THE CARITAS IN VERITATE FOUNDATION WORKING PAPERS
"The City of God in the Palace of Nations"

Water and Human Rights

A Catholic Perspective on the Human Right to Water

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A Catholic Perspective on the Human Right to Water

With a selection of texts from
the Church's engagement on Water

www.fciv.org
Edited by Alice de La Rochefoucauld and Dr. Carlo M. Marenghi
Published by FCIV
16 chemin du Vengeron, CH-1292 Chambésy
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ISBN: 978-2-8399-2189-3

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EDITORIAL

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Our planet is an enclosed system when it comes to entrance and exit of matter in significant amounts. Water and oxygen are existing in enormous quantities, but both substances are limited to the amounts that have been present on Earth since the Quaternary Period. However, the strength of life is extraordinary and unforeseeable, and when facing shortage or even lack of certain essential substances, surprising evolutionary mechanisms are set in motion in order to ensure its own continuity.

Thales from Miletus (636 –546 B.C.), a pre-Socratic Greek philosopher - who is often considered the first philosopher and the father of Western philosophy - stated that "Hydor (water) is the beginning of everything". As a matter of fact, our life begins in water, which, by its very nature, is a source of life. People have always had to deal with the need of having enough water for their uses and subsequently to manage appropriately the produced wastewater. The availability of high quality water, as well as safe management of the produced wastewater, have been a prerequisite for urban development in every part of the world. This intuition of the first pre-Socratic philosopher has been confirmed by modern science which considers water and its cycle the basis for life on our planet and recognizes it as what differentiates Earth from other planets in our system.

It has to be agreed that, since air and water are essential to life, they should be considered common goods of nature – goods that belong to all humanity and all living beings. There is no doubt that air is for everyone and belongs to everyone. Therefore, given its diffusity, it has occurred to no one to use air distribution as an instrument of power. Water is at the center of economic and social development: it is vital in order to maintain health, grow food, generate energy and create jobs while sustaining the natural environment. However, a fair and equitable global water management is far from being achieved.

The most severe outcome of water scarcity is drought. Drought impacts lives and livelihoods through many different dimensions, including food insecurity and land degradation. In the case of prolonged drought coupled with degraded agricultural land, people might move to nearby fertile rural

areas or to urban areas in order to access basic services, including water supplies. As recalled in the subsequent article on "Water and Migration", drought-related migration has long been a hidden category of migration due to the challenges of data collection. Although no global estimates are available on the number of people moving solely because of water scarcity and/or drought, context-specific data is becoming available in a diverse range of countries (e.g. Angola, China, Iran, Uganda) with water insecurity being identified as a key push factor to migrate.

The vital necessity of water to humanity can also be translated in its strategic importance for the establishment and maintenance of peace in the world. As elaborated in the article "Water as a Path towards Peace", water is a dimension of what is referred to today as resource security. As early as 2450 to 2400 BC, surface water was diverted by Urlama, King of Lagash, and his son, to deprive the neighboring land of Umma and its city of Girsu of water[1] . This border region, also known as Gu'edena (edge of paradise) which was the scene of conflict for centuries, is located in what is now southern Iraq. Sadly, the latter is still a region of water insecurity nowadays. World War II exemplified the manipulation of surface water for military objectives. Conflicts over water resources have been numerous in history, and new ones may occur in the future, especially given the new arising challenges human beings are facing during this century: the change in demography having as a consequence the increase of water, food and energy needs; climate change with its disastrous consequences in terms of water scarcity and natural disasters; new non-State actors and armed groups enhancing violence and conflicts and using water as a weapon in order to make enemies suffer and to force entire communities to be displaced.

More importantly than water being a cause of conflict, it is a factor of cooperation, establishing and maintaining peace in the world. However, water cooperation should not be understood as the absence of conflict, but rather "various forms of cooperation over water occur […] alongside various forms of conflict. Moreover, tensions over shared waters are too sophisticated and complex to be adequately categorized as either conflict or cooperation"[2] .

As stated by the United Nations (UN) Special Rapporteur on the Human Right to Safe Drinking Water and Sanitation, Mr. Leo Heller, at the 71st session of the UN General Assembly, development cooperation funding is estimated to be insufficient to achieve the water, sanitation and hygiene targets of the Sustainable Development Goals (SDGs). However, while more funding is truly required, it is also important that development cooperation takes into consideration the comprehensive nature of water and sanitation services. For outcomes to be effective and sustainable, States need strong legal, regulatory and policy frameworks for the water and sanitation sector that are in line with the human rights to water and sanitation. Inadequate policies, planning and management of services can seriously

impair the effectiveness of development cooperation funding, preventing it from reaching those most in need and from being sustainable. Thus, partner Countries must create an enabling environment for development cooperation while observing their human rights obligations.

As recalled in the first article on "Water and Human Rights", during the last decades - and with particular reference to the debates related to the fight against poverty, conservation and exploitation of ecosystems, or renewable and non-renewable resources - the crucial role of water in development processes, as well as in the strategies of international cooperation, has absolutely been expanded and recognized as a key issue for international law. This awareness was enhanced for the first time by the United Nations Conference on Human Settlements (Habitat I) that was held in Vancouver (Canada) in 1976, followed by initiatives such as the UN decision to call the "Water for Life" Decade (2005-2015), with the creation, in various Governments and International Organizations, of programmes dedicated to its complex issues. These initiatives paved the way for the launch of policies, strategies and actions by States and International Organizations aimed at dealing with the complex problematic of water, such as: safety and quantity; affordable quantitative, responsible and sustainable use; as well as loss and waste of this resource.

Many water related issues are closely linked to international trade; with increasing trade between nations and continents, water is more frequently used to produce exported goods. Therefore, the competition for water – between water 'uses' and water 'users' – increases the risk of localized conflicts and continued inequities in access to services, with significant impacts on local economies and human well-being. Persistent poverty, inequitable access to water supply and sanitation services, inadequate financing, and deficient information about the state of water resources, their use and management, impose further constraints on water resources management and its ability to help achieve sustainable development objectives. The article on "Trade and Water" highlights how water clearly falls not only in the human rights legal framework, but also within the international trade legal framework, although through different approaches. While trade may be viewed as an opportunity for a Country's growth and for the advancement of these human rights, the State must ensure that trade activities do not result in negative human rights impacts. In fact, water is intrinsically connected to basic human rights such as the right to life, to food, to health and to adequate standard of living.

However, even if the right to water is now indirectly recognized in international texts, it does not exist as a right per se. The recognition of rights must be met by a universal responsibility for action. This implies changes in lifestyle, production and consumption, as well as the development of renewable and clean energy. The provision of safe water in necessary quantities and the collection of wastewater and its disposal by

environmentally adequate means, contribute to the care of our common home and people's dignity, whilst also contributing to the development of responsible citizenship amongst present and future generations. Although the challenge is great, we rely on solidarity and collective sensitivity, fruits of the dialogue of philosophies, knowledge, spiritualties and epistemologies. There are currently many valuable projects and initiatives working towards the care of our common home, as shown in the article on the experiences of faith-based organizations.

The right to water is a basic human right and a central issue in today's world. It is an issue that affects everyone and is a source of great suffering in our common home. Looking ahead and at the work done over the last years, the International Community is called to continue its action in finding practical solutions capable of surmounting selfish concerns that prevent everyone from exercising this fundamental right. Water needs to be given the central place it deserves in the framework of public policy.

His Holiness Pope Francis invites us to remember that "our right to water is also a duty to water. Our right to water gives rise to an inseparable duty. We are obliged to proclaim this essential human right and to defend it – as we have done – but we also need to work concretely to bring about political and juridical commitments in this regard"[3] . Water management should be based on a participatory approach, involving users, planners and policy makers at all levels. Both, men and women should be involved and have equal voices in managing water resources and sharing the benefits that come from sustainable water use. In achieving the 2030 Agenda, water concerns of the poor become the concerns of all in a prospective of solidarity. This solidarity is a firm and persevering determination to commit oneself to the common good, to the good of all and of each individual[4] . It presupposes the effort for a more just social order and requires a preferential attention to the situation of the poor[5] . The same duty of solidarity that rests on individuals exists also for nations: advanced nations have a very heavy obligation to help developing Countries.[6]

Notes

1. Hatami, H. and P. Gleick. 1994. Chronology of conflict over water in the legends, myths, and history of the ancient Middle East. Water, war, and peace in the Middle East. Environment 36(3): 6 Available at http://onlinelibrary.wiley.com/doi/10.1111/j.1936-704X.2012.03130.x/full

2. Zeitoun, M., and Mirumachi, N. (2008), 'Transboundary water interaction 14 reconsidering conflict and cooperation', International Environmental Agreements: Politics, Law and Economics 8(4) in Hanasz, P., Understanding water cooperation and conflict Global Water Forum www.globalwaterforum.org

3. Address of His Holiness Pope Francis to Conference on the Human Right to Water Pontifical Academy of Sciences 23 February 2017

4. Cfr. Note of the Pontifical Council for Justice and Peace, presented Saturday in the 3rd World Water Forum in Kyoto, Japan, entitled "Water, An Essential Element for Life."

5. Cf. Pope John Paul II, Encyclical Letter Sollicitudo rei socialis, §38-40 and Second Vatican Ecumenical Council Gaudium et spes, §100.

6. Second Vatican Ecumenical Council, Gaudium et spes, §86.

SECTION ONE

WATER AND HUMAN RIGHTS – A CATHOLIC PERSPECTIVE ON THE HUMAN RIGHT TO WATER

WATER AND HUMAN RIGHTS: CONSIDERATIONS AND CHALLENGES UNDER INTERNATIONAL LAW

A Caritas in Veritate Foundation Report by

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1. Introduction

"[…] the human right to safe drinking water and sanitation as components of the right to an adequate standard of living are essential for the full enjoyment of the right to life and all human rights".[1] This United Nations General Assembly (UNGA) non-binding resolution of 2015 represents, to date, the most advanced position in international soft-law with regard to the interrelationship between water and human rights. Making such access a human right is the result of a long process of international and intergovernmental negotiations, with the concurrence of relevant rules, different in nature – conventional, compulsory, binding or between soft and hard law – and which had a systematic formulation in 2002 by the UN Committee on Economic, Social and Cultural Rights (CESCR). Called upon to explain the significance of a self-standing right to water and its juridical coherence to the *corpus* of international human rights law, the CESCR reaffirmed that, living on Earth, human condition on the planet and research for improving social and economic standards have an intrinsic link with water usage and management.[2] In 2010, the UNGA proclaimed the Declaration on the Human Right to Water and Sanitation as an instrument that recognizes this right through different positions and considers water "essential for the full enjoinment of life and all human rights".[3] Jointly with the CESCR intervention, the UNGA declared the right to water and sanitation consistent with principles and rules of international law, estimating it even a prerequisite for the enjoyment of other rights. Both of these above-mentioned pronouncements clearly indicate that water plays a crucial role in accomplishing the outcomes of projects, investments, and levels of quality, both in development processes and in intergovernmental policies on cooperation. It is linked to sustainable development and its achievement as well. Nowadays, the Objective Sustainable Development Goal (SDG) 6, interrelated with SDG 2, outlined in the Agenda for Development 2030[4] explains these considerations through a functional

In 2010, the UNGA proclaimed the Declaration on the Human Right to Water and Sanitation as an instrument that recognizes this right through different positions and considers water "essential for the full enjoinment of life and all human rights".

approach: the access to water, and particularly its rational use, conservation, preservation from pollution and management are considered significant challenges for the current domestic and international policies.

From a legal perspective, the challenges concerning water (pollution, scarcity, stress, access, increased demand, etc.) are closely related to the enjoyment of other human rights, including safe environment, food, health, labor, and education. These relationships are, above all, rooted in international law, namely in its role and effectiveness of safeguarding natural resources and protecting the human person. In addition, in relation to the domestic normative framework, some Countries have already included the right to water as a self-standing right in their legislative system. They also specify the criteria for quality and quantity of clean water, and, in some cases, establish the structures responsible for a reasonable implementation of this right. Regrettably, most States have not provided this right, placing it in jeopardy.

These relationships are, above all, rooted in international law, namely in its role and effectiveness of safeguarding natural resources and protecting the human person.

Undoubtedly, drinking water and sanitation are not only indispensable to sustain life and health, education and decent work, but they also represent an essential tool to protect and promote human dignity and rights for all.[5] In this regard, one can find scholar studies and political opinions about the existence or absence of a right to water, from a wide range of viewpoints, as well as the activities of Governments and international institutions that aim to ensure access to water for all people under their jurisdiction or competence. Nevertheless, the situation seems far from considering the legal framework provided by the CESCR and the UNGA in their soft-law instruments as generally accepted in the law of international community, despite various efforts to acknowledge, promote, and implement these instruments.

2. Some basic facts and concerns

Statistics remain a necessary point of departure for a legal analysis that strives to analyze the relationship between water and human rights. Current data do not highlight a theoretical and general lack of water, but specify the main distinction between water scarcity and water stress and further sub-divide the issues of water shortage, water quality and water crisis[6]. This distinction has been adopted by intergovernmental institutions as a method of analysis and as a set that leads to appropriate interventions. One-third of the world's population today lives under water stress, and this percentage is set to increase to two-thirds by 2025, as a result of growing water scarcity in face of increased demand for water worldwide. The latter demand is related to the combined effects of climate change, which reduces a consistent supply of renewable resources, of global population increase, and of intensifying and broadening economic activities. Thus, water resources are gradually diminishing. Regarding the current overview of the

global situation, one can rely on the joint work carried out by the World Health Organization (WHO) and UNICEF[7], which indicates that, despite the fact that water is considered an essential element for all aspects of life, at present, approximately two billion people on the planet are still living without sufficient availability of water for their personal or domestic use.

One-third of the world population lacks adequate and efficient mechanisms of purification and sanitation, while others simply do not have access to a sufficient quantity of water to satisfy their individual or family needs. Yet, 884 million people do not have access to improved sources of drinking water, while 2.3 billion lack access to increased sanitation facilities. With reference to the economic activity, water is a productive factor and many industrial activities depend on access to this resource. Today agriculture accounts for 70% of the world freshwater use. In the future, this amount is expected to increase due to the growth in food production.

In addition to the abovementioned considerations, we should also include those people affected by persistent and unsustainable conflicts related to the control of water sources, access to water, and its use or its pollution as the effects of human activities. In fact, this question is clearly linked to statehood sovereignty over natural resources, such as rivers or water basins, and not just motivated by reasons of national security, defense or control of territories. On many occasions, water jurisdiction or safety represent the essential factors of divergences between States. An example might be the dispute between Argentina and Uruguay[8] regarding the authorization of Uruguay for the contruction of pulp mills on the banks of the Uruguay River, which was submitted to the International Court of Justice. On 20 April 2010, the ICJ ruled that "[…] in recent years [this] has gained so much acceptance among States that it may now be considered a requirement under general international law to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource".[9] Following this evolution of international law, the ICJ judgment subsequently has recognized that environmental protection and equitable management of shared resources – in that case water – become legally protected goods also in face of the statehood will and decision.

The ICJ judgment subsequently has recognized that environmental protection and equitable management of shared resources – in that case water – become legally protected goods also in face of the statehood will and decision.

Conflicts can also involve the economic sphere in relation to the gradual privatization of water as well as economic and business activities regarding consumption and commercialization of water. The problem in that case is the distinction (or the opposition?) between trade activities, exploitation of a usually non-renewable resource, for climatic and geographical reasons, and sovereign title, acquired situation, unsolved complaints, or denial of fundamental rights. A concrete example of water resources is experienced in the territories of indigenous peoples around the world. Exploitation – even intensive – for productive activities by Governments and private companies does not take into account the ancestral value of water for

autochthons, notwithstanding the provisions of the Declaration on the Rights of Indigenous People, adopted by the UNGA in 2007: "Indigenous peoples have the right to maintain and strengthen their distinctive spiritual relationship with their traditionally owned or otherwise occupied and used lands, territories, waters and coastal seas and other resources and to uphold their responsibilities to future generations in this regard".[10]

Water stress and water scarcity are also relevant for food availability, agricultural work and employment in the rural area.[11] Historically, irrigation has been a deciding factor between commodities production (but also in livestock and farm activities) and drought. In many areas, the lack of water determines land degradation and the extent of food shortage. It also becomes a way of identifying levels of famine and malnutrition (food safety), while water scarcity in crops and farms determine high levels of food insecurity.

While these elements shed light on a worrying situation, the reality is much worse, since millions of poor people living in informal settlements are simply not included in official statistics. The majority of them live in rural areas of developing or Least Developed Countries (LDCs) affected by internal or international conflicts, institutional destabilization, and remain without access to the basic infrastructures that ensure the enjoyment of water and sanitation. In this case, scarcity and stress coincide or overlap. In the same regard, a recent study conducted by the International Organization for Migration (IOM) and the Office of the United Nations High Commissioner for Refugees (UNHCR), confirms that lack of water is a decisive factor of human displacement, and that environmental changes threaten millions of people around the world (cf. Water and Migration). Apart from actual battles or weapon use, we can say that the world is facing evidence of increasing competition and conflicts over fresh water resources (cf. Water as a Path towards Peace).[12]

Given the inequality in access to, and consumption of water, the proclamation of a right to water requires correct reference to, and a coherent interpretation and application of the relevant provisions and recommendations within the framework of international law.

Given the inequality in access to, and consumption of water, the proclamation of a right to water requires correct reference to, and a coherent interpretation and application of the relevant provisions and recommendations within the framework of international law. In fact, as an item of international human rights law, the right to water can be interpreted and supported by the general principles of this international law regime. The right to water is consistent with all human rights that are "universal, indivisible and interdependent and interrelated. The international community must treat human rights globally in a fair and equal manner, on the same footing, and with the same emphasis".[13]

3. Water, resources and right: the functional method of international law

Globally, it has been acknowledged that lack of water cannot be considered as an isolated factor, but must be seen in combination with poverty and marginalization, as well as with famine, conflict, and with climate change effects. These complex interrelationships generate a serious challenge, which slows down, and makes the interventions of international cooperation or the progressive activities at the domestic level more expensive. In order to confront this reality, it is necessary to take into account that it will be necessary in the future to take a decisive step towards the recognition of a self-standing right to water. This becomes increasingly urgent as clear claims and obligations emerge from various stakeholders. In fact, the promotion and protection of human rights result from a complementary relation between the right of persons to have their dignity guaranteed and the duty of everyone to respect the obligations to such guarantees.

Lack of water cannot be considered as an isolated factor, but must be seen in combination with poverty and marginalization, as well as with famine, conflict, and with climate change effects.

At this point, let us consider further questions. First of all, how has the international law on drinking water and sanitation evolved? What indicators – rules or general principles – have emerged in international law over the past years and how do they allow to claim the existence of an autonomous right to water?

During the last decades, and with particular reference to the debates related to the fight against poverty, conservation and exploitation of ecosystems, or renewable and non-renewable resources, the crucial role of water in development processes, as well as in strategies of international cooperation, has been expanded and recognized as a key issue for international law. For the first time, this awareness was enhanced by the United Nations Conference on Human Settlements (Habitat I) that was held in Vancouver (Canada) in 1976. One of the central proposals stated by its Plan of Action called for the commitment of States to "[a]dopt programmes with realistic standard for quality and quantity to provide water for urban and rural areas by 1990, if possible".[14] The references are undoubtedly aimed at water resources and not directly to the beneficiaries, although the inclusion of the habitat in the wider environmental issue places the individual at the heart of every concern, as defined by the United Nations Conference on Environment, held in Stockholm (Sweden) in 1972.

During the last decades, and with particular reference to the debates related to the fight against poverty, conservation and exploitation of ecosystems, or renewable and non-renewable resources, the crucial role of water in development processes, as well as in strategies of international cooperation, has been expanded and recognized as a key issue for international law.

A direct concern regarding access to water became evident with the United Nations Water Conference, convened at Mar del Plata (Argentina) in 1977. The Conference adopted an Action Plan, composed of eight Recommendations and ten Resolutions concerning, *inter alia*, water rights for farmers, incompatibility between traditional rights and the role of States in controlling water resources, and the right of each State to shared water resources. Moreover, in its Operational Guidelines, the Plan requests

Governments to take measures "to provide all people with water of safe quality and adequate quantity and basic sanitation facilities by 1990, and accords priority to the poor and less privileged and to water scarce areas".[15] A direct reference to fundamental rights is recognized in Resolution II, entitled Community Water Supply, which provided that: "[a]ll peoples, whatever their stage of development and their social and economic conditions, have the right to have access to drinking water in quantities and of a quality equal to their basic needs".[16] The decisions of the Conference allowed the UNGA to proclaim the International Drinking Water Supply and Sanitation Decade (1981-1990).[17] The sensitivity at that time led the intergovernmental context to develop a strategy to address natural phenomena that cyclically affected several areas of the planet, defined as being at high risk of drought. How can we forget, for example, the challenges faced by the international community and of various international agencies as they strove to address the Sahel crises that repeatedly demanded attention and required external aid? This action, however, was essentially linked to the natural phenomenon of desertification, to the lack of agricultural production and, therefore, to the hunger of millions of people. In other words, attention was focused more on the scarcity of water rather than on water as a strategic resource, which would have called for the elaboration of a strategy to balance its use and control, and to safeguard its management and conservation.

The introduction of a more specific consideration about the importance of water as an asset to be defended and the related human right to be protected, have been imposed in the international context by the decisions adopted at various United Nations Conferences in the 1990s: Environment 1992, Population 1994, Social Development 1995, Food Security 1996, Habitat 1996. As a consequence, *inter alia*, of the Rio Conference, held in June 1992, a first systematic analysis and related action were facilitated through two main acts ruled by States: Agenda 21, whose Chapter 18 is devoted to the social use of water and to the preservation of this resource recognizing that: "Integrated water resources management is based on the perception of water as an integral part of the ecosystem, a natural resource and a social and economic good, whose quantity and quality determine the nature of its utilization"; and the Convention to Combat the Desertification,[18] adopted in 1994, that envisages among its objectives the "conservation and sustainable management of […] water resources" (art. 2.2.), as well as a study of activities by States that "enhance the availability of water resources in affected areas, by means of, *inter alia*, cloud-seeding" (art. 17.1.g). The Rio conclusions emphasize attention to water as a consequence of the concept of sustainable development. Twenty years later, a consideration that made water a key element in the economic, social and environmental profile, was stated in the Conference Rio+20: "Water is at

"Water is at the core of sustainable development as it is closely linked to a number of key global challenges".

the core of sustainable development as it is closely linked to a number of key global challenges".[19]

In the same way and of particular interest was the planned, but never implemented, mechanism proposed in the context of the Social Summit of Copenhagen in 1995, which urged that everyone be ensured access to basic social services, including the universal access to safe drinking water and to sanitary means of disposal of excreta. The so-called 20/20 Initiative[20] aimed to guarantee, on the one hand, that donor Countries reserve a minimum of 20% of their public aid for development in order to address such basic social needs as water and sanitation. The beneficiary Countries, on the other hand, were required to allocate 20% of aid to this same sector. Similar criteria are currently included in the objectives and indicators of the Official Development Assistance (ODA) by Member States of the Organisation for Economic Co-operation and Development (OECD), which call for measuring the proportion of ODA allocated to basic social services, including water and sanitation.[21]

International attention and sensitivity, as well as intergovernmental instruments of soft-law, continue through initiatives such as the UN decision to designate the Water for Life Decade (2005-2015). That decade allowed the establishment of policies, strategies and actions by international organizations and States aimed at taking action on the complex problems of water, including safety and quantity, affordable quantitative, responsible and sustainable use, as well as loss and waste of this resource. In this regard, a significant step forward occurred with the issuance of the report by the Global Water Partnership,[22] of which the core proposal referred to the appeal for deliberate action by developed and developing Countries, intergovernmental institutions and civil society organizations. The priority was given to holistic and comprehensive attention to water problems (limited resources, pollution, access, etc.), and to their solution (management, allocation of resources, infrastructure, etc.). For the first time, an international consultation acknowledged the difference between water need – which usually is a problem of poor Countries – and water demand – characteristic of developed areas – and, therefore, of the need to consider that the social value of water should be a priority over its economic value.

That decade allowed the establishment of policies, strategies and actions by international organizations and States aimed at taking action on the complex problems of water, including safety and quantity, affordable quantitative, responsible and sustainable use, as well as loss and waste of this resource.

This newly oriented approach generates a special impact on the general standard of living, the fight against poverty and the practice of agriculture, as well as on methods of producing crops and, more generally, on growth in rural areas. In agriculture, water is used for irrigation but, considering climate change, the storage should be ensured in order to best benefit from precipitation systems. Moreover, the geographical distribution of water sources is not homogeneous, and some areas suffer more than others. In addition, reserves should be monitored and managed to avoid paradoxes such as those in Africa, where only 6% of drinking water is used, but nearly 23% is in reserve in the subsoil. Between water need and water demand lies the fundamental right of access to water. Even if access is effectively managed, the

full enjoyment of this right could be effectively realized when most people will have access to this resource.

4. The cross-cutting approach to a self-standing right to water

International law related to water, its use and preservation, and specifically to its access by persons and communities, can be considered as a special area of legal concern which, so far, has not been sufficiently pursued in order to ensure the fundamental right to water. The provisions of general international law, in fact, have become the grounds of the promotion and protection of human rights at international level.

How is the position of the right to water situated in the international body of human rights law? Could it be identified as a derivative right, not self-standing, but acquired from other rights – or their interpretations – that are formally codified in international law instruments?

In this sense, the UNGA Declaration on the recognition of the right to safe drinking water and sanitation, adopted with Resolution 64/292 in 2010,[23] can be indicative, since it recalls the different acts that have been adopted, whether they are provisions of human rights treaties or soft-law rules.

A reference to the right to safe drinking water and sanitation is explicitly included in many international instruments on human rights adopted after the Universal Declaration of Human Rights, as further progress was made in implementing the Declaration through a programmatic approach, including the International Covenant on Economic, Social and Cultural Rights (art. 11), the Convention on the Elimination of All Forms of Discrimination against Women (art.14. 2), the Convention on the Rights of the Child (art. 24), the Convention on Occupational Health Services of ILO No. 161 (art. 5), the Declaration on the Rights of Indigenous Peoples (art. 25), up to the Convention on the Rights of Persons with Disabilities (art. 28). These rules do not include explicit mention of a right to water but are oriented to include water as a component of the general living standard necessary for a constructive development and the implementation of human rights.

Therefore, in international human rights law, the promotion and protection of a specific right related to water (or, more precisely to "drinking water") has been considered with growing attention to coordinate the different approaches, to avoid overlaps and enhance the necessary legal coherence. This is a case of cross-cutting approach that, in international human rights law, constitutes a method to balance different claims of new rights or to identify such claims. This method is generally accepted by States and has become a recurrent technique applied in soft-law instruments

and in quasi-judiciary decisions, as in case of General Comments or Recommendations adopted by Treaty Bodies related to articles of human rights conventions.

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A study on that topic was launched by the former UN Sub-Commission of Human Rights in 1997.[24] Following a protracted process and an extensive debate, this led to the development of specific Guidelines for the Realization of the Right to Drinking Water Supply and Sanitation. These rules, adopted under the domain of soft-law, recalled the responsibilities of the members of the International Community and recommended that States recognize that the human person has the right "to a sufficient quantity of clean water for personal and domestic uses; [and] to have access to adequate and safe sanitation that is conducive to the protection of public health and the environment". Similarly, the Guidelines applied, as a collaborative precondition for action by States, a general principle of contemporary international law: "water resources constitute a common heritage and must be used in an equitable manner and managed in cooperation with the users in a spirit of solidarity".[25]

As already mentioned above, the more systematic approach to this right can be found in the General Comment No. 15 (art. 11) adopted by the CESCR, that justified its necessity on an objective opinion: "Water is a limited natural resource and a public good fundamental for life and health".[26] In addition, the Treaty Body described the content of the right to water as "indispensable for leading a life in human dignity",[27] and laid out the different responsibilities to guarantee everyone "sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic use".[28] The use of terminology is correct, motivated, and sufficient to enable a person (or a community) to claim to be a victim of any violation of such a right. In fact:

- sufficient water relates to the needs of the individual and therefore must take into account different factors (location, age, sex, work, diet, etc.);

- safe water refers to the condition required for consumption, food use or for personal sanitation and then related to the environmental conditions, prevention of pollution, proper conservation, sanitation facilities, etc.;

- acceptable water means that its use has to be culturally and socially accepted (separate areas of facilities for men and women to ensure privacy and dignity);

- accessible water refers to permanent services that facilitate access for everyone in the household or its vicinity;

- affordable water means the capability of everyone to pay for water but without prejudice related to expenditures for other services (health, education, etc.) or essential goods.

"[w]ater should be treated as a social and cultural good, and not primarily as an economic good"

With reference to the economic value of water, the General Comment affirms that "[w]ater should be treated as a social and cultural good, and not primarily as an economic good".[29] This context leads to the question of privatization of water through a safeguarding clause that is premised on the direct obligation of States' calls to avoid "compromising equal, affordable, and physical access to sufficient, safe and acceptable water". From this obligation comes the need to prevent such abuses by establishing, *inter alia*, an effective regulatory system "which includes independent monitoring, genuine public participation and imposition of penalties for non-compliance".[30] This position does not exclude the commercialization of water nor some economic activities related to this good, but prevents potential or effective conflicts by establishing two criteria:

- the "payment for water services has to be based on the principle of equity, ensuring that these services, whether privately or publicly provided, are affordable for all, including socially disadvantaged groups"[31];

- any condition related to the commercial use of water that deprives persons or communities of equal opportunities is considered as incompatible with the guarantees related to this right: "Where such action is based on a person's failure to pay for water their capacity to pay must be taken into account. Under no circumstances shall an individual be deprived of the minimum essential level of water".[32]

This approach attempts to demonstrate that the reference to water in several international instruments represents a clear application of the concept of mutual supportiveness that is the balance between different fundamental rights, not as opposition or competition, but for coordination and harmonization in achieving a common aim.

A question arises with regard to these arguments: what is the reason for the positions and interpretations pronounced by the Committee? First, there is an acceptance that access to water is not merely a component of the right to an adequate standard of living, or of the right to health, or to food. The General Comment, therefore, affirms that a self-standing right to water requires promotion and protection itself, but without a disadvantage with respect to other rights, that are interrelated with access to water. Second, this approach attempts to demonstrate that the reference to water in several international instruments represents a clear application of the concept of mutual supportiveness that is the balance between different fundamental rights, not as opposition or competition, but for coordination and harmonization in achieving a common aim. Third, it should also be noted that the CESCR did not exceed its sphere of competence because the approach followed did not create a new right without a solid basis. Thus, it clarified one of the constitutive pillars of the right to an adequate standard

of living, fully aware that any provision of that right does not provide an exhaustive list of its various components. The case of access to water offers evidence of the genuine capability of a Treaty Body to produce an act, which, although not legally binding, is necessary in interpreting the human rights treaties and consequently to establish the terms and conditions to apply and implement its relevant rules by States parties.

In order to guarantee authentic access to water, the General Comment distinguishes three types of obligations to be implemented by States, namely:

- to respect, including "refraining from engaging in any practice or activity that denies or limits equal access to adequate water; arbitrarily interfering with customary or traditional arrangements for water allocation; unlawfully diminishing or polluting water, for example through waste from State-owned facilities or through use and testing of weapons; and limiting access to or destroying of water services and infrastructure as a punitive measure, for example, during armed conflicts in violation of international humanitarian law"[33]. It is evident that, *inter alia*, the precise interrelation between international human rights law, international environmental law and, more specifically, international humanitarian law with reference to a case that is related to the legal situation of *crimina juris gentium*;

- to protect, which requires States "to prevent third parties from interfering in any way with the enjoyment of the right to water. Third parties include individuals, groups, corporations and other entities as well as agents acting under their authority";[34]

- to fulfill, which imposes States "to adopt the necessary measures directed towards the full realization of the right to water".[35] The latter obligation can be disaggregated into three specific duties: to facilitate, requiring States "to take positive measures to assist individuals and communities to enjoy the right"; to promote, which obliges States to ensure "appropriate education concerning the hygienic use of water, protection of water sources and methods to minimize water wastage"; and to provide (the right) "when individuals or a group are unable, for reasons beyond their control, to realize that right themselves by the means at their disposal".[36]

In the past, but even today, the rules of water law have been adopted by domestic legal systems, even if this good is subject to commercialization. By contrast, the norms of international trade law dispose – and impose – more stringent parameters that make the protection of the right to water no longer as an *erga omnes* obligation according to international law. By mentioning the World Trade Organization (WTO) system and rules, oriented to "liberalization through regulation", it is possible to identify in

the programmatic structure of the Preamble of the Marrakesh Agreements, as well as in several exceptions clauses established by the same treaty, the means to anchor access to water in human rights. The effect is a clear support for the implementation of a right of access to water, even if it is carried through commercial activities. The Preamble considers trade as a component to improve development for human communities, and protection for the environment as a way to include water as a component of various ecosystems. A specific reference to such clauses can be found in Articles XI and XX of the General Agreement on Tariffs and Trade. The first case rules that WTO Member States have an obligation to "avoid critical food shortages"; the other refers to the obligation to take "necessary measures to protect human health and human life". Obviously, these are measures related to commercial activities and, in particular, temporary measures according to the international trade law, but they show how the basic needs of people, and hence their rights, can also be a derogation to very binding rules. They also make clear, however, that only a consideration of water based on human rights can unite the various self-contained regimes of international law and therefore overcome its fragmentation. This methodological approach is the same as the one used for the recognition and interpretation of new fundamental rights under international jurisprudence, as in the case of the European Court of Human Rights which has not explicitly recognized a human right to water, but has found a violation of the right against inhuman or degrading treatment in the denial of regular use, and disposal of, fresh water to a detainee.[37]

Legal analysis of praxis during the past years has demonstrated that the right to water requires not only strategies or plans of action, but rather a monitoring and evaluation system.

Legal analysis of praxis during the past years has demonstrated that the right to water requires not only strategies or plans of action, but rather a monitoring and evaluation system. This was exercised by the Human Rights Council during its March 2011 session, when it took action to appoint the former "Independent Expert on the issue of human rights obligations related to access to safe drinking water and sanitation", as first Special Rapporteur on the Human Right to Safe Drinking Water and Sanitation.[38] The mandate of the Special Rapporteur has facilitated a definition of the goals to implement this right by introducing a list of recommendations and remarks on how the different stakeholders should operate. The first results of this work can be summed up in a list of measures that every State "must" implement, and their content is not exhortative, but also compulsory, at least in language and terminology. Clear examples include:

(a) States must mainstream the human rights to water and to sanitation into existing strategies in other fields in order to ensure coherent planning;

(b) States must also develop specific strategies and plans for the water and sanitation sectors to ensure that these issues are accorded sufficient priority and that their specificities are taken into account;

(c) Where strategies and/or plans for the water and sanitation sectors are already in place, States should re-examine these, and revise and align them with human rights standards and principles as necessary;

(d) States must first aim at basic access for everyone and then move progressively towards higher levels of service;

(e) States must devise specific strategies to address discrimination and to reach the most disadvantaged. They must identify vulnerable and marginalized populations, patterns of discrimination, and their underlying structural causes by, *inter alia*, collecting disaggregated data. They must set specific targets to reduce inequalities in access, develop tailored interventions for specific circumstances and specifically monitor progress for these groups".[39]

More details on the obligations of States to provide a framework to achieve universal coverage of the access to water resources is referred to in the following: "States must go to the maximum of available resources in the realization of the rights to water and to sanitation, turning to international assistance where needed. Progressive realization also implies gradually higher levels of service".[40] The standards for compliance set forth in these provisions are expressed as legally binding, and requiring a commitment from the State to ensure sustainability. They also emphasize accountability, in accord with the mandate of the Special Rapporteur "[t]o monitor the way in which the human right to safe drinking water and sanitation is being realized throughout the world".[41]

It is important to note that words such as cleanliness and safety, accessibility and affordability, common heritage, equitable management, and solidarity have become part of the international language and of international rules or soft law instruments applied to water. This opens up the possibility to consider water as a strategic asset in the lives of persons, and, therefore, in relation to their fundamental rights. This perspective, related to peoples, allows to consider the various components of the right to self-determination that, already in 1962, the United Nations extended to permanent sovereignty over natural resources[42], including watercourse; In addition, in relation to persons, this constitutes the basis of a right of access to water or to affordable and safe water resources.

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5. An approach based on the geopolitics of water

The core-approach of these considerations about water in the context of the international legal system is the relation of water resources, not only to the question of scarcity/stress determined by drought, soil degradation, situations of the dried and desert areas, but also to the development objectives, the fight against poverty and conflicts.

Therefore, what emerges is a consideration of situations where water scarcity is not only a structural problem of international cooperation, but is linked to the geopolitics of water, and, in this situation, is not at the mercy of weather or geographic conditions.

This vision of geopolitics of water is debated in the international arena and is further developed when there is competition over water, which is caught between opposing claims over the use of this resources in human consumption, food supplies, agriculture production, livestock and, more recently, aquaculture, and industrial activities especially in regions or areas with heightened environmental risk. In the coming years, the impact of negative factors, such as climate change and environmental pollution, will lead to unpredictable scenarios related to access to water and may be the determinant factor in water-related crises. These scenarios are sufficient to consider the need for an international strategy to prevent conflicts related to water, and to implement the conditions – rules, institutions, public consensus – for the full enjoyment of the right to water – by elaborating a strategy on such access. The strategy will need to consider ways to provide all people access to fresh water and sanitation and thus guaranteeing a fundamental right rather than simply articulating a plan of action or an instrument to achieve or to manage generic sustainable development.

The impact of negative factors, such as climate change and environmental pollution, will lead to unpredictable scenarios related to access to water and may be the determinant factor in water-related crises.

