of the research school CERES (since 1994).
- Member of the research school SENSE (since 2007).
- Member of the Academic Advisory Board Postgraduate program on Env. & Urban studies Semarang, Indonesia.
- Member of the board of Academisch China Overleg (ACO).
- Member of the board of CEPT Master Programme at University Ahmedabad, India.
- Member of the Board of the Foundation for the Institute for Development Planning,
- Member of Netherland Association of Economists (since 1980).
- Member of Dutch Association of Compliance Officers (since 2002).
- Member of Editorial board of the “International Journal of CSR and Sustainability” and The journal of Pro-poor growth, an international perspective (an open access journal).
- Member Advisory council NWO Innovate governance models in drinking water supply and waste water treatment (KUB).
- Member Think tank NCICD project in Jakarta Indonesia.
- Regional editor of the International Journal of Water (since 2007).
- Reviewed journals including the Journal for Civil Engineering, Small Business Economics, etc.
- Guest Professor Environmental Management Institute in Qinhungdiao, China (since 2011).
- Curatorium Dutch Chapter Society for International Development Board (since 1983).
- Visiting professor at the Beijing university of Civil engineering and architecture, appointed in 2014.

Micha Werner

Associate Professor of Hydraulic Engineering
- Member of EGU & AGU.
- Member of the WMO External Panel of Experts (OPACHE) on forecasting.
- Member of Editorial board of the Hydrology and Earth System Science Journal.
- Served on editorial panel of ICE Journal of Water Management.
- Convened and chaired session at EGU General Assembly.
- Member of Scientific committee of Annual Waternet Symposium.
- Member of the thematic advisory group on the Joint R&D programme of the Environment Agency & DEFRA, UK.

Michael McClain

Professor of Ecophysiology
- Served on the editorial board of the journal Ecophysiolog and Hydrobiolgy.
- Served on the steering committee of the Freshwater Program of Diversitas.
- Served on the steering committee of the Global Environmental Flows Network.

Mick van der Wegen

Senior Lecturer in Hydraulic Engineering
- Member AGU.
- Member of the Centrum voor Kustonderzoek (NCK).

Miroslav Marence

Associate Professor of Storage and Hydropower
- Member of Editorial Board of the international journal ICE-Water Management.
- Member of International Society of Rock Mechanics.
- Member of Croatian Geotechnical Society.
- Member of Hydropower Sustainability Assessment Protocol Chamber.
- Member of Editorial Board of the Nile Water Science & Engineering Journal.

Nemanja Trifunovic

Associate Professor of Water Supply Engineering
- Member of the International Water Association (IWA), American Waterworks Association (AWWA), Serbian Association for Water Technology and Sanitary Engineering.

Paolo Paron

Senior Lecturer in Hydraulic Engineering and River Basin Development:
- Editor and contributor of a book on “Geomorphological mapping methods and applications” for Elsevier.
- Editor of two Atlases of Somalia for the UN Food and Agriculture Organization, and a digital Atlas of Afghanistan for the NGOs iMMAP.
- Initiator and leader of an international working group on Applied Geomorphological Mapping (www.appgema.net), under the auspices of the International Association of Geomorphologists (www.geomorph.org).
- Chair of thematic sessions at international conferences (regularly at IAG, EGU).

Peter Kelderman

Senior Lecturer in Environmental Chemistry
- Member of IWA Specialist Group on Watershed and River Basin Management.
- Member of the Management Committee of IWA Specialist Group on Watershed and River Basin Management.
- Member Scientific Committee of four IWA Conferences of the Specialist Group on Watershed and River Basin Management.

Peter van der Steen

Senior Lecturer in Environmental Engineering
- Member of International Advisory Board of SANIPATH project, Emory University, Atlanta, USA.

Pieter van der Zaag

Professor of Integrated Water Resources Management
- Chairperson Netherlands National Committee IHP-HWRP.
- Member of the Scientific Programme Committee of the Stockholm World Water Week.
- Associate Editor of the international journal Water Policy.
- Member of the Netherlands Organisation for Scientific Research NWO-WOTRO Steering Committee on Conflict and Cooperation over Natural Resource in Developing Countries (CoCooN).
- Member research school SENSE (Socio-economics and natural sciences of the environment).
- Scientific Advisor of the International Foundation for Science (IFS).
- Member of the scientific advisory commission of the SOW-VU Centre for World Food Studies – Vrije Universiteit Amsterdam.
- Member of the Editorial Board of the international journal Hydrology and Earth System Sciences.
- Member of the Governing Board of WaterNet in Southern Africa.

Raquel dos Santos - de Quaij

Researcher/Lecturer in Water Management
- Member of the IWA (International Water Association) specialist group on Sanitation & Water in Developing Countries.
- Member of the IWA specialist group on Benchmarking and Performance Assessment.
- Member of the IWA specialist group on Watershed and River Basin Management.
- Representative in the Brazilian-Dutch Dialogue on Urban Water Management coordinated by NWP (Netherlands Water Partnership).

Raymond Venneker

Senior Lecturer in Hydrology
- Member of the IAHS Working Group on Education in the Hydrological Sciences.

Robert de Bruin

Manager Finance
- Member of Dutch association of Financials for Financials (FFF).

Rosh Ranasinghe

Professor of Climate Change Impacts and Coastal Risk
- Expert advisor on the development of Sea level rise scenarios for Tamil Nadu, India – Asian Development Bank, Manila, Philippines.
- Expert advisor (coasts) on the development of the Thematic Research programme on Climate change – National Science Foundation, Sri Lanka.
- Co-chair of steering committee on European research council project NEMO: (since 2011).
- Member of National Committee of Coastal and Ocean Engineering Australia.
- Appointed visiting Professor at The Australian National University, Canberra, Australia.

