



A focus on Kenya, where discussion groups have played an important role in improving water governance.

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"The unfiltered, dominant ideas on the Internet are mostly the disseminated prejudices of small groups of activists from the rich world."

▶ JOHN BRISCOE'S OPINION PAGE 8

"An informative and practical collation of various technological innovations." Read this issue's book review.

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STOCKHOLM

WATERFRONT

THE FORUM FOR GLOBAL WATER ISSUES | # 2 | MAY 2014

OKAVANGO BOTSWANA'S FUTURE



*Stockholm Water Prize
Laureate John Briscoe*

**CONTROVERSIAL,
AND PROUD OF IT**

Last Word

**WHAT WE TALK ABOUT WHEN
WE TALK ABOUT WATER**

PUBLISHED BY STOCKHOLM INTERNATIONAL WATER INSTITUTE

EDITORIAL

Photo: Thomas Henriksson



AND THE WINNER IS...

We are in the middle of award season here at SIWI. On World Water Day in March, we announced this year's recipient of the Stockholm Water Prize, John Briscoe. Dr. Briscoe is currently a professor at Harvard University. He gets the prize for "his unparalleled contributions to global and local water management" in the words of the nominating committee. In addition I understand that he is a very appreciated teacher. In this issue, we offer both an interview with, and an opinion piece by Dr. Briscoe. The 2014 Stockholm Water Prize links to several of the issues we hope to raise for discussion during World Water Week this year, such as dams and water pricing. We look forward to inspiring debates in Stockholm!

Around the time you pick up this copy, at the end of May, we will announce the winner of the Stockholm Industry Water Award, during the Africa Water Week. Stay tuned.

In the *Briefing* section, you can read about the winners of the Swedish national competition that sends a contender to the Stockholm Junior Water Prize final dur-

ing World Water Week. It strikes me time and again during my international travels, what an important competition Stockholm Junior Water Prize is for young people around the world, and the great impact it has on the lives and careers of the winners.

You may notice that something has changed about the magazine you hold in your hand. With this issue, we launch a redesigned Stockholm Water Front, with a new format, a revamped look and what we hope is a clearer and more accessible structure. Please do get back to us with both criticism and praise!

And of course, we are busy preparing for World Water Week which starts on August 31 with a focus on energy and water. The preliminary programme has been published and the registration is open. Do not delay!

Torgny Holmgren
Executive Director
Stockholm International Water Institute
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COVER PHOTO istock

STOCKHOLM WATERFRONT

Stockholm Water Front is a quarterly magazine that aims to inform the global water debate and be a source of knowledge and inspiration for professionals worldwide with an interest in water issues. Stockholm Water Front mixes popular science articles with news reporting and carries analyses by some of the world's most knowledgeable water writers. It is published in print and digitally by Stockholm International Water Institute, and is free of charge.

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FEATURED CONTRIBUTOR



James Workman, an authority on natural resource conservation markets, is author of the award-winning *Heart of Dryness: How the last Bushmen can help us endure the coming age of permanent drought*, and founder of Aqua-Just, an online utility-based platform that lets families and firms trade the water they save. In this issue he has the Last Word, exploring What we talk about when we talk about water.

"I can't imagine any shared resource more fungible, delightful, renewable or vital to social harmony than our water, unless it is our language. Both form the durable foundation of every culture. Learning to use them with care is an ongoing challenge that demands both our tolerance and our trust." Workman lives and works in San Francisco.

Photo: Victoria Engstrand-Neacsu, SIWI

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BRIEFING

Photos: Sanna Gustafsson, SIWI



A JOB FOR THE BRAVE – SUMMIT ON WATER INTEGRITY HELD IN LUSAKA

Water sector stakeholders from Western, Southern and Eastern Africa gathered in Zambian capital Lusaka on April 29-30 to discuss how to promote water integrity in the region.

“Lack of water integrity is a huge cost for societies as it translates into poor service provision, loss of lives, stalling of the much needed development, and degraded resources”, said Hon. Christopher B. Yaluma, Zambian Minister of Mines, Energy and Water Development, during the opening plenary.

Water integrity is for the brave. The close to 100 water integrity ambassadors that took part in the

two-day summit testified that uncovering corrupt activities and promoting transparency is challenging and can at times be met with strong resistance. But by sharing insights, case examples and good practices participants learned from each other and felt empowered to continue pushing for water integrity in their respective regions.

The participants’ recommendations were turned into a Summit Statement handed over to Hon. Bai-Mass Taal, Executive Secretary of AMCOW (African Ministers’ Council on Water) to be taken further at their General Assembly and at the Africa Water Week.

Read the full Summit Statement | www.watergovernance.org/integrity/summit

SIWI JOURNALIST GRANT DEADLINE

Three journalists specialising in water or water-related issues will be invited to World Water Week in Stockholm, August 31-September 5. SIWI hopes that the opportunity to report on a global water meeting, where world leaders, policy-makers, and academics meet representatives from the private sector and civil society to discuss some of the world’s most urgent issues will motivate journalists from all over the world to apply for the grant. Deadline is May 30, 2014.