Achieving a right to water will require close cooperation in order to determine the amount of water resources, their conservation needs, safety and risk of degradation in the different regions of the world.[43] There is a need to elaborate a water policy consistent with the use, first of all, of agricultural activities, industries and other public uses; and of shared commitments and goals reaching to both international and domestic levels. In agriculture, the most relevant challenge is to increase production by 60 percent by 2050, in anticipation of the growth of the world's populations that will reach more than 9 billion people by that time. In connection with this need, an interesting hypothesis to study would be that more production requires more irrigation and thus greater mobilization of water resources. Faced with this growing demand for water resources, a concrete response might be the use of wastewater in land irrigation systems. However, this will require an increase in level of treatment of wastewater by appropriate procedures in order to conform to the agricultural labor cycle. Otherwise, the resulting environmental damage will be irreversible.

This route is now established in the Agenda 2030, in the specific development goal dedicated to water (SDG 6). A second objective will be to bridge the technical gap in the structures of this sector among different Countries. The real question is whether to transfer the technology for water retention as it presently exists or whether to consider it according to the criteria of modern science and to the perspective of future generations.

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The affirmation of a right to water is consistent with a conviction that water resources belong to the arena of common goods, and therefore are public and not appropriable by a single control. This implies the recognition

that water can be used by everyone without restriction, as a public good excluding any marketing or commercialization. In this regard, the CESCR emphasized in paragraph 11 that "Water should be treated as a social and cultural good, and not primarily as an economic good".

However, does this really correspond to reality? The geopolitics of water has been set up in accordance with a consolidated attitude by States or private corporations to commercialize water resources. The consequence is the economic relevance and the exchange value acquired by water, in addition to the legal aspects related to the right to water, to access and to the use of fresh water. According to the international legal order, this consideration about trade regimes of water may be considered as a vehicle to submit the right to water to the rules of international trade law and, consequently, to investigate the relationship, or disagreement, between a fundamental right to water and the laws that ruled the use of water resources.

6. The future: a work-in-progress fundamental right

Previous reflections about the relationship between water and human rights, today and in the future, have attempted to demonstrate that relevant instruments and proceedings of international human rights law have succeeded in clarifying the constitutive elements of the right to water, and have laid the foundation of its enforcement. This allows us to conclude that, to date, improvement has been made on some aspects, the most relevant ones from a legal point of view, and then try to envision an outlook for the future, over the medium and long term.

It is important to note that international principles and rules related to guaranteeing the right of access to water resources do reflect a human-based approach as evident in a range of components that provide the basis of this right:[44]

- freedoms, such as protection against arbitrary and illegal disconnection; prohibition of unlawful pollution of water resources; non-discrimination in the access to safe drinking water and sanitation, notably on the basis of land or housing status; non-interference in the access to existing water supplies, especially to traditional water sources; and ensuring that personal security is not threatened when accessing water or sanitation facilities outside the home;

- entitlements including access to a minimum amount of safe drinking water to sustain life and health; access to safe drinking water and sanitation in detention; and participation in water- and sanitation-related decision-making at the national and community levels;

- sufficient and continuous supply, which comprises water for drinking, washing clothes, food preparation and personal and household hygiene;[45]

- safe and acceptable use and physically accessible for all sectors of the population, taking into account the needs of particular groups, including persons with disabilities, women, children and the elderly;[46]

- affordability for all, in the sense that no individual or group should be denied access to safe drinking water because they cannot afford to pay.

Even if these are not the only references to water in international human rights instruments, they certainly form the starting point for considerations made by scholars who have attempted to systematize this right. Different opinions on the conceptualization of the right to water have arisen: an element belonging to other rights, a self-standing right as part of international law of human rights or an enabling condition to achieve other rights?

How could we think about overcoming these differences? In a broad sense, is it possible to consider the relation between access to water and fundamental rights in an appropriate manner or in coherence with international law principles, rules and standards? In the context of international treaty law, access to water resources is a right related to other rights, which are explicitly accepted as binding rules or legal obligations deriving from treaties. In this regard, an approach through the source of access to water is identifiable with different rights: adequate standard of living, health, food, clothing, housing or education, as envisaged in the article 11 of the International Covenant on Economic, Social and Cultural Rights. Moreover, the recognition and provision of a right of access to water in several soft-law instruments, adopted by intergovernmental institutions or conferences, have been increasingly accepted by States as legal conviction (opinio juris), as well as the efforts to implement this right in many Countries through legal practice (diuturnitas). This allows us to consider access to water as an established or emergent rule of customary international law. Finally, the systematic interpretation adopted by the CESCR in the General Comment No. 15 that emphasizes the relationship between access to water, standard living rights and the fundamental principles of international human rights law, in primis non-discrimination, make this right fully legitimate.

The binding force deriving from treaty law, the general practice shared by States with customary law, as well the obligation of States to treat access to water not differently from any other component of an adequate living standard as required by the non-discrimination principle, demonstrate that the legal basis of the relation between access to water and human rights can be considered as "the progressive development of international law".

The binding force deriving from treaty law, the general practice shared by States with customary law, as well the obligation of States to treat access to water not differently from any other component of an adequate living standard as required by the non-discrimination principle, demonstrate that the legal basis of the relation between access to water and human rights can be considered as "the progressive development of international law".[47] Of course, there are still a number of problems to be resolved in order to

achieve the full enjoyment of this fundamental right, not only because of the diversity of positions among scholars, but also because of the differences in the engagement of States, in particular, with regard to the provisions of international human rights law. In order for this branch of international law to guarantee the access of everyone to water resources, certain basic requirements must be fulfilled. Two examples can help clarify this assertion.

First of all, there is the principle that rights are interdependent and indivisible.

First of all, there is the principle that rights are interdependent and indivisible. Thus, they cannot be freely chosen, even in the context of the distinctions among civil, political and economic, social and cultural rights. This approach eliminates the traditional distinction between the rights that States must guarantee with omissions (obligations not to do or to permit) and rights that need affirmative action (obligations to do). Each category of rights requires the same level of political, institutional, regulatory and economic commitment. Consequently, according to the international law of human rights, in order to ensure a fundamental right such as access to water, States are called upon to engage in obligations of conduct and obligations of result, overcoming the traditional distinction that was limited only to the obligations of conduct, namely the protection of social and economic rights, since programs and resources are clearly needed to implement them.

Then there is justiciability, that, according to practice, seems to have become a point of reference for human rights, especially when confronting absence, or lack of protection, as well as in case of violation of the principle of equality.

Then there is justiciability, that, according to practice, seems to have become a point of reference for human rights, especially when confronting absence, or lack of protection, as well as in the case of violation of the principle of equality. Justiciability refers to the relationship between the protection of rights and the territorial exercise of statehood sovereignty, both in the establishment of specific rules and in procedural safeguards. With regard to access to water, the finish line of justiciability is still far away. Moreover, today and in the years to come, as we are faced with water scarcity, there will be a much greater increase in the privatization of water. Therefore, opposition of claims about property, use, or appropriation of resources, as well as trade disputes between national and transnational corporations engaged in packaging and commercialization of water, will become a concrete reality that States will have to address by strengthening their judicial system. Recognizing access to water as a right may be a strategy to assure that commercial uses do not limit the use of water for human consumption. This context also could include the protection of disadvantaged and vulnerable groups in relation to the justiciability of their rights, as in the case of indigenous people. The justiciability for such peoples can be achieved, first and foremost, through the application of the principle of free, prior and informed consensus "particularly in connection with the development, utilization or exploitation of mineral, water or other resources".[48] Justiciability, therefore, constitutes a criterion to assess the protection of water resources and implementation of an affordable access to safe drinking water and sanitation.

Based on the abovementioned considerations, it is possible to define the right of access to water as a work-in-progress right that requires full acquiescence by States to the provisions of international law and respect of its obligations related to water. Such acquiescence can co-exist with the necessary resources and can promote a widest range of cooperation in favor of areas and people because of their vulnerability to the effects of water scarcity, pollution or degradation. Sustainable, equitable and reasonable use of the water resources will be a way to take into account the interests of future generations in the context of human rights protection.

These considerations have tried to demonstrate that no rules and legislation, domestic or international, nor judgments, can solve the water emergency that currently concerns our planet and human life on Earth. The efforts to comply with the relevant norms of international law related to the protection of water resources and to the implementation of international human rights law may be a suitable path to promote and eventually achieve the full enjoyment of the right of access to water.

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COMMON GOOD AND COMMON WEALTH: TRADE AND WATER

A Caritas in Veritate Foundation Report by

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1. Background

Water contributes to improvements in social well-being and inclusive growth. Water is necessary for social development, and access to water to satisfy essential needs is a fundamental, inalienable, universal right. Yet, the demand for water is expected to increase 55 per cent by 2030[1] and at the same time global water resources may only meet 60 percent of the world's needs.[2] Global water demand is largely influenced by population growth, urbanization, food and energy security policies, and macro-economic processes such as trade globalization, changing diets and increasing consumption. The existing freshwater resources therefore face rising pressure to provide for the social, economic and environmental needs of a growing world population. Unless the balance between demand and finite supplies is restored, the world will face an increasingly severe global water deficit.

Water is necessary for social development, and access to water to satisfy essential needs is a fundamental, inalienable, universal right.

Studies show that human populations are using 10 per cent more water than is sustainable in the longer term, and the gap continues increasing with population growth, prosperity and urbanization.[3] Water is, in fact, one of the biggest challenges for sustainable development over the coming decades, with its effects being felt environmentally, socially and economically. For this reason, the current Transformative Agenda 2030 has a dedicated water goal (Sustainable Development Goal – SDG 6) which reinforces the need of water-use efficiency across all sectors to ensure sustainability of the water resource (see Target 6.4. - By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity, and substantially reduce the number of people suffering from water scarcity).[4]

Current data shows that agriculture is by far the thirstiest consumer of freshwater globally, accounting for 70 per cent of freshwater withdrawals worldwide, although this figure varies considerably across countries; while industry and energy together account for 20 per cent of water demand, leaving only 10 per cent for domestic use.[5] While currently the agricultural

sector consumes close to 80 per cent of freshwater, projections indicate that industry will account for most of the increase in water use to 2025.[6] Overall, lack of water in all its forms could reduce the world's gross domestic product by 2.6 per cent.[7]

A recent Joint Monitoring Programme (JMP) report[8] highlights that 2.1 billion people lack safely managed drinking water services; yet, access to water is not just an obvious basic necessity. Accessing water in sufficient quantity and quality is also the basis for any country to lock in all the potential of its economic development. As clarified by the Committee on Economic, Social and Cultural Rights and the General Comment No. 15, the right to water covers only personal and domestic uses, and the water for agriculture is, for instance, covered under the right to adequate food, provided for in Article 11 of the Covenant. However, the General Comment No. 15 States that priority should be given to "the water resources required to prevent starvation and disease, as well as the water required to meet the core obligations of each of the Covenant rights."[9] The continuing contamination, depletion and unequal distribution of water is exacerbating existing poverty and effective measures must be adopted to realize, without discrimination, the right to water, as set out in the United Nations Committee on Economic, Social and Cultural Rights (CESCR) General Comment No. 15 paragraph 6.[10]

Accessing water in sufficient quantity and quality is also the basis for any country to lock in all the potential of its economic development.

It is important to clarify that whereas the right to water applies to everyone, in order to ensure there is non-discrimination in access, Governments have a duty of ensuring that sufficient attention is given to disadvantaged and marginalized groups. This is currently reiterated in SDG 6 especially under Target 6.1 and 6.2. which also call for special attention to certain groups such as women and girls, but also those in vulnerable situations. The scope of non-discrimination in access in the Human Right to water and sanitation framework captures those individuals and groups who have traditionally faced difficulties in exercising this right, including:

> women, children, minority groups, indigenous peoples, nomadic, traveler communities, refugees, asylum seekers, homeless people, internally displaced persons, migrant workers, prisoners, detainees, victims of natural disasters, persons living in disaster-prone areas, and those living in arid and semi-arid areas, or on small islands are provided with safe and sufficient water.

There is a clear emphasis under the human rights law that vulnerable and marginalized groups should have equitable access to water for personal and domestic use and water management systems, including sustainable rain harvesting and irrigation technology. In this respect, a people may not "be deprived of its means of subsistence" for securing the livelihoods.[11] Additionally, as underscored in the General Comment No. 15 paragraph

14 and in paragraph 16, the allocation of water resources, and investments in water, should effectively facilitate access to water without overt or covert discrimination. For example, investments should not disproportionately favor expensive water supply services and facilities that are often accessible only to a small, privileged fraction of the population, rather than investing in services and facilities that benefit a far larger part of the population. It is further reinforced that access to water should not be based on housing or land status and specific consideration is needed for access to the rural and deprived urban areas (including informal human settlements); and traditional water sources in rural areas which should be protected from unlawful encroachment and pollution.

[...] steps taken by Governments to ensure access to safe available, affordable and acceptable drinking water must be deliberate, concrete and targeted towards the full realization of the right to water for all.

Overall, and in the context of progressive realization, steps taken by Governments to ensure access to safe available, affordable and acceptable drinking water must be deliberate, concrete and targeted towards the full realization of the right to water for all. While there are few mechanisms to monitor the progressive realization of the human right to water in national practice across countries and over time,[12] tracking the rates of change in water and sanitation coverage, under human rights law, requires specific metrics that allows for measurements of the progressive realization of human rights, publishing structural, process and outcome level indicators reflective of the human rights norms and principles.

Such monitoring correlates to the national implementation efforts (including clarity in the legal, policy, and regulatory frameworks i.e. adequate enabling environment) and is an area for further advocacy in the current sustainable development agenda for facilitating rights-based accountability for water and sanitation policy.[13] Given that many national water and sanitation systems remain disconnected from international human rights frameworks, implementation of the rights to water and sanitation begins through codification under national law, with these structural changes leading subsequently to reformed policy processes and then to improved health outcomes.[14]

As will be seen in the subsequent sections, water accountability at the levels of both international human rights law and national level laws, policies, and regulation, can contribute to alleviating the global water crisis across countries and regions and ensure reduced inequality at all levels.

2. Trade and water

Studies confirm that unlike the debate on the relationship between international economic law and water, namely the question of privatization of water services under the General Agreement on Trade in Services (GATS), there has been relatively little attention brought to international trade in water.[15] This is despite the fact that commercial pressures to export water are raising growing concerns among local

communities and environmental organizations over the over-exploitation of water resources and the impact of international trade agreements on national environmental policies.[16]

As a critical resource for agriculture, public health and domestic activities, transportation, and recreation, many water uses are already traditionally local activities. Surface waters have long been part of the community's political, social, and religious structures,[17] and decentralization policies are in line with the International Community's shift away from viewing water as a commodity whose rights can be sold by national Governments. During the 1990s, the United States/International Monetary Fund-led 'Washington Consensus' encouraged developing nations to privatize many Government services, including water service delivery. The movement to commodify water resources has however been slowed, in part, because of water's essential role for human survival, the vulnerability of low-income and marginalized groups to price distortions has led to a growing movement to view water as a human right.

The movement to commodify water resources has however been slowed, in part, because of water's essential role for human survival, the vulnerability of low-income and marginalized groups to price distortions has led to a growing movement to view water as a human right.

It must be noted, however, that water is also one of the most complex natural resource, as quantifying availability, controlling flows, regulating pollution, and monitoring water users can be elusive if the right enabling environment is not in place and sufficiently implemented. In India, 65 per cent of Indian bottlers simply pump water from any bore well or even municipal water supplies resulting, in addition to poor bottled water quality, in threatening ground water resources because of overexploitation and pollution due to purification and processing.[18]

To ensure more inclusive approaches and render water resources management to more effective coordination of the multiple stakeholders, (including the local communities who may often not be equipped to handle such challenges), the decentralization of water resources management has become an attractive option for countries with large or complex watershed systems – giving rise to the foundational element of the Integrated Water Resources Management (IWRM) paradigm, and prominence to the principle of subsidiarity.[19] While noting that IWRM implicitly endorses a decentralized decision-making structure, where water resources governance is primarily undertaken by institutions at the level of the water resource, in practice water resources management in most instances still remains highly political and under the jurisdiction of Sovereign States.[20]

Internationally, the 1992 Dublin Statement on Water and Sustainable Development[21] established stakeholder participation as one of the four pillars of IWRM claiming that a participatory approach 'means that decisions are taken at the lowest appropriate level, with full public consultation and involvement of users in the planning and implementation of water projects.' Furthermore, the 1997 United Nations Convention on the Law of the Non-Navigational Uses of Watercourses (UN Watercourses Convention), albeit not so explicitly supporting the principle of subsidiarity, included

as a guiding principle the right of equitable participation, while, more firmly, the 2004 Berlin Rules on Water Resources support the concept of decentralization by establishing the right of persons likely to be affected to participate in water resource management processes. At the regional level, the Nile Basin Cooperative Framework Agreement, for example, lists subsidiarity as one of its guiding principles. Despite the fact that the Agreement has not entered into force due to vociferous disagreements over certain controversial legal provisions, the principle of subsidiarity is not among these disputed provisions.[22]

The consideration of water as an economic resource or as a social good is a complex and controversial issue. Recent studies confirm that there is a broad shift in international law and policy towards seeing water mainly as an economic good.[23] The Dublin Principles established at the 1992 United Nations International Conference on Water and Sustainable Development described water as an "economic good" in its fourth principle – "water has an economic value in all its competing uses and should be recognized as an economic good".[24] Subsequently, a shift in perspectives and in State obligations, contested and spurred by a movement to have access to clean water, integrated into the international human rights regime.[25] As a follow-up of the Dublin doctrine, the Rio Conference clearly recognized that water must be managed both as an economic and a social resource, stating in Chapter 18 of Agenda 21 that "integrated water resources management is based on the perception of water as an integral part of the ecosystem, a natural resource and a social and economic good".[26] The World Water Vision adopted in 2000 by the World Water Council stated that water must be treated as an economic good and introduced the idea of moving towards full-cost pricing of water services for all human uses.[27]

International trade in goods affects water usages and illustrates how countries are relying on international trade to source products from abroad for domestic production that would otherwise put further strain on their water resources.[28] Various concerns over water usages may be concomitant to international trade, but these are not necessarily a root cause but rather a by-product of how countries decide to produce and trade. However, agreements concerning trade liberalization should not curtail or inhibit a country's capacity to ensure the full realization of the right to water, the latter of which should be given due attention in international agreements supported by the development of further legal instruments by States as relevant.[29] These obligations extends to the conclusion and implementation of other international and regional agreements, where steps are equally needed to ensure instruments do not adversely impact upon the right to water. Key to these processes are the specific obligations related to access to safe drinking water as well as the international conventions which explicitly recognize the right to water.[30]

However, agreements concerning trade liberalization should not curtail or inhibit a country's capacity to ensure the full realization of the right to water, the latter of which should be given due attention in international agreements supported by the development of further legal instruments by States as relevant.

In the face of what has been referred to as the global water crisis, it has become generally accepted by the International Community that water should be treated as an economic good in order to solve problems of scarcity, inefficiency and unsustainability.[31] Increasingly, too, the human right to water has been referred to in international declarations, regional resolutions[32] and national constitutions. Many constitutions contain explicit references to the right to water, including those of Bolivia (Plurinational State of), the Democratic Republic of the Congo, Ecuador, South Africa, Uganda and Uruguay. Recognizing the right to water domestically is intrinsic to fulfilling the right, it entitles individuals to demand it politically, administratively and judicially.[33] Such constitutional recognition, the development and interpretation of legislation and policies need to be aligned in accordance with the right.[34] Courts from various legal systems have also adjudicated cases related to the enjoyment of the right to water, covering issues such as the pollution of water resources, arbitrary and illegal disconnections, or lack of access to sanitation.[35]

Many constitutions contain explicit references to the right to water, including those of Bolivia (Plurinational State of), the Democratic Republic of the Congo, Ecuador, South Africa, Uganda and Uruguay.

The concept of basic water requirements to meet fundamental human needs was first established at the 1977 United Nations Water Conference in Mar del Plata, Argentina. Its Action Plan asserted that all peoples, whatever their stage of development and their social and economic conditions, had the right to have access to drinking water in quantities and of a quality equal to their basic needs.[36] The UN Economic and Social Council has since argued that the social and cultural, not just economic, value of water be taken into account, expressing concern that pricing alone cannot ensure equitable access to clean water for all people, nor can it safeguard the needs of local ecosystems.[37] As advanced in other literature, the consideration of water as a social resource implies that its availability should favor social well-being, at both individual and collective levels.[38] Other studies have claimed that making water available at subsidized prices will generate non-efficient water use, leading to water scarcity.[39]

Whereas water scarcity is predominantly influenced by precipitation changes and the pattern of water use, it is also driven by social contexts such as capital intensity (the capital–labor ratio), trade openness, and income.[40] There has been a growing interest from both trade and water experts in the relation between international trade and freshwater scarcity since local water depletion and pollution are often closely tied to the structure of the global economy. The competition for water – between water 'uses' and water 'users' – increases the risk of localized conflicts and continued inequities in access to services, with significant impacts on local economies and human well-being. Persistent poverty, inequitable access to water supply and sanitation services, inadequate financing, and deficient information about the state of water resources, their use and management impose further constraints on water resources management and its ability to help achieve sustainable development objectives.

The competition for water – between water 'uses' and water 'users' – increases the risk of localized conflicts and continued inequities in access to services, with significant impacts on local economies and human well-being.

Many water problems are closely linked to international trade; with increasing trade between nations and continents, water is more frequently used to produce exported goods.[41] Previous studies have conducted analyses on the determinants of water use but have ignored the endogeneity of trade openness, yet trade openness on the degree to which water is withdrawn and consumed can contribute to water accountability.[42] Researchers have analyzed how trade and income affect water withdrawal and further investigated the relationship between income and the degree of water consumed or withdrawn.[43] International trade in commodities implies long-distance transfers of water in virtual form, where virtual water (invented by Tony Allan of King's College London) is understood as the volume of water that has been used to produce a commodity and that is thus virtually embedded in it. Knowledge about the virtual water flows entering and leaving a Country can cast a completely new light on the actual water scarcity of a Country.[44]

International trade in commodities implies long-distance transfers of water in virtual form, where virtual water is understood as the volume of water that has been used to produce a commodity and that is thus virtually embedded in it.

Jordan imports about 5 to 7 billion cubic meters (m3) of virtual water per year, which is in sharp contrast with the 1 billion m3 of water withdrawn annually from domestic water sources. This means that people in Jordan apparently survive owing to the import of water-intensive commodities from elsewhere, for example from the USA.

Mexico imports cereals from America which use 7 billion m3 of water. If it grew these cereals itself, it would use 16 billion m3, so trade "saves" 9 billion m3 of water. But such beneficial exchanges occur more by chance than design. Because most water use is not measured, let alone priced, trade rarely reflects water scarcities. There is empirical evidence suggesting that Countries often set tariffs to exploit their market power when they have policy space to do so.[45] In the absence of tariff water, importing Countries' market power tends to be negatively correlated with applied tariffs, which is consistent with a cooperative tariff-setting. Conversely, in the presence of tariff water, the relationship between importers' market power and tariffs tends to become positive, suggesting a tendency towards non-cooperative tariffs.[46]

However, optimal tariff-setting often results in a negative externality for trading partners which create incentives for trading partners to cooperate within a negotiating framework such as the World Trade Organization (WTO) or regional trade agreements. Indeed, there is large empirical evidence suggesting that WTO negotiations do facilitate cooperation in tariff-setting by providing a negotiating table to internalize terms-of-trade externalities. WTO confirms that the positive correlation between importers' market power and tariffs is only observed when levels of tariff water are above 20 percentage points.[47] The absence of legal constraints as the fear of retaliation from trading partners is one of the possible explanations for setting tariffs at non-optimal levels.

Other studies on virtual water have shown that trade openness has a favorable effect on water use efficiency; but this favorable effect would be lost if a Country were to erect a barrier to technological development accompanied by trade liberalization. When the overall effect induced by trade is calculated as being in the range of –1.00 to –1.52; this means that the overall effect of a 1 per cent increase in the intensity of trade openness reduces the degree of water withdrawal/consumption by roughly from 1.0 to 1.5 per cent, on average.

It has been advanced that trade patterns thus influence patterns of water use and scarcity: import of water-intensive commodities reduces national water demand, which is attractive for water-scarce countries like in the Middle East and North Africa; while export of water-intensive commodities, raises national water demand and thus enhances national water scarcity (e.g. in the USA and Australia). But there is, as such, no private ownership of water so that it even cannot be traded as in a market.[48] But water is traded in virtual form, i.e. in the form of agricultural and industrial commodities.[49]

Arguably, virtual water trading holds a potential solution for water-short countries to achieve food security, and may also have the potential to play a key role in international negotiations over management of transboundary water resources.[50] However, as a precaution, it should be understood that solely virtual water should not be used for any decision-making since the idea of virtual water implies only the usage and influence of water and no concerns on social, cultural, and environmental implications. Virtual water trade also does not consider other limiting factors than water.[51]

In practice, water scarcity appears to affect trade patterns only in cases where absolute water shortage forces water-scarce countries to import water-intensive products, because they simply cannot be produced domestically.[52] Global water-use efficiency can be increased by including water scarcity as a factor into trade decisions, but taking care not to cause water dependencies. According to Hoekstra, Arjen (2010), one of the key dilemmas of trade and water lies in the imbalance between international trade agreements and international agreements on sustainable water use, because the former are strong and the latter weak.

Water falls not only in the human rights legal framework, but also the international trade legal framework though the approaches differ. "We all have the right to food, health, water, and development. Trade is an opportunity for a Country's growth and for the advancement of these human rights. At the same time, trade can also have a negative influence on these human rights. Trade agreements invariably affect the human rights of consumers, residents, workers, those in poverty and others, and on the ability of States to regulate and protect the human rights of their people. However, trade agreements are often negotiated without reference to their impact on the rights to health, education, food, work, and water."[53]

While recognizing that globalization may contribute to human rights and development, experience suggests that human rights have frequently been subordinated to dogmas of market fundamentalism with a focus on profit rather than sustainable development.

While recognizing that globalization may contribute to human rights and development, experience suggests that human rights have frequently been subordinated to dogmas of market fundamentalism with a focus on profit rather than sustainable development.[54] Accordingly, international investment agreements and investor–State dispute settlement agreements must be tested for conformity with the Charter of the United Nations and never undermine the ontological State function to ensure the welfare of all persons under its jurisdiction, nor lead to retrogression in human rights.[55]

The inter-disciplinary nature of trade and water – in which understanding the relation between international trade and patterns of water scarcity and water quality, the environmental, social and political dimensions are as important as the economic dimension.[56] Understanding these nexuses is of critical importance for the tangible delivery of a robust sustainable development agenda, which are defined in a manner that reinforces such interlinkages and the integration. It is noteworthy that the SDGs put more emphasis on water and trade compared with the Millennium Development Goals (MDGs) and the words "(fresh)water" and "trade" are significantly more frequently used in the SDGs.

Additionally, WTO and "ecosystem" are now mentioned in the SDGs – thus SDGs allow for a more complex approach on the grounds that most of the issues are interconnected and cannot be approached in isolation.[57] It is important to point out that although the SDG framework provide concepts for the freshwater management (such as integrated water resources management and water efficiency), what is lacking is clarity about how to translate these goals into specifically designed domestic policies and targets. At the domestic level, it will be crucial to ensure adequate and strengthened regulatory frameworks.[58]

It is important to point out that although the SDG framework provide concepts for the freshwater management what is lacking is clarity about how to translate these goals into specifically designed domestic policies and targets.

The lack of a common understanding of whether or not water should be viewed as a commodity or a basic human right has resulted in heated debates among legal professionals and leading members of the academia.[59] For instance, Maude Barlow 2014, in her book Blue Future argues that "water must not become a commodity to be bought and sold on the open market […] we must choose between protecting the commons or commodifying them; between cooperation or persistent, life-threatening conflicts and the resulting devastation."[60] Other professional have argued that "water is not tradable, but when you trade agricultural products, you are trading water. In Colombia, inflation often follows weather-related disasters. This causes economic instability, which challenges traditional monetary policy. But monetary policy alone cannot control flood and energy inflation, both of which are strongly influenced by climate change."[61]

As innovations in water technology advance, a new phenomenon of commodification of water and transfer of large volumes of water across long distances for commercial purposes has emerged: new bulk storage and transfer technologies have now been developed to make it possible

to move large volumes of water across long distances for commercial purposes, through massive pipelines, supertankers or giant sealed water bags.[62] In practice, however, water is now traded in bulk form (by human/made diversions, including canals, taker ships, trucks, or pipeline) either domestically or between States.[63] Such opening up of the international market-place to water has exacerbated the situation of water scarcity in the more water-impoverished countries, reinforcing inequalities between rich and poor countries and in some cases impacting on water affordability due to price of water increases.

While the current trade regime and its underlying principles provide the framework for a vast set of policy options to harness the benefits of international trade, clearly water challenges respond to local issues and confined circumstances requiring institutional responses at the catchment level.[64]

3. Water affordability

"social sustainability" in the form of affordable access must not be jeopardized in favor of measures that aim to secure economic and environmental sustainability. Hence, to be environmentally sustainable, there must be sufficient water resources of good quality available to serve existing and future users.

Ensuring affordability is complex and requires different interventions in different contexts. As highlighted in the Report of the Special Rapporteur on the human right to safe drinking water and sanitation (A/HRC/30/39 para 29), when seeking to ensure affordability in practice, measures to implement human rights often need to be reconciled with broader considerations of ensuring environmental and economic sustainability. In addition, I argued that "social sustainability" in the form of affordable access must not be jeopardized in favor of measures that aim to secure economic and environmental sustainability. Hence, to be environmentally sustainable, there must be sufficient water resources of good quality available to serve existing and future users.[65]

Studies show that at the level of securing access, water is rarely priced in ways that reflect supply and demand. Usually, water pricing simply means that city dwellers pay for the cost of the pipes that transport it and the sewerage plants that clean it.[66] At the users level, beyond securing the minimum guarantees of water for per capita for personal and domestic use, water amounts used by people for other functions and in other sectors should be subject to water pricing and mechanisms and regulated market forces (e.g. through a tiered pricing system) and other innovations for water efficiency.[67]

Required water allotments for personal and domestic use does not necessarily mean that water is free, and in fact the human rights framework does not provide for a right to free water. However, underpinning this is affordability requirement - which also underlines that cost recovery should not become a barrier to access to safe drinking water and sanitation, notably by the poor, who should not be disproportionately burdened with water and sanitation expenses. Furthermore, all direct and indirect costs related

to water and sanitation should not prevent anyone from accessing these services and should not compromise their ability to enjoy other human rights, such as the rights to food, education, adequate housing or health.[68]

Since July 2010, the UN General Assembly declared that access to clean water and sanitation is a human right; but the assembly did not specify whether a public authority or the private sector would be best capable of providing this right. However, as elaborated in the General Comment No.15 (2002), whatever the service delivery option, the State retains the human right obligation to protect, respect and fulfil. In defining economic accessibility, the General Comment No. 15 under paragraph 12c (ii) emphasizes that water, and water facilities and services, must be affordable for all, noting that the direct and indirect costs and charges associated with securing water must be affordable, and must not compromise or threaten the realization of other Covenant rights.

Given that people's capacity to pay for water and sanitation differs depending on their socio-economic situation, as well as the method of service delivery, States must therefore find ways of guaranteeing affordability, especially for the most disadvantaged individuals and communities, while also ensuring overall sustainability of services.[69] Furthermore, the State's obligations to ensure affordable access to water and sanitation in institutions – such as schools, health centers and prisons – or at work and in public spaces is also essential.

For anti-privatization activists, enshrining access to water as an independent human right should affirm the role of the State as the principal duty-bearer in water provision, and guard against privatization which they believe commodifies a public good and makes access less affordable. But on the other hand, the ongoing failure of Governments around the world to fund the infrastructure necessary for improving water quality and access means private sector involvement continues to be an attractive option.[70] At the center of private sector engagement in delivering water infrastructure and services, however, lies the question of affordability since access to affordable water and sanitation services is crucial for the realization of the human rights to water and sanitation.

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The importance of affordability for all (and especially for the poor, vulnerable and marginalized groups) is underscored in the UN Special Rapporteur for Safe Drinking Water and Sanitation, Leo Heller,[71] who emphasizes that economic perspectives and human rights perspectives are not impossible to reconcile, but human rights require ensuring affordable service provision for all, regardless of ability to pay, and economic instruments must be (re-)designed to achieve this objective.

At the macro level, human rights call for safeguards in the process of setting tariffs and determining subsidies, both in procedural and substantive terms, which include the human rights principles of transparency, access to information, participation and accountability. Furthermore, the State

Furthermore, the State is obliged to ensure that the cost of accessing water (and sanitation) is affordable and meets the needs of marginalized and vulnerable individuals and groups.

is obliged to ensure that the cost of accessing water (and sanitation) is affordable and meets the needs of marginalized and vulnerable individuals and groups. Affordability of services can be ensured for all through different mechanisms, including through public financing, devising appropriate tariff schemes, setting concrete standards to determine affordability, including for those populations that do not receive formal services and regulation.

The private sector, in particular water service providers, as well as large-scale agricultural producers and industry, through the production of goods and services, has an impact on water resources and in most cases could contribute positively to the realization of the human right to water. Where water services are operated by the private sector, concerns have been raised about arbitrary and illegal disconnections, the affordability of water and sanitation services, as well as about the extension of these services to vulnerable and marginalized groups.

In the Committee on Economic, Social and Cultural Rights General Comment No. 24 on State Obligations under the International Covenant on Economic, Social and Cultural Rights in the Context of Business Activities (E/C.12/GC/24)[72] identification of the groups that are often disproportionately affected by the adverse impact of business activities is provided including: women, children, indigenous peoples particularly in relation to the development, utilization or exploitation of lands and natural resources, peasants, fisher folks and other people working in rural areas, and ethnic or religious minorities where they are politically disempowered. In addition, persons with disabilities are cited as among those often disproportionately affected by the negative impacts of business activities, in particular because they face particular barriers in accessing accountability and remedy mechanisms.[73]

Clearly, States have a duty to protect against human rights abuse by third parties, including business enterprises. The private sector equally has a responsibility to make water resources management a priority, and to work with Governments, United Nations agencies, NGOs and other stakeholders to address possible social, economic and environmental challenges that may emerge out of their practice. In addition to the CEO Water Mandate launched in 2007,[74] the UN Guiding Principles for Business and Human Rights : Implementing the United Nations "Protect, Respect and Remedy" Framework (endorsed by the Human Rights Council in its resolution 17/4 of 16 June 2011)[75] provide an authoritative global standard for preventing and addressing the risk of adverse human rights impacts linked to business activity.

While States generally have discretion in deciding upon these steps, they should consider the full range of permissible preventative and remedial measures, including policies, legislation, regulations and adjudication. States also have the duty to protect and promote the rule of law, including by taking measures to ensure equality before the law, fairness in its

application, and by providing for adequate accountability, legal certainty, and procedural and legal transparency.

4. Conclusion

Water contributes to inclusive growth, and will be necessary for the attainment of most of the sustainable development goals. Access to water to satisfy essential needs is a fundamental, inalienable, universal right. To ensure non-discrimination in access, Governments have a duty of ensuring that sufficient attention is given to disadvantaged and marginalized groups at the more local and basin catchment levels. According to the World Health Organization, the average person requires 20 Liter (L) per day for basic subsistence and up to 70 L per day for maintaining a minimum quality of life. An effective infrastructure and water services regulatory framework, aligned with the norms and principles of human rights is proposed to ensure both accountability and sustainability of water resources. Furthermore, the implications of the right to water for water management is that it requires giving priority in water allocation to personal and domestic uses for all.

An effective infrastructure and water services regulatory framework, aligned with the norms and principles of human rights is proposed to ensure both accountability and sustainability of water resources.

In terms of water resources management and governance, the principle of subsidiarity has been considered an important pillar of IWRM. However, it is clear that actual implementation is a challenging undertaking that will require a commitment to comprehensive law-making, capacity-building, and balance between water users. More specifically, low-income countries should be especially mindful of the investments necessary to implement a robust water resources management strategy, though even high-income countries will face unique political challenges.[76]

Key to the States' obligations to protect, respect and fulfil is the need to review whether existing laws provide the necessary coverage in light of evolving circumstances and whether, together with relevant policies, they provide an environment conducive to business respect for human rights. For example, greater clarity in some areas of law and policy, such as those governing access to land, including entitlements in relation to ownership or use of land, is often necessary to protect both, rights-holders and business enterprises. In cases where potential conflict between State obligations under the Covenant and trade or investment treaties exist, States should refrain from entering into such treaties where conflicts are found to exist. The conclusion of such treaties should therefore be preceded by human rights impact assessments, (which should subsequently occur regularly) taking into account both, the positive and negative human rights impacts of trade and investment treaties, including their contribution to the realization of the right to development.

For purposes of ensuring compliance and remedy, the State entering new trade agreements should insert a provision explicitly referring to their

human rights obligations in future treaties, and to ensure that mechanisms for the settlement of investor-State disputes take human rights into account in the interpretation of investment treaties or of investment chapters in trade agreements.[77]

The failure to enforce existing laws that directly or indirectly regulate business respect for human rights has been viewed as a significant legal gap in State practice. The governance of water in this respect is not different: such laws might range from non-discrimination and labor laws to environmental, property, privacy and anti-bribery laws. Therefore, it is important for States to consider whether such laws are currently being enforced effectively, and if not, why this is the case and what measures may reasonably correct the situation.

Additionally, laws and policies that govern the creation and ongoing operation of business enterprises, such as corporate and securities laws, directly shape business behavior. Yet their implications for human rights remain poorly understood. Clearly, WTO policies affect national agricultural policies, and these in turn affect irrigation water use. It is therefore worthwhile further exploring the possibility of incorporating water sustainability considerations into international trade regulations.[78]

"States should maintain adequate domestic policy space to meet their human rights obligations when pursuing business-related policy objectives with other States or business enterprises, for instance through investment treaties or contracts".

