




UNITED NATIONS
UNIVERSITY

UNU-INWEH

Institute for Water,
Environment and Health



**Annual
Report
2011**



The global water crisis has many facets, each of which grows more serious each year, and meeting the MDG targets remains a challenge. The coastal oceans in particular suffer via climate change and local degradation. Freshwater ecosystems are challenged by an altered hydrographic cycle and the growing extractions for agriculture, industry and human use, while drylands agriculture faces growing water challenges. In many regions, the provisioning of potable water and adequate sanitation are undiminished challenges. The perilous state of the oceans, which still provide some 16% of animal protein food for people, is now recognized by IPCC, the World Bank, and the World Economic Forum. A holistic ecosystem approach, encompassing physical, economic, socio-political and cultural factors is required if we are to address the water crisis effectively.

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UNU-INWEH at a Glance

UNU-INWEH is the 'United Nations Think-Tank on Water'. It responds directly to the global water crisis and facilitates the global efforts to meet the Millennium Development Goals. In so doing, it aligns with the overall vision for the United Nations University. UNU-INWEH's three core functions are derived from its mandate: (a) helping developing countries meet the MDGs through capacity development; (b) facilitating global knowledge enhancement, networking and mobilization to address the global water crisis; and (c) fostering better approaches to water management and governance through applied research designed to bridge critical policy gaps.

UNU-INWEH's implementation team is grouped according to the four thematic sub-programmes. Each group is headed by a chief scientist (Assistant Director), responsible for managing the project activities within the theme, operationalizing strategies for growth, scouting for new partnerships and initiatives, and overseeing staff members. These functional groups are supported by an office support team comprising office administration, financial management, media interaction, and implementation in the Middle East and North Africa region. The support team is further underpinned by the Finance and Administration and the Human Resources units at UNU Centre.

The International Advisory Committee (IAC) provides advice and guidance to the Director. The IAC comprises up to six individuals appointed by the Rector and two ex-officio members (the Rector and the Director). The Government of Canada hosts UNU-INWEH in partnership with McMaster University. Core funding is provided through the Canadian International Development Agency (CIDA).



Director's Summary for 2011



UNU-INWEH took off with a strong start in 2011. A number of new initiatives were launched in the Middle East and North Africa region, dealing with key issues like water scarcity, traditional natural resource management approaches and creation of a regional water database. These activities demonstrate both the relevance of UNU-INWEH's work and a growing footprint of activities to address important regional issues.

UNU-INWEH also continues to build on its work around the concept of water security. A key policy meeting - designed to create a bridge between former heads of state and the water expert community - highlighted the water security challenges and identified ways to move forward. Led by former Presidents of the United States and Mexico, Bill Clinton and Vicente Fox and chaired by former Canadian Prime Minister, Jean Chrétien, these leaders met in Québec City in May 2011 and endorsed the findings..

The dialogue addressed some central issues around the notion of water security: Why is water fundamental to global security? Is clean water a precondition for development? Can international law make a difference? What are the opportunities for solving the water crisis? The findings from this dialogue are being published in 2012 as a book as well as a policy brief.

UNU-INWEH made progress in an otherwise slowly-evolving twinning process: it has now established a Memorandum of Understanding with Alexandria University to undertake a joint research and academic programme. As an early stepping stone towards establishing a twin institute, this programme will focus on drylands and water management issues, and relate closely to the Institute's joint Master's degree programme on integrated drylands management.

UNU-INWEH successfully concluded its 14th International Advisory Committee meeting in Ottawa (9-10 June 2011). The IAC considered the broad strategic directions for UNU-INWEH and reviewed the budget for the 2012-2013 Biennium. The IAC members also informally met with representatives of the Canadian Government in order to exchange information and discuss the synergies between the strategic interests of UNU-INWEH and the Canadian Government. This process concluded with a formal meeting of the senior UNU-INWEH management at the Canadian International Development Agency, the primary funder for UNU-INWEH's core support.

Negotiations with the Canadian Government subsequently moved forward, with an aim to renewing long-term core funding for UNU-INWEH beyond 2012. An external review of the institute's achievements, completed in late 2010, highlighted the Institute's significant achievements. It is anticipated that the negotiation process will be completed in early 2012.

Programmes

Coastal Ecosystems

Continuing human migration and population growth mean that 40% of humans now live within 50 km of a coastline, and average population density in coastal areas is over twice the world average. Coastal environments are of growing importance for us, yet our impacts on coastal ecosystems are also growing. The aim of this programme is to improve the management of these complex coastal systems by addressing the fundamental gaps in our understanding of ecosystem functions and the impacts of human activities on them.

