

Annual Report UNESCO-IHE

2013



UNESCO-IHE
Institute for Water Education

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Rector's statement

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 in the 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

UNESCO-IHE at a glance

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 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.

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 even 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:

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.

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.

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;
- Reconstruction: Water infrastructure/WASH in fragile states.

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

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.

Signed	Partner	Goal
January 2013	University of Amsterdam (UvA)	PhD promotions arrangements, joint research and education activities and staff exchange.
March 2013	Organisation of American States (OAS)	OAS covers 25% of the tuition cost for up to four online sanitary engineering professional courses.
April 2013	National Water Authority (ANA), Nicaragua	Support to MSc research in Nicaragua and possible support to full or partial PhD research for Nicaraguan citizens.
April 2013	World Meteorological Organization (WMO)	Co-financing of MSc fellowships for 2 to 3 selected candidates per year.
Originally signed September 2004, renewed in May 2013	Dura Vermeer	Sponsoring of a part-time Chair in Flood Resilience.
May 2013	University of Arizona	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.
May 2013	University of Atacama, Chile	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.
Originally signed May 2008, renewed in May 2013	WaterNet Trust	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.
June 2013	YACHAY E.P.	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.
Originally signed July 2008, renewed in July 2013	Eidgenössische Anstalt für Wasserversorgung, Abwasserreinigung und Gewässerschutz (EAWAG)	Co-supervision, hosting and sponsoring by EAWAG of three UNESCO-IHE MSc students during the research phase of their studies.
July 2013	Rand Water Academy	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.
August 2013	Universidad Nacional Autónoma de México, Institute of Engineering (UNAM)	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.
September 2013	King’s College London, University of London	Staff exchange for the purpose of lecturing or consultation, exploration of further collaborative activities.
November 2013	Ramsar Convention of Wetlands & Charles Sturt University (RAMSAR)	Arrangements for the establishment of a Ramsar Chair in the Wise Use of Wetlands.

Education

Context

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

Education

MSc programmes & specializations

MSc PROGRAMME IN ENVIRONMENTAL SCIENCE		
Environmental Planning and Management		Db
Environmental Science and Technology	J	Db
Environmental Technology and Engineering	J	EU
Environmental Technology for Sustainable Development	J	
Limnology and Wetland Management	J	
Water Quality Management		Db
MSc PROGRAMME IN URBAN WATER AND SANITATION		
Sanitary Engineering	J	Db
Urban Water Engineering and Management	J	
Water Supply Engineering	J	Db
MSc PROGRAMME IN WATER MANAGEMENT		
THEMATIC PROFILES		Db
Water Conflict Management		
Water Quality Management		
Water Resources Management		
Water Services Management		
MSc PROGRAMME IN WATER SCIENCE AND ENGINEERING		
Ecohydrology	J	EU
Flood Risk Management	J	EU
Hydraulic Engineering and River Basin Development		Db
Hydraulic Engineering - Coastal Engineering and Port Development	J	Db
Hydraulic Engineering - Land and Water Development	J	Db
Hydroinformatics - Modelling and Information Systems for Water Management	J	Db
Hydrology and Water Resources	J	Db

Db	Delft-based MSc specializations
J	Joint programme
EU	Joint Erasmus Mundus programme

Joint Programme Partners map



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.

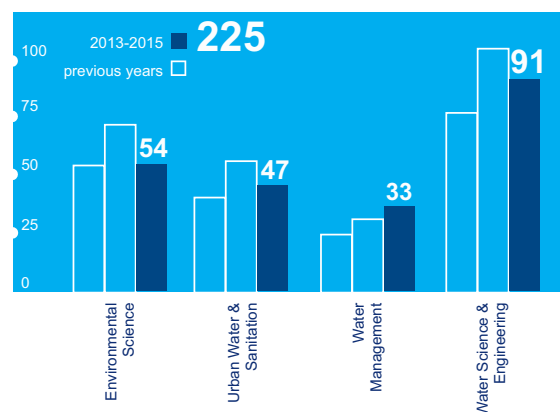
Over the course of ten years, UNESCO-IHE has increased the diversity, accessibility and quality of its educational offerings, while maintaining development relevance. It has done this primarily through expanding staff capacity in the social sciences, developing educational partnerships, expanding its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

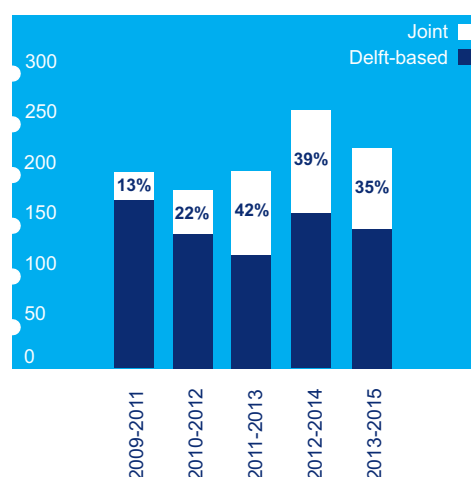
Students

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.

MSc students per programme



Joint/Delft-based MSc students per academic year



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

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

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

Efficiency		2010	2011	2012	2013
E15	Teaching/management/coordination input (hrs/module)	253	257	248	251
E16	MSc thesis supervision input (hrs/graduate)	92	93	94	87

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

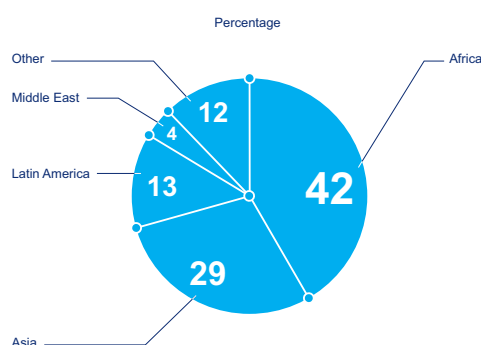
- E5** Number of graduates MSc programmes: being the total number MSc students graduating in this year.
- E6** Number of short course participants: being the total number short course participants (including tailor made courses, refresher courses etc, i.e. all courses for which participants receive a 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.

Students region of origin academic year 2013-2014



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 enrolls 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.

Online courses

In 2013, the number of online courses was increased by two courses, bringing the total to 19. Offering courses online vastly reduces the cost for students, making the Institute's offerings accessible to many more people, especially from developing countries. Increasingly, online courses include a formal assessment, allowing students to earn ECTS credits.

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

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

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 (accumulative), and (vi) the citation count (accumulative); (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 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. SWWW, 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 to 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 fulfil 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.

Research

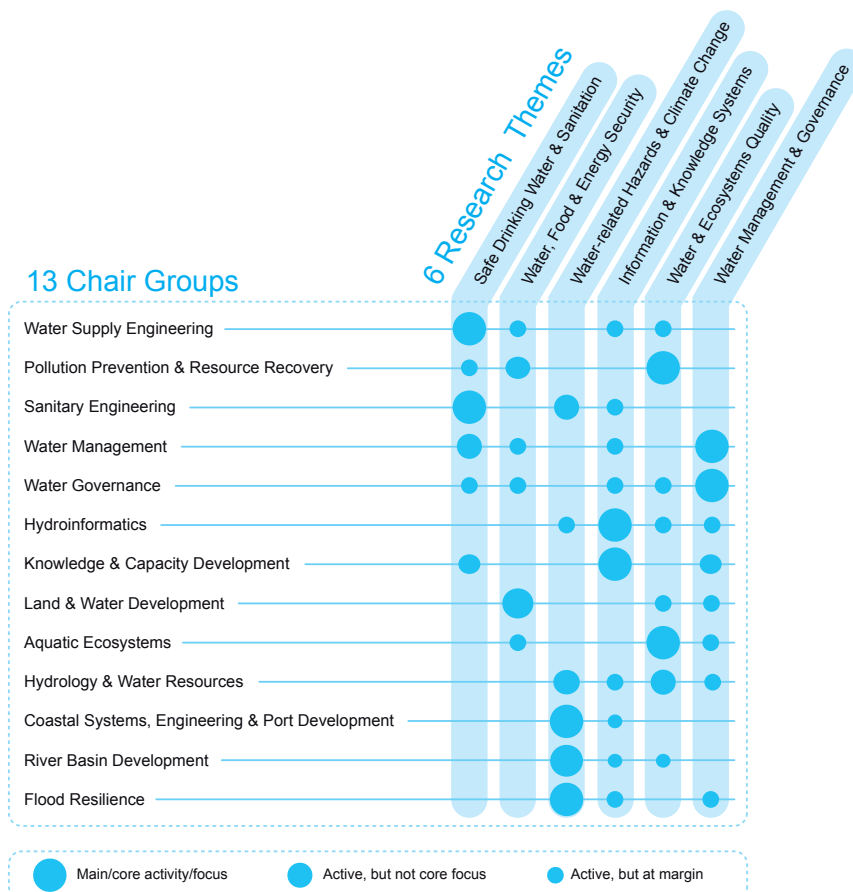
- **Water & Ecosystems Quality** - Investigating the role of aquatic ecosystems in providing environmental and human well-being, supporting development, and maintaining water integrity.
- **Water Management & Governance** - Social, biophysical and technological processes of water systems are intrinsically linked. Our research focuses on understanding interactions between societies, ecosystems and technologies in search of ways to effectively manage and govern water flows and water systems in a sustainable and fair manner.
- **Water, Food & Energy Security** - Research to support better management of water for food and energy security in a sustainable and equitable way in synergy with natural ecosystems and compatible with the respective socio-economic context.
- **Information & Knowledge Systems** - Research that enables better management of the information cycle of data acquisition, modelling, forecasting, optimization and knowledge management for facilitating innovation and supporting decision making.

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 Mondiaal, 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 in

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 in 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'Oréal-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

Research

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.

Capacity development

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

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, Cap-Net 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.

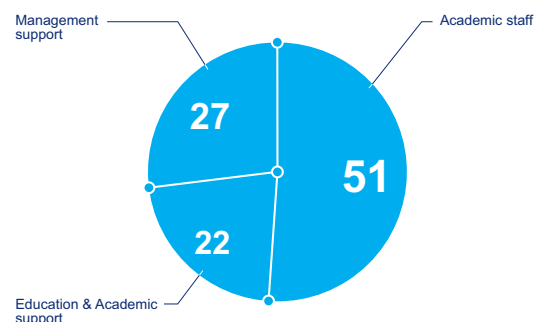
UNESCO-IHE adheres to the Collective Labour Agreement for Dutch Universities and has a diverse range of HRM policies in place that apply to all staff, focusing on performance and development management, recruitment, hiring and termination, performance review and remuneration, health and safety (ARBO),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



Development of gender ratios

	2010		2011		2012		2013	
Total fte staff (% female)	161	38.4	158	37.0	166	36.0	160	40.0
Non-academic staff fte (% female)	74	56.9	72	54.0	74	56.2	78	57.3
Academic staff fte (% female)	87	22.8	86	22.1	85	22.8	82	25.0

Academic staff: gender & scale figures

Academic staff	Male	Female	% academic females at UNESCO-IHE	% females NL academic institutions (2012)
Lecturers	14	9	39%	36%
Senior Lecturer	17	7	29%	
Associate Professor	20	4	16%	
Professor	17	3	15%	16%
Total	68	23	25%	

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

Performance indicators business

Business indicators	2010	2011	2012	2013
B7 Overhead (%)	30	30	29	28
B8 Non-academic staff contingent (%)	47	48	48	49
B9 Knowledge exchange events with the private sector (No.)	-		2	39
B10 Alumni assistance/cooperation requests (No.)	4	6	10	20
B11 UNESCO-IHE mentioned in media (No.)	-	-	-	400
B12 Unique visits website (No.)	320,933	305,273	341,615	340,692

B7	Overhead (%): To monitor the efficiency of staff, the percentage of overhead (based on the Berenschot method 1a) is given.
B8	Non-academic staff contingent (%): The percentage of non-academic fte's staff relative to total staff.
B9	Knowledge exchange events with the private sector (number): The number of events at the Institute dedicated to knowledge exchange with private sector participation initiated or facilitated by UNESCO-IHE, where UNESCO-IHE acts as intermediary between the Dutch and international water and knowledge sectors.

B10	Alumni assistance/cooperation requests: The number of requests put forward to the UNESCO-IHE Alumni network to assist with student acquisition, project acquisition or advisory service to the Institute itself or public and private partners.
B11	UNESCO-IHE mentioned in media: The number of times UNESCO-IHE is mentioned in international online media (excluding social media).
B12	Unique visits website: The unique UNESCO-IHE website visits per year.

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 Aspretto 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.

Home base

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 through 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:

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

The marked increase in income from the EC is one of the first outcomes of IHEs actions towards diversification of funding.