The Guiding Principles on Business and Human Rights stipulate in principles 8 and 9 that "States should ensure that Governmental departments, agencies and other State-based institutions that shape business practices are aware of and observe the State's human rights obligations" and that "States should maintain adequate domestic policy space to meet their human rights obligations when pursuing business-related policy objectives with other States or business enterprises, for instance through investment treaties or contracts".[79] Accordingly, all international investment agreements under negotiation should include a clear provision stipulating that in case of conflict between the human rights obligations of a State and those under other treaties, human rights conventions prevail.[80] In this respect, and as proposed by the Human Rights Council in the A/HRC/30/44 report, States should ensure that parliaments, national human rights institutions and ombudspersons are involved in the process of elaboration, negotiation, adoption and application of trade and investment agreements.[81]

Clearly, the human right to water offers framework for viewing water as a social/common good — which should be affordable to all — highlighting the need for States to meet their national and extra-territorial obligations to protect, respect and fulfil when defining and entering trade agreements to ensure no violations of human rights occur, and effective remedial mechanisms are in place to deal with potential risks. In the relationship between trade and water, lies the market power, which left effectively unregulated can necessitate inequalities and intersectional and multiple levels of discrimination for vulnerable and special groups.

Although the approaches differ, water clearly falls not only in the human rights legal framework, but also the international trade legal framework. While trade may be viewed as an opportunity for a Country's growth and for the advancement of socio-economic and cultural human rights, the State must ensure that trade activities do not result in negative human rights impacts. Global water-use efficiency can be increased by including water scarcity as a factor into trade decisions, but taking care not to cause water dependencies.

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10. Water is required for a range of different purposes, besides personal and domestic uses, to realize many of the Covenant rights. For instance, water is necessary to produce food (right to adequate food) and ensure environmental hygiene (right to health). Water is essential for securing livelihoods (right to gain a living by work) and enjoying certain cultural practices (right to take part in cultural life). Nevertheless, priority in the allocation of water must be given to the right to water for personal and domestic uses. Priority should also be given to the water resources required to prevent starvation and disease, as well as water required to meet the core obligations of each of the Covenant rights. See, United Nations Committee on Economic, Social and Cultural Rights General Comment No. 15 (2002) para. 6 page 3.

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have access to clean and safe water and sanitation within their respective jurisdictions. In February, 2015 the Africa Commission for Peoples Human Rights (ACPHR) adopted the Resolution 300 on the Human Right to water In Africa and has since developed draft guidelines (under review) for implementing this resolution. While these declarations and resolutions are not legally binding, they do reflect a consensus and a political statement of intent on the importance of recognizing and realizing the right to water.

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SHARING WATER – WATER AS A PATH TOWARDS PEACE

A Caritas in Veritate Foundation Report by

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1. Introduction

"Access to water is one which goes beyond national borders and requires international cooperation in governance to promote a harmonious, sustainable use of natural resources in view of achieving the global common good". [1]

The vital importance of water to humanity can also be translated in its strategic importance for the establishment and maintenance of peace in the world. Water is a dimension of what today is referred to as "resource security". Conflicts over water resources have been numerous in history and new ones may occur in the future, especially with the new and increasing challenges that are being faced by human beings during this century. As a consequence of changes in demography, the need for water, food and energy has increased. Climate change has disastrous consequences in terms of water scarcity and natural disasters. Non-State armed groups, enhancing violence and conflicts, often use water as a weapon and thus increase suffering among their enemies and force entire communities to be internally displaced. In addition, with the recent rise of populism, international cooperation to confront the above-mentioned challenges, becomes even more difficult. According to the World Economic Forum, water crises are found worldwide and will constitute the third most damaging risk for the years to come. Hence, the Forum strongly advocates "policy options where multi-stakeholder action is critical."[2]

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The modern historical context, however, is not merely a record of conflicts. We must as well take into account the long and deep history of water-related cooperation[3], where people across populations, groups and borders collaborate and share water resources for their mutual benefit. International treaties and agreements, river basin organizations, water users' associations and many other cooperative mechanisms established at local

level, and including all stakeholders, offer a range of tools for collective and preventive risk management, dialogue and dispute resolution.[4]

This chapter aims to address how water, as a strategic resource and through management and governance, can, on the one hand, create and enhance conflicts and tensions, but, on the other hand, can also catalyze cooperation among and between countries, groups and populations.

2. New challenges

A. Demography and increasing water, food and energy needs

One of the most significant challenges to be faced by human beings in the near future is the nexus between water scarcity and water management, on one side, and growing global population and soaring demand for energy or economic needs, on the other side.

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In fact, "in several major river basins — including the Amu Darya, Ganges, Indus, Jordan, Nile, Tigris-Euphrates and Yellow — annual water withdrawals nearly equal or even exceed long-term flow balances and ecosystem needs. Currently, 1.4 billion people live in river basins that hydrologists consider to be 'closed', meaning that, under prevailing practices, all their annually available renewable water is already committed to various human or environmental requirements, with little or no spare capacity left."[5] Furthermore, a wide range of negative factors affect water quality and water management, from corruption to toxic metals, the latter of which emanate from industry waste. In light of this, and according to the United Nations[6], by 2050, the planet will be inhabited by 9.7 billion people, of whom 3.9 billion will probably live "in river basins under severe water stress".[7] Moreover, in 2012, the Organisation for Economic Cooperation and Development (OECD) highlighted how "water demand is projected to increase globally by 55% between 2000 and 2050"[8] , with major surge concerning manufacturing (+400%), thermal electricity generation (+140%) and domestic needs (+130%).[9]

Presently, more than "two-fifths of the world's entire labor force work in heavily water-dependent sectors like agriculture, mining and fisheries".[10] This means that water is not just vital for life and the existence of humankind, but it is also crucial for the economic sector and daily human activities. More importantly, it cannot be replaced. If not properly approached, this challenge will become incontrovertible in a few years.

B. Climate change and its consequences

The hydrologic cycle, which is the continuous movement of water on, above and below the planet surface is a natural process, essential to life. Human beings always have had to cope with changing climate

conditions, and they often have been forced to use all their inventiveness to face the whims of weather patterns. However, at present, climate change is not only the result of the nature's cycle; it is now largely related to human activities, especially to the "unsustainable consumption by about 15% of the world's population".[11] Several regions of the world are already experiencing environment-related issues [Figure 1], and "from California to the Middle East, huge areas of the world are drying up".[12] One of the main problems will be the alternation of years of rain and years of drought, such as already experienced in the Sahel region which will be affected by a deep and wide desertification. The hydrologic cycle will be accelerated by global warming: "As temperatures increase, so does the atmosphere's ability to hold water, increasing precipitation and evaporation and upsetting fundamental hydro-meteorological mechanisms."[13] According to data compiled by the Grace Mission[14] since 2003, "parts of Turkey, Syria, Iraq and Iran along the Tigris and Euphrates rivers lost 144 cubic kilometers of stored freshwater – or about the same amount of water in the Dead Sea".[15] "Elemental weather patterns, such as the onset of the Monsoon and the *El Niño*-Southern Oscillation, may shift or falter."[16] This probably will lead to new crises, since "the combined effects of socioeconomic growth and climate change indicate that, by 2050, the population at risk of exposure to a moderate level of water stress could reach at least 5 billion people".[17]

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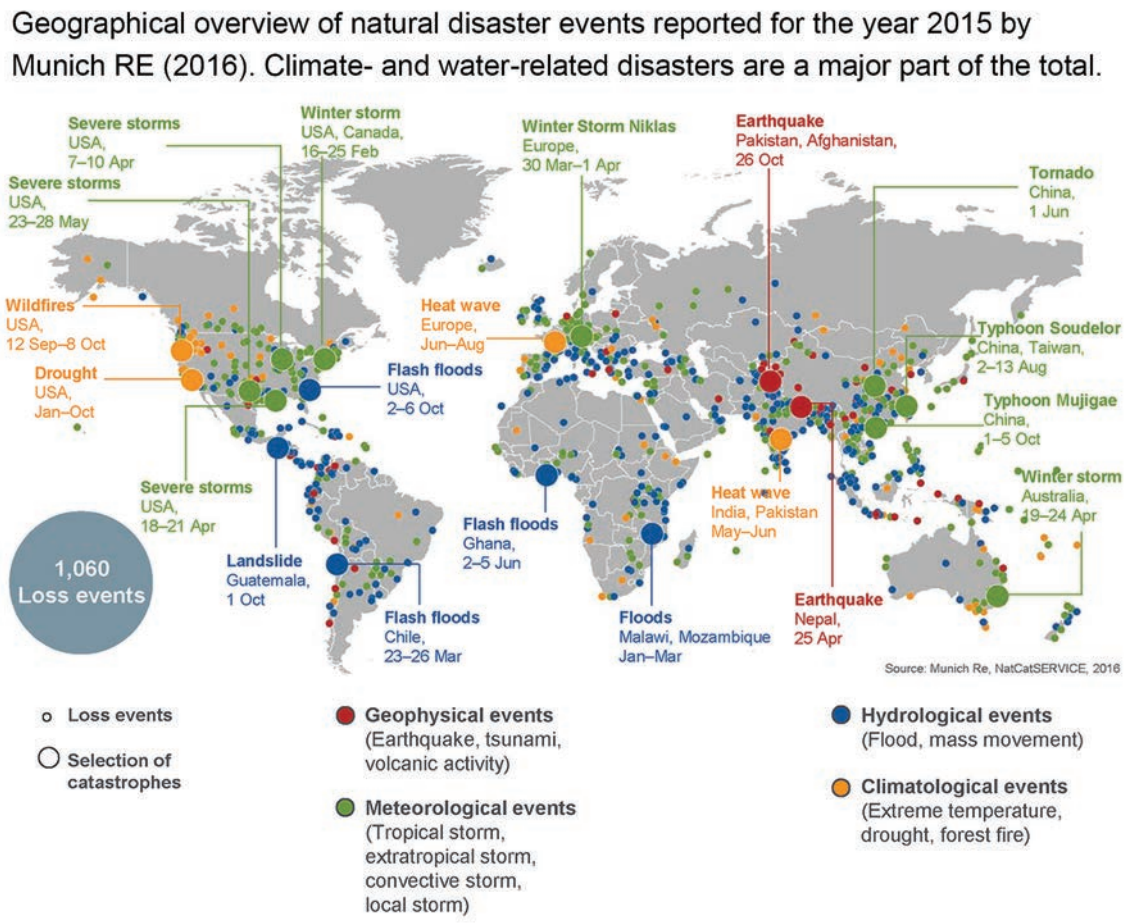
In addition, in the absence of any new and stringent climate policy, the average global temperature is expected to rise from 1.4 to 5.8°C by 2100.[18] Even with the renewed international will of the COP22 in Marrakech (2016)[19] to implement the ambitious targets of the Paris Agreement, the average global temperature will still rise by 1.5 to 2°C, compared to preindustrial levels.[20] As a consequence, such a phenomenon might lead to increased demand of water for individual, social and economic needs.

Adverse effects of climate change have also been recognized as a driver of migration, which has been emphasized by the decision to include migration in the Paris Agreement (cf. Water and Migration).

Figure 1: Geographical overview of climate and water related disasters[21]



C. Non-State armed groups

As António Guterres, Secretary-General of the United Nations, pointed out at the UN Security Council in January 2017, "most of today's conflicts are still essentially internal, even if they quickly take on regional and transnational overtones. They are fueled by competition for power and resources, inequality, marginalization and exclusion, poor governance, weak institutions, sectarian divides. […] With so many factors at work, it takes very little to trigger a crisis that can engulf a country or a region, with global consequences. […] It would be naïve to say that 2017 will be a year of peace, but at least it is our obligation to do everything we can to make it a year for peace".[22]

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In such a context, it should be recalled that water resources and systems always have represented attractive targets for non-State armed groups. In fact, water is generally a more feasible target rather than the bases of military or public authorities. At the same time, targeting water resources can produce devastating effects on affected populations and authorities.

For instance, dams, pipelines and broader water infrastructures are the favorite targets of non-State armed groups (cf. case study Daesh and the Mosul Dam). In fact, in such cases, even a small amount of explosive material is enough to inflict deep damages and problems on the concerned population. In addition, the very course of rivers might be deviated, and destruction of dams might flood entire territories and displace inhabitants (cf. case study Daesh and the Mosul Dam). However, two other categories of attacks should be taken into consideration: First, cyber-attacks[23], where technological progress linked with water infrastructures and shortages might be exploited by cyber-attack groups.[24] Second, chemical and biological attacks[25], which might harm human beings and animals and destroy large parcels of land and the environment. Regarding these typologies, it is relevant to address how security and reactivity play a significant role in preventing and responding to potential attacks.

Furthermore, the threat posed by a non-State armed group is not just related to an attack itself; in fact, the eventuality of an attack could be sufficient to spread fear and tensions within the threatened Country or region, and to stress socio-political environments (cf. case study Daesh and the Mosul Dam).

Finally, given the importance of water and its growing scarcity, States and International Organizations are called to foster laws aiming to better protect water infrastructures and water resources. Hence, the establishment of efficient water-management systems and strong monitoring apparatuses might be an appropriate way to control and avoid such situations.

3. Water security and conflicts

A. The present international context and water security

As Pope Francis declared, the world is living a piecemeal World War III.[26] Several regions are currently experiencing deep levels of tension and armed conflict. Many States are increasingly using violence to solve internal and external challenges. In several democracies, representative institutions are currently challenged by populist leaders and parties who enlarge the disaffection gap between elected politicians and voters and polarize the discussion in the public opinion. In such an international environment, cooperation on water scarcity and water management is facing serious challenges. Therefore, the global community must understand that water scarcity, as other current phenomena, is a global challenge and has to be addressed through global, national and local cooperative solutions.

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development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability."[27] Hence, water security also means human security.

B. Water as a cause and tool for conflict

Water is essential for life and for the survival of human beings. Therefore, water-related conflicts have a long history, going back to 2500 BC.[28] According to the Pacific Institute, throughout history up to 2017, 400 conflicts related to water have been registered, including 18 new disputes that have arisen only in 2016, with most of them involving violence.[29]

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At this point, a proper definition of water conflict is necessary. Conflicts might arise when different user groups, at both, local and national levels, have diverse ideas and priorities about the access or the usage of water resources. According to the Global Water Forum, "water conflicts occur in three spheres: hydrosphere, economic, and political. Problems in one may lead to conflict in another".[30] "Within the hydrosphere, water conflict can be further divided into problems of water quality, water quantity, and ecosystem problems."[31]

Therefore, it is important to stress the complex relationship between water and security. Even if history shows us that water has rarely been the only source of conflict or war, it continues to be a global, regional and local incentive for hostilities. However, as Figure 2 suggests, in the past decade there has been a significant increase in the number of reported conflicts over access to water and in the use of water as a tool of conflict.[32] Policymakers and the media even tend to address water as the "new oil" and warn of possible "water wars" in order to control vital water resources.[33] The main reason for new water-related hostilities is due to the above-mentioned challenges our world is facing, such as the growing number of people affected by water scarcity, climate change and environmental pressure, increasing pollution of water reserves, or the sharing of river basins and aquifers between two or more States or local groups. In addition to issues related to the localization of water and to the dispute for the use of reserves, water is threatened by wars and armed conflicts not directly linked to it. In fact, in many situations, especially in current conflicts, water is used as a weapon to enhance the suffering of people and as a source of massive internal displacements.[34]

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Figure 2: Number of Reported Water Conflict Events per Year, 1930–2016[35]

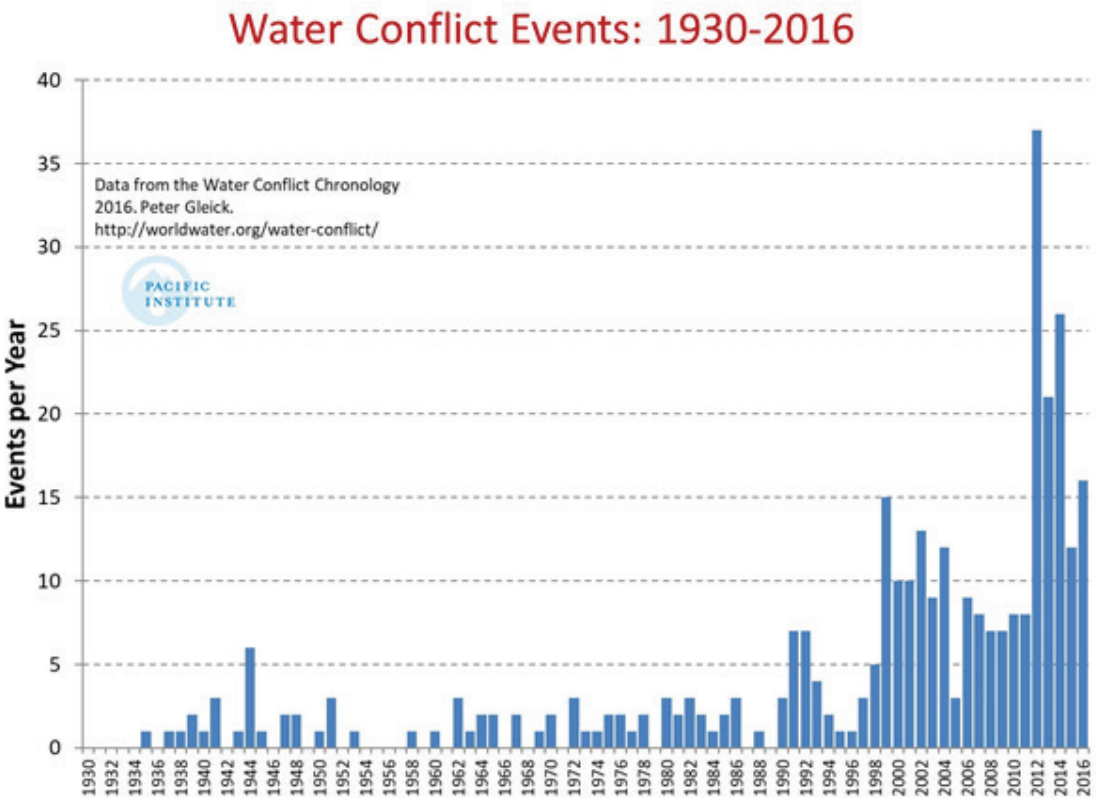

Figure 2 shows the average number of conflicts related to water between 1930 and 2016. Even though some would argue that the current peaks are attributable to improved data collection methods, an increased number of water conflicts have been registered within the last 15 years. Most of those conflicts take place in unstable and war-torn Countries. The Middle East is an especially vulnerable region of the world, where continuous civil wars between ethnic and religious groups have been waged, such as in Yemen, Iraq, Iran, and Afghanistan. These include cases involving the Tigris and Euphrates Rivers, the same region of Mesopotamia where, already in 2500 BC, clashes over water happened. During those conflicts, water was often intentionally targeted by using major dams as weapons of war, or by attacking pipelines and water supply systems, as in Syria and Iraq.[36]

Not only has there been an increase in the number of water-related conflicts, but the nature of conflicts as such has also shifted, from a macro to a micro level, "from ones with a classic geopolitical or ideological nature, such as the Cold War, to ones focused on natural resources competition, identity, and State failure, from between superpowers to within developing countries or countries in transition".[37] Although tensions among nations still persist, due to a lack of international agreements or limits within existing agreements on water management resources, as it is the case in parts of Africa and Asia[38], there has been a clear shift from inter-State to

intra-State water conflicts, which often find their climax at the local level. According to Peter Gleick, President of the Pacific Institute, "the biggest worry today is sub-national conflicts; conflicts between farmers and cities, between ethnic groups, between pastoralists and farmers in Africa, between upstream users and downstream users on the same river. We have more tools at the international level to resolve disputes between nations. We have diplomats. We have treaties. We have International Organizations that reduce the risk that India and Pakistan will go to war over water but we have far fewer tools at the sub-national level".[39] Hence, tensions concerning access to water at both, national and local levels, may become critical if they are linked with ethnic, cultural or religious issues. "Many are small in scale, involving local violence over water allocations and use of violence over local development decisions that affect environmental and economic conditions at the community scale."[40] The main roots of such conflicts usually can be traced to refer to limited water resources.[41] In this regard, and as often the case, the poorest parts of the population suffer most from water scarcity and developing conflicts.

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Regrettably, in the past, not enough attention was given to local violence and there is a significant risk that, in future, local conflicts may generate international conflicts, as is sadly the case with Syria where "water shortages, mismanagement, drought, and subsequent economic and population dislocations appear to have contributed directly to the political unraveling of that country".[42]

It might be useful to take two examples: the Horn of Africa and the Middle East. The extreme drought in the Horn of Africa is intensifying ethnic tensions and conflicts for the control over the few, still available, water resources. This drought is threatening the food security of already poor populations and has led to a food emergency situation. In the Middle East, the main problems with water are related to tensions among countries generated by water scarce environments, although often masked by ongoing political tensions.[43]

Those examples show that water scarcity can present a clear danger to the internal stability of countries in the region. Therefore, the link between water and conflicts follow complex, context-dependent pathways, which differ from one to another. Adjustments of shared water resources may improve access of water to one group but at the same time undermine the water security of another group, which in turn can lead to conflicts. Considering the recent increase of conflicts over water resources, more efforts are needed to first understand and analyze the nature of those risks, and then to develop diplomatic, economic, and institutional tools for reducing conflicts over water resources.[44]

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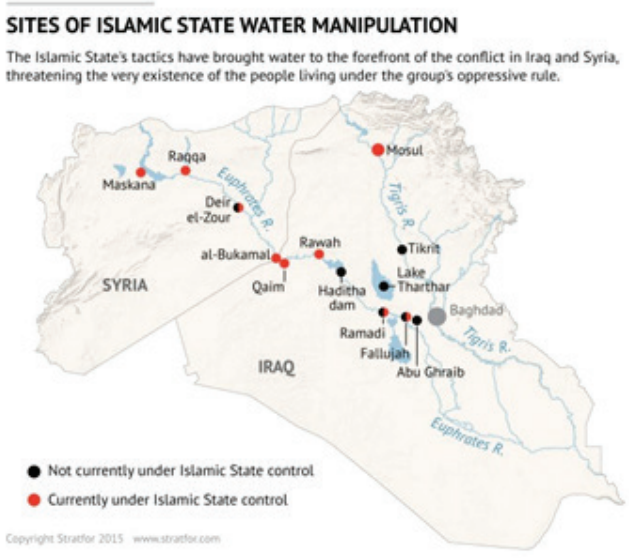
C. Case study: Daesh and the Mosul Dam

As mentioned above, the Middle East has been suffering the same water-related crises for more than 2000 years. In fact, "the Old Testament gives an account of the defeat of Sisera and his "nine hundred chariots of iron" by the unmounted army of Barak on the fabled Plains of Esdraelon. God sends heavy rainfall in the mountains, and the Kishon River overflows the plain and immobilizes or destroys Sisera's technologically superior forces[45]".[46]

Historically, every civilization has been built on water: rivers, lakes, seas, Oceans. Water always has represented a critical geopolitical factor. Not only does it give access to trade and provide power projection, but it also can be used as a weapon, as mentioned in the previous point.

Daesh's advance in Iraq and Syria over the last years highlights the importance of water as a weapon of conflict, especially regarding the case of the dam of Mosul. As shown in Figure 3, since 2012, the so-called Islamic State has conquered cities and towns in the two Middle Eastern States following the courses of Euphrates and Tigris.[47]

Figure 3: Sites of Islamic State Water Manipulation[48]



This strategy had several purposes: control water resources; the possibility of gaining social legitimation by providing water services; the possibility of flooding the enemy's cities and towns and obstruct the advance of enemy forces.[49] This proves that, alongside oil, water was the major driver of Daesh's advance in both countries. In fact, since 2013, the Islamic State "has launched nearly 20 major attacks (as well as countless smaller assaults) against Syrian and

Iraqi water infrastructure."[50] One of the most relevant of these operations was led in 2014, when Daesh broke down the Nualmiyah Dam, in Fallujah, with the resulting flood "destroying 200 square kilometers of Iraqi fields and villages"[51] , displacing approximately 40.000 people and slowing down the deployment of Iraqi soldiers. Nevertheless, at present, the greatest water-related challenge faced by the Country is the dam of Mosul, built in 1984 by a German-Italian consortium. It generates almost 75% of Iraqi electricity and contained between 9 and 12 billion cubic meters of water, which are crucial for farming zones within the Nineveh Plains.[52] Nowadays, the dam is under Italian and Kurdish protection, and an Italian company, Trevi, is working to repair the structure foundation problems. In fact, if the dam falls, a macro-wave of 20 meters will destroy the region, killing an estimated 500.000 people and forcing over a million citizens to flee.[53]

On 9 July 2017, Iraqi forces have been able to defeat Daesh combatants in Mosul, eliminating its capital in Iraq and decapitating its claims to be a proper State. Despite such progress on the battlefield, the dam of Mosul still represents a possible target for Daesh.

In such a situation, international, regional and local cooperation to manage the dam and all water resources of Euphrates and Tigris might deeply change the socio-political environment, thus reducing tensions and improving development and peace-building.

In fact, "once institutional capacity has been established between parties in relation to sharing water resources, it has been proven to be resilient over time, even as conflict was being waged over other issues".[54]

4. International cooperation, responsibility and solidarity

In addition to water serving as a cause of conflict, more importantly, it can serve as a factor of cooperation to establish and maintain peace in the world.[55] However, water cooperation should not be understood as the absence of conflict, but rather "various forms of cooperation over water occur […] alongside various forms of conflict. Moreover, tensions over shared waters are too sophisticated and complex to be adequately categorized as either conflict or cooperation. More insight and understanding will be gained if they are understood as water-related interactions".[56] In this sense, the increase of tensions between riparian States or local authorities sharing the same water resources leads more often to negotiations and cooperation rather than to conflicts. The pivotal point which can make this outcome possible is the understanding of water as a common good and not merely an economic good, whose scarcity can destabilize entire regions. Cooperation can be instrumental for all riparian actors, bringing stability and enhancing development.

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Historically, States and populations sharing the same water resources were more used to collaborate than to clash. In fact, "a comprehensive review of

some 2.500 State-to-State interactions over water, between 1948 and 2008, showed that cooperative events (such as technical exchanges) outnumbered conflictive incidents (such as reducing water flows to another Country) by two to one".[57]

Furthermore, awareness that water scarcity is a global challenge in a hyper-connected and interdependent world might promote further dialogue and cooperation, since no actor can solve this issue alone. The persistent factors of water-related collaboration are economic, environmental and strategic; in addition, they also require a strong grounding in ethics. Thus, cooperation represents the practical implementation of the principles of responsibility and international solidarity. As defined in the report of the UN Independent Expert on Human Rights and International Solidarity, Virginia Dandan, presented at the Human Rights Council in 2017, international solidarity is "the expression of a spirit of unity among individuals, peoples, States and international organizations, encompassing the union of interests, purposes and actions and the recognition of different needs and rights to achieve common goals".[58] Therefore, solidarity is a firm and persevering determination to commit oneself to the common good, to the good of all and of each individual[59], as part of the human family. It presupposes the effort to build a more just social order and requires preferential attention to the situation of the poor.[60]

In this sense, international cooperation implies that "States in a position to do so [helping developing countries] should provide international assistance […] to contribute to the fulfilment of human rights in other States".[61]

A. International agreements and cooperation

The last decades have experienced a proliferation of legal instruments in international law that directly or indirectly address all water-related issues (cf. Annex - Timeline).

Presently, the International Freshwater Treaties Database identifies more than 600 international agreements concerning fresh and underground waters.[62] However, the fundamental international legal basis for international cooperation lays in the UN Charter, Art. 33, which affirms how countries have to fix their issues through peaceful procedures, "by negotiation, enquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrangements, or other peaceful means of their own choice".[63] This applies to all international and human rights issues, such as those concerning the right to water.

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The 1997 UN Watercourse Convention states that "watercourse States [States which share water resources] shall in their respective territories utilize an international watercourse in an equitable and reasonable manner. In particular, an international watercourse shall be used and developed

by watercourse States with a view to attaining optimal and sustainable utilization thereof and benefits therefrom, taking into account the interests of the watercourse States concerned, consistent with the adequate protection of the watercourse."[64] Furthermore, "watercourse States shall cooperate on the basis of sovereign equality, territorial integrity, mutual benefit and good faith in order to attain optimal utilization and adequate protection of an international watercourse. In determining the manner of such cooperation, watercourse States may consider the establishment of joint mechanisms or commissions, as deemed necessary by them, to facilitate cooperation on relevant measures and procedures in the light of experience gained through cooperation in existing joint mechanisms and commissions in various regions."[65]

The creation of the mandate of a United Nations Independent Expert on the Human Right to Safe Drinking Water and Sanitation, in March 2008, puts explicit focus on the right to available, accessible, safe drinking water for all. In March 2011, the Human Rights Council appointed the former Independent Expert as first Special Rapporteur on the Human Rights to Safe Drinking Water and Sanitation[66], highlighting the importance of this issue. The Special Rapporteur is expected to provide recommendations to Governments, to the United Nations and other stakeholders on how to facilitate access to water for all peoples throughout the world.

The International Court of Justice (ICJ) is also engaged in such efforts to protect water; during the Gabčikovo-Nagymaros Project case, "for the first time the Court showed its jurisdiction over disputes involving international rivers and environmental consequences under the application of international law".[67] Moreover, in 2010 it introduced a new international law rule, as it "explicitly recognized Environmental Impact Assessment (EIA) as a practice that has attained customary international law status".[68]

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have a positive outcome if their objectives are clearly understood: ensuring peace and security; promoting integral mankind and nations' development; enhancing environmental sustainability and a new approach over resource consume; providing every member of the human family with an access to safe drinking water.

In order to develop more effective cooperation agreements, the first step is to identify which factors can improve cooperation, such as: understanding that win-win solutions concerning water resources are possible, whereas the lack of cooperation might imply short or long term tensions and challenges; a strong will to accept compromises and other parts' interests; recognizing the existence of "legal mechanisms aimed at governing transboundary and ground waters, containing binding legal agreements for the management of waters. These legal tools might be implemented and work within regional institutions such as river basin organizations created on a mandate of International Organizations. Regional organizations may provide funds, which constitute another enabling factor, for specific projects related to water management, monitoring and scientific projects".[71]

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Furthermore, as pointed out by UN Special Rapporteur on the Human Right to Safe Drinking Water and Sanitation, Léo Heller, "integrating human rights law and principles into development cooperation provides a clear legal framework for the human rights to water and sanitation that States have already recognized".[72]

Since the 1990s, development cooperation has been growing significantly. Cooperation in water supply and sanitation "increased by 12.3% between 2006 and 2014, with a gross disbursement of $7.2 billion in 2014".[73] Nonetheless, there are still issues related to funding modalities, areas targeted (whether rural or urban), and interventions in informal settlements. Development cooperation is making progress, but its reach could be significantly larger.

The following two examples show how international and local cooperation can be efficient: first, the case of the Mekong River in South-East Asia. In 1995, Thailand, Laos, Cambodia and Vietnam signed an agreement to regulate governance and management of this water resource, especially regarding dams, pollution, agriculture and industrial uses. Such a compromise was possible, thanks to the mediation ability of the Committee for Coordination of Investigations on the Lower Mekong Basin, where it was decided that projects would have to be funded by the Asian Development Bank.[74]

Second, the Water Court of the Plain of Valencia[75], in Spain, promotes progress toward a fair distribution of water. The precedents of this tribunal, which go back to the Muslim period in Valencia's history, or even before, were set in 1239 by the code of laws of James I, King of Catalonia, Aragon, Valencia and Mallorca. This tribunal still gathers every Thursday at 12 pm, at the entrance of the Cathedral of Valencia, for the purpose of settling

disputes that result from distribution of irrigation water in the city's orchard. This precedent, a legal body which is still functioning, is an example of how to address cooperation and management of a scarce resource like water while respecting the rights of affected people. In this sense, the ethics of this tribunal can help every actor involved in water issues to promote a transition from the ownership of a water resource to the right of use, with the commitment of returning it to nature. In 2009, the tribunal became part of the list of intangible cultural heritage by UNESCO.

B. Importance of risk assessment and prevention

Risk assessments concerning water resources are deeply relevant for three major reasons: first, to avoid and monitor environmental and water pollution impacts in relation to new projects, as shown by the ICJ decision to include EIAs as a customary practice with international law status; second, to prevent the rise of conflicts which might result in armed clashes; and third, to prevent possible attacks, especially by non-State armed groups, as highlighted by the case study of Daesh and the previous section on non-State armed groups.

Risk assessment should identify vulnerabilities and shortages of water infrastructures, and propose solutions to address them. In addition, it is necessary to create procedures and rules to monitor water quality and contamination, which is the case of the Early Warning System (EWSs).[76] Lastly, assessment is necessary to assess quantities of substances contained in water, and, subsequently, to declare it safe and clean, as done by the World Health Organization.[77]

Risk assessment and water management are critical to prevent conflicts and/or attacks to water infrastructures and use of water resources. However, they can be useful only if they are efficiently implemented. In this sense, today, more than ever, water management acquires a fundamental role in promoting peace and security in every basin around the world.

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5. The role of all stakeholders in water management

First, it should be noted that presently there is no International Organization that aims at coordinating and dealing with water management.

As noted by the UN Special Rapporteur on the Human Right to Safe Drinking Water and Sanitation, "the recently issued OECD Principles on Water Governance represent a relevant example of a broad political commitment on the part of developed countries. […] However, important normative content, such as affordability, appears as more of an aspiration than an obligation under human rights law. A 2007 policy paper of the OECD Development Assistance Committee on Human Rights and

Development clearly indicated the need to integrate human rights into decision-making, establish safeguards and promote the observation of human rights principles".[78] However, in order to have a proper "human rights-based approach to development cooperation in the water and sanitation sector, States and multilateral agencies must adopt a holistic view of policy, project and programme compliance within the human rights framework".[79]

It is important to repeat that water-related challenges need to engage all stakeholders: international, regional, national, local, public and private, and civil society. In fact, at the present time, in addition to the State, a wide range of actors play important roles in water management. Even though every actor tries to promote its own interests, the common purpose should serve to guarantee access to safe drinking water and sanitation for all, to promote development, and to reduce tensions and conflicts. Management decisions that impact the distribution of water must also respond to the criterion of justice. The human right of access to safe drinking water and sanitation must be promoted in such a way that existing inequalities are reduced to the greater well-being of the least advantaged. Public and private partnerships can play an important role in providing access to safe drinking water, albeit it does not dismiss the principal role of the State in fostering the realization of the right of access to water, whereas international and regional organizations and ad hoc commissions might provide the broader international legal framework. Furthermore, NGOs, civil society and associations might act at an intermediate level, mediating between national and local authorities and representatives. Decision-makers should clearly understand the link between development strategies and issues of water allocation, supply, participation, etc., and the implications for people living in poverty and for the broader social, political, environmental and economic context. Local groups, and especially marginalized ones, need to be engaged about appropriate solutions to their needs, and traditional knowledge can be vital in planning water resources or in finding solutions to water-related problems.[80] Women and men should be involved and have equal voice in managing water resources and sharing the benefits that come from sustainable water use. Hence, respect for the principle of subsidiarity should be part of all water management policies. In this sense, the concept of "integrated water resources management"[81] might be useful. It includes three basic pillars: first, participation and transparency of policy making in order to ensure local and national commitment and legitimacy; second, the development of scientifically-based policies; and third, the development of sustainable policies in order to face climate change challenges in the short, medium and long term. In fact, given current scenarios related to the environment, "the effects of climate change and future competition over water should be explicitly accounted for in current development policies at river basin, national and local levels".[82]

Even though every actor tries to promote its own interests, the common purpose should serve to guarantee access to safe drinking water and sanitation for all, to promote development, and to reduce tensions and conflicts.

Hence, respect for the principle of subsidiarity should be a part of all water management policies. In this sense, the concept of "integrated water resources management" might be useful.

From micro to macro-management

As mentioned above, solutions to face water and climate challenges need the engagement of local communities given that often conflicts over water resources occur at local level (cf. water as a cause and tool for conflict). Thus, a specific focus is requested on the micro dimension of water management, which allows people and social groups to develop resilience skills. All actors involved should be devoted to implement all required measures.[83]

To successfully implement these measures, the participation of managers at the micro level is essential, since they represent the indispensable linkage on the ground. Through their actions, it would be possible to improve the population's understanding and acceptance of reducing consumption. As a consequence, any action taken to face a serious problems of water scarcity should start with a personalist strategy.[84] This methodology can be successful even when water-related issues demand macro projects — for instance, building a dam to obtain a large water reserve by flooding a valley, and partially or totally altering the course of a river are examples of strategies that involve several countries.

Such projects should be carried out with the cooperation of managers at the micro level, since they have a double impact: on the micro level, through people and their goods, and on the macro level, through the environment and the social, political and economic context.

6. Conclusion

In so many ways, water is an indispensable element for the security of peoples and nations. There is common agreement on the recognition of the potential threats to peace and prosperity posed by water insecurity. "In the coming years, rising water stress, poor water quality and the mounting impacts of climate change may worsen diseases, sap economic growth, and limit food and energy production in many regions around the world".[85] Hence, to foster peace and an appropriate level of security in the current world situation, Governments and International Organizations will inevitably have to increase efforts to ensure that every person has access to safe drinking water.

Sharing water and sharing the benefits which water brings, in a mutually agreed, equitable and sustainable way, is the key to prevent conflicts over this precarious resource, whether at the local or international level, whether regarding major hydropower projects or neighborhood projects in local villages.

Sharing water and sharing the benefits which water brings, in a mutually agreed, equitable and sustainable way, is the key to prevent conflicts over this precarious resource, whether at the local or international level, whether regarding major hydropower projects or neighborhood projects in local villages. All stakeholders should be included, especially civil society at the local level, in order to achieve transparent, accountable, adaptable and co-

operative water management for ensuring global water security in the 21st century.

Reflection on past experiences of such cooperation could represent an important road map, or best practices framework, for the promotion of hydro-solidarity among countries and communities. The lasting foundations of water-related solidarity are economic, environmental and strategic factors, but also require a strong ethical grounding.

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WATER AND MIGRATION: HOW FAR WOULD YOU GO FOR WATER?

A Caritas in Veritate Foundation Report by

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Programme Officer, Environment and Climate Change (MECC) Division
International Organization for Migration

Migration due to water scarcity and prolonged drought accompanied humans throughout history, impacting diverse parts of the world

Migrant farmworkers cluster near their tent in California in February 1936.