UNU-INWEH's Coastal Ecosystems Programme undertakes research on threatened ecosystems like coral reefs and mangroves, monitors and assesses pollution impacts, and studies integration of coastal management with development. We believe that applied research and improved scientific understanding of how these critical ecosystems function are central to sound decision-making. This programme also fosters regional monitoring programmes to better understand the sources and impacts of pollutants in the coastal ecosystems as a first step towards mitigation and amelioration. Such activities are an effective capacity-building tool.

Dryland Ecosystems

Drylands - comprising deserts, grasslands, and woodlands - cover about 41 per cent of Earth's land surface and are inhabited by more than 2 billion people. Many of these dryland areas face severe land degradation, in which marginal areas are turned into wastelands and natural ecosystems are altered through destruction of surface vegetation, poor management of water resources, inappropriate land use practices, overuse of fertilizers and biocides, and disposal of domestic and industrial wastes. This has serious implications for food security and the livelihoods of at least 1 billion people across the world. This programme focuses on developing urgently needed sustainable management strategies for the protection, preservation, reclamation or rehabilitation of drylands. Enabling wise management of water resources and protection of water quality are central to this goal.

This programme further undertakes research on alternative livelihoods and enabling policies to facilitate broader adoption of these livelihood approaches. It has launched a worldwide effort to "warehouse" knowledge that is pertinent to sustainable land management and disseminate it effectively to end-users. Poverty reduction through capacity development is another key activity, ranging from community-based efforts to advanced degree programmes.

Freshwater Ecosystems

A major factor contributing to the global water crisis is the widespread failure to effectively manage the global freshwater resources through integrated management approaches at the basin or watershed scale. In most cases, conflicts in water usage - whether between sectors in a country, between upstream and downstream riparians, or between countries sharing river basins - are not resolved effectively and sustainably. This programme aims to better manage the freshwater ecosystems - including rivers and lakes, their watersheds, and freshwater deltas and wetlands - by overcoming two core challenges facing developing countries: The first is limited or absent scientific knowledge on water quality and quantity, and ecology and ecosystem services. The second is failure at the policy level to manage freshwater ecosystems in an integrated and holistic fashion.

This programme incorporates advanced education and capacity development, and knowledge and information management. Capacity development is directed towards adult education based on IWRM principles for current water professionals, executive training courses, and courses available for free to the general public. The programme has also initiated an institute-wide effort to bring together knowledge management, mobilization and enhancement principles.

Water-Health Nexus

The provision of safe drinking water and sanitation is important for achieving all the Millennium Development Goal targets, especially those for child and maternal health (Cheng et al, 2012). In addition to being a practical imperative, there is a moral imperative to improving global access to sustainable drinking water and sanitation, especially in rural communities. Over 3.5 million people, about half of whom are children, die each year from water-related health problems, while billions are made ill. At the core of this programme is the focus on meeting the safe water crisis through capacity and tool development that addresses human, technological, infrastructural and institutional capacity for timely action as well as informed decision-making processes. A special focus is on rural, remote communities that are often ignored in the international development community.

The programme examines human health and well-being within the context of multiple and sustainable uses, a systems approach that bridges the biophysical environment as well as the social, cultural and political systems that determine the flow of water through society. It also focuses on community-level approaches and technologies for engagement, ownership and empowerment. A long-term goal is to build, in a staged manner, a global 'Knowledge Portal' for provisioning of safe water services.

Knowledge Management and Mobilization – The K* Initiative

New
&
Emerging

The linear model of research-to-policy and practice is recognized to be incomplete – instead, it is seen that relationships between policy and practice, research and other types of knowledge are better characterized as ecosystems. Intermediaries and intermediary organizations are playing key role in broadening and deepening thinking about how these can be made to function more effectively through Knowledge Mobilization (KMb), Knowledge Translation and Transfer (KTT), Knowledge Brokering (KB), Knowledge Adoption (KA) and a number of other terms which collectively we term K* (KStar). Knowledge Management is also a key component of this approach.



This emerging and vibrant, yet diffuse and dispersed knowledge field has seen considerable growth in the last decade. Important initiatives are taking place in the international development, agriculture, environmental sustainability, health and education sectors. Building on well-attended workshops held in 2010 and 2011, UNU-INWEH has convened several like-minded institutions to catalyze organization of a focused multi-sectoral K* conference to bring together key international players in this field.

In brief, the overarching objectives of the K* summit – which will be held in Hamilton in April 2012 – are to: establish a baseline understanding of the global K* community and the beginnings of a global learning network, along with the mechanisms to sustain it, and then to continue and broaden the conversation through the development of wiki-based green, and ultimately white, papers. It is already clear that what is being learned in some countries and sectors is not known about in others. The K* summit will begin to identify some of the many 'low hanging fruit' with the ultimate outcome of achieving improved efficiency and accelerating the impact of initiatives as a result of these improved linkages.

