

...implementar u...  
...de una cultura del encuentro en tot...  
...derechos universales. La ciencia, la cultura, la...  
...contribuir al logro de sociedades más justas, so...  
...comprometidas con el cuidado de la casa común.

Francisco

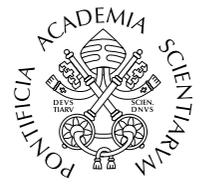
PONENCIAS

SEMINARIO DERECHO HUMANO AL AGUA

# PONENCIAS

## SEMINARIO DERECHO HUMANO AL AGUA

23 al 24 de febrero de 2017  
Casina Pio IV | Ciudad del Vaticano



# PONENCIAS

SEMINARIO

# DERECHO HUMANO AL AGUA

APORTES Y PERSPECTIVAS INTERDISCIPLINARIAS SOBRE  
LA CENTRALIDAD DE LAS POLÍTICAS PÚBLICAS EN LA  
GESTIÓN DE LOS SERVICIOS DE AGUA Y SANEAMIENTO

23 y 24 de febrero de 2017

Casina Pio IV | Ciudad del Vaticano



CÁTEDRA DEL DIÁLOGO Y  
LA CULTURA  
DEL  
ENCUENTRO





“En realidad, el acceso al agua potable y segura es un derecho humano básico, fundamental y universal, porque determina la sobrevivencia de las personas, y, por lo tanto, es condición para el ejercicio de los demás derechos humanos.”

*(Laudato Si', 30)*

## EJE 2

# LA CENTRALIDAD DE LAS POLÍTICAS PÚBLICAS EN LA CONSTRUCCIÓN DEL BIEN COMÚN



## **Panel 5**

# **GOBERNABILIDAD E INNOVACIÓN EN LA GESTIÓN PÚBLICA EN LOS SERVICIOS DE AGUA Y SANEAMIENTO**

# WATER AS A HUMAN RIGHT: RHETORIC AND REALITY

ASIT BISWAS<sup>64</sup> AND CECILIA TORTAJADA<sup>65</sup>

*"To deny people their human rights is to challenge their very humanity."*

*Nelson Mandela*

## ABSTRACT

On 23-24 February, the Pontifical Academy of the Vatican is putting together some of the world's leading water experts from different religions, theologians and development specialists to discuss water as a human right. Pope Francis himself will participate in this discussion.

In 2015, the Pontiff issued a landmark encyclical on the environment, *Laudato Si'*. This substantive document is addressed to "every person living on this planet with the expectation of entering into dialogue about our common home."

In this historic document, the Pontiff asserts "access to safe drinkable water is a basic and universal human right, since it is essential to human survival and, as such, is a condition for the exercise of other human rights." He also noted freshwater is "indispensable" for "supporting terrestrial and aquatic ecosystems." Further, "Caring for ecosystems demands farsightedness, since no one looking for quick and easy profit is truly interested in their preservation. But the cost of the damage by such selfish lack of concern is much greater than economic benefits to be obtained ..."

This is a fresh and welcome view that contrasts with the obfuscations of the international organizations during the last four decades. In 1977, all the UN agencies, including WHO, UNICEF and UNEP, as well as multilateral development banks like the World Bank and Asian Development Bank, coined a term, "improved sources of water". The main problem with this term is that it has absolutely no relation to the quality of water. In addition, international organizations have used the three terms, "improved sources", "clean", and "safe" water, interchangeable consistently.

As a result, the world now believes improved sources of water mean safe water. Even Ban Ki

64 One of the world's leading authorities on water and environment. He is Co-founder of the Third World Centre for Water Management, Mexico, and is currently Distinguished Professor at Lee Kuan Yew School of Public Policy, Singapore. He was member of the World Commission on Water, and a founder of International Water Resources Association and World Water Council. He has been senior advisor to 19 governments and six Heads of United Nations Agencies; Past President of International Water Resources Association; advisor to CEOs of major MNCs on strategic issues. Among his prizes are Crystal Drop and Millennium Awards of International Water Resources Association; Walter Huber Prize; Honorary Degree of Doctor of Technology from University of Lund, Sweden; Honorary Degrees of Doctor of Science from University of Strathclyde, Glasgow; Helsinki University of Technology; Indian Institute of Technology, Kharagpur; Indian Institute of Technology, Bhubaneswar. He received the Stockholm Water Prize, and Reuters selected him as top 10 water trailblazers of the world. In 2015 he was named world's second most influential water industry leaders. He is author of 83 books and over 650 scientific and technical papers. His work has been translated into 37 languages. the Distinguished Visiting Professor at Lee Kuan Yew School of Public Policy, National University of Singapore.

65 Senior Research Fellow. Institute of Water Policy, Lee Kuan Yew School of Public Policy. National University of Singapore.

Moon has often used “improved sources”, “clean”, and “safe” water in the same statements interchangeably.

