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UNU-INWEH

Institute for Water,
Environment and Health



ANNUAL REPORT 2017



**UNITED NATIONS
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UNU-INWEH

Institute for Water,
Environment and Health

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Institute for Water, Environment and Health

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ABOUT UNU-INWEH

UNU-INWEH is an integral part of the United Nations University (UNU) – an academic arm of the UN, which includes 14 research and training Institutes and programmes located in 13 countries around the world, and dealing with a range of development issues. UNU-INWEH acts as the “United Nations’ Think Tank on Water”. It responds to regional and global water issues, facilitates efforts to meet UN Sustainable Development Goals and engages in water initiatives that help developing countries reduce poverty and ensure environmental sustainability.

UNU-INWEH’s vision is to create a world free of water problems where sustainable human development, environmental health and security are assured for all.

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 critical analysis and synthesis of existing bodies of scientific discovery; targeted research that identifies emerging policy issues; application of on-the-ground scalable science-based solutions to water issues; and global outreach.

UNU-INWEH is linked to various processes in the UN system; for example, it represents the UNU in UN-Water – a group of over 30 UN Agencies working on water and sanitation issues globally. Its UN status gives UNU-INWEH unparalleled access to national governments and related policymaking processes.

UNU-INWEH was established, as a public service agency and a subsidiary body of the UNU in 1996. Its operations are secured through long-term host-country and core-funding agreements with the Government of Canada. The Institute is located in Hamilton, Canada, and its facilities are supported by McMaster University. UNU-INWEH is the only Institute within UNU that focuses entirely and solely on water issues. It is also the only entirely water-focused UN entity in Canada.



DIRECTOR'S SUMMARY

The year was exciting, vibrant and productive. UNU-INWEH has completed its transition to a revised and sharpened workplan that i) makes water the explicit and strong entry point to 'environment' and 'health' work components and ii) focuses on continental water issues only – where the frequently-cited global water crisis is. Five new work avenues – projects - of the Institute have been formulated, including i) water-related sustainable development goals ii) alleviating global water scarcity through unconventional water resources and technologies iii) water security and nexus iv) managing water-related health risks and v) managing water resources variability and risks for increased resilience. All newly formulated in 2017 core-funded UNU-INWEH projects explicitly identified Sustainable Development Goals and the key areas of Canadian New Foreign Feminist Policy, to which they contribute. Climate change, ecosystem services, gender dimension and capacity development are set to be cross-cutting areas. Most of the new projects have strong roots in the previous work of the Institute. This transition was influenced by recommendations from the institutional performance review of the 2011-2015 period, which was completed in March 2017. This resulted in a number of changes, among them, increasing the weight of the specialist staff in the Institute, and changing the composition of the International Advisory Committee.



UNU-INWEH significantly increased its contribution to UN processes, including engagement with 5 UN-Water Task Forces and 2 Expert Groups, major involvement in the UN World Water Development Report (WWDR) series and SDG6 Synthesis Report, and support of the work of the High-Level Panel on Water (HLPW). The Institute started 2 new corporate publications series – Policy Briefs and Analytical Reports, published over 35 products (most of them peer-reviewed), including 5 books, and tripled the number of in-house trainees.

Some of the Institute projects, e.g. “Water-Related Sustainable Development Goals”, matured in 2017 to start visibly influencing the progress of several national governments towards SDG6 targets. UNU-INWEH staff participated in over 40 international fora. This included special sessions at the World Water Congress in Mexico, and Stockholm World Water Week, partnering with other UNU sister centers in some of these activities.

Our aim is progressing steadily – to become a thought leader and a most trusted source of expertise and analysis on global water issues, known for identifying policy gaps that are not yet addressed, challenging the status-quo, while remaining rigorous and objective in our work.

Dr Vladimir Smakhtin, Director
United Nations University
Institute for Water, Environment and Health

MESSAGE FROM THE CHAIR OF THE INTERNATIONAL ADVISORY COMMITTEE

2017 was a year of exciting new developments at UNU-INWEH. The International Advisory Committee was pleased to see UNU-INWEH's new strategic focus on continental water issues, which are continuously referred to in the global discourse on water crisis – as well as its strengthened contribution to UN processes, ambition to significantly increase policy impact, to become a leading global water policy think tank, and a force behind achieving SDG 6 outcomes. The Committee is also pleased with UNU-INWEH productivity in the past year, its strengthened links with the institution, host McMaster University, and growing visibility it is achieving in Canada.



