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**UNU-INWEH**

Institute for Water,  
Environment and Health



Annual Report 2014





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Environment and Health

# Annual Report 2014

UNU-INWEH: The UN Think Tank on *Water*



Photo Credit: UN Photo, John Isaac



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UNU-INWEH: The UN Think Tank on Water. Credit: UN Photo, Evan Schneider

To learn more about  
UNU-INWEH, visit us at:  
[www.inweh.unu.edu](http://www.inweh.unu.edu)

# About UNU-INWEH

## The UN Think Tank on Water

### About Us

UNU-INWEH acts as the “United Nations’ Think Tank on Water”. We respond directly to the regional and global water crisis and facilitate efforts to meet UN Development goals by providing a scientific evidence base. The United Nations University is not a traditional university in the sense of having a faculty, campus, or students. It carries out its work in cooperation with other research institutions, international organizations, and individual scholars and scientists throughout the world.

UNU-INWEH was established as a public service agency and as an institute of the UNU in 1996. Its operations are secured through long-term host-country and core-funding agreements with the Government of Canada. Located in the McMaster Innovation Park in Hamilton, Ontario, its facilities are provided in partnership with McMaster University.

### Our Vision

UNU-INWEH strives to ensure a world free of water problems where sustainable human development and environmental health and security are assured for all.

### Our Mission

UNU-INWEH’s mission is to help resolve pressing water challenges that are of concern to the United Nations, its Member States, and their people, through knowledge-based synthesis of existing bodies of scientific discovery; through cutting-edge targeted research that identifies emerging policy issues; through application of on-the-ground scalable solutions based on credible research; and, through relevant and targeted public outreach.



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# Our Comparative Advantage

## The Whole Spectrum of Water Issues

As a think tank on water that covers the whole spectrum of water issues, UNU-INWEH offers services on a worldwide scale, occupies a unique niche in the UN system, and has a number of comparative advantages over similar institutes operating at regional and international scales.

As part of a UN organization, UNU-INWEH is connected to various processes within the UN system, which allows it to provide policy guidance on matters of international importance. A key example is the UNU-INWEH Director elected to serve as the Chair from 2010-2012 for UN-Water — a group of 31 UN organizations working on water and sanitation issues globally.

UN status affords UNU-INWEH unparalleled access to national governments and related policymaking processes. At the same time it receives preferential and often exclusive access to financial and human resources available within the UN system.

UNU-INWEH's activities also cut across a broad range of geographical scales. UNU-INWEH is one of the very few institutions that can run pilot studies with small communities, and then synthesise findings to impact policy formulation at national and international scales.

It is important to point out that UNU-INWEH operates within UNU's responsive administrative management — one which provides efficient and timely services — while maintaining the full range of rules and regulations promulgated by the UN system. With an administrative support group that works closely with the project implementation teams, it offers flexible and efficient implementation of projects and initiatives.



UNU-INWEH Director, Dr. Zafar Adeel, presenting at World Water Week



A visit from the Chinese Water Resources Dept. Delegation

# Director's Summary

## 2014: The Year of Water & Energy



Dr. Zafar Adeel, Director

### ***UNU-INWEH underwent remarkable transitions in 2014, including changes to its programme, projects, team composition, and engagement with partners.***

A significant dialogue on programmatic consolidation was undertaken in 2013, with inputs from the UNU Council, the UNU-INWEH International Advisory Committee (IAC), and the team members at UNU-INWEH. All projects from four thematic programmes were condensed into two new programmes: *Water and Ecosystems*, and *Water and Human Development*. Starting with January 2014, these programmes were active, with corresponding modifications to the Institute's website and management systems.

UNU-INWEH continued engagement in the deliberations around the post-2015 development agenda. In particular, it partnered with the UN Office on Sustainable Development (UNOSD), the Global Water Partnership (GWP), and McMaster University. Building on our previous work on water-related Sustainable Development Goals (SDGs), we undertook a country-level analysis of 11 countries. The aim is to facilitate the ongoing negotiations by providing evidence-based information to the UN member states.

We also continued active engagement in the global consortium that is evaluating the Economics of Land Degradation (ELD) and the rewards of investing in sustainable land management. Funded through the European Union (EU), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), and the Korea Forest Service (with UNU-INWEH as the scientific lead in the process) we analyzed the economics worldwide associated with sustainable land management — which is a major weapon in beating land degradation and desertification. A particular development was the engagement of the private sector in the ELD initiative, including a number of case studies demonstrating the role of the private sector in combatting land degradation.

UNU-INWEH continues to lead the work on drinking water and sanitation by serving as the coordinator of a task force of UN-Water (a coordination mechanism of 31 UN organizations). UNU-INWEH has now been asked to lead the organization of World Toilet Day on behalf of the UN system. This effort also relates to the final push by the UN system to meet the Millennium Development Goals (MDGs), particularly those with the focus on sanitation, which are led by Deputy Secretary-General Jan Eliasson. Working together with UN-Habitat, we have been engaged in an advocacy campaign to meet sanitation-related MDGs, including the eventual eradication of open defecation.