Additionally, the world accepts that “only” 663 million people do not have access to safe water, as claimed by WHO and UNICEF. The reality, however, is very different. At the very least, some 3.5 billion people in the world do not have access to water that is safe to drink, a figure that is more than 5 times higher than what is believed to be the case today.

Take South Asia, with a population of nearly 1.7 billion people. There is *not* a single city, town or village where people have access to safe water. Thus, unfortunately, the claim that the safe water Millennium Development Goal was achieved five years before the target deadline is meaningless.

Further, over the past 20 years, the world has witnessed two very unusual situations in developed and developing countries in terms of urban water supply. In developed countries, where water is safe to drink, people have steadily lost trust in the quality of water they receive. From the west European countries to the United States and Japan, increasingly more people are not drinking water from the tap. The use of bottled water has skyrocketed, even though it costs about 1,000 times more than tap water and both are safe to drink. More and more people are also using expensive point of use treatment systems to process tap water, which is safe to start with.

In cities like Singapore and Hong Kong, some 70-85% of the households boil tap water before drinking even though tap water is safe to drink.

In cities of the developing countries, quality of water supplied has deteriorated steadily. In cities like Delhi, some 20 years ago, households used to have simple point of use treatment systems like filters. Now they have moved into a more complex and expensive system like reverse osmosis which was developed for sea water desalination. A problem with domestic reverse osmosis system is that nearly 70-80% of water treated is wasted. It is thus not a good solution.

The Pontiff’s focus on “safe” water is a most welcome development. Let us hope this will result in the international organizations going back to the fundamental requirement, that is, provision of safe water to all. This will indicate that the number of people that do not have access to safe has been underestimated by a factor of at least five.

Another issue that has been much discussed is that when water is accepted as a human right, it must be provided free or at highly subsidized rates by the government. Surprisingly, food and health have been accepted as human rights decades before water. Yet, no one argues that food and medical services should be provided free to everyone or should be highly subsidized. Why is then many politicians or NGOs argue that water provisioning should be free?

This is probably because we human beings have a special emotional attachment to water that is not the case with other resources. Thus, there has to be a real debate not only on what are the rights of consumers when we accept water is a human right, but also the related responsibilities. Experience shows free water leads to very inefficient uses of water including increased wastage. Water should be priced properly so that there would be a sustainable financial model for proper operation, maintenance, updating and construction of new facilities for water and wastewater treatment systems. Hundreds of billion dollars will be necessary if every person in the world is to have access to safe water and proper wastewater treatment within the next 2-3 decades.

Concurrently, poor families should receive targeted subsidies so that they have access to reliable water supply and wastewater treatment services. The subsidies could start, for

example, when the water bill of a household exceeds 2% of their income.

The eminent poet W. H. Auden said: "Thousands have lived without love, but no one without water." We earnestly hope that the Pontiff's interventions will go a long way to facilitate that everyone in the world has access to safe water and sweep away once for all the various myths, misinformation and misunderstandings of the last forty years in this area.

## INTRODUCTION

Since the early 1970s, the International Labour Office (ILO) has been working on a basic human needs approach. In 1977, it published a report entitled *Employment, Growth and Basic Needs: A One World Problem* (ILO, 1977) that identified five basic human needs: food and water, clothing, housing, education and public transportation. One can of course argue whether these are the most important basic human needs or there could be others which are as, or more, important than these five needs. The report also noted that the basic requirement for life is food and water.

The work of ILO focused global attention on the basic needs approach. This was discussed not only within ILO but also in most other UN institutions as well as the development banks.

When all the resolutions and declarations that have been adopted by the United Nations since 1970 are analyzed, it becomes evident that these have regularly vacillated between declaring water as a basic human need and as a human right. In fact, these two terms have often been used interchangeably in the various UN declarations and resolutions, without any clear understanding of either the two concepts, or their implementation requirements. The general approach during the 1970s and 1980s was basically inconsistent.

## WATER AS A HUMAN RIGHT

In November 2002, the Committee on Economic, Social and Cultural Rights, established by the United Nations to oversee the implementation of the Covenant on Economic, Social and Cultural Rights, presented General Comment No. 15 during its 29th Session in Geneva. This document reinterpreted Articles 11 and 12 of the Covenant, and concluded that under this instrument water can be considered a human right. Under Article 11, the General Comment noted:

The adequacy to water should not be treated narrowly, by mere reference to volumetric quantities and technologies. Water should be treated as a social and cultural good and not primarily as an economic good. The manner of the realization of the right to water must also be sustainable, ensuring that the right can be realized by present and future generations.

In retrospect, the discussions on water as a human right were kept alive during 2002-2010 period primarily by human rights professionals (in contrast to water professionals) and activist NGOs who opposed water pricing and the private sector involvement in the water sector.

James Wolfensohn, a former President of the World Bank, noted in 2005, that to some governments that constituted the Bank's shareholders, "the very mention of the words human rights is inflammatory language." The problem was also complex because the word "rights" often had different meanings to different constituencies. Furthermore, understanding and interpreting of rights varied widely between different interest groups.

