

WATER ETHICS: WHAT DOES IT MEAN IN PRACTICE?

**Proceedings of the 6th Interdisciplinary Webinar
organized by the W4W Group (Workshop for Water Ethics)**

on 18th May 2021

from the Museum of History of Science of Geneva



Water Ethics : what does it mean in practice?

Proceedings of the 6th Interdisciplinary Webinar

organized by the W4W Group (Workshop for Water Ethics) on 18th May 2021

from the Museum of History of Science of Geneva

For its 6th Colloquium, the Association Workshop for Water Ethics (W4W) remains true to its ethical and interdisciplinary approach. It shall explore what water ethics means in practice, based on practical examples from the fields.

The Association W4W is an apolitical civic-minded interdisciplinary platform that has the following goals:

- Conceptualize and explain the ethical dimension of fair and sustainable water management in a globalized world.
- Contribute original thought likely to foster an environment conducive to the implementation of international development commitments.

The proceedings of past colloquia are available

in English at:

https://www.globethics.net/documents/4289936/13403256/GE_Texts_6_isbn9782889313129.pdf

https://www.globethics.net/documents/4289936/15469226/GE_Praxis_13_isbn9782889313082.pdf

in French at:

https://www.globethics.net/documents/4289936/13403256/GE_Texts_6_French_isbn9782889313259.pdf

https://www.globethics.net/documents/4289936/15469226/GE_Praxis_13_FR_ISBN9782889313372.pdf/

Table of contents

Members of the W4W group	4
Association W4W (Workshop for Water Ethics)	5
Speakers	6
Introduction to Water advocacy (Evelyne Fiechter-Widemann)	7
The role of government in the advocacy of water (Cecilia Tortajada)	9
Public Involvement in Water Management in China (Asit K. Biswas).....	11
Ethics, Economics, Ecology joined to each other. The case of water spring managed privately by Nestlé Waters in partnership with local farmers (Henniez - Switzerland) (Benoît Girardin).....	13
Access to Water: Contribution of the Sustainable Development Goals (SDGs) (Laurence Boisson de Chazournes)	17
Q&A and Debate Among Speakers	20

Members of the W4W association



A doctor of ecophysiology at the Orsay Faculty of Sciences (Paris-Sud), **Annie BALET** worked on metabolism and the ultrastructure of plants in reaction to environmental problems. She subsequently taught biology at the secondary-school level, raising the awareness of students to associated environmental and humanitarian issues. She helped organize informal week-long seminars on sustainable development.

Benoît GIRARDIN is lecturing on ethics and international politics at the Geneva School of Diplomacy and International Relations, a university institute. He has extensive international experience, having been responsible for the Swiss development cooperation programs in Cameroon, Pakistan, and Romania, then later for evaluation, finally serving as Swiss Ambassador to Madagascar. Once retired, he was invited to lead from 2011 to 2015 a private academic institution in Rwanda. Initially, he earned a doctorate in theology from the University of Geneva in 1977.



Evelyne FIECHTER-WIDEMANN is a hon. member of the Geneva Bar and holds a MCJ from New York University. After obtaining a doctorate in theology at the University of Geneva in 2015, she is pursuing her research on global ethics of water in Singapore. She taught Swiss and international public law at the Collège de Genève. She was a Board member of the Swiss Protestant Church Aid (EPER) as well as of the Geneva International Museum of the Reformation.



After studying at the University of Geneva, **Laurence-Isaline STAHL GRETSCH**, spent fifteen years as an archeologist specializing in prehistory, both in the Jura Canton (for construction related to the Trans-Jura freeway) and at the University of Geneva. Following the defense of her dissertation in sciences, she joined Geneva's History of Science Museum, which she has headed for fifteen years. In 2009 the museum staged an exhibit on hydropower in Geneva. Since 2011, the Museum had hosted all congresses on water ethics..



After earning a master's degree in civil engineering at the Swiss Federal Institute of Technology in Zurich, **Christoph STUCKI** initially specialized in analyzing the behavior of materials at the Swiss Federal Laboratories for Materials Science, before joining an engineering firm in Lausanne. He then developed a railway network planning model at the Swiss Federal Institute of Technology in Lausanne. In 1980 he became the general manager of Geneva's public transport system. Currently, he is the president of Unireso, the cross-border transport fare network for a basin encompassing parts of France, Vaud, and Geneva.



Gary VACHICOURAS, who holds a doctorate in theology, studied at the Holy Cross Greek Orthodox School of Theology (Brookline, Mass.), the University of Paris IV-Sorbonne, and the University of Athens. He was a teaching fellow at the Ecumenical Patriarchate's Orthodox Center in Chambésy-Geneva and the executive director of the Foundation for Interfaith and Intercultural Research and Dialogue. His involvement in higher education has touched on human security, especially through his teaching, innovative research, and intergovernmental dialogue.



Following his training as a professional IFR pilot, **Renaud DE WATTEVILLE** traveled and created Swissmate, an events management company. For over 20 years he managed projects for various companies in Switzerland and abroad. In 2008 he started Swiss Fresh Water SA, which developed a low-cost decentralized desalination system intended for use by low-income populations. This was an opportunity for him to make a real human difference by making his experience available for a high-impact industrial project.



Association W4W (Workshop for Water Ethics)

Association W4W is an apolitical civic-minded interdisciplinary platform that brings together notable figures from the theological, ethical, political, scientific, economic, and legal spheres who share a common concern for water challenges in a globalized world.

Water is a natural resource that was long considered a free good. Its status is changing as awareness of its increased scarcity grows, and especially as it is used abusively (polluted and wasted, especially in agriculture).

Indeed, this resource is increasingly threatened not only by increasing demand from the public, agriculture, and industry, but also by climate change.

To meet the demand and avoid water wars by defusing water-related conflict, the public sector – in partnership with the private and community sectors – must create appropriate conditions for managing this resource fairly and sustainably.

It has set the following goals for itself:

1. Conceptualize and explain the ethical dimension – essential for identifying and implementing solutions – of fair and sustainable water management in a globalized world;
2. Contribute original thoughts that could influence the creation of a favorable environment for implementing the Sustainable Development Goals (in particular 4,5,6 and 14);
3. Take these solutions' interdisciplinarity into account;
4. Using a pluralist and ecumenical approach, establish contacts with existing ethical focus groups, for example IRSE, Gloethics.net, the Institute of Business Ethics, and similar entities globally;
5. Involve influential private-sector players, university researchers and students, as well as civic-minded associations;
6. Organize colloquia on the topic of water's ethical challenges in a globalized world, provide targeted information to decision-makers and influential stakeholders, and exchange thoughts in networks and on blogs.

www.fiechter.name

Speakers



Dr Evelyne FIECHTER-WIDEMANN is a hon. member of the Geneva Bar and holds a MCJ from New York University. After obtaining a doctorate in theology at the University of Geneva in 2015, she is pursuing her research on global ethics of water in Singapore. She taught Swiss and international public law at the Collège de Genève. She was a Board member of the Swiss Protestant Church Aid (EPER) as well as of the Geneva International Museum of the Reformation.



