

STRATEGIC DIRECTIONS UNESCO-IHE IN 2020

UNESCO-IHE
Institute for Water Education



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PREFACE

Winds of change swept over the Institute over the past few years. This document summarizes the final results of the change process that was put into motion by the 2009 session of the Governing Board of UNESCO-IHE. Following that decision an Institute-wide open and transparent consultation process with the involved stakeholders started with a view to build a consensus as to what directions we should take given the enormous water-related challenges ahead.

Several task forces, electronic and agora-typed real-time consultations were held, and a group of distinguished personalities, the Friends of UNESCO-IHE, was brought together to examine the challenges and options ahead. Finally, two connected documents emerged and were submitted to the 2010 session of the Governing Board of UNESCO-IHE: this strategy document that envisages where UNESCO-IHE will be in the year 2020 and an implementation plan that draws a roadmap indicating how to get there. The Governing Board has examined the proposals and adopted the approaches envisaged. Two Resolutions were adopted and are annexed to this document. They are there to serve as a starting point to construct a UNESCO-IHE global campus in close cooperation with the UNESCO Members States as well as with our cooperating partners and welcomes others who wish to contribute to finding solutions through water education, research and capacity development.

The strategic plan developed comprises two major elements. Firstly, the geographical coverage of the Institute is to be expanded by establishing a global campus with interconnected elements in Asia, Latin America and Africa. Not only do most water challenges exist in these regions, but developing a global campus will enable UNESCO-IHE to better understand local needs and react more swiftly to requests coming from local partners and stakeholders. Secondly, expanding the programmes with issues of water governance, and extending our disciplinary fields including social sciences will enable the Institute to cover all principles relating to current and future water challenges.

We are looking forward to working with you to achieve these strategical objectives.



Professor András Szöllösi-Nagy, PhD, DSc
Rector

Delft, 28 June 2011



EXECUTIVE SUMMARY

Water is critical to the world's prosperity and environmental sustainability and is expected to grow in importance over the coming decades. Safe drinking water and appropriate sanitation are vital factors in human health and quality of life. Rapid social and environmental changes are taking place; more than half the world's population now lives in cities, and that percentage is only expected to grow. Changing consumption patterns, pollution of aquatic and land ecosystems, and increased competition among water users for limited water resources present global challenges that must be addressed.

■ CURRENT POSITIONING

UNESCO-IHE Institute for Water Education is well-placed to address these immense challenges; its expertise and track record in academic education, scientific research and capacity development speak for themselves. The Institute has the mandate and opportunity to play a global role in training a new generation of water leaders, facilitating the development of capable organizations and providing an enabling environment for well-informed decision-making that will improve water management practices. Appropriate response strategies are needed to further increase the impact of UNESCO-IHE in meeting the challenges and opportunities of the rapidly expanding global, regional and national needs of the water sector. This document presents a response strategy that will lead the Institute to the 2020s, i.e. a decade ahead.

Currently based in Delft, UNESCO-IHE Institute for Water Education is the largest international post-graduate water education facility in the world. Its highly motivated staff, good facilities and wide range of courses have trained and educated people from all over the world. The Institute offers a unique combination of applied, scientific and participatory research in water engineering combined with natural sciences and management sciences. The research conducted here feeds a constant flow of cutting-edge information into the education programmes, which in turn produce highly trained researchers who are poised to become world experts in water management.

Since its establishment the Institute has also played an instrumental role in building the capacities of water sector organizations in the South, not least by strengthening the efforts of other universities and research centres to increase the knowledge and skills of professionals working in the water sector. It has developed extensive networks and key partnerships worldwide, with a specific focus on developing countries and countries in transition. In the course of its work, UNESCO-IHE has identified a definite and strong need to develop, strengthen and maintain local and regional capacities to conduct professional training, academic education and research in water-related subjects. These local knowledge institutions are instrumental in sustaining sector organizations and developing the social and legal frameworks that are needed for effective water management.



GLOBAL CAMPUS

The need for a strong knowledge base and well-trained professionals is still growing exponentially, as evidenced by the number of partners asking UNESCO-IHE for assistance and partnership. In order to offer an appropriate response to the global needs in the water sector, UNESCO-IHE needs to intensify its geographic presence, particularly in the developing world where the most pressing water issues are, including locations in Africa, Asia and Latin America. It is envisaged, therefore, that regional UNESCO-IHE Category 1 institutes will be established all over the world, joining forces to create a global campus. Operating from these closely networked regional institutes, UNESCO-IHE will be in an even better position to understand local needs and respond more swiftly to requests from partners and local stakeholders. The global campus will seek to offer demand-responsive, innovative global water education programmes that are internationally appealing and accredited, while at the same time providing support and pursuing enhanced and effective cooperation with the partner institutions, creating new learning alliances for enhanced capacity development.

These regional institutes are envisioned as autonomous UNESCO institutes operating within a global campus, working in concert worldwide to train the water leaders of the future. The shared value system will include stringent quality control, while reflecting some of the regional specificities and local/regional knowledge systems. These values have earned the UNESCO-IHE Institute of Water Education its current reputation: inspiring academic leadership, a focus on international cooperation, and a sound entrepreneurial attitude. Each of the envisioned UNESCO Category 1 institutes in the various regions will be linked to the networks already active in those regions, integrating into the existing structures built up over the years and finding optimal synergies with new partnerships in support of capacity development at the levels of the individual, organization and enabling environment. The institutes in the global campus will be closer to local stakeholders, empowering the regions through knowledge transfer and helping them to build strong institutions and solve their own emerging water issues from an intimate, first-hand knowledge of the region.

The increased impact achieved by diversifying approaches and expanding to a global campus will be coordinated from Delft, maintaining the current momentum to maximum effect. The Delft-based Institute will play a pivotal role, relying on the experience it has built over the past years. As the global capacity for water education leads to a larger number of world experts, the pool of potential water leaders will expand to include a broader range of highly trained specialists with intimate knowledge of local problems in every region. The aim is to create strong, continent-based support in each area, tailoring the programmes to meet specific needs, as well as spreading and intensifying the expertise that has already been developed and the new knowledge generated by ongoing research. The global campus, as a closely networked organization, will therefore make it possible to match appropriate experts to specific problems, intensifying the activities of UNESCO-IHE and helping ensure the availability of relevant water expertise all over the world.

The UNESCO-IHE global campus will naturally seek cooperation with the Category II water centres and the UN World Water Assessment Programme (WWAP), led by UNESCO. In addition to a coordinating council that will facilitate strategic planning among the institutes in the network, it is envisioned that there will be coordinated management of the network through a permanent consultative body, which will have strong working relations with the UNESCO-IHE Governing Board. In the new structure, the Delft Institute will act as a hub, providing services and support in water education, research, capacity development and quality control. In cooperation with its fellow institutes as equal partners, the Delft Institute will work with its other cooperating partners and networks, helping them to achieve a world-class standard. By doing so, UNESCO-IHE will achieve a significantly increased global impact, initiating a change process that will facilitate its transformation from a leading institute to a leading network of organizations.



INTERNAL STRUCTURE

To achieve the ambitions expressed by UNESCO-IHE in water education, research and capacity development, the Delft-based Institute needs some fine-tuning in its internal structure as well in ways that will support its commitment to academic excellence and maximize its societal impact. The new organizational structure will be dynamic, responsive and self-learning, fostering innovation and creativity and providing inspiring and professional leadership. The process of internationalization that has been pursued since 2003 will continue, reflecting UNESCO-IHE's ambition to be a world-class centre of water education, research and capacity development. One of the important tasks at hand is to integrate the social components of water management into the programmes, ensuring that the engineers and researchers trained at the Institute not only have a thorough understanding of their field, but are also able to communicate their expertise effectively to people in other sectors. The resulting T-shaped profile will allow these future water leaders to use their expertise to maximum effect. For more details on the T-shaped profile see also the implementation plan.

The T-shaped profiles of staff will receive specific attention in this internal reform process, providing a broad range of knowledge without overlooking the need for in-depth expertise in specific fields. The Delft Institute will have three Academic Departments: Water Science and Engineering, Environmental Engineering and Technology, and Integrated Water Systems and Governance. This new structure facilitates distinction between academic fields, while creating new synergies in project activities. Interdisciplinary cooperation will be supported by the flexible structure of the units and the rotating leadership system. These changes play a vital role in fulfilling UNESCO-IHE's ambition to be a leading academic institute and intensify the global impact of the important work being done here.



POINT OF DEPARTURE: IT'S ALL ABOUT WATER!

Approaches to water management need to adapt in response to changing factors all over the world. The most important global driver that will essentially determine how water will have to be managed 40 years from now in a world inhabited by 9 billion people is population growth, as well as its spatial and temporal dynamics. All the other drivers that influence water management, such as land use changes, urbanization, food production, globalization, migration patterns, energy issues, changes in trade and other secondary drivers, are derived from population change.

Climate variability and climate change will be additional factors that will increase pressure on water systems, as well as uncertainty and risk, but they are clearly not the most critical drivers for the next decades. Each of these drivers, separately and in combination, will affect water cycle dynamics at different spatial and temporal scales that need to be better understood through research programmes. In addition, the relevant knowledge needs to be transmitted more effectively through education, training and capacity development programmes. Even if we had that knowledge, who would deliver and implement projects that will make water use sustainable? Who will be the agent of change? Who will shape fundamental improvements in developing countries that already face major water challenges? The answer to these questions lies in a growing awareness that a new generation of water leaders with a broad knowledge of issues needs to be trained and additional delivery capacities need to be established.