Read more | www.siwi.org/media/world-water-week-journalist-grant



STUDENTS’ UNDER-WATER STUDY WINS SWEDISH PRIZE

Students Ana Latorre and Frida Hellström won the Swedish national contest qualifying them for the Stockholm Junior Water Prize international final.

The winning study was carried out mainly under water, examining how physical environmental conditions such as wind, waves and ground hardness affect marine eelgrass. The jury praised the project for its contribution to strengthening the biodiversity of the coastlines in Sweden.

The international final of the Stockholm Junior Water Prize takes place during 2014 World Water Week in Stockholm, on September, 3 at Grand Hôtel in the heart of Stockholm.

Read more | www.siwi.org/prizes/stockholmjuniorwaterprize

NEW WATER AND ENVIRONMENT CLUSTER IN STOCKHOLM

SIWI has grown greatly in recent years, and today has over 60 full time staff members. The offices in central Stockholm, from where SIWI operated since 2005, rapidly became unsuitable for the Institute’s needs. On April 1, the doors were opened to new offices at Östermalm, a few kilometres east of the city centre. With the move, a water and environment cluster has been created in Stockholm, with the Global Water Partnership (GWP) and Stockholm Environment Institute (SEI) housed across the courtyard from SIWI’s new offices.



Photo: Vasakronan

Read more | www.siwi.org

BACARDI RECYCLES WATER IN RUM PRODUCTION

Water is key to the production of Bacardi rum in Puerto Rico. It takes roughly 12 liters of water to create one liter of spirit. This water does not go to waste – Bacardi recycles about 15,000 gallons of water per day. Since 2006, Bacardi has reduced the water use in rum production by 72 percent.

Read more | www.bacardilimited.com/news/263

“Progress on rural sanitation – where it has occurred – has primarily benefitted richer people, increasing inequalities”

Progress on Drinking Water and Sanitation report 2014, WHO/UNICEF

BRIEFING

WATER HIGHLIGHTED AT EU-AFRICA SUMMIT

Photo: European Council



Read more about the implications of the Summit for the EU-Africa water partnership | www.european-council.europa.eu/eu-africa-summit-2014

The agreement set out by EU and African leaders in the declaration adopted by the 4th EU-Africa Summit held in Brussels on April 2-3, highlights the political and economic significance of water for both continents. The roadmap for EU-Africa relations until 2017 offers frameworks for the future of the EU-Africa water partnership, in particular as part of the infrastructure agenda together with energy, transport and ICT. The new framework should allow for a stronger interaction between water and the related sectors of agriculture, energy, climate change, science, and peace and security.

WATER PRICING IN NEW ECONOMY

SIWI's Executive Director Mr. Torgny Holmgren and Director of Stockholm Water Prize and Stockholm Industry Water Award Mr. Jens Berggren have written an article on Water Pricing in the quarterly *The New Economy* magazine, arguing that the global thinking around water has to be advanced, and that it makes good business sense to manage water wisely. The article followed a *Water Front* cover story on the same subject, published in our 4-2103 issue.

to Read the articles | www.theneweconomy.com/strategy/siw-water-is-precious-its-time-to-advance-our-thinking-around-it

www.siwi.org/publication/water-pricing-how-to-value-our-most-elusive-resource



USAID LAUNCHES WATER & CONFLICT TOOLKIT

As professionals in the water community are aware, water is a key ingredient for human security. However, it can also play an important role in bridging the gap between development and peace-building, said the US Agency for International Development, when it launched its Water & Conflict Toolkit for Programming recently. In four parts, the toolkit sets out to 1) explore the relationship between water, conflict and cooperation; 2) highlight lessons learned from water-related development and peace-building programmes; 3) discuss potential programme options, real-world examples of relevant development interventions, and monitoring and evaluation, and 4) provide guidance to help identify and evaluate the conflict risk and peace-building potential of water programmes.

Read more | www.usaid.gov/sites/default/files/documents/1866/WaterConflictToolkit.pdf

DUPONT OPENS REGIONAL TECHNOLOGY CENTER TO BRING AGRICULTURAL INNOVATION TO AFRICA'S FARMERS

DuPont is set to open an Africa regional technology center in Delmas, South Africa. The center is designed to help advance DuPont's ongoing efforts to accelerate seed product development for Africa's farmers and help them better manage key agronomic challenges, including pest and disease pressure, climate volatility and nutrient-depleted soils.

Read more | www.dupont.com/corporate-functions/news-and-events/corporate-news-releases



MISSION: SAVING THE OKAVANGO DELTA

TEXT | VICTORIA ENGSTRAND-NEACSU PHOTO | ISTOCK & VICTORIA ENGSTRAND-NEACSU

ONE OF THE WORLD'S FEW INLAND DELTAS, THE OKAVANGO, IS FACING PRESSURE ON SEVERAL FRONTS. THREE STATES WITH DIFFERING NEEDS MUST COOPERATE TO SAVE IT FOR FUTURE GENERATIONS.