UNU-INWEH also underwent a renewal in 2014 through significant transitions in team composition. As UNU-INWEH bade farewell to a number of staff members, it also welcomed new team members, including two new Assistant Directors who will lead the implementation of UNU-INWEH's newly created programmes.

UNU-INWEH also completed a new, five-year Strategic Plan (2015-2019) in August 2014, which focused on a renewal and creation of partnerships. A major dialogue was initiated with the leadership at McMaster University to further strengthen the ongoing collaboration. Water Without Borders, a joint venture focusing on graduate students, underwent significant improvements. Additionally, UNU-INWEH triggered discussions with a number of private-sector partners on building research and capacity development collaborations. These changes, initiated in late 2014, will lay the ground for growth and progress for UNU-INWEH in the years to come.

A handwritten signature in black ink, appearing to read 'Zafar Adeel', written in a cursive style.

Dr. Zafar Adeel, Director  
United Nations University  
Institute of Water, Environment and Health



# Highlights and Milestones

## Celebrating Water & Energy

### World Water Day 2014

Organization of the 2014 World Water Day celebrations in Tokyo (21 March) was a key activity that UNU-INWEH undertook in collaboration with other UNU institutes and UN organizations. The partners for this UN-Water event included UNU Centre, UNU-FLORES, UNU-EHS, UNIDO, UNESCO, UNW-DPC and UNW-DPAC. A major highlight of the event was a keynote speech by the HRH Crown Prince of Japan. A number of ministers, deputy ministers, heads of UN organizations, and senior diplomats also participated in and attended the event. The World Water Day celebrations were preceded by an international training workshop for journalists and a regional consultation for the Asia Pacific region on 20 March. A policy brief based on the discussions during the event will be launched by UNU-INWEH in 2015.

### Successful Conclusion of a Massive, Open, Online Course (MOOC)

UNU-INWEH, working within the Economics of Land Degradation (ELD) Initiative, launched a Massive, Open, Online Course (MOOC) for free during 2 March - 17 May 2014. About 100 people completed the course (with the initial registrations exceeding 1,000). The MOOC was a 12-week program consisting of 12 units, available on Global Campus 21®. It included traditional course material such as videos, readings, and case studies, as well as an online learning room to provide interactive tools in building a vibrant learning community focused on co-creating solutions. Participants received an ELD badge upon successful completion, provided they had actively and collaboratively participated in the course. Participants who handed in all assignments, participated in peer-review, and achieved at least 90% scores received a certificate from UNU-INWEH.



World Water Day Photo Contest Winner, "Salinity" by Mohammad-Rakibul-Hasan



World Water Day Photo Contest Winner, "Water is Life" by Rudi Dundas



# Programmes of UNU-INWEH

## Human Development and Ecosystems

### Water & Human Development Programme

Leading in the development of a global community of best practice that identifies, synthesizes, evaluates, generalizes, and disseminates practical methods and innovative approaches to accelerate solutions to global and regional challenges at the interface of water and human development. This programme tackles three interconnected and closely linked challenges: ensuring water-health security; safeguarding and sustaining water availability; and, securing food supply for all.

### Projects

#### **Water-related Sustainable Development Goals (SDGs)**

Independent, scientifically-based evidence is provided for evaluating SDGs involving water and better understanding their implementation. This project also includes analysis of the future outlook beyond 2015 and assessment of progress towards specific targets.

#### **Innovative Wastewater Management & Reuse:**

Focusing on multiple uses of wastewater, including business models for improving sanitation access and wastewater management that operate on profits made from water, energy, fertilizer, and nutrient recovery.

#### **Water, Sanitation & Hygiene for Women & Children**

Achieving better outcomes for maternal and child health through improved access to safe drinking water and adequate sanitation and hygiene, particularly in the community and health care facilities.

#### **Water Security & Food Security**

Moderating an evidence-based dialogue on water security and assisting with capacity development where needed. A particular focus is better use of water to achieve food security, relating to the concepts of 'more nutrition and economic return per drop' and improving water use efficiencies from 'field to fork' (reducing wastage).



*In Bolivia, many family farms cannot afford to purchase feed for livestock holdings*



*Sustainable solutions at a wastewater treatment plant in Uganda*



*Dr. Corinne Schuster-Wallace visiting an elementary school in Uganda*

## Water and Ecosystems Programme

Focusing on enhanced capacity and research to improve scientific understanding of critical dryland, freshwater, and coastal ecosystem functions and management approaches adapted to a changing environment. This programme also explores integrated holistic management approaches to foster sound policies for water and its important role in protection of ecosystems and conservation of ecosystem services.

### Projects

#### *Economics of Water & Land Challenges*

Investigating the economic dimensions of a broad range of water- and land-related challenges. Business and private sector engagement is sought for both understanding and responding to broad economic challenges.

#### *Integrated Ecosystem Management*

Improving the resilience of societies to the threats posed to coastal habitats, marine fisheries resources, and freshwater ecosystems by rapid population growth, human activity, and climate change, through integrated solutions that apply from 'ridge to reef.'

#### *Building Ecosystem Capacities*

Focusing on institutional and human capacity gaps, a number of activities focus on integrated water resources management, sustainable management of mangroves, and integrated management of dryland ecosystems.