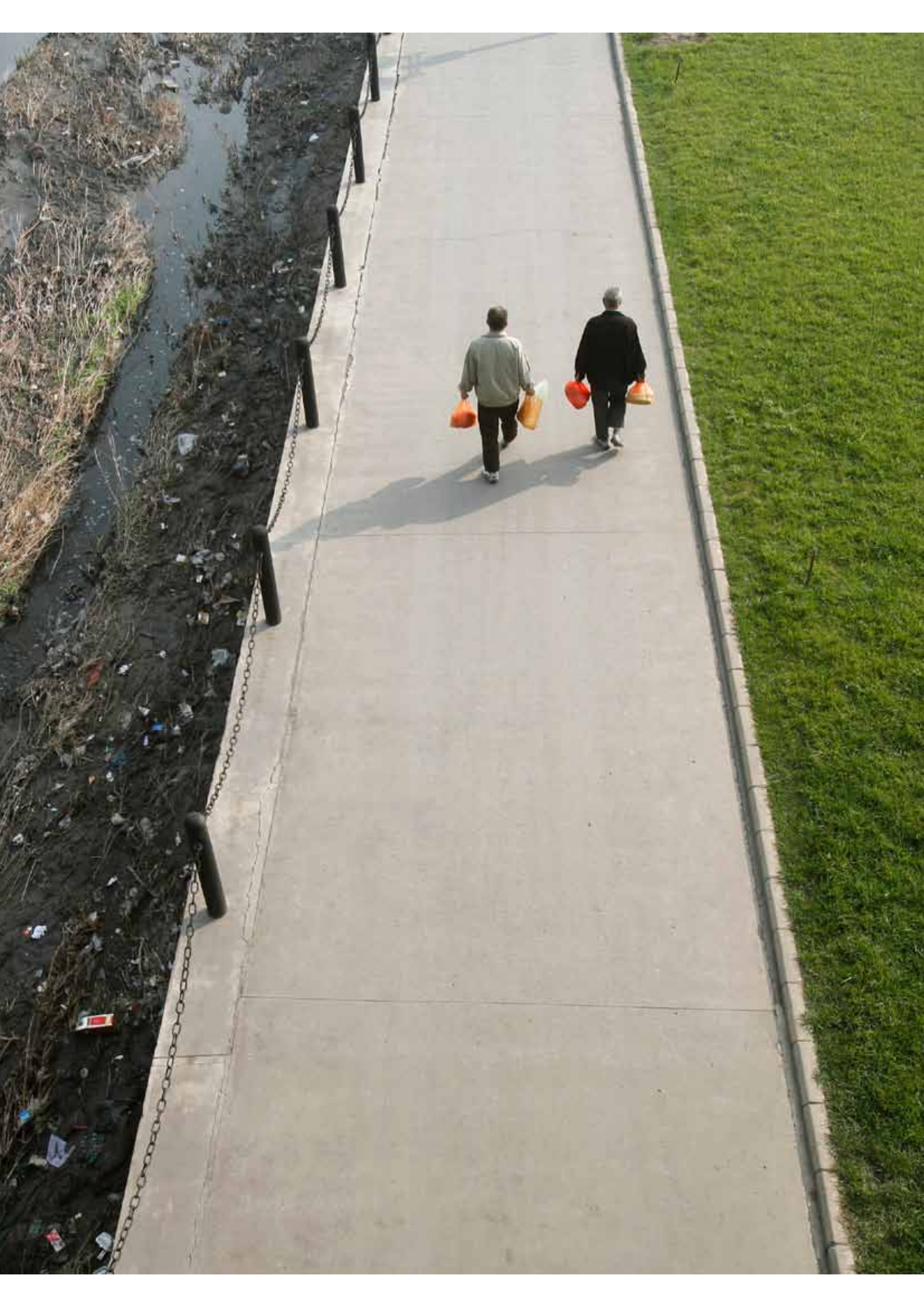
Water will be one of the most important issues of the 21st century. This indisputable fact has been confirmed at various World Water Fora and in the UN World Water Development Reports. As a result of various political processes, political awareness of water-related issues has increased very significantly over the past decade. Several governments have raised the profile of water on their national political agenda, and more are likely to follow. The United Nations is in the process of preparing appropriate response strategies in which water-related capacity building, awareness raising and education are key elements. UNESCO's International Hydrological Programme spearheads efforts concerning a pilot programme on "Water Education for All" within the framework of UN Decade on Educating for Sustainable Development, led and coordinated by UNESCO. Outside of

the UN system, many new players, partners as well potential competitors have also appeared on the scene as a net result of these changes.

This new playing field is full of opportunities. However, it is also likely to generate new risks for the Institute unless an appropriate response strategy is established to increase its impact. The high-level educational services provided by the Institute are needed more than ever, and in more places than ever. Rising to the challenge at hand and turning new risks into excellent opportunities will require a new strategy for UNESCO-IHE as a whole.

In line with the expanding educational needs in the water sector, the Institute needs to expand its response capacity. Growth is needed in research and education, organizational structure, the number of students admitted to MSc and/or PhD degree programmes, its physical facilities, and its human, financial and knowledge resources. UNESCO-IHE also needs to focus more on serving places beset by water problems. The Institute needs to increase its impact all over the world, with a particular focus on the developing world, where the overwhelming majority of water issues are concentrated. The challenge that the Institute now faces is how to manage that process of expansion.

Accordingly, this document articulates the response strategy that has been developed to further increase the impact of UNESCO-IHE in meeting the challenges of the rapidly expanding global, regional and national needs of the water sector in terms of human resources, relevant knowledge and institutional effectiveness.



UNESCO-IHE IN A CHANGING WORLD: CHALLENGES AND OPPORTUNITIES



VISION, MISSION AND GOALS

The vision and mission of the Institute were established soon after IHE became an integral part of UNESCO as a functionally autonomous Category I UNESCO institute in 2003. The UNESCO-IHE Institute for Water Education envisions a world in which people manage their water resources sustainably and in which all sectors of society, particularly the poor, can enjoy the benefits of basic water services. Its mission expresses a commitment to generating and sharing knowledge, training water leaders and building capacity all over the world. The vision and mission of UNESCO-IHE are robust enough to remain valid for many years to come.

As an institute of graduate and post-graduate education and research, UNESCO-IHE contributes to the education, training and research skills of professionals and assists in strengthening the capacity of sector organizations, knowledge centres and other institutions active in this field, with a focus on developing countries and countries in transition.

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);
- 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.



UNESCO-IHE IN 2011

EDUCATION

As the world's largest international graduate school in water, UNESCO-IHE is frequently referred to as the "Institute for Water Education". Education is at the very core of the organization, integrated into its institutional structure and its networks in the water sector worldwide. The education provided at the Institute has a very good reputation, particularly in the developing world.

UNESCO-IHE offers a wide variety of educational courses in the field of water. In addition to 4 MSc programmes and 15 specializations, a PhD programme, and more than 10 double-degree programmes, the Institute also offers a range of courses tailored to specific needs. Its excellent facilities at an attractive downtown location in Delft, The Netherlands, include modern and innovative learning tools, including smart boards, WiFi, remote access to all digital resources, notebooks for students, e-learning, video-conferencing, to name but a few. The modular structure of the curricula offers good opportunities for flexible learning and short courses.

The Institute has recently established a number of double-degree programmes with key partners in the South. Students come to UNESCO-IHE from all over the world, and return to bring new expertise to the complex water issues in their home countries. The multi-cultural environment inspires students, enhances their personal development, and enriches their approach to life and work.

RESEARCH

Post-graduate education requires research and innovation; it cannot be sustained without developing new knowledge. Research activities are key to maintaining the quality of the Institute and achieving its objectives for education and capacity development. Research by staff members, MSc and PhD students and post-doctoral researchers, very often in collaboration with partners, helps to bring cutting-edge knowledge, new ideas and approaches into the (virtual) classrooms. The research facilitated by UNESCO-IHE promotes an intellectual environment of inquiry, creativity, precision, innovation, constructive criticism, and healthy, science-based scepticism. The development of critical thinking is a key component in the Institute's approach.

MSc and PhD research topics are usually extremely relevant to current issues, addressing tangible water problems in today's world, and students can choose from a broad range of topics. MSc and PhD research supervision is intense and very high-calibre; the diverse backgrounds of the Institute's staff and partners allow for high-quality supervision of interdisciplinary topics. MSc and PhD research topics are often embedded in well-established research lines in accordance with contemporary developments in the field.

The Institute has good laboratory facilities of its own, as well as access to labs at other institutions located nearby (Delft University of Technology, Deltares). Practicing empirical, applied and participatory research, UNESCO-IHE occupies a research niche in water engineering combined with natural sciences and management sciences. The scientific quality, productivity and relative impact of most UNESCO-IHE cores are good, and a number are very good.



CAPACITY DEVELOPMENT

Through capacity development projects, the Institute strengthens the education and research capacity at its partner institutions (academic and non-academic), enabling easier access to water education and research programmes. By combining these activities with improved contextual knowledge, the Institute has been able to increase its overall impact. Consequently, UNESCO-IHE is strengthening the water sector as a whole through capacity development at three essential levels: individual, organizational and institutional. In that regard, policy advice and advisory services are regularly provided to sector organizations, such as government ministries, water utilities and basin organizations. The Institute has well-established ties to Dutch water management authorities and the history of water management in the Netherlands.

PARTNERSHIPS AND NETWORKS

Working within the framework of a partnership, and actively promoting knowledge networks and knowledge sharing, is an overarching principle in all the activities UNESCO-IHE undertakes. This key strategic principle will provide excellent opportunities for the Institute to expand its impact. UNESCO-IHE is committed to continued participation in its current partnerships and active development of potential new partnerships.

STAFF

UNESCO-IHE and its highly motivated international staff have extensive experience in tertiary education, particularly in the context of developing countries. An extensive network of guest lecturers ('world experts as teachers') and well-established partnerships all over the world guarantees lively interactions between learners, teachers and practitioners. The guest lecturers ensure a healthy balance between theoretical approaches and practice-based feedback.