Discussions on water as a human right have focused almost exclusively on domestic water use, which accounts for only about 10% of total global water use. Other types of water uses like for agriculture, energy production and generation, industry and nature have been mostly missing from this debate.

Any objective analysis will indicate that the possibility of a treaty-based approach to establish water as a human right is, for all practical purposes, near zero, during the post-2000 period. Thus, to give the concept legitimacy, in 2010, during the 64th General Assembly of the United Nations, Bolivia introduced a resolution that would recognize human right to water and sanitation.

A review of the voting for the resolution will indicate the complexity and acceptability of the issue: 122 countries voted in favour, none against, 41 countries abstained, and 29 countries were absent. Among the important countries that abstained were Australia, Austria, Canada, Denmark, Israel, Japan, Netherlands, Korea, Sweden, Turkey, United Kingdom and United States.

It is worth noting that nearly all the countries that abstained felt obliged to explain why they had done so. Each country confirmed that they strongly support the idea that every human being should have access to clean water and sanitation. Most pointed out what they were doing to achieve this goal.

For example, the United States said safe and accessible water supplies furthered the realization of some other human rights. However, the resolution described the right to water and sanitation in a way not reflected in existing international law since there is no right to water and sanitation in an international legal sense.

Australia pointed out that when new human rights are recognized, consensus is essential. This, regrettably, was not the case for the resolution.

The United Kingdom abstained because of both substantial and procedural grounds. It argued that there was no legal basis for declaring or recognizing water or sanitation as a freestanding human right, nor was there evidence that they existed in customary law.

Other countries put forward similar reasons for abstaining.

Given the current geopolitical landscape, acceptance of water and sanitation as a freestanding treaty-based human right is not possible in the foreseeable future. Furthermore, General Assembly resolutions are simply advisory in nature and not binding as those by the UN Security Council. Even Security Council resolutions are often flouted by many countries because of a lack of credible enforcement mechanisms.

The fact that not a single country opposed the General Assembly resolution indicates that every country agrees that access to clean water and sanitation are desirable goals. Equally, 70 countries that did not support by abstaining, or by not being present, meant that there was no consensus on this new right that was derived from another human right covenant. The absence of consensus was specifically stressed by countries like Australia, Canada, France, Norway, United Kingdom and United States as one of the main reasons for abstaining.

Countries that voted for the resolution also expressed some reservations. Colombia pointed out that the resolution established "an unsuitable precedent" in human right matters. It noted that its Constitutional Court had noted that protecting the right to drinking water was not appropriate in situations where human life was not threatened. States were obliged only to ensure delivery of public services.

Singapore, another country that voted in favour, said that discussions on the right to access to clean water and adequate sanitation should continue. However, the scope and obligations of the nation states needs to be clarified.

Argentina, which also supported the resolution, explained that the main human rights treaties were pillars of the country's legal order. The relevance of access to clean drinking water had been recognized by many of its legal instruments. However, it is the main responsibility of the states to ensure its citizens had access to safe drinking water and sanitation.

An objective analysis of the General Assembly debate indicates that every country supported the view that all human being should have access to safe water and good wastewater collection and treatment. Thus, the main issue hinges around not whether access to clean water is desirable but rather how to achieve this goal.

An important concern for some of the abstaining countries was that they were not sure what are likely to be the legal implications if they accepted this new right. Some countries were concerned that they may be sued by their citizens for compensations since they may not be able to meet the obligations for decades. Others were concerned that adopting this right may require them provide clean water and proper wastewater treatments free or at highly subsidized rates which they cannot afford. Many countries are unlikely to subscribe to this concept until their responsibilities and accountabilities are clarified, as well as of the population (Biswas, 2007).

It is also important to note the distinction between two types of human rights: civil and political rights and economic, social and cultural rights. The implementation requirements for these two types of rights are very different. Civil and political rights can be endowed upon individuals by ensuring that the governments do not interfere with them. These rights generally do not require appreciable budget to be granted, or need major institutional realignments to be properly enjoyed. They are comparatively easy and economic to implement, given the necessary political will.

In contrast, economic, social and cultural rights, including access to clean water and proper sanitation, require active interventions and appropriate machineries at all levels of governments. This means the formulation of national, regional and/or municipal policies, and then ensuring that functional institutions exist so that these rights could be enforced. Appropriate budgets would have to be made available in a timely manner and in perpetuity to the institutions responsible for implementing these rights.

Thus, implementation of an economic, social and cultural right like access to clean water and sanitation will require very substantial financial resources in perpetuity as well as adequate technical, managerial and administrative capacities and continued strong political support. Since water supply and sanitation are municipal responsibilities, it will require direct support and involvement of all levels of governments. This is seldom easy. For this enabling environment to develop in any country, it will be necessary for the citizens to demand this right continuously and vociferously. Equally they must be willing to pay the costs of the necessary services directly to the utilities and/or indirectly through taxes. Unless this enabling environment is assured, progress is likely to be slow to ensure universal access to safe drinking water.