UNU-INWEH assists developing countries in drylands to better manage their resources



Rivers, lakes and aquifers are critical and essential to human life



Overfishing and pollution serve as a local threat to coastal ecosystems

# Water-Related Sustainable Development Goals

## Water & Human Development Programme

### Project Achievements

UNU-INWEH continued engagement in the deliberations around the post-2015 development agenda, particularly those pertaining to water and partnered with the UN Office on Sustainable Development (UNOSD), the Global Water Partnership (GWP), and McMaster University. Building on our previous work on water-related Sustainable Development Goals, we undertook a country-level analysis of 11 countries representing different geographies and economies in Africa, Latin America, North America, and Southeast Asia. The aim is to facilitate the ongoing SDG negotiations by providing evidence-based information to the UN member states. A major expert consultation was organized by UNU-INWEH in Hamilton (8-9 October 2014) to discuss the country-based analysis; participants represented academia, regional economic commissions, the UN secretariat, and non-governmental organisations. The final report will be presented at the UN Headquarters in New York in February 2015, in collaboration with UNDESA and UNOSD.



Experts gather during at UNU-INWEH for a two-day sustainable development workshop





# Innovative Wastewater Management & Reuse

## Water & Human Development Programme

### Project Achievements

The implementation of research-based technical options for wastewater treatment and reuse in developing countries, supported by pertinent policy level interventions, offers great promise for environment and health protection as well as livelihoods resilience. This project addresses four major and interconnected aspects of wastewater management:

1. applied research aiming at transforming 'waste' into 'wealth' through biogas production, nutrient recycling, and ecological sanitation;
2. policy-relevant study addressing global, regional, and country level trends in wastewater generation, treatment, and use;
3. capacity development activities centered around safe and productive use of wastewater in agriculture; and
4. knowledge-based synthesis of existing research addressing resource recovery and reuse while considering wastewater as an economic asset in an urbanizing world.

Based on funding received from Grand Challenges Canada (GCC) in 2013, UNU-INWEH developed a major partnership with the Government of Uganda to develop robust and scalable technologies, combined with an innovative business model to tap private sector resources for sustainable wastewater management in urban informal centres and in rural communities. This partnership also involves a number of NGOs in Canada and Uganda, as well as private sector partners. All the partners took part in a multi-stakeholder workshop in Kampala (February 2014). This second-phase of the initiative developed during 2014 is also seeking capital resources from the Islamic Development Bank; the multi-year project proposal was presented to GCC in November 2014.



# Water, Sanitation & Hygiene for Women & Children

## Water & Human Development Programme



*Water-associated diseases, such as cholera and dengue threaten the health of billions worldwide. Credit: UN Photo, Tobin Jones*

“Large parts of Europe, West and Central Africa, and South America face the threat of outbreaks of the deadly dengue virus due to climate change and urbanization, according to the first-ever maps of dengue vulnerability published on Tuesday.

Research by the United Nations University found dengue fever, that is transmitted by the bite of female mosquitoes and causes severe pain, is on the move with the maps pinpointing vulnerable areas as a tool to help prevent outbreaks.”

- THE HUFFINGTON POST

### Project Achievements

This project addresses various aspects of water-related health, particularly as they pertain to women and girls. The over-arching goal of the project is to support local government, NGOs, and community leaders partnering with communities to ensure that they have the knowledge, capacity, and desire to implement and practice sustainable Water, Sanitation, and Hygiene (WaSH) in order to ensure good public health and wellbeing. It directly addresses water-health linkages in an integrated and effective manner and is supported through four key activities: tool development to support evidence-based decision-making; research-policy-practice implementation; dissemination; and, capacity development.

# Water Security & Food Security

## Water & Human Development Programme

### Project Achievements

This project directly responds to the growing concerns around water security and food security worldwide. It addresses issues related to the likelihood of armed conflict and war over shared water resources, on the continuing availability of water resources to produce sufficient food for 9-10 billion people, on the probability of providing safe drinking water to every man, woman and child, and on the impact of climate change to create extreme water events — such as typhoons, floods and droughts — for which we are not prepared. The following three activities took place in 2014 and are ongoing:

First, UNU-INWEH co-chairs, together with UNESCAP, the UN-Water Task Force on Water Security. The aim of the Task Force is to conduct a series of regional expert consultation and to further elaborate the concepts related to water security in each region. The consultations, which will begin in mid-2015, will culminate in a policy brief describing the consolidated position of the UN system on this issue.

Second, a book series entitled, “Water Security in a New World”, is being published in collaboration with Springer. The first two volumes of the series are entitled: “Individuals and Communities: The Human Face of Water Security” and “Water-Energy-Food Security Nexus in the Arab Region.” Both volumes are due for publication in mid-2015.

Third, a research-based initiative is focused on better understanding water management and related development challenges in the Indus Basin. This activity aims to define the correlation and importance of water, social, and institutional relationships at varying levels of government, basin authorities, private sector, and civil society. It particularly aims to identify existing capacities and capability and examine long-range threats and opportunities the targeted country in the Indus Basin: Pakistan. After intensive planning during 2014 — which also involved the US Institute of Peace, the US Water Partnership, Georgetown University, and the Stimson Center — the project will undertake a number of field trips and expert consultations by mid-2015.