Dr Cecilia TORTAJADA Professor in practice, School of Interdisciplinary Studies, University of Glasgow and Adjunct Senior Research Fellow, Institute of Water Policy, Lee Kuan Yew School of Public Policy, National University of Singapore. Former president of the International Water Resources Association, and Editor-in-Chief of the International Journal of Water Resources Development. Over 25 years of experience on water, environment and natural resources management, agricultural development and capacity building in the overall context of development. Working at present on impacts of global changes on water resources, environment, food and societies.



Prof. Asit K. BISWAS Distinguished Visiting Professor, University of Glasgow, UK; Chairman, Water Management International, Singapore; and Chief Executive, Third World Centre for Water Management, Mexico. Prof Asit K. Biswas is universally acknowledged as one of the world's leading authorities on water, environment and development related issues. He has a very distinguished career as an academic; senior public official in Canada; advisor and confidant to Presidents, Prime Ministers and Ministers in 19 countries, six Heads of United Nations Agencies, two Secretary-Generals of OECD, several Heads of bilateral aid agencies, and four CEOs



Dr Benoît GIRARDIN is lecturing on ethics and international politics at the Geneva School of Diplomacy and International Relations, a university institute. He has extensive international experience, having been responsible for the Swiss development cooperation programs in Cameroon, Pakistan, and Romania, then later for evaluation, finally serving as Swiss Ambassador to Madagascar. Once retired, he was invited to lead from 2011 to 2015 a private academic institution in Rwanda. Initially, he earned a doctorate in theology from the University of Geneva in 1977.



Prof Laurence Boisson De Chazournes, is a professor at the University of Geneva's Law Faculty. As senior advisor to the World Bank's legal department (1995-99), she collaborates with various other international organizations. She is an expert in international law, dispute settlement (ICJ, WTO and investments) as well as environmental law. She is the author of numerous publications related in particular to international environmental law and water protection and management.

Introduction to Water Advocacy

Evelyne Fiechter-Widemann, W4W Group founder and honorary Attorney at Law.

What is water advocacy?

Obviously, this means defending water or take sides for water.

But with which arguments and for which goals?

In 2010, the UN decided to confer the status of a human right to water and sanitation.

Since then, the water ethics, also called "Blue Ethics", has developed quite a bit, but in different directions:

- Some tend to defend water under the label of physio centrism, which is to say putting nature in the center at all cost,
- whereas others defend water under the label of anthropocentrism, which means putting the human being in the center at all costs.

Let us try not to engage into ideologic conflicts, but let us stick to the Golden Rule, which enjoys universal consensus. It says:

**do unto others
as you would have them do
unto you.**

Having said this, water advocacy is for me an attitude.

Feeling oneself as responsible for water, or to put it bluntly: being a steward of water.

Water advocacy is also to stay informed about the complex issue of drinking water.

Water advocacy is also to share information about it. This is a task our association Workshop for Water Ethics has been trying to assume for more than ten years, in two ways:

- by organizing seminars and
- by publishing with Globethics.net some contributions of our speakers in a book launched, two years ago in English, last year in French, and this year in Spanish, with the help, among others of the theological Faculty in Geneva.

By the way, next June, Switzerland is going to vote on the potable water issue.

That might sound strange, for Switzerland is known as a water castle.

But we are indeed in the midst of intense debates, emotion is present.

So if we want to be water advocates: Let us stay rational and ready for dialogue.

Thanks to our speakers today, we'll start understanding that:

Owing to conflicting interests, the drinking water issue is one of the most complex ever,

- that it requires efforts in all sectors, ranging from science and biology to politics, economics and ecology,
- without forgetting Ethics with a capital «E»: access to potable water for all.

The role of government in the advocacy of water

Cecilia Tortajada, Professor in practice, School of Interdisciplinary Studies, University of Glasgow, UK., and Adjunct Senior Research Fellow, Institute of Water Policy, Lee Kuan Yew School of Public Policy, National University of Singapore

In an increasingly globalised and interconnected world, societies have become less resilient with respect to water resources. Long-term developments such as population growth, urbanisation and industrialisation, as well as the impending threat of climate change, have increasingly resulted in global impacts on water resources. As a result, their long-term availability is at the risk of becoming unsustainable.

In terms of decision making, the diversity of views on what should be developed, what should be sustained and how, and over which period of time, has become very complex, as actors generally have views that differ from each other. In order to develop a common vision, advocacy represents a key element. It has the distinct potential to increase awareness, with members of society becoming conscious that water is essential for broad social and economic development, and ideally, to encourage them to work towards common goals.

In Singapore, PUB, the National Water Agency, has worked for decades to engage the members of society in the common goal of water conservation. Within this framework, public education, instrumental information, and awareness instruments have played a very important part in making the public appreciate the importance of conserving the resource, and act accordingly. Given the natural scarcity of water, all ideas as well as support from the public for conservation initiatives are of major importance.

Partnerships between public, private and 'people' sectors, as they are called in Singapore, in addition to sustained education, information and communication campaigns, have been very strong components of the strategies aiming to achieve long-lasting attitudinal change among the public and the industries towards conserving water. Efforts in terms of programmes, strategies and campaigns launched by the government to engage the public in water conservation practices started more than five decades ago, and continue until now.

As in all other countries, water conservation in Singapore is part of water demand management strategies, the concept and implementation of which have been an evolutionary process. In the mid-1990s, for example, increases in the demand for water were considered to be good indicators of economic growth and national development. However, the idea that high water demand was a sign of progress began to change in the 1970s, when the first large-scale consumer-oriented campaigns were launched.

In the 1990s, as the rate water consumption was increasing, the risk was that it would double every 16 years. With this in mind and taking into consideration the efficacy of the various public engagement methods used until then, PUB focused on even wider reaching mass-scale conservation campaigns. This approach was encouraged by the Singapore Green Plan (launched in 1992), which charted the strategic directions the city-state would be adopting to achieve its sustainable development goals. The extensive public consultations regarding the Green Plan inspired policymakers to emulate a similar type of engagement process for other campaigns as well. In fact, this was the beginning of 'public consultations' as an engagement tool in environmental issues in Singapore.

Over time, awareness and dissemination methods made use of both conventional information tools and more audience-friendly approaches. In 1995, for example, in an unusual campaign that ran for 6 days, an island-wide water rationing exercise was conducted involving 30,000 households in 20 constituencies. During this period, the water supply was interrupted for 14 hours each day. The aim was to shake up public inertia and remind Singaporeans about the importance of water. Unfortunately, there are no evaluations available that can indicate the direct impact of this exercise in terms of both perceptions by the public and of water conservation efforts, but we assume that they had an impact on the population.

Water demand management strategies have been very comprehensive over the years and have included multiple pricing, efficiency, financial, and awareness initiatives for domestic and non-domestic sectors. Even then, the fact that the public has been invited to adopt water conservation practices through pricing and non-pricing mechanisms does not necessarily mean that individual consumers have changed their behaviour permanently towards water conservation. There are numerous difficulties and limitations in educational and awareness campaigns to change people's behaviour. They may be due to perceptions of entitlements, prevailing attitudes and patterns of behaviour, but also to additional complex practical issues that influence internal and external water use, such as the environment in which people live and work, and the extent to which a culture of change is encouraged and perceived. As noted, laws, regulations and economic incentives can trigger changes in practices, but not necessarily in behaviour or attitudes on permanent basis.