## CHALLENGES TO IMPLEMENT SAFE DRINKING WATER AS HUMAN RIGHT

For ensuring every person has access to safe drinking water and proper sanitation, there are many important myths and challenges that have must be addressed. Only the major challenges will be discussed herein.

## What is safe water and proper sanitation?

It is essential to agree on what is meant by “safe” water and “proper” sanitation. It will be necessary to decide how much water is needed by each person to lead a healthy life, both in terms of quality and quantity. Thereafter, it will be necessary to consider financial requirements and presence of functional institutions with necessary managerial, technical and administrative capacities.

An important issue in this context is what is meant by “safe” water and “proper” sanitation. Sadly, an honest and objective discussion of such a fundamental issue has been conspicuous by its absence over the past four decades. A brief historical background is necessary to understand how we have arrived at the present unsatisfactory situation.

Even though access to clean water and proper sanitation was known to be important development issues, surprisingly this concern was not reflected in the national and international political agenda till about the mid-1970s. This was first discussed seriously during the United Nations Conference on Human Settlements, in Vancouver, in 1976. The Conference was concerned with the fact that in developing countries “nearly two-thirds of the population do not have reasonable access to safe and an ample water supply.” It recommended “urgent” actions in terms of:

- “programmes with realistic standards for quality and quantity to provide water for urban areas;”
- “reduce inequities in service and access to water;”
- “promote efficient use and reuse of water;” and
- “take measures to protect water supply sources from pollution.”

The Vancouver Declaration on Human Settlements considered water to be a basic human need. The concept of water as a human right was not noted (Biswas, 2007).

The Vancouver recommendation on water was picked up by the United Nations Water Conference, in Mar del Plata, Argentina, in 1977. Discussions during this Conference vacillated between water as a basic need and as a human right. In Resolution 1, it said:

All people ... .. have the right to have access to drinking water in quantities and of a quality equal to their basic needs. (Biswas, 1978)

It then went on to recommend that “the decade 1980-1990 should be designated the international drinking water supply and sanitation decade.” It suggested that the countries should “establish standards of quality and quantity that are consistent with the public health, economic and social policies of Governments,” and also, importantly, “that those standards are observed.”

Like the 2010 resolution on water as a human right, the Vancouver and the Mar del Plata Action Plans were approved by the UN General Assembly. However, unlike the water as a human right these two were approved with significantly fewer countries abstaining or not being present.

It should be emphasized that in all the discussions leading to and during the UN Water Conference the requirements for drinking water was clear: it must be safe to drink without any potential adverse health impacts and easily accessible.

Regrettably, following the Mar del Plata Water Conference, the UN devised a meaningless term, "improved" sources of water which has no practical value. During the post-1980 period, the various UN organizations and all the development banks started to use this meaningless term extensively. Over the last 35 years, all these organizations have collated data from national governments on access to water. Basically, as long as people receive water, irrespective of their quality, they are assumed to have access to "improved" sources of water which was considered to be synonymous to "clean" or "safe" water. Nothing is further from truth.

If quality and accessibility of water are not considered, 100% of the people in the world always have access to water: otherwise they would not survive. An important issue that has been lost during the past 35 years is that the main emphasis should have been the provision of safe water.

What is even more disconcerting is that major international organizations like UNICEF, WHO, other UN agencies, World Bank, etc., have used the term "improved" sources of water, "safe" and "clean" water interchangeably. Consider the latest (2015) update on progress on sanitation and drinking water (UNICEF and WHO, no date). The very first paragraph of this report notes "access to safe drinking water." In the second paragraph it mentions "improved drinking water." Throughout this report, like all their earlier reports, since early 1980s, "clean," "safe" and "improved sources" of water have been used interchangeably. Thus, not surprisingly, people all over the world now believe "improved" sources of water is actually "clean" or "safe" water.

The latest report claims that "only" 663 million people now do not have access to improved or clean sources of drinking water (UNICEF and WHO, no date). They further estimate that in 2015, the following percentages of urban population in different developing countries had access to "improved" sources of water: Bangladesh 87%, Brazil 100%, Egypt 100%, India 97%, Iran 98%, Malaysia 100%, Mexico 97%, Nepal 91%, and Pakistan 94%. These are impressive figures except the fact that overwhelming majority of the citizens in these countries do not dare to drink water from the tap because of poor quality.

On March 12, 2012, UN Secretary General, Ban Ki Moon, proudly proclaimed in a message to the Sixth World Water Forum, in Marseille, France, that: "Last week we announced that the world has met the target of reducing by half the proportion of people without sustainable access to **safe** drinking water" (our emphasis). Sadly, this is a totally misleading statement.

Let us consider only South Asia, with a population of some 1.7 billion people. Except for a medium size town in India, Jamshedpur, people nowhere in South Asia, either in urban or rural areas, have access to clean water that is safe to drink. Thus, to say only 663 million people do not have access to safe water in 2015 is at best an exaggeration and at worst a deliberate misinformation to show the MDG water goal was actually achieved. In fact, estimates made by the Third World Centre for Water Management indicate that some 3.5 to 4.0 billion people in the world do not have access to safe water. This is at least five times more than the latest WHO-UNICEF estimate (Tortajada and Biswas, 2017).