Botswana has in recent decades often been spoken of as an African success story. Stable, reliable and wealthy. Soon after independence in 1966, diamonds were discovered under its desert sands, and consecutive governments have used the revenues to build today's Botswana, where most development indicators point upwards.

The reserves of the precious stones are dwindling, however, and few ex-

pect it to last more than another 20 years. Something must take the diamonds' place to ensure Botswana's continued

prosperity. The most obvious contender, and the apparent choice of the government, is tourism.

Botswana boasts an abundance of wildlife, the dramatic Kalahari Desert, and the Okavango Delta, one of the most delicate aquatic ecosystems in the world. The delta is a favoured destination of well-off safari tourists seeking remoteness and unique experiences. Catering to the top-end

tourist bracket is a conscious choice of the government who fears that mass tourism would hurt the delta's intricate ecosystem.

Maintaining and developing luxury eco-tourism in the delta is dependent on that it stays what it is, relatively intact. However, that in turn depends on the water steadily flowing in every year. The Okavango Delta is end station for the Okavango (called the Cubango in Angola, Kavango in Namibia) that originates in the central Angolan highlands. The water travels through the three countries before it spreads through the ●●●

COVER STORY



What makes the Okavango Delta so alluring to tourists, its remoteness, is also what affects the local population adversely: the socio-economic conditions in the region, including parts of Botswana, Namibia and Angola, are dire, with widespread poverty, malnutrition and poor infrastructure. "In Angola, the area used to be called 'the land at the end of the world'," says Dr. Ebenizário Chonguica of OKACOM.

The fear in Botswana is that extensive hydropower development upstream will lead to diminishing flows into the



Delta. "A high development scenario would kill the delta," comments Dr. Ebenizário Chonguica,

Executive Secretary of the Permanent Okavango River Basin Water Commission (OKACOM) that groups Angola, Botswana and Namibia.

Following a Transboundary Diagnostic Analysis (TDA) completed in 2011, OKACOM has worked on a Strategic Action Programme for the Cubango-Okavango River basin. In this process, a variety of low- and high-development scenarios were set up to try and predict how the Delta would react.

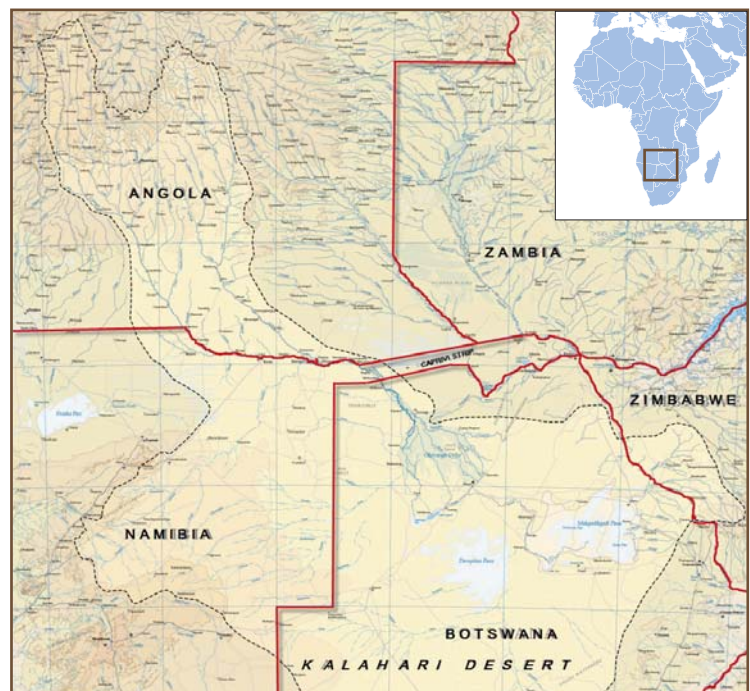
●●● fan-shaped delta. Botswana is the beneficiary of enormous masses of water, as much as 95 per cent of the delta's water comes from Angola.



"Within our boundaries, what water we can call ours is very little. So what we have is shared," says Tracy S. Molemi, Deputy Director of International Waters at Botswana's Department of Water Affairs.

While Angola is by far the biggest contributor to the Okavango, it is also the smallest user of its water. Its neighbours recognise that rebuilding the country after the long civil war that ended in 2002 brings with it a need for energy development, in Angola's case hydropower. Namibia has also said it wants to tap more of the Kavango's water for its own national needs.

Angola, Botswana and Namibia work together in OKACOM, the Permanent Okavango River Basin Water Commission.



Map illustration: Elin Ingblom, SIWI
Okavanga Delta map: www.coeearth.org

The high development scenario included considerable population growth, increased water demand, irrigation schemes and hydropower development in the next 10-15 years.

“It would completely change the flow of water and sediments, and the level of water stress would be very high,” says Dr. Chonguica. “Habitats would diminish, fisheries and pastures would decline, the food chain would collapse, and the opportunity for tourism attraction would be lost”.