As efficient as Singapore's water resources management system is, the so-called four-water taps or water sources, will not last eternally if they are not used effectively. As in the rest of the world, it is of fundamental importance to educate and engage the public in more and better ways to conserve water since these initiatives will multiply the opportunities for long-term availability of water resources

Note : This short article draws in a previous published article: Tortajada, C., and Joshi, Y. K. (2013). Water Demand Management in Singapore: Involving the Public. *Water Resources Management*, 27, 2729-2746. DOI 10.1007/s11269-013-0312-5.

Public Involvement in Water Management in China

Asit K. Biswas, Distinguished Visiting Professor, University of Glasgow, UK

Simply speaking, ethics are a set of moral principles that steer overall societal behaviour. They guide any specific society's beliefs as to what could be considered right or wrong, or what is just or unjust. They, thus, affect the individual as well as societal behaviour.

From a historical and global context, ethical values are neither constant over time, nor are they the same in all countries of the world during any specific period of time. As the world changes due to evolving situations and scientific and technological advances, and cultural mores are transformed, ethics may undergo modifications as well.

For most people, ethical values are often subjective and relative. Consider smoking. During the 1950s and 1960s, most people smoked. In fact, smoking among women was promoted because it could act as "torches of freedom" which could contribute to equality between men and women. In fact, during the 1950s and 1960s, smoking was as ubiquitous in most parts of the world as water bottles are today. Societal views on smoking started to change during the 1970s.

Different eras may have different ethical norms on specific issues. In the same era, when ethical values may be similar in different parts of the world, they may be approached in different ways.

1. Public involvement: Chinese style

Let us consider the ethics of public participation in water management in the world. In general, an overwhelming majority of the people in the Western world currently believe, and have generally believed over the past 4-5 decades, that public participation is essential if water development projects and management practices are to be sustainable, equitable and socially acceptable.

There is also a strong belief in the Western world that in a hierarchical country like China, there is no, or at best very limited, public involvement in water-related management activities.

Having worked extensively in China since 1980, and visited the country over 100+ times, there is no question that the Chinese authorities get the public involved extensively. However, the way the public is involved in water management practices and processes is very different from the West.

China gets its people involved in water management practices and processes, but they do not term it public participation. Thus, it is generally believed outside China that there is no public involvement in water management. This belief is erroneous.

Having been an advisor to 26 governments on water and environmental issues at mostly Ministerial levels over the past 50 years, there is no question that significantly more people in China are directly involved in water management practices, for prolonged periods of time, compared to the West. Because of paucity of time, let me give only three examples of public involvement in water management practices in China that enriches the overall process.

1.1 Volunteers

An important way many Chinese get involved in water management is through a process called volunteers. These volunteers not only help in water management but also in other development and social activities. These help to improve resources management and enhance their quality of life and also the overall environmental quality.

The volunteers come from all ages: school students, working people and retired individuals. They volunteer regularly in their own ways. They do not receive any financial compensation, nor are they politically coerced or encouraged.

Consider a megacity like Shenzhen. It is often called the "volunteer capital" of the world. Nearly 1 in 3 people in Shenzhen volunteer for various social and development activities. This directly contributes to social welfare. Many of the volunteers help with water management activities.

In the early 1970s, Shenzhen, then known as Bao'an county, was basically a small border city with some 28,000 population. It was basically a custom stop into mainland China from Hong Kong, and consisted of several fishing villages. Shenzhen became the first special economic zone of China due to its close proximity to Hong Kong. By 2020, Shenzhen had a population of 17.56 million. It is now the largest financial centre of the world, and also among the top 10 cities of the world having the largest economy. It now has the second-largest number of skyscrapers, and the fifth-highest number of billionaires in the world. This remarkable transformation has happened within the last four decades.

A major consequence of this breakneck urban and economic development in such a short time has meant the

waters of the Shenzhen River and its Bay are seriously polluted. The volunteers of Shenzhen are playing important roles in assisting the Water Department to monitor and manage the situation, including helping the inhabitants to be increasingly aware of the high level of water pollution and what they can do about it.

Currently, every day volunteers take water quality samples in several locations of the Shenzhen Bay, and monitor the levels of several parameters like colour, turbidity, pH, and total dissolved solids. The volunteers are trained properly by the Water Department. The data obtained by the volunteers complement the water quality database of the water authority. The Ministry consistently receives new data from the volunteers on the water quality of the Bay. They also receive visual reports from the volunteers on surface water quality.

The citizens of Shenzhen, and of several other Chinese cities, help in water management.

1.2 River Chief Systems

China has developed a unique system where citizens play important roles in identifying and informing river chiefs of all sources of visible pollution.

There is a saying in China that “nine dragons manage water.” In China, like in all other countries, there are many government departments responsible for managing water-related issues. They have overlapping responsibilities, jurisdictions, responsibilities and accountabilities. This invariably contributes to inefficiencies and poor water management.

The River Chief System started in 2007 when a massive outbreak of blue-green algae occurred in the Lake Taihu. This seriously affected the main drinking water source of Wuxi. In order to overcome this serious and urgent problem, the Wuxi local government tried a new experiment by nominating the senior-most officials of the Chinese Communist Party to be River Chiefs for 64 major rivers. Their tasks included issues like protecting water resources, water pollution control, restoration of water ecology and enforcement of all laws and regulations. The River Chief System takes full advantage of China’s top-down administrative system and hierarchical system of the party and the state.

The Wuxi experiment was a remarkable success. Within only one year, the percentage of major rivers that met quality standards increased from 53.2% to 71.1%. In September 2012, encouraged by the success of the River Chief System, the entire Jiangsu province started to nominate senior-most officials of the party or the state as River Chiefs.

Impressed by the success, in 2016, China’s central government decreed that every lake and river, or segments thereof, must have a River Chief to keep the water bodies free of visible pollutants. By 2018, there were some

1.1 million River Chiefs. They are accountable “for life” for any serious pollution that may have happened during their watch.

On each stretch of a river or lake, notice boards have been erected at frequent intervals, with the name and mobile telephone number of the Chief. Any member of the public who may see a visible source of pollution, or note a foul smell of water, can call the River Chief with appropriate information or complaints. Promotions in their regular jobs take direct account of their performance as River Chiefs. In addition, surprise inspections are carried out to ensure that the River Chiefs are promptly addressing the information and complaints they are receiving from the public.

This is another example of the Chinese public getting involved directly in improving water quality.

1.3. Rain gardens

Another concept that has enhanced the public’s involvement and association with water is rain gardens. It also fulfils several other objectives. Among these are retaining stormwater which could reduce levels of local flooding, recharge of groundwater, filtering and reducing pollutants carried by urban runoff, and reducing ambient air temperature due to urban heat island effects of cities.