The Institute's research capacity has increased significantly over the last few years, accompanied by a large and very lively research programme with nearly 140 PhD researchers, more than 20 post-doctoral researchers and many visiting scientists. This flourishing research environment also ensures the integration of science-based education in the MSc programmes.



NEW CHALLENGES: TOUGH QUESTIONS ARE EMERGING

CHANGING GLOBAL DYNAMICS

Water is critical to the world's prosperity and environmental sustainability and is expected to grow in importance over the coming decades. It is obvious that water is the element that connects all the MDGs, from poverty alleviation to public health. This strategic plan recognizes that meeting the global challenges requires a strong foundation of knowledge to enable well-informed decision-making and improve water management practices.

Water resource managers have struggled to respond to rapid social and environmental changes at all levels and scales during the past three decades. Urbanization and the rapid and unprecedented growth of slum areas, in combination with changing consumption patterns and the increasing demand for food and energy, caused major land use changes and likely contributed to increased climate variability. More than half of the world's population now lives in cities and the proportion of urban dwellers is growing, making it more difficult to meet many of the MDGs.

The demand for natural resources and energy has increased, as has the associated pollution of aquatic and land ecosystems. Increased competition among water users for limited water resources triggers conflict and exposes inequities among people. This is particularly true for trans-boundary river basins and aquifers, which support nearly 40% of the human population. These drivers, and the constraints limiting our ability to adapt to them, affect the developed and developing world in different ways and force the global community to reconsider how water resources should be managed in the future.

KEY WATER MANAGEMENT ISSUES

A number of water-related development questions are relevant to the mission of the Institute over the next 10 years. Safe drinking water and appropriate sanitation are huge problems in the developing world, with repercussions that affect human health and the quality of life. Effective forecasting tools and risk mitigation strategies need to be developed and implemented to address natural hazards such as floods and droughts. Global change, and climate change/variability in particular, poses increased uncertainty and new risks that will require appropriate responses. The projected personnel shortages and staff successions in developing countries and countries in transition must be addressed in a life-long learning context that effectively transfers existing knowledge and generates new knowledge.

Addressing these and related questions will require sound knowledge about the state of water resources at various levels and scales, and of the best water management practices and technologies applicable to the various climatic and socio-cultural regions in the world. It will require the effective use of scientific, cultural and traditional sources of knowledge. Innovation based on research, data, information collection, modelling and analysis will be required to close knowledge gaps and develop improved technologies, management and governance practices. Finally, it must be ensured that knowledge is properly managed and readily available to decision-makers and the water sector to support their efforts to achieve effective water management.



CREATING OPPORTUNITIES: RESPONDING TO THE CHALLENGES AHEAD

MANDATE AND DUTY

Knowledge and appropriate capacity are key to effectively solve water issues at all scales and in all parts of the world. Unless humanity is equipped with the knowledge and capacity needed to manage water sustainably, there is no way it will reach the MDGs and go beyond them.

UNESCO-IHE has, therefore, a key task to transfer knowledge and research in contributing to achieve the world's development goals over the next decade. We must all recognize that there is a definite and strong need to develop, strengthen and maintain local and regional capacities to conduct professional training, academic education and research in water-related subjects.

The Institute, as a UNESCO entity, has both the mandate and duty to play a global role in addressing these immense challenges. It is well-placed to do so, due to two strategic advantages:

1. UNESCO-IHE has proven expertise and a good track record in providing academic education, conducting scientific research, and carrying out capacity development activities.
2. UNESCO-IHE already works in partnership with other knowledge centres and institutions in the water sector all over the world to import specific expertise that is unavailable at the Institute and to export the common pool of knowledge to those aspiring to acquire it.

The Institute therefore aims to offer innovative, internationally appealing global water education programmes, while at the same time pursuing enhanced and effective cooperation with its partner institutions. New international learning alliances and enhanced e-learning distance education systems will be created. E-learning in various languages will be promoted based on the unique experience developed by the Institute and with its partner institutions. Life-long learning in an international context will be actively promoted. The outreach of the Institute will be strengthened significantly in order to meet global needs.



OUTREACH: A NEW INSTITUTIONAL STRATEGY FOR GREATER IMPACT

GOING GLOBAL

In order to effectively implement the proposed strategies, a more dynamic, flexible, adaptive, efficient and global organizational structure needs to be put in place that will be capable of responding to the emerging and growing regional and global needs. Therefore, a new institutional structure is envisioned that is based on a combination of external and internal reforms.

Externally, the geographical presence of UNESCO-IHE will be expanded by creating similar regional institutes in areas where the main water issues are. These regional institutes, together with the current Institute, are envisaged to form the UNESCO-IHE Global Campus. Internally, the current delivery structure of the Delft facility will be re-visited and fine-tuned where necessary to meet new challenges. The new structure will be based on inspiring academic leadership, international development orientation, and a sound business attitude.

The new institutional strategy and structure is expected to stimulate creativity, interdisciplinarity, inter-cultural dialogue, regional cooperation and new initiatives. This will be accomplished by an expanded staff based on strong motivation and identification with the mission of UNESCO-IHE.



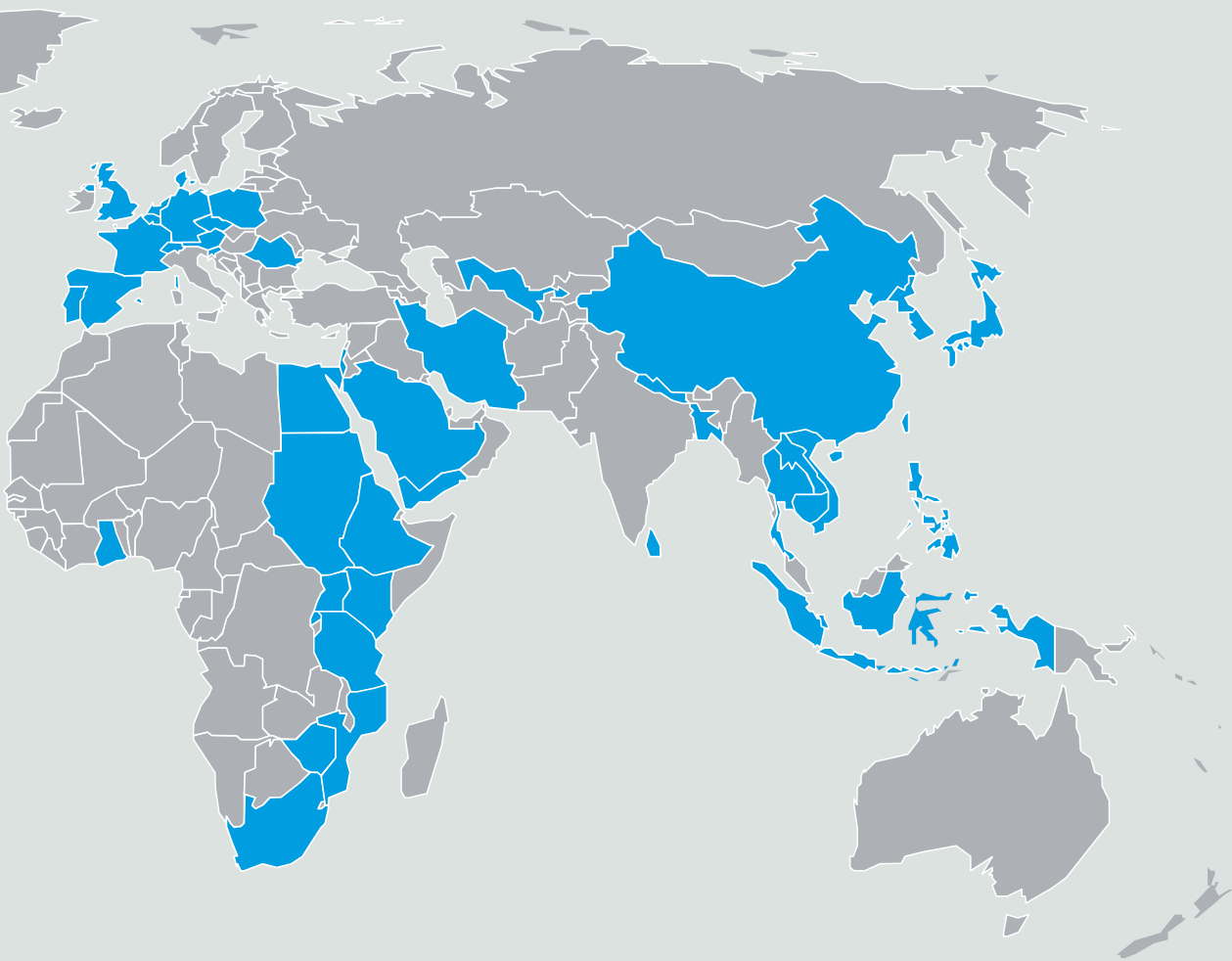
PARTNER INSTITUTES WITH MAJOR COLLABORATIVE PROGRAMMES

AFRICA

- Ain Shams University, *Egypt*
- Egyptian Ministry of Water Resources and Irrigation, *Egypt*
- Hydraulics Research Institute, *Egypt*
- Addis Ababa University, *Ethiopia*
- Haramaya University, *Ethiopia*
- Kwame Nkrumah University of Science and Technology, *Ghana*
- Egerton University, *Kenya*
- Victoria Institute for Research in Development, *Kenya*
- Eduardo Mondlane University, *Mozambique*
- National University of Rwanda, *Rwanda*
- Cap-Net, *South Africa*
- University of Kwazulu Natal, *South Africa*
- University of Western Cape, *South Africa*
- University of Khartoum, *Sudan*
- University of Dar-es-Salaam, *Tanzania*
- Makerere University, *Uganda*
- National Water and Sewerage Corporation (NWSC), *Uganda*
- University of Zimbabwe, *Zimbabwe*
- WaterNet Trust, *Zimbabwe*