Saroj Sharma

Associate Professor of Water Supply Engineering
- Editor of the Journal of Water Supply: Research and Technology - IWQ (IWA journal).
- Member, International Water Association (IWA).

Shreeshar Maskey

Senior Lecturer in Hydrology
- Member of the Scientific Committee of the 8th International Conference of EWRRA on Water Resources Management in an Interdisciplinary and Changing Context (26-29 June 2013, Porto, Portugal).
- Member of European Geosciences Union (EGU).
- Member of International Association of Hydrological Sciences (IAHS).
- Guest Editor, Hydrology and Earth System Sciences, Special Issue on Drought Forecasting and Warning.
- Member of the Editorial Board of Nile Basin Water Science and Engineering Journal.
- Member of the Editorial Board of Frontiers in Hydroscopere.

Stefan Uhlenbrook
Vice Rector Academic and Student Affairs
- Member of the editorial board Hydrology and Earth System Sciences (since 2004).
- Member of the editorial board Hydrological Sciences Journal (since 2006).
- Member of the editorial board Hydrologie und Wasserbewirtschaftung (Hydrology and Water Management, in German (since 2008).
- Alternate Governor World Water Council.
- Member of center-commissioned review team of the IWI (CGIAR) research programme.
- Chair of the Bousinesq Center for Hydrology, annual meeting at Royal Netherlands Academy of Sciences, Amsterdam, The Netherlands.
- Task force member of the European Innovation Platform on Water, Brussels, Belgium.
- Panel member of review committee of Swedish Research Council-SIDA, Stockholm, Sweden.

Thom Bogaard
Assistant Professor of Hillslope and Land Degradation Hydrology
- Guest editor of a HP special issue (published 2012).
- Guest editor of Engineering Geology special issue (published 2012).
- Guest editor of HESS special issue started in 2012 (expected publication 2013).
- Treasurer of the Treub Maatschappij (Organization for supporting research in the tropical regions).
- Member of the board of the CERG (Centre European des Risques Geomorphologique - Specialized Centre of Council of Europe EUR-OPA Major Hazard Agreement).

Tibor Stigter
Senior Lecturer in Hydrogeology and Groundwater Resources
- Member of International Association of Hydrogeologists (IAH).
- Member of Commission on Groundwater and Climate Change of IAH.
- Member of Commission for English-Portuguese translation of abstracts of papers published in Hydrogeology Journal.
- Guest Editor of Regional Environmental Change Special Issue.
- Member of the scientific committee for the workshop “Governar a água: uma parceria Estado – Sociedade” held in Lisbon.

Tineke Hooijmans
Associate Professor of Sanitary Engineering
- Representative in the Dutch Nutrient Platform meetings.

Uta Wehn de Montalvo
Senior Lecturer / Researcher in Capacity Development and Innovation
- Member of the Programme Committee IWA (International Water Association) Development Congress & Exhibition 2013, Kenya.
- Member of the Programme Committee ICT4S (ICT for Sustainability) Conference 2013, Switzerland and 2014, Sweden.
- Member of the IWA reference group for the Human Resource capacity gaps study.
- Member of the International Advisory Committee for the ‘Water Resources: Management and Crisis’ conference, September 2014, University of Jammu, Kashmir, India.
- Guest Editor of Water Policy, Special Issue on Leadership in Knowledge and Capacity Development (2013) 15(Suppl.2).
- Member of the panel on SDGs: The role of Water Operators in the Post2015 Sustainable Development Agenda, 2nd Global WOPs Congress and GWOPA General Assembly, 27-29 November 2013 Barcelona.
- Member of the panel, Opening Ceremony Panel Discussion, IWA Development Congress, 14-17 October 2013, Nairobi.
- Organizer of the Expert Meeting on Water-related SDGs and Capacity Development, 6-7 February 2013, UNESCO-IHE, Delft.

Wim Glas
Application Manager
- Member of the Association for Learning Technology (ALT).
- Member of the European Society for Engineering Education (SEFI).
- Member of the Nederlandstalige Moodle Vureniging (Ned-Moove).

Yasir A. Mohamed
Associate Professor of Water Resources Management
- Guest editor of the Spatial Hydrology journal.
- Chair of the Sudan committee on the assessment of the impacts of the Ethiopian Grand Renassiance dam on Nile.
- Chair of the international conference on “New Nile perspectives”, Khartoum, 2013
- Member of the regional steering committee of the Joint Multi-Project Purpose of the Eastern Nile Technical Regional Office, ENTRO, Addis Ababa Ethiopia.

Zoran Vojinovic
Associate Professor of Urban Water Systems
- Associate Editor of the Journal of Hydroinformatics.
## Projects