### Changes in rainfall can affect world politics, says UN-sponsored book

“In the Arab region, we’ve seen a confluence of population impacts, social challenges, combined with water scarcity, combined with impacts on food security. When you have a confluence of all these factors coming together, that’s really where the explosive situations occur... Canadians may not think this matters,” said Sandford. “It should matter to Canadians that our hydrology’s changing,

- THE STAR



Drinking water in Dakhla. Credit: UN Photo, Evan Schneider



# Economics of Water & Land Challenges

## Water & Ecosystems Programme



### Project Achievements

The Economics of Land Degradation (ELD) is an initiative for a global study on the economic benefits of land and land-based ecosystems, in close partnership with GIZ and UNCCD. The initiative aims to make economics of land degradation an integral part of policy strategies and decision-making by increasing political and public awareness. UNU-INWEH operates as the Scientific Coordinator for the ELD Initiative. In 2014, it managed knowledge and information management on the economics of land degradation and linkages to food, energy, and water security. It undertook the development of three primary ELD reports to scientific communities, private sector, and policy-/decision-makers. A key achievement was the organization of the 3rd ELD Scientific Meeting (June 2014) in Nairobi, Kenya. UNU-INWEH is also actively promoting and sustaining an online presence that both promotes and disseminates the work of the ELD Initiative and relevant partners work through various social media channels.



Land degradation threatens fertile land worldwide. Credit: UN Photo, Stuart Price

“Rapidly increasing agricultural land prices and large-scale investments by local and foreign companies in land in developing countries reflect the risks of land degradation and perceived land scarcity. Yet despite the rising value of land and the growth in business interest, land degradation continues apace. This is due to a failure to investment in measures to prevent degradation in response to the rising demands for land-related products and services.”

- RURAL21 INTERNATIONAL JOURNAL

# Integrated Ecosystem Management

## Water & Ecosystems Programme



*Groundwater aquifers serve as a major source of water supply for agricultural uses.*

### Project Achievements

This project aims to improve the resilience of societies to the threats posed to coastal habitats, marine fisheries resources, and freshwater ecosystems by rapid population growth, human activity, and climate change, through integrated solutions that apply from 'ridge to reef.' A major activity is undertaken at the request of the Government of United Arab Emirates (UAE) and aims to examine the effectiveness of dams in recharging groundwater aquifers. It assessed existing water harvesting techniques and reviewed alternative methods available. The project relied on participatory evaluation techniques, involving local communities, in order to assess the impact of water utilized for irrigation as well as flood and erosion control measures. A systematic inventory of recharge dams was prepared for 15 study sites. During early 2013, field implementation of the research findings was undertaken and 9 recharge wells were installed in number of the dams covered by the UNU-INWEH study. The UNU-INWEH expert team observed during 2014 the performance of these recharge wells against the field condition during the rainy period. Subject to a significant rainfall event, which are rare for UAE, this activity could be concluded by early 2015.

# Building Ecosystem Capacities

## Water & Ecosystems Programme

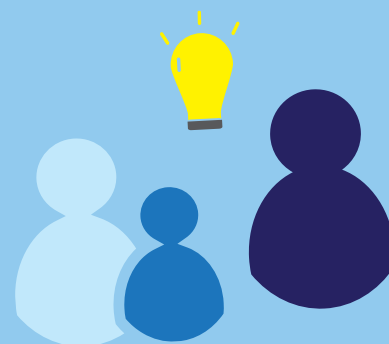
### Project Achievements

#### **Integrated Water Resources Management**

This project focuses on institutional and human capacity gaps in effective management of ecosystems, and relies on initiatives undertaken with partner institutions to address these gaps. Specific activities within the project focus on integrated water resources management (IWRM), sustainable management of mangroves and integrated management of dryland ecosystems. The Water Learning Centre (WLC) — a distance education program focused on IWRM — entered its tenth year of operation in 2014, having successfully provided over 140 students graduate with a UNU Diploma in IWRM. The WLC promotes topics such as sustainable water management, water-health, mangrove ecosystems, and climate change (latter three currently in development) through a core curriculum that is provided by international experts who offer opportunities for continuing education and skills upgrading. The long-term, overarching goal of the WLC is to enhance national capacities for the development and implementation of sustainable natural resource management strategies in developing countries, at local, regional, and sub-regional levels. The program is directed to practicing professionals wishing to upgrade their knowledge of the various natural resource management concepts and practices.

#### **Environment and Health Training**

Through partnership and support from the Arab Gulf Programme for Development (AGFUND), UNU-INWEH worked with the Governments of Kenya and Tanzania in 2014 to develop a curriculum on environment and health training for water professionals.