ASIA

- Center for Environmental and Geographic Information Services, *Bangladesh*
- Institute for Water Modeling, *Bangladesh*
- Mekong River Commission, *Cambodia, Laos, Vietnam, Thailand*
- Beijing Normal University, *China*
- China Ministry of Land and Resources, *China*
- China University of Geosciences, *China*
- Hohai University, *China*
- Nanjing Hydraulic Research Institute, *China*
- Yunnan University, *China*
- Yangtze Estuary Waterway Administration Bureau, *China*
- Capacity Knowledge Network Indonesia (CKNet), *Indonesia*
- Universitas SriWijaya, *Indonesia*
- Iran Ministry of Energy -Regional Centre on UrbanWater Management, *Iran*
- Power and Water University of Technology, *Iran*
- International Centre for Water Hazard and Risk Management (ICHARM), *Japan*
- Korea Water Resources Corporation, *Korea*
- Ministry of Water Resources, *Nepal*
- Birzeit University, *Palestine*
- Palestinian Water Authority, *Palestine*
- Asian Development Bank, *Philippines*
- King Abdullah University of Science and Technology, *Saudi Arabia*
- International Water Management Institute, *Sri Lanka*
- National Chiao Tung University - Taiwan International Institute for Water Education, *Taiwan of China*
- Water Resources Bureau Taipei, *Taiwan of China*
- Asian Institute of Technology, *Thailand*
- Interstate Commission for Water Coordination of the Aral Sea Basin, *Uzbekistan*
- CanTho University, *Vietnam*
- National Water Resources University, *Vietnam*
- Sana'a University, Water Education Centre, *Yemen*



EUROPE

- Austrian Academy of Sciences, *Austria*
- Mondsee Institute of Limnology, *Austria*
- Ghent University, *Belgium*
- Institute of Chemical Technology Prague, *Czech Republic*
- Danish Hydraulic Institute, *Denmark*
- SUEZ Environnement, *France*
- Deutsche Wasserhistorische Gesellschaft (DWhG), *Germany*
- Technical University of Dresden, *Germany*
- University of Kiel, *Germany*
- Business Centre for Hydrology Unie van Waterschappen, *The Netherlands*
- Delft University of Technology, *The Netherlands*
- Deltares, *The Netherlands*
- International Spate Irrigation Network, *The Netherlands*
- International Water Association (IWA), *The Netherlands*
- Ministry of Infrastructure and the Environment, *The Netherlands*
- Netherlands Environmental Assessment Agency, *The Netherlands*
- United Nations Environment Programme-Global Programme for Action, *The Netherlands*
- VU University Amsterdam, *The Netherlands*
- Wageningen University, *The Netherlands*
- Water Board 'Stichtse Rijnlanden', *The Netherlands*
- Women for Water Partnership, *The Netherlands*
- University of Lodz, *Poland*
- University of Algarve, *Portugal*
- Politechnica University Timisoara, *Romania*
- Dundee University, School of Natural Resources, Law, Policy and Management, *Scotland*
- University of Ljubljana, *Slovenia*
- Technical University of Catalonia, *Spain*
- Swiss Federal Institute of Technology, *Switzerland*
- World Wide Fund for Nature – International, *Switzerland*

LATIN AMERICA AND THE CARIBBEAN

- Universidad Blas Pascal, *Argentina*
- University of la Plata, *Argentina*
- Saneamento Basico do Estado de Sao Paulo, *Brazil*
- UNESCO-HidroEx, Minas Gerais, *Brazil*
- Universidade de São Paulo, *Brazil*
- Universidade Federal de Minas Gerais, *Brazil*
- University of Brasilia, *Brazil*
- Universidad del Valle, *Colombia*
- University for Peace, *Costa Rica*
- Instituto Nacional de Recursos Hidraulicos, *Cuba*
- Universidad Politecnica de la Habana, *Cuba*
- Instituto Mexicano de Tecnologia del Agua, *Mexico*
- Technological University of Panama, *Panama*
- University of the West Indies, *Trinidad and Tobago*

NORTH AMERICA

- Army Corps of Engineers, *USA*
- The Coca-Cola Company, *USA*
- Florida International University, *USA*
- University of Nebraska, *USA*
- University of South Florida, *USA*
- World Bank – Global Development Learning Network, *USA*

TOWARDS A GLOBAL CAMPUS: REFORMING EXTERNALLY



UNESCO-IHE LATIN AMERICA AND THE CARIBBEAN

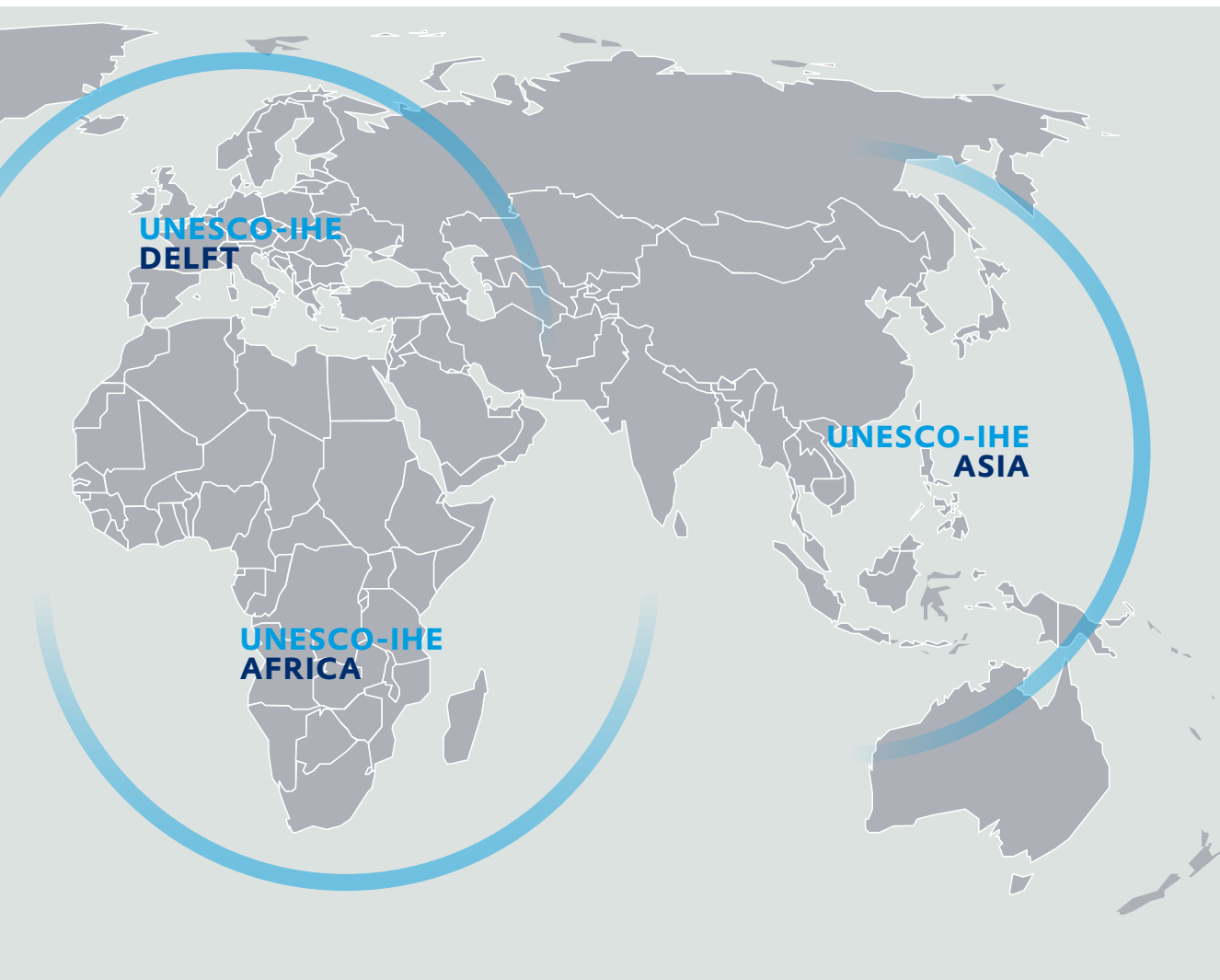
POWER OF COOPERATIVE NETWORKS

With the institutional transition from IHE to UNESCO-IHE in 2003, the Institute was assigned the enlarged mandate and task to play a lead role in capacity development for water worldwide. At the same time, to increase the Institute's impact and efficiency, the idea was adopted to move the operational structure of the Institute towards facilitating the creation of a truly global water education and research partnership: The Global Partnership for Water Education and Research (PoWER) was created. The development of joint educational activities with partner institutes has consequently become one of the cornerstones of the UNESCO-IHE policy. These partnerships aim to serve the water sector of the world with good-quality, relevant education, training and research at a scale appropriate to the demands of the sector. Partnership development is also at the core of the Netherlands DGIS / UNESCO-IHE Programmatic Cooperation (DUPC) where partners provide the capacity, the inputs and the inspiration that is needed to achieve results on the ground. UNESCO-IHE has created many cooperative networks and partnerships, which proved very effective over the years in joint research, education and capacity building efforts.

The UNESCO-IHE PoWER has gained solid ground, as was clearly demonstrated by the Partnership Conference on Joint Educational Programmes in July 2010. These programmes have gradually evolved into partnerships based on credit transfer systems between two or more institutes on the basis of shared responsibility in delivering part of the educational programmes. By increasing the number and quality of joint education programmes as well as the number and quality of joint research and capacity development programmes with partners, the Institute is gradually transitioning into a global campus for water education and research.