His concerns are echoed by Ketlhatlogile Mosepele, Acting Deputy Director of Research Services and Training at the Okavango Research Institute (ORI), located in Maun at the southern stretches of the Delta. He says that less water coming into the Delta would affect the whole ecological chain – wildlife living in semi-aquatic areas would diminish and tourism would be at risk.

“I am not using too big words if I say that it is about Botswana’s future,” says Dr. Chonguica.

The Strategic Action Programme, which stresses cooperation and joint decisions in matters that affect the Delta, was endorsed by Namibia’s and Botswana’s governments in 2013. Dr. Chonguica is hopeful that Angola, too, will endorse it before the end of 2014.

According to Dr. Chonguica the key is to come up with a solution that alleviates poverty in all three countries, without it affecting the

THE DELTA IN NUMBERS

- **The Okavango Delta**, in northern Botswana, spreads out like a hand inside the Kalahari Desert.
- It is fed mainly by the river **Cubango** (known as **Kavango** in Namibia and **Okavango** in Botswana) and its main tributary Cuito, both originating in the highland plateau of Angola, and passing through Namibia, on its way into the delta.
- The length of the Okavango River from its source in the Angola highlands to the mouth at the outer margin of the Delta in Botswana is **1,100 kilometres**.
- The Delta has more than **150,000 islands**.
- **The inundated area** of the Okavango Delta fluctuates between 6,000 to 8,000 km² during the dry season, swelling to up to 15,850 km² during the flood.
- To read the Transboundary Diagnostic Analysis of the Cubango-Okavango River Basin, go to www.okacom.org/site-documents/tda-final-reports/feffcubango-okavango-river-basin-transboundary-diagnostic-analysis/view

Delta. “There is a risk that politicians will be selfish. You don’t win elections outside your constituencies. But we need them to convince their voters that cooperating with neighbours is the

better deal. It is an exercise of thinking before doing”.

Tracy S. Molefi at Botswana’s Department of Water Affairs has thought long and hard about this. “In shared waters, it is very important for people who represent countries to be able to place themselves above national interest. It is not that they should ignore their countries’ interest, but they should see a basin as a whole. The minute you think ‘What do I get?’, you’re stuck.”

She believes that it is a give and take. “In order to safeguard tourism as a top earner far into the future, we need to sacrifice a little bit of tourism today.”

She wants Angola to be invited to invest in the Delta. “Let them (Angolans) get priority, make tourism income from the Delta. We need to compensate upstream so that they don’t block downstream”.

“Selfishness must be avoided”, says Dr. Chonguica. In addition to inviting Angolan investment in the Delta, he says there is a need for joint investments in potential tourism development inside Angola. “We would need a joint effort in clearing land mines and building basic structures, such as airstrips”.

And the time to act is now, says Ms. Molefi. “The technocrats know about the importance of a holistic view. We don’t need to do any more studies. We need to catch the attention of the decision-makers!” ●

SIWI IN BOTSWANA

- Botswana initiated a **reform of its water sector** in 2008.
- As part of the reform, **SIWI supported the capacity building of staff** from Botswana’s Department of Water Affairs (DWA), Water Utilities Corporation (WUC) and other water stakeholders.
- The capacity-building programme included eight courses on various topics closely linked to the reform process. One covered the area of **Transboundary Water Management**,

a central issue when it comes to managing and safeguarding the Okavango Delta for future generations, in close cooperation with other states.

- To read more about SIWI’s capacity building work, go to www.siwi.org/knowledge-services/capacity-building
- To read more about SIWI’s work in transboundary waters, go to www.siwi.org/knowledge-services/transboundary-water-management



INTERVIEW



CONTROVERSIAL, AND PROUD OF IT

INTERVIEWED BY | VICTORIA ENGSTRAND-NEACSU PHOTO | JON CHASE/HARVARD NEWS OFFICE & ALEXA BRISCOE

STOCKHOLM WATER PRIZE LAUREATE DR. JOHN BRISCOE SPEAKS TO STOCKHOLM WATER FRONT ABOUT GROWING UP UNDER APARTHEID, HIS DISCORD WITH SELF-PROCLAIMED SAVIORS OF THE WORLD, AND HIS ADMIRATION FOR WATER PRACTITIONERS.

Dr. John Briscoe, a native of South Africa and currently a Professor at Harvard University, has been described as a person with vast experience from all levels, from the highest policy

level to the field. But he rejects the idea of one being more important than the other.

“At the end of the day it is what happens on the ground that matters. All policies must be

judged by whether they make a difference on the ground. I believe that the years I spent working at the micro level is what enables me to be an effective policy-maker.”

What, if any, difference has it made in your career that you a born and raised in South Africa?

A huge difference. In South Africa, as in many other places, the Good Lord put the resources on which our country would grow in one place, and the water in another place. Concern with developing and managing water resources is in my blood and that of most South Africans. I was also brought up during the apartheid era and, like many of my peers, this gave rise to an acute concern with justice and development.