Currently in all South Asian countries and the overwhelming majority of the developing world, each household has to take charge of their own water supply by each becoming a mini water utility. Water is provided by the utilities for about 3 to 5 hours per day. Each household collects the water when it is available in an underground tank and then pumps it to an overhead tank. Thus, even though the supply is intermittent, each household converts this intermittent supply to 24-hour continuous water availability through their own individual efforts.

Since the quality of water supplied by utilities in nearly all cities of developing countries leave much to be desired, each household is forced to install its own process for treating water received so that it can be made safe to drink. Thus, households have their own individual treatment processes that are installed and maintained by the private sector.

Furthermore, quality of water in numerous third world cities has progressively deteriorated. This is because both surface and groundwater have been steadily contaminated by known and unknown pollutants from continuous discharges of untreated, or partially treated, domestic and industrial wastewaters to water bodies.

A decade or more ago, quality of water supplied by utilities were reasonable so that households could use simple treatment processes like filters to improve their quality. With steadily declining water quality, along with increasing affluence and literacy, average households in major Indian cities like Delhi and Mumbai are now using sophisticated treatment processes like membranes to get drinking water. Membranes were originally developed for desalination of sea water. Now they have become integral part of domestic household treatment processes in many cities and even rural areas to make water drinkable.

A major problem with membranes is that at household level they are very inefficient. Only about 30-40% of water treated is clean. The rest, 60-70%, is discharged as wastewater.

The residents of nearly all the third world cities currently receive free or highly subsidized water which is mostly undrinkable. The supply may be affordable but the coping costs for converting intermittent to continuous supply, and then make water drinkable are quite high.

This has created a "lose-lose" situation. Currently, water utilities from Delhi to Lagos do not have financially sustainable models because of low water pricing. The coping costs of individual households are quite high. Thus, both households and utilities have become long-term sufferers.

## THE UNCLEAN ISSUE OF SANITATION

Just like "improved" sources of water is a meaningless term, so is "improved" sanitation. It simply means availability of toilets without any consideration of how wastewater is collected, treated and disposed of in an environmentally safe manner.

"Improved" sanitation is another meaningless semantic invention. In 2015, it was estimated that 2.4 billion people globally do not use "improved" sanitation (UNICEF and WHO, no date). However, if one considers percentage of people in developing countries that have access to good wastewater collection, treatment and disposal facilities, a realistic estimate will be about 15-20%. Thus, for all practical purposes, like "safe" drinking water, UNICEF-WHO estimates of access to sanitation have given the world a very rosy but totally erroneous picture. The situation is significantly worse than what the UN has estimated and currently accepted globally.

Consider Patna, capital of Bihar state, India. With over two million people, it is the 18th largest urban agglomeration in the country. Currently, only about one-fifth of the households are connected to a sewer system. The rest depend on septic tanks and low cost sanitation. Its sewage treatment plants, like in most parts of the developing world, suffer from poor operation and maintenance practices, and are ineffective. Thus, wastewater quality, even after treatment, leaves much to be desired.

The balance of 80% of Bihar's households depends on septic tanks and other low cost sanitation. Because of poor construction and maintenance of hundreds of thousands of individual septic tanks, shallow groundwater is becoming increasingly contaminated with

regular discharges of inadequately treated wastewater. Also, septic tanks are cleaned by small and untrained private operators every 2-4 years. They basically suck the wastes and then dump them in public lands, forests, water bodies or open drains. Cities have mostly no regulations or standards for these private operators for the discharge of such wastes. The companies basically dispose them in ways that are most economical to them. Since Patna depends primarily on groundwater, its quality is progressively deteriorating because of such uncontrolled waste disposal practices.

Because of rapid urbanization, Patna Master Plan expects the region to have over 6 million people by 2031, a 3-fold increase in only 15 years. Such rapid growth rates will most certainly overwhelm the city's financial and management capacities, including construction of new water supply and wastewater management facilities and their proper maintenance.

There are two major problems with the current focus on improved sanitation and not wastewater management. First, cities of the developing world will be discharging more and more wastewater to the environment without adequate treatment. This will continue to further contaminate water bodies which are sources of water to downstream communities.

Second, as cities grow, historically their water requirements have increased as well. However, not only due to source water quality deterioration but also exhaustion of new sources from which water can be obtained economically, urban centres now must consider treating their wastewater properly and then reuse it regularly. There are simply no other long-term solutions. Wastewater must now be considered a new source of water as well as energy.

### WATER NEEDED PER PERSON PER DAY

From empirical studies, it is evident that not only quality but also quantity of water used has an important impact on human health. How much water does an individual need per day? There are no easy answers even for basic survival, let alone for a healthy life. There is also a major difference between what is needed and how much is actually used.