<http://www.inweh.unu.edu/River/KnowledgeManagement/Knowledgemanagement.htm>



KIM-UNU

KIM-UNU, “Knowledge Integration and Management – United Nations University” is the technology platform developed by UNU-INWEH in partnership with the Centre for Community Mapping as a powerful and user-friendly Knowledge Management System (KMS). The platform has been developed in recognition that often there is a wealth of knowledge and information, representing a significant investment of development funds and project implementation which is not readily accessible, let alone capable of integration.

Documents and information are stored in a relational database, with the ability to quickly and effectively integrate this existing information via a search interface for efficiencies in targeting new initiatives and building on the body of knowledge that exists. Built into this platform, a suite of communication and interaction tools allows users to view, comment and access information as a group either in real time or as a shared collaborative workspace. The information is presented through a geo-referenced interface.

The application of KIM-UNU for the following bodies of information is underway:

- UN-Water (Integration with the UN-Water Activity Information System for KMS implementation between the 29 UN-Water member institutions for all transboundary water matters);
- The Lake Victoria Basin Commission (KMS implementation between Kenya, Uganda, Tanzania, Rwanda & Burundi);
- “Knowledge from Land” (KMS implementation of institutions concerned with global land degradation and sustainable land management practices);
- Management of Hima areas for conservation and natural resources use across 21 countries in the West Asia - North Africa region.



Progress Report on Coastal Activities and Projects

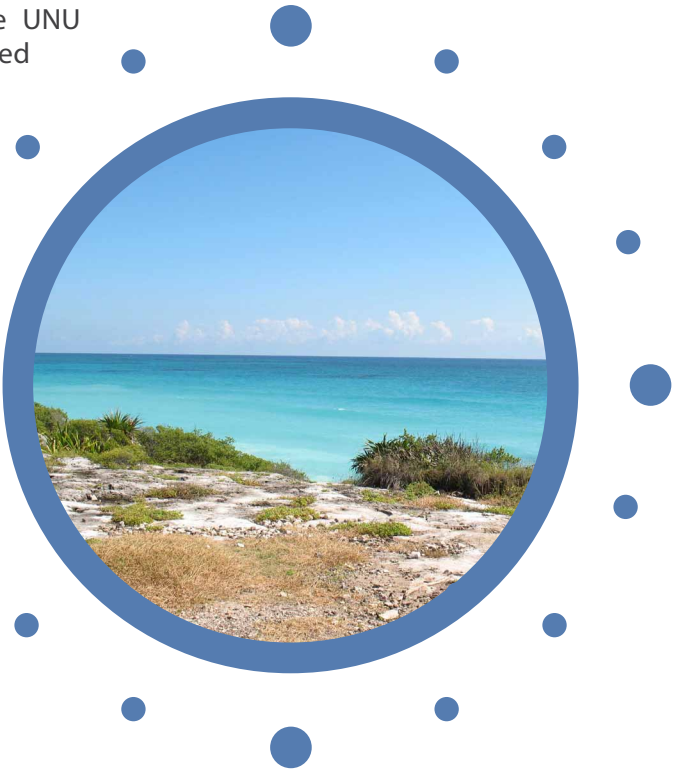
Assessing the environmental impacts of large-scale coastal developments in Dubai

The Persian Gulf region has seen remarkable economic and social development in recent years, with an unprecedented scale of coastal development. Such development also brings with it numerous environmental challenges as well as opportunities for governments in this region to demonstrate leadership in environmental stewardship and innovations in management of natural resources. To address this, UNU-INWEH undertook a Dubai-based project entitled Strategic Management of Marine Ecosystems Surrounding the Nakheel Marine Projects. This unique project developed a comprehensive monitoring and research programme for the marine waters surrounding the Nakheel developments with the aim to improve the management of these complex coastal systems. Ecological and environmental research was conducted to determine the nature of these newly developed ecosystems and their responses. A series of regional training courses were conducted to enhance capacity on a number of coastal environmental management topics. Research results have been reported in over 13 peer-reviewed articles.



Caribbean Coastal Pollution Project (CCPP)

The CCPP (2007-2010) received funding from Canada’s Persistent Organic Pollutants (POPs) Trust Fund through the World Bank. A number of activities were ongoing through 2011 and key outputs were being completed. The project aimed at the assessment, monitoring and management of POPs in coastal ecosystems of eight countries in the Caribbean region: Belize, Guatemala, Honduras, México, Dominican Republic, Jamaica, St Lucia and Trinidad & Tobago. It involved a series of training workshops, upgrading of laboratory technical capacity, two research projects and a monitoring program for POPs in coastal fish. Analysis for POPs in fish samples from four countries for two years were analyzed by the University of West Indies laboratory in Jamaica and entered in a database. During 2011 the outcomes of this project were published in a peer reviewed article in the journal Environmental Pollution and on the UNU research website. UNU INWEH also presented its work at a regional workshop on coastal pollution in Montego Bay, Jamaica and at the Gulf and Caribbean Fisheries Institute regional Conference in Cancun Mexico. A follow up proposal is currently being considered for funding under GEF V.