You are equally at ease, and equally committed, talking to a president and a poor farmer. Where do you make best use of your time?

It has been my privilege to be able to do both of these. On the one hand it is vital to constantly learn from people “at the end of the line” about what they see as priorities in living better lives. On the other hand political leaders have a vital role in policies and investments. Having worked with many great political leaders I have a deep respect for how difficult their jobs are. They cannot simply pay attention to one issue or one group of people – they have to know how to integrate across issue, group and time.

Is there any period in your life that has made a strong impact on your professional choices?

Platitudinous as is it may sound, I have learned something from every experience. I learned a lot from my mother about poverty and injustice as she ran an orphanage and day care center in Soweto. I learned a lot working in the ministry of water in South Africa about how important major infrastructure was to national economic growth and security. I learned a lot about the priorities of very poor people and the fallacies of high-sounding slogans when I lived with poor people in Bangladesh in the 1970s. I learned a lot about the

“I have learned a lot about the priorities of very poor people and the fallacies of high-sounding slogans”

challenges facing governments with limited capacity when working for the government of Mozambique after independence. I learned a lot working on the World Bank water policy about how imperative it was to let everyone be heard and yet to make policies which responded to the needs of legitimate representatives of people in developing countries. I learned a lot as the World Bank’s country director for Brazil about how important it was to respect and support legitimate, elected, political leaders and about putting my own pet theme – water – into a broader context. I am learning a lot as a professor about how hungry students are to make a difference, and how badly they are advised by people who live in glass houses.

Is there any professional achievement in your life that you value higher than others?

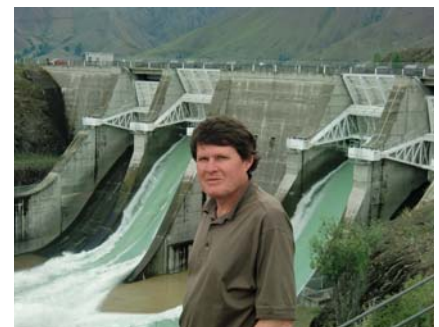
I feel that all roads have led to Rome for me. Almost everything I have done has focused on the same goal, namely of trying to help make this a better world. Sometimes it is listening to a farmer or a government official; sometimes it is giving a talk to students, sometimes it is writing high policy and trying to convince institutions like the World Bank to do the right thing.

Do you consider yourself controversial?

Yes! And I am proud of that. I would say there are two dimensions on which

I feel particularly strongly and am considered controversial.

First, I have had and continue to have, huge differences of opinion with people who, I feel, tell other people what they should want and how they should live their lives. These are typically single-issue groups who are elected by no one, who proclaim themselves to be the saviors of something, who mostly don’t know what it is to live without food, electricity or water. In my view they have a right to be heard, but get far too much credit and clout in the halls of power in rich countries. Second, I also do not have a high opinion of people who give advice without ever having had responsibility for making things happen on the ground. My heroes are not those who write high-sounding papers on “new paradigms”, but the leaders and practitioners who have responsibility and accountability. It has been my immense privilege to work with many great elected political leaders and many great thinking practitioners. These are my heroes! ●



STOCKHOLM WATER PRIZE

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UNDERSTANDING MY STOCKHOLM WATER PRIZE

TEXT | DR. JOHN BRISCOE PHOTO | BJÖRN GUTERSTAM

THIS YEAR'S AWARD IS AN ACKNOWLEDGEMENT OF THE VITAL ROLE THAT "THINKING PRACTITIONERS" PLAY IN MAKING THE WATER WORLD BETTER, WRITES JOHN BRISCOE IN THIS OPINION.



Dr. John Briscoe, 2014 Stockholm Water Prize Laureate

High-visibility prizes (especially those awarded in the Stockholm City Hall!) are symbolic acts, in which individuals are recognised because they are personal manifestations of particular ideas. In the case of the Stockholm Water Prize, an award requires both nomination by a group of credible and influential nominators and selection by a committee of eminent people. For a person to be awarded the Stockholm Water Prize, that person needs to embody an idea or ideas that can garner this support. The Prize has been awarded for over twenty years. Most of the awardees are scientists from developed countries. A few have been NGOs. Two have been individuals honored for leading the passage of water laws in their countries. Only a couple of the awardees would be considered to be practitioners. So what does the award of the 2014 Prize mean?

To my mind, the most important symbolism of the award is acknowledgement of the role of "thinking practitioners". Water development and management is, at the end of the day, a practical matter. Practitioners are the people at the coalface – the ones who have to control the floods, allocate scarce water during droughts, assure supplies for industry and people. Much – almost all – of what is published on water in learned journals and discussed in academic and scientific conferences is of little help to these frontline practitioners and the publics they serve. And the unfiltered, dominant ideas on the Internet are mostly the disseminated prejudices of small groups of activists from the rich world. But when we examine the path-breaking innovations – for example in flood management by the Mississippi River Commission or drought management by the Murray Darling Basin

Authority – the key people are the practitioners. The leading practitioners have dirt under their fingernails, but are also able to stand back and see the big picture and develop new management models which can be accepted by society and implemented, and which can change the reality for millions of people. In my latest professional incarnation – as a university professor – I am struck both by how hungry students are for exposure to these thinking practitioners, and how rarely their professors have any knowledge of this vital area.