Survival needs are very different from health needs which are significantly higher. Information on the minimum amount of water needed to maintain good health under different conditions is scarce. Some indications can be obtained from a ten-year study carried out in Singapore between 1960 and 1970. This attempted to correlate domestic water use in terms of waterborne diseases in Singapore hospitals. It indicated that as per capita water use went up, disease rates declined. However, there did not appear to be much improvement beyond daily use of 75 litres per person. This could be considered the "social minimum" for the city-state (Biswas, 1981). Current daily per capita water use in Singapore is 148 litres, nearly twice this amount.

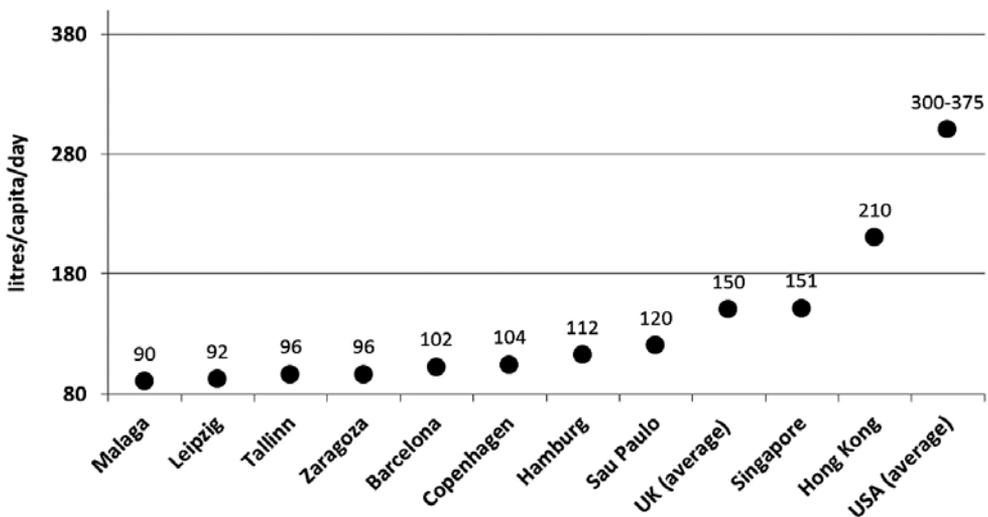
In the absence of similar studies elsewhere, it is difficult to say how much clean water people need for a healthy lifestyle. An overwhelming majority of recommended daily per capita water requirements are mostly plucked from the thin air, without any serious studies. At present, they range from 40-200 litres.

For example, the Indian standard BS1172 recommends 150-200 litres per person per day for communities of more than 100,000 inhabitants. Unquestionably, this is high and there is no scientific logic to justify this level. The upper figure of 200 litres is more than twice the water required if it is used efficiently. Figure 1 shows that in several European cities, daily per capita water use is now between 90-100 litres. Such efficient levels of water use allow the inhabitants of these cities not only to enjoy healthy lifestyles but also to reduce costs. It ensures less water has to be treated for drinking, which means less wastewater is produced that needs to be treated.

Serious reductions in per capita daily use will only be possible through pricing, economic incentives, public awareness, environment ethics and behavioural changes. It will also need strong and sustained political support.

If domestic water use can be brought down to 90-120 litres per capita per day, and wastewater can be properly treated and reused, clean water as a human right can be implemented even in the most water-stressed cities of the world. Thus, if water use can be made increasingly efficient, there is absolutely no reason as to why every citizen of the world cannot have enough clean water not only now but also by 2050 when the global population is estimated to be around 9.7 billion.

Figure 1. Daily water consumption per capita



Source: Third World Centre for Water Management

Equally, with current knowledge, management practices and technologies available there is absolutely no reason why cities of 200,000 people and more cannot have a viable and sustainable financial model which could provide safe water as their right. The consumers must be willing to pay for this service directly through tariffs and/or taxes. Right to water does not mean that all human beings can have as much water as they wish, whenever they wish, free of costs. Rights come with responsibilities. Free or highly subsidized water, as the experience from all over the world shows, will never ensure that every person has daily access to 90-110 litres of clean water. Only poor and/or large families, whose water bill exceeds 2% of household incomes, should receive targeted subsidies.