Financial report

Performance indicators finance

Finance indicators	2010	2011	2012	2013
B1 Annual project turnover (M Euros)	9.18	9.98	10.23	11.17
B2 Annual amount of matching funds (M Euros)	2.65	2.2	2.77	2.47
Effectiveness matching (%)	43	32	41	35
B3* Funding from GoN of total income (%)	-	-	59	58
B4*** Funding from EC of total income (%)	-	-	14	6
B5* Funding from foundations/NGOs (%)	-	-	9	6
B6* Funding from the private sector (%)	-	-	6	4

* Due to the economic crisis, less funding was available from private organizations and foundations, but was fortunately compensated by other funding including those from international organizations, other governments and public organizations.

** The EC PF7 and Erasmus programmes came to an end, and the first calls of the new programmes opened end 2013 and beginning 2014.

B1	Annual project turnover (M Euros): The annual project turnover consists of funds from externally funded projects.	B4	Funding from EC of total income (%): To monitor the diversity of funding the percentage of funding of the EC as part of the total income is given.
B2	Annual amount of matching funds and effectiveness matching (%): The annual amount of matching funds versus externally funded projects is monitored through the use of a proportion of the baseline funding for matching/ co-funding.	B5	Funding from foundations/NGOs (%): To monitor the diversity of funding the percentage of funding of foundations / NGOs as part of the total income is given.
B3	Funding from GoN of total income (%): To monitor the diversity of funding the percentage of funding of the Government of The Netherlands as part of the total income is given.	B6	Funding from the private sector (%): To monitor the diversity of funding the percentage of funding of private companies as part of the total income is given.

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).

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.

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.

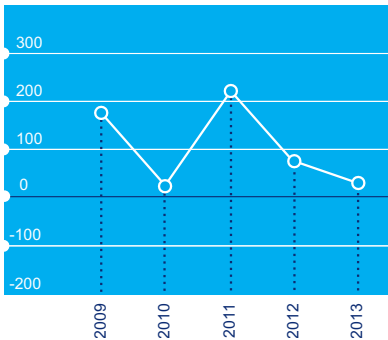
The overall costs for operation and maintenance of the building decreased by 35%. This is due to the postponement of the final pay-off in the lease, which did not include redemption in 2013. The interest costs on the SWAP linked to the lease ended at the end of 2012. The costs of running the facilities 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.

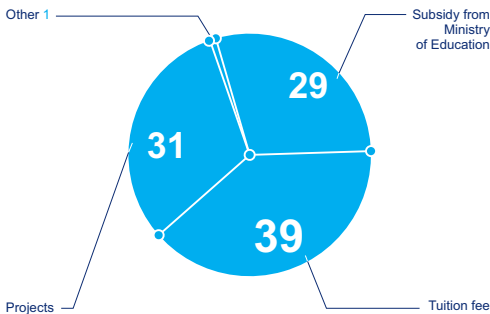
Education-related costs decreased by 21% as a result of lower costs for unoccupied student housing due to the increased number of participants. Including the lowered amount for sub-rental income on student housing, we saved €236 K. Acquisition and marketing costs were markedly lower (7%) than in 2012,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

Overall financial results (Euro x 1000 / academic year)



Sources of income (percentage)



Financial report

Statement of income and expenditures in Euros * 1,000

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

Balance sheet in Euros * 1,000

	31 Dec 2013	31 Dec 2012
Assets		
Fixed assets	5,121	4,299
Accounts receivable	2,425	2,401
Cash and banks	17,566	14,205
Total	25,112	20,905
Equity and liabilities		
Equity	2,025	1,936
Fellowship Trust Fund	262	258
Provision	556	304
Current liabilities	22,269	18,407
Total	25,112	20,905

Fellowship Trust Fund

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	Euros
Fund on 1 January 2013	258,886
Gifts	
Stichting Meyboom	20,611
Membrane Tech. Vanessa Brusius	75
Membrane Tech. Sergios Ribeiro	75
Interest	3,282
Total	24,043
MSc fellowships	
Badruz Zaman, 2014-2015, Indonesia	20,611
Total	20,611
Fund on 31 December 2013	262,318

Annexes

Annex 1

Educational statistics

Registered degree programme participants for the academic year 2013-2014

Programme	Source of funding			Region of origin					Gender		Total
	Full NFP	Co-financed NFP	Other	Africa	Asia	Latin America	Middle East	Other	Female	Male	
MSc Programmes 2012-2014	95	0	165	114	75	27	11	33	114	146	260
Water Science and Engineering	36	0	66	36	41	6	4	15	33	69	102
Water Management	10	0	19	11	10	1	1	6	19	10	29
Environmental Science	33	0	39	32	17	9	4	10	45	27	72
Municipal Water and Infrastructure	16	0	41	35	7	11	2	2	17	40	57
MSc Programmes 2013-2015	76	0	149	100	66	28	10	21	81	144	225
Water Science and Engineering	25	0	66	30	44	7	1	9	22	69	91
Water Management	16	0	17	20	7	5	1	0	14	19	33
Environmental Science	20	0	34	28	7	4	5	10	27	27	54
Urban Water and Sanitation	15	0	32	22	8	12	3	2	18	29	47
PhD programmes 2013	30	3	106	47	40	26	5	21	54	85	139
Total	201	3	420	261	181	81	26	75	249	375	624
Percentage	32.2	0.5	67.3	41.8	29	13	4.2	12	39.9	60.1	

Annex 2

Short courses

Short course	Date		Participants	Female participants
Advanced Water Transport and Distribution	01/Jul/13	19/Jul/13	7	2
Advanced Water Treatment and Reuse	02/Apr/13	19/Apr/13	1	0
Applied Groundwater Modelling	10/Jun/13	28/Jun/13	11	5
Aquatic Ecosystems: Processes and Applications	10/Jun/13	28/Jun/13	5	4
Cleaner Production and the Water Cycle	22/Apr/13	10/May/13	5	2
Coastal and Port Structures	04/Mar/13	22/Mar/13	2	1
Coastal Systems	14/Jan/13	01/Feb/13	2	1
Constructed Wetlands for Wastewater Treatment	04/Mar/13	22/Mar/13	1	0
Decentralised Water Supply and Sanitation	01/Jul/13	19/Jul/13	8	3
Design of Hydropower Schemes	24/Jun/13	28/Jun/13	3	0
Environment and Global Change: Uncertainty and Risk Assessment	29/Apr/13	10/May/13	9	6
Environmental Engineering	04/Mar/13	22/Mar/13	3	2
Environmental Monitoring and Modelling	02/Apr/13	19/Apr/13	10	6
Environmental Planning and Implementation	02/Apr/13	19/Apr/13	4	4
Financial Management of Water Organisations	02/Apr/13	19/Apr/13	2	0
Flood Risk Management	10/Jun/13	28/Jun/13	7	3
GIS and Hydrological Modelling	16/Sep/13	27/Sep/13	16	7
GIS and Remote Sensing Applications for the Water Sector	28/Oct/13	08/Nov/13	27	11
Groundwater Data Collection and Interpretation	02/Apr/13	19/Apr/13	16	4
Groundwater Resources and Treatment	04/Mar/13	22/Mar/13	5	3
Hydrological Data Collection and Processing	02/Apr/13	19/Apr/13	8	5
Industrial Effluent Treatment	10/Jun/13	28/Jun/13	10	8
Integrated Coastal Zone Management	22/Apr/13	03/May/13	6	1
Integrated Hydrological and River Modelling	10/Jun/13	28/Jun/13	1	1
International Port Seminar	22/Apr/13	10/May/13	9	2
Introduction to River Flood Modelling	22/Apr/13	10/May/13	10	2
IWRM as a Tool for Adaptation to Climate Change	01/Jul/13	19/Jul/13	23	9
Managing Water Organizations	04/Mar/13	22/Mar/13	2	2
Modelling Wastewater Treatment Processes and Plants	22/Apr/13	10/May/13	4	2
Morphological Modelling Using Delft 3D	16/Sep/13	20/Sep/13	3	1
Nanotechnology for Water and Wastewater Treatment	02/Apr/13	12/Apr/13	7	3
Negotiation and Mediation for Water Conflict Management I	11/Feb/13	01/Mar/13	3	1
Negotiation and Mediation for Water Conflict Management II	04/Mar/13	22/Mar/13	1	0
Port Planning and Infrastructure Design	11/Feb/13	01/Mar/13	4	0
Public-Private Partnerships in the Water Sector	10/Jun/13	28/Jun/13	4	2
River Basin Modelling using SWAT and PCRaster	23/Sep/13	27/Sep/13	2	1
River Restoration and Rehabilitation	10/Jun/13	28/Jun/13	8	3
Service Oriented Management of Irrigation Systems	02/Apr/13	19/Apr/13	2	0
Small Hydropower Development	09/Sep/13	20/Sep/13	23	4
Solid Waste Management	01/Jul/13	19/Jul/13	17	9
Spate Irrigation and Water Management under Drought and Water Scarcity	09/Sep/13	20/Sep/13	15	3
Surface Water Treatment I	14/Jan/13	01/Feb/13	3	3

Short course	Date		Participants	Female participants
Tracer Hydrology and Flow System Analysis	22/Apr/13	10/May/13	1	0
Urban Flood Management and Disaster Risk Mitigation	22/Apr/13	10/May/13	8	5
Urban Water Systems	10/Jun/13	28/Jun/13	4	2
Water and Environmental Law	22/Apr/13	10/May/13	4	1
Water and Environmental Policy Making	04/Mar/13	22/Mar/13	2	0
Water Quality Assessment	11/Feb/13	01/Mar/13	5	1
Water Resilient Cities	01/Jul/13	19/Jul/13	1	1
Water Resources Planning	02/Apr/13	19/Apr/13	7	1
Water Transport and Distribution I	22/Apr/13	10/May/13	3	3
Water Treatment Processes and Plants	10/Jun/13	28/Jun/13	9	3
Watershed and River Basin Management	01/Jul/13	19/Jul/13	9	1
Where there is little data: How to estimate design variables in poorly gauged basins	01/Nov/13	22/Nov/13	16	1
Total			378	145
Percentage			100%	38,4%

Online course participants

Online course	Date		Participants	Female participants
Biological Wastewater Treatment: Principles, Modelling and Design	01/Mar/13	05/Jul/13	25	3
Cleaner Production and the Water Cycle	02/Sep/13	06/Jan/14	4	1
Constructed Wetlands for Wastewater Treatment	02/Sep/13	06/Jan/14	11	0
Ecological Sanitation	01/Mar/13	05/Jul/13	10	5
Environmental Flows	01/Dec/13	05/Apr/14	21	13
Flood Modelling for Management	01/Mar/13	10/May/13	6	0
Industrial Effluent Treatment	01/Mar/13	05/Jul/13	17	6
Integrated Coastal Zone Management	01/Mar/13	05/Jul/13	10	3
Integrated River Basin Management	01/Mar/13	05/Jul/13	17	9
IWRM as a Tool for Adaption to Climate Change	02/Sep/13	06/Jan/14	6	2
Modelling Sanitation Systems	02/Sep/13	06/Jan/14	1	1
Policy and Management in Developing Countries	02/Sep/13	06/Jan/14	9	6
Public and Private Partnerships	02/Sep/13	06/Jan/14	12	3
Service Oriented Management of Irrigation Systems	01/Mar/13	05/Jul/13	4	1
Solid Waste Management	02/Sep/13	06/Jan/14	22	12
Urban Drainage and Sewerage	02/Sep/13	06/Jan/14	15	1
Water and Environmental Law and Policy	04/Mar/13	24/Jun/13	14	9
Water Quality Assessment	01/Mar/13	05/Jul/13	13	4
Water Transport and Distribution	20/Sep/13	20/Feb/14	18	5
Total			235	84
Percentage			100	35.7

Regional refresher course participants

Regional refresher course	Country	Date		Participants	Female participants
Revisiting water management in irrigation systems in Sub-Saharan Africa: opportunities and constraints for productivity increase	Sudan	06/Oct/13	10/Oct/13	22	9
Integrated water and sanitation management in urban slums and the surrounding environment	Uganda	07/Oct/13	11/Oct/13	22	12
Planning and governance of large dams	Ghana	28/Oct/13	01/Nov/13	19	7
WASH service delivery in conflict affected and fragile states	South Africa	18/Nov/13	22/Nov/13	19	10
Membrane filtration in drinking and wastewater treatment	Brazil	09/Dec/13	13/Dec/13	24	13
Total				106	51
Percentage				100%	48.11%