The announcement of my Stockholm award includes a couple of other key ideas.

There is the idea of "global and local" and the dialectic between these. I have had the privilege of working at both ends of the spectrum, and believe that the ideas and policies I have been engaged with at the global level are profoundly influenced by the experience I have had with local water challenges. The key idea is credibility. If every global policy maker, if every advocate of a "new paradigm", were obliged to first spend some years getting acquainted with the realities at a local level, our water world would be a better one!

Then there is the idea of "development and management". In no area of water management is moral hazard – the temptation for (rich) people who have to tell (poor) people who don't have what they (poor people) should have – more present and important. The facts are well known. Most of those campaigning against large hydro come from rich countries, which have developed an average of nearly 80 per cent of their hydropower potential. But they do not want Africans, who have developed about 5 per cent of their potential, to build large projects. People in arid areas of rich countries have reached water security in part by storing lots of water – about 1,000 days of average flow on the Colorado, and 500 on the Murray Darling, for example.



“If every global policy maker was obliged to first spend some years getting acquainted with the realities at a local level, our water world would be a better one”

But, again, many living with this security do not want dams to be built in similar circumstances in poor countries, where little storage has been built (just 30 days on the Indus, for example). The big game changer here has been the engagement of the emerging economies, both directly and indirectly. It was my honor and privilege to work with these governments to change the policies of the World Bank regarding the need to support poor countries in developing this critical infrastructure.

Finally, the award announcement identifies my “unwavering commitment”. I have student after student commenting on how they perceive big government and big institutions (like the World Bank) to be stifling (and how NGOs and start-ups are the solutions to the world’s water, energy and food challenges). My message – and one now reinforced by the Stockholm Water Prize – is that these big institutions are key to a better water world, and that professionals with experience and knowledge and,

especially “unwavering commitment” can change these institutions and this world.

In closing, I could name at least a dozen “thinking practitioners” who embody all of the above ideas more fully than I. It is my belief – and perhaps that of those who made this selection – that the 2014 Stockholm Water Prize honors this cohort of committed thinking practitioners, and that it will stimulate some in the next generation to follow down this path. ●

ABOUT THE AUTHOR

Dr. John Briscoe is the 2014 Stockholm Water Prize Laureate. He is currently a Professor of Environment Engineering at Harvard University where he directs the Harvard Water Security Initiative and is on the faculty of the School of Engineering and Applied Sciences, School of Public Health and Kennedy School of Government.

A TALKING REVOLUTION

WATER GOVERNANCE DIALOGUES IN KENYA

TEXT | MAYA REBERMARK PHOTO | ISTOCK

A PILOT PROGRAMME AIMED AT MAKING KENYAN WATER USERS AND PROVIDERS BECOME MORE AWARE OF THEIR RIGHTS AND RESPONSIBILITIES PROVED SUCH A SUCCESS THAT IT INSPIRED SIMILAR PROGRAMMES ACROSS KENYA.

The pilot programme, started in 2009 by the UNDP Water Governance Facility at SIWI and Kenya Water for Health Organization (KWAHO) in the Bondo district in western Kenya, set out to strengthen the capacities of formal and informal water service providers, regulators and water users. The aim was to effectively engage the groups in water sector reforms and ultimately improve access to water for communities.

The project broke new ground in the region by establishing Water Dialogue Forums through which water suppliers and water users could physically meet and exchange thoughts and ideas. The conversations held at the Water Dialogue Forums addressed challenges and perception differences in water management and service delivery, while trainings focused on the responsibilities of service providers and water users alike. Several hundred people in Bondo were trained on water sector reforms in this manner.

As a result of the discussions and training on water sector reforms, water providers became more aware of their actual maintenance responsibilities and water users became more vigilant in protecting their water resources infrastructure. Previously, water infrastructure had often been subject to vandalism with metal parts stolen for illegal sale. These thefts had been largely ignored by the community who saw the equipment as part of the supplier's goods and not necessarily connected to the quality of their water supply. This increased public awareness resulted in less reparation costs for the company and a more reliable supply for users. By creating community ownership through participation, more initially dissatisfied users also opted to remain with the supplier instead of disconnecting from costly and unreliable water supply.

The successes of these projects were greatly helped by the political backdrop in Kenya in 2010, when politicians enshrined the Human Right to Water into the new Kenyan Constitution. In 2011 and 2012 Nakuru, Eldoret, Vihiga and Kakamega regions saw projects modelled on Bondo evolve, the success of which encouraged the next stage of scaling up with financial contributions from the United Kingdom and Sweden.