### Tailor made training

<table>
<thead>
<tr>
<th>Country</th>
<th>Contract title</th>
<th>Funding</th>
<th>Partners</th>
<th>Start</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armenia</td>
<td>ToT and Curricula Dev on IWRM</td>
<td>NUFFIC - NFP</td>
<td></td>
<td>27/Jan/14</td>
<td>30/Nov/14</td>
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<tr>
<td>Bangladesh</td>
<td>Training Program Government of Bangladesh on River Systems Management</td>
<td>NUFFIC - NFP</td>
<td></td>
<td>01/Jun/12</td>
<td>04/Mar/13</td>
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<tr>
<td>Bhutan</td>
<td>Tailor-Made Training BTN-104 Mike 11</td>
<td>NUFFIC - NFP</td>
<td></td>
<td>20/Feb/13</td>
<td>05/Jul/13</td>
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<tr>
<td>Brazil</td>
<td>Workshop on flood forecasting in Brasilia</td>
<td>Dutch Ministry of Infrastructure and Environment</td>
<td>Ministry of I&amp;M</td>
<td>01/Jun/12</td>
<td>18/Nov/13</td>
</tr>
<tr>
<td>China</td>
<td>Beijing municipality 12 days groundwater short course</td>
<td>W&amp;W Holding B.V. - WmE</td>
<td></td>
<td>13/Jan/13</td>
<td>26/Jan/13</td>
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<tr>
<td></td>
<td>Tailor-Made-Training Huai River Commission Staff</td>
<td>Dutch Ministry of Infrastructure and Environment</td>
<td></td>
<td>25/Jan/13</td>
<td>31/Jan/13</td>
</tr>
<tr>
<td>Egypt</td>
<td>Upgrade Hydraulic Engineering Course RTC Cairo</td>
<td>NUFFIC - NFP</td>
<td></td>
<td>04/Jul/13</td>
<td>30/Dec/13</td>
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<tr>
<td>Georgia</td>
<td>Environmental Protection in the light of Global Warming</td>
<td>NUFFIC - NFP</td>
<td></td>
<td>01/Feb/14</td>
<td>15/Dec/14</td>
</tr>
<tr>
<td>Honduras</td>
<td>Building Capacity in the Sanitation Sector in Honduras</td>
<td>NUFFIC - NFP</td>
<td></td>
<td>28/Feb/13</td>
<td>31/Oct/13</td>
</tr>
<tr>
<td>India</td>
<td>Tailor Made Training Course on River Basin Planning</td>
<td>International Bank for Reconstruction and Development</td>
<td></td>
<td>11/Nov/13</td>
<td>08/Jan/15</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Integrated Flood Management II Module Development</td>
<td>DGIS - UNESCO-IHE Programmatic Cooperation</td>
<td>Municipality of DKI Jakarta, Palembang and Sriwijaya University</td>
<td>01/Oct/13</td>
<td>01/Apr/13</td>
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<tr>
<td></td>
<td>SC on Urban and Rural Polder Development Indonesia</td>
<td>Dutch Ministry of Infrastructure and Environment</td>
<td></td>
<td>05/Oct/13</td>
<td>05/Oct/15</td>
</tr>
<tr>
<td>Iraq</td>
<td>Tailor-Made Training training software</td>
<td>UNDP</td>
<td></td>
<td>01/Mar/12</td>
<td>15/Jan/14</td>
</tr>
<tr>
<td>Myanmar</td>
<td>Delta Planning training workshop 2013 for alumni Asian Deltas in Myanmar / Burma</td>
<td>Dutch Ministry of Infrastructure and Environment</td>
<td>WU, Delta Alliance</td>
<td>20/Jan/13</td>
<td>01/Feb/14</td>
</tr>
<tr>
<td>Nepal</td>
<td>Building Flood Disaster Resilience of Cities</td>
<td>Stichting Nuffic for Water Management and Climate Change, Tsinghua University, National Sun Yat-sen University and Kathmandu University</td>
<td></td>
<td>27/Jan/12</td>
<td>31/Jan/13</td>
</tr>
<tr>
<td>Nepal</td>
<td>Training on Improving the Functionality of Water Supply and Sanitation Facilities (NUFFIC/87/NPL)</td>
<td>NUFFIC - NFP</td>
<td></td>
<td>01/Jun/12</td>
<td>30/Sep/13</td>
</tr>
<tr>
<td>Nepal</td>
<td>Zero Waste</td>
<td>NUFFIC - NFP</td>
<td>Encludesolutions Zeist (part of Triodos)</td>
<td>22/Oct/13</td>
<td>31/Mar/14</td>
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<tr>
<td>Netherlands</td>
<td>TUT Water and Environmental Management Course</td>
<td>University of Oulu</td>
<td></td>
<td>15/Mar/13</td>
<td>14/Nov/13</td>
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<tr>
<td></td>
<td>3rd international conference on research frontier in chalcogen cycle s&amp;T</td>
<td>Internal Funding</td>
<td></td>
<td>15/May/13</td>
<td>30/May/13</td>
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<td>Country</td>
<td>Contract title</td>
<td>Funding</td>
<td>Partners</td>
<td>Start</td>
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</tr>
<tr>
<td>Netherlands</td>
<td>Development of the Solid Waste Management course</td>
<td>DGIS - UNESCO-IHE Programmatic Cooperation</td>
<td></td>
<td>01/Jun/13</td>
<td>31/May/16</td>
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<tr>
<td></td>
<td></td>
<td>KULTURisk Summer School- Flood Risk Reduction: perception, communication, governance</td>
<td>European Commission - FP7</td>
<td>01/Sep/13</td>
<td>30/Sep/13</td>
</tr>
<tr>
<td>Rwanda</td>
<td>Recent developments in Water quality monitoring: optimization and modernization of surface water quality monitoring programmes</td>
<td>Stichting Nuffic</td>
<td>NUR</td>
<td>01/Jun/12</td>
<td>20/Dec/13</td>
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<tr>
<td></td>
<td>Nuffic Refresher Course - WASH Service Delivery in Conflict Affected and Fragile States</td>
<td>NUFFIC - NFP</td>
<td></td>
<td>01/Jan/13</td>
<td>31/Dec/13</td>
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<tr>
<td>Sudan</td>
<td>Refresher Course 2013-Sudan</td>
<td>NUFFIC - NFP</td>
<td>HRS Sudan</td>
<td>26/Mar/13</td>
<td>27/Dec/13</td>
</tr>
<tr>
<td>Suriname</td>
<td>Drinking water monitoring and surveillance training</td>
<td>Inter-American Development Bank</td>
<td></td>
<td>21/Apr/14</td>
<td>21/Oct/14</td>
</tr>
<tr>
<td>Uganda</td>
<td>Refresher Course Kampala</td>
<td>NUFFIC - NFP</td>
<td>Makerere University</td>
<td>08/Mar/13</td>
<td>31/Dec/13</td>
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<tr>
<td>Various</td>
<td>Erasmus Mundus Masters Course in Ecohydrology</td>
<td>European Commission</td>
<td>Univ. Lodz (Poland), Univ. Kiel (Germany), Univ. La Plata (Argentina)</td>
<td>01/Sep/10</td>
<td>31/Aug/17</td>
</tr>
<tr>
<td>Countries</td>
<td></td>
<td>Asian Development Bank</td>
<td></td>
<td>01/Nov/12</td>
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<tr>
<td></td>
<td></td>
<td>LDK Consultants Engineers and Planners S.A.</td>
<td></td>
<td>17/May/13</td>
<td>31/Jul/13</td>
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<tr>
<td></td>
<td>Cap Development Program for Water and Environment Prosecutors and Investigators</td>
<td>Internal Funding</td>
<td>IWC, Nyenrode</td>
<td>20/May/13</td>
<td>31/May/14</td>
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</table>
## Research & development