Progress Report on Coastal Activities and Projects



International Course: Biodiversity of Mangrove Ecosystems

UNU INWEH has supported this annual training course since 2004 in collaboration with UNESCO-MAB. Its objective is to build the capacity of professionals and institutions in developing countries to undertake monitoring, research and conservation of critical coastal ecosystems within mangrove forests. The 11th annual training course on mangrove ecosystems took place 5-19 October 2011 at Annamalai University in India. Sixteen participants from 9 countries in Southeast Asia attended. External funding from UNEP was provided for this course. UNU INWEH is now replicating this course to other regions as well as converting it into a 6 month post graduate level online programme associated with a short hands-on field and laboratory component.

Policy Report:

“Managing the growing impacts of development on fragile coastal and marine ecosystems: Lessons from the Gulf”



On 16 November 2011, accompanied by a worldwide media release, UNU-INWEH launched this publication. It discusses how coastal development and other human activities are compromising a valuable and unique marine ecosystem that is shared by eight countries: Bahrain, Kuwait, Iran, Iraq, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. It offers recommendations for improved management and highlights the critical gaps that exist in awareness of the importance of coastal ecosystem services as well as the capacity needed for effective management. Next to direct development impacts it also considers other anthropogenic stressors – such as pollution, overfishing, risk from invasive species and climate change. It builds upon UNU-INWEH’s direct experience in Dubai (described on page 13) and provides an

analysis of the existing challenges and opportunities, and an overview of how well the region has responded.

News of this report appeared in 72 news sites worldwide and in seven languages (English, French, Spanish, German, Portuguese, Arabic and Chinese) across 29 countries; 12 stories ran on 8 international newswires and it was also covered by BBC World Service Radio, Al Jazeera TV and EFE Radio. The findings described in this document are equally applicable to other coastal nations around the world who are facing similar environmental challenges.



Progress Report on Coastal Activities and Projects

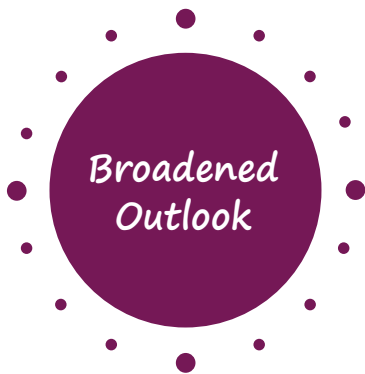
Learning from Coastal Efforts

Managing Coasts in a Changing World - Seminar Series

Coastal ecosystems are severely stressed in many parts of the world as a result of overpopulation, intense coastal development, urbanization, spiraling resource use, pollution, and spread of invasive species. Climate change is expected to exacerbate these stressors and is considered by many to be one of the most important challenges facing the world in the 21st century. This monthly seminar series invites experts based in southern Ontario to present topics relating to coastal environmental science and management in the face of climate change.



Water Without Borders



The joint master's degree programme between UNU-INWEH and McMaster University entitled "Water Without Borders" entered its second year of operation in 2011. The programme attracts students from a range of backgrounds (natural sciences, human sciences, and health sciences) and disciplines (e.g. geography, engineering, business, philosophy, and medicine) corresponding with the academic specialties at McMaster University. The programme focuses on the common need to investigate key research issues at the water-health nexus while contributing to both policy and capacity building.



In August 2011, Prof. Sarah Dickson of McMaster University was jointly appointed as the programme director by UNU-INWEH and McMaster University. At the same time, Dr. Corinne Wallace took up the role of WWB Programme Coordinator at UNU-INWEH.



http://www.inweh.unu.edu/WaterwithoutBorders_2011.htm

Progress Report on Drylands Activities and Projects

Ensuring Impacts from Sustainable Land Management (KM:Land)

KM:Land, a GEF-funded initiative, developed a set of global indicators to measure impacts of sustainable land management projects as the first step in a broader knowledge management initiative. A set of guidelines for project managers on reporting impacts at the project level was produced following the selection of indicators and a pilot testing exercise. A knowledge management platform entitled “Knowledge from Land” was also established.

The outputs of KM:Land have been used more broadly via the various processes of the United Nations Convention to Combat Desertification (UNCCD). Specifically, the conceptual framework, the selected indicators, the knowledge management platform and the procedure for pilot testing have all served to provide advice and guidance to the UNCCD.



GLOBAL ENVIRONMENT FACILITY



Sustainable Management of Marginal Drylands (SUMAMAD)

Together with a network of researchers and institutions in nine partner sites (Bolivia, Burkina Faso, China, Egypt, India, Iran, Jordan, Pakistan, Tunisia), the SUMAMAD project aims to foster the rehabilitation of degraded drylands through sustainable management and conservation practices while enabling dryland communities to improve their well-being through the exploration of alternative livelihoods.