A very important function of rain gardens is to increase people’s interactions with water and also provide a venue for social interactions. Rain gardens harvest rainwater from the roofs of buildings nearby, as well as from nearby highways and pavements. They create a park-type of atmosphere, often with shallow ponds and clubhouses. During my latest visit to rain gardens in Suining City in Sichuan Province, I saw young children trying to catch tadpoles or aquatic insects in the shallow ponds under the watchful eyes of grandmothers, and elderly people drinking tea and playing mah-jong in the clubhouses. Thus, rain gardens have many purposes, including being an attractive place for the young and old to gather and pass time productively.

2. Concluding Remarks

China has developed its own processes and systems for its people to get involved in water management, especially during the post-2000 period. While the River Chief System has been highly effective in managing water quality, it should be noted that this is very effective for a top-down political system. River Chiefs may not be as effective in other countries, as it has been in China.

However, the concept of volunteers and rain gardens can be adopted effectively in other countries, with appropriate modifications for the local conditions.

Ethics, Economics, Ecology joined to each other. The case of water spring managed privately by Nestlé Waters in partnership with local farmers (Henniez - Switzerland)

Benoît Girardin, member of W4W

When the name “Henniez” – pronounced “eni:e” – is spelled out in Switzerland, rare are those people who have not heard of it and do not associate it with mineral water bottles sold in restaurants, bars and groceries, and this since 1900. For long decades the mineral water “Henniez” has been, and still is, a leader in the Swiss mineral water market with a 17% share. In 2006 it reached a production of 176 million liters, based on an average flow of 20-22 cubic meters per hour.

The seven underground sources, located on a hill, in part of the river Broye catchment area in Western Switzerland, one hour’s drive north-east from Geneva, were known and appreciated for their healing virtues and drinking quality, already by the Celts and later in the Roman era. Indeed, its present name hails from “Ennius”, a Roman landowner, settled nearby in 50BC. As of 1648, the site was transformed into a water cure centre, used for both bathing and mineral drinking water.

In 1905, a local family, the “Rouge” was able to purchase the seven sources, exploit them and build a bottling factory close by, the first one in the country. This family enterprise paid a lot of attention to the quality of the water and kept on monitoring it closely. With the intensification of agricultural activities in the neighbourhood, the owner increasingly checked any possible contamination of the sources and the deep water. Extensive agricultural exploitation that could result in some depletion of the resource was ruled out, thanks to forests that have expanded. Some additional 70’000 trees were planted in the eighties to protect and enhance the whole process of water filtration through sand and stone layers over a lengthy flow taking between seven and ten years. It is rich in hydrogen carbonates, nitrates, magnesium, calcium, and sodium.

The owner developed solid relationships with farmers cultivating the surrounding fields. In 1991 the domain, covering 120 hectares, was acknowledged as a natural reserve. In that protected area, the use of any pesticides, phytosanitary products and fertilizers is strictly prohibited. The neighbouring farmers were given a responsibility in the protection of, not only the sources themselves, but also of the natural resources all around.

The hill with the sources was sold to Nestlé Waters in 2008, and they launched in 2009 the so-called Eco-Broye Project, an innovative, sustainable and profitable water management project.

The Eco-Broye project

The Eco-Broye Project has been extended, beyond the initial area of 120 ha, to a larger part of the riparian strip of effluent stream, the river “Broye”. Its main objective is to keep the same approach and even expand and reinforce it.

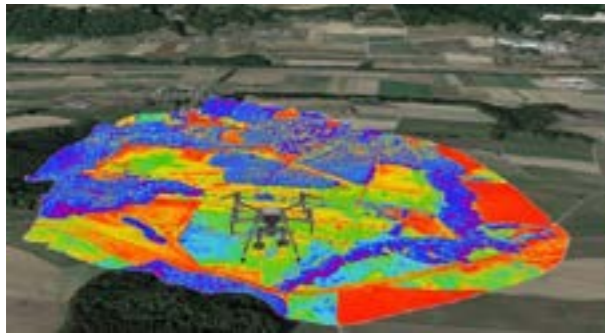
« The soil is at the heart of water protection ». These are the words of Francesco Davila Alotto, the officer in charge of water resources and environment at Nestlé Waters Suisse. Rainwater is seeping into the soil, through several layers of rocks and sediments. Through this process it becomes purified naturally and enriched in minerals.

After two years of talks and meetings, a cooperation scheme between Nestlé Waters and some 70 farmers, local authorities, the State government, as well as other important regional actors, has been conceived and shared.

Two perimeters have been set: a Close Perimeter covering 120 ha with 7 springs/sources, and a Large Perimeter covering 2’400 ha.

In the close perimeter, fields are cultivated by half a dozen farmers under contract with Nestlé. Crops are planted and collected, cows and sheep are reared. In that perimeter chemicals and manure spreading are strictly banned. The manure produced – 23’000 tons per year – is collected, then processed into biogas in a gas engine that produces electricity (6.8 gigawatts per year) for some 1’500 households as well for the Nestlé bottling factory. Heat produced, 8 gigawatts per year, is mainly used by the Nestlé factory. The electricity produced is CO₂ free, the equivalent of a yearly abatement of 3’000 tons of CO₂. Such an agricultural biogas unit is the largest one in Switzerland. It is owned and operated not by Nestlé but by E Greenwatt, a separate company. The remnants are then mixed with coffee grounds, extracted from used Nespresso capsules, in a nearby Nestlé factory. Such a mixture has a high potential as an organic fertilizer and is re-used by the local farmers. It is odourless. Humus is enriched, preserving water absorption and conservation.

A specific effort aims at reintroducing old cereals in the fields and replanting ancient fruit tree varieties that prove more resistant. Between the fields, hedges are planted, so that birds can nest there and eat insects. The enriched humus helps to improve the water absorption capacity of the soil and preserve it. The absence of manure in the



fields keeps away an important source of pollution. Pesticides are ruled out. The phasing down of intensive agriculture has entailed an extension of biotopes and upgrading of biodiversity. The agricultural production is less but better priced.

A fully biological filtration process of potable water is secured and checked. Water as a resource is protected against contamination, properly managed and secured. A small stream, initially flowing through underground pipes has resurfaced. Redesigned, it has recovered its full capacity as a biotope for fish, frogs and crabs that grow steadily, as well as to avoid flooding of downstream areas.

The overall purpose is to further natural processes to develop so that a series of "natural" indicators can help an upstream monitoring of the quality of water or, alternatively, send warning signals about potential threats. Biodiversity is turned into a kind of whistle-blower of water and soil quality.

A monitoring system has been defined by the stakeholders and is carried out jointly by farmers and Nestlé hydrogeologists. It can be considered as reciprocal, a kind of cross monitoring.

In economic terms, farmers might produce less but earn the same if not more, thanks to the higher price of organic products. On top of that, sustainability of the resources is secured and farmers appreciate working in a healthy environment.



Nestlé Waters' hydrogeologists and farmer check agricultural markers in a field visit

In the large perimeter, covering some 2'400 hectares and cultivated by some 25 farmers, the use of chemicals is not banned but strongly limited. The manure is collected and transported to the biogas plant. Some remnants are re-used in specific, very limited spots. Hedges have been reintroduced or upgraded. Corridors for animal migration have been developed. Free rotation of cultivated lands and exploited areas is respected. Biodiversity has improved considerably: flora and fauna are better protected. Bees produce more honey. Birds and worms flourish. Overall natural resources of the region have been boosted, to the benefit of a large population.