Good water governance emphasises that decision-makers are held accountable for their responsibilities just as stakeholder participation is an equally critical slice of the balancing act – two elements successfully brought together in the Bondo Water Dialogue Forum programme. ●



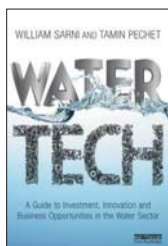
A SPREADING SUCCESS

- **The pilot programme** was a joint effort by the UNDP Water Governance Facility at SIWI, the UNDP Kenya country office and Kenya Water for Health Organisation (KWAHO).
- **Before the Water Dialogue Forums**, 97 per cent of the population of Bondo was not aware of their human right to water. During the project, 470 water actors were trained on water sector reforms.
- **The improved water governance successes** seen in Bondo have inspired projects in the Nakuru, Eldoret, Vihiga and Kakamega regions of the country.
- **KWAHO** was involved in the draft National Water Policy (2012) and draft Water Bill (2013) of Kenya leading up to the Human Right to Water being enshrined in the new Kenyan constitution.
- Read more about the programme on www.kwaho.org/new/projects

INNOVATION – A KEY TO SURVIVING WATER SCARCITY

TEXT | DR. PHILLIA RESTIANI

INNOVATION IS A KEY TO OUR SURVIVAL IN COPING WITH FUTURE WATER CHALLENGES. WATER TECH SHOWS WHAT TECHNOLOGICAL INNOVATIONS SHOULD LOOK LIKE IN THE “21ST CENTURY WATER” PARADIGM, WRITES SIWI’S DR. PHILLIA RESTIANI IN THIS REVIEW.



Water Tech:
A Guide to
Investment,
Innovation and
Business Oppor-
tunities in the
Water Sector.

Authors:
William Sarni and
Tamin Pechet

Water, as a key natural resource for sustainable food and energy production that underpins the lifeline of our wellbeing and economy, has become increasingly scarce and less predictable. We are faced with a rather grim prognosis, with a forecasted 40 per cent shortfall between water supply and demand in 2030 (the WRG 2030, 2009). Such a scenario will put 47 per cent of the global population in areas of high water stress (OECD, 2008), adding even more pressure to the 1.6 billion people that currently live under economic water scarcity.

However, the enormous challenges of our water problems are solvable. Innovation is the key to human survival over time. *Water Tech* by Sarni and Pechet brings out the private sector’s perspective on how technological innovations have come a long way to take on these water challenges. To a certain extent innovations will be crucial, as adapting might not be sufficient or even possible.

Water Tech illustrates what innovation looks like in the so called “21st Century Water” paradigm, which requires a shift from using water as disposable commodity to a valued resource. The book discusses this idea

in three parts. The first part establishes the context for water technology challenges by underlining the issues of water pricing and value and the global trends that drive innovations. In the second part, the opportunities in water technologies are presented through examples of how countries, companies, entrepreneurs, and investors are address-

This book serves as an informative and practical collation of various technological innovations, rather than a deep, comprehensive review of how societies can better deploy innovations to address water challenges. It also encourages a paradigm shift – water should be seen as a scarce, valuable resource – and highlights the benefits of exploiting opportunities in water technologies.

The book is a highly recommended read – technological innovation is more than merely a “hardware” issue. Enabling factors

(policy, regulation and aligned incentives) and broad stakeholders’ engagement are required to bring innovation to fruition.

The book talks inspiringly about how partnerships and collaborations in technological innovations can bring us closer to a water wise world. ●

“Innovations will be crucial, as adapting might not be sufficient or even possible.”

ing water scarcity in three main areas: water supply; water demand; and the water, energy, and food nexus. The last part looks at the technological innovation landscape, from ideas to commercialisation, through examples of initiatives taken by innovators and investors as well as legal, regulatory, and marketing leaders.

ABOUT THE AUTHORS



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William Sarni is Director and Practice Leader, Enterprise Water Strategy, Sustainability and Climate Change at Deloitte, and has been providing sustainability, environmental and hydrogeological consulting services to private- and public-sector enterprises.



TAMIN PECHET
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Tamin Pechet is CEO of Banyan Water. He is also Chairman of Imagine H2O, a global organisation spurring entrepreneurship in the water industry through innovation prizes and a water business incubator. He is a frequent speaker on water business opportunities.

“What we talk about when we talk about water”

TEXT | JAMES WORKMAN PHOTO | VANESSA LEMAIRE-WORKMAN



Water is so slippery that even basic terms may escape our grasp. Precise usage eludes us, leaving vexing questions: What separates *water rights* from *rights to water*? Can water development come from *water conservation*? When does *water use* become *water consumption*?

Clear answers transcend mere semantics. The meaning of water’s words can shape life and death.

Skeptical? Just imagine if the landmark World Commission on *Dams* had instead been a World Commission on *Reservoirs*. The same parties would have met at the same time to examine the same evidence on performance, impacts, costs and benefits of the same large infrastructure. Yet results would likely have changed dramatically.