Highlights for 2011 include: improving soil by establishing ecological orchards in Burkina Faso to replace cotton production and help diversify incomes; developing plans to establish the largest eco-husbandry demonstration site in China's grasslands for the restoration of degraded ecosystems through the introduction of free-range chicken farming; and, introducing gel nutrition media in desert plants in Egypt to enhance water efficiency in threatened species.

Progress Report on Drylands Activities and Projects

The Hima Initiative

The Hima meaning “a protected area” is a traditional community based environmental resources management system that has been practiced for more than 1500 years in the Arabian Peninsula to preserve the ecosystem and support human well being.

A workshop in Istanbul, Turkey in April 2011, organized by UNU-INWEH, with funding from the West Asia and North Africa Forum (WANA Forum) and the World Justice Project (WJP), discussed how to create an enabling environment for sharing experiences, building capacity and strengthening information networks. A strategy for including Hima in regional protected area management, policies and legislation was developed.

From this workshop a policy brief will be prepared on Hima principles and a legal framework. A number of pilot projects will be implemented, to test these principles under a Hima management frame work. -. A brief on “Principles of Hima Governance: a Community-Based Natural Resources Management (CBNRM) System” was released on the 21 June 2011 at the World Justice Project forum in Barcelona, Spain.





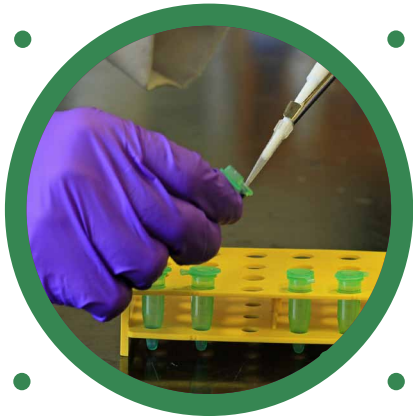
Optimization & enhancement of groundwater recharge through Reservoirs, Breakers and Dams in UAE

The project—undertaken in collaboration with and support from the UAE Government—aims to examine the effectiveness of dams in recharging groundwater aquifers. These aquifers serve as a major source of water supply, for agriculture, and industrial use. Their sustainable use over the long term requires an adequate balance between water withdrawal and recharge.

A systematic inventory of recharge dams will be prepared for the 15 study sites. It is anticipated that the project will lead to better land and water management in UAE. These results are also transferrable to other arid and semi-arid countries throughout the region. Such cross-fertilization of ideas is explicitly included in the project design through engagement of project teams for the SUMAMAD project from Tunisia, Iran and Jordan.

The first field visit of the UNU-INWEH team of experts took place in November 2010, which led to publishing a report in May 2011. The UNU-INWEH team also held a workshop with audience from local UAE concerned authorities, universities, NGOs, and researchers. A second visit took place during May 2011 with the focus on discussing the report and the design of the recharge wells for three demonstration sites. A second workshop also took place with a focus on monitoring of groundwater recharge methodologies in dryland areas; the purpose of these workshops was to share the UNU-INWEH's experience on dryland management issues. The first recharge well was cast in place, and tested during the summer of 2011.

Progress Report on Freshwater Activities and Projects



GEF IW: Science

UNU-INWEH is nearing the completion of the IW:Science project and launch of the global transboundary waters scientific synthesis in late 2012. The project is a GEF funded activity to look at the science and learning opportunities from 20 years of transboundary water projects that make up the International Waters (IW) portfolio. The portfolio is the largest investor of multi-country collaborations on shared water systems ever, consisting of a US\$ 1.2 billion GEF investment matched with US\$ 6.4 billion in co-financing and involving 150 countries.

IW:Science focuses on synthesizing scientific findings from GEF's International Waters portfolio. The project was designed to conduct a review, analysis and synthesis of the science behind 20 years of IW projects. Reports of the Millennium Ecosystem Assessment. Five groups of scientists, comprising experts both within and external to the IW projects, were assembled according to their areas of expertise in the five GEF IW system types; River Basins, Lakes, Groundwater, Coastal Zone/Land-based Pollution Sources, and Large Marine Ecosystems and the Open Ocean. Both natural and social science expertise was considered when looking at the impact on the sustainable management of global transboundary water systems worldwide.

The considerable database built for IW:Science, the largest ever for GEF International Waters projects, is being integrated into the UN-Water Activity Information System. This partnership serves to benefit the transboundary water interests of both GEF and UN-Water through information exchange and online integration of results. As the Executing Agency of the IW:Science project, UNU-INWEH recently took part in the 6th International Waters Conference of the Global Environment Facility in Dubrovnik, Croatia in October 2011. practices will be undertaken and integrated into the KAPE initiative (see above). This will provide a broader evidence base for scaling the lessons learned up and out to the larger Lake Victoria basin region.