In both perimeters, farming techniques are absorbing CO₂. A nitrogen-free agriculture has proved possible. Soil acidification is lowered.

A solid contribution to CO₂ abatement is also provided through diverse processes: 70% of the water bottles are transported out of the plant to sellers by train. The temperature of another source's lukewarm water is used to deliver energy through heat pumps, the bottling is done thanks to green energy, the bottles are made mainly of recycled plastic.

Governance

Although Nestlé Waters Suisse is the owner of the close perimeter, the requirements of clean and rich water are monitored through a close cooperation with the Farmers' Committee. Advisory services, observations, joint monitoring are provided by the farmers who on their side get some technical support provided by a consultant firm, acting as an advisor.

Monitoring of conditions in the fields and water quality is implemented jointly by farmers themselves, Nestlé hydrogeologists and farmers' advisors. Nestlé hydrogeologists might include scientific considerations and call on international experience.

The final decision belongs to Nestlé Water, but a high degree of significant influence is exercised by the Farmers' Committee.

Local and State authorities are regularly consulted and ensure that compliance with public policies related to water, soil, soil erosion and environmental protection, in both the close and large perimeters is reached.

Within Nestlé Waters Europe, the Eco-Broye approach is considered as a successful front-runner, setting the standards for all water-related projects in Europe, potentially beyond the European area.

Ethical Frame of Reference

The priorities and goals of the whole process described relies on some key decisions taken and choices made that refer to ethics, implicitly or explicitly.

A key priority is indeed given by management to sustainability, overruling fast return on investment and valuing investments in a long-term perspective. Economical realism, costing of all the involved factors, not only financial expenses, is at the heart of the system. Natural resources are stewarded rather than exploited to the core. Economics and sustainability look like bedfellows. After a small stage of upfront funding, the system is rapidly reaching economical self-sustainment. One can draw a line between that dimension and the lengthy process of water filtration. The environmental footprint is taken seriously and CO₂ emissions lowered as much as possible.

The second priority is the respect endowed to nature, in particular the living beings, considered as worth being listened to and carefully stewarded. Biodiversity is being seen as not only a reflector or a witness, but an active contributor, a whistle blower and even, it is said, some kind of rights-holder.

Circular and local economy are seen in their potentials of reduction in losses, prompt reactivity as well as of risk management to the extent the actors' responsibilities are organised in partnership and boosted to monitor closely and signal any warnings from nature. A holistic and multi-stakeholders' approach comes first, that is, making purely technocratic solutions subservient, not an end in themselves. Recycling solutions, innovative ways are looked for. Scientific knowledge is put forward in its anticipatory and exploratory dimensions.

Eventually, the purpose of stakeholders' joint responsibility, accountability, effective partnership matters more than dependency and mechanical implementation of instructions. Trust rather than policing is fostered. Stakeholders' expertise, participation and accountability, flat hierarchy rather than top-down management are considered an edge. One could even say that stakeholders are turned into quasi-shareholders.

A kind of close cross-monitoring, based on reciprocal trust, is carried out and renders the whole process much more effective.

Through that polycentric and systemic partnership, the absence of one dominant player, the give and take balance and interplay, the multiple, although dissimilar partners share some solid form of equity.

Conclusion

Ethics sets the orientation that makes economics and natural sustainability not only compatible but also boosting, nurturing and reinforcing each other. Instead of fostering antagonism between economic and ecological sustainability and resulting in a zero-sum game between them, an ethical dimension, based on trust, equity, responsibility, partnerships, stewardship and respect for nature, sustainability, fosters their interdependence and reaches a virtuous cycle.

In such a way, ethics provides a reliable platform and inspires a decisive guidance in risk management and dilemma-handling as well.

Access to Water: Contribution of the Sustainable Development Goals (SDGs)

Laurence Boisson de Chazournes, Professor of international law and international organization at the University of Geneva. Director, Platform for International Water Law / Geneva Water Hub.

The 2030 Agenda for sustainable development, together with its 17 Sustainable Development Goals (SDGs), in many aspects reflects and reinforces existing international law¹. Moreover, some of the individual SDGs align closely with individual human rights. It is also important to recall that the 2030 Agenda was adopted by all UN Member States² and applies universally. Its implementation rests on acceptance rather than enforcement.

My focus will be on SDG 6, which deals with water and sanitation, while taking into account that water is a cross-sectoral issue. As a matter of fact, without access to water, a number of other SDGs cannot be fulfilled³. In particular, I will highlight the interfaces between SDG 6 and the human right to water (1), before addressing the role of the non-discrimination principle in access to water and sanitation (2) and the issue of accountability of the private sector (3).

1. The many interfaces between SDG 6 and the right to water and sanitation

There are several interfaces between SDG 6 and the right to water and sanitation. One can speak of a mutual feeding process which is benefitting both the fulfillment of SDG 6 and respect for the right to water and sanitation. I will highlight this mutual feeding process in four points.

SDG 6 did not come out of nowhere

A number of international binding and non-binding instruments have played a critical role in its shaping. These include human rights instruments, such as the Convention on the Rights of the Child (Article 24(2)) or the Convention on the Elimination of Discrimination against Women (Article 14(2)(h)). One should also mention the resolutions

¹ Kaltenborn, M., Kuhn, H., SDGs: Acceptance, not enforcement, April 6, 2017.

² Resolution A/RES/70/1 entitled "transforming our world: the 2030 Agenda for Sustainable Development", adopted by the United Nations General Assembly on September 25, 2015. The Resolution was unanimously adopted by the UNGA through raucous cheers and a standing ovation by representatives of the 193 UN member states. For further details, see: United Nations Population Fund, Historic new Global Goals unanimously adopted by United Nations, 25 September 2015, available at: <https://www.unfpa.org/news/historic-new-global-goals-unanimously-adopted-united-nations> (Accessed on May 24, 2021).

³ UN-Water, 2016: Water and Sanitation Interlinkages across the 2030 Agenda for Sustainable Development. Geneva, p. 16.

of the UN General Assembly⁴, of the UN Human Rights Council⁵ as well as general comments and reports of human rights bodies, especially the Committee on economic, social, and cultural rights⁶. This feeding process is reflected in the content of SDG 6, which reiterates the human right to water and sanitation. However, interestingly SDG 6 goes further by aiming for access to water in all settings, including schools, health-care facilities, work place and other institutional settings. In other words, SDG 6 does not only focus on households and domestic settings but pushes further the boundaries of the right to water and sanitation.

SDGs include a plural dimension

State and non-state actors are involved in fulfillment of the SDGs⁷. This means that actors not traditionally involved in the promotion and protection of human rights are involved in the implementation of the SDGs. This is done through a target-oriented approach to which all actors have committed in one way or another. Looking more particularly at the private sector, various techniques are resorted to, such as Corporate Water Stewardship promoted by the UN Water Compact⁸, as well as various types of public private partnerships. The SDGs offer an experimentation ground for committing the private sector towards the satisfaction of both SDG 6 and the human right to water and sanitation.