The IAC welcomes its new members in 2017 – Dr. Siegfried Demuth and Dr Claudia Ringler. Together they bring world-class expertise on a range of critical water issues from hydrology, water resources, climate change and water-related extremes, to global water modelling and policy, and water-energy-food nexus. We also wish a fond farewell and thank you to some longstanding members of our Committee – Fatma Abdel Rahman Attia, Johann Bell and Melita Samoily – whose contribution to UNU-INWEH's evolution and ongoing success were tremendous and are greatly appreciated.

The International Advisory Committee believes that UNU-INWEH has all necessary components to achieve its ambitions in the years to come and that 2017 was a strong step in this direction.

Margaret Biggs
Matthews Fellow in Global Public Policy, School of Policy Studies
Queens University, Ontario, Canada

HIGHLIGHTS

UNU-INWEH helps accelerate national progress towards water-related SDGs

SDG Policy Support System - 2017

Evidence, based on rigorous data, is the lifeblood of decision-making. For countries, good quality evidence is vital for them to effectively plan and put the Sustainable Development Goals (SDGs) into action. In 2017, UNU-INWEH developed the SDG Policy Support System (SDG PSS), a platform that helps governments strengthen their policies and action plans to meet national water-related SDG goals. Using SDG-PSS, policy makers can more effectively plan, track and report on progress toward SDG 6 targets. The system was trailed this year in five countries - Costa Rica, Ghana, Korea, Pakistan, and Tunisia (<http://sdg.iisd.org/news/unu-iweh-rolls-out-monitoring-system-on-water-related-sdgs/>). The system (<http://inweh.unu.edu/sdg-policy-support-system/>) brings together existing national data and automatically translates its into evidence. This evidence is then used to assess and monitor six critical components of sustainable SDG implementation – capacity, finance, policy & institutional strength, gender mainstreaming, risk reduction and resilience, and integrity. The SDG PSS produces easily referenced summaries to show decision-makers the key gaps and strengths in these components, and to help them accelerate SDG 6 implementation through better decision- and policy-making. In 2017, the trial PSS was made freely available online in English, French and Spanish with video tutorials and user guides. It was also presented during special sessions at the World Water Congress, Mexico, and in the official launch at Stockholm World Water Week, and at the Korean International Water Week. In Korea, trial countries agreed on next steps needed to mainstream the PSS. In 2018 the full version will be available in the same languages and will be web-interactive. The PSS now forms part of the tools recommended by UN-Water Monitoring guide that is offered to all Member States (<http://www.unwater.org/publications/good-practices-sdg-6-monitoring/>).



National Workshop: Achievement of Water-related SDGs; 19-21 April, Tunis, Tunisia



National Workshop: Achievement of Water-related SDGs; 13-15 March, Islamabad, Pakistan

UNU-INWEH features in all major “wastewater events” of the year

UNU-INWEH contributed to eight of 16 Chapters of the UN-Water’s flagship publication ‘Wastewater: The Untapped Source’ The United Nations World Water Development Report (WWDR) 2017, UNESCO (<http://www.unesco.org/new/en/natural-sciences/environment/water/wwap/wwdr/>). As part of the World Water Day campaign, UNU-INWEH led the session ‘Wastewater and Education’ (in partnership with



Panelists of the session presenting 2017 World Water Development Report at the UN headquarters, New York

UNU-IAS, Water Research Commission of South Africa and University of KwaZulu-Natal), in Durban, South Africa. The Institute also joined the high-level panel to present the WWDR at the UN Headquarters, in April. Permanent representatives include Hungary, Tajikistan, Thailand and Italy to the United Nations; Director, UNESCO Field Office, New York; Secretary of UN-Water; and Coordinator of the World Water Assessment Programme, UNESCO. (<http://inweh.unu.edu/unu-inweh-participates-in-the-presentation-of-the-2017-wwdr-at-the-un-headquarters/>). UNU-INWEH also provided substantive input to shape the major global water events: At World Water Week in Stockholm, Sweden - organizing special sessions on various aspects of SDG 6.3 (wastewater and water quality); and participated in a session by sister Institute, UNU-FLORES. At Asia International Water Week in Gyeongju, Republic of Korea UNU-INWEH convened a joint session with UN Environment.