The Institute has reached the limits of what it can provide in Delft. The 8/10 syndrome reflects this: eight out of ten qualified candidates were rejected on average over the past few years. This represents 1800 qualified students lost annually. The lack of sufficient resources, including physical space, does not offer much room to expand. As matters stand, the Institute cannot expand its impact in its current location to accommodate the needs of that 80% of young professionals who applied but could not be accepted.

Clearly, the 1800 aspiring young professionals a year cannot be brought all to Delft at the same time. Instead, we have resolved to do it the other way around: bring Delft, or rather the spirit and the water knowledge of Delft, to the world. The Institute will maintain a particular focus on the developing world, where most of the pressing water issues are.



NETWORKED MIRRORS

This is envisaged to be accomplished by creating mirrors of the Delft-based UNESCO-IHE Institute for Water Education in those regions in Africa, Asia and Latin America, working in close cooperation with the potential host country governments interested. The Institute envisions a global campus of nearly identical institutes that are connected in many ways in a network driven by a unity of purpose. Rather than creating identical clones of the Delft-based UNESCO-IHE Institute for Water Education, these institutes will reflect some of the regional specificities and local/regional knowledge systems developed in the region, while remaining firmly connected to the strict quality control developed by the Institute in awarding degrees and various diplomas.

The Category I UNESCO regional institutes in the various regions will be integrated into a global campus, incorporating the networks that are already active there. The regional institutes in the global campus will have the opportunity to find optimal synergies to strengthen each other to serve the regional needs effectively. The Institute aims to ensure stability amongst the existing partner networks that were built over the past decades with a view to making them more sustainable. Water-related UNESCO Category 2 Centres, UNESCO Chairs and associated research and development centres around the world are also expected to become key partners in this global partnership, each contributing to the water education, research and capacity development outputs of the network in their own right.

Alongside the global campus and the existing networks, there is also the vast network of the UNESCO-IHP Category II water centres, which function in accordance with national laws and therefore, unlike the Category I institutes, are not an integral part of UNESCO. These two networks provide an enormous capacity that could significantly contribute

to water education, science and technology development and transfer at a regional level. Cooperation with the Category II water centres and the UN World Water Assessment Programme (WWAP), led by UNESCO, will therefore be indispensable. The Delft-based Institute will act as a hub in providing educational, research, capacity building and quality control services and support to those centres through effective cooperative schemes. Working as equal partners with the regional institutes, and working closely with other cooperating partners and networks, the Institute will achieve a significantly greater global impact.

The strategic goal for 2020 is for UNESCO-IHE to be a global network of world-class, high-impact international water knowledge institutions, constituting the global UNESCO-IHE campus that addresses the needs of present and future generations in the field of water education, research and sustainable development. It is envisaged that education, research and training activities will be implemented in cooperation with partner institutions through effective student and content exchange programmes. This global campus will increasingly reflect the regional representation and connectivity on the ground and, consequently, improve the quality of all related activities and products.

UNESCO-IHE Institutes will emerge on the basis of outstanding and sustained academic performance and will be the nucleus of the wider Global Partnership for Education and Research (building on the present PoWER network) that will continue to develop over the years. The network of UNESCO-IHE Global Campus partner institutes will apply innovative, learner-centred didactical approaches to produce graduates with competency profiles that effectively balance scope of knowledge with depth of expertise (T-shaped profile) under strictly agreed quality control.



GLOBAL CAMPUS: EFFECTIVE COORDINATION

The UNESCO-IHE Institutes will have an effective global governance structure to ensure efficient coordination amongst the regional institutes, although each will have a high degree of functional autonomy. The overall aim is to coordinate existing water education and research capacities (specialist knowledge, education and research funding, courses developed, students admitted) and to create new ones responding to real demands.

Although the regional institutes in the Global Campus will be autonomous in functioning and funding, a workable mechanism has to be in place that ensures effective coordination:

- Coordinated strategic planning amongst the cooperating institutes forming the core of the UNESCO-IHE global campus, including outreach to the wider Partnership Network. Inter-institute coordination will be the responsibility of a UNESCO-IHE Coordinating Council, which could e.g. comprise the Chairpersons of the Governing Boards of the individual UNESCO-IHE regional institutes. This Council, chaired on a rotational basis by the Chairpersons of the UNESCO-IHE institutes, should be effective, practical and non-bureaucratic, providing a communication channel amongst the Governing Boards of the individual UNESCO-IHE institutes at a strategic level. Coordination could include developing joint long-term and medium-term strategies, harmonizing annual plans, developing strategic business plans for cooperative fundraising, designing staff and student exchange programmes, planning and supervising joint research programmes, and establishing joint publication and communication policies.

- Coordinated management of the network of regional UNESCO-IHE Institutes through a permanent consultative body, such as the UNESCO-IHE Rectors Conference, with rotating chairpersons and regular meetings (e.g. an annual meeting and quarterly video-conferencing sessions). The UNESCO-IHE Rectors Conference will maintain excellent working relations with the existing group of leaders of the PoWER network. Members of the Rectors Conference will be subject to a code of conduct stating the shared objectives, agreed conditions and shared rules and regulations for cooperation.
- Coordinated management and organization of joint education, training and research activities under contracted conditions with regard to educational content offered, cost-sharing liabilities, shared business opportunities, quality insurance and several other issues that affect the day-to-day operations of the institutional network. One key condition here is that the partners are autonomous and have no financial liabilities to each other.

It should be noted that the external reform and expansion of the current UNESCO-IHE Institute for Water Education would also contribute significantly to building peace and stability through internationalized water education. What UNESCO-IHE does best is educating future leaders in water, through formal degrees for regular students or through specific training of ministerial cadres from developing countries and countries in transition. Within the next half-century, our planet will be home to over 9 billion people. It has never been more important to spread the spirit and practice of democracy, transparency, human dignity, openness, solidarity, cooperation over shared resources and professionalism. Water connects and does not



UNESCO-IHE signed a vision statement on strengthening collaboration in water education, research and capacity development with 18 key education and research institutes in higher learning from around the world. High-level representatives from partner institutes assembled in Delft in July 2010, to discuss the possibilities and opportunities for setting up joint educational programmes at the Master's level in the water sector. The development of joint educational programmes with partner institutes is one of the cornerstones of UNESCO-IHE's policy to serve the world water sector with good quality, relevant education and training at a scale required by the sector.

divide; joint global water education programmes through student and faculty exchange offer the best means to build peace around and for water. Empowering the regions through knowledge transfer will help them solve their own emerging water issues in a way that nobody else can.

UNESCO-IHE's present overall vision, mission and goals are well suited to respond to the challenges ahead and do not require any major adjustments to be valid for the global UNESCO-IHE campus. There is, however, a need to clearly define, reaffirm and update the values and organizational structures underlying our educational, research and capacity development activities as needed, with a view to identifying the implications that these values and structures will have for concrete action during the coming decade.

Transitioning away from the current strategy of 'one Institute in Delft', the term UNESCO-IHE will from now on refer to this larger global campus of autonomous regional UNESCO-IHE Institutes that mirror one another in certain ways, yet act as autonomous entities connected through the same value system, including stringent quality control. The Delft facility will be referred to subsequently as 'the Institute'.

The main strategic objective of the global UNESCO-IHE campus is to increase the delivery capacity of UNESCO-IHE through improved access to high-quality water and environmental education, training and research opportunities by a significantly higher number of participants, at a competitive cost. The global campus network should be able to offer an evident added value, such as maximum international exposure of the future water leaders for the benefit of developing countries and countries in transition. Education and training programmes are to be flexible, allowing students to choose where to do which part of their studies, within an effective and harmonized credit exchange system working towards a degree. Participation in joint projects by researchers and teaching staff of the global campus will be facilitated, as there should be ample opportunities for staff and student exchange programmes. The overall objectives are maximum exposure, shared scientific interest, enhanced quality and the sharing of business opportunities in the global education, training and research market for water and environment.



CREATING SYNERGIES

UNESCO-IHE currently carries out three types of activities that complement and reinforce each other, and are thus difficult to isolate:

1. post-graduate education,
2. scientific research, and
3. capacity development.

The challenge is to generate maximum synergy amongst all three. It should be noted that this unique trio goes far beyond the traditional role of university graduate schools. A very specific feature of the Institute is its link to real-life water issues in the developing world. The research programme that is applied is, by its very nature, constantly refreshed by an influx of new real-life issues that need to be solved, instead of simply following self-generated, and often therefore self-fulfilling, academic research agendas.

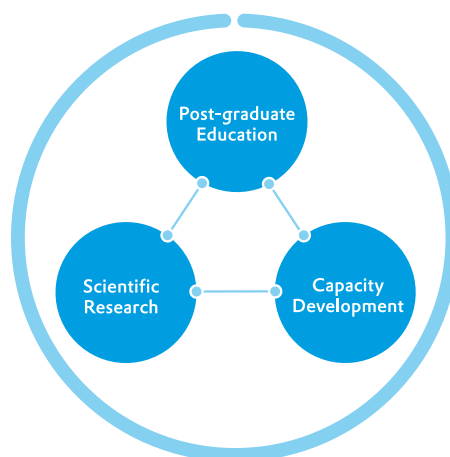
Consequently, the research activities are important to maintain the quality and achieve the objectives of the Institute's educational and capacity development activities. Research by the staff, students at all levels, and partners helps to bring cutting-edge ideas and approaches into the (virtual) classrooms and promotes an intellectual environment of inquiry, creativity, innovation and critical thinking.

Research skills are among the fundamental competencies UNESCO-IHE seeks to impart to MSc and PhD students, and other 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 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 coming from the more developed countries. Furthermore, stronger research cooperation within universities in the developing world improves and enhances educational programmes just as it does at UNESCO-IHE.