The SDGs' approach contributes to the development and hardening of international law in terms of effectiveness

While there are examples of disconnection between the rule of law and development activities, there are also examples which show that the SDGs can go hand in hand with the promotion of the rule of law, as is the case in the water context. The 17 objectives, the 169 targets and the 232 indicators embraced by the SDGs are result oriented,

⁴ United Nations General Assembly Resolution A/RES/64/292, 28 July 2010, §1.

⁵ Human Rights Council, Resolution 15/9 on Human rights and access to safe drinking water and sanitation, September 2010, A/HRC/RES/15/9, §3.

⁶ See in particular, Committee on Economic, Social and Cultural Rights, General Comment No. 15: The Right to Water (Arts. 11 and 12 of the Covenant), §2.

⁷ The Addis Ababa Action Agenda, note 94, §35.

⁸ Corporate Water Stewardship. Pacific Institute, available at: <https://pacinst.org/corporate-water-stewardship/> (Accessed on May 24, 2021).

with a specific focus on what is happening on the ground. If well conducted and implemented, they have a mobilization power for State and non-State actors that human rights can benefit from.

Follow-up and review mechanisms

Several follow-up and review mechanisms have been put in place for tracking progress in the implementation of SDG 6⁹. Briefly noted, it should be stressed that the follow-up and review processes are voluntary and country-led¹⁰. They rest on peer pressure and transparency.

The 2030 Agenda did not provide for a follow-up and review mechanism aiming at ensuring that other stakeholders, such as private actors, align their activities and policies with the SDGs. It is a process-based approach that has been put in place. Checks and balances and peer pressure need to find their place to adjust to this situation. In the context of the mutual feeding process I referred to earlier, one would hope that human rights bodies rely on the SDG reports when interacting with Member States. These interactions could strengthen the SDG process.

2. Non-discrimination and access to water and sanitation and SDG 6

In contrast to the Millennium Development Goals, the SDGs have a much stronger focus on inequalities. Goal 10 is dedicated to “reducing inequalities between and within countries”¹¹. The 2030 Agenda further commits Member States to “leave no one behind”¹² and states that SDG indicators should be disaggregated, where relevant, by income, sex, age, race, ethnicity, migratory status, disability, and geographic location¹³. In the area of water, these features are crucial for ensuring access to water and sanitation for everybody.

The Millennium Development Goals’ target aimed to halve the proportion of the population without access to drinking water and sanitation services by focusing on aggregate coverage. On the contrary, the global indicators for SDG targets 6.1 and 6.2 play a key role in the elimination of discrimination and inequalities in access to water and sanitation, by revealing and tracking inequalities through the use of data disaggregated by income, sex, age, race, ethnicity, migration status, disability, and geographic location in national contexts.

This means that significant inequalities in water and sanitation services should be overcome at the international level, but also within individual countries, in urban and

rural areas, and in the various subnational regions. Marginalized communities and disadvantaged groups such as women, children, or poor people should be a focus of attention, taking into account that they are more susceptible to the impacts of pollution and water-related disasters¹⁴.

Race, ethnicity, and religion are also grounds of discrimination in access to water and sanitation, as illustrated in the case-law of human rights bodies¹⁵. In some countries, indigenous peoples, pastoralists and/or nomadic communities lack access to safe water and sanitation in disproportionate numbers.

Disaggregation of data is important in that it reveals the different discriminations that may exist. However, disaggregated data alone does not automatically result in reduction of inequalities. Governments and other stakeholders need to take measures to tackle the inequalities that are revealed¹⁶. This is where non-discrimination as understood in human rights terms can help, not least by highlighting the need for proactive initiatives that address and combat inequalities.

3. SDG 6 and the accountability of the private sector

The role of both public and private actors is crucial when it comes to mobilizing financial resources. Indeed, while sustainable service delivery for water and sanitation relies primarily on domestic public resources and international development aid, private investments are critical to achieving universal access to safe and affordable drinking water, sanitation, and hygiene by 2030, as public resources, be they domestic or international, do not suffice. National governments and international financial institutions have been called upon by the UNGA to improve the efficiency of existing financial resources, while increasing innovative sources of financing¹⁷. There is a need for commitments from economic actors. They can do so as independent power producers or through partnerships.

The idea of encouraging commitments to abide by principles or initiatives is important as it helps to advance accountability. Codes of conduct and other normative instruments, such as the UN Guiding Principles on Business and Human Rights¹⁸, go in the same direction.

Two initiatives related to private companies and water go-

14 UN-Water (2018), *Nature-Based Solutions for Water*, p. 60.

15 Laurence Boisson de Chazourmes, *Fresh Water in International Law*, Second edition, Oxford, OUP, 2021, pp. 195-199.

16 UN-Water, *Eliminating discrimination and inequalities in access to water and sanitation*, p. 31-32.

17 Resolution A/RES/70/1, p. 27.

18 Guiding Principles on Business and Human Rights: Implementing the United Nations “Protect, Respect and Remedy” Framework. United Nations Human Rights, Office of the High Commissioner, New York and Geneva, 2011.

vernance have been developed by the UN Global Compact. First, one should mention the CEO Water Mandate, a public-private initiative launched in 2007 that mobilizes business leaders on water, sanitation, and the SDGs¹⁹. In particular, it gathers a number of business leaders to address global water challenges through corporate water stewardship. Upon signing the Mandate, companies of all industries and locations make a public commitment across six commitment areas and report annually on progress²⁰. These include: direct operations, supply chain and watershed management, collective action, public policy, community engagement, and transparency.

Second, the CEO Water Mandate developed and published in 2010 the Guide to Responsible Business Engagement with Water Policy²¹. This Guide aims to make a compelling case for responsible water policy engagement and to support it with insights, strategies, and tactics needed to do so effectively²². The Guide is centered on five aspirational principles that underpin responsible engagement. First, responsible corporate engagement in water policy must be motivated by a genuine interest in furthering efficient, equitable, and ecologically sustainable water management²³. Second, responsible corporate engagement in water policy means ensuring that activities do not infringe upon, but rather support, the government’s mandate and responsibilities to develop and implement water policy²⁴. Third, responsible engagement in water policy promotes inclusiveness and meaningful partnerships across a wide range of interests²⁵. Fourth, responsible engagement in water policy proceeds in a coherent manner that recognizes the interconnectedness between water and many other policy arenas²⁶. Fifth, companies engaged in responsible water policy are fully transparent and accountable for their role in a way that ensures alignment with sustainable water management and promotes trust among stakeholders²⁷.

These initiatives are based on commitments. However, a question remains as to the effects deriving from these commitments. Building on commitments through programs and activities is a way to take private operators at their word and to build effectiveness. A dialogue can then be engaged and accountability helps assess these commitments.

19 See: <https://ceowatermandate.org/about/what-is-the-mandate/> (Accessed on May 24, 2021).

20 Overview: 2018-2020 Action Platform Water Security through Stewardship. CEO Water Mandate, p. 1.

21 The CEO Water Mandate, *Guide to Responsible Business Engagement with Water Policy*, November 2010.

22 Ibid., p. 12.

23 Ibid., p. 36.

24 Ibid., 37.

25 Ibid.

26 Ibid., p. 38.

27 Ibid.

Due to the inadequacies in, and the poor record of implementation of, SDG 6, a new framework was put in place to speed up progress on water and sanitation²⁸. It is hoped that it will help achieve SDG 6 by 2030 and ensure sound implementation of the right to water and sanitation.