Ethiopia Water Minister receives the 2017 Water Catalyst Award

The Water Catalyst Award recognises individuals demonstrating exceptional advocacy to improve the lives of others through improved water management, access to drinking water for all, or improved visibility of water issues on the international development agenda. The Award is jointly presented biannually by UNU-INWEH and Suez Water. The 2017 Award winner was His Excellency Dr Seleshi Bekele Awulachew, Minister of Water, Irrigation and Electricity of Federal Democratic Republic of Ethiopia. The Ministry has an impressive portfolio of water and energy development, including achieving national water supply and sanitation targets, advancing rapid irrigation development to ensure national food security, and building Africa’s biggest hydropower dams. Prior to his Ministerial appointment, Dr. Awulachew served as interregional advisor in the UN Division of Sustainable Development in the Department of Economic and Social Affairs (UNDESA), as a senior water expert at Economic Commission for Africa (UNECA), and as a director of East Africa Office at the International Water Management Institute (IWMI). Throughout his career, he made significant contributions to mainstreaming sustainable water management in national development plans of countries across Africa, Asia, Latin America and the Caribbean. The Award shares laureates’ experiences in a special public lecture, held in Hamilton (<http://inweh.unu.edu/minister-bekele-awulachew-from-ethiopia-is-the-winner-of-the-2017-water-catalyst-award/>). In his presentation, Minister Awulachew discussed the water challenges facing the globe, Africa and Ethiopia and how countries can respond.



His Excellency Dr Seleshi Bekele Awulachew

SELECTED PROJECT ACTIVITIES

Water-related Sustainable Development Goals (SDGs)

The aim of this project is to provide tools, processes, and support for UN Member State governments to accelerate progress against SDG 6 and other water-related SDGs. This project was the major highlight of 2017 (see Highlights section), with 5 national workshops that brought together national research and policy communities, special sessions at two major world congresses, and a functional, continuously improving and being customised for national needs, policy support system. To further help national governments improve SDG planning and policy, UNU-INWEH plans to carry out a comparative analysis of the development of water-related SDG policies in 5 countries over the first 2 years of the 2030 Agenda, and to extend the SDG Policy Support System beyond SDG 6 to the goals and targets of other water-related agreements. In 2017, the Project also contributed new data for improved estimation of environmental flows for SDG6.4 <http://inweh.unu.edu/wp-content/uploads/2016/08/IWMI-Research-Report-168.pdf>, and started a comprehensive analysis of how groundwater supports various SDG targets. In 2017, UNU-INWEH also conducted a critical review, to document that previous interventions in low-income and lower-middle income countries to reduce sources of water pollution from industries, municipal wastewater and agricultural runoff have been largely ineffective (<http://inweh.unu.edu/wp-content/uploads/2017/12/Global-Barriers-To-Improving-Water-Quality-A-Critical-Review.pdf>). The review suggested, among other points, potential solutions to this problem, including setting realistic objectives for monitoring programmes, developing appropriate, low-cost solutions for pollution abatement and focusing on strengthening regulatory capacity.



Our SDG-related work and tools, in 2017, were effectively mainstreamed into global SDG6 processes, and continue gaining more traction with national governments.

Lisa Guppy, Senior Researcher: Water and Policy; Project Leader

Managing water-related health risks

The project was reformulated in late 2017 and now seeks to address 3 specific aspects: i) Neglected Tropical Diseases (NTDs), ii) natural chemical contaminants, and iii) water resources management during humanitarian crises. In 2017, UNU-INWEH completed a case study on NTDs looking at climate change impacts on health (leishmaniasis and schistosomiasis) in the Arab Region (https://www.unescwa.org/sites/www.unescwa.org/files/events/files/riccar_technical_report-unu-inweh_2017.pdf). This study was undertaken as part of the Regional Initiative for the Assessment of Climate Change Impacts on Water Resources and Socio-Economic Vulnerability in the Arab Region (RICCAR). The results indicated greater exposure conditions through changes in the geographical extent and duration of disease transmission due to warming. Understanding these vulnerabilities is critical for public health decision-makers. The work was presented at the High-Level Conference on Climate Change Assessment and Adaptation in the Arab Region - in September, in Beirut, Lebanon. This study was the foundation to creating a global vulnerability map for schistosomiasis, which will be replicated for other NTDs. Work was also started on exploring the links between health and migration through a systematic review of the literature.



NTDs affect more than 1 billion people every year, but water management and financing in both the health and water sectors to address these, remain far from adequate. The effectiveness of long-term investments into treatment of natural water contaminants has not been ascertained. By identifying and critically examining such major policy gaps, we contribute to progress towards several targets of SDG 6 and 3.

Praem Mehta, Researcher: Water and Health; Project Leader.