While recognizing the need for integration and synergy, the Institute has specific strategies and values for education, research and capacity development, respectively.

The following three sections examine these strategies.

THE UNESCO-IHE ACTIVITIES



EDUCATION

Vision on education

In 2020, UNESCO-IHE will be a global network of world-class, high-impact international educational institutions, constituting a global UNESCO-IHE campus that addresses the needs of present and future generations in the field of water education and sustainable development. Educational activities will be done in cooperation with partner institutions through effective exchange programmes. The network will apply innovative, learner-centred didactical approaches to produce graduates with T-shaped competency profiles under strict quality control.

STRATEGY

If the MDGs are to be met in Africa by the target date of 2015, in less than five years' time, the number of water professionals in this region needs to be increased by approximately 300%. This figure is incredible and shocking. However, in the mid-term review of the MDGs, recent statistics from the World Health Organization (WHO) have revealed that a continuation of the current trends in funding and actions will mean that Sub-Saharan Africa will not reach the MDG for sanitation before 2082 - three generations from now. Huge investments in water education and capacity building will most definitely be needed to change that situation. In a similar vein, South-East Asia needs a 250% increase in its water professionals, while Latin America and the Caribbean require an increase of some 50%.

However deplorable the global state of affairs, the solution requires massive water education. This, in turn, creates a very significant opportunity for the UNESCO-IHE global campus to lead the process of change through education, capacity building and development in Africa, Asia, Latin America and the Caribbean. UNESCO-IHE needs to boost its student intake accordingly, achieving a significant growth in the number of students enrolled in MSc and PhD programmes. About 2000 applications for the MSc programmes are received annually; out of ten qualified applicants, less than one is admitted on average. There are more than 250 PhD applications a year, with many more informal applications; the PhD programme shows a similar admission rate.

One realistic five-year strategic objective is to increase the number of students admitted in Delft by 30%. This means admitting about 220 MSc students per year, welcoming a minimum of 600 participants in shorter courses per year, and having a lively PhD programme with 120-130 active PhD researchers. Many more participants will be educated in collaboration with the partners.

This vision implicitly implies that due attention is to be paid to the academic fields of engineering and the natural sciences, as well as to gradually expanding more into the relevant fields of social sciences and humanities. Furthermore, UNESCO-IHE is to provide global leadership in the field of water education, with a special emphasis on providing individuals and sector organizations with the necessary competencies to contribute to sustainable development. UNESCO-IHE as a global campus will serve the objectives of the United Nations by providing high-impact water education and related support for its Member States. Finally, it aims to be the world-class institution for water education, research and capacity development that works with its partners to attract top-ranking permanent and visiting lecturers, researchers and students from across the globe.

VALUES

Global challenges as well as the external drivers and pressures outlined above will expose future graduates to water problems of unprecedented complexity and magnitude. This requires new knowledge, skills and attitudes in order to be optimally prepared for these new challenges. Therefore, the educational programmes and curricula of UNESCO-IHE will be centred around the following values:

- **Teamwork**
UNESCO-IHE will improve the post-graduate curricula to better develop integrative and teamwork skills based on a systems approach.
- **Continuous professional development**
UNESCO-IHE will invest in providing life-long learning and continuous professional development opportunities.
- **Open attitude for learning**
The Institute will review its post-graduate curricula and the ones of partners with respect to how an open learning attitude can be further promoted.
- **Stimulating learning environment**
Programme curricula must allow flexibility to serve the participants' interests in terms of breadth and depth and to trigger passion and curiosity. The facilities must support that process by enabling a problem-based and active learning environment.
- **Heterogeneous student population and respect for cultural diversity**
The Institute will remain responsive to new developments and to new demands, and will actively use the alumni network, among others, to detect and identify such trends. Respect for cultural diversity will be central in all relations within the Institute.
- **Adaptive, flexible and self-learning organization**
A system will be put in place, which continuously monitors the impacts of education at UNESCO-IHE. This will be done partly by the life-long 'monitoring of alumni'. This will require a professional system to obtain extensive interaction with and feedback from alumni and mechanisms to ensure that this feedback is acted upon.
- **T-shaped competency profile for water professionals of the future**
The water expert of the future - independent of whether their background is in engineering, earth and natural sciences or social sciences - should be equipped with knowledge, skills and understanding that enable him/her to interact with other disciplines. This requires a T-shaped competencies profile. UNESCO-IHE will review and revise the curricula of all programmes so that future graduates acquire a T-shaped competency profile and have strong integrative skills enabling them to become effective water leaders.

RESEARCH

Vision on research

In 2020 UNESCO-IHE conducts globally coordinated research that is internationally recognized, globally relevant and has high impact. It is a leading institution in applied water research that supports the protection and sustainable development of water and related resources in least developed countries and countries in transition. Research is carried out by highly qualified research staff, students, and collaborators in state-of-the-art research facilities and in cooperation with leading research institutions throughout the world.

The research mission of UNESCO-IHE is to provide the water sector, water managers and decision makers, with the knowledge to address and solve persistent and emerging water related problems, as well as to strengthen education and capacity development programmes within UNESCO-IHE and amongst its partners.

STRATEGY

UNESCO-IHE's research programme ultimately aims to provide the water sector, water managers and decision-makers with the knowledge they need to address and solve persistent and emerging water-related problems. Fundamental and applied research needs to be carried out; the Institute is and needs to be engaged in the full continuum of research, from the creation of new knowledge to applying it in real-life cases. In doing so, the research programme is to strengthen education and capacity development programmes within the UNESCO-IHE global campus.

The Institute is already highly visible in international water research and has a favourable reputation. As water issues have become more complex, the solutions require an interdisciplinary approach. Therefore, systems thinking is a prerequisite for effective solutions. The research conducted at the Institute has an evident impact on society and is important to the developing world; the visibility of this aspect will be increased through the global campus, improving access by others who have similar needs.

As emphasized earlier, the links to the developing world provide an excellent opportunity to perform an almost constant reality check, since the water issues that those countries face require new and innovative solutions. A traditional academic approach focuses on finding problems to tackle, which are often generated by a projection of a research development track, to which more or less standard solutions developed under the climatic and environmental conditions characteristic of Europe or North America, are then applied. In contrast, developing countries face entirely different issues due to their bio-physical and social contexts. The research agenda of the Institute is poised to deviate significantly from that of a standard university in the industrialized world. This provides a diversity and richness of issues that the Institute will capitalize on in identifying its new directions in research and education.

VALUES

UNESCO-IHE's research domain in 2020 will be water science and engineering in a broad context, encompassing water engineering, environmental and social sciences. It is characterized by the following values:

- **Scientific Excellence**
UNESCO-IHE will continue its ground-breaking work and further develop excellence in research.
- **Societal Impact**
UNESCO-IHE will prioritize research of a high societal impact and will seek opportunities to expand its comparative advantages.
- **Solution-Oriented**
During the next decade, UNESCO-IHE will continue to conduct research that is applied and focused on producing new, and using existing, knowledge to help solve major water-related problems in the developing world and address critical challenges such as
 - providing water for basic needs: safe drinking water, sanitation, food and energy,
 - using water resources to enable sustainable development,
 - protecting human and environmental quality and ecosystem services,
 - managing water-related conflicts and ensuring equity and optimal use of water, and
 - coping with natural hazards, especially in relation to global changes and climatic variability.
- **Interdisciplinarity**
As water issues require an interdisciplinary approach, systems thinking is a prerequisite for effective solutions. The UNESCO-IHE global campus, in collaboration with its partners, is uniquely positioned to conduct interdisciplinary research based on in-depth disciplinary understanding of the issues. UNESCO-IHE hosts knowledge from water engineering and hydrology through environmental sciences and into dimensions of governance and economics, supported by advanced IT, modelling and decision support tools. All these areas operate side by side under the same roof and contribute to achieving the vision .
- **Collaboration and Partnerships**
UNESCO-IHE will continue to encourage and foster collaborative research activities and staff exchange programmes with regional UNESCO-IHE Institutes, leading research universities, institutes, and partners/networks with a view towards multiplying the overall impact.
- **Accountability**
UNESCO-IHE will develop measures for continuously evaluating and tracking the scientific quality, societal relevance, and impact of its research activities.

CAPACITY DEVELOPMENT

Vision on capacity development

In 2020, the global network of UNESCO-IHE Institutes will be an international, academically acclaimed tertiary water education network, firmly linked to the water sector worldwide and within the UN system, and appreciated for partnering with Southern institutions in all of its capacity development activities. It is known for its demand-responsiveness, ability to swiftly mobilize resources, and creativity in addressing complex problems. Comprehensive interdisciplinary solutions are devised in response to dynamic societal demand.

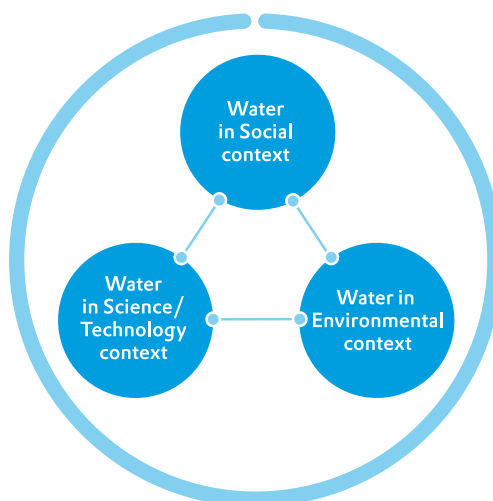
The UNESCO-IHE Institutes will have mainstreamed capacity development in all its projects and adopted a systematic approach towards knowledge sharing and learning. The network of institutes will not only be a learning organization itself, but will also support partners in adopting this approach. The network will be selective in the projects it engages in, based on criteria such as the societal impact of the project, the innovative and/or interdisciplinary character of the intervention, the exposure to relevant (local/regional) practices, and the opportunity to learn and further upgrade and expand its services.