Dams emphasise artificial concrete that blocks pristine flows, a messy legacy that forced fish to bash piscine skulls against implacable walls. *Reservoirs*, by contrast, conjure what’s enjoyed today: refreshing pools, precious water banks, clear liquid assets for clean energy, irrigation, drinking, or recreation.

One word alters infinite outcomes.

Or consider: whether in a *dam* or *reservoir*, how should we measure the volume it stores? Litres versus gallons are confusing enough. But more intense political complications surround the term *acre feet*.

An acre foot sounds precise: exactly 325,851 3/7 gallons of water (or 1,233,481.83754752 litres).

But water is never abstract, and always subjective to context. So “the amount it would take to cover one acre of land one foot deep” not only betrayed a rainy (U.S.) Eastern prejudice that shattered in the arid West; it presumed water’s exclusive role was to make deserts bloom.

Irrigation farming remains vital for a hungry world. Yet unsurprisingly, the world’s thirsty cities, industries, and ecologists don’t describe their growing and dynamic needs in traditional terms of a dusty square grid dampened into mud. As farmers and temperatures shrink river flows, these new and competing users prefer to value water in the language of *metered units* (cities), *cubic feet per second* (energy plants), or *restored habitat* (fishermen).

Today’s agencies generate friction even when they grudgingly concede an acre-foot is also “the average annual water usage of a suburban household.” Which household? My frugal one? Or my wasteful neighbours’, with their lawn and pool?

All language is political, and man is the measure of all things.

Alas, man’s measurement falters since our needs are so relative. Relativity undermines modifiers in a simple government effort to, say, impose *uniform* rations to ease *water scarcity* during *extreme* drought. Rations can’t be uniform when elastic demand varies by 7.1 billion metrics. Scarcity is but perception, with an arbitrary threshold that shifts constantly by local institution, time, mood, or psyche; some people consider their desert to be abundant. Droughts lack comparative value in duration, intensity and duration, especially when calibrated against a past stationarity that no longer exists.

In sum, water is a fugitive resource: it tries to escape our control. Water’s language is equally elusive, hard to pin down with universal rules. Yet our ongoing quest for clarity, in both cases, remains essential. By asking what we talk about when we talk about water, we tap the source of the wisdom we share. ●

James Workman is a writer and authority on natural resource conservation. He is this issue’s featured contributor (see page 2).

CALENDAR

MAY 26-31

Africa Water Week

The Africa Water Week (AWW) is convened by the African Ministers Council on Water (AMCOW) in conjunction with the African Union Commission and organised with other development partners. It is the 5th year running, and it takes place in Dakar, Senegal. Speakers include: H.E. President Macky Sall of Senegal, H.E. President Sirleaf Johnson of Liberia, Hon. Sarah Reng Ochekepe AMCOW Interim President, Hon. Pape Diouf, Host Minister/AMCOW Incoming President and Hon. Bai Mass Taal AMCOW Executive Secretary.

www.africawaterweek.com/5th
[#AfricaWaterWeek](https://twitter.com/AfricaWaterWeek)

JUNE 29-JULY 6

Almedalsveckan

Almedalsveckan is an annual political meeting point and has been organised in Gotland, Sweden, for over 40 years. The openness and accessibility during Almedalsveckan is unique both for Sweden and around the world.

www.almedalsveckan.info
www.swedishwaterhouse.se



MAY 28

Stockholm Industry Water Award

The 2014 Stockholm Industry Water Award winner will be announced worldwide on May 28. For more information about the award, and how to nominate for next year, please visit www.siwi.org/prizes

JULY 7-11

Gender Water & Development Conference

SIWI is supporting the Gender Water & Development Conference being held from 7-11 July 2014, in East London, South Africa. The conference programme is designed to encourage broad stakeholder engagement. It aims to serve as a platform for key role players from across community based organisations, academia, government institutions and private sector to exchange knowledge and best practice on gender perspectives in policy, programme implementation and governance.

Barbara Schreiner, Chairperson for the conference explains, "Our intention for the conference is to challenge the social constructs that define roles for men and women and tackle topics that intersect race, class and gender. Only through an equal society can we achieve the kind of economic stability needed for growth and development in our poorest countries".

www.global-water-conference1.com
[#GenderH2O](https://twitter.com/GenderH2O)

#UNFCCC

**United Nations
Climate Change Conference**

Bonn, Germany

JUNE 4-15 BONN CLIMATE CHANGE CONFERENCE

SIWI will attend the Bonn Climate Change Conference to continue working for the integration of water into UNFCCC global climate workstreams. Under the mechanisms of Loss and Damage and the Nairobi Work Programme, steps will be taken to agree on collective actions to address and mitigate the

harsh impacts from climate change.

The event will be a pivotal step in the preparations of a draft negotiating text for COP20 in Lima in the hope of reaching a new climate agreement in December 2014.

unfccc.int/meetings/bonn_jun_2014/meeting

www.worldwaterweek.org

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