Arabian Gulf University delivers the WLC Programme in coordination with UNU-INWEH





### **Mangroves Training Course**

The 14th annual training course on mangrove biodiversity started on 27 October 2014 that involved 14 international participants from eight countries (India, Indonesia, Sri Lanka, Bangladesh, Vietnam, Thailand, Singapore, and Philippines). The course outlined an integrated approach towards management of coastal ecosystems, with a particular emphasis given to teaching the methodology for assessing, monitoring, and conserving biodiversity in mangrove ecosystems. UNU-INWEH, with key partners, converted the content of this international mangroves course into an online post-graduate level courseware. The online course was further complimented by a short hands-on field and laboratory component. In partnership with the Latin America School for Protected Areas at the University of International Cooperation in Costa Rica and their campus in Puerto Morelos, Mexico, the course was piloted in 2014. In partnership with The Nature Conservancy (TNC), the course was also launched in 2014 as an open-access, distance-education class via the TNC training platform, [www.ConservationTraining.org](http://www.ConservationTraining.org).



*Exploring ecosystems in the Mangrove Biodiversity Course*



*Fieldwork for the Mangrove Biodiversity Course*

# Recent Publications

## Water & Human Development Publications

Adeel, Zafar, Axworthy, Thomas, S., Editors. (2014). *The Global Agenda 2013: Water, Energy and the Arab Awakening*. United Nations University.

Adeel, Zafar. (2014). *Envisioning a World Free of Water Problems*. United Nations University.

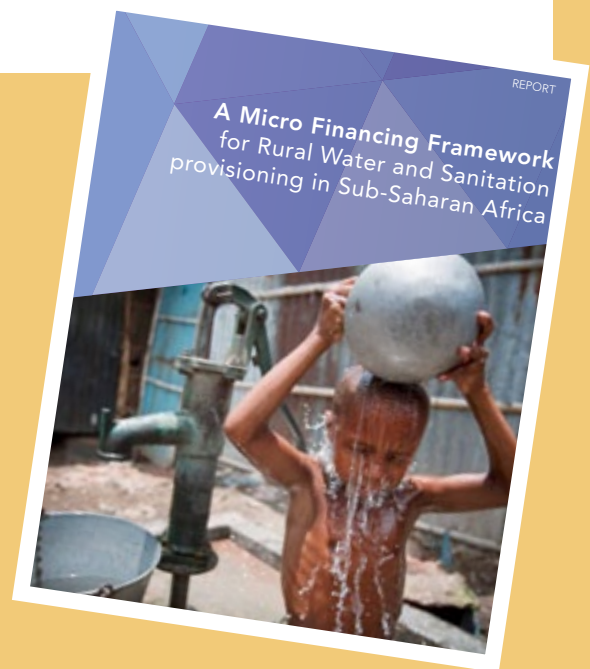
Adeel, Zafar. (2014). *Knowledge Challenges for Policy Integration of Water and Energy Domains*. Water Monographies II: Water & Energy. United Nations Office to support the Decade 'Water for Life' 2005-2015 / UN-Water Programme on Advocacy and Communication in the framework of the Decade, WCCE - World Council of Civil Engineers, Fundación Aqueae.

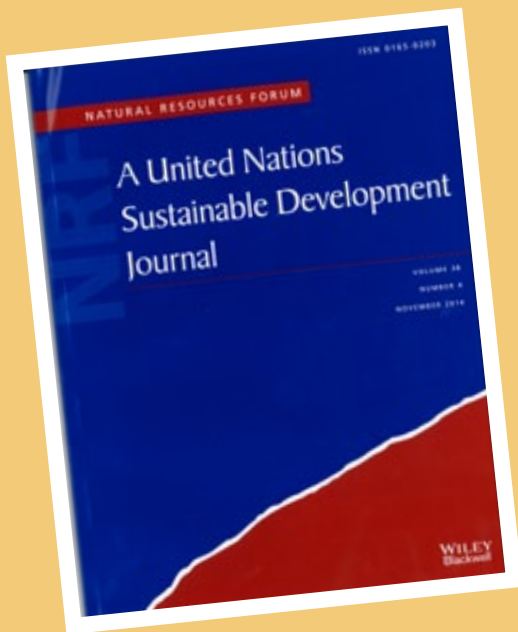
Dickin, Sarah, Mbuvi, Dorcas, Mengueze, Sandrine, Schuster-Wallace, Corinne. (2014). *A Micro Financing Framework for Rural Water and Sanitation Provisioning in Sub-Saharan Africa*. United Nations University.

### Changing Rainfall a Global Problem

“In the Arab region, we’ve seen a confluence of population impacts, social challenges, combined with water scarcity, combined with impacts on food security. When you have a confluence of all these factors coming together, that’s really where the explosive situations occur.’ The book proposes that a 180-kilometre pipeline bringing water from the Red Sea to the Dead Sea would improve the region’s environmental, energy and peace prospects.”

- GLOBAL NEWS





Dickin, Sarah, Elliott, Susan, Schuster-Wallace, Corinne. (2014). **Mosquitoes & Vulnerable Spaces: Mapping Local Knowledge of Sites for Dengue Control in Seremban and Putrajaya Malaysia.** Applied Geography, 46:71-79. doi: 10.1016/j.apgeog.2013.11.003.

Fullerton, L.M., Dickin, S.K., Schuster-Wallace, C.J. (2014). **Mapping Global Vulnerability to Dengue Using the Water Associated Disease Index.** United Nations University.