STRATEGY

Initially, the emphasis of capacity development activities at the Institute was on the education and training of individuals. By the end of the 1980s, the Institute became more and more involved in institutionally strengthening the programmes of universities, research institutes, ministries and other water sector organizations. With the introduction of the MSc and PhD programmes, research became increasingly important as an instrument in capacity development. By the end of the 1990s, the knowledge networking concept had been introduced and successfully implemented in Africa (WaterNet and NBCBN/NileNet) and on other continents (e.g. CKnet-INA in Indonesia, as well as the Asia-Pacific Water Forum Network). Consequently, UNESCO-IHE's role changed from that of a purely implementing entity to facilitator/moderator/knowledge broker.

UNESCO-IHE strengthens the water sector at large through capacity development on three essential levels: individual, organizational and institutional. To accommodate the individual level, UNESCO-IHE strengthens knowledge institutions in developing countries and assists them in developing and implementing water education and research programmes. Through this mechanism, UNESCO-IHE ensures that high-quality water programmes become more easily accessible and affordable for many individuals. The direct support to sector organizations and the development of an enabling environment in which people and organizations can prosper is the other cornerstone of UNESCO-IHE's capacity development efforts.

THE RESEARCH DOMAINS OF UNESCO-IHE IN 2020





GOALS AND STRATEGIES

EDUCATION

Goal E1	Strategies
Offering world-class education with a high impact in the field of water and sustainable development (UN mandate), as well as providing global leadership in the field of water education to allow individuals and sector organizations to acquire the necessary competencies for IWRM and sustainable development (UN mandate), as well as providing global leadership in the field of water education to allow individuals and sector organizations to acquire the necessary competencies for IWRM and sustainable development.	ES1 Attract top lecturers/researchers.
	ES2 Develop programme for continuous professional development.
	ES3 Implement open courseware concept for all of the education materials.
	ES4 Ensure further development of lecturers' skill and implement a dynamic HRM policy.

Goal E2	Strategies
The education of UNESCO-IHE is to be characterized by a consistent application of innovative, learner-centred didactical approaches to produce graduates with T-shaped competency profiles. A solid knowledge and understanding of one discipline as well as cognitive competencies outside that discipline blended with functional, personal values and ethical and meta-competencies are to be acquired by students.	ES5 Design flexible programmes.
	ES6 Improve educational support capacity at the Institute.
	ES7 Review all educational offerings for current and future needs.
	ES8 Continuously update facilities and infrastructure.
	ES9 Use public domain software whenever possible and appropriate.
	ES10 Implement an effective quality control system and strict admission guidelines.

Goal E3	Strategies
Educational activities will be carried out in close cooperation with strategically developed and selected partner institutions and networks. A strong global and regional partnership in water education and research with high impact will be developed.	ES11 Develop joint educational programmes with key partners (joint MSc and PhD degrees).
	ES12 Continuously Interact more with alumni, intensify joint activities and monitor the impact of the education we provide.
	ES13 Enhance strategic cooperation with NGOs, UN institutes and leading water sector organizations.

RESEARCH

Goal R1
Conduct recognized world-class, high-quality water research. Continue to be an active member of national and international research communities. Develop and implement research results to support informed decisions and actions needed for effective water management throughout the world.

Goal R2
Develop an institutional environment and structure that encourages creativity and innovation in water research. Focus on meeting strategic knowledge and research needs. Communicate research results via different channels and translate knowledge into action through policy development and education.

CAPACITY DEVELOPMENT

Strategies

- RS1** Improve access to as well as safety and security of drinking water and sanitation for all, through knowledge and research.
- RS2** Foster improved management of water through knowledge and research. Identify, develop, and deliver knowledge and analysis to improve understanding of the natural processes in aquatic ecosystems.
- RS3** Ensure an interdisciplinary approach to water resources management.
- RS4** Better protect and improve the resilience of society from natural hazards, such as sea level rise, floods and droughts.
- RS5** Develop and improve interdisciplinary approaches and methodologies, hydro-informatics technologies and integrated ICT systems to manage the information cycle.
- RS6** Develop strategic research plans for each academic department and improve the overall coherence of the research programme.

Strategies

- RS7** Continually update and develop UNESCO-IHE's research facilities and infrastructure. Increase the effectiveness and efficiency of the library. Continue supporting laboratory-intensive research.
- RS8** Develop dynamic human resource management.
- RS9** Increase knowledge dissemination and sharing capacity. Develop the UNESCO-IHE website towards a globally acknowledged, excellent website for water knowledge and education.

Goal CD1

Strengthen knowledge and capacity building institutes in the global South.

Goal CD2

Strengthen water sector organizations to improve their performance.

Goal CD3

Contribute to the global agenda on Water Sector Capacity Development.

Strategies

- CDS1** Work in partnership. Strengthen existing and new partnerships through which UNESCO-IHE channels its capacity development efforts and fosters knowledge sharing and pooling of resources.

Strategies

- CDS2** Integrate levels and disciplines.
- CDS3** Find funding for high-priority activities.
- CDS4** Develop career opportunities and incentives for staff working on CD projects.
- CDS5** Strengthen Water Governance expertise at UNESCO-IHE and partner institutes.
- CDS5** Strengthen Water Governance expertise at UNESCO-IHE and partner institutes.

Strategies

- CDS6** Research and develop effective capacity development approaches.



AN ORGANIZATIONAL STRATEGY FOR GREATER IMPACT



IMPROVING INTERNALLY: OPTIMIZING THE ORGANIZATIONAL STRUCTURE

To achieve the ambitions of the Delft-based UNESCO-IHE Institute in education, research and capacity development by 2020, an internal modification of the organizational structure is required. The new structure will be in line with the vision on education, research and capacity development, maintaining an efficient organization and ensuring optimal responsiveness to market needs and opportunities with clear command-control lines. It should be noted here that the changes are more of a fine-tuning of the current structure towards more transparency; radical restructuring will not be necessary.

The strategical reform process has been largely driven by the required enhancement of the impact and, consequently, the extension of the role that UNESCO-IHE should play in its efforts towards capacity development for the global water sector. In order to keep the implementation of education, research and capacity development programmes in line with the changing situation in the field, key elements of the future services of the Institute must be more flexible and competence-based. This entails flexibility of the education programmes and more flexibility in the way these programmes are financed. As a result of the changes, partner institutions will play an increasingly important role, which should also be reflected in the way UNESCO-IHE is adapting its organizational structure to the changing realities in terms of regional/global involvement and disciplinary needs.



A NEW ORGANIZATIONAL STRUCTURE

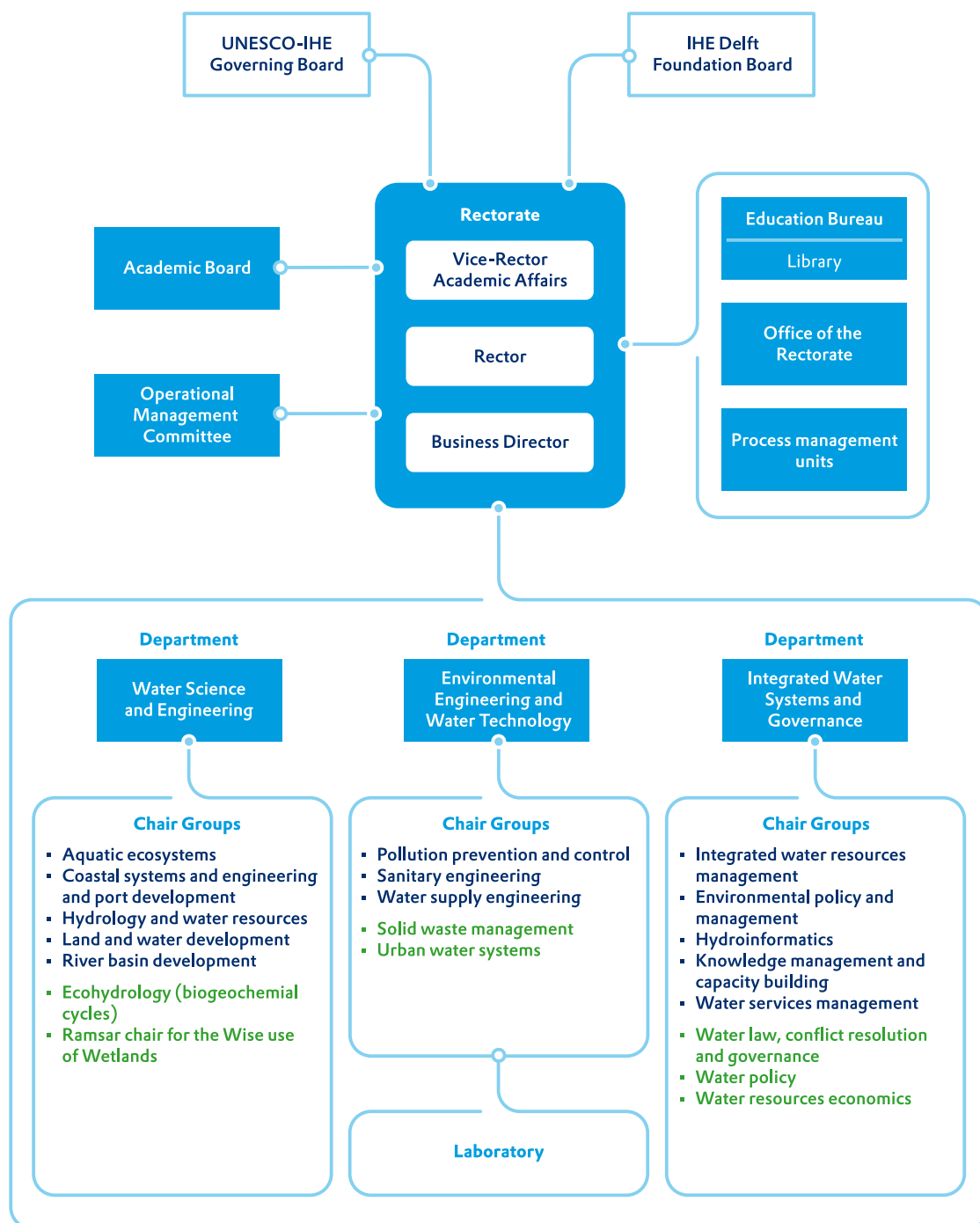
UNESCO-IHE requires an organizational structure that is capable of functioning as a dynamic, flexible, responsive, self-learning, anticipatory and innovative system. It should be an institution that stimulates motivation, creativity and innovative initiatives by the staff. There should be a clear and straightforward decision-making process and well-defined terms of reference for the units involved, with inspiring and professional leadership at all levels and clearly defined command-control lines. The aims were to find an innovative approach that facilitates interactions, synergies and coherence among the various educational and research activities in an interdisciplinary fashion and to make sure that academic leadership prevails. The emphasis is on strengthening and increasing the effectiveness of the academic activities, and ensuring that the process management units effectively serve those activities.