<table>
<thead>
<tr>
<th>Country</th>
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<th>End</th>
<th>Funding Partners</th>
<th>Partners</th>
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<tbody>
<tr>
<td>Argentina</td>
<td>Hydrogeochemistry characterization of the presence of arsenic of the Phreatic aquifer of Mataderos area- Buenos Aires City</td>
<td>11-Feb-13</td>
<td>1-Jul-14</td>
<td>DGIS - UNESCO-IHE Programmatic Cooperation</td>
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<td>Australia</td>
<td>Stakeholder Risk Perception Framework</td>
<td>15-Feb-10</td>
<td>31-Dec-13</td>
<td>Monash University</td>
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<td>Climate Change Adaptation Research Grants Program</td>
<td>1-May-11</td>
<td>31-May-15</td>
<td>National Government</td>
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<td>Storm Surge Forecast Model</td>
<td>1-Apr-13</td>
<td>31-Dec-17</td>
<td>Australian Research Council University of Queensland (lead), University of New South Wales</td>
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<td>Socio Technical Flood Resilience in Water Sensitive Cities</td>
<td>1-Jul-13</td>
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<td>National Government</td>
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<td>Austria</td>
<td>Coupled stress-seepage numerical design of concrete lined pressure tunnels</td>
<td>15-Nov-10</td>
<td>15-Nov-14</td>
<td>Verbund</td>
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<td>Bangladesh</td>
<td>Managing Saltwater Intrusion impacts in Bangladesh, An Integrated approach based on salinity monitoring, modeling and stakeholder participation to improve water safety plans</td>
<td>1-May-13</td>
<td>30-Jul-14</td>
<td>IRC International Water and Sanitation Centre CEGIS</td>
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<td>Workshop for proposal: Understanding the dynamics of flood risk to enhance resilience in urbanizing deltas</td>
<td>1-Jul-13</td>
<td>10-Sep-13</td>
<td>Nederlandse Organisatie voor Wetenschappenlijk Onderzoek (NWO)</td>
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<td>Integrating the dynamics of social and biophysical processes to support delta management</td>
<td>1-Sep-13</td>
<td>31-Dec-14</td>
<td>DGIS - UNESCO-IHE Programmatic Cooperation FHRCB, WUR, BUET</td>
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<td>Bonaire, Sint Eustatius and Saba</td>
<td>Environment and Health characterization</td>
<td>1-Aug-11</td>
<td>31-Jul-14</td>
<td>Dutch Ministry of Infrastructure and Environment</td>
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<td>Bonaire, Sint Eustatius and Saba</td>
<td>Solid Waste Bonaire 1</td>
<td>26-Oct-12</td>
<td>1-Sep-13</td>
<td>Dutch Ministry of Infrastructure and Environment TU Hamburg, Min of Infrastructure and Environment</td>
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<td>China</td>
<td>Sediment Alluvial Process in Wave-current Boundary Layer</td>
<td>1-Dec-11</td>
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<td>Nederlandse Organisatie voor Wetenschappenlijk Onderzoek (NWO)</td>
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<td>Yangtze River Water Quality Early Warning Monitoring</td>
<td>22-Sep-13</td>
<td>1-Oct-13</td>
<td>Dutch Ministry of Infrastructure and Environment</td>
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<td>Colombia</td>
<td>Operational Flood Forecasting Warning and Response for Multi Scale Flood Risks</td>
<td>1-Oct-09</td>
<td>31-Dec-13</td>
<td>UNESCO-IHE Partnership Research Fund</td>
<td>DPAE, Cinara, Univalte, Deltares, NOAA</td>
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<td>Cuba</td>
<td>Strengthening the Cuban Food Production and Aquaculture Sector.</td>
<td>1-Mar-12</td>
<td>31-Dec-15</td>
<td>European Commission - EuropeAid ACPA, IIIA, CPAM, Univ. Zagreb</td>
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<td>Adapting to CC and Mitigating Water Scarcity by Innovative UWM in Cuba</td>
<td>1-Sep-13</td>
<td>31-Dec-16</td>
<td>European Commission - EuropeAid CUJAE, INRH, IIIA</td>
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<td>Egypt</td>
<td>Management Info on Water Quality in the Nile Basin</td>
<td>1-Sep-04</td>
<td>31-Dec-13</td>
<td>PoWER</td>
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<td>Climate Change and Development Impacts on Nile Aquifer Salinization - Comparative Modeling Study</td>
<td>1-Oct-13</td>
<td>31-Dec-14</td>
<td>Dutch Ministry of Infrastructure and Environment</td>
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<td>Georgia</td>
<td>Integrated Natural Resources Management in Watersheds of Georgia</td>
<td>1-Dec-10</td>
<td>30-Sep-14</td>
<td>United States Agency for International Development (USAID)</td>
<td>Florida International University, Ministry of Environment, United Water Company of Georgia</td>
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<td>India</td>
<td>Enhancement of natural water systems and treatment methods for safe and sustainable water supply in India</td>
<td>10-Nov-11</td>
<td>30-Sep-14</td>
<td>European Commission - FP7</td>
<td>UJS, NIH, IITR, AU, AJD, KWB, BRGM, CEMDS, HTWD, CSIRO, IWMI.</td>
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<td>Mozambique</td>
<td>Drinking Water in Greater Maputo and in secondary towns, Mozambique</td>
<td>5-May-13</td>
<td>5-May-14</td>
<td>Dutch Ministry of Infrastructure and Environment</td>
<td>Eduardo Mondlane University</td>
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<td>Netherlands</td>
<td>Knowledge and Capacity Development, research under DUPC Policy Forum</td>
<td>1-Jan-08</td>
<td>31-Dec-13</td>
<td>DGIS - UNESCO-IHE Programmatic Cooperation</td>
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<td>Interne &amp; externe leerprocessen Ruimte voor de Rivier</td>
<td>1-Oct-10</td>
<td>31-Dec-13</td>
<td>National Government</td>
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<td>Climate Proof Cities</td>
<td>4-Nov-10</td>
<td>31-Dec-14</td>
<td>Kennis voor Klimaat</td>
<td>TUD, Deltas, WUR, KWR</td>
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<td>Adaptation strategies in outer dike areas in the hotspot region of Rotterdam</td>
<td>30-Oct-11</td>
<td>6-Jun-13</td>
<td>Gemeente Rotterdam, Kennis voor Klimaat</td>
<td>UU, Arcadis, Deltas, VU, Cluster Stadstraktorwijking, Doepels Strijkers Architects</td>
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<td>Building UNESCO-IHE Spatial Data Infrastructure</td>
<td>1-Mar-12</td>
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<td>DGIS - UNESCO-IHE Programmatic Cooperation</td>
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<td>Long term Westerschelde Morphodynamics</td>
<td>23-Jul-12</td>
<td>14-Nov-13</td>
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<td>Coagulation strategies to control TEP fouling in RO systems</td>
<td>1-Oct-12</td>
<td>5-Dec-13</td>
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<td>Development and Application of the Morphodynamic Model for the Ems Estuary</td>
<td>1-Nov-12</td>
<td>1-Nov-13</td>
<td>Christian-Abrechts-University of Kiel</td>
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<td>Anticipatory Management as part of a regulatory package for water management</td>
<td>1-Mar-13</td>
<td>31-Mar-14</td>
<td>Hoogheemraadschap de Stichtse Rijnlanden</td>
<td>Hydrologic,</td>
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<td>Organization NCR Days 2013</td>
<td>1-Apr-13</td>
<td>30-Dec-13</td>
<td>Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO)</td>
<td>Netherlands Centre for River Studies partners</td>
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<td>Sulfate Reduction Dependant Anaerobic Methane Oxidation</td>
<td>31-May-13</td>
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<td>European Commission - FP7</td>
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<td>Zambezi-Tana Workshop</td>
<td>24-Jun-13</td>
<td>10-Sep-13</td>
<td>Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO)</td>
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<td>Experienced Water Postdoc Fellowship Programme</td>
<td>1-Jul-13</td>
<td>30-Sep-15</td>
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<td>Role of biofilm-matrix components in the extracellular reduction and recovery of chalcogens</td>
<td>1-Sep-13</td>
<td>30-Jun-15</td>
<td>European Commission - FP7</td>
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<td>Netherlands Antilles (N/A)</td>
<td>Bel Air Flood Modelling Study</td>
<td>20-Mar-12</td>
<td>1-Feb-13</td>
<td>National Government</td>
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<td>Serbia</td>
<td>Arsenic Removal from Drinking Water</td>
<td>1-Aug-10</td>
<td>31-Jul-13</td>
<td>NL EVD Internationale</td>
<td>TU Delft, Vitens, Haskoning, 2 Serbia Water Supply companies</td>
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<td>Uganda</td>
<td>Grey water management in slums in sub-saharan Africa</td>
<td>15-Jul-13</td>
<td>31-Dec-14</td>
<td>UNESCO-IHE Partnership Research Fund</td>
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<td>United States</td>
<td>Modeling hydrodynamics, sediments and ecology in San Francisco Bay</td>
<td>1-Oct-11</td>
<td>1-Oct-14</td>
<td>USGS Pasific Science Drive</td>
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<td>United States</td>
<td>SWAN Sustainable Water Action, Building research links between EU and US</td>
<td>1-Mar-12</td>
<td>29-Feb-16</td>
<td>European Commission - FP7</td>
<td>Centre National de Recherche Scientifique, Univ of Arizona, Univ of the West of England, Universidad de Sevilla, Bulgarian Acad of Sciences BAS-NIGG,</td>