Annex 3

PhD fellows

Promotions

Name	Country	Title thesis	Promoter	Date
Mr. Mabiza	Zimbabwe	Integrated water resources management, institutions and livelihoods under stress	vd Zaag	06/Feb/13
Mr. Seyoum	Ethiopia	Framework for dynamic modelling of urban floods at different topographical resolutions	Solomatine	08/Mar/13
Mr. Ansa	Ghana	The removal of faecal coliforms in waste stabilization pond systems and eutrophic lakes	Gijzen/ Lubberding	16/Apr/13
Mr. Khatri	Nepal	Risk and uncertainty analysis for sustainable urban water systems	Vairavamoorthy	01/May/13
Mr. Li	China	Adaptive multi-reservoir-based flood control and management for the Yellow River. Towards a next generation software system	Mynett/ Popescu	03/May/13
Mr. Komakech	Uganda	Emergence and evaluation of endogenous water institutions in an African river basin	vd Zaag	05/Jul/13
Mr. Love	Zimbabwe	Water resources strategies to increase food production in the semi-arid tropics	vd Zaag/ Uhlenbrook	12/Sep/13
Mr. Sanchez Torres	Colombia	Modelling the future water infrastructure of cities	Mynett	18/Sep/13
Mr. Acheampong	Ghana	Sustainable gold mining wastewater treatment by sorption using low-cost materials	Lens	18/Oct/13
Ms. Villa Gomez	Mexico	Simultaneous sulfate reduction and metal precipitation in an inverse fluidized bed reactor	Lens	18/Oct/13
Ms. Kijjanapanich	Thailand	Sulfate reduction for remediation of gypsiferous soils and solid wastes	Lens	18/Nov/13
Mr. Katukiza	Uganda	Sanitation in unsewered urban poor areas	Lens	29/Nov/13
Mr. Mburu	Kenya	Experimental and modeling studies of horizontal subsurface flow constructed wetlands treating domestic wastewater	Lens	29/Nov/13
Mr. Ebrahim	Ethiopia	Modelling groundwater systems. Understanding and improving groundwater quantity and quality management	Mynett	03/Dec/13
Ms. Hoang	Viet Nam	The effect of riparian zones on nitrate removal by denitrification at the river basin scale	Mynett	04/Dec/13
Ms. Zhu	China	Web-based virtual environment for decision support in water based system	Mynett	05/Dec/13
Ms. Uwamariya	Rwanda	Adsorptive removal of heavy metals from groundwater by iron oxide based adsorbents	Amy / Lens	06/Dec/13

Registered PhD fellows

Name	Country	Title thesis	Promoter
Mr. Mvulirwenande	Rwanda	Beyond structuralism to explain the effectiveness of knowledge and capacity development in water supply. towards an actor-interaction oriented perspective	Alaerts
Ms. Pascual Sanz	Spain	Partnerships between water operators as a vehicle for capacity development and change	Alaerts
Mr. Abel	South Sudan	Assessment of Soil Aquifer Treatment (SAT) for multiple contaminant removal and its applicability in developing countries	Amy / Kennedy
Mr. Salifu	Ghana	Fluoride removal from drinking water	Amy / Kennedy
Mr. Kim	Republic of Korea	Municipal wastewater treatment using algae and bacteria at MBR process(based on MLE process	Brdjanovic
Mr. Mawioo	Kenya	Novel concepts and technologies for excreta and wastewater management in emergency conditions	Brdjanovic

Name	Country	Title thesis	Promoter
Mr. Rubio Rincon	Mexico	Feasibility of using seawater in urban sanitation (implementation)	Brdjanovic
Mr. Skoullous	Greece	Model-based assessment of urban wastewater infrastructure development on aquatic environment	Brdjanovic
Mr. Welles	Netherlands	Impact of salinity on the biological Phosphorus removal in activated sludge systems	Brdjanovic
Ms. Zakaria	Indonesia	Rethinking fecal sludge management in emergency setting	Brdjanovic
Mr. Abebe	Ethiopia	Agent-based modelling of socio-technical systems for urban flood risk assessment	Brdjanovic / Vojinovic
Mr. Sanchez Guillen	Panama	Cost-effective municipal wastewater treatment by coupling of UASB and ANAMMOX reactors	Brdjanovic/ vLier
Ms. Fadul Bashir	Sudan	Optimizing benefit streams in spate irrigated agriculture in Sudan	de Fraiture
Ms. Mersha	Ethiopia	Integrated Water Resource Management (IWRM) for sustainable irrigation development: Awash River Basin, Ethiopia.	de Fraiture
Ms. Theol	Iraq	Effects of sediment transport on the irrigation system. Case study: Al-Kadhimiya irrigation system, Tigris River, Iraq.	de Fraiture
Mr. Galvis Castano	Colombia	Development of a technology selection model for pollution prevention and control in the municipal water cycle	Gijzen
Mr. Silva Vinasco	Colombia	Greenhouse gas emissions from ecotechnologies for sustainable domestic wastewater management in tropical regions	Gijzen
Ms. Setyamukti	Indonesia	Processing organic kitchen waste in a low-tech box composting system	Gijzen /Rotter (TU Berlin)
Ms. Obani	Nigeria	Environmental human rights and development, case of sanitation	Gupta
Ms. Sanz Galindo	Colombia	Developing conflict resolution as a policy tool for small and medium enterprises	Gupta
Mr. Belachew	Ethiopia	Using catchment models and in situ measurements to estimate combined effects of diffuse and industrial effluent loads into the Borkena River, Ethiopia	Irvine
Ms. Etiegni	Kenya	A case of Lake Victoria fisheries (Kenya)	Irvine
Mr. Hategekimana	Rwanda	Governance of wetlands in Africa with focus on Rwanda	Irvine
Ms. Ingabire	Rwanda	The importance of denitrification for nitrogen retention in a sub-tropical catchment	Irvine
Mr. Nabuyanda	Zambia	The fate of cobalt, copper and lead in two wetlands in Zambia	Irvine
Ms. Rongoei	Kenya	Wetland ecosystem integrity in relation to exploitation for livelihoods in Nyando wetlands, Kenya	Irvine
Ms. Salcedo Borda	Peru	Effect of flow change, due the presence of dam, on nutrients cycling	Irvine
Mr. Uwimana	Rwanda	Rehabilitation of sediment and nutrient retention functions in wetlands of Migina catchment, Rwanda	Irvine
Mr. Masese	Kenya	Spatio-temporal dynamics in trophic resources and transfers among food webs in the Mara River.	Irvine
Mr. Bruins	Netherlands	Improved manganese removal from groundwater	Kennedy
Mr. Dhakal	Nepal	A novel method to predict antiscalant dose in membrane system: comparison and bench marking synthetic and bio-based antiscalant in BWRO & SWRO application	Kennedy
Ms. Reyes Perez	Ecuador	Water demand management and small scale water supply systems in tropical islands	Kennedy
Mr. Schurer	Netherlands	under construction	Kennedy
Ms. Tabatabai	Islamic Republic of Iran	Low chemical consuming UF.RO for desalination	Kennedy
Mr. Andreev	Moldova	Terra preta nova production for resource oriented management of human excreta	Lens
Ms. Ariunbaatar	Mongolia	Pretreatment methods to enhance anaerobic digestion of organic solid wastes	Lens
Ms. Bhattarai Gautam	Nepal	Anaerobic methane oxidation with nitrate as electron acceptor	Lens
Mr. Botwe	Ghana	Historical trends in chemical pollution and sedimentation in the Tema Harbour, Ghana	Lens
Ms. Cassarini	Italy	Anaerobic oxidation of methane in the presence of different electron acceptors	Lens
Ms. Cassidy	Portugal	Anaerobic oxidation of methane by sulfate reduction	Lens
Mr. Chung	Republic of Korea	Point-of-use drinking water disinfection methods for African peri-urban areas	Lens

Name	Country	Title thesis	Promoter
Ms. Espinosa Ortiz	Mexico	Mycogenic production of elemental selenium nanoparticles	Lens
Mr. Isildar	Turkey	Metal recovery from electronic waste	Lens
Mr. Jain	India	Biogenic production of selenium nanoparticles	Lens
Mr. Janyasuthiwong	Thailand	Biogenic sulfide production and selective metal precipitation at low pH for semiconductor wastewater treatment	Lens
Mr. Karimi	Islamic Republic of Iran	Nitrogen removal from aquaculture wastewater in photobioreactors	Lens
Mr. Mal	India	Biological removal of tellurium and selenium from electroplating wastewater	Lens
Mr. Mustapha	Nigeria	Treatment of petroleum-contaminated wastewater using constructed wetlands	Lens
Ms. Rada Ariza	Colombia	Microalgae for wastewater biotreatment and biomass recovery	Lens
Mr. Reyes Alvarado	Mexico	under construction	Lens
Mr. Staicu	Romania	Biorecovery of selenium from inorganic wastewaters	Lens
Mr. Waktola	Ethiopia	In vitro investigation on the antibacterial activities of microcystis species from Koka reservoir against some human pathogenic bacteria	Lens
Ms. Zapater Pereyra	Peru	Design and development of a novel constructed wetland (CW) set-up: Duplex-CW	Lens
Ms. Alvarez Mieleles	Ecuador	Ecological modelling in tropical rivers and wetlands	Mynett
Ms. Lin	China	Unstructured cellular automata in ecohydraulics modelling	Mynett
Mr. Martinez Cano	Colombia	Adaptation strategies to the pressure of global change in urban drainage modelling	Mynett
Mr. Meesuk	Thailand	Merging topographical data from multidimensional views for enhanced urban flood modelling	Mynett
Ms. Minaya Maldonado	Ecuador	Development of methodologies, environmental indexes, indicators and programs for integral environmental evaluation and restoration of degraded systems	Mynett
Ms. Ouikotan	Benin	Flood modelling in Cotonou (as coastal) city: hydraulic and hydrology aspects	Mynett
Mr. Simanjuntak	Indonesia	Coupled stress-seepage numerical design of prestressed concrete-lined pressure tunnels	Mynett
Mr. Wang	China	Numerical modelling of ice floods in the Ning-Meng reach of the Yellow River basin	Mynett
Ms. Musa	Nigeria	Living with sea level rise on a subsiding delta: using satellite based data and information as tools to develop mitigation and adaptation options for the Niger delta	Mynett /Popescu
Mr. Bin Ab Razak	Malaysia	Modeling of headland sediment bypassing process & nearshore evolution of embayed beach	Roelvink
Mr. Dam	Netherlands	Long-term process-based modelling of the morphology of estuaries	Roelvink
Ms. Donoso	United States of America	Analysis of the upper ocean thermal structure of the eastern tropical Pacific: establishing correlations with precipitation in Latin America	Roelvink
Mr. Guo	China	Morphodynamic modeling of the river- and tide-dominated Yangtze Estuary, China: processes and mechanisms	Roelvink
Ms. Minikowski Achete	Brazil	Long term morphodynamics modeling of San Francisco Bay	Roelvink
Mr. Sembiring	Indonesia	Near shore operational model for swimmer safety	Roelvink
Mr. Wan Yuanyang	China	Dynamics of fluid mud and its influence on the backfilling at the north passage of Yangtze estuary, China	Roelvink
Ms. Duong	Viet Nam	Climate Change impacts on the stability of Small Tidal Inlets (CC-STI)	Roelvink / Ranasinghe
Mr. Da Silva Duarte Duque	Portugal	Design criteria for coastal cities	Roelvink / Zevenbergen
Ms. Ali	Sudan	Effects of erosion control practices in the upper Blue Nile Basin on downstream sedimentation rates	Roelvink/Wright
Mr. Adeboye	Nigeria	Productive and sustainable use of land and water under deficit irrigation in Ogun-Osun River Basin, Nigeria	Schultz
Mr. Dejen	Ethiopia	Hydraulic and operational performance of irrigation systems in view of interventions for water saving and sustainability. Sugar estates and community-managed schemes in Ethiopia	Schultz
Ms. Delos Reyes	Philippines	Modernization strategy for national irrigation systems in the Philippines: Linking design, operation and water supply	Schultz