Photograph by Dorothea Lange

The interaction between environmental change and migration has been a universal phenomenon since the beginning of humankind. On the one hand, environmental impacts have long been a factor in driving migration as people naturally moved out of harm's way and towards favourable conditions seeking greener pastures. On the other hand, the influence of migration on the environment has been a universal phenomenon, with agriculture, industrialization and urbanization shaping our natural world.

The link between migration, environment and climate change has been progressively researched since the 1990s with a primary focus on the dynamic relationship between environmental change and migration. Against the backdrop of this research and contemporary migration flows, a need emerged for a more focused examination to provide evidence and guidance for integrating migration in specific environmental policies, and, vice versa, environment in migration policy.

1. Why is it important to consider the linkages between migration and fresh water availability?

In our current world, almost 15% of the global population is on the move, with more than 244 million international migrants and 763 million internal migrants counted by UN statistics.[2] The management of such flows has become an international, regional and national governance concern.

As the risk of non-reversible change in precipitation patterns increases with climate change, so does the vulnerability of populations relying traditionally on the natural water cycle. Hence, it is important to examine the potential of migration considering contemporary water crisis, which has been identified for the fifth consecutive year in a row among the top five global risks in terms of impacts.[3]

Hence, it is important to examine the potential of migration considering contemporary water crisis, which has been identified for the fifth consecutive year in a row among the top five global risks in terms of impacts.

This paper examines the nexus between these two determining global issues of the twenty-first century: migration and fresh water availability. It aims to explore the existing and potential linkages between migration and water availability on the one hand and the impact of migration on water resources on the other.

Knowledge about the relation between climate change and respective variance in water availability has greatly advanced since the first International Panel on Climate Change (IPCC) report was released in 1990, while issues related to environmental migration linked to water availability have been increasingly deliberated. Nevertheless, there is little empirical research conducted on the linkages between water availability and human mobility. Existing research until now mainly focused on indirect linkages related to migration and water availability including, inter alia: migration-agriculture[4] and migration-natural resource scarcity-conflict.[5]

This paper looks at available evidence on the nexus between migration and fresh water availability (what do we know), the impacts of climate change (what is expected to come) and available policy options to manage such new realities (what can we do about it).

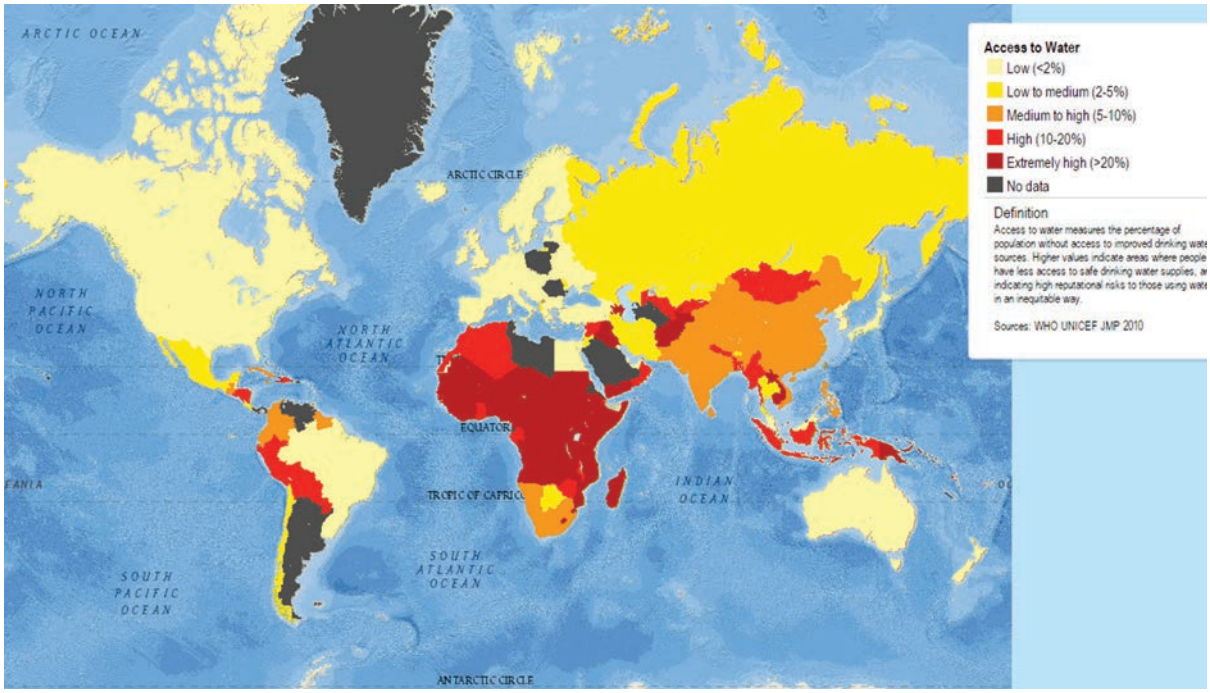
2. What are the linkages between migration and water security?

Water security has been defined by UN Water "as the capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability".[6] The definition underlines the key features of water security (access to enough quality water in a sustainable, timely manner) and the critical importance of water in livelihoods, physiological functioning, development, health, peace and stability.

The Global Water Institute estimated that around 700 million people in 43 countries suffer from physical water scarcity[7] , where demand for water regularly exceeds available supply.[8] At the same time, two-thirds of

The Global Water Institute estimated that around 700 million people in 43 countries suffer from physical water scarcity[7] , where demand for water regularly exceeds available supply.

Map 1: AQUEDUCT Water Risk Atlas[10]



Access to water measures the percentage of population without access to improved drinking water sources. Higher values indicate areas where people have less access to safe drinking water supplies.

the global population live in areas that experience water scarcity for at least one month a year.[9]

Available data on access to water suggests that the largest populations without access to water live in North Africa, the Middle East, Sub-Saharan Africa, Central Asia, Southeast Asia, Central America and Western regions of Latin America (Map 1).

Lack of water security has long been identified as one of the push factors of migration as it undermines the lives and livelihoods of people.

Lack of water security has long been identified as one of the push factors of migration as it undermines the lives and livelihoods of people. Yet, it has been a taxing effort to establish an explicit link between migration and water insecurity, as water can rarely be separated from the other social, political, economic and demographic drivers of migration.

Like other environmental factors of migration, water scarcity can lead to temporary and permanent movements depending on the duration and severity of water stress as well as the coping capacity of populations. Most people moving because of water insecurity try to reach water resources closest to home, traveling the shortest distance possible. Migration related to water tends to be internal or regional as those who do not have the means to access water locally will seldom have the means to move beyond their region.

Above all, poor people are the most vulnerable in the face of water scarcity as they are unable to substitute water used for maintaining their well-being and subsistence farming activities.

Above all, poor people are the most vulnerable in the face of water scarcity as they are unable to substitute water used for maintaining their well-being and subsistence farming activities. Although vulnerability to rainfall is a major national concern of countries where large part of the population still relies on sustainable farming or pastoralism, it also affects more developed regions where financial coping capacities of lower-income classes are exhausted by prolonged water scarcity.

In less developed countries, migration is often used to cope with issues associated with adverse climatic conditions and resource scarcity. Often the decision to migrate in the context of water scarcity is the result of environmental factors (e.g. rainfall variability, drought, desertification, salinization), combined with human factors (e.g. unsustainable land and water management), or even the simple matter of survival.

Historically, communities around the world adapted to seasonal availability of water by moving temporarily, which has allowed less fertile regions to support human existence. Nomadic pastoralists have long sustained their livelihoods in marginal environments by making seasonal migration their way of life.

The most severe outcome of water scarcity is drought. Drought impacts lives and livelihoods through many different dimensions, including through food insecurity and land degradation. In the case of prolonged drought coupled with degraded agricultural land, people might move to nearby fertile rural areas or to urban areas to access basic services, including water supplies.[11]

Drought related migration has been a hidden category of migration due to the challenges of data collection.[12] Although no global estimates are available on the number of people moving solely because of water scarcity and/or drought, context-specific data is becoming available in a diverse range of countries (e.g. Angola, China, Iran, Uganda) with water insecurity being identified as the key push factor to migrate.[13]

Lately, quantitative data on drought-related displacement, as a form of forced migration, is made available through the IOM Displacement Tracking Matrix (DTM). For example, the most recent data from the Horn of Africa shows that at least 305,885 people were displaced due to drought in Ethiopia between January and February 2017[14] and 75,366 in Somalia in April 2017.[15]

3. How can the impact of climate change on fresh water availability reshape migration patterns?

Adverse effects of climate change have been recognized as a driver of migration, which was also underlined by the decision to include migration in the Paris Agreement. Global climate change will be primarily revealed through local changes in the water cycle with uneven impacts across the globe. As climate change reshapes fresh water supply, it will have a cascading effect on well-being and food production. It will affect communities whose income is highly sensitive to local rainfall patterns.[16]

Migration connected to water has been in the spotlight with climate change predictions indicating that people might need to move because of the changes in the hydrological cycle and increasing global temperatures.

Migration connected to water has been in the spotlight with climate change predictions indicating that people might need to move because of the changes in the hydrological cycle and increasing global temperatures (IPCC, 2007).[17] In many parts of the world, climate change is expected to significantly influence local water availability leading to the intensification of water stress and associated disasters like drought. Being a risk multiplier, climate change also escalates the likelihood of the environment becoming the main push factor of migration.

Future estimates of people exposed to critical water stress, or who are forced to migrate due to water stress, vary between 24 million and 1.8 billion. The United Nations World Water Assessment Programme (WWAP) estimates that, by 2025, 1.8 billion people will be living in countries or regions with absolute water scarcity, while two-thirds of the global population could be experiencing water stress.[18] The *2009 World Water Development Report: Water in a Changing World* approximated that water scarcity in some arid and semi-arid places would displace between 24 million and 700 million people.[19]

As the risk of hydrological and agricultural drought increases as temperatures rise, so does the vulnerability of populations relying traditionally on rainfall for water. Some communities are and will be more impacted than others. The vast majority of the 767 million people living

of less than US$1.90 a day lives in rural areas where agriculture represents their main source of livelihood.[20] These smallholder farmers depending on rain fed agriculture are among the most vulnerable in the face of a changing climate as water signifies a key ingredient for ensuring their well-being and livelihoods.

The worst affected regions are in Africa. The IPCC Fourth Assessment Report (AR4) projected that between 75 and 250 million people in Africa will be exposed to increased water stress by 2020 due to climate change.[21] Drought already poses a recurring challenge to the lives and livelihoods of many people across the Horn of Africa although people often don't identify drought as a primary cause of their move.[22]

Climate change and related drought also increasingly force nomadic pastoralist communities to alter their routes to travel further and for longer periods. Slow environmental degradation and prolonged drought can also lead to permanent migration of pastoralists to places where water and grazing land is available.[23]

4. How might migration impact water resources?

As migration is driving much of the increase in urbanization, it is key to consider migration in the planning and management of urban water resources.

In recent years, migration became "essentially an urban affair" with 3 million people around the world moving to cities every week.[24] Nearly 54 per cent of the global population lived in urban areas in 2015[25], a number that is expected to increase to 66 per cent by 2050.[26] As migration is driving much of the increase in urbanization, it is key to consider migration in the planning and management of urban water resources.

When local coping capacities are exceeded, water scarcity or drought can lead to migration from rural areas to cities, where people hope to find access to basic services, including water. Cities have long symbolized the land of opportunity, with more advanced infrastructure, established markets and access to resources. However, research shows that most of the migrants who have been forced to move for environmental reasons end up in peripheral, slum areas with limited access to resources.

According to the World Water Development Report: Water for a Sustainable World, migration and urbanization, along with population growth and increases in production and consumption "have generated ever-increasing demands for freshwater resources".[27] Rural-to-urban migration has been posing a continuous challenge to the provision of drinking water services, especially in deprived peri-urban and slum areas.

Understanding the potential linkages between migration and fresh water availability is also key in the context of peace-building and conflict resolution. The Symposium on Climate Change, Water Stress, Conflict and Migration noted that it is highly likely that "climate change, water stress, conflict and migration have causal linkages, but the exact nature and

direction of these linkages are likely to be context-dependent and difficult to assess" (2012).

The risk of conflict between host communities and migrant or displaced populations increases when fresh water is scarce. Intra-communal conflicts for water might become more frequent, especially between agricultural and pastoralist communities who are often ethnically and culturally different.[28] Regular routes of nomadic communities are also threatened by conflict situations, which can lead to restricted or no access to water and to the destruction of water points along nomadic routes.

Without proper management of local water resources increasing competition could lead to verbal or even more severe conflict.

5. How can the migration-water nexus be addressed through the Sustainable Development Goals (SDGs)?

The SDGs provide several entry points to address environmental migration due to water scarcity, including:[29]

- Ending poverty by building resilience of vulnerable populations to extreme events under Goal 1.
- Achieving food security and promoting sustainable agriculture and strengthening capacity for adaptation to environmental changes under Goal 2.
- Reducing the number of people suffering from water scarcity under Goal 6.
- Promoting the implementation of planned and well-managed migration policies under Goal 10.
- Reducing the number of deaths and people affected by disasters through effective disaster risk reduction (DRR) practices and strengthening development planning for resilient cities and settlements under Goal 11.
- Building adaptive capacity in the face of climate change and integrating climate change measures in policies under Goal 13.

Promoting an environmentally sustainable approach to migration management allows for durable solutions, in line with SDG 6 to ensure availability and sustainable management of water and sanitation for all; SDG 7 to ensure access to affordable, reliable, sustainable and modern energy for all; and SDG 13 to combat climate change.

6. What are the options for policy?

With timely and well-designed migration policy responses, migration can have positive effects by removing pressures from local environmental coping capacities and by deploying migration as an adaptation strategy, as well as through channelling migrant remittances into infrastructure.

The International Organization for Migration (IOM) – UN Migration Agency - believes that well-managed, proactive migration governance benefits all and it can contribute significantly to development and environmental restoration. With timely and well-designed migration policy responses, migration can have positive effects by removing pressures from local environmental coping capacities and by deploying migration as an adaptation strategy, as well as through channelling migrant remittances into infrastructure.

Based on IOM's experience at the policy and operational levels and its work with States, migrants and migrant communities, the Organization proposes the following policy recommendations as a proactive approach to consider human mobility concerns in water governance and water security in migration governance. These recommendations are based on IOM's contribution to the Global High-Level Panel on Water and Peace (2017):

- *Consider* the full spectrum of human mobility in the context of water governance and establish policy responses accordingly to address different migration dynamics.
- *Carry out* policy interventions across the whole migration cycle to help people to stay, help people to move and help people on the move.
- *Consider* the two main directions in the interrelationship between migration and water: how environmental migration might be driven by water insecurity, and how pressure on water resources might be intensifying due to migration inflow.
- *Integrate* migration in water governance frameworks and reciprocally water management issues in migration governance framework.
- *Prevent* forced forms of migration by identifying water and security hotspots, by proactively enacting community stabilization programmes in the targeted areas, or by establishing seasonal migration frameworks to reduce pressures on water resources.
- *Apply* the human rights framework for water governance and operationalize migration management to ensure water security for all.
- *Adopt* community-based and participatory approaches and promote the co-development of migrant and host communities.
- *Strengthen* coordination within the WASH cluster and ensure performance monitoring and competence based approach.
- *Prioritize* funding for directly implementing agencies who are better equipped to respond, and for the creation of regional hubs for preposition of WASH emergency materials.

To ensure water security for all, global water governance needs to consider the two mega trends of this century: migration and climate change. It needs to recognize the benefits of migration for development and its live-saving purpose. Although migration itself cannot solve water availability issues, it can be part of the solution. Taking concrete steps today in policy will result in being better prepared for the future.

To ensure water security for all, global water governance needs to consider the two mega trends of this century: migration and climate change.

NOTES

1. In coordination with Dina Ionesco, Head of the Environment and Climate Change (MECC) Division, International Organization for Migration

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THE ROLE OF FAITH-BASED ORGANIZATIONS AND EXAMPLES OF GOOD PRACTICES

WATER, THE SOURCE OF LIFE IN THE AMAZONIA - THE LIFE OF INDIGENOUS PEOPLE AND FARMING COMMUNITIES IN THE AMAZONIA

A Caritas in Veritate Foundation Report by

EJE DE DERECHOS HUMANOS DE LA RED ECLESIAL PANAMAZONICA (REPAM)

1. Introduction: water, the source of life in the Amazonia

The Amazonia region contains the largest tropical forest in the world. It covers six million square kilometres and cuts across the territories of Bolivia, Brazil, Colombia, Ecuador, French Guyana, Guyana, Peru, Suriname and Venezuela. It is home to 2,779,478 indigenous people, comprising 390 indigenous tribes and 137 isolated (uncontacted) peoples, with their valuable ancestral cultures.

The Amazon River basin is a living system that works as a regulator of regional and global climates, maintaining air moisture and producing a third of the rain that falls on the Earth. The Amazon is one of the largest rivers in the world. About one-tenth of the Earth's fauna and flora live in the Amazon basin.

More than 20% of the plant cover in the Amazonia region no longer exists: it has been slashed and burned to make space for, among others, mining, cattle rearing, large scale agriculture production, wood extraction and hydropower generation projects, as well as the creation of human settlements. Amazonia also experiences a high incidence of droughts, a situation that in the past was not thought possible. Climate change is happening and it is having a wide range of social and environmental impacts.

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Amazonia faces the imposition of large-scale natural resource extraction projects, which see the river basin as the provider of resources and economic growth.

The region also experiences severe inequality problems regarding the distribution of important and, in some cases, fundamental natural resources. Often, we refer to having the "right to" something, when what we really mean is guaranteeing "access to" it, e.g., water, food or energy. To date, we know that over 840 million people are chronically undernourished, about two billion people are deficient in vitamins and minerals and that a large

percentage of the world population does not have access to electricity, nor to secure energy sources.

Even though the planet has a significant amount of fresh water, it was recorded that, in 2015, one-fifth of the Earth's inhabitants were living with water shortage. It has been estimated that, by 2025, about 1,800 million people may be living without water and that, by 2030, that number will increase to about half of the world's population. Every year, about 6 million children die from illnesses related to drinking contaminated water. A series of economic activities are damaging the environment and contaminating clean water sources with solid residues and chemicals. In Amazonia, the lack of access to potable water and to water for other uses from rivers and lakes poses a threat to the survival of its populations.

A series of economic activities are damaging the environment and contaminating clean water sources with solid residues and chemicals. In Amazonia, the lack of access to potable water and to water for other uses from rivers and lakes poses a threat to the survival of its populations.

Oil pipes in the Ecuadorian Amazon.

Coca River, a tributary of the Amazon.

2. Tapajós River and *Yurimaguas* Communities: living by the river and not being able to enjoy its waters

The countries crossed by the Amazon basin have a large cultural and biological diversity, created by the biophysical characteristics of the zone. These territories have been long inhabited by indigenous tribes and other river dwellers that have developed production practices, which are compatible with the environment that provide them with natural resources.

Amazonia faces similar problems that impact the environment and communities. These communities are now joining efforts to denounce the problems. The following sections expose the situation of one Brazilian community and one Peruvian community in Amazonia.

A. Tapajós, Brazil: the river is part of the identity of the Munduruku people

a. Background

The *Tapajós* River basin, a major tributary of the Amazon River, cuts across the *Para, Mato Grosso* and *Amazonas* States, connecting two large biomes, the *Cerrado* and the Amazon Forest. It extends to about 1,800 km, which makes it the fifth largest in the Amazon River basin system. Thousands of indigenous people, communities preserving

ancient traditions and farmers inhabit the shores of the *Tapajós* River and its tributaries, the Rivers *Juruena, Arapiuns, São Manoel (Teles Pires), Cururu, Crepori, Das Tropas* and J*amanxim*. These populations reveal the history of migrations along its waters. Most of these populations recognise the river as part of their identity, either because the river plays a central role in their creation myths, as in the case of the *Munduruku* people, or because they define themselves as riverside or riverbank dwellers and believe their "essence" emanates from the river.

For the *Munduruku* and other river dwellers, the water they drink is the same as that where women wash their clothes, clean their food or bathe. It is also where women and men navigate or fish daily. The river is a true school, where children learn to swim and fish. The river provides their main source of food and it is also a source of income for river dwellers who practise traditional fishing methods. There are 494 fish species, identified by the Chico Mendes Institute (ICMBio), in the *Tapajós* River alone.

The *Munduruku* remember that the colour of the water of their sacred river used to be different; they think that the current colour indicates the pollution from mining activities. At the end of May 2017, the Indigenous Health Secretariat of the Health Ministry (SESAI) delivered dozens of water filtration tanks to *Jacareacanga* for installation in the *Munduruku* villages of the upper reaches of the *Tapajós* River. This initiative reveals much about the current condition of the *Tapajós* River.

The exploration of the *Teles Pires* River started in the 18th century, but the exploration of the *Tapajós* only began in 1958, on the tributary *Das Tropas* River, when Nilson Pinheiro discovered large deposits of gold[1] .

Daily life in Munduruku villages.[2]

b. Violation of the enjoyment of the right to water

Almost 60 years of gold mining have significantly altered the ecosystems of the *Tapajós* River basin. Its inhabitants have noticed several impacts, including silting of streams and reduced

Almost 60 years of gold mining have significantly altered the ecosystems of the *Tapajós* River basin. Its inhabitants have noticed several impacts, including silting of streams and reduced fish stocks. Currently, the main threat to the health of the *Tapajós* River populations is the high concentration of mercury in the water and fish.

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According to Lúcio Flávio Pinto (a journalist specialising on Amazon issues) "The large companies that enter the *Tapajós* River do so when there is already the certainty of gold in the rocks, after independent or artisan mineral prospectors (*Garimpeiros*) have explored the zone. The artisan explorations take place on the river bank, where the *Garimpeiros* use mercury and dredges that pollute and destroy the river. You can see a river that used to have clear waters become filled with sediments from collapsing cliff walls, or loaded with mercury from gold exploration, which causes a lot of damage."[3]

The indigenous tribes and other river dwellers who are no longer able to drink or live from the muddy river waters loaded with heavy metals, must look for water supply systems that are foreign to their way of life. They also lament the increasing distance to those last remaining clear water streams. In recently developed villages by the *Tapajós* River bank, like *Dajekapap*, or villages cut by roads, where large scale farms start to operate - as is the case of *Sawre Apompu* - children must now learn to cope with outbreaks of diarrhoea and viral diseases.

The situation in the rivers *Teles Pires* and *Juruena*, sources of the *Tapajós* River, is even worse. Those rivers have not only been contaminated through mining activities, but also receive agrochemicals that are being used in the soybean plantations that extend from the *Mato Grosso* to the *Para* States. The *Munduruku* and *Apiaká* tribes, as well as the *Quilombolas*[4] and artisan fisherfolk of *Planalto Santareno*, in the lower *Tapajós*, live in a similar situation, as their watercourses - and groundwater - are also being affected.

For the indigenous tribes and traditional communities in the *Tapajós* River basin, the prospect of having an industrial corridor in the lower, middle and upper *Tapajós* is slowly becoming a reality. Contrary to the beliefs of the *Munduruku* and other river dwellers, for whom the river is entangled with their existence, the Government and large companies see the *Tapajós* River as a provider of energy resources and as a route for transporting commodities (mainly soybean produced in the north of the *Mato Grosso*).

Contrary to the beliefs of the *Munduruku* and other river dwellers, for whom the river is entangled with their existence, the Government and large companies see the *Tapajós* River as a provider of energy resources and as a route for transporting commodities

The Government is planning a variety of projects to increase the infrastructure in the region to export agricultural and mineral commodities. These will be paid through public and private funds. There is provision for 43 large capacity hydroelectric plants for the whole basin, with three for the *Tapajós* River and four for the *Jamanxim* River, which constitute the *Tapajós* Hydroelectric Corridor.

There is already a plant in operation in the *Teles Pires* River, the *Teles Pires* Hydroelectric Dam (UHE *Teles Pires*), three under construction (*São Manoel, Sinop* and *Colíder*) and another two are planned. In the *Juruena* River there is a plan to install 30 dams (FEARNSIDE, 2015)[5] .

There are several projects related to the hydroelectric plants. These include the construction of an industrial waterway, which is an ambitious system of water transportation (requiring dozens of large dams, reservoirs, locks, canals and river ports) that would link the Rivers *Tapajós*, *Teles Pires* and *Juruena*; the paving of the highway BR163 (almost complete); a railway project, nicknamed the Grainrail; and the creation of a series of transhipment stations (ETCs)[6] . All these projects would consolidate the "north exit route", reducing the costs of moving soybean production out of the *Mato Grosso*.

These works are being carried outside legal requirements, given that large grain ports are being built in *Santarem* and *Miritituba*, together with the hydroelectric plant in *Teles Pires*, without consulting the *Tapajós* River Basin Committee[7] . The indigenous tribes and other inhabitants were not consulted on these projects, as required by the International Labour Organization Convention 169 — Indigenous and Tribal Peoples Convention, 1989, to which Brazil is a signatory.

In 2014, federal attorneys for six States asked the Federal Justice to prohibit the National Water Agency (ANA) from authorising new ventures in major rivers in the Brazilian Amazon, without first creating the committees of the respective river basins. Among them was the *Tapajós* River basin committee[8]. Nevertheless, in November 2015, the hydroelectric project of *Sao Luiz do Tapajós* received a "Declaration of reserve of water availability" (DRDH) by ANA, a stage in the regulatory procedures to establish a power plant, which is intended to reserve the amount of water required for the operation of the plant. Thus, in 2016, the Federal Public Ministry of *Santarém* filed a public civil action against ANA, pointing out that such a declaration could only be issued when a viability study had been carried out. Sometimes these cases can be resolved in favour of the companies. They just need to provide technical solutions to the problems identified to those offices responsible for granting licenses to operate. This also happens with environmental impact assessments.

The significant interventions to consolidate the industrial corridor in the *Tapajós* River, which include clearing forests, building dykes, dams and locks, destroying rapids or modifying the course of rivers, irreversibly damage the regional ecosystems on which the indigenous tribes and other inhabitants depend, both physically and culturally.

The significant interventions to consolidate the industrial corridor in the *Tapajós* River, which include clearing forests, building dykes, dams and locks, destroying rapids or modifying the course of rivers, irreversibly damage the regional ecosystems on which the indigenous tribes and other inhabitants depend, both physically and culturally.

Impacts of mineral exploration by *Garimpeiros* in the *Tapajós* River.[9]

In addition to the need of water for their survival, the *Munduruku* tribe has a cosmological and spiritual relationship with the *Tapajós* River. *Idixidi*, as they call the river, designates that their territory extends to wherever its waters flow, waters that were created by *Karosakaybu* (the creator) when throwing three *tucumã*[10] shells. "Our ancestors walked throughout our river, leaving written records, even in the stones." *Munduruku* leaders warn that the cultural heritage of the *Munduruku* is not in the cities, like that of white people, but in the rivers and waterfalls. According to Bruna Rocha, professor of archaeology at the Federal University of Western Pará, the *Munduruku* people have occupied the *Tapajós* River basin so extensively that during colonial times, the entire *Tapajós* River was known by Europeans as "*Mundurukania*."

According to their legends, ancient *Munduruku* women inhabit the depths of their river as matrinchã fish (*Brycon spp*.). The legend recounts that, a long time ago, women formed a line and, while singing, left their husbands and plunged into the waters where they were transformed into fish. When they talk about the *Tapajós* River, women remember a time of plenty and good health and relate the clean water to breast milk in the old times, since both nurture a strong and vigorous life.

With the construction of the hydroelectric plants of *São Manoel de Teles Pires*, the *Munduruku* experienced even more impacts, such as the contamination of waters by oil spillage, the reduction of fish stocks and, especially, the destruction of the *Sete Quedas* rapids, the *Munduruku* heaven.

With the construction of the hydroelectric plants of *São Manoel de Teles Pires*, the *Munduruku* experienced even more impacts, such as the contamination of waters by oil spillage[11] , the reduction of fish stocks and, especially, the destruction of the *Sete Quedas* rapids, the *Munduruku* heaven. The UHE *Teles Pires*, which ironically received the Green Certification in the category of responsible social and environmental management (the Chico Mendes prize[12]), destroyed two of the most important sacred *Munduruku* sites.

The *Munduruku* explain that *Sete Quedas*, the rapids that were destroyed during the construction of the dam, is the place where their dead used to

go to, but, today, the dead wander lost and without direction. Another sacred place of extreme importance that is being destroyed by the mining enterprises and the *Garimpeiros, Dajekapap*, is also threatened by the hydroelectric plants of *Sao Luiz do Tapajós* and *Jabotá. Dajekapap* has been described in the myth of the origins of the *Munduruku*, as the place that guards the traces of the foot of *Karosakaybu*, the creator of their people and everything that there is in the world.

According to the leaders of the *Teles Pires* village, by disturbing and destroying sacred places, where only the *Munduruku*, accompanied by shamans, are allowed to visit, the Government and the *Garimpeiros* are responsible for a series of accidents that have happened to the *Munduruku* people.[13] In that way, the State (at the service of private capital), is not only responsible for the death of *Munduruku* people when it forcefully establishes ventures in their sacred river, but it also kills them culturally and spiritually when they fail to protect their sacred territories bathed by the *Tapajós* River.

B. Yurimaguas, Peru: the essential resource for farming activities

a. Background

Yurimaguas is the capital of the *Alto Amazonas* Province. The province has a surface area of 2,004,288 ha (or 1.57% of the national territory and 5.32% of the *Loreto* region territory). It is located in the southwest of the *Loreto* region, within the basins of the Rivers *Marañón, Huallaga, Nucuray* and *Paranapura*. It contains the Districts of *Lagunas, Santa Cruz, Balsapuerto, Teniente César López Rojas, Yurimaguas* and *Jeberos*.

The province benefits from an abundance of water. The hydrological network of the *Alto Amazonas* province is fed mainly by the *Huallaga* River, which receives flows from the Rivers *Caynarachi, Shanusi, Paranapura, Sapote, Aypena, Chipurana, Shishinahua*, as well as the *Cuiparillo* and *Shishiyacu* waterfalls and integrated lakes, such as *Naranjal* and *Sanago*.

Even when water is abundant, communities do not always have access to potable water. The capital has potable water, but not in adequate quantity or quality.

Even when water is abundant, communities do not always have access to potable water. The capital has potable water, but not in adequate quantity or quality. Only the city centre has a water service around the clock. The suburbs only have water in the early hours of the morning.

From a forestry perspective[14] , the province is mainly composed of permanent forest production and protected zones. This means it is considered a zone mainly for forestry production. In general, it has pristine forest with the widest biodiversity of fauna and flora, and it is not suitable for large scale agriculture.

Scientists have recorded a total of 457 species in the *Alto Amazonas* province, consisting of 165 fish, 83 mammals, 279 birds, 42 reptiles, 51 amphibians and 2 molluscs. Indigenous communities use 82 of these

species, either directly or indirectly, including 33 mammal species, 37 bird species, 8 reptiles, 2 amphibians and 2 molluscs. From those used, at least 10 species are catalogued as rare or very rare. The 165 species of fish represent 26 families, of which 26% (43 species) are used for human consumption and the rest are considered ornamental.

Rice and oil palm monocultures are associated with deforestation, loss of biodiversity and impacts on water conservation in the region. These practices benefit few people economically and, from the social point of view, promote the exploitation of workers and the displacement of communities. In the long term, these practices will cause the loss of resources and heritage that guarantee the survival of the people living there.

According to Economic and Ecological Zoning[15] , the areas where the *Cotoyacu* community are settled regulate the hydrological cycle of the watershed headwater sources, due to the existence of large wetland areas. Disorderly occupation of the land and the inadequate use of land is making headwaters disappear, therefore many communities experience water scarcity downstream.

The province has 101 communities. Many of them are river dwellers, who, unlike the indigenous communities, are not entitled to communal land through legislation, so they do not have a title to the land they occupy.

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When someone is looking to obtain individual land ownership, if the occupied land is catalogued as forest or protected land, he cannot have a title, but he can potentially obtain a concession or adjudication, as is the case of the enterprise *Palmas del Shanusi — Grupo Romero*. It won an adjudication for 957 hectares of primary forest in April 2007 to cultivate oil palm. To initiate production, the enterprise cut down all the forest and the ecosystem that the forest supported disappeared with it. The company also drained the area. This changed the landscape, altered the wildlife and generated serious environmental damage, including water contamination, where the company operates[16] .

Near this community, the company has not only established oil palm cultivation, but also large extensions of rice cultivation. Both crops use water in large quantities. The watercourses that feed the zone, *Cotoyacu* and *Yanayacu*, have been deviated, they have been drained in some areas and the forest on their banks felled. This has caused water contamination, the decrease in fish varieties, illnesses in those who use the water and death of animals that drink it.

Stream deviated from its natural course with heavy machinery.

Heavy machinery used to change the course of streams.

There is plenty of regulation relating to the rational use of water, forests and soils, nevertheless, it is seldom applied, since it depends on the will of civil servants, the informality of arrangements, and widespread corruption in the region.

b. Violation of the enjoyment of the right to water for the *Cotoyacu* Community

Until 2008, communities in the *Shanusi* valley had water of high quality in good quantities provided by the *Cotoyacu* and *Yanayacu* streams.

The *Cotoyacu* stream got its name from a monkey species that was abundant in the zone. The *Yanayacu* (dark water) stream was named after the marshlands that gave birth to the streams. These areas had a large diversity of fish and animals that were the basis of the diet of the zone's inhabitants.

In 2007, the *Palmas del Shanusi — Grupo Romero* enterprise paid 124,728.90 Peruvian Soles for the adjudicated 957 ha. The land cuts across the *Yurimaguas* territory, the *Teniente Cesar Lopez Rojas* jurisdiction and the *San Martin* region. In addition to this adjudication, the enterprise has obtained land from smallholders who have been forced to transfer ownership. As a result, life in communities such as *Túpac Amaru, Bella Selva, Puerto Perú, Nuevo Arequipa, Nuevo Jaén, Independencia, Jorge Chávez, San Pedro de Mayrujay* and *Cotoyacu* has changed completely. The only community that is resisting, denouncing and fighting this is *Cotoyacu*.

Life in communities has changed completely. The only community that is resisting, denouncing and fighting this is *Cotoyacu*.

Forest clearance on a large scale first started around *San Martín – Barranquita*[17], followed by the *Yurimaguas* territory and then extended to all the enterprise's land. The area was fenced off and communities were suddenly unable to use their ancestral roads. They could neither hunt nor fish freely and access to the zone was, in general, controlled, with schedules for entering and leaving. In addition to deforestation, the streams and other water bodies became private property. Before adjudication, the zone had abundant trees for timber, marshlands, wild flora and fauna and diverse water bodies, with all the richness associated with forest. Today the land is used for rice and oil palm production.

Communities were left without land; people and families that used to be land owners became agricultural workers. From having a cultural identity and deep roots, they became invaders in the cities to where they had to migrate.

Furthermore, the *Cotoyacu* community has been left without streams. For example, the *Cotoyacu* stream has been deviated, drained in parts and contaminated with pesticides and other chemicals used by the *Palmas del Shanusi – Grupo Romero* enterprise. The *Cotoyacu* and *Puerto Perú* communities do not have drinking water, nor their old bathing areas. Water scarcity and the loss of water for their daily life has created serious problems, not only for their health but also for their culture. Not having water, some communal land owners have transferred their land to the enterprise and migrated to the cities. Others have stopped cultivating their traditional produce and have adapted to water scarcity. The consumption of produce from outside has increased compared to that of local produce.

Having been deprived of fishing and hunting in their usual places, they are obliged to adapt to a new lifestyle, with restrictions and changes in ancestral habits, now that everything is privatised.

Having been deprived of fishing and hunting in their usual places, they are obliged to adapt to a new lifestyle, with restrictions and changes in ancestral habits, now that everything is privatised. The concept of communal spaces has disappeared. Land use management has changed. Before, there was a diversity of agricultural produce in the same plot, but today there are only monocultures. If they were food producers before, today they are buyers of local produce.

Since 2008, the community has been complaining about the contamination of the streams and they have filed a complaint for environmental contamination. In response, the *Palmas del Shanusi – Grupo*

Romero enterprise provides them with water from the headwaters of the streams, which are now located on its property, to which no-one has access, despite being a public good.

Water issues are not a priority for province authorities. If it rains too much, there is no water, as the stream is too muddy, and if it does not rain, there is not enough water. However, not many people appear to complain.

The *Cotoyacu* community has settled by the river bank, and although they are not an indigenous tribe, they have adapted to the ancestral customs of the indigenous tribes in the region. The main difference is that they seek land registration individually and not as a community. They are conscious that they live from the forest and the water of the river, and that their life is not possible without them. For this reason, they have taken care of these resources, generation after generation. Today they do not have water, so they depend on the same enterprise that has impaired their life and threatened them with extinction. Young people now must look for other spaces where they can develop, as theirs is no longer a real community. The *Palmas de Shanusi - Grupo Romero* enterprise has taken their right to enjoy a healthy and balanced environment.

The inheritance of taking care of biodiversity using ancestral knowledge is being lost. Children and young adults cannot enjoy the richness of the river. They no longer know how to fish, they do not know about the *Mijano*[18] , they do not know the fish species that inhabit the zone. Owning a home is only a memory from their parents. They live in a zone where, once, the only problem was the abundance of food. The right to a diet according to their cultural beliefs has been taken from them. They are the new Amazonia people, those without land, forests or water.

They are the new Amazonia people, those without land, forests or water.

3. Proposals for the future

According to the report from the U.N. Special Rapporteur on the Human Right to Safe Drinking Water and Sanitation[19] : "Common violations of the human right to water and sanitation", presented to the Human Rights Council at its 27th Session on 30 June 2014, the recurrent violations in Amazonia can be grouped into:

- Violations of the obligation to respect. The obligation to respect the right to water and sanitation requires States to refrain from action that will unjustifiably interfere with their enjoyment.
- Violations of the obligation to protect and abuses by non-State actors. The obligation to protect requires States to enact and enforce necessary protections of the right to water and sanitation to protect individuals from human rights abuses by third parties. To this we would add the obligation to protect from abuses by the State.
- Violations of the obligation to fulfil. These are complex and include:

Failure to develop, implement and monitor strategies, plans and programmes; (b) Failure to properly raise, allocate and utilize the maximum available resources; (c) Corrupt practices; (d) Unjustified retrogressive measures; (e) Failure to prioritize the necessary steps to ensure minimum essential levels of access to water and sanitation; (f) Failure to provide adequate services in public facilities and institutions and in emergency situations.