Managing Water Resources Variability and Risks for Increased Resilience

This is a new and timely initiative for UNU-INWEH. The average annual global economic loss from floods and drought – extremes of water variability - is over \$40 billion, across all economic sectors, and is growing, largely due to the increasing frequency and severity of extreme events attributed to climate change. Other real risks to countries' water resources are the failures of ageing water infrastructures, explosions of chemical, biological or nuclear stockpiles, and the potential threats from water-focused terrorism. This project aims to better understand and quantify such risks and assess the effectiveness of various risk reduction interventions. The project started in late 2017, but already made substantial progress, including the lead of the forthcoming UN WWDR 2018 Chapter on nature-based solutions (NBS) to water variability, establishing links with flood resilience network in Latin America through Practical Action – Peru to assess the practice of NBS, and joining efforts with the International Water Management Institute (IWMI) to map multiple climate-related water hazards in in South Asia (<http://inweh.unu.edu/publications/reports/>). UNU-INWEH also joined hands with Ottawa University, and McMaster University-led, Canada-wide "Floodnet" initiative to assess the global status and effectiveness of flood early warning systems – to be completed in 2018, and explores the prospects of collaboration with UNU sister Institute (UNU-EHS; Bonn) on the assessment of water-related threats to major world cities.



There are some 25 targets related to disaster reduction in 10 of the 17 SDGs; most of these are water-related. The challenges of water-related disaster management and threats alleviation have therefore not been resolved despite decades of efforts. We need out-of-the-box thinking and new approaches to resolve these challenges

Duminda Perera, Senior Researcher: Hydrology and Water Resources; Project Leader

Water Security and Nexus

This project was refocused to take account of previous work under the projects on Water Security and Food Security and Integrated Ecosystems Management. Its refreshed targets are to strengthen the thematic, technical and institutional capacity of UN Member States on how to put Water Security into action. This includes developing policy-relevant and science-based tools to quantify water security, address water-related drivers of human migration (e.g. water quality, quantity, extremes) as a global development challenge; and unpacking the water nexus components of the Water Security agenda and conceptual framework regarding food and energy security, services of water and wetland ecosystems, water as a peace tool. In 2017 UNU-INWEH completed the work of the UN-Water Task Force on Water Security, summarizing the most recent advances as a Policy Brief; compiled a global synthesis book on wetlands as nature based solutions to water quality management; initiated work on water-related migration in several regions, and advanced the development of a comprehensive on-line course on Global Water Security. UNU-INWEH also participated in the work of the InterAction Council – a global public policy forum composed of more than 30 former Heads of State including Canadian Prime Minister Jean Chretien – to discuss how Canada can play a more active role on the global water arena by promoting peace and conflict resolution. A comprehensive assessment of Canadian capabilities in the water sector has been initiated, involving several UNU-INWEH staff and many Canadian partners.



In 2017, I had a pleasure and honor of speaking at over 40 various water-related science and policy gatherings, with a total audience of approximately 3000 people with an addition of 20,000+ contacts through CBC podcasts. I hope this helps promote the global sustainable development agenda and concepts of water security - in Canada and globally.

Bob Sandford, EPCOR Water Security Research Chair at UNU-INWEH

Alleviating global water scarcity through unconventional water resources and technologies

Alleviating global water scarcity through unconventional water resources and technologies

Conventional water resources, such as rainwater and river runoff, will unlikely be sufficient to meet the growing water demand and hence – several SDG6 targets, particularly in arid and semi-arid areas. Water-scarce countries, regions and communities need to consider a range of unconventional water resources to narrow the water demand-supply gap for food production, livelihoods, ecosystems, and sustainable development. Such water sources include desalination of seawater and highly brackish groundwater; groundwater confined in deep geological formations or in off-shore aquifers; physical transportation of water through tankers and icebergs; micro-scale capture of rainwater where otherwise it evaporates; atmospheric moisture harvesting such as cloud seeding, fog water collection; and residual water from urban areas and agriculture. The Project considers the current knowledge on these sources and how and where they could be better utilised to alleviate increasing water scarcity and meet the 2030 water targets. This unique global initiative led by UNU-INWEH, started in July 2017 (<http://inweh.unu.edu/unconventional-water-resources/>), has already attracted support of the UN-Water that established a Task Force to be led by UNU-INWEH: <http://enb.iisd.org/download/pdf/sd/enbplus82num31e.pdf>. This Task Force also includes the Food and Agriculture Organization of the United Nations (FAO), International Fund for Agricultural Development (IFAD), International Water Management Institute (IWMI), United Nations Convention to Combat Desertification (UNCCD), United Nations Development Programme (UNDP), UN Environment, United Nations Educational, Scientific and Cultural Organization (UNESCO), and World Meteorological Organization (WMO).



There are scattered, although growing examples around the world, of the use of unconventional water resources. But there has been no coordinated global initiative to build and share a global vision to harness the potential of such resources and technologies. We are filling this gap.