Name	Country	Title thesis	Promoter
Ms. Elsheikh	Sudan	Crop water productivity of sunflower (Helianthus Annuus L) under different irrigation regimes for Gezira clay condition	Schultz
Mr. Junaidi	Indonesia	Optimisation of the urban drainage and flood protection of Padang City, Indonesia	Schultz
Mr. Keita	Mali	Subsurface drainage of valley bottom rice irrigated schemes in the Sudanian climate. Case study of Tiéfara in Burkina Faso	Schultz
Ms. Osman	Sudan	Sediment and water management in large irrigation system, case study: Gezira scheme, Sudan	Schultz
Mr. Winaktoe	Indonesia	Urban polder development. Case study on the Province of Daerah Khusus Ibukota (DKI) Jakarta	Schultz
Ms. Yekti	Indonesia	Role of reservoir operation in sustainable water supply to Subak irrigation systems. Case Study in the South of Bali	Schultz
Ms. Yihun	Ethiopia	Agricultural water productivity optimization in a water scarce semi-arid region of Ethiopia	Schultz
Mr. Bayissa	Ethiopia	Drought assessment and forecasting for the Upper Blue Nile Basin by assimilating remotely sensed data into a hydrological model	Solomatine
Mr. Castro	Colombia	Hydraulic model based simulation and optimization of water distribution networks for energy consumption and water losses reduction.	Solomatine
Mr. Chacon Hurtado	Colombia	Dynamic multi-objective optimisation of dynamic heterogeneous networks of physical and social sensors	Solomatine
Mr. Delipetrev	the former Yugoslav Republic of Macedonia	Decision support system for water resources management in the Republic of Macedonia: Case study of Bregalnica River Basin	Solomatine
Mr. Hartanto	Indonesia	Integrating multiple sources of information and hydrological modelling to reduce uncertainty in operational water management	Solomatine
Mr. Kayastha	Nepal	Dealing with uncertainties in remotely linked models	Solomatine
Mr. Marquez Calvo	Mexico	Multi-objective optimization applied to complex model-based water-related problems: robustness, efficiency, interactivity	Solomatine
Mr. Mazzoleni	Italy	Optimal integration of heterogeneous uncertain data into water models	Solomatine
Mr. Md. ALI	Malaysia	Flood risk mapping under uncertainty: Application to Sungai Johor Basin, Malaysia	Solomatine
Mr. Mukolwe	Kenya	Flood inundation modelling under uncertainty: estimation, visualisation and communication	Solomatine
Mr. Yan	China	Inundation modelling under uncertainty using global Earth observation data	Solomatine
Mr. Almoradie	Philippines	Networked environments for stakeholder participation in water resources and flood management	Solomatine / Jonoski
Mr. Tran	Viet Nam	Adaptive behavior to impacts of climate change and socio-economic development in Mekong Delta, Vietnam	Solomatine + Zaag
Mr. Bhatt	Nepal	An integrated approach for adapting agriculture and water management to global change. Case study of a Himalayan River Basin in Nepal	Uhlenbrook
Ms. Calderon Palma	Nicaragua	Stream-aquifer interactions in fractured sedimentary rocks using a multitechnical approach	Uhlenbrook
Mr. Demessie	Ethiopia	Past-present-future land use in the Blue Nile and impacts on hydrology	Uhlenbrook
Mr. Hassaballah	Sudan	The Hydrological Impacts of land use/cover and climate changes on Dinder River morphology and eco-hydrology of the Dinder National Park (DNP)/ Sudan	Uhlenbrook
Ms. Hu Yurong	China	Assessment of climate change and its impacts on hydrological processes and water resources in the Yellow River source region, China	Uhlenbrook
Mr. Munyaneza	Rwanda	Space-time patterns of hydrological processes and water resources in Rwanda, with special focus on the meso-scale Migina catchment	Uhlenbrook
Mr. Natumanya	Uganda	Spatial-temporal dynamics of flow regime and water resources in the upper Mara basin, Kenya	Uhlenbrook
Mr. Nyenje	Uganda	Hydrological aspects of alternative sanitation solutions in slum areas in African mega-cities	Uhlenbrook
Ms. Trambauer Arechavaleta	Uruguay	Hydrological drought forecasting in Africa at different spatial and temporal scales	Uhlenbrook
Mr. Wong	Malaysia	Assessment and modelling of large-scale hydrological variability in Peninsular Malaysia	Uhlenbrook
Mr. Yang	China	Quantitative assessment of groundwater and surface water interactions in Erdos plateau, China	Uhlenbrook

Name	Country	Title thesis	Promoter
Mr. Gebrekristos	Ethiopia	Impact of improved land management practices on hydrology in Blue Nile River Basin / up-scaling of hydrological model	Uhlenbrook/Savenije
Ms. Ahmed	Egypt	Climate change and development impacts on groundwater resources in the Nile Delta, Egypt	Uhlenbrook/Solomatine
Ms. Digna	Sudan	On optimising the operation of the multi-reservoir system in the Eastern Nile basin considering water and sediment fluxes	Uhlenbrook/vd Zaag
Ms. Saraiva Okello	Mozambique	Bridging the gaps between hydrology, land use and water management using tracers and water resources modelling in the Incomati Basin	Uhlenbrook/vd Zaag
Ms. Basco Carrera	Spain	Participatory decision making for sustainable integrated water resources management. Strengthening stakeholder ownership using a collaborative modeling approach	v Beek/Janoski
Mr. Zhou	China	Decision support system for managing underground water related assets (water distribution)	Vairavamoorthy
Mr. Sanchez Ralda	Guatemala	The use of information and communication technologies, to warn poorer women and men in anticipation to more extreme weather events and floods	van Dijk
Mr. Pena Castellanos	Colombia	Integrated water resources data in supporting decisions	vanLier
Ms. Riungu	Kenya	Biogas facilities as a sanitation for the informal urban slum settlements: Enhanced sludge valorisation	vanLier
Ms. Costa De Barros	Brazil	Water governance in São Francisco river basin - Brazil	vd Zaag
Ms. Kassa	Ethiopia	Gender, environment and sustainable development-understanding the linkages. The case of Blue Nile river basin	vd Zaag
Mr. Kiptala	Kenya	Managing basin interdependencies: Understanding tradeoffs and synergies in the Pangani River Basin, Tanzania	vd Zaag
Ms. Metzker Netto	Brazil	Knowledge creation in networks dynamics, in terms of water resources management	vd Zaag
Mr. Muanda	Congo	Understanding the organisation of sanitation services in informal settlements of South Africa	vd Zaag
Mr. Smit	Netherlands	Institutional analysis of water resources management in the Blue Nile river basin, Ethiopia and Sudan	vd Zaag
Mr. Verma	India	Groundwater recharge movement in India	vd Zaag / Uhlenbrook
Mr. Owusu-Ansah	Ghana	Near-real time monitoring of flows in the Volta basin using variational data assimilation	vd Zaag/vd Giesen
Mr. Yalew	Ethiopia	Integrated assessment of land use and water resources management in the upper Blue Nile River Basin	Vd Zaag/vGriensven
Ms. Mwelwa	Zambia	Flow, morphology and vegetation in the Middle Zambezi: a study of spatial and temporal scales	Wright
Mr. Narrain	Germany	Computer modelling for the optimisation of low-head hydropower schemes	Wright
Ms. Rogelis Prada	Colombia	Operational flood forecasting, warning and response for multi-scale flood risks in developing cities	Wright
Mr. Worku	Ethiopia	Integrated management of water resources and optimal reservoir release for energy, irrigation and ecosystem services. A case Study of the Omo-Ghibe Basin	Wright /vdZaag
Ms. Ahmed	Bangladesh	Application of resilience to flood risk management on Dhaka	Zevenbergen
Ms. Anema	Netherlands	Building community resilience to floods in urban contexts	Zevenbergen
Ms. Bacchin	Italy	Adaptive waterscapes - exploring water resilient urban environments. The role of urban planning and design in the performance of urban water	Zevenbergen
Mr. Nilubon	Thailand	Urban flood risk analysis and management using relational urbanism model: A case study in Ayutthaya historic city (under UNESCO), Thailand	Zevenbergen
Mr. Olthuis	Netherlands	Ap=grading wet slums	Zevenbergen
Mr. Radhakrishnan	India	Development and application of Real-in-options (RIO) accounting tools for storm water management and flood safety	Zevenbergen
Mr. Salinas Rodriguez	Bolivia	Adaptation tipping points and opportunities for flood resilience and water sensitivity	Zevenbergen
Mr. Veerbeek	Netherlands	A comparative study of the effects of current and future urban growth on surface runoff in large metropolitan areas	Zevenbergen

Annex 4

Research lines

Integrated Water Systems and Governance Department	
Chair Group	Research line
Water Management	Biophysical and social dimensions of water systems
	Institutional and economic dimensions of water systems
	Integrative instruments and interventions
Water Governance	Water Politics
	Water Law
	Water Policy
Hydroinformatics	Data, modelling, uncertainty and risk
	Systems engineering, optimization and integration
	Collaborative decision making and Internet-based computing and learning
Knowledge and Capacity Development	Analysing the dynamics of professional knowledge dissemination and access to the global knowledge pool
	Investigating the nature, extent and boundaries of citizen observatory contributions to improved knowledge flows and their implications for water governance
	Assessing the economic and social value of knowledge and capacity development
	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
	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

Water Science and Engineering Department	
Chair Group	Research line
Land and Water Development	Water and food security
	Irrigation and ecosystems, in particular in wetlands and coastal lowlands
	Non-conventional irrigation options
Aquatic Ecosystems	Modernization of irrigation and drainage systems
	Nutrient and pollutant cycling
	Constructed wetlands
Hydrology and Water Resources	linking ecological processes with sustainable wetland use and livelihoods
	Hydrological processes near the earth's surface Ecohydrology
	Basin hydrology and global changes
Coastal Systems, Engineering and Port Development	Integrated coastal modelling
	Performance and reliability of flood defense systems and coastal structures
	Quantitative assessment of Coastal risk
	Port design
River Basin Development	Port-related hydrodynamic and morphological modelling
	River morphodynamics (topographic changes of river bed and river corridor)
	Ecohydraulics (interaction riparian vegetation-river and large floating debris)
	Impacts of training and rehabilitation projects on rivers
Flood Resilience	Kite Aerial Photography (KAP) and Unmanned Aerial Vehicles (UAV) for landscape change detection
	Urban Drought and Flood Resilience
	The emergency management

Research lines

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

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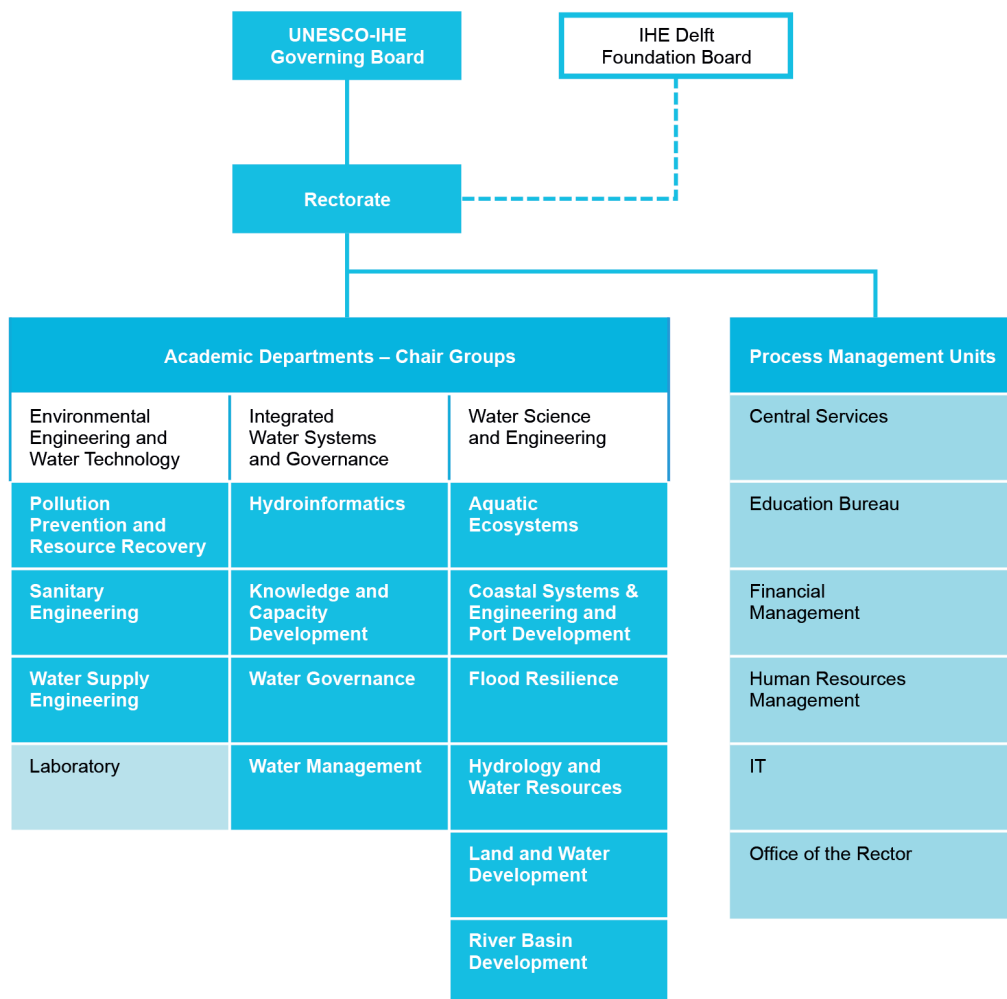
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Annex 6