Qadir, M., Quill  rou, E., Nangia, V., Murtaza, G., Singh, M., Thomas, R.J., Drechsel, P. and Noble, A.D. (2014). **Economics of Salt-induced Land Degradation and Restoration.** Natural Resources Forum, 38: 282–295. doi: 10.1111/1477-8947.12054

UN-Water. (2014). **World Water Day 2014 Advocacy Guide.** United Nations University.

### Salt-ruined farmland costs billions of dollars every year, study finds

“Salt residue from soil irrigation degrades around 5,000 acres of farmland every day at a global annual cost of \$27 billion dollars in lost arable revenues, according to a study released Tuesday. Using cheap, short-sighted ways to water land without adequate drainage methods are the chief reason behind the land spoilage, according to the report by the UN University’s Canadian-based Institute for Water (UNU-INWEH). The total area being affected, the report notes, has shot up over the last two decades — from 111 million acres in 1991 to 160 million in 2013, representing some 20 percent of the world’s irrigated lands.”

- ALJAZEERA (AMERICA)





# Recent Publications

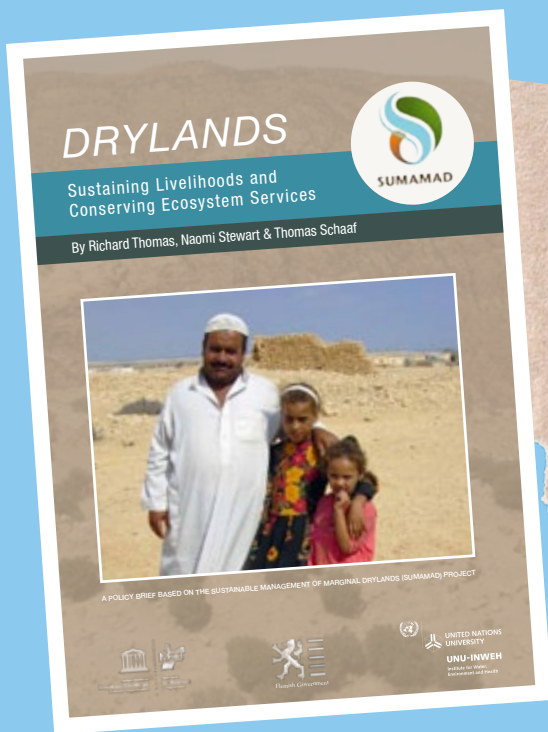
## Water & Ecosystems Publications

Agardy, Tundi, Ainsworth, Cameron, Sale, Peter. (2014). **Transforming Management of Tropical Coastal Seas to Cope with Challenges of the 21<sup>st</sup> Century**. *Marine Pollution Bulletin*, 85:1, 8-23. doi: 10.1016/j.marpolbul.2014.06.005.

Bauman, Andrew, Baird, Andrew, Burt, John, Feary, David, Pratchett, Morgan. (2014). **Patterns of Coral Settlement in an Extreme Environment: The Southern Persian Gulf (Dubai, United Arab Emirates)**. *Marine Ecology Progress Series*. 499: 115–126. doi: 10.3354/meps10662.

Burt, John, Feary, David, A., Van Lavieren, Hanneke. (2014). **Persian Gulf Reefs: An Important Asset for Climate Science in Urgent Need of Protection**. *Ocean Challenge*, 20: 49-56.





## Protecting Coastal Ecosystems Requires Global Cooperation

“Coastlines are under increasing risk not just from climate change but also from overpopulation, and from the interaction between the two processes. Together, those threats will increase the pressure on tropical coastal waters, making the seas increasingly unable to meet the demand our species requires of it. The main problem, according to 24 scientists from Canada, the USA, the UK, China, Australia, New Caledonia, Sweden, and Kenya, writing in the journal *Marine Pollution Bulletin*, is that most of those coastal regions are ‘lacking...holistic, regional-scale management approaches to balance the growth in competing demands from fisheries, aquaculture, shipping, oil, gas and mineral extraction, energy production, residential development, tourism and conservation.’”

- CONSERVATION MAGAZINE

Schaaf, Thomas, Stewart, Naomi, Thomas, Richard. (2014). ***Drylands: Sustaining Livelihoods and Conserving Ecosystem Services***. United Nations University.

McCormick, H. (2014) ***Participation of NGOs in Land Degradation Policy-Making in Uganda: Is Opportunity to Participate Enough?*** Major Research Paper for the Master of Arts in Globalization Studies and the Water Without Borders Collaborative Graduate Program in Water, Environment and Health, McMaster University and United Nations University Institute for Water, Environment and Health (UNU-INWEH). Available from: <http://inweh.unu.edu>

# Key Events in 2014

## Global Outreach at UNU-INWEH

### Water, Energy, and the Arab Awakening Book Launch

UNU-INWEH published this new book together with the InterAction Council — an association of 40 member former heads of state including Bill Clinton (USA), Jean Chrétien (Canada), Vicente Fox Quesada (Mexico), Andrés Pastrana Arango (Colombia), and Gro Harlem Bruntland (Norway). With contributions from many former heads of state, the book offers authoritative views on interlinked topics ranging from the Middle East and denuclearization of Korea, to the water crisis and the future of energy. The book was simultaneously launched in Scotland and Canada, accompanied with extensive media coverage. The story became the primary headline in UN Wire on the day of the launch, and was the topic of a radio show by BBC World Service.