Manzoor Qadir, Assistant Director and Project Leader



Participants of the UNU-INWEH Science Day, November 2017

KEY STAKEHOLDERS / AUDIENCE

UNU-INWEH's research has a diverse range of stakeholders broadly grouped into:



Politicians and policymakers, including members of parliament, ministers, policy advisors, and key government officials at the national and local levels, primarily in developing countries, concerned with water, health and environment issues



Donors and development partners active in water, health and environment, including NGOs and implementing agencies from the North and the South



Scientific community in water-related research institutions and academia (North and South)



UN agencies (and networks, such as UN-Water), other UNU Institutes and programmes, and international and regional organizations and networks



Host country and national partners and stakeholders in Canada



Media, especially key journalists looking for authoritative new information on science and development issues related to water, health and environment



Water-related industries and private entrepreneurs.



General public and civil society



Closing plenary at the High Level Conference on Climate Change Assessment and Adaptation in the Arab Region, featuring all the RICCAR partner

UN & OTHER POLICY LINKS

In 2017 UNU-INWEH intensified active engagement with UN processes and flagships outputs. UNU-INWEH contributed to half of the UN 2017 World Water Development Report (WWDR) on wastewater, lead one chapter out of 7 in the forthcoming WWDR 2018 (on nature-based solutions -NBS-) to water challenges), and will co-lead (together with UNU-FLORES) a Chapter of the next WWDR 2019 – with a topic “Leave no one behind”, focusing, amongst others, on water and population displacement. The WWDR report series is a flagship product of the UN-Water, has a huge publicity globally, normally with a launch at UN HQ, and influences global water policies and thinking. Such significant and consistent contribution to WWDR Series by UNU-INWEH actually started in 2017.

UNU-INWEH contribute, now on several occasions, to the work of the High-Level Panel on Water (HLPW), supported by UNDESA. These contributions, all short-term, included in 2017 i) input into a briefing note on water, peace and migration; ii) contribution to the formulation of the report of the HLPW initiative on Data for Water management (this report will be part of the “package” that will be presented by HLPW in March 2018); iii) production of the “Water Crisis Report” (the document that summarises facts and numbers describing the magnitude of the global water crisis – see “featured publications” section in this Annual Report).

UNU-INWEH is a member of the UN-Water Task Force (TF) on the production of the Synthesis Report on SDG6 – the major undertaking of the UN-Water at present. The Report is to be tabled in July 2018 for the High Level Political Forum, which looks at the progress towards several SDG, SDG6 among them. The role of the TF is coordination of contributions from many UN agencies. UNU-INWEH also contributes directly the content to multiple sections of the Report.

UNU-INWEH also co-coordinates, together with UNDESA, another UN-Water TF- on the new UN Water Decade of 2018-2028. The mandate of this TF is to produce an Action Plan for the Decade that the UN Secretary General may use at the launch of the Decade at UN HQ in March 2018. This activity emerged from the UN Resolution on the Decade adopted by the GA in December 2016. The first draft of the action plan has been presented to Member States for comments at the Member States briefing in December 2017 at UN HQ: <http://sdg.iisd.org/news/member-states-discuss-decade-on-water-for-sustainable-development/>. It is likely that UNU-INWEH will also play a solid role in the implementation of the Decade (i.e. after March 2018); the exact nature of these contribution and levels of engagement remain to be determined in the nearest months.



UN Member States Briefing on the Progress with the Action Plan for the new Water Decade 2018-2028, 8 December, New York, USA

UNU-INWEH joined a new global initiative, led by FAO - Global Framework on Water Scarcity in Agriculture (WASAG) – launched in April, with a mandate reflected in its name. WASAG includes tens of partners - UN agencies, international financing institutions, research and academic institutions (global, regional and national), global think tanks, networks and civil society organizations. Examples include: IFPRI, IWMI, UNESCO-IHE, UNFCCC, UNFCCD, WMO, WWC, WRI, ICID, CBD, several lead Universities. For UNU-INWEH, and UNU at large, engagement with such new partnerships provides good opportunities to increase visibility, expand networks and opens the way to collaborate on joint proposals and disseminate policy-relevant results and messages.