Organizational chart of UNESCO-IHE

ORGANIZATION CHART OF UNESCO-IHE



Annex 7

Committees

UNESCO-IHE Governing Board

Abdel Afouda, until 30 June
 Abdin Mohamed Ali Salih
 Avinash C. Tyagi
 Ben Braga, per 1 July
 Blanca Jimenez Cisneros, representative of the
 Director General of UNESCO
 Claudio Caponi, an observer
 Fritz Holzwarth, Chair
 Gabriel Oteze, per 1 July
 Iwona Wagner, per 1 July
 John Verbakel
 Louis de Quelerij
 Maria Pilar Cornejo de Grunauer, until 30 June
 Ognejen Bonacci, until 30 June
 Richard L. Lino
 Tineke Huizinga-Heeringa
 Tomoharu Hori
 Wim Kuijken

IHE Delft Foundation Board

Annemieke Nijhof
 Louis de Quelerij
 Wim Deetman, Chair
 Wim Kuijken

Rectorate

András Szöllösi-Nagy, Chair
 Greet Vink
 Stefan Uhlenbrook

Academic Board

András Szöllösi-Nagy, Chair
 Arthur Mynett
 Bart Schultz
 Charlotte de Fraiture
 Chris Zevenbergen
 Damir Brdjanovic
 Dano Roelvink
 Dimitri Solomatine
 Gary Amy
 Guy Alaerts
 Han Ligteringen
 Huub Gijzen
 Jan Leentvaar
 Joyeeta Gupta
 Jules van Lier
 Kala Vairavamoorthy
 Kenneth Irvine
 Maria Kennedy
 Meine-Pieter van Dijk
 Michael McClain
 Nigel Wright
 Piet Lens
 Pieter van der Zaag
 Stefan Uhlenbrook

Operational Management Group

Arno Heins
 Erik de Ruyter van Steveninck
 Erwin Ploeger
 Greet Vink, Chair
 Ioana Popescu
 Juliette Terlaak
 Robert de Bruijn
 Saroj Sharma
 Wilmar Ceton

Examination Board

Anne van Dam, per 1 Oct
 Arthur Mynett, Chair, until 1 Oct
 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

Education Coordination Committee

Arno Heins
 Edwin Hes
 Erick de Jong
 Erik de Ruyter
 Erwin Ploeger, Chair
 Hermen Smit, per 1 Oct
 Jan Herman Koster
 Jeltsje Kemerink, until 1 Oct
 Tineke Hooijmans
 Wilmar Ceton

Education Development Committee

Dano Roelvink
 Erwin Ploeger
 Jan Herman Koster
 Maria Kennedy
 Piet Lens
 Pieter van der Zaag
 Stefan Uhlenbrook

Works Council

Assela Pathirana
 Hans van der Kwast
 Jolanda Boots
 Maria Rusca
 Nemanja Trifunovic
 Patricia Darvis, Chair
 Sylvia van Opdorp-Stijlen

Student Association Board

George Tom Ogol
 Maria Luisa Bains Salingay
 Maria Clemens
 Santosa Sandy Putra

PhD Association Board

Aline Saraiva-Okello
 Fernanda Minikowski Achete
 Fiona Zakaria
 Joana Cassidy
 Mário Paulo da Silva Duarte Duque
 Peter Mawioo
 Pedi Obani
 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
 Gastprogramming Het Muziektheater
 Gil Garcetti photographer
 Handelsbeurs Concertzaal 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 W.J. Cosgrove
 1999 Prof. M. Abu Zeid, PhD
 1998 Prof. W.A. Segeren, MSc
 1998 R. Moochtar, 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
 1976 Prof. W.F.J.M. Krul
 1968 Prof. J.Th. Thijssen, MSc

Annex 8

External memberships

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 Morphological Triangle (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.
- Organization NCR Days 2013 (venue UNESCO-IHE 3-4 October 2013).
- Guest editor International Journal Advances in Water Resources (Elsevier).
- Convener EGU 2014 session: "Numerical modelling of river morphodynamics".

Andras Szöllösi-Nagy

Rector

- Member of the Board of Governors of the World Water Council.
- Member of the Bureau of the Governing Board of 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.
- Serves on the editorial boards of Water Resources Management (Reidel), Environmental Systems, the International Journal of Water Policy (IWA Publishing), Journal of Water, Sanitation and Hygiene for Development (IWA), International Journal on Landslides (Springer), and the Encyclopedia of Life Support Systems (EOLSS).
- 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 2011).
- Guest editor of the journal wires-water.

- Editor of special issues of the Journal of Water Resources Management and for Phys. Chem. Earth.
- 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 Encyclopedia (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 PIACN.
- 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

- Editor of Hydrological Research Letters, Journal of Japan Society of Hydrology and Water Resources.
- Member of International Working Group of the IWA/IAHR 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

Carel 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.
- Member of the Water Environment Federation.

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 Universiteitsfonds 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 ICFM6.
- Member of the Advisory Committee Deltas of Times of Climate Change II.
- Chairman COST (European Knowledge Network) Urban Flood Management C22 (2005-2009).
- Chairman of the Dutch WODC Advisory Committee on "Meetbaarheid van Veerkracht".
- Chairman ICAADE 2015 International Conference on Amphibious Architecture, Design and Construction.

Damir Brdjanovic

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 Int. Conference on Hydroinformatics
- Member of the International Association of Hydrological Sciences
- Member of the International Association of

- 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 OCIB, 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 (Dhenim).

Frank van der 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 Baldassarre

Senior Lecturer in Hydroinformatics Systems

- Editor of Hydrology and Earth System Science journal.
- 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 (ICFM6).
- 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 Institutes for Postgraduate International Education in the Netherlands.
- Technische Innovatie Campus Delft.
- Delft Blue Technology.
- Delft International Advisory Board.
- Stuurgroep Valorisatieprogramma Deltatechnologie en Water (VPdelta).
- Stichting Onderwijs Civiel-Ingenieur voor Bedrijfsleven en Overheid.
- International Community Platform (ICP).
- Klankbordgroep-Horizon 2020 Climate Action, Resource Efficiency and Raw Materials.
- Klankbordgroep-Horizon 2020 Bioeconomy.
- Klankbordgroep-Horizon 2020 People.
- Acting member European Innovation Platform Water.
- UNESCO focal point gender.

Guy Alaerts

Professor of Capacity Building

- Member of the organizing committee of the 5th Delft Symposium on Water Sector Capacity Development (29-31 May 2013).
- Guest Editor of Water Policy, Special Issue on Leadership in Knowledge and Capacity Development (2013) 15(Suppl.2).

Han Ligteringen

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 Ecohydrological Modeling

- Member of Koninklijk Nederlands Aardrijkskundig Genootschap (KNAG, Royal Dutch Geographical Society).
- Member of Vakvereniging Fysische Geografie (VVFg).
- Member of OSGeo.nl.
- Member 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.

Hendrike Clouting

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 Latinaqua (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 IAHR (International Association of Hydro-Environment).
- Member of EGU (European Geoscience Union).
- Member of RWA (Romanian Water Association).
- Chair of the Education and Professional Development Section of IAHR (2009-2014).
- Technical Committee Member of 10th Hydroinformatics Conference, 2012, Hamburg, Germany.
- Technical Committee Member of the IAHR 2013 Congress, Chengdu, China.
- Scientific Committee Member of the Conference WATER 2012, Constanta, Romania.
- Scientific Committee Member of the Conference Ecolmpulse 2012, Timisoara, Romania.
- Organiser of Theme E. Education in Hydraulic Engineering, at IAHR Congress 2009, Vancouver.
- Organiser of the Special workshop on Young professionals at IAHR Congress 2011, Brisbane.
- Organiser of the Special workshop on Young professionals at IAHR Congress 2013, Chengdu.
- Co-organiser of the International workshop on Planning and design of Observatories in Amana, US, 2007.
- Co-Convener of the session on Integrated Catchment Science and Management, of British Hydrological Society Meeting, 2010, BHS International Symposium, Newcastle.
- Co-organiser of the Special workshop on Decision Support Systems, at BALWOIS

2012. Ohrid, Macedonia.
- Editor of Special Issue in Journal of Environmental Engineering and Management, Volume 11, Issue 5, 2012, "Localized environmental services for all".
 - Editor of Special Issue in Journal of Environmental Engineering and Management, Volume 12, Issue 5, 2013, "Environmental research and technology".
 - Editor of IWA Water wiki, the on-line platform for the global water community to interact and share knowledge online.

Jack van de Vossenbergh

Senior Lecturer in Microbiology

- Member of Koninklijke Nederlandse Vereniging voor Microbiologie (KNVM, Royal Dutch Society for Microbiology)
- Member of American Society for Microbiology (ASM)

Jan Luijendijk

Programme Manager Capacity Development / Knowledge Manager

- Member of the organizing committee of the 5th Delft Symposium on Water Sector Capacity Development (29-31 May 2013).

Jan Willem Foppen

Associate Professor of Hydrology

- Served on the editorial board of the Journal of Environmental Quality.

Jochen Wenninger

Senior Lecturer in Hydrology

- Member of the American Geophysical Union (AGU).
- Member of the International Association of Hydrological Sciences (IAHS).
- Member of the European Geosciences Union (EGU).

Joop de Schutter

Programme Manager

- Chairman of the Board of the IGRAC Foundation; Member of the UNESCO-IGRAC Governing Board.
- Chairman of the Supervisory Council of the Water Footprint Network.

Joyeeta Gupta

Professor of Law and Policy in Water Resources and Environment

- Member of Climate Change Committee, International Law Association.
- Member of IHDP Earth System Governance Project.
- Member of the Global Water Systems Project.
- Member of Adviesraad Internationale Vraagstukken (AIV).
- Member of Raad van Toezicht, OXFAM NOVIB.
- Vice-president, Commissie Ontwikkelingssamenwerking (COS).
- Editor in Chief (since 2004) and Associate Editor (since 1999) of International Environmental Agreements: Politics, Law and Economics (IF 2.0), Kluwer Academic Publishers (since 2004), Springer.
- Member of Editorial Board of Review of European Community and International Environmental Law (RECIEL).
- Member of Editorial Board of International Journal of Water Governance, Baltzer Science Publishers.
- Member of Editorial Board of Catalan Environmental Law Journal, Revista Catalana de Dret Ambiental.
- Member of Editorial Board of Current

Opinion in Environmental Sustainability (IF 3.168), Elsevier.

- Member of Editorial Board of Carbon and Climate Law Review, Lexis.
- Member of Editorial Board of Environmental Science and Policy, (IF 2.978) Elsevier Science.
- Member of Editorial Board of International Journal of Sustainable Development, Inderscience Enterprise Ltd.

Jules van Lier

Professor of Environmental Waste Water Engineering

- Associated Editor of Water Science and Technology (since 2008).
- 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 Coordinatiegroep Universitaire Rechtspositie (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 (IWHA).
- Member of the Deutsche Wasserhistorische Gesellschaft (DWHG).

Luigia Brandimarte

Senior Lecturer in Hydraulic Engineering & River Basin Development

- Member of the IAHR.
- Member of the IAHS.
- 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.

Maarten Siebel

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,

Yaounde.

- Member of Netherland Association of Economists (since 1980).
- Member of Dutch Association of Compliance Officers (since 2002).
- Member of Erasmus University Knowledge Club (since 2008).
- Member of the Erasmus Graduate School (EGS).
- Member of the Commissie bezinning en toerusting PKN Heemstede, April 2014.
- Member Society for a Democratic Europe VDE (since 2007).
- Member of the European Institute for Comparative Urban Research, Euricur, Rotterdam (since 1994).
- Coordinator of the working group European Association of Development and Training Institutes.
- Member of Nederlandse Vereniging voor Afrika Studies (since 2000).
- Member of International Institute for Asian Studies in Leiden (since 2002).
- Member on the 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 Qinhuangdao, 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 Ecohydrology

- Served on the editorial board of the journal Ecohydrology and Hydrobiology.
- 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-economic 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 - AQUA (IWA journal).
- Member, International Water Association (IWA).

Shreedhar Maskey

Senior Lecturer in Hydrology

- Member of the Scientific Committee of the 8th International Conference of EWRA on Water Resources Management in an Interdisciplinary and Changing Context (26-29 June 2013, Porto, Portugal).
- Member of the International Scientific and Advisory Committee of the International Conference on "Climate Change, Water Resources and Disasters in Mountainous Regions: Building Resilience to Changing Climate" (27-29 Nov 2013, Kathmandu, Nepal).
- 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 Hydrosphere.
- Reviewer for several international journals: Climatic Change, HESS, Hydrological Sciences J., Hydrological Processes, J. Am. Water Resour. Asso. (JAWRA), J Flood Risk Mgmt., J. Hydrology, J. Hydroinformatics, J. Hydrologic Engg. (ASCE), J. Water Resour. Mgmt., J. Water Resour. Pl. Mgmt. (ASCE), Int. J. Climatology, Theor. Appl. Climatology, etc.