First, the Institute will move towards three academic departments, in line with the global developments in scientific research and education in the field of water and environment. Complementing the traditional fields of water science/engineering and emerging environmental engineering/technology, there will be a new addition: the increasingly important field of integrated approaches to water systems management and water governance, including social and political sciences. UNESCO-IHE has been moving in that direction for some time; the structural changes will be the culmination of this process. The revised structure is flexible and provides the envisaged short-term framework of Chair Groups and Academic Departments within the current UNESCO-IHE in Delft. New elements may arise in the coming decade in response to new emerging issues and fields.

The revised organizational structure is in line with the ambitions of UNESCO-IHE to take a leadership role in the development of the global campus for water education and research. This role requires a new structure and mode of operation similar to the graduate school of a regular university, offering education as well as fully developed research programmes covering the main fields of activities. Research is a main intellectual driver, an activity that is as important as education and capacity development. Under optimal conditions, feedback will flow mutually between all these activities. Moreover, interdisciplinary water research is also a source of inspiration for all other academic activities of UNESCO-IHE and its global network.

The basic academic units will be organized along principal academic areas, intentionally maintaining a high degree of flexibility to foster overall flexibility in the organizational structure. The basic academic units of the institution are the Chair Groups, covering a specific academic field based on scientific content. Related Chair Groups will be structured in separate, yet closely interacting Academic Departments.

THE NEW UNESCO-IHE ORGANIZATIONAL STRUCTURE



The table shows existing Core Groups belonging to each of the Academic Departments. The Core Groups marked green are envisaged chairs to be established till 2020, of which some will develop to a full-fledged chair group. The subsequent establishment of the Chair Groups will depend to a large extent on the availability of funding. More details on this can be read in the implementation plan.



NEW STRUCTURE OF THE ACADEMIC DEPARTMENTS

THREE ACADEMIC DEPARTMENTS

There will be three Departments: Water Science and Engineering, Environmental Engineering and Technology, and Integrated Water Systems and Governance. Academic Departments will be led by a Head of Department who is an academic at the rank of a full professor. In order to provide a healthy and timely leadership change, as well as to ensure that the Department Heads will be able to return to full academic work, these positions will be of finite duration and rotating on the basis of a three-year cycle with a maximum of two sequential periods of serving as Head of department, i.e. a maximum of 6 years.

Departments will be managed using an integrated management approach, in which the day-to-day resource management of the Department is performed by the Deputy Head of Department, who works closely with the Head of Department to achieve the objectives of the Department. Similarly to the current working method of the Rectorate, the Departments will be managed through a high degree of delegated responsibility and authority.

CHAIR GROUP (CG) - THE BASIC ACADEMIC UNIT

The grouping of the Chair Groups in Academic Departments is based on academic coherence and a systems approach. This new structure ensures that the departments are sufficiently distinct from each other in their academic orientation and approach to water systems. It also brings together academic staff members with similar academic fields, interests and research areas, thus enabling synergies to be found in the project activities. As most water problems require interdisciplinary solutions, cross-departmental cooperation is essential and will be further supported. The flexible structure of these units and the rotating leadership are concrete steps towards this.

These Groups comprise a number of academics with common academic expertise, fields and interests, covering a well-defined strategic area and evolving in accordance with the UNESCO-IHE Mid-Term Strategy and Chair Plan. Chair Groups are not permanent entities, but open-ended, demand-driven, dynamically evolving academic entities. In other words, they can be created or dissolved at will in order to be aligned with strategic developments and changing conditions. The basis for these dynamics is the Chair Plan of UNESCO-IHE. Based on their academic field and research agenda, Chair Groups will be further grouped together into an Academic Department.

THE RECTORATE

The Institute is led by the Rectorate. This leading body consists of the Rector, the Vice-Rector for Academic Affairs, and the Business Director. See the Implementation Plan for more details on the responsibilities of these three positions.



FORWARD-LOOKING MANAGEMENT AND COMMUNICATION

The fundamental challenges to be faced during the coming years are tied to the internationalization of the Institute and its growing stature as a world-class centre of water education, research, and capacity development. Owing to the entirely extra-budgetary nature of the Institute, the financial stability and sustainability of the Institute is critical and must always be secured. In this regard, continuously evolving and flexible business plans will be developed.

The Institute's staff members have become significantly more international since the institution became part of UNESCO in 2003. This internationalization is expected to continue over the next decade, accelerating with the establishment of the UNESCO-IHE Global Campus. The changes associated with this process will produce enormous diversity of various kinds in the institution.

In line with the Institute's ambitions to continue to provide global leadership in the field of water education, with special emphasis on providing individuals and sector organizations with the necessary competencies to contribute to sustainable development, we will strengthen the perception, understanding and impact of UNESCO-IHE in the world. In displaying and shaping the image of the Institute, both within UNESCO, the UN-system in general and various audiences (i.e. media, the general public, and among many other counterparts) it is essential that a high level of quality, coherency and sustainability is maintained in all of the activities.

RELEVANT UNESCO-IHE GOVERNING BOARD DECISIONS IN 2010

UIHE/GB-VIII/Decision 2

DECISION 2 New Strategic Directions and Comprehensive Reforms of the UNESCO-IHE Institute for Water Education for the period of 2011 - 2020	
The Governing Board of the UNESCO-IHE Institute for Water Education,	
Recalling	the Proposal for the New Strategic Directions and Comprehensive Reform of the Institute, considered by the 7th session of the Board, that resulted in their endorsement of the general approach to reform the current scope and functioning of the Institute;
Noting	with appreciation that the Rectorate has launched a wide-ranging consultation process with all the relevant stakeholders involved, within and outside the Institute, that yielded the necessary consensus across the Institute;
Recognizes	the intent of the new strategic directions is to concurrently enhance the Institute's academic programmes and business efficiency through the use of contemporary business processes and to implement a cross-cutting management structure emphasizing the integration of multiple disciplines and programmes;
Approves	the general principles of the new decadal strategic directions and comprehensive reforms of UNESCO-IHE, with a view towards expanding its global impact on water education as presented to the Board;
Requests	the Rectorate to establish a detailed Implementation Plan for the Strategy with a view to its early execution during 2011;
Invites	(1) the Director General of UNESCO, and (2) the Executive Board of UNESCO to take note of the reform process and to support its implementation at global and regional levels.

UIHE/GB-VIII/Decision 3

DECISION 3 Establishment of a global UNESCO-IHE campus of interconnected regional institutes	
The Governing Board of the UNESCO-IHE Institute for Water Education,	
Recognizing	the efforts and ongoing activities within the UN Decade on Education for Sustainable Development particularly with respect to water education;
Noting	the new decade long strategic directions and comprehensive reform plans of UNESCO-IHE, with a view towards expanding its global impact on water education;
Recalling	the relevant discussions held at the 19th sessions of the Intergovernmental Council of the International Hydrological Programme;
Recognizing	the enormous global needs for improved water education, research and capacity building in developing countries in order to meet the requirements of the water-related Millennium Development Goals and other internationally agreed goals;
Noting also	that international postgraduate water education could be best performed on the basis of regional and networked educational institutions located in areas where water-related problems take place;
Emphasizing	the need to maintain the high educational quality standard of UNESCO-IHE, as well as that of the appropriate quality control, in any institution the Institute has joint education programmes with;
Recalling	Article V/1/(c) of the Statutes of the Institute as approved by the 31st session of the General Conference of UNESCO as well as Resolution 185/EX/17, particularly paragraphs 7, 9, 47, 48, 49, 56, 69, 75, 76, 77, 78 and 80;
Approves	the general principles of establishing autonomous "mirror" UNESCO-IHE institutes at a continental/regional scale that are connected with the Institute, as well as with each other, in a networked fashion as a global campus;
Invites	the Rectorate to elaborate, in close cooperation with the IHP Secretariat, a detailed concept note to serve as a working document for consideration by Member States and the appropriate bodies of UNESCO, taking into account the relevant deliberations of the 19th session of the IHP Intergovernmental Council;
Also invites	the Director General of UNESCO to present, upon the examination of the concept note, the comprehensive idea of improved tertiary water education at a global scale to the Executive Board of UNESCO;
Recommends	to the Member States of UNESCO to support the process of establishing "mirror" UNESCO-IHE Institutes in their respective regions as Category I Institutes including the examination of the potential for hosting such institutes with the necessary means of support in their establishment, functioning and funding.

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