### PRIVATE SECTOR OR PUBLIC SECTOR

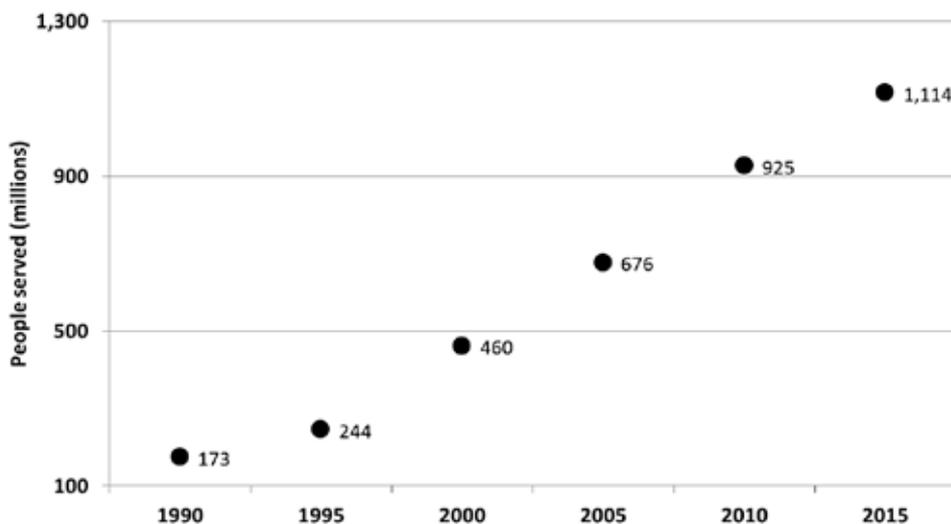
Over the past two decades there has been a serious debate as to who should provide water to the people: public or private sector. It has been primarily an ideological debate, with limited practical relevance. Some feel water is a human right, essential for survival and thus should be available to everyone free or at highly subsidized costs.

The fact is, as noted earlier, water is a derived human right and not a treaty-based right. Even for treaty-based human rights like food and health, there are no similar contentious debates as to whether food and health services, including medicines, should be available to everyone free. Water seems to have a mystic of its own where proponents and opponents of public or private sector have been at loggerheads for decades as to what is the best for society. Proponents of the private sector claim its involvement will ensure efficient water provisioning. This is not necessarily correct. The world's two most efficient water utilities, Tokyo and Singapore, are managed by the public sector. No private sector has come close to their performance. Equally, large number of public water utilities are truly inefficient.

Accordingly, which sector can provide the best service to society is a meaningless debate. Instead, the discussion should focus on whatever sector in a specific city can provide clean water reliably and cost-effectively to its entire population, including the poor. The appropriate sector should be allowed to do so. Irrespective of which sector provides the water, it has to be properly priced, with targeted subsidies to the poor, so that the utilities have a viable and sustainable financial model with limited political interferences.

During the post-1990 period, private sector concessions to run water utilities have increased steadily. By 2015, the number of people served by the private sector had increased to well over 1.11 billion (Figure 2). This is not surprising given the poor levels of services from numerous public water utilities where their management, work programmes and finances are regularly interfered with by public officials having one eye on the next election. Populist short-term policies are often not the most appropriate for the long-term proper functioning of water utilities.

**Figure 2. Millions of people served by the private sector concessions**



Source: David Lloyd Owen, Envisager, 2016.

Governments in most developing countries do not have enough resources to invest in updating dilapidated water supply and sewer systems, let alone provide for very substantial investments needed to account for new water and sewer systems as well as their proper operation and maintenance. The problem is especially serious for sewer systems since

they are now totally inadequate to meet the needs of the present population, let alone the escalating demands due to rapid urbanization and continuing population growth. Nor do most municipalities have capacities to manage this expansion.

For these and many other reasons, the private sector concessions for water provisioning are likely to increase steadily during at least the next two decades.

It should also be noted that during the past decades many water utilities have been re-municipalized for a variety of reasons. The number of people affected by re-municipalization is estimated at less than 100 million. Anecdotal evidence from important cases like in Cochabamba, Bolivia, further indicate that these re-municipalized utilities are having considerable difficulty to attract appropriate investment and talents to improve the current levels of poor services.

## PRIVATE SECTOR CONTRIBUTIONS

While virtually all the discussions of the private sector involvement have been on the concessions to run water utilities, the private sector as a whole has been playing increasingly important roles in implementing the people's rights to have access to clean water and wastewater management.

Over the past decade or so, some of the enlightened business leaders, like Paul Polman of Unilever and Peter Brabeck-Letmathe of Nestlé, have institutionalized new business policies that have meant that one of their important objectives is to ensure they create long-term values for the society. Under this new business philosophy, many multinational and national companies are reducing significantly their water footprints by extensively embracing water conservation and recycling practices. They are assisting their employees and the communities where they manufacture and source their raw materials with availability of clean water and helping with wastewater management.

Nestlé and Unilever are two of the world's largest MNCs. They now have restructured their internal guidelines so that their factories and offices in whatever countries they may be, as well as their suppliers respect and contribute to the implementation of the human rights to water. They have established due diligence mechanisms like conducting human rights impact assessments of their own activities as well as of their suppliers. These have dramatically increased their impacts on the water sector.

These two companies, as well as others like Procter & Gamble (P&G) and Coca-Cola, now source ingredients like coffee, tea, cocoa, milk, sea food, spices, sugar, palm oil, and other similar products from many small, medium and large suppliers. They provide direct advice to their farmers on how to manage water properly not only for drinking but also use it efficiently to reduce water use and contamination (Biswas-Tortajada and Biswas, 2015). Companies like Nestlé have over 8,000 agronomists all over the world who advise the farmers on agricultural issues as well as on water management. Very often, especially in rural areas, these company employees are major and reliable sources of information on water, agriculture and environmental issues (Biswas et al, 2014).