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 IWMI (CGIAR) research programme.
- Chair of the Boussinesq 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.
- Second editor of the book "Groundwater and Ecosystems" published by Taylor and Francis.
- Reviewer for ISI-indexed journals (Journal of Hydrology, Agricultural Water Management, Journal of Environmental Management, Agriculture, Ecosystems & Environment, Environmental Sciences).
- 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).
- Lead Organiser and Conference Moderator of the 5th Delft Symposium on Water Sector Capacity Development (29-31 May 2013).
- Co-Chair of the Scientific Committee of the 5th Symposium on Water Sector Capacity Development, Delft, May 2013.
- 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.
- High Level Panel Member at the Budapest Water Summit, 'Governing Water wisely with SMARTER SDGs', 8-11 October 2013, Budapest.
- Organizer of the Expert Workshop on Knowledge and Capacity Development in the Water Sector, 27-28 May 2013, UNESCO-IHE, Delft.
- Organiser 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 Nederlandse Stalige Moodle Vereniging (Ned-Moove).

Yasir A. Mohamed

Associate Professor of Water Resources Management

- Guest editor of special issue of the Journal of Phys. Chem. Earth.
- Guest editor of the Spatial Hydrology journal.
- Chair of the Sudan committee on the assessment of the impacts of the Ethiopian Grand Renaissance dam on Nile.
- Chair of the international conference on "New Nile perspectives", Khartoum, 2013
- Member of the regional steering committee of the Joint Multi-Purpose Project 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.

Annex 9

Projects

Tailor made training

Country	Contract title	Funding	Partners	Start	End
Armenia	ToT and Curricula Dev on IWRM	NUFFIC - NFP		27/Jan/14	30/Nov/14
Bangladesh	Training Program Government of Bangladesh on River Systems Management			01/Jun/12	04/Mar/13
Bhutan	Tailor-Made Training BTN-104 Mike 11	NUFFIC - NFP		20/Feb/13	05/Jul/13
Brazil	Workshop on flood forecasting in Brasilia	Dutch Ministry of Infrastructure and Environment	Ministry of I&M	01/Jun/12	18/Nov/13
China	Beijing municipality 12 days groundwater short course	W&W Holding B.V. - WmE		13/Jan/13	28/Jan/13
	Tailor-Made-Training Huai River Commission Staff	Dutch Ministry of Infrastructure and Environment		25/Jun/13	31/Jul/13
Egypt	Upgrade Hydraulic Engineering Course RTC Cairo	NUFFIC - NFP		04/Jul/12	30/Dec/13
Georgia	Environmental Protection in the light of GLObal Warming	NUFFIC - NFP		01/Feb/14	15/Dec/14
Ghana	Refresher Course 2013-Ghana	NUFFIC - NFP	Water Resources Commission (WRC), Ghana, Volta River Authority, Ghana	21/Jan/13	21/Dec/13
Honduras	Building Capacity in the Sanitation Sector in Honduras	NUFFIC - NFP		28/Feb/13	31/Oct/13
India	Tailor Made Training Course on River Basin Planning	International Bank for Reconstruction and Development		11/Nov/13	08/Jan/15
Indonesia	Integrated Flood Management II Module Development	DGIS - UNESCO-IHE Programmatic Cooperation		01/Oct/11	01/Apr/13
	SC on Urban and Rural Polder Development Indonesia	Dutch Ministry of Infrastructure and Environment	Municipality of DKI Jakarta, Palembang and Sriwijaya University	05/Oct/13	05/Oct/15
Iraq	Tailor-Made Training training software	UNDP		01/Mar/12	15/Jan/14
Myanmar	Delta Planning training workshop 2013 for alumni Asian Deltas in Myanmar / Burma	Dutch Ministry of Infrastructure and Environment	WU, Delta Alliance	20/Jun/13	01/Feb/14
Nepal	Building Flood Disaster Resilience of Cities	Stichting Nuffic	for Water Management and Climate Change, Tsinghua University, National Sun Yat-sen University and Kathmandu University	27/Jun/12	31/Jan/13
	Training on Improving the Functionality of Water Supply and Sanitation Facilities (NUFFIC/87/NPL)	NUFFIC - NFP		01/Jun/13	30/Sep/13
	Nepal Zero Waste	NUFFIC - NFP	Enclusolutions Zeist (part of Triodos)	22/Oct/13	31/Mar/14
Netherlands	TUT Water and Environmental Management Course	University of Oulu		15/Mar/13	14/Nov/13
	3rd international conference on research frontier in chalcogen cycle s&T	Internal Funding		15/May/13	30/May/13

Country	Contract title	Funding	Partners	Start	End
Netherlands	Development of the Solid Waste Management course	DGIS - UNESCO-IHE Programmatic Cooperation		01/Jun/13	31/May/16
	KULTURisk Summer School- Flood Risk Reduction: peception, communication, governance	European Commission - FP7		01/Sep/13	30/Sep/13
Rwanda	Recent developments in Water quality monitoring: optimization and modernization of surface water quality monitoring programmes	Stichting Nuffic	NUR	01/Jun/12	20/Dec/13
	Nuffic Refresher Course - WASH Service Delivery in Conflict Affected and Fragile States	NUFFIC - NFP		01/Jan/13	31/Dec/13
Sudan	Refresher Course 2013-Sudan	NUFFIC - NFP	HRS Sudan	26/Mar/13	27/Dec/13
Suriname	Drinking water monitoring and surveillance training	Inter-American Development Bank		21/Apr/14	21/Oct/14
Uganda	Refresher Course Kampala	NUFFIC - NFP	Makerere University	08/Mar/13	31/Dec/13
Various Countries	Erasmus Mundus Masters Course in Ecohydrology	European Commission	Univ. Lodz (Poland), Univ. Kiel (Germany), Univ. La Plata (Argentina)	01/Sep/10	31/Aug/17
	ADB Coral Reefs	Asian Development Bank		01/Nov/12	01/Aug/14
	Cap Development Program for Water and Environment Prosecutors and Investigators	LDK Consultants Engineers and Planners S.A.		17/May/13	31/Jul/13
	International Water Leadership Program	Internal Funding	IWC, Nyenrode	20/May/13	31/May/14

Research & development

Country	Contract title	Start	End	Funding	Partners
Argentina	Hydrogeochemistry characterization of the presence of arsenic of the Phreatic aquifer of Mataderos area- Buenos Aires City	11-Feb-13	1-Jul-14	DGIS - UNESCO-IHE Programmatic Cooperation	
Australia	Stakeholder Risk Perception Framework	15-Feb-10	31-Dec-13	Monash University	
	Climate Change Adaptation Research Grants Program	1-May-11	31-May-15	National Government	
	Storm Surge Forecast Model	1-Apr-13	31-Dec-17	Australian Research Council	University of Queensland (lead), University of New South Wales,
	Socio Technical Flood Resilience in Water Sensitive Cities	1-Jul-13	1-Jul-17	National Government	
Austria	Coupled stress-seepage numerical design of concrete lined pressure tunnels	15-Nov-10	15-Nov-14	Verbund	
Bangladesh	Managing Saltwater Intrusion impacts in Bangladesh, An Integrated approach based on salinity monitoring, modeling and stakeholder participation to improve water safety plans	1-May-13	30-Jul-14	IRC International Water and Sanitation Centre	CEGIS
	Workshop for proposal: Understanding the dynamics of flood risk to enhance resilience in urbanizing deltas	1-Jul-13	10-Sep-13	Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO)	
	Integrating the dynamics of social and biophysical processes to support delta management	1-Sep-13	31-Dec-14	DGIS - UNESCO-IHE Programmatic Cooperation	FHRCB, WUR, BUET
Bonaire, Sint Eustatius and Saba	Environment and Health characterization	1-Aug-11	31-Jul-14	Dutch Ministry of Infrastructure and Environment	
Bonaire, Sint Eustatius and Saba	Solid Waste Bonaire 1	26-Oct-12	1-Sep-13	Dutch Ministry of Infrastructure and Environment	TU Hamburg, Min of Infrastructure and Environment
China	Sediment Alluvial Process in Wave-current Boundary Layer	1-Dec-11	1-Dec-15	Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO)	
	Yangtze River Water Quality Early Warning Monitoring	22-Sep-13	1-Oct-13	Dutch Ministry of Infrastructure and Environment	
Colombia	Operational Flood Forecasting Warning and Response for Multi Scale Flood Risks	1-Oct-09	31-Dec-13	UNESCO-IHE Partnership Research Fund	DPAE, Cinara, Univalle, Deltares, NOAA
	Piloting Colombia's New IWRM Policy in Key Catchments (ColCuencas)	15-May-11	30-Jun-15	DGIS - UNESCO-IHE Programmatic Cooperation	Universidad Nacional de Colombia, Universidad del Valle, Colombian Ministry of the Environment and Sustainable Development, Association of Regional Autonomous Corporations (ASOCARS)
Côte d'Ivoire	Stability of Grand Bassam	21-Mar-12	15-Oct-13	National Government	
Cuba	Strengthening the Cuban Food Production and Aquaculture Sector.	1-Mar-12	31-Dec-15	European Commission - EuropeAid	ACPA, IIIA, CPAM, Univ. Zagreb
	Adapting to CC and Mitigating Water Scarcity by Innovative UWM in Cuba	1-Sep-13	31-Dec-16	European Commission - EuropeAid	CUJAE, INRH, IIIA
Egypt	Management Info on Water Quality in the Nile Basin	1-Sep-04	31-Dec-13	PoWER	
	Climate Change and Development Impacts on Nile Aquifer Salinization - Comparative Modeling Study	1-Oct-13	31-Dec-14	Dutch Ministry of Infrastructure and Environment	

Country	Contract title	Start	End	Funding	Partners
Georgia	Integrated Natural Resources Management in Watersheds of Georgia	1-Dec-10	30-Sep-14	United States Agency for International Development (USAID)	Florida International University, Ministry of Environment, United Water Company of Georgia
India	Enhancement of natural water systems and treatment methods for safe and sustainable water supply in India	10-Nov-11	30-Sep-14	European Commission - FP7	UJS, NIH, IITR, AU, AJD, KWB, BRGM, CEMDS, HTWD, CSIRO, IWMI ,
Mozambique	Drinking Water in Greater Maputo and in secondary towns, Mozambique	5-May-13	5-May-14	Dutch Ministry of Infrastructure and Environment	Eduardo Mondlane University
	Feasibility study to reconnect the Salone River to the main Zambezi: A Hydro-Geomorphological approach	23-Sep-13	22-Jun-14	WWF Eastern Kenya Country Off.	
Netherlands	Knowledge and Capacity Development, research under DUPC Policy Forum	1-Jan-08	31-Dec-13	DGIS - UNESCO-IHE Programmatic Cooperation	
	Interne & externe leerprocessen Ruimte voor de Rivier	1-Oct-10	31-Dec-13	National Government	
	Climate Proof Cities	4-Nov-10	31-Dec-14	Kennis voor Klimaat	TUD, Deltares, WUR, KWR
	Adaptation strategies in outer dike areas in the hotspot region of Rotterdam	30-Oct-11	6-Jun-13	Gemeente Rotterdam, Kennis voor Klimaat	UU, Arcadis, Deltares, VU, Cluster Stadsontwikkeling, Doepels Strijkers Architects
	Building UNESCO-IHE Spatial Data Infrastructure	1-Mar-12	31-Oct-14	DGIS - UNESCO-IHE Programmatic Cooperation	
	Long term Westerschelde Morphodynamics	23-Jul-12	14-Nov-13	Stichting Deltares	
	Coagulation strategies to control TEP fouling in RO systems	1-Oct-12	6-Dec-13		
	Development and Application of the Morphodynamic Model for the Ems Estuary	1-Nov-12	1-Nov-13	Christian-Albrechts-University of Kiel	
	Anticipatory Management as part of a regulatory package for water management	1-Mar-13	31-Mar-14	Hoogheemraadschap de Stichtse Rijnlanden	Hydrologic, partners
	Organization NCR Days 2013	1-Apr-13	30-Dec-13	Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO)	Netherlands Centre for River Studies
	Sulfate Reduction Dependant Anaerobic Methane Oxidation	31-May-13	31-May-15	European Commission - FP7	
	Zambezi-Tana Workshop	24-Jun-13	10-Sep-13	Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO)	
	Experienced Water Postdoc Fellowship Programme	1-Jul-13	30-Sep-15	European Commission - FP7	
	Role of biofilm-matrix components in the extracellular reduction and recovery of chalcogens	1-Sep-13	30-Jun-15	European Commission - FP7	
Netherlands Antilles (N/A)	Bel Air Flood Modelling Study	20-Mar-12	1-Feb-13	National Government	
Serbia	Arsenic Removal from Drinking Water	1-Aug-10	31-Jul-13	NL EVD Internationaal	TU Delft, Vitens, Haskoning, 2 Serbia Water Supply companies
Uganda	Grey water management in slums in sub-saharan Africa	15-Jul-13	31-Dec-14	UNESCO-IHE Partnership Research Fund	
United States	Modeling hydrodynamics, sediments and ecology in San Francisco Bay	1-Oct-11	1-Oct-14	USGS Pasific Science Drive	