IAC MEMBERS

International Advisory Committee



Participants of the IAC meeting, May 2017. Ania Grobicki, IAC Member (top left); Roberto Lenton, IAC Member; Margaret Biggs, IAC Chair; Vladimir Smakhtin, Director (bottom left); Nick Marketos, McMaster University; Manzoor Qadir, Assistant Director, Siegfried Demuth, IAC Member

Ms Margaret Biggs

Matthews Fellow in Global Public Policy, School of Policy Studies, Queens University, Ontario, Canada

Expertise: Maternal and child health, democratic governance

Dr Siegfried Demuth

Director of the International Centre for Water Resources and Global Change, Germany

Expertise: Hydrology, Water resources and climate change; floods and droughts

Dr Ania Grobicki

Water Expert: Land and Water Division; FAO, Rome, Italy

Expertise: Water goals in relation to the needs of cities, industry, agriculture, energy, and the environment

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 Claudia Ringler

Division Director: International Food Policy Research Institute, USA

Expertise: Global water modelling and policy; water-energy-food nexus

Dr David Malone, (ex officio)

Rector, United Nations University
Expertise: Peace and Security, Japan

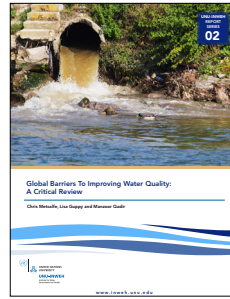
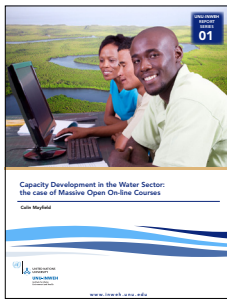
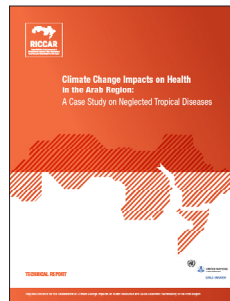
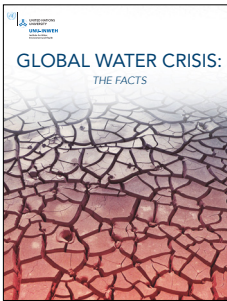
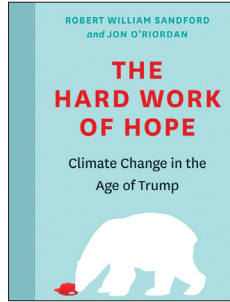
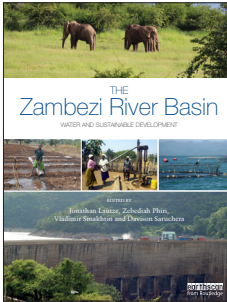
Dr Vladimir Smakhtin, (ex officio)

Director, UNU-INWEH
Ontario, Canada

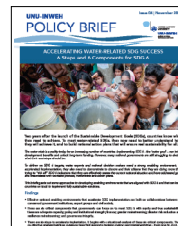
Expertise: Water Resource Management

PUBLICATIONS

Featured Publications



New: UNU-INWEH Report Series



New: UNU-INWEH Policy Brief Series

List of Publications

Amarnath, G.; Alahacoon, N.; Smakhtin, V.; Aggarwal, P. 2017. Mapping multiple climate-related hazards in South Asia. Colombo, Sri Lanka: International Water Management Institute (IWMI); IWMI Research Report 170; 41pp

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Devlaeminck, D. Adeel, Z. Sandford, R.W. (Eds.) 2017) The Human Face of Water Insecurity; Springer; 222 pp;

Dickin, S. 2017. Climate Change Impacts on Health in the Arab Region: A Case Study on Neglected Tropical Diseases. RICCAR Technical Report, Beirut, E/ESCWA/SDPD/2017/RICCAR/TechnicalReport.1. 29 pp

Eriyagama, N., Thilakarathne, M., Tharuka, P., Munaweera, T., Mutuwatte, L., Smakhtin, V., Premachandra, W. W., Pindeniya, D., Wijayarathne, N. S., Udamulla, L. (2017) Actual and Perceived Causes of Flood Risk: Climate vs Anthropogenic Effects in a Wet Zone Catchment in Sri Lanka. Water International 42(7): 874-892

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Keraita B., Mateo-Sagasta, J., Qadir, M., Medlicott, K., Drechsel, P. and Lamizana, P. 2017. Risk mitigation in wastewater irrigation systems and examples in Latin America and the Caribbean. In: J. Mateo-Sagasta (Ed.) Safe and Productive Use of Wastewater in Latin America and the Caribbean: Principles, Status and Needs. Food and Agriculture Organization of the United Nations, Santiago, Chile (In Spanish); 28-41;

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SELECTED EVENTS

- ▶ Organised/hosted by UNU-INWEH ▶ Participated in

January

- ▶ Water & Climate Change Conference, Canadian Water Resources Association, Ottawa, Canada

February

- ▶ 26th UN-Water Meeting, Geneva, Switzerland
- ▶ 31st Steering Committee of GFAR (the Global Forum on Agricultural Research), Rome Italy
- ▶ British Columbia Sustainability Conference, Comox, Canada
- ▶ National Workshop: Achievement of Water-related SDGs; Accra, Ghana