GLOBAL ENVIRONMENT FACILITY

Progress Report on Water-Health Nexus Activities and Projects

Hydrosanitas - Safe Water Provisioning Knowledge Portal

The development of an interactive portal for safe water provisioning solutions for rural, remote and otherwise marginalized communities around the world will provide simple, yet comprehensive information on proven solutions in order to empower and inform decision-makers. Since its inception, partner meetings and stakeholder consultations have guided the development of a pilot system. The knowledge portal is built upon the KIMUNU platform and will be ready for evaluation in spring 2012.





KAPE - Knowledge, Attitudes, Practices, and Empowerment

Focusing on the provision of safe water to marginalized communities in the Lake Victoria basin of Kenya, several research activities have been undertaken to date. Data collection is ongoing through collaborations with McMaster University and the University of Waterloo. Major differences have been observed in knowledge, attitudes and practices across genders, age groups, and family status. Funding for the project has been secured from the Social Sciences and Humanities Research Council of Canada (SSHRC) and from the Rotary Club of Hamilton, while research is supported by both UNU-INWEH and McMaster University. In addition, a network of communities is being established, with community leaders involved with the project sharing their water experiences with public officials, NGOs and academics from around the world at the Rural Water Supply Network's 6th international forum in Uganda. Initial results have been published in the East African Journal of Public Health (Levison et al, 2011).

Progress Report on Water-Health Nexus Activities and Projects



Solutions to Polluted Lake-shore Drinking Water in Rural African Communities

This initiative to develop an integrated planning framework for the provision of safe drinking water to lakeside communities has been tested through a pilot project on the shores of Lake Victoria. Pumps now provide 12,000 households with access to easily drawn and safe water at a fee of US\$ 0.65 per month per household (with a solar-powered pump in Abala), US\$ 0.05 per 20 litres jerrycan (with electrically-powered pump in Kiyindi) and about US\$ 1.4 per month per household (with a diesel powered pump in Mbarika). Two key conclusions are that the beneficiary communities can manage their own developmental initiatives effectively if actively involved in planning, implementation and in the management of their resources; and, small grants have the capacity to achieve large impacts on the livelihood of communities as the impact has been significant, given that up to 80% of the diseases diagnosed in the nearby dispensaries were waterborne. However, providing adequate sanitation in these communities remains a challenge. As a result of these successes, as well as ongoing needs in each of the communities, further investigations around knowledge, attitudes and practices will be undertaken and integrated into the KAPE initiative (see above).



The Global Environmental Change and Human Health (GECHH)

This is a joint project of the Earth System Science Partnership (ESSP) (www.essp.org).

With a commitment to boost networking through international symposia and optimizing research, the second annual Symposium “Global Environmental Change and Human Health: Healthy Forests for Life” was organized in partnership with the Institute of Ecosystem Study and the Water Research Institute of the Italian National Research Council in September 2011.

To strengthen knowledge translation, GECHH partnered with the McMaster Centre for Climate Change and with CNR-IRSA, respectively, co-hosting a Café Scientifique on “Hot Topic: Climate Change, Extreme Heat, and Canadians’ Health” and a seminar “Towards global human health and wellbeing in a changing environment: climate, forests and water: the role of UNU-INWEH and the GECHH Project”.

Science/policy bridging activities for 2011 included representation in the “Workshop on the Research Dialogue” at SBSTA-34 of the Climate Change Convention, the UNECE Workshop “Payments for Ecosystem Services: What role for a green economy?” and, a side event “Water & Forests: Fostering Human Health in a Changing Environment towards a Green Economy” at the CBD/SBSTTA-15 Meeting.



Progress Report on Water-Health Nexus Activities and Projects



Vulnerability Mapping

This initiative is designed to measure, map and mitigate the vulnerability of individuals and communities to water-related diseases in the face of global environmental change. The project is a joint UNU initiative (INWEH, IIGH and EHS).

Two PhD students, Kate Mulligan and Sarah Dickin, have joined the project as research students from McMaster University while Dr. Haidar Rizal bin Toha will be working on the initiative from UKM. Mr. Firhad Ahmad, a research assistant based in Malaysia, has been hired to coordinate collection of secondary data sets and aid with key informant interviews. Ms. Mulligan completed her field season and key informant interviews in late 2010. Ms. Dickin has completed a field season in Malaysia conducting focus groups within different communities. Both were awarded external research grants to support their work in the field. Initial findings have been presented in international fora, including the International Medical Geographers Symposium and the Association of American Geographers.