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<td>Electrosynthesis of biofuels from gaseous carbon dioxide catalyzed by Microbes</td>
<td>1-Jun-12</td>
<td>1-May-15</td>
<td>European Commission - FP7</td>
<td>University of Massachusetts, Amherst, USA</td>
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<td></td>
<td>Modeling mud dynamics in South San Francisco Bay</td>
<td>1-Oct-13</td>
<td>31-Dec-15</td>
<td>USGS Pasific Science Drive</td>
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<td>Uzbekistan</td>
<td>Assessment of Applicability of an Equitable and Sustainable Financing Model</td>
<td>1-Oct-10</td>
<td>31-May-13</td>
<td>UNESCO-IHE Partnership Research Fund</td>
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<td>Various Countries</td>
<td>Development of Hydropower Converter for Very Low Head Differences</td>
<td>1-Apr-08</td>
<td>6-May-13</td>
<td>European Commission - FP7</td>
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<td>Rehabilitation technologies for degraded water systems presenting quantity and quality problems</td>
<td>15-Oct-08</td>
<td>30-Jun-13</td>
<td>European Commission - FP7</td>
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<td>Risk-Based Operational Water Management for the Incomati River Basin</td>
<td>1-Jan-09</td>
<td>31-Dec-13</td>
<td>UNESCO-IHE Partnership Research Fund</td>
<td>Mondlane University, KOBWA</td>
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<td>Gridded Management System on Environmental Sustainability and Vulnerability</td>
<td>1-Apr-09</td>
<td>31-Mar-13</td>
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<td>WMO, C3I, SWAT, EAWAG, JRC, IIID, UN-IIST, CERN, CRS4, Univ. of Geneva</td>
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<td>Zero chemical UF/RO system for Desalination</td>
<td>1-May-09</td>
<td>6-Jun-13</td>
<td>NL EVD Internationalal</td>
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<td>Permeable Reactive Barrier for Remediation of Acid Mine Drainage</td>
<td>1-Aug-09</td>
<td>20-Dec-13</td>
<td>UNESCO-IHE Partnership Research Fund</td>
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<td>Optimization of Water Allocation Between Off-Stream and In-Stream Demands</td>
<td>1-Aug-09</td>
<td>31-May-13</td>
<td>UNESCO-IHE Partnership Research Fund</td>
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<td>Natural Systems for Wastewater Treatment and Reuse</td>
<td>1-Sep-09</td>
<td>1-Sep-13</td>
<td>UNESCO-IHE Partnership Research Fund</td>
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<td>Adaptation to Global Change in Agricultural Practices (AGIoCAP)</td>
<td>21-Sep-09</td>
<td>30-Sep-13</td>
<td>UNESCO-IHE Partnership Research Fund</td>
<td>Asian Institute of Technology, Thailand; Ministry of Irrigation Nepal, Nepal</td>
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<td>Salt and Brackish Water as Second Quality Water for Urban Environment</td>
<td>1-Oct-09</td>
<td>13-Dec-13</td>
<td>Internal Research Fund</td>
<td>Birzeit Univ., KWR, Hong Kong</td>
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<td>Environmental Flows for People and Ecosystems in the Mara River Basin (MaraFlows)</td>
<td>1-Jan-10</td>
<td>31-Dec-14</td>
<td>UNESCO-IHE Partnership Research Fund</td>
<td>Egerton University, Kenya; University of Dar es Salaam, Tanzania; Florida International University, USA; WWF Kenya</td>
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<td>Impact of Untreated Wastewater on natural Water Bodies: Risk Assessment</td>
<td>1-May-10</td>
<td>30-Apr-14</td>
<td>UNESCO-IHE Partnership Research Fund</td>
<td>An-Najah University, Palestine; Birzeit University, Palestine ; Palestinian Water Authority</td>
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<td>Constructed Wetlands with Tropical Plants for the Treatment of Landfill Leachat</td>
<td>1-Oct-10</td>
<td>6-Dec-13</td>
<td>UNESCO-IHE Partnership Research Fund</td>
<td>University of Sao Paulo</td>
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<td>Merging Hydrologic Models and EO Data for Reliable Information on Water</td>
<td>1-Jan-11</td>
<td>31-Dec-13</td>
<td>European Commission - FP7</td>
<td>AUT, Hidromod, IST, CPTEC, JRC, Skysoft, UEM</td>
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<td>Knowledge-based approach to develop a prevention culture of water Risk</td>
<td>1-Jan-11</td>
<td>31-Dec-13</td>
<td>European Commission - FP7</td>
<td>UniBs, ECMWF, UniLj, WSL, CORILA, KCL, JRC, AAWA, UniBris, Willis</td>
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<td>Adaptive and integrative tools and strategies on natural resources management.</td>
<td>1-Mar-11</td>
<td>28-Feb-14</td>
<td>European Commission - FP7</td>
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<td>Advanced Biological Waste-to-Energy Technologies</td>
<td>1-Jan-12</td>
<td>31-Dec-15</td>
<td>European Commission - FP7</td>
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<td>Communities &amp; institutions for flood resilience in Bangladeshi &amp; Dutch Deltas</td>
<td>1-Mar-12</td>
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<td>Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO)</td>
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<td>Community Based Earth Observatory of Water</td>
<td>1-Oct-12</td>
<td>4-Jun-16</td>
<td>European Commission - FP7</td>
<td>Sensor scope, disdrometics, advancisys, AAWA, EPFL, Hydroresearch Delft, Middlesex Univ. Sheffield Civil Protection</td>
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<td>ICT Solutions for Efficient Water Resources Management</td>
<td>1-Oct-12</td>
<td>30-Sep-15</td>
<td>European Commission - FP7</td>
<td>SIEMENS, TOSHIBA, CMR, ITALDATA, METROPOLITANA MILANESE, AQUATIM, ICCS, K&amp;S</td>
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<td>Post-Graduate Research Programme on Adaptation to Climate Change in the Mekong - Phase 2</td>
<td>1-Nov-12</td>
<td>31-Dec-14</td>
<td>DGIS - UNESCO-IHE Programmatic Cooperation</td>
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<td>Evaluation of Two Technologies for Heavy Metals Removal under Tropical Conditions</td>
<td>1-Feb-13</td>
<td>1-Jun-14</td>
<td>UNESCO-IHE Partnership Research Fund</td>
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<td>DUPC Irrigation and Wetlands</td>
<td>5-Feb-13</td>
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<td>UNESCO-IHE Partnership Research Fund</td>
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<td>Water Metabolism approach for the Sugarcane Ethanol context: comparative analysis for São Paulo, Brazil and Valle del Cauca, Colombia</td>
<td>18-Mar-13</td>
<td>1-Oct-14</td>
<td>DGIS - UNESCO-IHE Programmatic Cooperation</td>
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<td>DANube macroregion: Capacity building and Excellence in River Systems</td>
<td>1-Jun-13</td>
<td>31-May-15</td>
<td>European Commission - FP7</td>
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<td>Risk based operational management for the Incomati River Basin Groundwater assessment</td>
<td>1-Jul-13</td>
<td>31-Dec-14</td>
<td>UNESCO-IHE Partnership Research Fund</td>
<td>KOBWA, UKZN, EMU</td>
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<td>NWO UDW Stakeholder workshop to develop full proposal</td>
<td>3-Jul-13</td>
<td>1-Feb-14</td>
<td>Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO)</td>
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<td>Uncovering Hidden Dynamics of Water Service Provision in Slum Environments</td>
<td>22-Jul-13</td>
<td>31-Dec-14</td>
<td>DGIS - UNESCO-IHE Programmatic Cooperation</td>
<td>University of Amsterdam, University Eduardo Mondlane (Mozambique), Chancellor College (Malawi).</td>
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<td>Environmental Flows for People and Ecosystems in the Mara River Basin</td>
<td>25-Jul-13</td>
<td>31-Dec-14</td>
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<td>Spate irrigation for rural economic growth and poverty alleviation II</td>
<td>25-Jul-13</td>
<td>31-Dec-14</td>
<td>UNESCO-IHE Partnership Research Fund</td>
<td>Meta Meta, Mekel, HRC</td>
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<td>International Water Quality Guidelines for Ecosystems</td>
<td>1-Aug-13</td>
<td>30-Jun-14</td>
<td>United Nations University (UNU)</td>
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<td>Benchmarking for Pro-poor Water Services Provision II</td>
<td>1-Sep-13</td>
<td>31-Dec-14</td>
<td>DGIS - UNESCO-IHE Programmatic Cooperation</td>
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<td>Transboundary data and rainfall prediction</td>
<td>1-Sep-13</td>
<td>31-Dec-14</td>
<td>DGIS - UNESCO-IHE Programmatic Cooperation</td>
<td>IWMI, CEGIS, IWFM, IITG, ECMWF</td>
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<td>Various Countries</td>
<td>Resilience-Increasing Strategies for Coasts</td>
<td>1-Nov-13</td>
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<td>European Commission - FP7</td>
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<td>Virgin Islands, British</td>
<td>Road Town Flood Risk Assessment - BVI</td>
<td>21-Mar-12</td>
<td>31-Jan-13</td>
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<td>Zimbabwe</td>
<td>Nature and Outcomes of Decentralisation of the Urban Domestic Water Sector in Zimbabwe and South Africa</td>
<td>1-Jan-13</td>
<td>31-Jul-14</td>
<td>UNESCO-IHE Partnership Research Fund</td>
<td>University of Zimbabwe, University of the Western Cape</td>
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### Institutional strengthening