These companies often are working with independent organizations like UTZ, Rainforest Alliance, Fairtrade and Greenpeace so that products are ethically sourced, water and other environmental conditions are properly managed and human rights are not violated. They have made significant progress during the last decade on improving sustainability of their business practices and contributing to continuing assessments of all types of human rights in their businesses like child labour, slavery, and rights to water and sanitation.

Many such companies are also giving special attention to water and sanitation needs of schools in communities where they and their suppliers operate. Thus, P&G is providing 10 billion liters of clean water to schools in the developing world. In India alone, Nestlé is providing clean water to 127,000 students, and Coca-Cola to some 200,000 students.

It is not only multinational companies that are helping to ensure that people have access to clean water but also many national companies are doing so as well. For example, GNFC now provides reliable water supply to nearly 150,000 people in Gujarat, India.

Thus, the private sector is playing an increasingly important role in providing access to clean water, sanitation and hygiene, both directly and indirectly. Accordingly, future discussions on the implementation of the human rights to clean water and sanitation must involve both public and private sector.

## CONCLUDING REMARKS

No country or sane individual has argued that human beings should not have access to clean drinking water and reliable wastewater management services. Without clean water and efficient wastewater management, people cannot have good quality of life and a healthy environment to live in and reach their full potential. The issue is thus not whether these should be achieved but rather how they should be achieved as soon as possible in a reliable, cost-effective and equitable manner.

As a first step, it is essential to determine the magnitude and extent of the problems. Most unfortunately, the latest global figure for 2015 that only 663 million people do not have access to clean water is a gross under-estimation. The real figure is around five times this number.

There is no question that enormous investments will be necessary in terms of the construction of new water and wastewater infrastructure, and also to replace older ones. In addition, concurrently it will be essential to build up technical, administrative and management capacities of the countries to manage them properly.

For urban centres of 200,000 people or more, we now have enough knowledge and technology to formulate a sustainable financial model where all consumers will pay for water and wastewater services that are efficient. Only those households where water bills exceed 1.5 to 2% of household income should receive targeted subsidies.

The decades-long debate whether water-related services should be highly subsidized or even free has not been productive. Domestic water uses everywhere must become increasingly efficient. This will ensure not only less clean water has to be produced but also less wastewater will have to be treated.

The heated discussions of whether the public or the private sectors should provide water have been mostly ideological and unproductive. Whoever can provide a reliable, cost-effective and equitable service should be encouraged to do so. Irrespective of whether public or private sector provides the service, consumers will have to pay for it. Otherwise even 50 years from now, people will not have access to clean water and proper wastewater services. The problem cannot be solved by linguistic gymnastic and by creating meaningless terms like improved sources of water, as has been attempted in the past.

The safe drinking water problem of the world is solvable. For this to be accomplished, there has to be sustained political will and determination, consistent demands from the people to have clean drinking water, and public and private sectors as well as NGOs to work together.

As W. H. Auden has noted: "Thousands have lived without love, and no one without water".

## REFERENCIAS

- Biswas, A. K. (1978). *United Nations Water Conference: Right Paper Summary and Main Documents*. Oxford: Pergamon Press.
- Biswas, A. K. (1981). Water for the Third World. *Foreign Affairs*, 60(1): 148-166.
- Biswas, A. K. (2007). Water as a Human Right in the MENA Region: Challenges and Opportunities. *International Journal of Water Resources Development*, 23(2): 209-225.
- Biswas, A. K., Tortajada, C., Biswas-Tortajada, A., Joshi, Y. K., and Gupta, A. (2014). *Creating Shared Value: Impacts of Nestlé in Moga, India*. Heidelberg: Springer.
- Biswas-Tortajada, A., and Biswas, A. K. (2015). *Sustainability in Coffee Production: Creating Shared Value Chains in Colombia*. Abingdon: Routledge.
- ILO (International Labour Office) (1977). *Employment, Growth and Basic Needs*. New York: Praeger Publishers.
- Tortajada, C., and Biswas, A. K. (2017). Water as a Human Right. *International Journal of Water Resources Development*, 33(4): 509-511.
- UNICEF and WHO (no date). *Progress on Sanitation and Drinking Water: 2015 Update and MDG Assessment*. WHO Press, Geneva, 80 p.
- United Nations (28 July, 2010). *General Assembly Adopts Resolution Recognizing Access to Clean Water, Sanitation as Human Right*. 64th General Assembly, Plenary, 108th Meeting (AM). Document GA/10967.
- United Nations Committee on Economic, Social and Cultural Rights (20 January, 2003). *General Comment No. 15: The Right to Water Document (Arts. 11 and 12 of the Covenant)*. E/C.12/2002/11. Office of the High Commissioner for Human Rights, Geneva, p. 4.