28 The SDG 6 Global Acceleration Framework: <https://www.unwater.org/publications/the-sdg-6-global-acceleration-framework/> (Accessed on May 24, 2021).

9 Resolution A/RES/70/1, Declaration, §47

10 Ibid., §74.

11 Resolution A/RES/70/1.

12 Ibid., Declaration, §4.

13 Ibid., Declaration., §74 (g).

Q & A and Debate Among Speakers

Transcribed by Gary Vachicouras, member of W4W

Benoît Girardin: I would like to introduce the second part of the program. I propose that we have a short round of speakers' questions alone. Then we'll open the floor to the participants.

Laurence Boisson de Chazournes: It's a question to Benoit Girardin and Asit K. Biswas about public participation, because I'm a great fan of public participation. My concern is that public participation goes with access to information and that you can't have meaningful public participation without a sound access to information. In this context, I'd like to understand the type of information needed to ensure that you have effective public participation which would lead to the results that you presented.

Benoît Girardin: The farmers' community meets regularly with the Nestlé/EcoBroye management, and, at that level, the exchange of information is substantial, specific and runs both ways in the interest of all parties. Local public authorities are kept informed regularly and may report to the local community's assembly every quarter, upon request. State authorities monitor compliance with environmental and health standards. If I may be allowed to make a joke: whereas, in the case of water, filtration is a top requirement, in the case of information, filtration will be limited to a minimum.

Asit K. Biswas: I begin by answering the first question asked by Laurence Boisson de Chazournes. You're right that for the public to participate, they need information. But I'll go a little further. Not only should they have the information, but they should also understand what that information means. And this is one of the major problems we're facing now. There's too much information overload, information available from many sources. But the average person does not know what is correct, what is fake and what is dogma. This is one of the biggest challenges of public participation. I also have a fundamental question about the way public participation is now carried out in the West. When I was the Director of Environment Canada in 1974, it was the first time in the 1970s that we started public participation in water management, in which Canada was the pioneer at that time. But the question we still have not answered is very simple: is this public participation an end in itself, or is it a means to an end? In this case the end would be better water management. After some 60 years of work, I have concluded, rightly or wrongly, that if it is an end in itself, I have no problem. We can continue what we're doing. But if it is a means to an end, that is, the end is better management of water, then the jury's

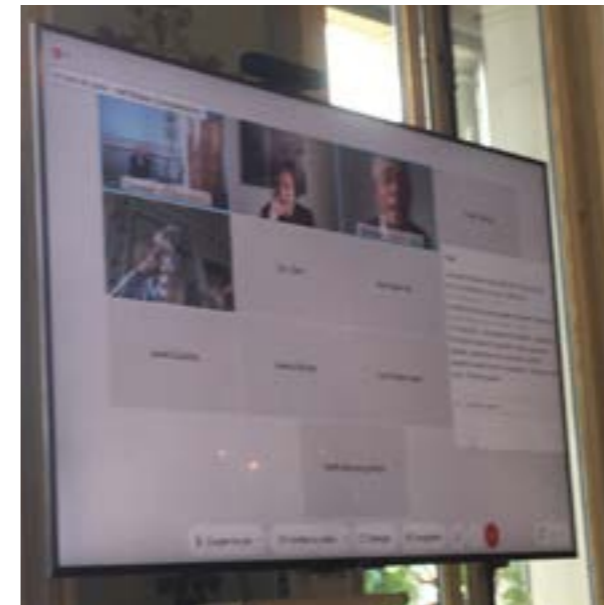
still out. We have very few instances where we can prove that public participation has improved water management practices. In fact, the OECD study indicates that it cannot be proved that public participation automatically improves practice.

The other problem we find with public participation is that when you participate with the public they are worried about everyday life. They give you their views on how their day-to-day life is affected. So macro policies are often not very useful. In fact, after all the public participation we used to develop the annual Bangladesh National Water Management Plan, our conclusion was that none of it could be used, because it is at the micro level, and we cannot use it for macro planning. So we have to decide for what purposes we are using public participation. That is one of the fundamental questions regarding some fundamental issues that I have with public participation.

Regarding the second remark made by Benoit Girardin, it is true that there is too much information to filter, reformat and reinterpret. On the one hand, there is too much information; we don't know what is right and what is wrong. The other is how to filter the information as it goes up the chain. Singapore has a very simple process: you might be interested to learn about the filtering of information. When a customer or any Singaporean citizen complains about some problem with the PUB Nnestational Water Agency, it is automatically recorded in PUB's computer system. And if within 24 hours, the person goes directly to the personal computer of PUB's chief executive, he or she will know that officer X has not answered the question. It is a way of filtering, because sometimes these problems are difficult to answer. So the person who was supposed to answer the question must do so within 24 hours, if not at least to say what that person can do to solve the problem and how much time it would take. If they don't, then it goes straight to the boss and the person responsible has to tell the boss why their job was not done properly. So that is one way of filtering information to the highest level. Thank you.

Laurence Boisson de Chazournes: The project that you presented strengthens accountability. And I'd like to know what you mean by accountability. Whom do you address regarding that accountability. Then I would like to understand who can somehow challenge this accountability, and how it should be done.

Asit K. Biswas: I said not only who is accountable, but who decides whether the solution or answer provided by



the person accountable is actually accurate and not just a public relations exercise.

Benoît Girardin: I thank you very much for the two questions. They do, in a sense, point out some weaknesses in my presentation. I should have taken part in a joint meeting of Nestlé/EcoBroye, Egreen and the farmers with their consultant. I have met a smaller group in which all parties were represented. Accountability starts with reporting to each other. So, when the farmers report to Nestlé that they see a problem related to the quality of cereals, of fruit trees, of the honey produced by the bee, as well as the information provided by other makers, or if Nestlé notices problems related to the quality of the water, both sides will report it immediately to the partner and lay the problem on the table. This is, in a sense, the first accountability. It is reciprocal reporting, based on shared interests that require a quick flow of information and reciprocal accountability. As far as the local communities and authorities are concerned, a different kind of accountability is required and working. The local authorities own and manage a system of water collection and distribution, and the treatment of used water. The ground water that supplies the communal sources as well the Nestlé sources might interact. They have a definite interest in reporting to each other quickly on problematic developments. Eventually, there is a kind of global accountability about compliance to requirements set by the federal state about potable water quality. Departing from quality, environmental and public health standards, while not reported, might entail major damages, in particular regarding the Nestlé's image.