“Many of our recent floods were similar in a number of ways,” wrote Sandford. Storms seem to get stuck in place instead of moving along. Their internal dynamics look more like tropical storms than those from temperate regions. Recent research suggests declining Arctic sea ice may be behind those effects. Although that theory remains controversial, Sandford said some sort of thread runs between a warmer Arctic, a weaker jet stream and extreme weather events.”

- CTV NEWS

### UN-sponsored Book: Changing Rainfall is a Global Problem

“Book written by 16 authors — including ex-Prime Minister Jean Chretien say world cannot ignore effect of climate change on rainfall patterns. [They] argue that the world can no longer afford to ignore the effects of climate change on rainfall patterns and their consequences for human security.”

- MACLEANS



### Spread of Ebola linked to defecation in the open - UN

“The United Nations called on Wednesday for an end to defecation in the open, with fears growing that it has helped spread the deadly Ebola virus ravaging West Africa. Half the population of Liberia, the country worst hit by the epidemic, have no access to toilets, while in Sierra Leone nearly a third of people live without latrines, a new UN report to coincide with World Toilet Day estimated.”

- MAIL & GUARDIAN

### India has highest number of people practicing open defecation

“Noting Prime Minister Narendra Modi’s pledge to end the practice in the country by 2019, the UN said it is an “ambition” channeling the view of Mahatma Gandhi, who had termed sanitation “more important than independence.” About one billion people worldwide or one-sixth of the developing world’s 5.9 billion population do not use toilets.”

- DECCAN CHRONICLE

“In 2013, more than 340,000 children under five died from diarrhoeal diseases due to a lack of safe water, sanitation and basic hygiene, an average of almost 1,000 deaths per day. But women who do not have access to adequate toilets are especially at risk, since they are vulnerable to shame and potential violence when they seek a place to defecate.”

- HERALD GLOBE

UN WATER  
19 November  
**WORLD  
TOILET  
DAY**



#### Organisation of World Toilet Day

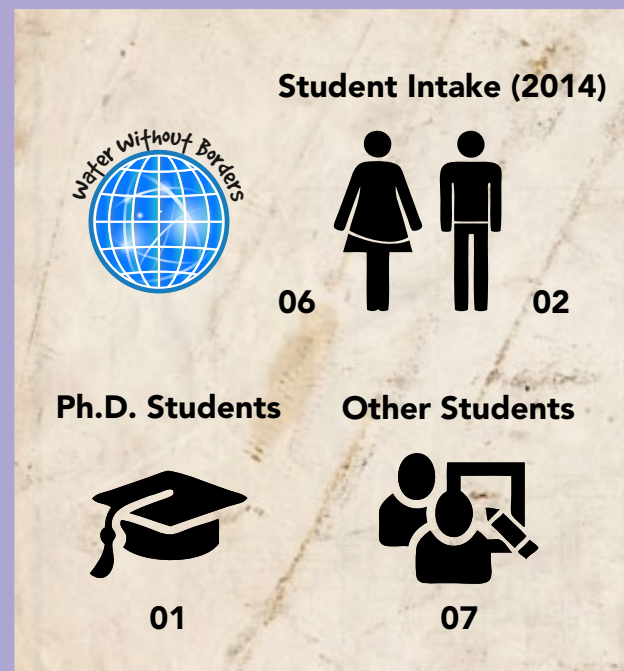
UNU-INWEH continued to lead the work on drinking water and sanitation by serving as the coordinator of a UN-Water task force (a coordination mechanism of 31 UN organisations). It was asked to lead the organisations of World Toilet Day (19 November) on behalf of the UN system. This effort related to the final push by the UN system to meet the MDGs, particularly the focus on sanitation led by the UN Deputy Secretary General Jan Eliasson. Working together with UN-Habitat, UNU-INWEH engaged in an advocacy campaign to meet sanitation-related MDGs, including the eradication of open defecation. The main event was organized at the UN Headquarters in New York, with many UN and international organizations and support from the permanent mission of Singapore.

# Key Events in 2014

## Local Outreach at UNU-INWEH



Prof. Sarah Dickson and Dr. Corinne Schuster-Wallace presenting Sarah Dickin with her WWB diploma



### Water Without Borders Graduation Ceremony

Water Without Borders (WWB) is a collaborative graduate programme established between UNU-INWEH and McMaster University. It strives to create a strong network of researchers in politically-relevant global issues on the topics of water, environment, and health. Students enrolled in the programme undertake extra courses and a joint research activity (the required McMaster research element is aligned with research projects at UNU-INWEH). This research is co-supervised between McMaster University and UNU-INWEH, facilitating collaboration and joint research opportunities. Both partner institutions organized a major public event (7 October 2014) to celebrate the graduation of a number of WWB students. The event was attended by WWB alumni, McMaster University faculty and senior management, and over 150 public participants.



**The Another Drop Seminar Series**

Started in 2006, the Another Drop public lecture series provides an opportunity to present research, policy, and case studies that aid in our understanding of linkages between water, environment, and health. The purpose is to provide the local academic and broader community with an insight into the many and varied challenges faced around the world.