March

- ▶ Workshop of Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), Global Assessment on Biodiversity and Ecosystems Services: Chapter 2, Leipzig, Germany
- ▶ National Workshop: Achievement of Water-related SDGs; Islamabad, Pakistan
- ▶ World Water Day and organisation of UNU-led session 'Wastewater and Education', Durban, South Africa

April

- ▶ Global Experts Committee Meeting of Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), Budapest, Hungary
- ▶ WWDR 2017 and High-Level Panel Debate: "Achieving SDG 6: The Role of Wastewater", New York, USA
- ▶ Launch of the Global Program of Action against Water Scarcity in Agriculture, FAO, Rome, Italy
- ▶ National Workshop: Achievement of Water-related SDGs; Tunis, Tunisia
- ▶ Canadian Network for Aquatic Ecosystem Services, Toronto, Canada
- ▶ Workshop on "Developing the international cooperation on water challenges", Montreal, Canada

May

- ▶ Dresden Nexus Conference 2017, Dresden, Germany
- ▶ Expert and Scoping Workshop of the Climate Technology Centre and Network (CTCN), Copenhagen, Denmark
- ▶ National Workshop: Achievement of Water-related SDGs, San Jose, Costa Rica
- ▶ 2017 Global Platform for Disaster Risk Reduction, Cancun, Mexico
- ▶ XVI World Water Congress, Cancun, Mexico
- ▶ InterAction Council "Current State of the World" Expert Presentation, Dublin, Ireland



Participants of the CTCN meeting, May, Copenhagen

June

- ▶ 32nd Steering Committee of the Global Forum on Agricultural Research (GFAR) and Strategic Workshop on Collective Agenda for SDG's, Rome, FAO, Italy

July

- ▶ International Conference on Water, Informatics, Sustainability, and Environment: Ottawa, Canada
- ▶ Water Catalyst Award Ceremony, Hamilton, Canada
- ▶ Expert Workshop of the World Water Data Initiative of the High-level Panel on Water, Washington USA

August

- ▶ 27th UN-Water Meeting, Stockholm, Sweden
- ▶ Canadian Soil Summit, Guelph, Canada
- ▶ World Water Week, Stockholm, Sweden
 - ▶ 3 special sessions organised by UNU-INWEH and UNU-FLORES

September

- ▶ World Water Development Report 2019 Inception Workshop, Perugia, Italy
- ▶ Second Meeting of the Global Assessment (GA) of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), Cape Town, South Africa
- ▶ Korea International Water Week and Asia International Water Week; Gyeongju, Republic of Korea
- ▶ Mid-term Project Workshop: Achievement of Water-related SDGs; Gyeongju, Republic of Korea
- ▶ High Level Conference on Climate Change Assessment and Adaptation in the Arab Region, Beirut, Lebanon



Second Meeting of the Global Assessment (GA) of the IPBES, Cape Town, South Africa

October

- ▶ Toronto Global Economic Forum, Toronto, Canada

November

- ▶ McMaster Water Week, Hamilton, Canada
- ▶ UNU Migration Network meeting, Maastricht, Netherlands
- ▶ Global workshop for integrated monitoring of Sustainable Development Goal 6 on water and sanitation, Hague, Netherlands
- ▶ High-Level Expert Group of the Inter Action Council (IAC), Water, Peace and Security, Ottawa, Canada

December

- ▶ Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Data and Knowledge Task force meeting on socio ecological indicators and SDG's, Seoul, South Korea
- ▶ UN Member States Briefing on the Progress with the Action Plan for the new Water Decade 2018-2028, New York, USA
- ▶ 9th Ecosystem Services Partnership (ESP) World Conference on Ecosystem Services for Eco-civilization, Shenzhen, China
- ▶ International workshop on Nature-based solutions for flood risk reduction and resilience building, Lima, Peru

Another Drop Lecture Series

January: Emerging Technologies for Resources Recovery from Wastewater
Speaker: Dr Younggy Kim (McMaster University)

February: From the Age of Carbon to the Age of Water – The Role of Wetlands
Speaker: Dr Ania Grobicki (Ramsar Convention)

March: Boreal Burning! Managing Wildfire and Water in an Era of Drought and Warming
Speaker: Dr Mike Waddington (McMaster University)

October: The Garden and The Marsh: The Fascinating Story of Cootes Paradise
Speaker: Dr David A. Galbraith (Royal Botanical Gardens)

November: Legacy and Emerging Contaminants in Fish, Wildlife and Humans: What are the Concerns?
Speaker: Dr Karen Kidd (McMaster University)



Dr. Younggy Kim (McMaster University)