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<td>Wageningen University</td>
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<td>Capacity Development of HEIs in Small-scale Irrigation (and Micro Irrigation) at Arba Minch university</td>
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<td>Enhancing Institutional Capacity in Water and Wastewater Treatment</td>
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UNESCO-IHE Annual Report 2013 89
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<td>Assessment of Climate Change Driven Variations in the Wave Climate along the Coast of Vietnam</td>
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### Advisory services

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<td>Food security Impact evaluation - Case study Bangladesh</td>
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<td>Advisory Services to the PMU of Jakarta Coastal Defence Strategy</td>
<td>Ministry of Foreign Affairs</td>
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<td>Testing the use of artificial DNA as a tracer for determining travel times in karst system in the Upper Bussento catchment, Cilento&amp;Diano Geopark (Italy)</td>
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<td>Sri Lanka</td>
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<td>Thailand</td>
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<td><strong>United States</strong></td>
<td>Workshop on Multi-layer Flood Risk Management comparing NL-USA approaches</td>
<td>Dutch Ministry of Infrastructure and Environment</td>
<td>Univ. Berkley</td>
<td>01/Mar/13</td>
<td>31/Dec/13</td>
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<td><strong>Various Countries</strong></td>
<td>Flood Modelling Study of the Joint Stormwater Catchment (Belle-Plaine)</td>
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<td>Capacity development for Performance Improvement of Water Utilities</td>
<td>European Commission - EuropeAid</td>
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<td>Satellite Based Water Monitoring and Flow Forecasting System in the Niger Basin</td>
<td>RVO</td>
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<td>01/May/12</td>
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<td>Supporting the National Water Legislation in South Asia and South East Asia</td>
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<td>An unstructured wave propagation model</td>
<td>SPC - Secretariat of the Pacific Community</td>
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<td>4/Oct/13</td>
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<td><strong>Viet Nam</strong></td>
<td>Modeling the Mekong Delta at three different scales</td>
<td>Office of Naval Research</td>
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<td>Knowledge Inventory / Problem analysis Red River – Hanoi</td>
<td>Dutch Ministry of Infrastructure and Environment</td>
<td>Deltares</td>
<td>18/Sept/13</td>
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<td><strong>Yemen</strong></td>
<td>Yemen Remote Sensing Scoping and Formulation mission</td>
<td>RVO - PVW-III</td>
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<td>Water Conflict Analysis Yemen</td>
<td>The Hague Institute for Global Justice</td>
<td></td>
<td>1/Nov/13</td>
<td>31/Mar/14</td>
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</tbody>
</table>
### Partners