Partnership with Alexandria University, Egypt

Discussions are ongoing with Alexandria University, Egypt to set up a joint research facility which would lead to the establishment of a twin institute of UNU-INWEH. The UNU-INWEH Director visited Alexandria University in December 2010. He met with Prof. Zahran (VP for Education and Student Affairs), Prof. Khishen (VP for Community Service and Environment Development) and Prof. Ibrahim (VP for Graduate Studies and Research). The meeting was very cordial and positive, and the University assured UNU-INWEH that it had a strong interest in setting up a joint research facility.

UNU-INWEH established a MOU with Alexandria University in September 2011 to undertake a joint research and academic programme. As a stepping stone towards a twin institute, this Joint Research Facility will focus on drylands and water management issues, and relates closely to the joint Master's degree programme on integrated drylands management.



Seminars and Events

Seminar; 18 January 2011; Hamilton, Canada **Another Drop Seminar Series - Ilingwesi: How to Animate a Community Towards Health Care Progress**

Miriam E. Patterson discussed how a Maasai Community in Kenya stated their desire to “get HIV/AIDS under control” throughout their 50 x 50 km area of land.



Seminar; 1 February 2011; Hamilton, Canada **Another Drop Seminar Series - Management of Water Utilities in the Arab Region: Challenges and Solutions**

H.E. Eng. Khaldon Khashman, Secretary General of ACWUA, discussed the water sector in the Arab region suffering from chronic problems, such as water scarcity, weak water and environmental policies, high investment needs, lack of management and technical capacity, increasing demand due to growing populations, and conflict.

Workshop; 22 - 25 February 2011; Istanbul Turkey **Water Scarcity Workshop**

A consultation workshop took place from 22-25 February, 2011 bringing together scientific, government and business leaders from WANA countries (Iran, Turkey, Egypt, Syria, Lebanon, Tunisia, Bahrain, UAE, Algeria, Morocco, and Jordan) to evaluate the further development and launch of a policy brief. It is anticipated that the policy brief will be launched at the World Water Forum (WWF) in Marseille in March 2012, with the possibility that HRH Prince Al Hassan Ben Talal will address the Forum and announce the release of the water scarcity policy brief.

Seminar; 8 March 2011; Hamilton, Canada **Another Drop Seminar Series - Water and Environmental Health in Ontario - How far have we come since Walkerton?**

Theresa McClenaghan, one of the CELA lawyers representing the Concerned Walkerton Citizens in the Walkerton Inquiry, briefly reviewed what led to the tragedy in that community and what needed to change in protecting Ontario’s drinking water system.

22 March 2011; Co-organizers: McMaster University; Hamilton, Canada **World Water Day 2011 - Walk for Water: Acknowledging the Burden**

UNU-INWEH organized a group walk from McMaster University to McMaster Innovation Park to draw attention to the plight of the many women in developing nations who are forced to walk great distances each day to access water. The walk culminated in a seminar at McMaster Innovation Park, which highlighted challenges of sanitation in an urbanizing world and water-health in the aftermath of natural disasters, with a focus on the Haiti earthquake.



9 June 2011; Hamilton, Canada **World Oceans Day**

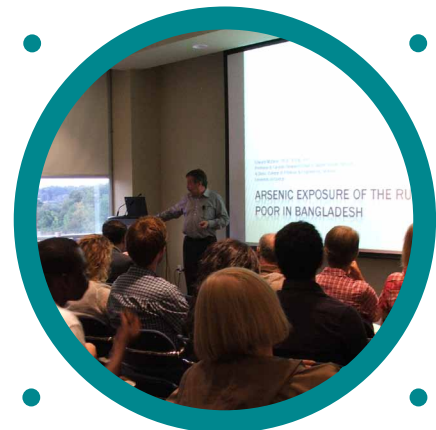
Posters and brochures were distributed for this event which focused on “Youth, the next wave of Change”. To raise awareness on the state of the oceans, staff members were asked to wear blue on 9 June 2011 and pass on the message to their collaborators and colleagues. A group photo was taken and posted on the UNU-INWEH website. An educational and outreach event was also organized at a local primary school. Children were shown an animated film on protecting the oceans and were invited to make an ocean craft.

Seminar; 13 September 2011; Hamilton, Canada **Another Drop Seminar Series - Arsenic Exposure of the Rural Poor in Bangladesh**

Edward McBean, Canada Research Chair in Water Supply Security at the University of Guelph, discussed different approaches to address the issue of arsenic contamination in water in rural Bangladesh including through rainwater harvesting, Arsenic Iron Removal Plants, identifying high-risk areas, and identifying food types and preparation activities which influence exposure scenarios.

Seminar; 21 September 2011; Hamilton, Canada; **Coastal Programme Seminar Series - Is there a** **Willingness to Pay for Island Sustainability?**

Rachel Dodds, Director, Sustaining Tourism and Associate Professor, Ryerson University, discussed the concept of sustainable tourism using the island of Koh Phi Phi, Thailand, as a case study and examined whether there was a willingness to pay for a more sustainable tourism destination after the tsunami of 2004.