- Violations of the obligation to refrain from discrimination and to ensure substantive equality. Examples of violations of the right to equality and non-discrimination can be grouped in the following categories: (a) Exclusion of groups or individuals from services or facilities, or failure to take measures to achieve substantive equality and address systemic patterns of inequalities; (b) Failure to reasonably accommodate persons with disabilities and take into account particular requirements; (c) Failure to prevent and combat discrimination and stigmatisation in the private sphere, or endorsement of stigmatizing practices through State action; (d) Failure to monitor inequalities in access to water and sanitation and to collect disaggregated data for that purpose.
- Violations of the obligation to ensure active, free and meaningful participation. Article 25 (a) of the International Covenant on Civil and Political Rights provides for the right to participate in public affairs. Participation must be active, free and meaningful. While it is often stressed that participation has significant instrumental value in ensuring more sustainable results, participation is a human right in itself, and noncompliance with relevant human rights obligations may give rise to violations. Such violations may arise from both, direct and indirect denial of participation, by failing to take reasonable steps to promote participation, including by ensuring the right of access to information.
- Violations of extraterritorial obligations. These are a growing concern in relation to the right to water and sanitation, for instance in the context of transboundary water resources, the activities of transnational corporations, or donor activities.

While it is often stressed that participation has significant instrumental value in ensuring more sustainable results, participation is a human right in itself, and noncompliance with relevant human rights obligations may give rise to violations.

In addition, there is the difficulty of daily access to justice without discrimination and on an equal standing.

Given these violations, we consider it a priority to follow the recommendations to States and the United Nations emanating from the report.

That Governments:

- Recognise the full range of violations of the right to water and sanitation and ensure access to justice for all such violations;

- Raise awareness on economic, social and cultural rights and the human right to water and sanitation, in particular, so that individuals know their rights and will be able to claim in the case of violations;
- Ensure that victims of violations are entitled to adequate reparation, including restitution, compensation, satisfaction or guarantees of non-repetition, and that the legislative framework requires courts to provide both restorative and transformative remedies;
- Ensure that judges, prosecutors and decision-makers have adequate human rights education and training, including on economic, social and cultural rights, by making training on those rights part of law school curricula and providing ongoing training;
- Ensure that individuals and groups do not face barriers in access to justice, whether economic, physical, linguistic, cultural or other, and take measures to overcome such barriers, including by means of legal aid;
- Ensure that national human rights institutions and other relevant bodies have an explicit mandate to:
  - identify and address violations of the right to water and sanitation, adopting a comprehensive approach;
  - receive complaints of violations of right to water and sanitation; and
  - require remedial and transformative action on violations of the right to water and sanitation.
- Ensure that civil society organizations working to address violations of the right to water and sanitation are properly resourced, have access to relevant information and can participate in decision-making processes.

That the United Nations mechanisms:

- Request that States provide information in their periodic reports on how they address the comprehensive range of violations of the right to water and sanitation,
- Ensure that complaints procedures are applied to ensure access to justice, including both restorative and transformative remedies, for the comprehensive range of violations of the right to water and sanitation.

As the Pan-Amazon Ecclesial Network (REPAM), and with a view on the entire Amazonia, we also would like to propose:

- That Governments produce an ordinance or mapping information system that identifies all streams, rivers, lakes and lagoons and their territories in the Amazonia region, to monitor, protect and defend them.
- That those water bodies are declared resources under the highest public

protection (preservation of identity and prohibition of transfer of ownership of the land where they are located).

- That Governments in Amazonia revise their environmental quality standards regarding the use and exploitation of water, giving priority to indigenous tribes and other river dwellers.
- That Governments implement regulatory measures on river transportation, with specific concern for the protection of fresh water sources, since this sector is currently causing contamination to rivers and therefore to the inhabitants of Amazonia. This regulation should promote a better and less contaminated environment.
- Regarding the progressive achievement of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Governments should make available all means to facilitate access to evaluation of water conditions and their levels of contamination, in response to their obligation to investigate violations of human rights.
- Regarding the situation of water bodies contaminated by oil and mining activities in several communities, we request that Governments immediately stop projects that are causing problems until there are adequate mechanisms of restoration and restitution available for those communities.

First school for the promotion, defence and enforcement of Human Rights of the REPAM.

4. Annex: Testimonials of indigenous leaders

Mr. Juarez Saw Munduruku at the Indigenous Peoples Forum, United Nations, New York, 2017.

Juarez Saw *Munduruku*:

"Water for the Munduruku people is important as one of us made the water. *Karosakaybu* made the *Tapajós* River with three shells of *tucumã*, and the Amazon with four. That is why the entire *Tapajós* is sacred for us. Our relationship with the river is part of the history of our children. When children are bathing in the river they are learning many things. They are learning to swim, [to dive by] jumping from the branches of trees and how to fish. The *Tapajós* is very important to us. It has sacred places, the most important we have. For example, by the stony area, over there, one of us, a *Muraicocu* came downstream writing on the stones. Today, we know the stones written by him. No-one has ever understood what is written on them. The *Tapajós* has history.

Because of that, we call the *Tapajós* '*Idixidi*'. Its water was made of the shells of *tucumã*. Today, people see that the *Tapajós* is not what it used to be. Our children cannot bathe there anymore because it is contaminated by the *Garimpeiros*. They are making sick the heritage that *Karosakaybu* left for us. Now people cannot drink or live from it as before. Before, when you drank, you wouldn't think that it would make you ill, no. Today, when people drink from the river they do not trust the water. No-one knows if they are going to survive. People know the water is contaminated. The hydroelectric plant built in the *Teles Pires* killed our river. Back then, when *Karosakaybu* gave us the river, he said: 'look, I made the river for you to take care of it, not to destroy it.' That is the word of *Karosakaybu*, who created the forest for us. It is there where he left the things he transformed for us, the pigs. All the other things he transformed are there in the forest. We need to take care of the forest and live with the things it offers to us, like the *Jacu* bird and other birds."

Our children cannot bathe there anymore because it is contaminated by the *Garimpeiros*. They are making sick the heritage that *Karosakaybu* left for us. Now people cannot drink or live from it as before.

Geraldo Kirixi

The river is for us like our mother, because we always need water, and like *Karosakaybu*, we live from the fish and pigs.

"This river is for us. *Karosakaybu* created the river. He already said that the river is for us like our mother, because we always need water, and like *Karosakaybu*, we live from the fish and pigs.

One day, men went hunting together and when they realized it, there was a man who had stayed at home, because his wife was giving birth. He could not go out to the forest, he could go nowhere; he was waiting for his wife. Afterwards, the women thought about jumping into the water to become fish. They formed a line to go to the water. The other men went to his home and they called him, because his wife couldn't walk. Then she gave the child to its father and he held it to his chest. And the women sang and walked towards the water."

***Munduruku* woman, translated by Reinaldo Poxo:**

"The river is very dirty; the river turtle is skinny. She eats river turtle, everybody eats it, and how, maybe even the Government also eats river turtle. She said she does not want the dam. She is afraid, because she likes eating fish, river turtle, the Acari fish. It is also why fish are skinny. The *Garimpeiros* work here in the river and they play with poison [mercury] and the river turtle eats the poison [mercury] and that is why it is skinny. She does not want dirty water like that, she wants it clean. She is afraid because before she could drink from the river, but now she cannot do it anymore. She is drinking water from a stream but she must go far to fetch it, at least 100 metres from her village and that is why she suffers so much."

***Munduruku* woman, translated by Reinaldo Poxo:**

"The water of the *Tapajós* River is very dirty. She likes bathing, but dredging is making the *Tapajós* very dirty. The fish do not come any more. Their children go fishing, but the fish do not bite. That is why there is not a lot of fish caught. *Karosakaybu* made this water not to get it dirty or to ruin it. It is for us and for God. He made this water here from *tucumã*."

Renata Poxo *Munduruku*:

"The water is our energy. It is where we bathe, where we fish, where we wash our clothes. The water is useful for that. No-one can contaminate the water. It is because of the water that fishermen get many fish."

"Water for me is very important, it is our energy and our food. I am also very sad when the Governments are destroying the forest, the waters. Our waters are contaminated and have a lot of waste. It is very sad that when people bathe they get lots of illnesses. The bottom of the *Tapajós* River has a lot of waste. When people bathe, they get a lot of diseases. It also causes our children to die. We, indigenous people, bathe in this water. Then the Government cannot destroy the water and neither can the water have all

this waste. The dams cannot not be there, otherwise the fish will die and we Munduruku will also be very sad. The water is very important for us."

Leonice Karo – *Munduruku* child

"When people bathe, it is very good. There is a lot of waste being thrown into the river water. Children start drinking this water and they get ill. They want to make more dams, but people don't want them. They will kill the river; all the fish are going to die, all of them. They are going to rot, all those things. There, the children will want to drink water when they become thirsty. They are going to die, aren't they?"

There, the children will want to drink water when they become thirsty. They are going to die, aren't they?

Reinaldo Poxo

"I live in *Itaituba*, by the old FUNAI [National Indian Foundation]. People here are suffering. About water: People bathe in the water and drink it. That is why people do not want the water to be dirty. That is why we fight and we speak up. [We suffer] for the forest too. We get our food from it. That is why we do not want the forest to disappear. That is why we suffer so much. Take a bath here! Not such a good idea, eh? People want clean water and the water is also suffering. The Government wants to kill everything here. That is why people are suffering."

Young man (Francisco Karo)

"The *Tapajós* was made from a *tucumã* shell. We do not want workers to destroy the river. People want clean and healthy water to drink. The *Tapajós* for us is important to bathe, to drink also. Before, we used to drink directly from the *Tapajós*. After the river got dirty, we started to take water from the streams, from the sources of the *Tapajós*. We stopped drinking water because the river is dirty, because of the *Garimpeiros*. Also, dredging and building dams make the water dirtier. The people who work manually in gold mining make a lot of dirt, because they work directly in the river. There, you cannot drink or bathe anymore, you get rashes. There, over the *Teles Pires*, the fish are dying because of the dam. Now, the fish issue is complicated, it is skinny, like eating mud. Before, I did not eat mud, I ate fruit. Fruit from the forest that is ours to live in and for the *açaí* and *buriti*[20] that we take. The streams are healthier, they give us more in the summer."

Wife of young man

"She spoke about breast feeding, as her sister used to do. Before, children were fed from their mother´s breast, they only stopped at about 6 years old. That is why children did not have illnesses, diarrhoea or flu. Now is different, they go to the cities to buy milk in tins and the milk is not good for them.

About water: she does not want it dirty, she wants it clean. She is not used to bathe in a bath or use a toilet like white people, because indigenous

people are different. That is why she speaks up for the forest. It has many monkeys. The loggers cut down a lot of forest. She doesn´t like it at all, it is very sad. God left the forest, not to fell or destroy it, but to give fruit. Fruit has everything, like the *açaí*. People eat that fruit. White people do not know it, they only know oranges, melons and bananas, but God left plenty of fruit in the forest to eat.

She does not want the dams either, not at all. Once she went up river (to the *Teles Pires*) and workers told a very sad story—fish are dying, the *Tracajá* river turtle is dying, even the *boto* [Amazon dolphin] is dying. Who knows what is in the bottom of the river, it seems that it is poison [mercury]. The fish eat the poison [mercury] and die. And the parcels that people have in the forest are also disturbed. First there were people that is ancient history, first there were people there and after *Karosakaybu* turned them into pigs, because for us *Karosakaybu* is God. He walked these lands, those white people do not know, I have never heard a story like that from white people. We do have history.

Karosakaybu was God first, that is why he made the things in the forest, fish, pigs, everything, he has done everything.

Ageu Pereira

"I want to talk a bit about the importance of the *Tapajós* River, the importance that it has for the inhabitants of *Itaituba*, for the river dwellers, for the indigenous tribes and others. It is a river that is precious to us. It is because water is life, hence our struggle today, that of the indigenous tribes and the river dwellers in defence of the *Tapajós* River. Often the Government sees us as hindering progress that do not want the development of the region. But the truth is that the river is part of our lives, because people are born and raised by its banks and people need water to drink, to bathe. Children also play there.

It is a river that is precious to us. It is because water is life, hence our struggle today, that of the indigenous tribes and the river dwellers in defence of the *Tapajós* River.

We also have many sacred places in the *Tapajós* River. Today our river is going through a difficult time with this issue of artisan gold mining, with these issues of the large projects in the region, some of which are already being implemented. For example, the ports of *Miritituba*. These large projects have many impacts for the river inhabitants. Our main concern is that the Brazilian Government supports these projects and forgets that on the river banks there are indigenous tribes, river dwellers, traditional communities, people that depend directly on this river, on the forest. From all the resources that this river has, the water has for us very interesting stories. It has stories about *botos* [Amazon River dolphins], of spells. People grew up listening to their parents telling these stories. These stories are about to be forgotten, not having any more places where to point out these events happening, because the large projects can kill the *Tapajós* River. That is why I had to talk about the importance of the river, very briefly, because

it is of greater importance than I can tell you with my words, but that is why we are fighting to defend it."

Amâncio Ikon

"We consider that nature is provoked by people. For example, when one kills a tapir, one cannot play with their bones or head. If you do, you may have an accident or die. It is a living thing. We respect nature. We know that it is not just people who are hungry, but also animals. A bird, an alligator, a snake, a jaguar doesn't kill. If there is no respect, someone 'has to run over the other'.

The spirits of the water are many. For example, think about an animal that the *Munduruku* respects a lot, the *boto* [Amazon dolphin]. If it comes to you, this is bad. Sometimes people see women playing with *boto* in the Amazon, but the *Munduruku* do not even get close to them."

Rozeninho Saw

Coordinator of the *Pariri do Médio Tapajós* Association, representative of the villages.

"We the incumbent have a great concern about water, because we know that no one lives without water. Our *Tapajós* River is not different because it has the history of our ancestors. It was *Karosakaybu* who created it. Our river is also at high risk of becoming extinct through the Government's hydroelectric project. Even when we managed to make the Brazilian Environmental Institute (IBAMA) archive the project for the power plant of *São Luiz do Tapajós*, we are still in the fight. The Government is still coming with the mining project that impacts the river—not only the river, but also the water table. People worry because water is life for us. In addition, the *Tapajós* River, especially in *Sawre Muybu*, there is a lot of *garimpo* [artisan gold mining]. The *garimpo* is illegal in this municipality, because the authorities are granting licenses illegally.

When it comes to artisan gold mining, water worries us a lot, as they use mercury to extract the gold. Mercury has an impact not only on men, but also on women. They eat fish and, in addition to affecting them, it also affects the children they will have in the future. Children are being born with deficiencies because of what mothers have eaten. The people who contaminated the water are the same ones working with artisan gold mining.

Why do people say that water is important? It is because water exists thanks to the forest. The forest conserves the water and we preserve the forest, because water is important for us. That is why people fight against a Government project that threatens the water that is life for us. People are fighting for the *Sawre Muybu* territory."

Lily Calderón
Pastoral "*de la Tierra*"– Diocese of *Yurimaguas*, Perú

Fernanda Moreira
Catholic Indigenous Missionary Council (CIMI) Brazil

Francis Andrade
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Notes

1. Source: http://www.icv.org.br/wp-content/uploads/2016/07/Ocekadi_Hidrel%C3%A9tricas_ConflitosSocioambientaisResisBaciaTapaj%C3%B3s.pdf
2. Photograph: Aaron Elkaim.
3. https://www.youtube.com/watch?v=yNmpZWsaROk
4. Quilombolas are the descendants of Afro-Brazilian slaves who escaped from slave plantations that existed in Brazil today most of the Quilombola population is part African-Brazilian, part Indian. Quilombos were mainly located deep in the jungles, far from European influence, and after the fall of Palmares, all the quilombos either went into hiding or were wiped out. Most of the Quilombolas remained hidden so successfully it was assumed they had been destroyed or died out. They dropped farming at the risk of being discovered and continued the agricultural forest practice.
5. Source: LOURES, Rosamaria. 2017. Governo Karodaybi: o movimento Ipereğ Ayu a resistência *Munduruku*. Dissertação (Mestrado em Ciências Ambientais) – Programa de Pós-graduação em Recursos Naturais da Amazônia, Universidade Federal do Oeste do Pará, Santarém.
6. Transhipment station (ETC): Port facility operated under permit, located outside the organized port area and used exclusively for reloading of goods in inland navigation vessels or cabotage (transport of goods between two places in the same Country by a transport operator from another Country).
7. In Brazil, Law No. 9.433/97, established that water resources management should promote its multiple uses in a decentralised form and with the participation of the civil society and other users. The integrated and participatory decentralization of water resources management would then be achieved through the creation of two public entities in each basin: a "River basin committee" and a "River basin agency." The committee would count with representatives from the Government, civil society and other users, constituting a new forum for dialogue, while the agency would be the executive branch of the corresponding committee.
8. http://revistaecologico.com.br/noticia.php?id=2800
9. Photograph: Mauricio Torres.
10. *Astrocaryum aculeatum*
11. http://agenciabrasil.ebc.com.br/geral/noticia/2016-11/vazamento-de-oleo-no-rio-teles-pires-afeta-comunidades-indigenas
12. https://theintercept.com/2017/01/20/empresas-apresentam-impacto-destruidor-de-usina-como-se-fosse-exemplo-de-sustentabilidade/
13. https://theintercept.com/2017/01/16/hidreletricas-avancam-sobre-terras-e-vidas-*Munduruku*/
14. Ley Forestal y de Fauna Silvestre N° 29763.
15. Municipal Land Ordinance N° 018-2015-MPAA-A approves economic and ecological zoning of the *Alto Amazonas* province as an appropriate land use management tool.
16. https://www.youtube.com/watch?v=rqaJRZM7iDQ
17. https://www.youtube.com/watch?v=cMycQfJobyY
18. Term used in Amazonia describing a phenomenon that happens during river high water season. Fish migrate in large quantities from the lakes where they spawned, in the heart of the Amazon forest, and move downstream to the rivers and basins. For the locals, this is a gift from Mother Nature of delicious wealth to nourish people.
19. https://documents-dds-ny.un.org/doc/UNDOC/GEN/G16/015/72/PDF/G1601572.pdf?OpenElement
20. *Euterpe oleracea* and *Mauritia flexuosa*.

BURKINA FASO - POTABLE WATER FOR A BETTER LIFE

A Caritas in Veritate Foundation Report by

ORGANISATION CATHOLIQUE POUR LE DEVELOPPEMENT ET LA SOLIDARITE (OCADES) - CARITAS BURKINA

Potable water supply and sanitation are major development issues for Burkina Faso. Nevertheless, the right of access of the entire population to drinkable water and sanitation by 2030 is enshrined in the Constitution of Burkina Faso. Like other countries, Burkina Faso has subscribed to the international commitments for the achievement of the Millennium Development Goals (MDGs), agreed for the period 2006-2015. This commitment has materialized through the adoption of the National Program of Supply of Drinking Water and Sanitation (NP-SDWS) by 2015.[1] At the end of the MDGs, a New National Policy on water (NPW) has been defined in the context of the Sustainable Development Goals (SDGs). To achieve the SDGs on water and sanitation, new repositories, including the National Program of Drinking Water (NP

- DW) and the National Program of Reuse of Waste Water and Excreta (NP-RWWE), have been developed for the period 2016-2030. These two programs are integrated in the National Plan for Economic and Social Development[2] which is the national reference for development over the period 2016-2020 in Burkina Faso.

Despite the efforts undertaken by the State and development partners during several decades in terms of realization and supervision of infrastructure management, the situation of potable water supply for inhabitants remains mixed, particularly in rural areas. With global natural conditions relatively unfavourable, and a demographic pressure on sensitive natural resources, the population's needs of drinking water and sanitation become a concern. In 2015, the National Steering Committee of the NP-SDWS estimated access to drinking water at 87% in urban areas and at 64.1% in rural areas.[3] This rate was below the average of developing countries (78%) for the same period. This unsatisfactory situation particularly penalizes women who assume the task of supplying household water for drinking and hygiene needs. Water supply issues expose communities and more specifically women to health risks (un-healthiness, inaccessibility, fetching water, diseases related to the consumption of water etc.), to illiteracy, to the lack of schooling for girls and even to security risks (conflicts related to the management of water points). According to health specialists, during prenatal visits, many women complain of pain related to fetching water and others experience complications during pregnancy.

Water supply issues expose communities and more specifically women to health risks to illiteracy, to the lack of schooling for girls and even to security risks

The causes of the low accessibility to drinking water in rural Burkina Faso include the lack of structures to the recurrence of related breakdowns due to the obsolescence and the poor quality of the hand pumps installed on water points and especially the lack of maintenance by local communities of these structures.

The situation is not better in the case of sanitation and hygiene. Despite the implementation of the NP-SDWS over the period 2007-2015, the MDGs for access to drinking water and sanitation have not been achieved in Burkina Faso. According to data from the Department of Water and Sanitation, at the end of 2015 the sanitation rate was estimated at 11% in rural areas against 34.2% in urban areas. Sanitation of the living environment remains low because many households do not have latrines or trash for garbage or pens for the animals. These indicators highlight the challenges that will rise in the context of the SDGs.

In such a national context, we can understand why the problem of access to drinking water and sanitation is a central issue for the development of the pastoral of the Church's Family of God, and for its charitable organization, which is the *Organisation Catholique pour le Développement et la Solidarité*[4] (OCADES) Caritas Burkina. In line with national priorities, particular attention is provided to these issues through different consecutive strategic plans of OCADES. To give more resources to realize this ambition in the

area of drinking water and sanitation projects, OCADES Caritas Burkina has gradually added more human and material resources in order to increase its operational capacity. Thus, throughout the OCADES Caritas Burkina network, there are human skills (engineers and technicians) and drilling workshops capable of producing more than 1,000 wells per year. These hydraulic technicians, sociologists, project managers and facilitators raise awareness, inform and train beneficiaries in the management of hydraulic works and sanitation.

The objective pursued by the Church's Family of God in Burkina Faso through OCADES Caritas Burkina is to improve people's access to drinking water and to allow communities to get involved in a sustainable, efficient and equitable management of this common resource throughout the Country. We found that there was no match between the needs of the population and the sources of water supply, in quantity, quality and spatial distribution. The Users' management of water has not always been well prepared and aimed at creating a social environment that encourages final ownership of the works. This permanently called into question the sustainability of the works. In general, awareness of the importance that water sanitation and hygiene have for communities and households must be strengthened.

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In terms of strategy and the principle of subsidiarity and responsibility of local communities, OCADES Caritas Burkina is part of the national policy of water and sanitation. It is collaborating with the establishment of management committees of the water points and of the association of water users (WUA) before, during and after the realization of hydraulic works and sanitation. All the infrastructure and equipment are made in close collaboration with local communities while requesting their financial contribution. In the villages of Bourzoga and Kabri, people are satisfied with the achievements of the project. Ms. Ouedraogo confides in these terms: "Before the drilling carried out under the project, we travelled almost 10 kilometres per day to supply us in a lowland. There were sometimes conflicts on the spot because each woman wanted to be served first. With the new boreholes, we are very happy. Thanks to the water from the borehole, we saw a marked decrease in the number of diseases. We are now healthy and our dignity is preserved. With the drilling water, we conduct several income-generating activities such as preparing and selling millet beer, food, etc. We make sure that the drilling is kept clean daily to preserve our health."

OCADES intervenes in the field in close consultation with the regional directorates of the different technical ministries and in particular those in charge of water and sanitation. Municipal authorities are involved and participate in the organization of the total appropriation of the works. Ousmane BANGRE, SG of the town hall of Tenkodogo, First Deputy Mayor, talks about this collaboration: "The city of Tenkodogo is facing

serious problems of water supply and sanitation. It is not easy. People are calling on us every day. When we have partners like OCADES on our side we can only rejoice. In this sense, we welcome the project because it will take a weight off our shoulders. In its structuring and in its accomplishments, the project takes into account our communal development plan. In the field, people are satisfied with drilling, latrines, and awareness sessions. Thanks to the hydraulic project, we will significantly improve our indicators of sanitation and drinking water while significantly improving the living conditions of the population." Traditional authorities and opinion leaders promote and appreciate the work of OCADES and are involved in setting up the management bodies. OCADES promotes the positioning of endogenous mechanics to repair pumps and masons trained in the construction of latrines adapted to the needs of the population.

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Thus, OCADES Caritas Burkina develops several partnerships with its sister Caritas, CIDSE organizations and other associations and cooperating bodies on water and sanitation issues. In addition, several hydraulic projects are being implemented by the OCADES Caritas Burkina network across the Country. Throughout the latter, the drinking water sector accounted for 20% of the total investment in the social sectors in 2016 (literacy, education, health, nutrition, social work, drinking water) while sanitation represented only 2%.

For instance, at the level of the General Secretariat, between 2004 and 2010, a hydraulic unit was funded by *Misereor*, which promoted professional practices in the field of organization, monitoring and evaluation of hydraulic structures. Even today, drinking water and sanitation projects are inspired by the achievements and tools put in place by that national unit. The example of the hydraulic program co-financed by the *Secours Catholique Caritas France* for 10 years is based on its sustainability, its relevance and its reliability in the accompaniment of involved actors. More than 50,000 people have directly benefited through 10 rural municipalities for the supply of drinking water, sanitation and the promotion of environmental education. This project, which has undergone several phases, has achieved significant results in terms of the number of hydraulic and sanitation structures, and training: more than 60 new boreholes, more than 200 old rehabilitated wells, more than 5,000 latrines built for households, more than 10,000 trees planted and maintained by schoolchildren, more than 200 trained and equipped waterwork repair mechanics, more than 100 masons trained in the construction of latrines and more than 500 associations of water users were put in place.

The work of the Catholic Church is aimed at encouraging the population to strengthen, on the one hand, the social cohesion in the realization and management of projects, and on the other hand, to learning to build together a better future through access to basic social services.

Beyond physical achievements, drinking water and sanitation projects significantly change the living conditions of populations who strongly adhere to them. The work of the Catholic Church is aimed at encouraging the population to strengthen, on the one hand, the social cohesion in the realization and management of projects, and on the other hand, to learning

to build together a better future through access to basic social services. Thus, Muslims, Christians, followers of traditional African religions, have a constructive dialogue by managing a collective work. OCADES Caritas Burkina is engaged in this battle for drinking water and sanitation as a mean of promoting the integral human development of the people. Mr. Alphonse SORO, SG of the Bittou Town Hall, reflects on the objective of accompanying people to take the responsibility of their own future: "The project is timely because the situation is very critical in Bittou. In terms of access to drinking water, with a rate of 47.9% we are significantly below the 74% at regional level. Drilling is insufficient and not always functional. On the ground, we see a strong public support for the project. The achievements of the current project (drilling, latrines, and sensitization) will improve people's access to basic social services. In doing so, OCADES and its partners are assisting us in the implementation of our communal development plans (CDP). This plan is based on several axes including the sustainable management of natural resources, economic growth and communal governance. We hope that the project will continue beyond 2018 to help us improve the living conditions of the people."

Satisfaction is often visible on the proud face of the users and their testimonies. According to Kadi Sawadogo, from the Eastern region of the Country: "Before the construction of the latrines, we were exposed to all kinds of risks including snake bites. Thanks to the latrines built, our living environment is cleaner, diseases are reduced and our dignity is preserved. Those infrastructures of the project reinforce our well-being." In different villages, the populations appreciate the drinking water and sanitation projects because they improve their living conditions and strengthen social cohesion. Based on local testimonies, fruitful collaboration with local authorities and renewed contacts with national authorities on water and sanitation issues, the projects executed through our national network meet the expectations of the various stakeholders. The various partnerships still need to be strengthened to achieve significant results in the water and sanitation sector.

Abbé Isidore Ouedraogo

NOTES

1. Water Supply and Sanitation in Burkina Faso Turning Finance into Services for 2015 and Beyond, Available at https://www.wsp.org/sites/wsp.org/files/publications/CSO-burkina-faso.pdf [Accessed 26.07.2017].

2. National Plan for Economic and Social Development 2016-2020, Availabe at http://www.pndes2020.com/pdf/06-en.pdf [Accessed 26.07.2017].

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EMPOWERING COMMUNITIES

WATERING DEVELOPMENT: THE PARADOX OF RURAL COMMUNITIES' ACCESS TO WATER IN MALAWI

A Caritas in Veritate Foundation Report by

THE CATHOLIC DEVELOPMENT COMMISSION IN MALAWI

1. Introduction

The Catholic Development Commission in Malawi (CADECOM) is the developmental and relief arm of the Episcopal Conference of Malawi (ECM), the latter representing the assembly of Catholic Bishops in Malawi. CADECOM'S Mission Statement is "to create awareness and empower disadvantaged men, women and the youth to undertake development which is integral, gender and environmentally sensitive, sustainable and which promotes justice, human dignity, and self-reliance with the active participation of the people themselves so that they take up the responsibility of their own destiny".[1]

This paper is based on interactions, consultations and interviews with communities and other stakeholders in the water sector, as well as a review of relevant literature, including past CADECOM reports. The paper draws insights from interviews conducted in Rumphi, Dowa, Balaka, Chikhwawa, Mzimba, Blantyre, Phalombe and beyond, where the Commission has been implementing water, hygiene and sanitation projects both under the Australia Africa Community Engagement Scheme (AACES) programme and other WASH initiatives.

2. Setting the ground on access to water

In analysing Malawi's current development situation and future prospects, water stands out as one of the key issues. For a resource as critical as water, it is inevitable that this issue should lie at the core of efforts that seek to put Malawi on a sustainable development path. Indeed, it is not an exaggeration to say that water literally "waters" Malawi's development. Water is life, thus life itself emanates from water. It is imperative for CADECOM to seriously engage in issues related to water, especially in rural communities that are often marginalized. To illustrate the centrality of water as a critical development tool, results of the

Indeed, it is not an exaggeration to say that water literally "waters" Malawi's development. Water is life, thus life itself emanates from water.

strength-based approach, which the Catholic Development Commission in Malawi (CADECOM) conducted in all the districts through the eight diocesan offices, highlighted water as one of the resources that can be maximised to promote household and national food and nutrition security. The Malawi Growth and Development Strategy (MGDS II) identified water as one of the key elements of the Country's development trajectory.[2] The formulation of the 2000 National Water Policy, which was revised in 2005, demonstrates the crucial role of water in the Country's aspiration for a better life of its citizens.[3]

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An important dynamic to be mentioned is that Malawi's abundant endowment of water resources positions it as the African Country with the highest potential to make use of this precious resource for national development. Malawi is blessed with five lakes and many perennial rivers. In addition, the water table is reasonably high in most areas even in the face of mounting deforestation. It is estimated that 21% of the Country is covered by water[4], a fact that could potentially energise interventions designed to put millions of people out of poverty and on the road to prosperity. It is paradoxical that, against this background, a large percentage of Malawians, especially in rural areas, lack access to potable and safe water.

In fact, Malawi is one of the Countries in Southern Africa likely to experience absolute water scarcity by 2025

In spite of the rich water resources at its disposal, Malawi remains one of the Countries in the world that faces the most serious problems regarding access to clean and safe drinking water. In fact, Malawi is one of the Countries in Southern Africa likely to experience absolute water scarcity by 2025[5]. Since Malawi has water in abundance, it is confronted by the challenge to enable the majority of its citizens to access regular, safe and clean water resources.

It is widely acknowledged by the Government and other stakeholders that the distribution of water across the Country is irregular and varies according to location, season and year. While some areas enjoy a dependable supply of water, other areas continue to experience erratic water provision. The latter situation undermines the ability of people, especially in rural and marginalised regions, to live a decent life and emerge from poverty. In some communities where we work, there is such a huge lack of water that it disturbs the harmonious co-existence of nature itself. CADECOM's mission exactly reflects this goal, a mission of the "Family of God filled with the Holy Spirit living in harmony, peace and solidarity".[6]

According to the 2011 Malawi Sector Performance Report for the water sector, 77 percent of rural areas have access to sustainable water sources while, in urban areas, the proportion stands at 92 percent.[7] However, the problem with such national aggregates is that they mask the inequalities that exist in the Country in terms of access to safe and clean drinking water. To deal with these distributional problems, a robust engagement of all stakeholders is required. In this way, we can hope to resolve the problems that hamper initiatives, such as inadequate financing, limited

water services coverage, increasing water demand and political interference. Our interaction with communities and our research conducted in the areas where we are implementing the AACES programme challenges the abovementioned findings: on average people walk 4.2 kilometres, spending three hours, to get water. This is not in line with the UN Sphere Standards, which recommend that water points should be within a reach of 30 minutes.

In our efforts to achieve 'Water and Sanitation for All, Always'[8] as envisioned by the 2005 National Water Policy, CADECOM implemented food security, water, sanitation and hygiene programme in Dowa, Rumphi, Phalombe and Mzimba with financial support from the Australian Government's Department of Foreign Affairs and Trade (DFAT) through Caritas Australia. The programme involved several projects, such as giving access to water through drilling of boreholes and the construction of water intakes as well as promotion of general hygiene using the Community Total Led Sanitation (CTLS) approach[9] . Within the five years of program implementation, CADECOM has sunk 64 boreholes and repaired one water intake in Phalombe, providing access to potable water, sanitation and hygiene services to more than 97,280 people. Our ratio stands at 346 households (1,520 people) per borehole, which, however, still is far below the Sphere Standard of 500 people.

3. The role of CADECOM in the water, hygiene and sanitation sector

CADECOM has been a major player in the water, hygiene and sanitation sector in Malawi for more than ten years. During this period, the Commission has constructed 153 water points such as boreholes, tanks and water intakes, excluding shallow wells that have benefitted millions of Malawians in all regions of the Country. These interventions have been made possible with support from Caritas Australia,[10] Cordaid[11] and Trocaire,[12] which have been financing half of these water, hygiene and sanitation facilities.

As part of its continuing contributions to the sector, CADECOM, through the Caritas Australia funded programs such as the AACES enhanced access to safe and clean water and food security for over 8,000 households with a proximity multiplier effect of 50%. Funding for the programme was provided by the Australian Department of Foreign Affairs and Trade (DFAT) through Caritas Australia. CADECOM embraces the principle of participatory development that currently frames the management of the common pool resources such as water, having as a target audience the poor and marginalized societies. It is CADECOM's hope that the Government and other stakeholders in the WASH sector will fully engage with the findings of these consultations and implement recommendations that could enhance interventions, policies and programming in this sector.

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4. Re-current observable challenges in the water sector

A. Lack of shared understanding on access to water

One of the key issues that emerged from consultations with communities and Government officials in the seven districts pointed to a disjuncture between what the Government says with regard to access to water and the point of view of the people on that issue. While all District Commissioners (DCs) and other Government officials interviewed in the districts sampled painted a rosy picture of the situation of access to clean water in their respective districts, communities told a different story. For example interviews with the District Council Office in Phalombe reported that 90 percent of the communities in the district had access to safe and clean water, which is better than the southern region average of 84 percent. However, interviews conducted with chiefs and members of the community in the authorities of Nazombe and Chiwalo revealed severe and persistent problems of access to water. The pattern was similar in all other districts where consultations were conducted.

While all District Commissioners (DCs) and other Government officials interviewed in the districts sampled painted a rosy picture of the situation of access to clean water in their respective districts, communities told a different story.

This highlights the problem of inadequate engagement between communities and Government officials with regard to access to safe and clean water. Additionally, low knowledge levels among communities on water policy was also stressed. The vast majority of the people at community level reported being unaware that the Government had developed a policy that not only guided the water sector, but also named them as key stakeholders in efforts to facilitate access to water.

Moreover, only few citizens knew that they have the right to clean and safe drinking water. One of the key principles of the Malawi Government water policy is to promote demand-driven and participatory development programmes. In the context of limited community information and understanding of what the policy stands for, it is inconceivable that people would demand their right to water and development. This explains why communities ask every organization engaged in that area to provide them with safe and potable water.

One of the key principles of the Malawi Government water policy is to promote demand-driven and participatory development programmes.

B. Inadequate water service coverage

In all the districts in which CADECOM consulted communities, local people reported that they had to walk long distances to fetch safe and clean water. In some areas, such as T/As Mtwalo in Mzimba and Chakhadza in Dowa, people were forced to use water that is unsafe, bitter, and salinated. There are some areas in Phalombe and Dowa, for instance, where the Government drilled boreholes but communities did not use the water because of its salinity. Filipina Solisitan from the Chiziko Village in Dowa, said: "This problem [of bitter water] has been here since we were born and, up to now, no solution has been found. We have to get

up around two o'clock in the morning to draw water from the Kasangadzi River which is four kilometres away."

In Dowa, Mzimba and Rumphi, communities said that they share water sources with wild animals, which represents a threat to people's lives. In Dowa, people said "crocodiles in Bua, Kasangadzi and Mtiti rivers are a big menace", whereas in Mzimba the danger comes from wild animals such as elephants from the Vwaza Marsh Game Reserve. The dangers of sharing water with animals go way beyond physical harm, as in the case of crocodiles, and can be a recipe for contracting some diseases.

The problem of limited access to water was also perceived by the Group Village Head Kaliati in T/A Kunthembwe in rural Blantyre, where the chief said there are only three boreholes for 775 households (3,410 people). Two of the boreholes were sunk by CADECOM Blantyre through the Caritas Australia-funded Integrated Community Development (ICD) programme while the other served the primary school in the village. In areas under T/A Nsamala in Balaka, three villages - Saiwa, Mmangeni and Mangani - shared one borehole only with a total household population of over 480. The problem of water scarcity is present in every corner of the Country, and requires political will and shared commitment amongst stakeholders. It is a paradox, considering the rich reserve of water sources in the Country.

To demonstrate the paradox of access to water in Malawi, it is ironic that these problems even occur in areas that have abundant water sources, such as wetlands and rivers. In all communities in Malawi where CADECOM has worked, water has been highlighted as one of the key issues affecting their livelihoods. Through its diocesan structures nationwide, CADECOM has highly contributed to the water sector, not only in the above-mentioned districts, but also across the entire Country. Considering the centrality of water in human life, CADECOM will continue to work in the water sector by making sure that Malawians have access to safe and potable water.