Dr Mike Waddington (McMaster University)



Dr David A. Galbraith (Royal Botanical Gardens)



Dr Ania Grobicki (Ramsar Convention)



Dr Karen Kidd (McMaster University)

CAPACITY DEVELOPMENT

Water Without borders (WWB) is a collaborative graduate programme, initiated by UNU-INWEH and McMaster University in 2010. It addresses water issues across geopolitical or disciplinary borders. The programme is designed to enhance professional and academic development and is undertaken alongside a graduate degree programme from any faculty at McMaster University. The Programme spreads across two semesters, including an international field trip. Nine new students joined the Programme in 2017. The programme was reviewed by McMaster University in 2017, with positive reflections, and subsequent enhancement of its logistical support.



Water Without Border students, supervisors and local community members in Ghana, 2017

UNU Internships are open to recent graduates or current students of a graduate programme – usually at the final stage of it. UNU-INWEH provides interns a chance to work in an international environment and experience first-hand the operations of the United Nations. It is expected that Interns have the necessary thematic skill and academic training to complete the assigned tasks with a final product – a paper/tool/dataset- contributing to one of the UNU-INWEH projects. Interns are recruited through a competitive application process - through vacancy announcements or unsolicited applications that are open all year. All interns are required to make a three to six-month full-time commitment; longer internships are preferred.

Through ELE, scholars who are enrolled in a graduate programme of an accredited university are able to gain practical experience working in the UN system. Young professionals work as part of the UNU-INWEH team, assisting in live projects. This gives unique professional experience that is not typically offered in an academic setting. The ELE programme assignments are for a minimum of 1 month, with a maximum tenure discussed on case to case to basis. The programme is also discussing to develop arrangements with leading academic institutions towards joint ELE models.

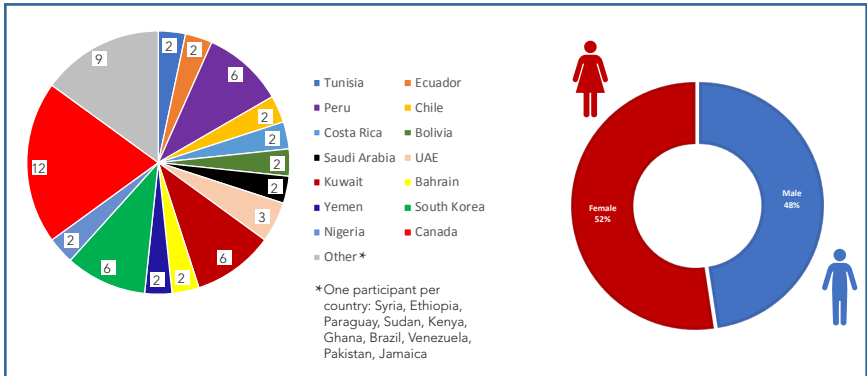


"Our Interns come from all over the world. ELE participants to date have come from Canada, India and South Korea. We are expanding to welcome scholars from other countries. Our Interns and ELE students are seen as part of the UNU-INWEH family"

Nidhi Nagabhatla, Coordinator of Internship and ELE Programmes
Senior Researcher: Water and Ecosystems; Project Leader (Water Security and Nexus)

UNU-INWEH's online Water Learning Center (WLC- <http://wlc.unu.edu/>) continued its activities in 2017, offering a course in IWRM. In 2017, 29 students graduated from the WLC from 12 different countries. A new course in Water and Health is complete and will be launched in 2018. In addition, another global scale diploma programme on 'Water Security' is currently under development and is scheduled for launch during last quarter of 2018. It

follows a partnership based approach of WLC: delivery and coordination through 4 regional training centers in South-East Asia, Latin America and Caribbean, Arab Region, and the Sub-Saharan Africa (establishing a South Asia Regional node is under discussion). A certain raiser for the Global Water Security e-course (<http://wlc.unu.edu/wp-content/uploads/2017/09/Water-Security-e-Course.pdf>) was launched at the International Conference on Water, Informatics, Sustainability and Environment held in July in Ottawa (<http://inweh.unu.edu/unu-inwehs-expertise-at-canada-hosted-sustainability-discussions/>), and partnership solicitation call for contribution of content and case studies for was launched during the 9th Ecosystem Services Partnership (ESP) World Conference-Ecosystem Services for Eco-civilization: Shenzhen, China in December.



Number of in-house and online trainees by country and gender



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UNU-INWEH

Institute for Water,
Environment and Health

204-175 Longwood Road South
Hamilton, ON Canada L8P 0A1

1-905-667-5511
www.inweh.unu.edu