Lecture; 4 October 2011; Hamilton, Canada **WaterShed Lecture Series - Safe Water and Health in a** **Changing Climate**

Kristie Ebi, Executive Director of the Intergovernmental Panel on Climate Change

Working Group II Technical Support Unit, provided an overview of health-related challenges based on various climate change scenarios.

Side Event; 11 October 2011; Co-organizers: UNU-LRT; GNDRI; Changwon, South Korea **UNCCD COP10 - United Efforts to Develop a Fellowship Programme to Combat** **Land Degradation**

A joint side event was hosted by UNU-INWEH, UNU-LRT and GNDRI to discuss a possible partnership and the modalities of establishing a multi-stakeholder UNCCD Fellowship Programme.

Seminars and Events

**Side Event; 13 October 2011; Co-organizers: UNU-EHS, UNU-ISP; Changwon, South Korea
UNCCD COP10 – Addressing Research, Policy and Capacity Gaps for Sustainable Land Management in Mountain Regions**

This joint side event, presented by UNU-INWEH, UNU-EHS and UNU-ISP, focused on critical challenges and opportunities for sustainable land use and management in mountain regions. The event highlighted obstacles that communities in different mountain ranges face and entry points that have or could enable them and other communities facing similar challenges to cope with and capitalize on the changes. The case studies drew upon projects supported or implemented by the three different UNU institutes.

**Side Event; 13 October 2011; Changwon, South Korea; Co-organizers: DesertNet International
UNCCD COP10 – At the Cutting Edge: Channelling Core Scientific Advances into the UNCCD Process**

UNU-INWEH participated in this side event hosted by DesertNet International which explored the options for channelling scientific advice into the UNCCD process. This was based on a joint policy brief developed by DesertNet International and UNU-INWEH on the same topic.

**Lecture; October 26, 2011; Hamilton, Canada
McMaster Centre for Climate Change (MCC) in partnership with UNU-INWEH and GECHH - What's up with the Weather?**

Dr. David Phillips discussed what's happening to our weather and why.

**Seminar; 1 November 2011; Hamilton, Canada
Another Drop Seminar Series - The Wishing Well: where maternal health and water intersect**

Dr. Chamberlain and Dr. Nakabembe discussed some of the many ways that water directly and indirectly impacts maternal/infant health, especially within the context of global environmental change and achievement of the millennium development goals.

**Workshop; 14 - 15 November 2011; Co-organizers: UNW-DPC, FAO, UNEP;
UN Campus, Bonn, Germany
International Workshop - Safe Use of Wastewater**

An international kickoff workshop was held on the "Safe use of wastewater in agriculture" initiative, together with FAO, UNEP and UN-Water Decade Programme on Capacity Development as collaborators.

Workshop; 17 November 2011; Ottawa, Canada

Panel Discussion and Workshop: The Role of K* in Strengthening Science-Policy Integration

This fast-paced and interactive session held as an invited session at the 3rd Canadian Science-Policy Conference (CSPC) began with short presentations by each of five panelists, followed by two sets of roundtable discussions among participants and each of the six panelists, and a short wrap-up segment. This year's panel engaged the broader CSPC community and:

- Provided insight into this active, emerging field;
- Showcased practical and tangible examples of the value and power of knowledge transfer- knowledge brokering and other K* approaches in Canada and internationally;
- Developed the theme of demonstrating the impacts of Knowledge Mobilization activities; and
- Was a waypoint for the first international K* Summit to be held in 2012, and subsequent development of a multi-sectoral forum and White Paper for K* issues nationally and internationally.

Seminar; 22 November 2011; Hamilton, Canada

Another Drop Seminar Series - The Politics of Policymaking

Alex Bielak, Carl Griffith and Ahmed Shafiqul Huque debated the role of evidence-based decision-making in water-related policy development; who decides what is incorporated and how is research translated for decision-makers?

Seminar; 24 November 2011; Hamilton, Canada

Coastal Programme Seminar Series - Persistent Contaminants in Marine Mammals: Trends and Patterns in a Changing World

Chris Metcalfe, Professor, Environmental and Resource Studies Program and Director, Institute for Watershed Science, Trent University, reviewed his research experience with contaminants in marine mammals from various locations around the world, as well as data that have been generated by other researchers working in this field.



Workshop; 15 - 19 December 2011; UNESCO and National Center of Scientific and Technological Research (CNRST), Burkina Faso; Bobo-Dioulasso, Burkina Faso

9th SUMAMAD International Workshop

The 9th international workshop of the Sustainable Management of Marginal Drylands (SUMAMAD) project was held in Bobo-Dioulasso and included a field visit to the project site at the Hippopotamus Pond Biosphere Reserve.

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