To demonstrate the paradox of access to water in Malawi, it is ironic that these problems even occur in areas that have abundant water sources, such as wetlands and rivers.

C. Non-functional water infrastructures

One contributory factor to the problem of limited access to water, sanitation and hygiene services in the areas where consultations were carried out, refers to the many boreholes and other water points that are not functional. Poor workmanship, low quality materials and vandalism emerged as some of the factors that exacerbate the problem already existing. According to a study done by Mulwafu (2011), approximately 40% of the rural water points in Malawi are not functioning properly. If Malawi is to attain equitable access to safe and potable water, hygiene and sanitation, these findings call for serious reflections by all stakeholders. Much of this situation is due to the Government's lack of commitment to establish and/or capacitate Water Management Committees. Only in Dowa, TA Chakhanza, out of the 32 boreholes sampled, 8 were non-functional, representing 25% of all non-functional boreholes.

D. Inadequate financing in the water, hygiene and sanitation sector

There is consensus among stakeholders that, in order to achieve universal access to water by 2025, the Country needs to invest 3.5 percent of the GDP annually in the WASH sector.[13] According to the Malawi Water Sector Investment Plan, the Country needs to invest at least $140 million every year between now and 2030 to accelerate universal access to water and 87 percent to grant access to basic sanitation by 2025.[14]

In fact, water and sanitation is one of the least funded social services, together with public health.

However, currently, the Country invests less than one percent of the GDP in this sector. This is highly inadequate. In fact, water and sanitation is one of the least funded social services, together with public health. Analysis of budgetary allocations to the sector reveals that water and hygiene are not listed as stand-alone budget lines but that they are bundled together with other areas such as the Green Belt and Water Development. The problem with the status quo points out the lack of attention to specific water, hygiene and sanitation needs as the Country strives to achieve universal access.

Budgetary allocations to the water, hygiene and sanitation sector has exhibited a downward pattern. According to the Water Aid Malawi budget analysis in 2011/2012, the sector was allocated MWK 7.27 billion, later revised upwards to MWK 7.822 billion. In the 2012/2013 fiscal year, the figures went down to MWK 4.63 billion, representing a drop of about 41 percent. For the 2013/14 budget, the Ministry of Water Development and Irrigation has been allocated approximately MWK 16 billion, covering all water related activities. Historically, however, the focus has been on irrigation and not on access to safe and clean water.

Against this background, District Commissioners (DCs) and other Government officials, who were interviewed and consulted, indicated that budgetary allocations to the WASH sector in their districts were far too little to have a meaningful impact on communities. For example, in Phalombe, the district received less than MWK 1 million a year for water, sanitation and hygiene. This is merely enough for administrative work. In other districts, the situation was not better. Money was only sufficient to repair minor damages to the boreholes. Considering that the costs of sinking one borehole are over MWK 2.5 million, new boreholes are only very rarely constructed.

This means that the major responsibility for projects in the WASH sector is left to Non-Governmental Organizations. For instance, to help filling the funding gaps, donors have been implementing interventions in the sector. In May 2013, the British Department for International Development (DFID) made a contribution of GBP 17 million (about MWK 10.8 billion) to the sector under the Malawi Integrated Water Supply, Sanitation, Hygiene Promotion and Capacity Building Programme. Australian Aid (AusAID) is contributing USD 14 million to the National Water Development Programme. Other donors under the programme are the World Bank, DFID – through the African Catalytic Growth Fund – the European Union

and the European Investment Bank, the UNICEF – Dutch partnership, the OPEC Fund and the Arab Bank for Economic Development in Africa (BADEA).

AusAID's support for the project is expected to provide water supply facilities to approximately 37,000 people, with sanitation services and hygiene promotion activities expected to benefit around 170,000 people. Following the recent launch of a water supply and sanitation system in Malosa, Zomba, 89,000 people will be able to access improved sanitation in the area. CADECOM commends such efforts, and appeals all stakeholders involved in enhancing equitable access to potable water, sanitation and hygiene to reach out to the most marginalised part of the population that lives in the periphery of the Country.

E. Increasing pressure on water resources

The problem of limited water services is being worsened by a rapidly growing population. According to projections, fresh water per capita will fall to less than 1,000 cubic metres by 2015.[15]

In some areas under review, such as T/As Nazombe and Chiwalo in Phalombe, Chakhaza in Dowa, Mtwalo in Mzimba, Chikulamayembe in Rumphi and Nsamala in Balaka, the demand for water services is so high that, although CADECOM has a water, sanitation and hygiene programme, under AACES and the Caritas Australia funded Integrated Community Development (ICD) programmes, the demand for water exceeds. High population growth is undermining the effectiveness of CADECOM's efforts. For instance, in T/A Chakhaza in Dowa, there are over 15,000 households in need of safe and potable water, yet the program is only targeting 2,000 households. For the past three years, according to the traditional leaders in this area, no single bore has been sunk by the Government. CADECOM wonders, when such revelations come across the Country, whether the Government has minimal priority on provision of safe water to Malawians.

F. Political interference

A review of community responses across the Country shows that political interference is a significant factor that influences the allocation and distribution of safe water facilities in communities. In search of support, politicians have been found to divert safe water facilities to sympathisers as a token of appreciation for their votes or to seek support for upcoming elections.

In search of support, politicians have been found to divert safe water facilities to sympathisers as a token of appreciation for their votes or to seek support for upcoming elections.

For example, a chief interviewed in Mpagaja and Mpenda villages in Blantyre remarked: "We had many boreholes here, especially just before the 2004 elections, as many aspiring candidates facilitated drilling, but, soon after the elections, all the boreholes were stolen. During the 2009 elections, no one gave us boreholes."

Such findings not only show the extent to which water is used as a political tool but also the lack of ownership which comes with the drilling of boreholes. In most cases, communities are not fully consulted and sensitised to take ownership of the water facilities. For example, CADECOM sampled a few villages outside its impact areas where the "Government" had drilled boreholes to check if the communities were told how to manage and repair the facilities. Unfortunately, all the eight communities which were consulted did not have training in water management.

In most cases, communities are not fully consulted and sensitised to take ownership of the water facilities.

G. Lack of capacity/presence of community water management committees

CADECOM's assessment in the districts under review also revealed that in most communities where boreholes have been sunk, either through the Government funded programmes such as Local Development Fund (LDF) or the Constituency Development Fund (CDF), communities did not have the skills to manage water facilities. The situation was different in areas where NGOs, such as CADECOM and Water Aid, drilled boreholes and established Water Management Committees which are trained in repairing boreholes and managing the surroundings.

District Water Officers in the districts sampled indicated that their budget lines were too small to undertake such training programmes in communities, let alone to establish the committees or to restore them where they were already established.

5. The 2005 National Water Policy and its role in the WASH sector

A review of the 2005 National Water Policy[16] indicates that its strength lies in the ability to identify water-related issues and draw policy objectives, instruments and guidelines, all of which attempt to provide answers to the challenges the policy seeks to address. Furthermore, the policy reflects on the structure and behaviour of key agents in the water sector, with achievable targets, however with no specific deadlines.

The National Water Policy also formulated key actions for attaining policy objectives, although capacity and resource constraints hinder implementation of some of the strategies and targets as evident in the six districts where inadequate financial resources have hampered progress in meeting goals and targets set by the policy.

The National Water Policy also formulated key actions for attaining policy objectives, although capacity and resource constraints hinder implementation of some of the strategies and targets as evident in the six districts where inadequate financial resources have hampered progress in meeting goals and targets set by the policy. Recognising that water is a multi-purpose productive resource that is intertwined with several other development issues, the policy's focus is not simply on the provision of water and sanitation services, but also on the increasing competition among

users. Thus, the policy offers a holistic approach to water management and sanitation by examining other crucial areas that impact water management and sets out the roles that other ministries such as Forestry, Agriculture and Irrigation and Fisheries must play if water sources are to be protected and water quality and flows in rivers and streams are to be improved.

However, this same holistic approach contains a weakness for the policy in the sense that, in its attempt to incorporate every sector that touches on water as a resource, it discusses broader issues and fails to provide specific policy direction on some key issues. For example, although the policy emphasises the need for the participtiption of beneficiaries and user groups in decision-making, it does not offer specific recommendations on how these ideas should be implemented. While, on a broader level, the policy mentions the need to promote active participation of youth, women and persons with disabilities in water management and sanitation services, it does not exactly point out how such participation will be put in practice and guaranteed.

Thus, the major challenge is the application of the policy as it becomes difficult to isolate what the policy says on specific issues and apply them in the various project efforts. Therefore, it is not surprising, that, while the policy emphasises decentralisation and community participation in water and sanitation projects, there is a different picture on the ground, where interviews with various people indicated that some communities feel that water projects take a supply driven and not a demand driven approach.

Therefore, it is not surprising, that, while the policy emphasises on decentralisation and community participation in water and sanitation projects, there is a different picture on the ground, where interviews with various people indicated that some communities feel that water projects take a supply driven and not a demand driven approach.

Furthermore, full implementation of the policy still faces hiccups, since other instruments that should enable its maximum execution have not been put in place. For instance, under the specific policy goal of water resources management and development, there is a strategy to establish and empower a National Water Resources Authority[17] to manage the Country's water resources; however, eight years after the policy was set up, the National Water Resources Authority is yet to be established, even though this body has well-stipulated and crucial institutional roles and responsibilities such as coordinating and harmonising stakeholder activities; prescribing and determining the establishment of water users associations; and apportion and control of water use in the Country. Although the Government has made several attempts to establish the body, such efforts have yet to bear fruits. In the absence of such an instrument, it is the beneficiaries of effective water management activities, namely the citizens, who suffer.

In addition, even if the policy attempts to broaden the roles of water institutions in sanitation, hygiene and pollution control, sanitation issues, especially hygiene, are not clearly spelt out. This means interpretation and implementation of the policy with regard to these two issues can best be done by referring to other documents, such as specific guidelines or a related policy, since the policy in question dwells mainly on specific objectives and strategies related to various issues, but does not offer details

on acceptable and effective actions that should be taken. For example, to check on whether one can drill a borehole in the city, you have to refer to a different policy, such as the Waterworks Act,[18] since the National Water Policy does not provide such specifications. In conclusion and according to CADECOM, the policy fails to link the abovementioned three issues that are intertwined in water management and delivery.

6. Recommendations

A. Increased awareness of water, sanitation and hygiene rights

There is a general lack of awareness among people in communities regarding their right to safe and potable water, sanitation and hygiene services, to the extent that some feel a sense of gratitude to office bearers who facilitate water and sanitation projects. This observation strongly suggests that the management of water, sanitation and hygiene is still supply-driven and not demand-driven, as envisioned by the Water Policy. Hence, CADECOM emphasises the need for urgent awareness-raising by the Government, the WASH sector and other stakeholders such as the media about the individual's right to safe water, sanitation and hygiene, on why they need to participate in these activities, and how valuable it is in the conservation and utilisation of water resources and their full enjoyment of their right to life.

Effective implementation, sustainability, operation and maintenance of water, sanitation and hygiene projects can only be achieved if people at grassroots level are empowered with adequate knowledge of their rights and own water, sanitation and hygiene projects.

CADECOM believes that effective implementation, sustainability, operation and maintenance of water, sanitation and hygiene projects can only be achieved if people at the grassroots level are empowered with adequate knowledge of their rights and own water, sanitation and hygiene projects. Furthermore, an institutionalised sense of ownership of the projects would have a positive impact on the development, running, maintenance and sustainability of the projects within the communities. Therefore, CADECOM calls for concerted efforts from the Government and the WASH actors to intensify sensitisation on the right of access to water, sanitation and hygiene so that communities are able to demand the same from service providers.

Equally important is the need of critical attention to differentiate between reports emanating from DCs' offices and those from chiefs and their communities. While DCs paint a rather rosy picture that is backed up by statistics from surveys, chiefs and their subjects claim otherwise. Where is this discrepancy arising from? This shows the lack of a coordinated approach to water management and assessment issues. Since the DC's office connects central Government and the community, it runs the risk of presenting an incorrect picture of water, sanitation and hygiene which, in the end, may impact the nature of assistance the people at the grassroots level receive from the Government or other stakeholders. CADECOM,

therefore, recommends a harmonised approach to the assessment of the water, sanitation and hygiene challenges and a participatory process of identifying solutions to the challenges.

B. Establishment and training of Community Water Management Committees

CADECOM believes that through community participation and ownership of water structures, the problem of vandalism and theft of water infrastructures could be effectively resolved. Establishing Community Water Management Committees is critically important for the sustainability of water infrastructures. However, it is not enough to set up such Committees. It is also important to equip the Committees with the skills to manage water infrastructures.

C. Rigorous procurement and vetting of suppliers

Measures to tackle the recurrent and widespread problem of non-functional water infrastructures should include strengthening procurement systems and instituting rigorous scrutiny of suppliers of material for assembling and maintaining boreholes as well as other water points. Fully engaging communities in such processes will help to remove suspicions and mistrust that arise between beneficiaries and other stakeholders in the WASH sector, such as between the Government and NGOs.

D. Adequate funding for the WASH sector

Based on interviews conducted with key stakeholders and analyses of budgetary allocations to water projects in the districts, financing emerged as one of the major issues hampering the progress towards achieving 'Water and Sanitation for All, Always'. The importance that the Government attaches to issues of water, sanitation and hygiene should not only be evident on paper, but should translate into the level of financing. CADECOM also recommends that the Government and NGOs in the WASH sector, in collaboration with beneficiary communities, should identify more independent ways of addressing financial constraints related to water projects by, for instance, exploring sustainable cash revenue streams such as liberalisation and cost recovery measures which could also encourage community ownership of water and sanitation projects.

Financing emerged as one of the major issues hampering the progress being made in achieving 'Water and Sanitation for All, Always'.

E. Understanding political undercurrents in water and sanitation delivery

Stakeholders in the water sector need to recognise and look out for political interests in the water service delivery, which affect the availability of safe water. Such interests worsen the problem of access to safe and clean water in communities, since, in such cases, water facilities

are mostly given to political party supporters, cronies or family members. CADECOM shares the view that, although there are formal institutions and procedures that guide service delivery in the water sector, there are inevitably informal institutions and procedures, socially shared rules, usually unwritten, that are created, communicated and enforced outside officially sanctioned channels, which affect the distribution of resources at national and local levels. In most cases, the poor and marginalised have no voice when faced with such situations.

As people, organisations, resources and power interact, the informal rules which structure resource allocation determine winners and losers as power is used to make or prevent decisions that benefit some and disadvantage and marginalise others. Thus, CADECOM calls for stakeholders in the water sector to understand politics in its institutional context in order to see how the informal rules influence the formal rules in the allocation of safe water facilities.

F. Establishing linkages between water, sanitation and hygiene issues in water policy

According to CADECOM's findings in the communities, the role of most water institutions and stakeholders has been confined to increasing the supply of water to meet the needs of the growing population, to the extent that sanitation and hygiene largely became peripheral issues. CADECOM proposes that these issues should be executed holistically as they are intertwined in the vision of ensuring sustainable management and utilisation of water resources for every Malawian. For example, where there is capacity building on water facilities, the sanitation and hygiene component should always be incorporated.

G. Setting up the National Water Resources Authority

Government must revamp and speed up efforts to set up the National Water Resources Authority, which is vital for the realisation of the goals and targets of the National Water Policy.

7. Conclusion

Used in a sustainable, demand-driven, and participatory manner, water holds massive potential to be the catalyst for aspirations of communities to fight poverty and achieve prosperity for their areas and for the nation as a whole.

Malawi has a tremendous opportunity to build the foundations for sustainable development if the Country taps the abundant water resources at its disposal. Used in a sustainable, demand-driven, and participatory manner, water holds massive potential to be the catalyst for aspirations of communities to fight poverty and achieve prosperity for their areas and for the nation as a whole. This calls all stakeholders in the water, hygiene and sanitation sector to strengthen their linkages and work together to address the problems that blunt efforts to

promote access to clean and safe water. We, at CADECOM, believe, that now is the time to act and resolve these problems; tomorrow could be too late if the slogan "water is life" is to hold true.

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THE PROMOTION OF THE RIGHT TO CLEAN WATER THROUGH THE NATIONAL HYDRAULIC COMMISSION

A Caritas in Veritate Foundation Report by

CARITAS SENEGAL

1. The context of intervention by Caritas Senegal

With an expanding hydraulic heritage of more than 1,500 motorized boreholes, estimated at more than 250 billion West African CFA Francs, serving at least 6 million rural people, it was necessary to offer an efficient service of access to drinking water, taking into account several factors: the development and the increasing complexity of the water supply, requirements concerning the quality of service and production safety, protection of water resources and consideration of environmental issues.

The baseline study carried out as part of the development of the National Strategy to improve the quality of drinking water in Senegal (CIMA/GENHY/ENVAL Group, 2015) shows that more than 1,062,000 people (18% of the population served by rural water supply systems in 2015) are exposed to fluoride and salt levels above WHO standards. To these physico-chemical problems, which must not overshadow the harmful effects of iron, nitrates, hydrogen sulfide, toxic products, etc., other problems are added which are linked to the bacteriological quality (only 5% of drinking water systems in rural areas are equipped with chlorine metering pumps).

The baseline study carried out as part of the development of the National Strategy to improve the quality of drinking water in Senegal shows that more than 1,062,000 people (18% of the population served by rural water supply systems in 2015) are exposed to fluoride and salt levels above WHO standards.

The identification and implementation of water treatment solutions that are efficient and tolerable by populations is, indeed, a priority.

Moreover, the analysis of the problems encountered in the field made it possible to determine the nature of the supports needed at the diocesan level of Caritas and the beneficiaries. The main challenge of these supports refers to improving the performance of diocesan Caritas, especially in the control of productive water; indeed, national public policies are not always translated into strategies for operational actions and the governance of this sector is still fragile.

To better align its actions in the hydraulic sector with those of the State, Caritas opts for the development of a water policy driven by the Church, which is in line with the one by the State, and focuses on access to water.

In order to achieve this objective, Caritas is restoring wells and drilling new boreholes, and is providing equipment and the development of a harmonized system of water-points.

In 1996, Caritas Senegal set up a National Water Commission (NWC) to support the hydraulic programs of seven Diocesan Caritas in order to address a number of concerns listed by Caritas Senegal in the field of hydraulics matters. The overall goal was to transfer skills and exchange experiences for a better management of the water in the dioceses, especially in the rural areas.

In 1996, Caritas Senegal set up a National Water Commission (NWC) to support the hydraulic programs of seven diocesan Caritas in order to address a number of concerns listed by Caritas Senegal in the field of hydraulics matters. The overall goal was to transfer skills and exchange experiences for a better management of the water in the dioceses, especially in the rural areas.

2. The aims of the National Water Commission

A. The overall goal of the National Water Commission

To promote the transfer of skills and the exchange of experiences for a better management of water resources in the dioceses of Senegal.

B. Specific goals of the National Water Commission

- To professionalize the hydraulic data management and the organization of water-points, for the use of the S.I.G (Système d'Information Géographique), and of the cartography;
- To promote the synergy of diocesan hydraulic projects and exchanges of experience between actors (stakeholders?) in the water sector.

3. Activities carried out by the National Water Commission

Caritas Senegal, through the National Water Commission services, has a hydraulic database that identifies:

- The hydraulic heritage;
- The taxation for the access to water;
- The spatial distribution of the works;
- The intervention planning.

A. The hydraulic heritage database

The global access rate increases thanks to investments by the State as well as by NGOs; the plurality of interventions explains these progresses. However, at the regional level, the rate of access continues to present very marked inequalities. It is the same within the regions, where differences in the level of access between rural communities reached significant proportions.

The rate of failure which increases from one year to another, is a source of concern, because it indicates the aging of the establishments and the weakness of the maintenance sector. Non-functional drillings deprive a significant part of the rural users of water. This is not always reflected in the Government statistics. The rate of access to «tap» (home plug or hydrant) is still low for some rural Dioceses in Kolda, Tambacounda and Ziguinchor where less than one in ten villages is connected to a network.

The quality of water is a major concern in several regions, particularly in the groundnut basin and island areas, where the water does not meet potability standards and should not be counted within the rate of access.

Taking into account, in the statistics of access, uncovered wells which distribute water of questionable quality, is also a bias in the measurement of access. Solutions for the treatment or the transfer of water are very expensive and their cost is prohibitive for rural users, who are already struggling to pay for raw water at its true cost.

Solutions for the treatment or the transfer of water are very expensive and their cost is prohibitive for rural users, who are already struggling to pay for raw water to its true cost.

The National Water Commission, thanks to its work of mapping and collecting information on infrastructure and hydrogeological resources, enabled stakeholders to streamline investments and to keep track of the maintenance of the installations.

B. The contribution for access to water and the improvement of the quality of the rural water service

The quality of the rural water service suffers in comparison with urban water and the most telling indicator is the rate of access to the tap. Most rural users have access to the water service through a well (where water is not of the highest quality), through a borehole fitted with a hand pump (whose sustainability is not established) or through a standpipe (sometimes far from home).

Drilling and networks become dated. The local resources are insufficient to start major works (new boreholes, reserves, etc.). The quality of the service in rural areas will particularly pass through the enlargement and the respect of the roles assigned to the ASUFOR (Association des Usagers des Forages), with the implementation of monitoring mechanisms and the observation of the quality of water and hydraulic works. That is why Caritas Senegal, through the NWC, has contributed to the study and to the popularization of the economic model of water-points management, which guarantees

That is why Caritas Senegal, through the NWC, has contributed to the study and to the popularization of the economic model of water-points management, which guarantees to the population a sustainable access to a source of drinking water.

to the population a sustainable access to a source of drinking water. This model has allowed the effective transfer of exploitation skills to ASUFOR, the reduction of the operating budget of the State, the confirmation of the economic role of water (water can be self-sufficient in terms of recurrent costs, infrastructure) and the assertion of local leadership.

Studies on the impact of fluoride on the health of populations and the pricing of water are contributions that the NWC has carried out for the benefit of decision-makers, and for a better support of the problems related to the quality and the cost of water.

C. The spatial distribution of the work

By mapping the works and analysing their spatial distribution, one can see that the NWC contributed to the development of programs to bring rural hydraulic facilities up to standards, coupled with a professionalization of conservation and maintenance, as well as an improvement in the management of water distribution.

It focused the realization of water conveyances and especially their orientation on areas where rates for the access to modern wells are high. It valued well water (protected work, wind or solar water pumping, local treatment of water chlorination) in areas where it is of good quality.

D. Planning interventions

Giving more capabilities to act to local communities

The transfer of water competence to local communities is necessary and must be gradually implemented with a program of capacity building. Currently, most of the decision-making and programming is done at the central level and the Local Water and Sanitation Plans (Plans locaux d'Hydraulique et d'Assainissement – PLHA), which are sectoral participatory planning instruments, need to be improved for a better prioritization of investments.

Dialogue must be developed and enhanced at the local level, and local communities should gradually have access to funding lines adapted to their needs and should benefit from the recognition of their role as contracting authorities.

Dialogue must be developed and enhanced at the local level, and local communities should gradually have access to funding lines adapted to their needs and should benefit from the recognition of their role as contracting authorities. Thus, through the NWC, Caritas assists local communities in the implementation of the Local Water and Sanitation Plans, and the companies as part of the Social Responsibility of Business (Responsabilité Sociale des Entreprises – RSE) for water projects in rural areas. Its expertise, available to the stakeholders, helped to improve the efficiency of the projects implemented by partners.

4. Conclusion

Through the experience of the NWC with Caritas, the Church of Senegal has consolidated its central role in the promotion of access to drinking water by the population.

Today, scientific arguments provided by various studies and publications of the National Water Commission, allow civil society and partners in the area, to build an advocacy strategy to improve public water and sanitation policies. The Church of Senegal through Caritas has to affirm with conviction and expertise its choice for the promotion of access to drinking water for the poorest populations.

ANNEX

TIMELINE OF UNITED NATIONS TREATIES, CONFERENCES AND AGREEMENTS ON WATER[1]

1948 - The Universal Declaration of Human Rights

Water is not clearly mentioned in the Declaration but it is the basis for the fulfillment of other rights, such as the right to a standard of living adequate for the health and well-being» and the fact that «Motherhood and childhood are entitled to special care and assistance.» [2]

1949 - Geneva Conventions

Among the four Geneva Conventions[3] , number 3 on Treatment of Prisoners of War and Convention number 4 on Protection of Civilian Persons in Times of War mentions water as a prerequisite for maintaining human dignity and thus confirms the supply of basic needs, including water, during times of war. The Conventions entitle prisoners of war and civilians access to water and sanitation in situations of armed conflict and occupation.[4]

Geneva Convention III – Treatment of Prisoners of War[5]

Article 20

"The Detaining Power shall supply prisoners of war who are being evacuated with sufficient food and potable water, and with the necessary clothing and medical attention".

Article 26

"[…] Sufficient drinking water shall be supplied to prisoners of war".

Article 29

"The Detaining Power shall be bound to take all sanitary measures necessary to ensure the cleanliness and healthfulness of camps and to prevent epidemics."

"Prisoners of war shall have for their use, day and night, conveniences which conform to the rules of hygiene and are maintained in a constant

state of cleanliness. In any camps in which women prisoners of war are accommodated, separate conveniences shall be provided for them."

"Also, apart from the baths and showers with which the camps shall be furnished, prisoners of war shall be provided with sufficient water and soap for their personal toilet and for washing their personal laundry; the necessary installations, facilities and time shall be granted them for that purpose."

Article 46

"The Detaining Power shall supply prisoners of war during transfer with sufficient food and drinking water to keep them in good health, likewise with the necessary clothing, shelter and medical attention."

Geneva Convention IV – Protection of Civilian Persons in Times of War[6]

Article 85

"The Detaining Power is bound to take all necessary and possible measures to ensure that protected persons shall, from the outset of their internment, be accommodated in buildings or quarters which afford every possible safeguard as regards hygiene and health…Internees shall have for their use, day and night, sanitary conveniences which conform to the rules of hygiene, and are constantly maintained in a state of cleanliness. They shall be provided with sufficient water and soap for their daily personal toilet and for washing their personal laundry; installations and facilities necessary for this purpose shall be granted to them. Showers or baths shall also be available […]."

Article 89

"[…] Sufficient drinking water shall be supplied to internees […]."

Article 127

"The Detaining Power shall supply internees during transfer with drinking water and food sufficient in quantity, quality and variety to maintain them in good health, and also with the necessary clothing, adequate shelter and the necessary medical attention."

Protocols I and II additional to the Geneva Conventions (1977)[7]

The Additional Protocols define that civilians or civilian Objects shall not be targets for attack, thus elements essential for human survival are prohibited from attack, including water facilities.

Additional Protocol I (1977) - Protection of Victims of International Armed Conflict

Article 54

2. It is prohibited to attack, destroy, remove or render useless objects indispensable to the survival of the civilian population, such as foodstuffs, agricultural areas for the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works, for the specific purpose of denying them for their sustenance value to the civilian population or to the adverse Party.

3. The prohibitions in paragraph 2 shall not apply to such of the objects covered by it as are used by an adverse Party: (b) – If not as sustenance, then in direct support of military action, provided, however, that in no event shall actions against these objects be taken which may be expected to leave the civilian population with such inadequate food or water as to cause its starvation or force its movement.

Additional Protocol II (1977) – Protection of Victims of Non-international Armed Conflict

Article 5

b. Persons whose liberty has been restricted […] shall, to the same extent as the local civilian population, be provided with food and drinking water and be afforded safeguards as regards health and hygiene.

Article 14

It is therefore prohibited to attack, destroy, remove or render useless for that purpose, objects indispensable to the survival of the civilian population such as food-stuffs, agricultural areas for the production of food-stuffs, crops, livestock, drinking water installations and supplies and irrigation works.

1966 - International Covenant on Civil and Political Rights

There is no direct mention to the right to water but Article 6[8] of the Covenant guarantees the right to life; water is essential to life and without water life cannot be ensured.

1966 - International Covenant on Economic, Social, and Cultural Rights

Although the right to water is not explicitly stated in the convention, it has been interpreted that the right to water can be deduced from Article 11[9] , the right to an adequate standard of living, and Article 12[10] , the right to health.

1976 - The Vancouver Declaration on Human Settlements

II.General Principles

1. "The improvement of the quality of life of human beings is the first and most important objective of every human settlement policy. These policies must facilitate the rapid and continuous improvement in the quality of life of all people, beginning with the satisfaction of the basic needs of food, shelter, clean water, employment, health, education, training, […]."[11]

1977 - Mar del Plata UN Water Conference

The Action Plan from the United Nations Water Conference recognized water as a right and for the first time declaring that "All peoples, whatever their stage of development and social and economic conditions, have the right to have access to drinking water in quantities and of a quality equal to their basic needs".[12]

1979 - Convention on the Elimination of All Forms of Discrimination Against Women

This is the first time the right to water and sanitation is explicitly mentioned in an international legally binding convention:

Article 14.2 (h)

"States parties shall take all appropriate measures to eliminate discrimination against women in rural areas in order to ensure, on a basis of equality of men and women, that they participate in and benefit from rural development and, in particular, shall ensure to such women the right: […] (h) To enjoy adequate living conditions, particularly in relation to housing, sanitation, electricity and water supply, transport and communication".[13]

1980 – UNGA Resolution 35/18 on the International Drinking Water Supply and Sanitation Decade

The Resolution "proclaims the period 1981-1990 as the International Drinking Water Supply and Sanitation Decade, during which Member States will assume a commitment to bring about a substantial improvement in the standards and levels of services in drinking water supply and sanitation by the year 1990".[14]

1985 - International Labor Organization (ILO) Convention No. 161 concerning Occupational Health Services

Article 5 of the ILO convention indirectly stresses the importance of water and highlights the necessity of adequate sanitary installations at work.[15]

1989 - Convention on the Rights of the Child

This convention is the second explicit reference to water, environmental sanitation and hygiene.

Article 24

"States Parties shall pursue full implementation of this right and, in particular, shall take appropriate measures: […]

c) to combat disease and malnutrition, including within the framework of primary health care, through, inter alia, the application of readily available technology and through the provision of adequate nutritious foods and clean drinking water, taking into consideration the dangers and risks of environmental pollution; […]

(e) To ensure that all segments of society, in particular parents and children, are informed, have access to education and are supported in the use of basic knowledge of child health and nutrition, the advantages of breastfeeding, hygiene and environmental sanitation and the prevention of accidents". [16]

Article 27

"States Parties recognize the right of every child to a standard of living adequate for the child's physical, mental, spiritual, moral and social development.

2. The parent(s) or others responsible for the child have the primary responsibility to secure, within their abilities and financial capacities, the conditions of living necessary for the child's development."

1990 - The Global Consultation on Safe Water and Sanitation (New Delhi)

This international conference adopted the New Delhi Statement, with the principle: 'some for all rather than more for some' which reflects the fundamental human rights principle of universality.

It advocates four main principles[17] :

- "Protection of the environment and the safeguarding of health through the integrated management of water resources and liquid and solid wastes";

- "Institutional reforms promoting an integrated approach, including changes in procedures, attitudes and behavior, and the full participation of women at all levels in sector institutions";
- "Community management of services, backed by measures to strengthen local institutions in implementing and sustaining water and sanitation programmes";
- "Sound financial practices, achieved through better management of existing assets, and widespread use of appropriate technologies"

1992 - International Conference on Water and Sustainable Development (Dublin Conference)

Principle 4 of the Dublin Conference states that "[…] it is vital to recognize first the basic right of all human beings to have access to clean water and sanitation at an affordable price".[18]

1992 - United Nations Conference on Environment and Development (Rio Summit)

Chapter 18 of Agenda 21 endorsed the Resolution of the Mar del Plata Water Conference that all peoples have the right to have access to drinking water, and called this "the commonly agreed premise."[19]

1994 - United Nations International Conference on Population and Development (Cairo)

Chapter 2, Principle 2 of the Programme of Action affirms that all individuals "have the right to an adequate standard of living for themselves and their families, including adequate food, clothing, housing, water and sanitation". [20]

Chapter 3.13 & 3.15 make a clear link between poverty and the lack of access to water: "Poverty is also closely related to inappropriate spatial distribution of population, to unsustainable use and inequitable distribution of such natural resources as land and water, and to serious environmental degradation".[21]

1999 - Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and Lakes

The right to water has also been implicitly confirmed in the Protocol on Water and Health. Article 5, states that "equitable access to water, adequate in terms both of quantity and quality, should be provided for all members of the population".[22]

1999 - United Nations General Assembly Resolution 54/175

Article 12 of the Resolution reaffirms that "in the full realization of the right to development, inter alia: (a) The rights to food and clean water are fundamental human rights and their promotion constitutes a moral imperative both for national Governments and for the international community".[23]

2002 - World Summit on Sustainable Development (Johannesburg)

The Political Declaration of the Summit states that "We welcome the Johannesburg Summit focus on the indivisibility of human dignity and are resolved through decisions on targets, timetables and partnerships to speedily increase access to basic requirements such as clean water, sanitation, energy, health care, food security and the protection of biodiversity".[24]

2002 - General Comment No. 15 - Committee on Economic, Social and Cultural Rights

General Comment 15 interprets the 1966 International Covenant on Economic, Social and Cultural Rights (ICESCR) confirming the right to water in international law.

This Comment provides guidelines for the interpretation of the right to water, framing it within two articles, Article 11, the right to an adequate standard of living, and Article 12, the right to health. The Comment clearly outlines States parties' obligations to the right and defines what actions would constitute as a violation.[25]

Article I.1 states that "The human right to water is indispensable for leading a life in human dignity. It is a prerequisite for the realization of other human rights". [26]

2003 – UNGA Resolution 58/217 on the International Decade for Action, "Water for Life" (2005-2015)

This resolution decides on the International Decade for Action 'Water for Life' 2005-2015. Precisely it proclaims "the period from 2005 to 2015 the International Decade for Action, "Water for Life", to commence on World Water Day, 22 March 2005; (2.) Decides that the goals of the Decade should be a greater focus on water related issues at all levels and on the implementation of water-related programmes and projects […]".[27]

2005 - Draft Guidelines for the Realization of the Right to Drinking Water and Sanitation

These Guidelines do not legally define the right to water and sanitation, but rather provide guidance for its implementation.[28]

2006 - Human Rights Council Decision 2/104

This Human Rights Council resolution requests a detailed study on the scope and content of the relevant human rights obligations related to equitable access to safe drinking water and sanitation under international human rights instruments, to be submitted prior to the sixth session of the Council.[29]

2006 - Convention on the Rights of Persons with Disabilities

Article 28, defines the right of persons with disabilities to an adequate standard of living:

"2. States Parties recognize the right of persons with disabilities to social protection and to the enjoyment of that right without discrimination on the basis of disability, and shall take appropriate steps to safeguard and promote the realization of this right, including measures: (a) To ensure equal access by persons with disabilities to clean water services, and to ensure access to appropriate and affordable services, devices and other assistance for disability-related needs".[30]

2007 - Report of the United Nations High Commissioner for Human Rights on the Scope and Content of the Relevant Human Rights Obligations Related to Equitable Access to Safe Drinking Water and Sanitation under International Human Rights Instruments

Based upon resolution 2/104 of the HRC, the UN High Commissioner for Human Rights published a report stating that "it is now the time to consider access to safe drinking water and sanitation as a human right, defined as the right to equal and non- discriminatory access to a sufficient amount of safe drinking water for personal and domestic uses […] to sustain life and health".[31]

These issues highlighted, formed the basis of the Independent Expert's mandate.

2008 - Human Rights Council Resolution 7/22 on Human Rights and Access to Safe Drinking Water and Sanitation

Through this resolution, the Human Rights Council decides "To appoint, for a period of three years, an independent expert on the issue of human rights obligations related to access to safe drinking water and sanitation".[32] It requires the independent expert to submit a report, including conclusions and recommendations, to the Council at its tenth session.

Although not explicitly referring to an inherent right to water, it clearly places the issue of safe water and sanitation on the Councils agenda. Through the creation of the mandate of the Independent Expert, UN human rights system now has a separate mechanism exclusively dedicated to issues related to the right to water and sanitation.

In September 2008 Catarina de Albuquerque is appointed as the Independent Expert.

2009 - First Report of the Independent Expert on the Issue of Human Rights Obligations Related to Access to Safe Drinking Water and Sanitation

[For further reports of the Independent Expert please refer to the table hereafter]

Catarina de Albuquerque's first report as Independent Expert focused on the human rights obligations related to sanitation. She defines the inextricable links between sanitation and fundamental human rights, including the right to an adequate standard of living, the right to adequate housing, the right to health, the right to education, the right to water, the right to work, the right to life, the prohibition of inhumane or degrading treatment and the prohibition of all form of discrimination.[33]

She claims that the right to sanitation should not only be recognized in relation to these rights, but should be recognized as a distinct right to fully capture all of the dimensions.

2009 – Human Rights Council Resolution 12/8 on Human Rights and Access to Safe Drinking Water and Sanitation

For the first time, the resolution recognizes that States have an obligation to address and eliminate discrimination with regard to access to sanitation, and urges them to address effectively inequalities in this area.[34]

2010 - United Nations General Assembly Resolution 64/292 on the Right to Water and Sanitation

For the first time, the General Assembly formally recognizes the right to water and sanitation by supporting the Resolution initiated by Bolivia on 28 July, 2010. The Resolution acknowledges that clean drinking water and sanitation are integral to the realization of all human rights.

The UNGA "Recognizes the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights".[35]

The Resolution also calls upon States and international organisations to provide financial resources, help build capacity and transfer technology to help other countries to provide safe, clean, accessible and affordable drinking water and sanitation for all.