Country	Contract title	Start	End	Funding	Partners
United States	SWAN Sustainable Water Action, Building research links between EU and US	1-Mar-12	29-Feb-16	European Commission - FP7	Centre National de Recherche Scientifique, Univ of Arizona, Univ of the West of England, Universidad de Sevilla, Bulgarian Acad of Sciences BAS-NIGG,
	Electrosynthesis of biofuels from gaseous carbon dioxide catalyzed by Microbes	1-Jun-12	1-May-15	European Commission - FP7	University of Massachusetts, Amherst, USA
	Modeling mud dynamics in South San Francisco Bay	1-Oct-13	31-Dec-15	USGS Pacific Science Drive	
Uzbekistan	Assessment of Applicability of an Equitable and Sustainable Financing Model	1-Oct-10	31-May-13	UNESCO-IHE Partnership Research Fund	AIT
Various Countries	Development of Hydropower Converter for Very Low Head Differences	1-Apr-08	6-May-13	European Commission - FP7	
	Rehabilitation technologies for degraded water systems presenting quantity and quality problems	15-Oct-08	30-Jun-13	European Commission - FP7	
	Risk-Based Operational Water Management for the Incomati River Basin	1-Jan-09	31-Dec-13	UNESCO-IHE Partnership Research Fund	Mondlane University, KOBWA
	Gridded Management System on Environmental Sustainability and Vulnerability	1-Apr-09	31-Mar-13	European Commission - FP7	WMO, C3I, SWAT, EAWAG, JRC, IISD, UN-IIST, CERN, CRS4, Univ. of Geneva
	Zero chemical UF/RO system for Desalination	1-May-09	6-Jun-13	NL EVD Internationaal	Evides, Membrane Technology Group, Vitens
	Permeable Reactive Barrier for Remediation of Acid Mine Drainage	1-Aug-09	20-Dec-13	UNESCO-IHE Partnership Research Fund	
	Optimization of Water Allocation Between Off-Stream and In-Stream Demands	1-Aug-09	31-May-13	UNESCO-IHE Partnership Research Fund	UNPAR
	Natural Systems for Wastewater Treatment and Reuse	1-Sep-09	1-Sep-13	UNESCO-IHE Partnership Research Fund	
	Adaptation to Global Change in Agricultural Practices (AGIoCAP)	21-Sep-09	30-Sep-13	UNESCO-IHE Partnership Research Fund	Asian Institute of Technology, Thailand; Ministry of Irrigation Nepal, Nepal
	Salt and Brackish Water as Second Quality Water for Urban Environment	1-Oct-09	13-Dec-13	Internal Research Fund	Birzeit Univ., KWR, Hong Kong
	Environmental Flows for People and Ecosystems in the Mara River Basin (MaraFlows)	1-Jan-10	31-Dec-14	UNESCO-IHE Partnership Research Fund	Egerton University, Kenya; University of Dar es Salaam, Tanzania; Florida International University, USA: WWF Kenya
	Impact of Untreated Wastewater on natural Water Bodies: Risk Assessment	1-May-10	30-Apr-14	UNESCO-IHE Partnership Research Fund	An-Najah University, Palestine; Birzeit University, Palestine ; Palestinian Water Authority
	Constructed Wetlands with Tropical Plants for the Treatment of Landfill Leachate	1-Oct-10	6-Dec-13	UNESCO-IHE Partnership Research Fund	Univeristy of Sao Paulo
	Merging Hydrologic Models and EO Data for Reliable Information on Water	1-Jan-11	31-Dec-13	European Commission - FP7	AUT, Hidromod, IST, CPTEC, JRC, Skysoft, UEM

Country	Contract title	Start	End	Funding	Partners
Various Countries	Knowledge-based approach to develop a prevention culture of water Risk	1-Jan-11	31-Dec-13	European Commission - FP7	UniBs, ECMWF, UniLj, WSL, CORILA, KCL, JRC, AAWA, UniBris, Willis
	Adaptive and integrative tools and strategies on natural resources management.	1-Mar-11	28-Feb-14	European Commission - FP7	
	Advanced Biological Waste-to-Energy Technologies	1-Jan-12	31-Dec-15	European Commission - FP7	
	Communities & institutions for flood resilience in Bangladeshi & Dutch Deltas	1-Mar-12	1-Mar-16	Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO)	IWFM, BUET, UCLA, NEAA,
	Community Based Earth Observatory of Water	1-Oct-12	4-Jun-16	European Commission - FP7	Sensor scope, disdrometrics, advanticsys, AAWA, EPFL, Hydroresearch Delft, Middlesex Univ. Sheffield Civil Protection
	ICT Solutions for Efficient Water Resources Management	1-Oct-12	30-Sep-15	European Commission - FP7	SIEMENS, TOSHIBA, CMR, ITALDATA, METROPOLITANA MILANESE, AQUATIM, ICCS, K&S
	Post-Graduate Research Programme on Adaptation to Climate Change in the Mekong - Phase 2	1-Nov-12	31-Dec-14	DGIS - UNESCO-IHE Programmatic Cooperation	
	Evaluation of Two Technologies for Heavy Metals Removal under Tropical Conditions	1-Feb-13	1-Jun-14	UNESCO-IHE Partnership Research Fund	
	DUPC Irrigation and Wetlands	5-Feb-13	31-Dec-14	UNESCO-IHE Partnership Research Fund	
	Water Metabolism approach for the Sugarcane Ethanol context: comparative analysis for São Paulo, Brazil and Valle del Cauca, Colombia	18-Mar-13	1-Oct-14	DGIS - UNESCO-IHE Programmatic Cooperation	
	DANube macroregion: Capacity building and Excellence in River Systems	1-Jun-13	31-May-15	European Commission - FP7	
	Risk based operational management for the Incomati River Basin Groundwater assessment	1-Jul-13	31-Dec-14	UNESCO-IHE Partnership Research Fund	KOBWA, UKZN, EMU
	NWO UDW Stakeholder workshop to develop full proposal	3-Jul-13	1-Feb-14	Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO)	
	Uncovering Hidden Dynamics of Water Service Provision in Slum Environments	22-Jul-13	31-Dec-14	DGIS - UNESCO-IHE Programmatic Cooperation	University of Amsterdam, University Eduardo Mondlane (Mozambique), Chancellor College (Malawi).
	Environmental Flows for People and Ecosystems in the Mara River Basin	25-Jul-13	31-Dec-14		
	Spate irrigation for rural economic growth and poverty alleviation II	25-Jul-13	31-Dec-14	UNESCO-IHE Partnership Research Fund	Meta Meta, Mekele, HRC
	International Water Quality Guidelines for Ecosystems	1-Aug-13	30-Jun-14	United Nations University (UNU)	
	Benchmarking for Pro-poor Water Services Provision II	1-Sep-13	31-Dec-14	DGIS - UNESCO-IHE Programmatic Cooperation	
	Transboundary data and rainfall prediction	1-Sep-13	31-Dec-14	DGIS - UNESCO-IHE Programmatic Cooperation	IWMI, CEGIS, IWFM, IITG, ECMWF

Country	Contract title	Start	End	Funding	Partners
Various Countries	Resilience-Increasing Strategies for Coasts	1-Nov-13	30-Apr-17	European Commission - FP7	
Virgin Islands, British	Road Town Flood Risk Assessment - BVI	21-Mar-12	31-Jan-13	National Government	
Zimbabwe	Nature and Outcomes of Decentralisation of the Urban Domestic Water Sector in Zimbabwe and South Africa	1-Jan-13	31-Jul-14	UNESCO-IHE Partnership Research Fund	University of Zimbabwe, University of the Western Cape

Policy development

Country	Contract title	Funding	Partners	Start	End
France	DUPC support to 6th World Water Forum	DGIS - UNESCO-IHE Programmatic Cooperation		22-Feb-12	14-Jun-13
Netherlands	The Water Channel The Next Wave	IFAD	MetaMeta, Nymphaea, The Water Channel	1-Jan-11	31-Dec-13
	Water related climate change adaptation: a south-north dialogue on knowledge	DGIS - UNESCO-IHE Programmatic Cooperation		1-Jan-11	30-Sep-13
	ADB 2nd Water Learning Week	Asian Development Bank		9-Apr-13	30-Jul-13
	Water Integrity Forum	Transparency International		3-Jun-13	7-Jun-13
	International Water Security and Peace Conference Peace Palace The Hague	DGIS - UNESCO-IHE Programmatic Cooperation	The Hague Institute for Global Justice, Water Gov Centre, UPeace, Clingendael	6-Aug-13	28-Feb-14
Palestine	Supporting Better Interaction and Impact between Scientific Research, Policy Making, and Practice in the Palestinian Water Sector (PWF)	DGIS - UNESCO-IHE Programmatic Cooperation		1-Jun-12	31-Mar-13
Philippines	ADB Urban Flood Tool	Asian Development Bank		30-Oct-12	31-Dec-13
Various Countries	Wetlands for Livelihoods	DGIS - UNESCO-IHE Programmatic Cooperation		23-May-12	30-Dec-13
	DUPC 5th KCD Symposium			5-Nov-12	31-Oct-13
	ADB 5th Delft Symposium	Asian Development Bank		1-Feb-13	30-Sep-13
	5th Symposium follow-up activities	Vitens Evides International		1-Jul-13	6-Dec-15

Institutional strengthening

Country	Contract title	Funding	Partners	Start	End
Algeria	Support to Water Sector Algeria	RVO	NABC (Lead), TUD, Leaf, WU, Deltares	30-Jan-12	30-Jun-14
Australia	Strengthening Educational Program to foster future water sensitive cities leaders	National Government		1-Oct-13	9-Jul-17
Bangladesh	Capacity Development of Water Sector Related Climate Change Induced Disaster Management and Adaptation	Wageningen University		1-Jul-11	31-Dec-13
	CD of Higher Education of Integrated Water Resources Management at CUET	NUFFIC - NICHE	WU, AIT	15-Aug-11	31-Dec-15
	Scenario Development in Integrated Water Resources Management: coping with future challenges in Bangladesh	Stichting Nuffic	WU, Deltares	1-Mar-13	28-Feb-17
	Sanitation Technical for Enterprises	IRC International Water and Sanitation Centre		1-Sep-13	1-Mar-15
Benin	Capacity development and the establishment of a water institute in Benin	NUFFIC - NICHE	Deltares, TUD	7-Jan-13	31-Dec-16
Brazil	Capacity Building HidroEx phase 3	National Government		2-Oct-12	10-Apr-13
	RC-2013-Brazil	NUFFIC - NFP	SABESP, IHE Alumni Brazil	4-Feb-13	31-Dec-13
China	Research fund for sustainability of water resources and environment in China, P.R.	Honor Power Foundation		8-Jun-07	31-Dec-16
	WQ-Taihoe	Ministry of Infrastructure and Environment		15-Oct-12	15-May-13
Colombia	Building with Nature - Solutions to coastal erosion in Colombia	Stichting Deltares		20-Nov-12	4-Mar-13
	Climate Adaptation Colombia - a tipping point analysis	RVO - PVW-III	Deltares (lead)	1-Jun-13	1-Aug-14
Egypt	NICHE EGYPT	NUFFIC - NICHE	MSM (lead)	1-Oct-11	1-Oct-15
	Waste Management El Gouna Egypt	TU Berlin		15-Nov-13	30-Nov-13
Ethiopia	Capacity Development of HEIs in Small-scale Irrigation (and Micro Irrigation) at Arba Minch university	NUFFIC - NICHE		11-Sep-13	31-Dec-17
Guatemala	NPT-Guatemala, Operation2010	Stichting Nuffic		1-Jan-10	20-Dec-13
Indonesia	Tailor Made Course on Integrated Lowland Development in Indonesia	Ministry of Infrastructure and Environment	Research Centre for Water Resources, Bandung, Indonesia	20-Feb-12	30-May-13
	NICHE IDN 142	NUFFIC - NICHE	PT IHE, Gender and Water Alliance, CKNet-INA	1-Jul-12	30-Jun-16
	Double degree integrated lowland development group 4	DGIS - UNESCO-IHE Programmatic Cooperation		4-Sep-12	1-Mar-13
	Integrated Urban Flood Management	Dutch Ministry of Infrastructure and Environment		1-Dec-12	31-Dec-13
	Short Course on Integrated Lowland Urban Drainage Development in Indonesia	Dutch Ministry of Infrastructure and Environment		5-Jan-13	31-Dec-13
	ADB MARE Asia Indonesia: Towards Greener Asian Cities	Asian Development Bank		30-May-13	31-Jul-15
	Capacity Building for High Standard Education and Training Programmes for the Water Supply Sector in Indonesia	NUFFIC - NICHE	Vitens Evides International, ITB, ITS	1-Jun-13	31-May-17
	Capacity Building for High Standard Education and Training Programmes for the WSS sector in Indonesia	NUFFIC - NICHE	Vitens Evides International, ITS, ITB	1-Jun-13	1-Jun-13