The following seminars were held in 2014:

**Sustainable Development Governance In The Post-2015 Development Era: A Few Reflections (January 2014)**

Speaker: Dr. Aslam Chaudhry, former Head of the United Nations Office for Sustainable Development in Incheon, Republic of Korea

**Global Action, Local Impact: Mercury Contamination In Arctic Ecosystems (February 2014)**

Speaker: Dr. Igor Lehnerr, Postdoctoral Fellow in the Department of Earth and Environmental Sciences at the University of Waterloo

**World Water Day 2014: The Water-Energy Nexus – From Global To Local (March 2014)**

Speakers: Emma Quillerou, UNU-INWEH; Michael Theodoulou, Anaergia Inc.; Dan McKinnon, City of Hamilton

**Water, Climate & Society (October 2014)**

Speakers: Katharine Jacobs former leader of the National Climate Assessment for the White House Office of Science and Technology Policy; Robert Sandford, EPCOR Chair of the Canadian Partnership Initiative in support of United Nations “Water for Life” Decade

**The Global Water Crisis As A Governance Crisis (November 2014)**

Speaker: Dr. Dustin Garrick, Philomathia Chair of Water Policy, McMaster University



# Financial Reporting 2014

## Contributions Received by UNU-INWEH



NSERC (CAD \$140,000)



UN-Water (USD \$235,000)



GIZ (USD \$190,000)



UNDESA: (USD \$60,000)



ICARDA: (USD \$40,000)



McMaster University (CAD \$60,000)



IWMI: (USD \$30,000)



Foreign Affairs, Trade and  
Development Canada      Affaires étrangères, Commerce  
et Développement Canada

Government of Canada — DFATD (CAD \$2,000,000)



**GLOBAL ENVIRONMENT FACILITY**  
INVESTING IN OUR PLANET

UNEP (GEF): (USD \$128,000)

### Acronyms:

DFATD: Department of Foreign Affairs, Trade and Development  
 GIZ: Deutsche Gesellschaft für Internationale Zusammenarbeit  
 NSERC: Natural Sciences and Engineering Research Council of Canada  
 ICARDA: International Center for Agricultural Research in the Dry Areas  
 IWMI: International Water Management Institute  
 UNEP: United Nations Environment Programme  
 GEF: Global Environment Facility  
 UNDESA: United Nations Department of Economic and Social Affairs

# IAC Committee

## Our International Advisory Committee

**Dr. Zafar Adeel, (ex officio)**

Director, UNU-INWEH, Ontario, Canada

*Expertise: Water Security, Water Management*

**Prof. Fatma Abdel Rahman Attia**

Professor Emeritus, National Water Research Center, Egypt

*Expertise: Groundwater Issues*

**Dr. Johann Bell**

Senior/Principal Fisheries Scientist, Strategic Engagement, Policy and Planning Facility, Secretariat of the Pacific Community (SPC), New Caledonia

*Expertise: Fisheries*

**Ms. Margaret Biggs**

Skelton-Clark Fellow, School of Policy Studies and Department of Political Studies, Queens University, Ontario, Canada

*Expertise: Maternal & Child Health, Democratic Governance*

**Dr. Roberto L. Lenton**

Founding Executive Director, Robert B. Daugherty Water for Food Institute, University of Nebraska, USA

*Expertise: Global Development Agenda, Food Security*

**Dr. David Malone, (ex officio)**

Rector, United Nations University, Tokyo, Japan

*Expertise: Peace & Security*

**Dr. Melita Samoily**

Director, CORDIO, Nairobi, Kenya

*Expertise: Tropical Coastal Ecosystems*

**Prof. Patricia Wouters**

Founding Director, UNESCO Centre for Water Law, Policy and Science, University of Dundee, United Kingdom

*Expertise: Water Law, Water Security*



David Malone, UNU Rector (top left); Peter George, UNU-INWEH Senior Advisor; Margaret Biggs, IAC Member; Johann Bell, IAC Member; Alison Sekuler, McMaster University; Richard Thomas, former UNU-INWEH Assistant Director; Chris Metcalfe, Senior Research Fellow; Zafar Adeel, Director; Melita Samoily, IAC Member (bottom left); Patricia Wouters, IAC Member; Fatma Abdel Rahman Attia, IAC Member.

# Join the Conversation!

## UNU-INWEH's Social Media Networks



<https://www.facebook.com/UNUINWEH>



<https://twitter.com/UNUINWEH>



<https://www.youtube.com/user/UNUINWEH>



<https://www.linkedin.com/company/unu-inweh>



[bit.ly/Google\\_UNUINWEH](http://bit.ly/Google_UNUINWEH)



### Social Media Highlight

For World Water Day 2014, UNU-INWEH teamed up with UN-Water to create a Facebook photo contest on Water & Energy. The winners had their work displayed at the official World Water Day celebrations in Tokyo, Japan.

To view the winning photos from the World Water Day 2014 Facebook Photo Contest, visit:

[http://bit.ly/WWD\\_2014](http://bit.ly/WWD_2014)





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