2010 - United Nations Human Rights Council Resolution 15/9 on Human Rights and Access to Safe Drinking Water and Sanitation

The resolution affirms that the right to water and sanitation are part of existing international law and thus legally binding for States and calls upon States to develop appropriate tools and mechanisms to achieve progressively the full realization of human rights obligations related to access to safe drinking water and sanitation.[36]

2010 Summit on the Millennium Development Goals

The crucial importance of water to so many aspects of human health, development and well-being led to the inclusion of a specific water-related target in the Millennium Development Goals (MDGs). Target 7.C calls to "halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation".[37]

According to UNICEF, the goal was met five years ahead of schedule in 2010[38] :

- 91 per cent of the global population now uses an improved drinking water source;
- 2.6 billion people have gained access to an improved drinking water source since 1990;
- 96 per cent of the global urban population uses improved drinking water sources;
- 84 per cent of the rural population uses improved drinking water sources;
- 8 of 10 people still without improved drinking water sources live in rural areas;
- 42 per cent of the population of least developed countries gained access to improved drinking water sources since 1990;
- In 2015, 663 million people still lack improved drinking water sources.

2011 – Human Rights Council Resolution 16/2 on the Human Right to Safe Drinking Water and Sanitation

The resolution extends the mandate of the current mandate holder [independent expert] as a special rapporteur on the human right to safe drinking water and sanitation for a period of three years" and "Encourages the Special Rapporteur, in fulfilling his or her mandate […] to promote the full realization of the human right to safe drinking water and sanitation by, inter alia, continuing to give particular emphasis to practical solutions with regard to its implementation, in particular in the context of country missions, and following the criteria of availability, quality, physical accessibility, affordability and acceptability".[39]

[*For further reports of the Special Rapporteur please refer to the table hereafter*]

2011 to 2014

The following years, some resolutions highlighted the importance of the right of access to safe drinking water and sanitation and called governments and all stakeholders to take the necessary steps to implement this human right.[40]

2011 – Human Rights Council Resolution 18/1

2012 - Human Rights Council Resolution 21/2

2013 - Human Rights Council Resolution 24/18

2013 – General Assembly Resolution 68/157

2014 - Human Rights Council Resolution 27/7

2015– General Assembly Resolution 70/169

This resolution recognizes the distinction between the right to water and the right to sanitation, making it a big step in the prioritization of sanitation.

The resolution "recognizes that the human right to safe drinking water entitles everyone, without discrimination, to have access to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic use, and that the human right to sanitation entitles everyone, without discrimination, to have physical and affordable access to sanitation, in all spheres of life, that is safe, hygienic, secure, socially and culturally acceptable and that provides privacy and ensures dignity, while reaffirming that both rights are components of the right to an adequate standard of living"[41]

2015 – Sustainable Development Goals (SDG Goal 6)

In 2015, UN Member States adopted the historic 2030 Agenda, setting universal and transformative goals and targets, and committing to working tirelessly for their full implementation. Goal 6[42] specifically addresses water and sanitation:

- By 2030, achieve universal and equitable access to safe and affordable drinking water for all;
- By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations;
- By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally;
- By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity;
- By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate;

- By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes;
- By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies;
- Support and strengthen the participation of local communities in improving water and sanitation management.

2016 – Human Rights Council Resolution 33/10 on the Human Right to Safe Drinking Water and Sanitation[43]

The following tables shows all the reports of the Independent Expert and the Special Rapporteur on the Right to Water and Sanitation.[44]

Year	Document number	Title	Statement
2017	Forthcoming - 72nd session of the General Assembly	Development cooperation	
	Forthcoming - 36th session of the Human Rights Council	Service regulation	
	Forthcoming - 36th session of the Human Rights Council	Mission to Portugal	
2016	A/71/302	Development cooperation and the realization of the human rights to water and sanitation	Statement - 71st session of the General Assembly
	A/HRC/33/49	Gender equality in the realization of the human rights to water and sanitation	Statement – 33rd session of the Human Rights Council
	A/HRC/33/49/Add.1	Addendum – Mission to El Salvador	
	A/HRC/33/49/Add.2	Addendum – Mission to Tajikistan	
	A/HRC/33/49/Add.3	Addendum – Mission to Botswana	
2015	A/70/203	Different levels and types of services and the human rights to water and sanitation	
	A/HRC/30/39	Affordability of water and sanitation services	
2014	A/69/213	Participation in the realization of the human rights to water and sanitation	Statement - 69th session of the General Assembly
	A/HRC/27/55	Common violations of the human rights to water and sanitation	Statement – 27th session of the Human Rights Council Special Rapporteur answers to Questions - Interactive Dialogue - HRC 27th session
	A/HRC/27/55/Add.1	Addendum - Mission to Brazil	
	A/HRC/27/55/Add.2	Addendum - Mission to Jordan	

Year	Document number	Title	Statement
2014	A/HRC/27/55/Add.3	Addendum - Handbook for realizing the human right to safe drinking water and sanitation	
	A/HRC/27/55/Add.4	Addendum - Comments by Brazil	
	A/HRC/27/55/Add.5	Addendum - Mission to Jordan: comments by the State on the report of the Special Rapporteur	
2013	A/68/264	Wastewater management in the realization of the rights to water and sanitation	Statement - 68th session of the General Assembly
	A/HRC/24/44	Sustainability and non-retrogression in the realisation of the rights to water and sanitation	Statement - 24st session of the Human Rights Council Special Rapporteur answers to Questions - Interactive Dialogue - HRC 24st session
	A/HRC/24/44/Add.1	Mission to Kiribati	
	A/HRC/24/44/Add.2	Mission to Tuvalu	
	A/HRC/24/44/Add.3	Mission to Thailand	
2012	A/67/270	Integrating non-discrimination and equality into post-2015 development agenda for water, sanitation and hygiene	Statement - 67th session of the General Assembly
	A/HRC/21/42	Stigma and the realization of the human rights to water and sanitation	- Statement - 21st session of the Human Rights Council - Special Rapporteur: answers to Question -Interactive Dialogue- HRC 21st session
	A/HRC/21/42/Add.1	Mission to Senegal	
	A/HRC/21/42/Add.2	Mission to Uruguay	
	A/HRC/21/42/Add.3	Mission to Namibia	

Year	Document number	Title	Statement
2011	A/66/255	Financing for the Realization of the Rights to Water and Sanitation	Statement - 66th session of the General Assembly, Third Committee
	A/HRC/18/33	Planning for the realization of the rights to water and sanitation	- Statement -18th session of the Human Rights Council - Special Rapporteur on the right to access to safe drinking water and sanitation reponses to HRC questions
	A/HRC/18/33/Add.1	Good practices compilation	
	A/HRC/18/33/Add.2	Mission to Slovenia	
	A/HRC/18/33/Add.3	Mission to Japan	
	A/HRC/18/33/Add.4	Mission to USA	
2010	A/65/254	The MDGs and the human rights to water and sanitation	Statement - 65th session of the General Assembly, Third Committee
	A/HRC/15/31	Human Rights Obligations Related to Non-State Service Provision in Water and Sanitation	Statement - Fifteenth Session of the Human Rights Council
	A/HRC/15/31/Add.1	Progress report on the compilation of Good Practices	
	A/HRC/15/31/Add.2	Preliminary note on the mission to Slovenia	
	A/HRC/15/31/Add.3	Report on the mission to Egypt	
	A/HRC/15/31/Add.3	Corrigendum	
	A/HRC/15/55	Joint Report on the mission to Bangladesh	
2009	A/HRC/12/24	Human Rights Obligations related to Access to Sanitation	Statement - Twelfth Session of the Human Rights Council
	A/HRC/12/24/Add.1	Report on the mission to Costa Rica	
	A/HRC/10/6	Preliminary Report laying out the Mandate Workplan	Statement - Tenth session of the Human Rights Council

Notes

1. Those treaties and conferences are directly or indirectly linked to water. This timeline is based on a chronological order and it is a non-exhaustive list.
2. http://www.un.org/en/universal-declaration-human-rights/ [Accessed on 19.07.2017].
3. 1. Geneva Convention on Wounded and Sick in Armed Forces in the Field, 2. Geneva Convention on Wounded, Sick and Shipwrecked of Armed Forces at Sea, 3. Geneva Convention on Prisoners of War, 4. Geneva Convention on Civilians.
4. https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/vwTreaties1949.xsp [Accessed on 19.07.2017].
5. http://www.un.org/en/genocideprevention/documents/atrocity-crimes/Doc.32_GC-III-EN.pdf [Accessed on 19.07.2017].
6. http://www.wipo.int/edocs/lexdocs/treaties/en/icrc-ge4/trt_icrc_ge4.pdf [Accessed on 19.07.2017].
7. https://www.icrc.org/eng/assets/files/other/icrc_002_0321.pdf [Accessed on 19.07.2017].
8. http://www.ohchr.org/Documents/ProfessionalInterest/ccpr.pdf [Accessed on 19.07.2017].
9. http://www.ohchr.org/Documents/ProfessionalInterest/cescr.pdf [Accessed on 19.07.2017].
10. Ibid.
11. http://www.un-documents.net/van-dec.htm Accessed on [20.07.2017]
12. http://www.ielrc.org/content/e7701.pdf [Accessed on 19.07.2017].
13. http://www.un.org/womenwatch/daw/cedaw/text/econvention.htm [Accessed on 19.07.2017].
14. UNITED NATIONS – GENERAL ASSEMBLY, Resolution 35/18, 19 November 1980, available at http://www.un.org/documents/ga/res/35/a35r18e.pdf [Accessed 22.05.2017].
15. http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C161 [Accessed on 19.07.2017].
16. http://www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx [Accessed on 20.07.2017]
17. http://www.ielrc.org/content/e9005.pdf [Accessed on 20.07.2017].
18. www.wmo.int/pages/prog/hwrp/documents/english/icwedece.html [Accessed on 20.07.2017].
19. https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf [Accessed on 20.07.2017].
20. http://www.un.org/popin/icpd/conference/offeng/poa.html [Accessed on 20.07.2017].
21. Ibid.
22. http://www.unece.org/fileadmin/DAM/env/documents/2000/wat/mp.wat.2000.1.e.pdf [Accessed on 20.07.2017].
23. http://derechoalaalimentacion.org/wp-content/uploads/2012/08/AG-54-175-derecho-al-desarrollo.pdf [Accessed on 20.07.2017].
24. https://sustainabledevelopment.un.org/milesstones/wssd [Accessed on 20.07.2017].

25. http://www.un.org/waterforlifedecade/pdf/human_right_to_water_and_sanitation_milestones.pdf [Accessed on 20.07.2017].

26. http://www.unhcr.org/publications/operations/49d095742/committee-economic-social-cultural-rights-general-comment-15-2002-right.html [Accessed on 20.07.2017].

27. http://www.un.org/es/comun/docs/?symbol=A/RES/58/217&lang=E [Accessed on 20.07.2017].

28. www2.ohchr.org/english/issues/water/docs/SUb_Com_Guisse_guidelines.pdf [Accessed on 20.07.2017].

29. http://www2.ohchr.org/english/issues/water/docs/HRC_decision2-104.pdf [Accessed on 20.07.2017].

30. www.un.org/disabilities/convention/conventionfull.shtml [Accessed on 20.07.2017].

31. http://www2.ohchr.org/english/issues/water/ [Accessed on 20.07.2017]

32. http://ap.ohchr.org/documents/E/HRC/resolutions/A_HRC_RES_7_22.pdf [Accessed on 20.07.2017].

33. http://www.ohchr.org/Documents/Press/IE_2009_report.pdf [Accessed on 20.07.2017].

34. https://documents-dds-ny.un.org/doc/RESOLUTION/LTD/G09/159/50/PDF/G0915950.pdf?OpenElement [Accessed on 20.07.2017].

35. http://www.un.org/es/comun/docs/?symbol=A/RES/64/292&lang=E [Accessed on 20.07.2017].

36. https://documents-dds-ny.un.org/doc/UNDOC/GEN/G10/166/33/PDF/G1016633.pdf?OpenElement [Accessed on 20.07.2017].

37. http://www.un.org/millenniumgoals/environ.shtml [Accessed on 20.07.2017].

38. http://www.un.org/en/sections/issues-depth/water/ [Accessed on 20.07.2017].

39. https://documents-dds-ny.un.org/doc/RESOLUTION/GEN/G11/124/85/PDF/G1112485.pdf?OpenElement [Accessed on 20.07.2017].

40. The different resolutions are available at http://www.ohchr.org/EN/Issues/WaterAndSanitation/SRWater/Pages/Resolutions.aspx [Accessed on 20.07.2017].

41. http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/70/169, [Accessed on 20.07.2017].

42. https://sustainabledevelopment.un.org/sdg6 [Accessed on 20.07.2017].

43. https://documents-dds-ny.un.org/doc/UNDOC/GEN/G16/225/27/PDF/G1622527.pdf?OpenElement [Accessed on 20.07.2017].

44. http://www.ohchr.org/EN/Issues/WaterAndSanitation/SRWater/Pages/AnnualReports.aspx [Accessed on 20.07.2017].

SECTION TWO

CHURCH TEXTS ON WATER

INTRODUCTION TO THE CHURCH TEXTS

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The Catholic Church has always considered water as essential for the existence of human beings, both in terms of physical survival and spiritual needs. Talking about water implies speaking about the origin and the possibility of life. In fact, civilizations are all born on the shores of important rivers; there is no possible development without water, and the access to water sources is as important today as it was at the beginning of human history. Starting from the Old Testament, throughout the New Testament and up to the Encyclical Letter *Laudato Si'*, the Church has recognized, as recently stated by His Holiness Pope Francis, that "water is an issue of primary importance, since it is indispensable for human life and for supporting terrestrial and aquatic ecosystems".[1] This importance is already clearly outlined in the Book of Genesis in which is stated that "Water was there in the beginning"[2] , and in the Exodus, when God shows his almightiness by giving the People of Israel water to drink in the desert. "So they [the People of Israel] quarreled with Moses and said, "Give us water to drink". [...] I [God] will stand there before you by the rock at Horeb. Strike the rock, and water will come out of it for the people to drink."[3]

Furthermore, turning to the New Testament, water represents a vital element of the first Sacrament, the baptism, which marks the watershed between the previous life and the life as a Christian. Indeed, we may affirm that, for the Catholic Church, water represents the beginning of a Christian's life.

In general terms, water is a natural resource, vital for the survival of humanity and all species on Earth. As a good of creation, water is destined for all human beings and their communities. God intended the Earth and all it contains for the use of all, so that all created things would be shared fairly by humankind under the guidance of justice tempered by charity.[4]

From the Catholic Church's perspective, while we are talking about water, we need to bear in mind that we are talking about a basic human right. As His Holiness Pope Francis reminds us, "All people have a right

to safe drinking water. This is a basic human right and a central issue in today's world". Without water, life is threatened. Therefore, the right to safe drinking water is a universal and inalienable right".[5] Throughout the last decades, the Church has repeatedly highlighted the importance of access to water. This has been reaffirmed in many documents of the Holy See starting from the Social Doctrine, through different encyclical letters to the latest statements of His Holiness Pope Francis in February 2017 or representatives of the Holy See. The 2015 Encyclical Letter *Laudato Si'*, represents a milestone in dealing with water rights and a new emphasis of the Church on the importance of the ecosystem as a gift that needs to be preserved and shared. In this Encyclical Letter, the importance of access to water is explicitly recognised: "we know that water is a scarce and indispensable resource and a fundamental right which conditions the exercise of other human rights".[6]

In parallel to the Church's position on the right of access to water, the International Community has given increased importance to this pressing issue; in fact, since 2003, water has become a top priority. Nowadays, within the United Nations system, there seems to be a common agreement that the survival of humanity and all species on Earth depends, to a great degree, on the availability of potable water and of effective sanitation systems. Such access is key to live in dignity and to promote and uphold human rights. Despite the efforts of the International Community, many new water-related issues arose, in particular the fact that access to drinking water in many regions in the world got worse. Events and processes such as desertification and climate change deteriorated precarious situations, leading to water scarcity and dryness, exacerbating the suffering of regions already affected by long-term conflicts and lack of effective development policies. All those challenges have been pointed out in the first part of the book.

Water scarcity and deprivation is experienced most dramatically by those living in poverty, and often in the poorest countries. Paradoxically, in richer countries, water is wasted and not perceived as the luxury it really is. Citizens in high-income countries very often take their privileged situations for granted, without thinking of the consequences that the waste of water has on the lives of their brothers and sisters in the rest of the world.

However, as a fundamental part of the world's ecosystem, not created by men, and essential for life, water belongs to every human being, and by its very nature it exists to be shared through different people and different generations. From this perspective derives that, for the Holy See, denying the access to water to someone is equivalent to denying his right to life. In many occasions, this has been reaffirmed in different multilateral fora by the Holy See diplomatic missions.

Another important aspect in the Social Doctrine of the Church represents the link between development and the access to water. Indeed,

effective access to water is required to ensure a real path to integral human development. As a matter of fact, the Holy See considers the Sustainable Development Goal 6 on access to Water and Sanitation and related targets as an important step towards a comprehensive international legislative framework.

Indeed, the promotion of integral human development, especially for those engaged in agriculture, requires proper management of water resources. Thus, the Catholic Church teaches that "[b]y its very nature water cannot be treated as just another commodity among many, and it must be used rationally and in solidarity with others. The distribution of water is traditionally among the responsibilities that fall to public agencies, since water is considered a public good. If water distribution is entrusted to the private sector it should still be considered a public good. The right to water, as all human rights, finds its basis in human dignity and not in any kind of quantitative assessment that considers water as a merely economic good.[7]

In this regard, Pope John Paul II recalled that important human needs exist which escape the market logic[8] and water is precisely one of these. It cannot be used solely as a means for profit because it is essential to the survival of the human person and thus cannot be transformed into a good reserved to the exclusive advantage of only those who can afford to pay for it.

In conclusion, and as showed in this publication, the human being needs to be at the centre of attention. Starting from this person-centred approach, every solution for access to safe water and sanitation should express a preferential love and consideration for the poor. It is for them that the water issue is crucial for life. It is mainly the poor who are deprived of the right to water, the right to health and the right to food. The human family must be served, not exploited. The primary objective of all efforts must be the well-being of those people — men, women, children, families, communities —- who live in the poorest parts of the world and suffer most from any scarcity or misuse of water resources.[9] In a family, every member is responsible for each and every other member; thus, the suffering of one becomes the suffering of all.

However, this is not enough. We need to move forward. As His Holiness Pope Francis stated, the right to water is also a duty to water, which is basic and pressing. Basic, because where there is water there is life, making it possible for societies to arise and advance. Pressing, because our common home needs to be protected. Yet it must also be realized that not all water is life-giving, but only water that is safe and of good quality. Sharing water and sharing the benefits which water brings, in a mutually agreed, equitable and sustainable way is the key to preventing conflicts over this precarious resource. Therefore, water needs to be accorded the central place it deserves in the framework of public policy.[10]

NOTES

1. Pope Francis, Encyclical Letter, *Laudato Si'* (28)
2. Genesis 1.2
3. Exodus, 17.1-7
4. Second Vatican Ecumenical Council, Gaudium et Spes, 69.
5. Address of Pope Francis to the Conference on the Human Right to Water, Pontifical Academy of Sciences, 23 February 2017, available at http://en.radiovaticana.va/news/2017/02/24/pope_francis_addresses_vatican_conference_on_right_to_water/1294848 [Accessed 27.07.2017].
6. Pope Francis, Encyclical Letter, *Laudato Si'*
7. Compendium of the Social Doctrine of the Church; 485.
8. John Paul II, Encyclical Letter *Centesimus Annus*, 40.
9. John Paul II, Message on the Occasion of the World Food Day to Jacques Diouf (Director-General of FAO), 13 October 2002.
10. Address of Pope Francis to the Conference on the Human Right to Water, *Op. Cit*.

CATECHISM OF THE CATHOLIC CHURCH

(Selected Excerpt)

2403**.** The *right to private property*, acquired by work or received from others by inheritance or gift, does not do away with the original gift of the earth to the whole of mankind. The *universal destination of goods* remains primordial, even if the promotion of the common good requires respect for the right to private property and its exercise.

COMPENDIUM OF THE SOCIAL DOCTRINE OF THE CHURCH

(Selected Excerpts)

365. An adequate solidarity in the era of globalization requires that human rights be defended. In this regard, the Magisterium points out that not only the "vision of an effective international public authority at the service of human rights, freedom and peace has not yet been entirely achieved, but there is still in fact much hesitation in the international community about the obligation to respect and implement human rights. This duty touches all fundamental rights, excluding that arbitrary picking and choosing which can lead to rationalizing forms of discrimination and injustice. Likewise, we are witnessing the emergence of an alarming gap between a series of new 'rights' being promoted in advanced societies – the result of new prosperity and new technologies – and other more basic human rights still not being met, especially in situations of underdevelopment. I am thinking here for example about the right to food and drinkable water, to housing and security, to self-determination and independence – which are still far from being guaranteed and realized".[755][1]

[...]

447. The Church's social doctrine encourages forms of cooperation that are capable of facilitating access to the international market on the part of countries suffering from poverty and underdevelopment. "Even in recent years it was thought that the poorest countries would develop by isolating themselves from the world market and by depending only on their own resources. Recent experience has shown that countries which did this have suffered stagnation and recession, while the countries which experienced development were those which succeeded in taking part in the general interrelated economic activities at the international level. It seems therefore that the chief problem is that of gaining fair access to the international market, based not on the unilateral principle of the exploitation of the natural resources of these countries but on the proper use of human resources". [930][2] Among the causes that greatly contribute to underdevelopment and poverty, in addition to the impossibility of acceding to the international market,[931][3] mention must be made of illiteracy, lack of food security, the absence of structures and services, inadequate measures for guaranteeing basic health care, the lack of safe drinking water and sanitation, corruption, instability of institutions and of political life itself. There is a connection between poverty and, in many countries, the lack of liberty, possibilities for

economic initiative and a national administration capable of setting up an adequate system of education and information.

[...]

468. Responsibility for the environment should also find adequate expression on a juridical level. It is important that the international community draw up uniform rules that will allow States to exercise more effective control over the various activities that have negative effects on the environment and to protect ecosystems by preventing the risk of accidents. "The State should also actively endeavour within its own territory to prevent destruction of the atmosphere and biosphere, by carefully monitoring, among other things, the impact of new technological or scientific advances ... [and] ensuring that its citizens are not exposed to dangerous pollutants or toxic wastes".[986][4]

[...]

470. Programs of economic development must carefully consider "the need to respect the integrity and the cycles of nature" [989][5] because natural resources are limited and some are not renewable. The present rhythm of exploitation is seriously compromising the availability of some natural resources for both the present and the future.[990][6] Solutions to the ecological problem require that economic activity respect the environment to a greater degree, reconciling the needs of economic development with those of environmental protection. Every economic activity making use of natural resources must also be concerned with safeguarding the environment and should foresee the costs involved, which are "an essential element of the actual cost of economic activity".[991][7] In this context, one considers relations between human activity and climate change which, given their extreme complexity, must be opportunely and constantly monitored at the scientific, political and juridical, national and international levels. The climate is a good that must be protected and reminds consumers and those engaged in industrial activity to develop a greater sense of responsibility for their behaviour.[992][8]

[...]

481. As regards the ecological question, the social doctrine of the Church reminds us that the goods of the earth were created by God to be used wisely by all. They must be shared equitably, in accordance with justice and charity. This is essentially a question of preventing the injustice of hoarding resources: greediness, be it individual or collective, is contrary to the order of creation.[1005][9] Modern ecological problems are of a planetary

dimension and can be effectively resolved only through international cooperation capable of guaranteeing greater coordination in the use of the earth's resources.

[...]

484. The principle of the universal destination of goods also applies naturally to water, considered in the Sacred Scriptures as a symbol of purification (cf. Ps 51:4; Jn 13:8) and of life (cf. Jn 3:5; Gal 3:27). "As a gift from God, water is a vital element essential to survival; thus, everyone has a right to it".[1009][10] Satisfying the needs of all, especially of those who live in poverty, must guide the use of water and the services connected with it. Inadequate access to safe drinking water affects the well-being of a huge number of people and is often the cause of disease, suffering, conflicts, poverty and even death. For a suitable solution to this problem, it "must be set in context in order to establish moral criteria based precisely on the value of life and the respect for the rights and dignity of all human beings". [1010][11]

485. By its very nature water cannot be treated as just another commodity among many, and it must be used rationally and in solidarity with others. The distribution of water is traditionally among the responsibilities that fall to public agencies, since water is considered a public good. If water distribution is entrusted to the private sector it should still be considered a public good. The right to water, [1011][12] as all human rights, finds its basis in human dignity and not in any kind of merely quantitative assessment that considers water as a merely economic good. Without water, life is threatened. Therefore, the right to safe drinking water is a universal and inalienable right.

NOTES

1. [755] John Paul II, Message for the 2003 World Day of Peace, 5: AAS 95 (2003), 343.
2. [930] John Paul II, Encyclical Letter Centesimus Annus, 33: AAS 83 (1991), 835.
3. [931] Cf. Paul VI, Encyclical Letter Populorum Progressio, 56-61: AAS 59 (1967), 285-287.
4. [986] John Paul II, Message for the 1990 World Day of Peace, 9: AAS 82 (1990), 152.
5. [989] John Paul II, Encyclical Letter Sollicitudo Rei Socialis, 26: AAS 80 (1988), 546.
6. [990] Cf. John Paul II, Encyclical Letter Sollicitudo Rei Socialis,34: AAS 80 (1988), 559-560.
7. [991] John Paul II, Address to the Twenty-Fifth General Conference of FAO (16 November 1989), 8: AAS 82 (1990), 673.
8. [992] Cf. John Paul II, Address to a study group of the Pontifical Academy of Sciences (6 November 1987): Insegnamenti di Giovanni Paolo II, X, 3 (1987), 1018-1020.
9. [1005] Cf. Second Vatican Ecumenical Council, Pastoral Constitution Gaudium et Spes, 69: AAS 58 (1966), 1090-1092; Paul VI, Encyclical Letter Populorum Progressio,

22: AAS 59 (1967), 268..
10. [1009] John Paul II, Message to Cardinal Geraldo Majella Agnelo on the occasion of the 2004 Brotherhood Campaign of the Brazilian Bishops' Conference (19 January 2004): L'Osservatore Romano, English edition, 17 March 2004, p. 3.
11. [1010] John Paul II, Message to Cardinal Geraldo Majella Agnelo on the occasion of the 2004 Brotherhood Campaign of the Brazilian Bishops' Conference (19 January 2004): L'Osservatore Romano, English edition, 17 March 2004, p. 3.
12. [1011] Cf. John Paul II, Message for the 2003 World Day of Peace, 5: AAS 95 (2003), 343; Pontifical Council for Justice and Peace, Water, an Essential Element for Life. A Contribution of the Delegation of the Holy See on the occasion of the 3rd World Water Forum, Kyoto, 16-23 March 2003.

GAUDIUM ET SPES

PASTORAL CONSTITUTION ON THE CHURCH IN THE MODERN WORLD

COUNCIL VATICAN II

7 December 1965

(Selected Excerpt)

69**.** God intended the earth with everything contained in it for the use of all human beings and peoples. Thus, under the leadership of justice and in the company of charity, created goods should be in abundance for all in like manner.(8)[1] Whatever the forms of property may be, as adapted to the legitimate institutions of peoples, according to diverse and changeable circumstances, attention must always be paid to this universal destination of earthly goods. In using them, therefore, man should regard the external things that he legitimately possesses not only as his own but also as common in the sense that they should be able to benefit not only him but also others. (9)[2] On the other hand, the right of having a share of earthly goods sufficient for oneself and one's family belongs to everyone. The Fathers and Doctors of the Church held this opinion, teaching that men are obliged to come to the relief of the poor and to do so not merely out of their superfluous goods.(10)[3] If one is in extreme necessity, he has the right to procure for himself what he needs out of the riches of others.(11)[4] Since there are so many people prostrate with hunger in the world, this sacred council urges all, both individuals and governments, to remember the aphorism of the Fathers, "Feed the man dying of hunger, because if you have not fed him, you have killed him,"(12)[5] and really to share and employ their earthly goods, according to the ability of each, especially by supporting individuals or peoples with the aid by which they may be able to help and develop themselves.

[...]

Notes

1. (8). Cf. Pius XII, encyclical *Sertum Laetitiae*: AAS 31 (1939), p. 642, John XXIII, Consistorial allocution: AAS 52 (1960), pp. 5-11; John XXIII, encyclical letter Mater et Magistra: AAS 53 (1961), p. 411.
2. (9). Cf. St. Thomas, *Summa Theologica*: II-II, q. 32, a. 5 ad 2; Ibid. q. 66, a. 2: cf.

explanation in Leo XIII, encyclical letter *Rerum Novarum*: AAS 23 (1890-91) p. 651; cf. also Pius XII Allocution of June 1, 1941: AAS 33 (1941), p. 199; Pius XII, Birthday radio address 1954: AAS 47 (1955), p. 27.

3. (10) Cf. St. Basil, Hom. in illud Lucae "Destruam horrea mea," n. 2 (PG 31, 263); Lactantius, Divinarum institutionum, lib. V. on justice (PL 6, 565 B); St. Augustine, In Ioann. Ev. tr. 50, n. 6 (PL 35, 1760); St. Augustine, Enarratio in Ps. CXLVII, 12 (PL 37, 192); St. Gregory the Great, Homiliae in Ev., hom. 20 (PL 76, 1165); St. Gregory the Great, Regulae Pastoralis liber, pars III c. 21 (PL 77 87); St. Bonaventure, In III Sent. d. 33, dub. 1 (ed Quacracchi, III, 728); St. Bonaventure, In IV Sent. d. 15, p. II, a. a q. 1 (ed. cit. IV, 371 b); q. de superfluo (ms. Assisi Bibl. Comun. 186, ff. 112a-113a); St. Albert the Great, In III Sent., d. 33, a.3, sol. 1 (ed. Borgnet XXVIII, 611); Id. In IV Sent. d. 15, a. 1 (ed. cit. XXIX, 494-497). As for the determination of what is superfluous in our day and age, cf. John XXIII, Radio-television message of Sept. 11, 1962: AAS 54 (1962) p. 682: "The obligation of every man, the urgent obligation of the Christian man, is to reckon what is superfluous by the measure of the needs of others, and to see to it that the administration and the distribution of created goods serve the common good."

4. (11) In that case, the old principle holds true: "In extreme necessity all goods are common, that is, all goods are to be shared." On the other hand, for the order, extension, and manner by which the principle is applied in the proposed text, besides the modern authors: cf. St. Thomas, Summa Theologica II-II, q. 66, a. 7. Obviously, for the correct application of the principle, all the conditions that are morally required must be met.

5. (12) Cf. Gratiam, Decretum, C. 21, dist. LXXXVI (ed. Friedberg I, 302). This axiom is also found already in PL 54, 591 A (cf. in Antonianum 27 (1952) 349-366) i.

ENCYCLICAL LETTER CENTESIMUS ANNUS

POPE JOHN PAUL II

1 May 1991

(Selected Excerpt)

40. It is the task of the State to provide for the defence and preservation of common goods such as the natural and human environments, which cannot be safeguarded simply by market forces. Just as in the time of primitive capitalism the State had the duty of defending the basic rights of workers, so now, with the new capitalism, the State and all of society have the duty of defending those collective goods which, among others, constitute the essential framework for the legitimate pursuit of personal goals on the part of each individual.

Here we find a new limit on the market: there are collective and qualitative needs which cannot be satisfied by market mechanisms. There are important human needs which escape its logic. There are goods which by their very nature cannot and must not be bought or sold. Certainly the mechanisms of the market offer secure advantages: they help to utilize resources better; they promote the exchange of products; above all they give central place to the person's desires and preferences, which, in a contract, meet the desires and preferences of another person. Nevertheless, these mechanisms carry the risk of an «idolatry» of the market, an "idolatry" which ignores the existence of goods which by their nature are not and cannot be mere commodities.

MESSAGE ON THE OCCASION OF THE WORLD FOOD DAY

POPE JOHN PAUL II

13 October 2002

The annual celebration of World Food Day, by focusing attention on FAO and its efforts to counter hunger and malnutrition, serves to remind us once more of the condition of countless people throughout the world who live in a state of inadequate food security.

The conclusions of the World Food Summit - Five Years Later are still fresh in our minds. The international community is committed to guaranteeing that basic freedom from hunger and access to adequate and healthy food which are primary expressions of the right to life and respect for human dignity which are so often solemnly proclaimed but are still far from being a reality. In fact, while humanity's attainments offer the hope of a future more responsive to human needs, the world tragically remains divided between those who live in abundance and those who are lacking even what is essential for their everyday sustenance. This situation constitutes one of the most obvious obstacles for building a society worthy of humanity, a world that is truly human and fraternal.

This year's chosen theme: "Water, source of food security" is an invitation to reflect on the importance of water, without which individuals and communities cannot live. As an indispensable factor in human activity, water is a basic factor of food security. Nor can we forget that water, a symbol used in the communal rites of many religions and cultures, signifies belonging and purification. In Christian terms, water is used as a sign of a process of interior transformation and conversion. From its symbolic value springs an invitation to be fully aware of the importance of this precious commodity, and consequently to revise present patterns of behaviour in order to guarantee, today and in the future, that all people shall have access to the water indispensable for their needs, and that productive activities, and agriculture in particular, shall enjoy adequate levels of this priceless resource. The growing awareness that water is a limited resource, but absolutely essential to food security, is leading many today to a change of attitude, a change which must be favoured for the sake of future generations.

It is necessary for the international community and its agencies to intervene more effectively and visibly in this area. Such an intervention should be aimed at promoting greater cooperation in protecting water supplies from contamination and improper use, and from that exploitation which aims

only at profit and privilege. In these efforts, the primary objective of the international community must be the well-being of those people – men, women, children, families, communities – who live in the poorest parts of the world and therefore suffer most from any scarcity or misuse of water resources.

The conclusions of recent international meetings have shown how the fight against hunger and malnutrition – and more generally the fight against poverty and in defence of the earth's ecosystems – has to be carried out in many diverse situations and amid rival interests. The first step in this effort is to regain a sustainable balance between consumption and available resources.

We are all aware that without attention to the fundamental principles of the ethical and moral order, principles rooted in the heart and conscience of every human being, this objective cannot be attained. In fact, the order of creation and its delicate harmony are in danger of being irremediably compromised. Biblical wisdom reminds us not to abandon the "source of fresh water and life" in order to "hew out broken cisterns that can hold no water" (Jer 2:13). We can almost see here a warning about our own present situation. We are reminded, in other words, that technical solutions, no matter how developed, are not helpful if they fail to take into account the centrality of the human person, who, in his spiritual and material dimensions, is the measure of all rights and therefore must be the guiding criterion of programmes and policies.

Adequate levels of development in every geographical area will be legitimately and respectfully guaranteed only if access to water is considered a right of individuals and peoples. For this to happen international policy must give fresh attention to the inestimable value of water resources, which are often not renewable and cannot become the patrimony of only a few since they are a common good of the whole of humanity. By their nature they "should be shared fairly by all mankind under the guidance of justice tempered by charity" (Second Vatican Council, Gaudium et Spes, 69).

May this year's celebration of World Food Day serve to remind everyone of the very human dimension of the tragedy of hunger and malnutrition, and help the international community to reaffirm the moral imperative of solidarity. This must be the direction of efforts to ensure that every people and nation will have access to necessary water supplies in order to guarantee an appropriate level of food security.

With this wish I invoke upon FAO, its Member States and its directors and personnel abundant heavenly blessings, and I renew to you, Mr Director-General, the expression of my highest consideration.

MESSAGE ON THE OCCASION OF THE BRAZIL'S LENTEN «CAMPAIGN OF FRATERNITY 2004»

POPE JOHN PAUL II

19 January 2004

(Selected Excerpt)

As a gift from God, water is a vital element essential to survival; thus, everyone has a right to it. Attention must be paid to the problems that derive from its scarcity, which is evident not only in Brazil but also in many parts of the world. Water is not an unlimited resource. Its rational use in solidarity demands the collaboration of all people of good will with the Government Institutions so as to ensure the effective protection of the environment, understood as a gift from God (cf. Post-Synodal Apostolic Exhortation Ecclesia in America, n.25). This is a question, therefore, that must be set in context in order to establish moral criteria based precisely on the value of life and the respect for the rights and dignity of all human beings.

MESSAGE FOR THE CELEBRATION OF THE WORLD DAY OF PEACE

POPE JOHN PAUL II

1 January 2005

(Selected Excerpt)

6. Since the good of peace is closely linked to the development of all peoples, the ethical requirements for the use of the earth's goods must always be taken into account. The Second Vatican Council rightly recalled that "God intended the earth and all it contains for the use of everyone and of all peoples; so that the good things of creation should be available equally to all, with justice as guide and charity in attendance"(10).[1]

As a member of the human family, each person becomes as it were a citizen of the world, with consequent duties and rights, since all human beings are united by a common origin and the same supreme destiny. By the mere fact of being conceived, a child is entitled to rights and deserving of care and attention; and someone has the duty to provide these. The condemnation of racism, the protection of minors, the provision of aid to displaced persons and refugees, and the mobilization of international solidarity towards all the needy are nothing other than consistent applications of the principle of world citizenship.

NOTES

1. (10) Pastoral Constitution *Gaudium et Spes*, 69.