Country	Contract title	Funding	Partners	Start	End
Indonesia	Improving Water Sector Planning, Management and Development	Asian Development Bank	Deltares (lead), Pt Wiratman, HaskoningDHV	13-Sep-13	5-Dec-14
Kenya	Strengthening polytechnics to enhance delivery of quality edu programs in IWRM	NUFFIC - NICHE		1-Jan-12	31-Dec-15
	Capacity Buildin in IWRM at Graduate Level in Cooperation with KEWI	NUFFIC - NICHE		1-Jul-12	30-Jun-16
Mongolia	Strengthening IWRM in Mongolia for the Ministry of Nature and Environment (MNE)	Ministry of Foreign Affairs	Deltaris, Haskoning, The Water Centre	1-Mar-09	18-Jun-13
Mozambique	Introduction of Water & Sanitation curricula at the UEM	NUFFIC - NICHE	IRC	1-Jan-11	31-Dec-13
	University of Zambeze Capacity Building Project	NUFFIC - NICHE	Rijksuniversiteit Groningen	1-Jan-11	31-Dec-13
	Set up of FIPAG Academy for Professional Development	NUFFIC - NICHE	TU Delft, IRC, Hydroex, Rand Water, EMU	1-Oct-12	1-Oct-16
	Low Cost Monitoring and Capacity Building for the Lower Zambezi	Dutch Ministry of Infrastructure and Environment		1-Dec-12	28-Feb-14
	Water Planning Tools to Support Water Governance	RVO - PVW-III	Future Water (Lead)	1-Mar-13	30-Jun-14
	Towards a sustainable academic African sanitation network	NUFFIC - NICHE	WASTE, SEI, LSHTM	1-Sep-13	31-Aug-14
Netherlands	Secretariat Knowledge Platform Water for Development	DGIS - UNESCO-IHE Programmatic Cooperation		1-Jul-13	31-Dec-16
Russian Federation	Translation of BWWT book into Russian language	DGIS - UNESCO-IHE Programmatic Cooperation		1-May-12	1-Dec-13
Rwanda	Rwanda Integrated Water Security Program (RIWSP)	United States Agency for International Development (USAID)	Florida International University, Winrock International, Care, World Vision and Water Aid	1-Jun-11	30-Jun-16
	PPP for increased access to Sustainable Water Services in Rwanda	RVO - Fonds Duurzaam Water	EWSA, FEPEAR, Aquanet	1-Apr-13	31-Mar-17
South Africa	Enhancing Institutional Capacity in Water and Wastewater Treatment	Stichting Nuffic		1-Jan-10	31-Dec-13
	Capacity Building for Integrated Water Resources Management in South Africa	Wageningen University		15-Sep-10	15-Nov-14
South Sudan	NICHE South Sudan	NUFFIC - NFP	CINOP (lead), Alterra/ WUR	1-Jan-13	31-Dec-16
Uganda	The Economics for Ecosystem Diversity Workshop	UNEP		4-Oct-13	30-Jun-14
Various Countries	Capacity Building project at WASA/WITSS	European Commission - EduLink	WASA, University of the West Indies, COSTAAT, Univ. of Guyana	1-Jan-09	6-Jun-13
	Flood Hazard and Vulnerability Assessment	United Nations Development Program		1-Oct-10	31-Dec-13
	Sparte Irrigation for Climate Proofing, Rural Growth And Poverty Alleviation	DGIS - UNESCO-IHE Programmatic Cooperation	MetaMeta, Haramaya University, Sana'a University, HRS Min Irr and WR Sudan	1-Jan-11	31-Jan-15
	Bill & Melinda Gates Foundation	Bill & Melinda Gates Foundation		11-Jun-11	31-May-15
	EU Mundus Ecohydrology Admin	Universidade do Algarve		1-Sep-11	1-Oct-14
	Collaborative knowledge sub-network to improve groundwater resources management	USAID - Egypt	Univ Arizona, Oregon State Univ, FIU, IGRAC	1-Oct-11	10-Jul-13
	West Africa Water Supply, Sanitation and Hygiene Initiative	United States Agency for International Development (USAID)	FIU (Lead)	1-Nov-11	1-Nov-15

Country	Contract title	Funding	Partners	Start	End
Various Countries	Asian Development Bank	Asian Development Bank		1-Dec-11	30-Sep-14
	Matchin Facility for Local Water Sector Organisations	DGIS - UNESCO-IHE Programmatic Cooperation		1-Jan-12	31-Dec-13
	Translation of BWWT Book into Spanish language	DGIS - UNESCO-IHE Programmatic Cooperation		1-May-12	1-Dec-13
	Small Scale Education Development Projects Partner Institutes	DGIS - UNESCO-IHE Programmatic Cooperation		1-Jan-13	1-Dec-13
	GWOPA/UN-Habitat vand UNESCO-IHE in support of Water Operator Partnerships	DGIS - UNESCO-IHE Programmatic Cooperation		1-Jul-13	30-Jun-18
	International cooperation in the field of sustainable water and sanitation services	Vitens Evides International		1-Jul-13	30-Jun-16
	Climate Adaptation Mainstreaming through Innovation	EC - Interreg		2-Sep-13	31-Mar-15
Viet Nam	Improvement of Higher Education in Water Management in view of Climate Change in Vietnam	NUFFIC - NICHE		1-Jan-12	31-Dec-15
	NICHE Vietnam National University	NUFFIC - NICHE		1-Jan-12	31-Dec-15
	Assessment of Climate Change Driven Variations in the Wave Climate along the Coast of Vietnam	Dutch Ministry of Infrastructure and Environment	CSIRO, Hanoi University	1-Jan-13	31-Dec-14
	Climate Change and Drinking Water Supply in the Mekong Delta, Vietnam	RVO - Fonds Duurzaam Water		1-Jul-13	31-Dec-15
Zimbabwe	Management and Scientific Backstopping support Waternet 2013	WaterNet Trust		1-Jan-13	31-Dec-13
	Support to the WaterNet Secretariat in Harare, Zimbabwe	DGIS - UNESCO-IHE Programmatic Cooperation		15-Aug-13	31-Dec-13

Advisory services

Country	Contract title	Funding	Partners	Start	End
Bangladesh	Food security Impact evaluation - Case study Bangladesh	Ministry of Foreign Affairs	APE (Lead), MDF, Aid Environment, BRAC IGS, BRAC DI	30/Oct/13	15/Apr/16
Brazil	Modeling Water and Sediment Outflow of the Amazon River	Office of Naval Research Global		01/Apr/12	30/Apr/13
China	ADB Capacity Building of Chao Lake Management Authority	Asian Development Bank	Haarlem Hydraulics	01/Jun/12	30/Oct/13
	Shandong Groundwater Allocation and Protection	Asian Development Bank		04/Oct/13	04/Dec/14
	Contribution to China Europe Water Platform Conference in Paris	Dutch Ministry of Infrastructure and Environment		06/Dec/13	31/Jan/14
Colombia	Pilot Project Developing Forecasting Capabilities as a part of Integrated Risk Management in Colombia	Royal Netherlands Embassy	IDEAM	02/Jan/12	31/Jul/14
Ethiopia	Flood based farming for food security in arid zone of Africa_Case: Ethiopia	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH		01/Oct/12	30/Apr/14
India	ADB Tamil Nadu CC	Asian Development Bank		01/Jun/12	31/Dec/14
Indonesia	Advisory Services to the PMU of Jakarta Coastal Defence Strategy	Ministry of Foreign Affairs	RHDHV, REBEL Group, UIHE	01/Jan/13	31/Dec/14
	NWP Network Agreement Heun for Indonesia	Stichting NWP		16/Feb/13	31/Mar/14
Italy	Testing the use of artificial DNA as a tracer for determining travel times in karst system in the Upper Bussento catchment, Cilento&Diano Geopark (Italy)	C.U.G.R.I.		27/Mar/12	4/Mar/13
Mozambique	Socio-economic study and impact assessment on private water vendors in greater Maputo	Vitens Evides International		18/Jul/13	31/Mar/14
Nepal	ADB Groundwater Study Nepal	Asian Development Bank		29/Oct/12	01/Apr/13
Netherlands	SENSE VLE development	SENSE Research School		02/Jan/12	06/Dec/13
	Water Channel Program 2012-2015	DGIS - UNESCO-IHE Programmatic Cooperation		06/Jan/12	31/Dec/13
	Calibrating the Meuse Alarm Model during low flow conditions using artificial DNA as a tracer	WML		12/Mar/12	04/Mar/13
	Establishment of the Secretariat of the National Committee of UNESCO-IHP-HWRP	Dutch Ministry of Infrastructure and Environment		15/Oct/12	31/Aug/16
	ADB project on Standards and Initiatives for Water Leadership Development Programmes	Asian Development Bank		5/Mar/13	30/Jun/13
	Netherlands Environmental Agency study for UN-Habitat	PBL Netherlands Environmental Assessment Agency		15/Jul/13	15/Nov/13
	Uitwerking van het thema Vitaal en Kwetsbaar voor het Deltaprogramma Rijnmond-Drechtsteden	Dutch Ministry of Infrastructure and Environment		02/Sep/13	20/Dec/13
Rwanda	Development of National Water Resources Masterplan	National Government		01/May/12	01/Dec/14
Sao Tome and Principe	Sao Tome Climate Change adaptation options study phase 2	National Government		01/Jun/12	31/Dec/13
Sri Lanka	IWMI reviewer science quality and relevance	IWMI		01/Sep/12	30/Jun/13
Thailand	ADB Thailand Floods	Asian Development Bank	Stichting Deltaris	01/Feb/12	31/Dec/13
	ADB-FRAAYU	Asian Development Bank	UNESCO Bangkok, HAI, AIT	01/Mar/13	31/Dec/14

Country	Contract title	Funding	Partners	Start	End
United States	Workshop on Multi-layer Flood Risk Management comparing NL-USA approaches	Dutch Ministry of Infrastructure and Environment	Univ. Berkley	01/Mar/13	31/Dec/13
Various Countries	Flood Modelling Study of the Joint Stormwater Catchment (Belle-Plaine)	National Government		01/Apr/09	31/Dec/13
	Development of a Decision Support System for Selection of Sanitation Options	Asian Development Bank		01/Dec/09	31/Dec/13
	WAMEX-2	Asian Development Bank		01/Sep/11	31/Dec/14
	Capacity development for Performance Improvement of Water Utilities	European Commission - EuropeAid		01/Oct/11	31/Dec/16
	Satellite Based Water Monitoring and Flow Forecasting System in the Niger Basin	RVO		01/May/12	30/Jan/14
	ADB Groundwater Research	Asian Development Bank	Inst. Global Env. Strategies, AIT, Coord Comm Geoscience Progr in East and SE Asia	6/Sep/12	31/Dec/14
	IWRM Proficiency Certification	Asian Development Bank		1/Mar/13	1/Aug/13
	Supporting the National Water Legislation in South Asia and South East Asia	Asian Development Bank		1/Mar/13	31/Mar/14
	An unstructured wave propagation model	SPC - Secretariat of the Pacific Community		4/Oct/13	31/Mar/14
Viet Nam	Modeling the Mekong Delta at three different scales	Office of Naval Research		1/Jan/12	30/Sep/14
	Knowledge Inventory / Problem analysis Red River – Hanoi	Dutch Ministry of Infrastructure and Environment	Deltares	18/Sep/13	31/Jan/14
Yemen	Yemen Remote Sensing Scoping and Formulation mission	RVO - PVW-III		13/Jun/13	30/Sep/13
	Water Conflict Analysys Yemen	The Hague Institute for Global Justice		1/Nov/13	31/Mar/14

Annex 10

Partners

Cooperation agreement partners

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Birzeit University / Palestinian Water Authority
China University of Geosciences, China
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Danish Hydraulic Institute, Denmark
Deltares, 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, Deltares and UNESCO-IHE
International Hydropower Association
Water Research Institute of Mozambique and Deltares
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)
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Egerton University (Njoro, Kenya)
Exeter University, Exeter, UK
Ghent University (Ghent, Belgium)
Hanoi Water Resources University, Hanoi, Vietnam
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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
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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

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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