#### Cooperation agreement partners
- Beijing Normal University, China
- Birzeit University / Palestinian Water Authority
- China University of Geosciences, China
- Institute Superior Politécnico José A. Echeveria
- Danish Hydraulic Institute, Denmark
- Delft University of Technology, The Netherlands
- Egerton University, Kenya
- Eastern Nile Technical Regional Office
- Global Development Learning Network
- Hoogheemraadschap De Stichtse Rijnlanden, The Netherlands
- Hydro and Agro Informatics Institute
- Hong Kong University of Science and Technology
- International Centre for Water Hazard and Risk Management
- IDEAM, Delft University and UNESCO-IHE
- International Hydropower Association
- Water Research Institute of Mozambique and Deltas
- Netherlands Ministry of Infrastructure and Environment, The Netherlands
- Iran Ministry of Energy / Regional Centre on Urban Water Management, Iran
- Ministry of Water Resources, Iraq
- The International Institute of Social Sciences, The Netherlands
- King’s College London, University of London, United Kingdom
- K-Water, Korea
- Maastricht School of Management
- Mekong River Commission
- Egyptian Ministry of Water Resources and Irrigation
- National University of Rwanda
- NBI and NBCBN
- Nebraska University
- National Water & Wastewater Engineering Company, Iran
- Organisation of American States
- The International Institute for Water and Sanitation
- Abbaspour (Power and Water) University of Technology, Iran
- Rand Water Academy
- Rotary International
- Sejong University, Korea
- The Ecuadorian National Water Secretariat, Ecuador
- Delft University of Technology
- Unie van Waterschappen
- University of Arizona
- University of Atacama, Chile
- Universidad Nacional Autónoma de México, Institute of Engineering
- Universidade Federal de Minas Gerais
- Universidad del Valle, Cali, Colombia
- University of Amsterdam
- University of Peace
- US Army Corps of Engineers
- Vietnam Maritime University
- Vitens Evides International
- Vrije Universiteit Amsterdam
- WaterNet Trust
- World Meteorological Organization
- World Wide Fund for Nature