Asit K. Biswas: I enjoyed your presentation, Benoit Girardin, very much. And I agree with pretty much everything you said. One of the things I'm finding out is that in the Western world, the quality of water is not a problem. But people do not drink water. Even in your university

when I went there to give a talk, I found a bottle of water provided to me and I asked, "Why do you not provide me with tap water?". Because whenever I go to Geneva and I'm a visitor frequently, I never use bottled water. Because the water is quite safe and good to drink. But one of the problems we are now finding out not only in Switzerland or Germany, is that in countries like Japan, people are not drinking tap water. In Singapore, the water is extremely safe. But 80% of the people in households still boil water before they drink it. In Hong Kong, 99 percent of the water is safe to drink. Therefore, one of the things we're now finding out, that is, that it is not enough to provide good quality water. How do we change the perceptions and attitudes of the folks that want to be sure it's safe to drink? You don't have to spend an enormous amount of money to buy bottled water either. And it seems to me that this has become a bigger problem in the Western world. Over the past 30 years, I see a steady decline in trust about the quality of water. In the early 1970s you could go to any US company or public office to find a water fountain. Now you get a big jar of water from which you get bottled water, or a bottle of water is provided to you. One of the things we have to start thinking is why the people's attitude in the West has changed and is still changing. The water quality there is quite good.

Benoît Girardin: I have a question to Laurence Boisson de Chazournes : regarding your references to states and the international community. My question about water management is in reference to townships, towns and local levels. To what extent or what is your experience of how these local levels can comply with SDG or align with SDG goals?

Laurence Boisson de Chazournes: Thank you for your question. I think that Professor Biswas has put his fingers on a problem found frequently in the Western world. And I would say that in Geneva, the quality of water is very high, and that we have much information about its quality. I find it very disturbing that people are still using bottled water.

Now, I have a point of disagreement about access to water in terms of quantity. I'm not sure everybody in Europe has access to water.

With respect to the other question, the SDGs are in fact for everybody. I think what is interesting is that it's a process of empowerment. It's a process where everybody should be on board for promoting access to water. And I think what is interesting about the SDG's approach is that it has created a space for exchange about good practices. And I think that is something of value that you should also stress very much.

Benoît Girardin thanks Laurence Boisson de Chazournes. I open now the floor to the webinar participants who could write their questions in the chat box.



Dilemma between face-to-face and video conferencing

Dac Vo Van asks about the presentation of Asit K. Biswas which is about Switzerland and Singapore, two small, rich countries. What would be your experience of providing water to the people of poor and larger underdeveloped countries in terms of water awareness and property management?

Asit K. Biswas: I respond that I would like to submit the idea that, if you look at good cases, even excellent cases of water supply 24/7 with clean water, you may wish to go all the way to Cambodia, which is not in virtually anyone's radar. The Phnom Penh water supply authority, the performance indicators of a non-water supply authority now is better than those of London, Paris or Los Angeles. And so when people say that developing countries have problems finding water because of finance, my response is that it's an excuse. If Phnom Penh, which has very little expertise, in a highly corrupt country, with a corruption perception index, one of the highest in the world, can provide 24/7 clean water, I say, it's my thesis, it's a question of management. All countries can provide water, but they must also have good management. So we don't have to go to rich countries like Switzerland or Singapore to find out. My suggestion is to go to Phnom Penh; one can learn a few things from Phnom Penh.

Benoit Girardin: I read a question from Bolivia, related to the financing for water. To what extent is it possible to have or reach a balanced and effective mix between subsidies from the government and the payment by consumers? And how would it look like?

Asit K. Biswas: I respond in saying that here, again, we have to go for one of the things Professor Laurence Boisson de Chazournes pointed out, we should look from experiences from different parts of the world and SDG give us a platform to do that.

Now, when you go to subsidy, the question is who pays for the subsidy? Is it the water authority that should pay the subsidy as it is the case in most parts of the world? Or is it the central government's job to pay for the subsidy, because poor people not only need water, they need healthcare, education, all types of services, electricity etc.? So as far as Singapore is concerned, what this means is if the family is considered to be poor, and cannot afford to pay for water or electricity, they receive a voucher. The voucher is issued by the Ministry of Social Security. And that voucher is for a certain amount depending on your financial situation. You can apply it to electricity bill or water. And that voucher is paid by the Social Security Ministry. The poor get a very targeted subsidy. And when I went to the slum

in Phnom Penh, I was surprised to find that people did not know the name of the prime minister. But they knew the name of the director general of the Phnom Penh water supply authority. He is the only person in Cambodia that helped them. So, by providing clean water even 24/7, this gentleman has become almost a cult figure among the poor also. This is a remarkable example of what he has done.

You are right Laurence Boisson de Chazournes that there are people in the rich countries who do not have access to water. Two million people do not have access to either water or even indoor plumbing, and are marginalized not only in the water area, but in education and everything else. So we have a problem. If you look at the UN and everybody else, they all talk about SDG, as though it's only for developing countries. The Secretary General's report currently pointed out only talks about developing countries and how they are failing to meet SDGs. There is not a single country in the Western world that has been noted in the report.

Christian Häberli: I am from the World Trade Institute. I have a question for Benoit Girardin. Back in 1975, when I wrote my PhD on Foreign Investment Law in Ghana, Nestlé was producing much demanded condensed milk in tin cans, with 100% imports of all commodities used. Visiting again thirty years later, Nestlé obtained maize and milk from well-trained and quality-minded contract farmers for the same product, still exported across West Africa. A similar, much bigger story is shown for Pakistan on Nestlé Websites. Some NGOs had and have other stories, criticizing Nestlé for "water grab" (in Brazil), "sea slaves" (undocumented seamen supplying shrimps to sweatshops in Thailand employing school age girls – "child labour") and "forced labour" (on cocoa farms and palm oil plantations in West Africa). Is there a corporate governance issue? Where is the regulator problem? Monitoring authority? Retailer action? All very complex issues, way beyond water ethics and justice, or a Swiss showcase!

Girardin Benoit: I tried, in a diplomatic way, to raise the issue with people when visiting them. And I understood from the engineer responsible for all of Europe that Nestlé has gradually changed, probably, let's say from the times they have been criticized heavily by NGOs. I have the impression that Nestlé has listened to those critiques and changed dramatically its own approach. The statements made in that respect by former Nestlé general director, Peter Brabeck-Letmathe, display clearly the change of orientation and behavior of the company. Respect is due to local communities, and agreements related to water sharing must be negotiated with them. They are also listening today. The EcoBroye project will be considered as the model that Nestlé Waters will implement in all its European sites, probably later in other regions as well. Nestlé has been awarded by the Dow Jones Sustainabi-

lity Index, a big award for its environmental approach in 2015, focusing on water stewardship and environmental sustainability. Can it be seen as a milestone on a new track? Some evidence is expected in a few years.

Evelyne Fiechter-Widemann: Thank you for all contributions to this 6th colloquium, from the speakers' side as well as from the participants' side.

Our 5th colloquium and this one have focused on African and Asian practical examples, all showing challenges and success stories which have shown ethics at work. The debate today has broadened our views: in Europe too, "no one should be left behind" as far as access to water is concerned. As the road towards this goal (giving an ethical base to the UN Agenda 30's as we have learnt today) seems still to be very long, let's continue to feel concerned by this vital challenge: "access to water for all".

I already invite you to the next year's 7th webinar.





E. Fiechter-Widemann, Benoît Girardin, physical and web participants of the 2021 webinar