#### Joint education & research partners
- Addis Ababa University, Institute of Environment and Water Development Studies (Addis Ababa, Ethiopia)
- Ain Shams University, Faculty of Engineering (Cairo, Egypt)
- Algarve University, Faro, Portugal
- An-Najah University (Nablus, Palestine)
- Asian Institute of Technology (Bangkok, Thailand)
- Birzeit University, Institute for Environment and Water Studies (Birzeit, Palestine)
- Egerton University (Njoro, Kenya)
- Exeter University, Exeter, UK
- Ghent University (Ghent, Belgium)
- Hanoi Water Resources University, Hanoi, Vietnam
- Haramaya University, Alemaya, Ethiopia
- HidroEX, Minas Gerais, Brazil
- Hohai University (Nanjing, China)
- Institute of Chemical Technology (ICTP), Prague, Czech Republic
- Kwame Nkrumah University of Science and Technology (Kumasi, Ghana)
- Makerere University, Institute for Environment and Natural Resources (Kampala, Uganda)
- National Water and Sewerage Corporation Uganda (Kampala, Uganda)
- Nile Basin Capacity Building Network (Cairo, Egypt)
- Palestinian Water Authority (Al-Bireh, Palestine)
- Polytechnic University of Catalonia (UPC), Barcelona, Spain
- TU Dresden, Dresden, Germany
- Universidad del Valle (Cali, Colombia)
- Universidad Nacional de la Plata, Buenos Aires, Argentina
- Universidade de Sao Paulo (Sao Paulo, Brazil)
- Universitas Sriwijaya (Palembang, Indonesia)
- University of Dar-es-Salaam (Dar-es-Salaam, Tanzania)
- University of Kiel, Kiel, Germany
- University of Kwazulu Natal, School of Bioresources Engineering and Environmental Hydrology (Pietermaritzburg, South Africa)
- University of Ljubljana, Slovenia
- University of Lodz, Lodz, Poland
- University of Natural Resources and Applied Life Sciences (BOKU), Vienna, Austria
- University of Nebraska-Lincoln, Lincoln, NE, USA
- Water Resources University Vietnam (Hanoi, Vietnam)
- WaterNet Trust Southern Africa
- Sejong University, Korea
- The Ecuadorian National Water Secretariat, Ecuador
- Delft University of Technology
- Unie van Waterschappen
- University of Arizona
- University of Atacama, Chile
- Universidad Nacional Autónoma de México, Institute of Engineering
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- University of Amsterdam
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- US Army Corps of Engineers
- Vietnam Maritime University
- Vitens Evides International
- Vrije Universiteit Amsterdam
- WaterNet Trust
Annex 11
UNESCO-IHE & Netherlands Alumni Associations

UNESCO-IHE alumni perform a vital role as 'ambassadors' to the world. The establishment and strengthening of the UNESCO-IHE Alumni Network is essential to promoting and facilitating knowledge dissemination, including the exchange of professional expertise and personal experience between alumni and the alma mater as well as amongst Alumni. These independent Associations organize various activities in their country.

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