MESSAGE OF POPE BENEDICT XVI TO THE DIRECTOR-GENERAL OF FAO ON THE OCCASION OF THE CELEBRATION OF WORLD WATER DAY 2007

CARDINAL TARCISIO BERTONE, SECRETARY OF STATE

22 March 2007

Mr. Jacques Diouf,

On the occasion of today's celebration of World Water Day, His Holiness Benedict XVI charges me to convey to you, Mr Director-General, and to all the participants at this meeting respectful and cordial greetings and encouragement for your action in favour of those in the world who are suffering from a shortage of water. In the context of the Decade 2005/ 2015, which the General Assembly of the United Nations has declared "The International Decade of Action: Water for life", this year's theme: Coping with water scarcity, gives us an opportunity to think about the importance of water as a source of life whose availability is essential for the vital cycles of the earth and fundamental for a fully human existence. We are all aware of the difficulty of achieving at a world level the goal fixed by the international community to halve the number of people who are without access to healthy water and basic hygiene services by 2015, through the development, among other things, of integrated management plans and an efficient use of water resources. However, we are likewise all convinced of the importance of not falling short of these goals, given the centrality of water in any process destined to foster the promotion of an integral human development. Furthermore, appropriate investments in the sector of water and hygiene services represent a significant mechanism for accelerating economic growth and sustainable development, for improving human health and hygiene, for uprooting poverty and for combating the degradation of the environment. Water, a common good of the human family, constitutes an essential element for life; the management of this precious resource must enable all to have access to it, especially those who live in conditions of poverty, and must guarantee the liveability of the planet for both the present and future generations. Access to water is in fact one of the inalienable rights of every human being, because it is a prerequisite for the realization of the majority of the other human rights, such as the rights to life, to food and to health. For this reason, water "cannot be treated as just another commodity among many, and it must be used rationally and in

solidarity with others.... The right to water... finds its basis in human dignity and not in any kind of merely quantitative assessment that considers water as a merely economic good. Without water, life is threatened. Therefore, the right to safe drinking water is a universal and inalienable right" (Compendium of the Social Doctrine of the Church, n. 485). World Water Day is a precious opportunity to encourage the international community to identify effective ways to permit this basic human right to be promoted, protected and enjoyed. In this regard, the sustainable management of water becomes a social, economic, environmental and ethical challenge that involves not only institutions but the whole of society. It should be faced in accordance with the principle of subsidiarity, that is, through the adoption of a participatory approach that involves both the private sector and above all the local communities; the principle of solidarity, a fundamental pillar of international cooperation, which requires a preferential attention to the poor; the principle of responsibility to the present generation and those to come, from which derives the consequent need to re-examine the models of consumption and production, often unsustainable with regard to the use of water resources. It is in addition a responsibility that must be shared and that becomes a moral and political imperative in a world that has levels of know-how and technologies that are capable of putting an end to situations of water scarcity and to their dramatic consequences that affect in particular the regions with a lower income, in which access to water can often spark real conflicts, whereas it can become a motive for interregional cooperation wherever people appreciate a farsighted approach founded on hydrological interdependence that binds those who use the water resource in neighbouring countries in a joint agreement. These are aspects, Mr Director-General, that not only demand the responsibility of government leaders and politicians, but that challenge every individual. We are all called to renew our life-styles with an educational effort that can reassign to this common good of humanity the value and respect that it ought to have in our society. Moreover, an educational effort of this kind could draw from many sacred texts of the traditional religions, such as the Bible, where water is symbolically a source and a sign of life and its presence is often associated with joy and fertility, assuming in addition a role of purification, renewal and rebirth. On this World Water Day, the Holy Father invokes the Lord's Blessings on all those who are committed to reaching the goals concerning water that have been set by the international community. Mr Director-General, I am honoured to convey to you this Message from His Holiness and ask you to accept the expression of my highest esteem.

MESSAGE TO CARDINAL RENATO RAFFAELE MARTINO, PERMANENT OBSERVER OF THE HOLY SEE IN NEW YORK AT THE INTERNATIONAL EXPO OF SARAGOSSA (SPAIN)

POPE BENEDICT XVI

10 July 2008

(Selected Excerpts)

"I am pleased to send a message of faith and hope", the Pope writes, "to those who are visiting the 2008 Saragossa Expo dedicated to the complex themes tied to the importance of water for human life and the maintenance of equilibrium among the diverse elements of our world. The Holy See wanted to be present at the Expo with a pavilion that was jointly prepared with the archdiocese of Saragossa, which I thank for their generous commitment to promoting proper cultural initiatives that draw the visitor closer to the immense patrimony of spirituality, art, and social wisdom that is inspired by water and which has been safeguarded by the Catholic Church".

"We have to be aware that, regrettably, water - an essential and indispensable good that the Lord has given us to maintain and develop life -, because of incursions and pressures from various social factors, is today considered a good that must be especially protected through clear national and international policies and used according to sensible criteria of solidarity and responsibility. The use of water - which is seen as a universal and inalienable right - is related to the growing and urgent needs of those living in poverty, keeping in mind that the 'limited access to drinkable water affects the wellbeing of an enormous number of people and is frequently the cause of illness, suffering, conflict, poverty, and also death'".

"Those who consider water today to be a predominantly material good", the Pope concludes, "should not forget the religious meanings that believers, and Christianity above all, have developed from it, giving it great value as a precious immaterial good that always enriches human life on this earth. How can we not recall in this circumstance the suggestive message that comes to us from Sacred Scripture, which treats water as a symbol of purification and life? The full recovery of this spiritual dimension is ensured and presupposed for a proper approach to the ethical, political, and economic problems that affect the complex management of water on the part of all concerned, as well as in the national and international spheres".

ENCYCLICAL LETTER CARITAS IN VERITATE

POPE BENEDICT XVI

29 June 2009

(Selected Excerpts)

27. [...] What is missing, in other words, is a network of economic institutions capable of guaranteeing regular access to sufficient food and water for nutritional needs, and also capable of addressing the primary needs and necessities ensuing from genuine food crises, whether due to natural causes or political irresponsibility, nationally and internationally. The right to food, like the right to water, has an important place within the pursuit of other rights, beginning with the fundamental right to life. It is therefore necessary to cultivate a public conscience that considers food and access to water as universal rights of all human beings, without distinction or discrimination [65].[1] It is important, moreover, to emphasize that solidarity with poor countries in the process of development can point towards a solution of the current global crisis, as politicians and directors of international institutions have begun to sense in recent times. Through support for economically poor countries by means of financial plans inspired by solidarity — so that these countries can take steps to satisfy their own citizens' demand for consumer goods and for development — not only can true economic growth be generated, but a contribution can be made towards sustaining the productive capacities of rich countries that risk being compromised by the crisis.

[...]

43. [...] A link has often been noted between claims to a "right to excess", and even to transgression and vice, within affluent societies, and the lack of food, drinkable water, basic instruction and elementary health care in areas of the underdeveloped world and on the outskirts of large metropolitan centres. The link consists in this: individual rights, when detached from a framework of duties which grants them their full meaning, can run wild, leading to an escalation of demands which is effectively unlimited and indiscriminate. [...]

[...]

51. [...] The hoarding of resources, especially water, can generate serious conflicts among the peoples involved. Peaceful agreement about the use of resources can protect nature and, at the same time, the well-being of the societies concerned. [...]

Notes

1. [65] Cf. Benedict XVI, Message for the 2007 World Food Day: AAS 99 (2007), 933-935.

STATEMENT AT THE 15TH SESSION OF THE HUMAN RIGHTS COUNCIL OF THE UNITED NATIONS ON ACCESS TO, AND DELIVERY OF, SAFE DRINKING WATER AND SANITATION SERVICES

ARCHBISHOP SILVANO M. TOMASI, PERMANENT OBSERVER OF THE HOLY SEE TO THE UNITED NATIONS AND OTHER INTERNATIONAL ORGANIZATIONS IN GENEVA

16 September 2010

(Selected Excerpt)

"[b]y its very nature water cannot be treated as just another commodity among many, and it must be used rationally and in solidarity with others. The distribution of water is traditionally among the responsibilities that fall to public agencies, since water is considered a public good. If water distribution is entrusted to the private sector it should still be considered a public good. The right to water, as all human rights, finds its basis in human dignity and not in any kind of merely quantitative assessment that considers water as a merely economic good. Without water, life is threatened. Therefore, the right to safe drinking water is a universal and inalienable right".

STATEMENT AT THE 3RD SESSION OF THE OPEN WORKING GROUP ON SUSTAINABLE DEVELOPMENT GOALS: "WATER AND SANITATION"

ARCHBISHOP FRANCIS CHULLIKATT, PERMANENT OBSERVER OF THE HOLY SEE TO THE UNITED NATIONS IN NEW YORK

24 May 2013

Mr. Co-Chair,

Water and sanitation is a subject which requires from us a renewed sense of solidarity, responsibility and action in order to ensure that all people have access to these fundamental necessities of life. The starting point for our discussion must lie in recognizing the fact that water is unlike other commodities: it is, rather, an essential element for human life and a good destined for everyone.[1] Such recognition is necessary if the international community is to protect and promote, as a universal human right, the human right to safe drinking water and sanitation. My delegation has been advocating for over a decade for this recognition, but collective efforts on the part of governments and international organizations are slow and hesitant in reaffirming that access to safe water and sanitation is a fundamental human right and a common good. The unfortunate reality is that today over 800 million people lack access to water resource, and millions more are without a safe and sustainable water supply. Water is the key to life, however, and denying water is tantamount to denying our brothers and sisters a vital source of life for survival. Pope Francis recently stated that: "Water is essential to life; without water we die; it quenches, washes, makes the earth fertile."[2] Closely linked to safe drinking water, also, is the need to provide access to improved sanitation. But here again, the MDG on sanitation remains the goal farthest away from achievement with nearly 1/3 of the world's population living without improved sanitation. These are not merely numbers; these are 2.5 billion of our fellow brothers and sisters. Sustainable Development Goals present a new opportunity for the international community to work together to reverse this bleak reality. Today, we have the opportunity to put discussions on human rights back into prospective. It is within our grasp today to create a world in which fundamental needs like safe drinking water and sanitation are given their due priority in the hierarchy of rights over the promotion of so–called "new" human rights. The failure to do so risks repeating the lack of progress made on the MDGs for access to sanitation and the right to safe drinking water.

Mr. Co-Chair,

In order to achieve this goal, we must adopt a rights-based approach to providing access to water and sanitation. However, without corresponding obligations, a rights-based approach risks reduction to sentimental expressions of good-will. Renewed efforts to meet our personal, political and social obligations in the utilization of water and sanitation resources, therefore, must become more than promises for action but rather celebrations of success. Such obligations will require adopting policies and programs which seek to answer first the question of "how" we can efficiently provide the needs of communities, before delving into the question of "whether" it is economically expedient to do so. In this way, we reassert that it is serving the human person which must guide us, not the pursuit at any cost of economic incentives. It furthermore requires recognition of environmental concerns. Access to water is one which goes beyond national borders and requires international cooperation in governance so as to promote a harmonious, sustainable use of natural resources in view of achieving the global common good.[3] In particular, the creation of competent authorities should be encouraged on the regional and cross-border levels for the joint, integrated, fair, rational and solidarity-based management of the common resources," such as water.[4] In these efforts, civil society and the private sector play a crucial role in protecting and promoting the right to water. Coupled with this reality is the need for each of us to recognize individual responsibilities to consume such essential goods with due moderation and justice. Water is not an unlimited resource. Its rational use in solidarity demands collaboration of all people of good will. Moderation in consumption requires the recognition that "water constitutes a 'system' worldwide, and even if there was not a direct connection between consumption and availability in two different places, other indirect connections exist that must be kept in mind." [5] Superfluous use of water has both direct and indirect impacts on others who do not live with an abundance of fresh water resources. Justice requires recognizing personal, legal and financial responsibilities, in harmony with the principle of subsidiarity, to provide mechanisms to identify those responsible for undermining or damaging access to safe drinking water and mechanisms for redress.

Mr. Co-Chair,

The Millennium Development Goals sought to halve the proportion of people living without safe drinking water and basic sanitation. However, the outcome of Rio +20 and the Sustainable Development Goals provide us with an opportunity to build upon lessons learned from the MDG process and to set our goals more resolutely and our efforts higher, so as to be no longer satisfied with providing only half the world's people access to essential goods for life, but rather, ensuring that all people have the right to safe drinking water and sanitation.

In conclusion, my delegation also wishes to underline the fundamental link between the precious and limited resource of safe drinking water and the question of food security. It is to be hoped that our initiatives "will help to guarantee to everyone a fair, reliable and adequate water access, thereby advancing every human being's rights to life and nutrition, as well as a responsible and supportive use of the Earth's goods for the benefit of the present and future generations."[6]

Thank you, Mr. Co-Chair.

Notes

1. A contribution of the Holy See to the Sixth World Water Forum Marseille, 12-17 March 2012.
2. Pope Francis, General Audience, 8 May 2013.
3. A Contribution of the Holy See to the Sixth World Water Forum Marseille, 12-17 March 2012.
4. Id.
5. Id.
6. Pope Benedict XVI, Angelus message, 18 March 2012.

STATEMENT AT THE 47TH SESSION OF THE COMMISSION ON POPULATION AND DEVELOPMENT OF THE UNITED NATIONS ECONOMIC AND SOCIAL COUNCIL

PERMANENT MISSION OF THE HOLY SEE TO THE UNITED NATIONS IN NEW YORK

10 April 2014

Mr. Chairman,

My delegation is convinced that only a truly human-centered approach to development can function as the authentic starting point for policy on population and development. Through its unparalleled global network of institutions, the Holy See unceasingly manifests its commitment to serving the poorest and most vulnerable populations in working to achieve their integral human development. This includes physical, social, and spiritual development – keeping the focus on those most essential factors for development, including: quality and affordable education and health care, access to food and nutrition, water and sanitation, the rights of migrants, as well as policies that support the family as the fundamental and most basic contributors of this development.

My delegation acknowledges with thanks your efforts and those of your bureau and the Secretariat for all the hard work during this Commission. The resolution just adopted contains many helpful contributions for advancing integral human development, and we are appreciative to you for including quite a number of our proposals. However, as already expressed on several occasions by many delegations, including my own, the balance of this resolution remains heavily skewed towards peculiar interests of certain developed countries, as evidenced by undue emphasis on selected rights over the real development priorities consistently elaborated by major regional groups, particularly those from developing regions.

I refer in particular to the heavy focus on sexual or reproductive mores. In this regard, the Holy See requests that its reservations on the following paragraphs be formally entered into the record of this meeting: PP16, OP9 and 9bis, OP10 and OP11.

- With reference to "sexual and reproductive health", so-called "reproductive rights," "family planning" and other language on which the Holy See has registered reservations at Cairo, we reiterate these reservations as set out more fully in the Report of the ICPD. In particular, the ICPD rejects recourse to abortion for family planning, denies that it creates any

new rights in this regard and recognizes that this is a matter subject to national legislation. Abortion is always gravely illicit and can never be called safe for the child who is killed or the mother who is brutalized. Yesterday Pope Francis publicly condemned yet again what he calls this "unspeakable crime" in the following terms: "[F]rom the moment of its conception life must be guarded with the greatest care." "Therefore," the Pope pleaded, "it is necessary to reaffirm our strongest opposition to any direct offence against life, especially ... the unborn child in its mother's womb."

- With respect to so-called "education" or "counselling" on "sexuality", we reaffirm the "primary responsibility" and the "prior rights" of parents, including their right to religious freedom, when it comes to the education and upbringing of their children, as enshrined in the Convention on the Rights of the Child, to which we are a State Party.
- By "gender" my delegation understands to mean "male or female" only, and to have no meaning other than the customary and general usage of the term.

We also were disappointed by the methods of work that led to this resolution. What was promised to be a concise, procedural approach without renegotiation of the issues ballooned into a partisan substantive jamboree during a week in which very little time was set aside for actual multilateral negotiations. We regret that the series of general comments for which we were solicited never matured into a full and robust negotiation of a true compilation text. We share the concerns expressed by the distinguished delegate from Bangladesh and others regarding the transparency and inclusivity of this final session. This manner of proceeding should not serve as a precedent for future Commissions.

We ask that the text of this statement be included in the official records of this meeting.

I thank you, Mr. Chairman.

ENCYCLICAL LETTER LAUDATO SI'

POPE FRANCIS

24 May 2015

(Selected Excerpts)

8. Patriarch Bartholomew has spoken in particular of the need for each of us to repent of the ways we have harmed the planet, for "inasmuch as we all generate small ecological damage", we are called to acknowledge "our contribution, smaller or greater, to the disfigurement and destruction of creation".[14][1] He has repeatedly stated this firmly and persuasively, challenging us to acknowledge our sins against creation: "For human beings… to destroy the biological diversity of God's creation; for human beings to degrade the integrity of the earth by causing changes in its climate, by stripping the earth of its natural forests or destroying its wetlands; for human beings to contaminate the earth's waters, its land, its air, and its life – these are sins".[15][2] For "to commit a crime against the natural world is a sin against ourselves and a sin against God".[16][3]

[...]

24. Warming has effects on the carbon cycle. It creates a vicious circle which aggravates the situation even more, affecting the availability of essential resources like drinking water, energy and agricultural production in warmer regions, and leading to the extinction of part of the planet's biodiversity. The melting in the polar ice caps and in high altitude plains can lead to the dangerous release of methane gas, while the decomposition of frozen organic material can further increase the emission of carbon dioxide. Things are made worse by the loss of tropical forests which would otherwise help to mitigate climate change. Carbon dioxide pollution increases the acidification of the oceans and compromises the marine food chain. If present trends continue, this century may well witness extraordinary climate change and an unprecedented destruction of ecosystems, with serious consequences for all of us. A rise in the sea level, for example, can create extremely serious situations, if we consider that a quarter of the world's population lives on the coast or nearby, and that the majority of our megacities are situated in coastal areas.

[...]

II. The issue of water

27. Other indicators of the present situation have to do with the depletion of natural resources. We all know that it is not possible to sustain the present level of consumption in developed countries and wealthier sectors of society, where the habit of wasting and discarding has reached unprecedented levels. The exploitation of the planet has already exceeded acceptable limits and we still have not solved the problem of poverty.

28. Fresh drinking water is an issue of primary importance, since it is indispensable for human life and for supporting terrestrial and aquatic ecosystems. Sources of fresh water are necessary for health care, agriculture and industry. Water supplies used to be relatively constant, but now in many places demand exceeds the sustainable supply, with dramatic consequences in the short and long term. Large cities dependent on significant supplies of water have experienced periods of shortage, and at critical moments these have not always been administered with sufficient oversight and impartiality. Water poverty especially affects Africa where large sectors of the population have no access to safe drinking water or experience droughts which impede agricultural production. Some countries have areas rich in water while others endure drastic scarcity.

29. One particularly serious problem is the quality of water available to the poor. Every day, unsafe water results in many deaths and the spread of water-related diseases, including those caused by microorganisms and chemical substances. Dysentery and cholera, linked to inadequate hygiene and water supplies, are a significant cause of suffering and of infant mortality. Underground water sources in many places are threatened by the pollution produced in certain mining, farming and industrial activities, especially in countries lacking adequate regulation or controls. It is not only a question of industrial waste. Detergents and chemical products, commonly used in many places of the world, continue to pour into our rivers, lakes and seas.

30. Even as the quality of available water is constantly diminishing, in some places there is a growing tendency, despite its scarcity, to privatize this resource, turning it into a commodity subject to the laws of the market. Yet 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. Our world has a grave social debt towards the poor who lack access to drinking water, because they are denied the right to a life consistent with their inalienable dignity. This debt can be paid partly by an increase in funding to provide clean water and sanitary services among the poor. But water continues to be wasted, not only in the developed world but also in developing countries which possess it in abundance. This shows that the problem of water is partly an educational and cultural issue, since

there is little awareness of the seriousness of such behaviour within a context of great inequality.

31. Greater scarcity of water will lead to an increase in the cost of food and the various products which depend on its use. Some studies warn that an acute water shortage may occur within a few decades unless urgent action is taken. The environmental repercussions could affect billions of people; it is also conceivable that the control of water by large multinational businesses may become a major source of conflict in this century.[23][4]

[...]

48. The human environment and the natural environment deteriorate together; we cannot adequately combat environmental degradation unless we attend to causes related to human and social degradation. In fact, the deterioration of the environment and of society affects the most vulnerable people on the planet: "Both everyday experience and scientific research show that the gravest effects of all attacks on the environment are suffered by the poorest".26[5] For example, the depletion of fishing reserves especially hurts small fishing communities without the means to replace those resources; water pollution particularly affects the poor who cannot buy bottled water; and rises in the sea level mainly affect impoverished coastal populations who have nowhere else to go. The impact of present imbalances is also seen in the premature death of many of the poor, in conflicts sparked by the shortage of resources, and in any number of other problems which are insufficiently represented on global agendas.[27][6]

[...]

185. In any discussion about a proposed venture, a number of questions need to be asked in order to discern whether or not it will contribute to genuine integral development. What will it accomplish? Why? Where? When? How? For whom? What are the risks? What are the costs? Who will pay those costs and how? In this discernment, some questions must have higher priority. For example, we know that water is a scarce and indispensable resource and a fundamental right which conditions the exercise of other human rights. This indisputable fact overrides any other assessment of environmental impact on a region.

NOTES

1. [14] Message for the Day of Prayer for the Protection of Creation (1 September 2012).
2. 15] Address in Santa Barbara, California (8 November 1997); cf. JOHN CHRYSSAVGIS, On Earth as in Heaven: Ecological Vision and Initiatives of Ecumenical Patriarch Bartholomew, Bronx, New York, 2012.
3. [16] *Ibid*.
4. [23] Cf. Greeting to the Staff of FAO (20 November 2014): AAS 106 (2014), 985.

5. [26] Bolivian Bishops' Conference, Pastoral Letter on the Environment and Human Development in Bolivia El universo, don de Dios para la vida (23 March 2012), 17.
6. [27] Cf. German Bishops' Conference, Commission for Social Issues, Der Klimawandel: Brennpunkt globaler, intergenerationeller und ökologischer Gerechtigkeit (September 2006), 28-30.

ADDRESS TO THE MEMBERS OF THE GENERAL ASSEMBLY OF THE UNITED NATIONS IN NEW YORK

POPE FRANCIS

25 September 2015

(Selected Excerpt)

The number and complexity of the problems require that we possess technical instruments of verification. But this involves two risks. We can rest content with the bureaucratic exercise of drawing up long lists of good proposals – goals, objectives and statistics – or we can think that a single theoretical and aprioristic solution will provide an answer to all the challenges. It must never be forgotten that political and economic activity is only effective when it is understood as a prudential activity, guided by a perennial concept of justice and constantly conscious of the fact that, above and beyond our plans and programmes, we are dealing with real men and women who live, struggle and suffer, and are often forced to live in great poverty, deprived of all rights.

To enable these real men and women to escape from extreme poverty, we must allow them to be dignified agents of their own destiny. Integral human development and the full exercise of human dignity cannot be imposed. They must be built up and allowed to unfold for each individual, for every family, in communion with others, and in a right relationship with all those areas in which human social life develops – friends, communities, towns and cities, schools, businesses and unions, provinces, nations, etc. This presupposes and requires the right to education – also for girls (excluded in certain places) – which is ensured first and foremost by respecting and reinforcing the primary right of the family to educate its children, as well as the right of churches and social groups to support and assist families in the education of their children. Education conceived in this way is the basis for the implementation of the 2030 Agenda and for reclaiming the environment.

At the same time, government leaders must do everything possible to ensure that all can have the minimum spiritual and material means needed to live in dignity and to create and support a family, which is the primary cell of any social development. In practical terms, this absolute minimum has three names: lodging, labour, and land; and one spiritual name: spiritual freedom, which includes religious freedom, the right to education and all other civil rights.

For all this, the simplest and best measure and indicator of the implementation of the new Agenda for development will be effective, practical and immediate access, on the part of all, to essential material and spiritual goods: housing, dignified and properly remunerated employment, adequate food and drinking water; religious freedom and, more generally, spiritual freedom and education. These pillars of integral human development have a common foundation, which is the right to life and, more generally, what we could call the right to existence of human nature itself.

ADDRESS TO THE WORLD WATER WEEK IN STOCKHOLM ON "WATER AND FAITHS: FAITH BASED ORGANIZATIONS CONTRIBUTING TO THE WATER SDGS"

CARDINAL PETER K. A. TURKSON, PRESIDENT OF THE PONTIFICAL COUNCIL FOR JUSTICE AND PEACE

29 August 2016

Distinguished representatives of various Religions, Organizers, dear Colleagues, ladies and gentlemen, it is a pleasure to greet you in the name of the Pontifical Council for Justice and Peace.

Having been asked to speak on "Faith and Development", I notice that many religions are represented here. This suggests that indeed there are many links between faith and development. Fruitful inter-religious collaborations and synergies have already started in several sectors, such as healthcare, food security, investment, education, stewardship of natural resources, and assistance to migrants.

From a Catholic perspective, our planet, its resources and ecosystems are a marvellous gift. So too, human life is a gift – we are not self-created, we receive our bodies and our first relationships through the same grand course of divinely-given nature. Hence, we readily understand that nature is intended to be shared between all the humans, one generation after the other, and that the whole human family is expected to take care of our common home. These fundamentals are easily found in other religions and spiritual traditions as well, regardless of their specific unique features.

Why is this shared fundamental understanding so important for development?

First of all, science can only explain concrete reality, its substances and causal relationships. Science can quantify the pollution in deep oceans or around a mining site, foreseeing its negative consequences and proposing remedies. But science cannot provide the motivation for virtuous action. The same holds beyond the realm of the natural sciences: sociologists, economists and lawyers can analyse and explain the negative effects of unemployment, speculation and corruption; they can warn us about rising inequalities, contradictory policies or geopolitical unrest. But in the end they cannot supply the motivation for virtuous action.

Pope Francis, in the Encyclical letter Laudato Si', asks: "What kind of world do we want to leave to those who come after us, to children who are now growing up? […] What is the goal of our work and all our efforts?"

(§160). Observing numerous alarming environmental and social indicators leads us to the daunting question: why should I care? Science and technology will not help here. Any technical solution is powerless "if we lose sight of the great motivations which make it possible for us to live in harmony, to make sacrifices and to treat others well" (§200). Pope Francis shares his conviction "that change is impossible without motivation and a process of education" – and for those purposes he proposes "some inspired guidelines for human development to be found in the treasure of Christian spiritual experience" (§15), since "faith convictions can offer Christians, and some other believers as well, ample motivation to care for nature and for the most vulnerable of their brothers and sisters" (§64).

Simply put, motivation to virtue is the valuable contribution that religious faith and spiritual practices can and must bring to development, through their spiritual leaders and the multitudes of believers and adherents. They "must constantly feel challenged to live in a way consonant with their faith and not to contradict it by their actions" (200). They must contribute, for example, to the adoption and further extension of ambitious and ethically-rooted frameworks for development action such as those pertaining to the implementation of the new Sustainable Development Goals.

A second perspective grounded in faith touches on human dignity. We are much more than items or data to be measured and represented by GDP. We are not simply factors of production and consumption. When human beings are just human resources, they cease to be the measure of success of policies. Instead, humans become disposable. Throw these people away in favour of better producers. Displace those people in favour of more profitable consumption of water.

Our vision of being human must be much more complex. Pope Francis teaches that we must integrate spirituality, social relationality, and our connections with nature. This lies behind his conviction that "what is at stake is our own dignity. Leaving an inhabitable planet to future generations is, first and foremost, up to us. The issue is one which dramatically affects us, for it has to do with the ultimate meaning of our earthly sojourn" (§160).

Since we are gathered during the World Water Week, I would like to conclude by giving a few examples of the contributions that Faith-based-organizations can provide concerning water.

- Educate youth to embrace solidarity, altruism and responsibility. The latter of these virtues will help them to be honest administrators and politicians.

- In teaching Sacred Scriptures and spiritual traditions, show that water is a precious and even a divine element. It is used extensively in liturgy. This should inspire us to use water with respect and gratitude, reclaim polluted water sources and understand that water is not a mere commodity.

- Organize interreligious campaigns for cleaning rivers or lakes, in order to foster mutual respect, peace and friendship among different groups.

- Reaffirm human dignity and the common good of the whole human family in order to promote a wise hierarchy of priorities for the use of water,

especially where there are multiple and potentially competing demands for water.

All this will help in making universal and sustainable access to drinkable water a reality. This most vital challenge has been a focus for the Catholic Church for many years. It is a continuing shame that so many of our brothers and sisters are systematically thirsty or compelled to drink unsafe water; that their needs are secondary to industries which take too much and that pollute what remains; that governments pursue other priorities and ignore their parched cries. We already know how Jesus judges these matters. In the Gospel of Matthew (25:35), Jesus teaches what we are supposed to do: "I was thirsty and you gave Me something to drink". I pray that this conference will help the world to be more alert to the thirst of Jesus and give him sufficient, clean water to drink!

Thank you.

STATEMENT AT THE 33RD SESSION OF THE HUMAN RIGHTS COUNCIL OF THE UNITED NATIONS - INTERACTIVE DIALOGUE ON THE HUMAN RIGHT TO WATER AND SANITATION

ARCHBISHOP IVAN JURKOVIČ, PERMANENT OBSERVER OF THE HOLY SEE TO THE UNITED NATIONS AND OTHER INTERNATIONAL ORGANIZATIONS IN GENEVA

16 September 2016

Mr. President,

The Delegation of the Holy See would like to express its deep concern that approximately 783 million people lack access to safe drinking water and that more than 2.5 billion do not have access to basic sanitation. Moreover, globally, one-third of all schools lack access to safe water and sanitation, and 160 million children suffer from stunting and chronic malnutrition linked to such problems.[1] Resolution 64/292 of the United Nations General Assembly recognizes the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights. In September of last year, the 2030 Agenda recognized water and sanitation as a core issue, established a dedicated Sustainable Development Goal 6 on water and sanitation, clear linkages to Goals relating to health, food security, climate change, resilience to disasters and ecosystems, among many others. In order to reach the ambitious objectives of the 2030 Agenda, we must address universal access to drinking water and sanitation as well as issues of quality and supply, in tandem with improved water management to protect ecosystems and build resilience. Our world has a grave social debt toward the poor who lack access to drinking water, because they are denied the right to a life consistent with their inalienable dignity. Sustainable development and human rights perspectives both call for reducing inequalities and eliminating disparities in access to basic services. In this regard, the sustainable management of water becomes a social, economic, environmental and ethical challenge that involves not only institutions, but also the whole of society. The intense and indiscriminate exploitation of natural resources results in grave situations of irreversible degradation and threatens the survival of future generations on this Earth. Reckless choices continue today and result in increasing exploitation of energy and natural resources, located in the poorest countries, to the economic advantage of many industrialized nations. In his Encyclical Letter, Caritas in Veritate, Pope Benedict XVI observed that "[t]he stockpiling of natural resources, which in many cases are found in the poor countries themselves, gives rise

to exploitation and frequent conflicts between and within nations."[2] As stated by Pope Francis last year at the UN General Assembly, the pillars of integral human development, namely, "housing, dignified and properly remunerated employment, adequate food and drinking water, religious freedom and, more generally, spiritual freedom and education – have a common foundation – the right to life and, more generally, what we could call the right to existence of human nature itself."[3] Today, it is impossible to talk about "common good without taking into account the right to live in a healthy environment. The fight against poverty and hunger requires more and more targeted intervention and solidarity in order to guarantee universal access to water. The promotion of integral human development, especially for those engaged in agriculture, requires proper management of water resources. Thus the Catholic Church teaches that "[b]y its very nature water cannot be treated as just another commodity among many, and it must be used rationally and in solidarity with others. The distribution of water is traditionally among the responsibilities that fall to public agencies, since water is considered a public good. If water distribution is entrusted to the private sector it should still be considered a public good. The right to water, as all human rights, finds its basis in human dignity and not in any kind of merely quantitative assessment that considers water as a merely economic good. Without water, life is threatened. Therefore, the right to safe drinking water is a universal and inalienable right."[4] Mr. President, my Delegation would like to recall that, in order to promote and attain the common good, it is necessary to protect and promote the right to water as a "duty of the civil authorities". To reaffirm human dignity and the common good of the whole human family, we must promote a wise hierarchy of priorities for the use of water, especially where there are multiple and potentially competing demands for water. Therefore, policies are needed that will protect this good in today's circumstances. In this regard, the Holy See is aware that situations vary greatly and thus urges the planning of policies that are valid and effective for the different contexts. The International Community has to face the urgent moral need for a new solidarity with regard to natural resources. This change can only be achieved through motivation and education of youth to embrace solidarity, altruism and responsibility. The latter of these virtues will help them to be honest administrators and politicians. Water management should be based on a participatory approach, involving users, planners and policy makers at all levels. Both women and men should be involved in managing water resources and sharing the benefits that come from sustainable water use. In achieving the 2030 Agenda, the water concerns of the poor become the concerns of all from the perspective of solidarity. This solidarity is a firm and persevering determination to commit oneself to the common good, to the good of all and of each individual.[5] It presupposes the effort for a more just social order and requires a preferential attention to the situation of the poor.[6] The same duty of solidarity that rests on individuals exists also for nations: advanced nations have a very heavy obligation to help the developing people.[7]

Notes

1. Cfr. http://www.who.int/water_sanitation_health/monitoring/jmp-2015-update/en/
2. Pope Benedict XVI, Encyclical Letter *Caritas in Veritate*, n. 49.
3. Pope Francis, Address to the United Nations Organization, New York, 25 September 2015
4. Compendium of the Social Doctrine of the Church, #485,
5. Cf. Note of the Pontifical Council for Justice and Peace for the 3rd World Water Forum in Kyoto, Japan, entitled "Water, An Essential Element for Life."
6. Cf. Pope John Paul II, Encyclical Letter *Sollicitudo rei socialis*, §38-40 and Second Vatican Ecumenical Council *Gaudium et spes*, §100.
7. Second Vatican Ecumenical Council, *Gaudium et spes*, §86.

STATEMENT AT THE OPEN DEBATE ON MAINTENANCE OF INTERNATIONAL PEACE AND SECURITY: WATER, PEACE AND SECURITY

ARCHBISHOP BERNARDITO AUZA, PERMANENT OBSERVER OF THE HOLY SEE TO THE UNITED NATIONS IN NEW YORK

22 November 2016

Mr. President,

The Holy See is pleased that the Presidency of Senegal has chosen this important topic for Open Debate in the Security Council, thus increasing the attention the international community will pay to it.

Water scarcity illustrates a paradox: while water covers two-thirds of the Earth's surface and is not used up when consumed, it is clear that the availability of fresh water is diminishing. With expanding deserts, deforestation and increasing droughts, everyone should be concerned about a potential worldwide calamity caused by a diminished water supply.

Water has always been scarce in some places due to their geographical location, but in others, it is scarce because of mismanagement and misallocation, resulting in waste and inequitable distribution. Environmental degradation makes water toxic and climactic changes alter hydrologic cycles. Underground water sources in many places are threatened by the pollution produced in certain mining, farming and industrial activities, especially in countries lacking adequate regulation or controls. Industrial waste, detergents and chemical products continue to pour into our rivers, lakes and seas. Agricultural production, the greatest consumer of fresh water, and industries, the second greatest consumer, demand water more than ever, depleting aquifers much faster than they can be replenished.

In many places, demand for water exceeds the sustainable supply, with dramatic consequences for the short and long term, including implications for national, regional and international peace and security. Water poverty especially affects Africa where large sectors of the population have no access to safe drinking water or experience droughts that impede agricultural production and provoke fierce competition. The migration of entire populations from regions that endure drastic water scarcity is seen as a threat to populations in areas with water.

In brief, the implications of water for national, regional and international peace and security can hardly be overstated. Indeed, water experts and advocates ominously predict that the Third World War will be about water. When he visited the FAO in 2014, Pope Francis said: "Water is not free, as we so often think. It is a grave problem that can lead to war."[1]

Water scarcity also has huge implications for justice and equity. As Pope Francis underlined in the Encyclical Laudato Si', fresh drinking water is an issue of primary importance for its fundamental role in health and overall well-being.[2] In this context, one particularly serious problem is the quality of water available to the poor. Every day, unsafe water-borne diseases, like dysentery and cholera, remain a leading cause of death, especially among infants and children.

Moreover, a growing tendency to privatize water and turn it into a commodity dictated by market laws could seriously compromise access to safe water on the part of the poor, making it conceivable, Pope Francis said, "that the control of water by large multinational businesses may become a major source of conflict in this century."[3] While good water management implies expenditures as well as fees for water use to encourage its wise consumption, it is even more important to remember that 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. Pope Francis affirmed that our world has a grave social debt towards the poor who lack access to drinking water, because they are denied the right to a life consistent with their inalienable dignity.[4]

Mr. President,

Water-related challenges to peace and security, indeed to life itself, must not only be considered as threats, but also as opportunities for nations to collaborate more closely to come up with solutions, instead of engaging in ever fiercer competition for a diminishing essential resource that could ultimately lead to wars and conflicts. New technologies continue to emerge that could enable us to avoid a sustainability crisis through, inter alia, better methods of food production that require less water and industrial manufacturing that minimizes pollution of our aquifers and water systems.

Moreover, local and traditional solutions to water-related challenges must not be abandoned in spite of technological advances. My delegation wishes to encourage both the public and private sectors to support community-driven initiatives for water conservation and water allocation. Local communities often know better their own water systems and how best to conserve and harness them. While the water shortage concerns vast areas, local solutions are always key components to coming to grips with the water problem.

Finally, education on the fundamental importance of water is crucial. Water continues to be wasted and polluted, not only in the developed world but also in developing countries that possess it in relative abundance. This shows that there is much to do in educating individuals and communities on issues such as water conservation, wise consumption, and equitable use of this universal common good on the part of all. It is important to cultivate among peoples and their leaders a conscientious awareness that

considers access to water as a universal right of all human beings, without distinction or discrimination. The water challenges provoking peace and security threats are technical, economic, political, social, but let us not forget that, ultimately, they are ethical and moral issues as well.

Thank you, Mr. President.

NOTES

1. Pope Francis, Greetings to the Staff of FAO, 20 November 2014.
2. Paragraphs 27 to 31.
3. Laudato Si' §31.
4. Laudato Si' §30.

ADDRESS TO THE CONFERENCE ON THE HUMAN RIGHT TO WATER – PONTIFICAL ACADEMY OF SCIENCES

POPE FRANCIS

23 February 2017

Dear Brothers and Sisters,

Good afternoon! I greet all of you and I thank you for taking part in this meeting concerned with the human right to water and the need for suitable public policies in this regard. It is significant that you have gathered to pool your knowledge and resources in order to respond to this urgent need of today's men and women.

The Book of Genesis tells us that water was there in the beginning (cf. Gen 1:2); in the words of Saint Francis of Assisi, it is "useful, chaste and humble" (cf. Canticle of the Creatures). The questions that you are discussing are not marginal, but basic and pressing. Basic, because where there is water there is life, making it possible for societies to arise and advance. Pressing, because our common home needs to be protected. Yet it must also be realized that not all water is life-giving, but only water that is safe and of good quality.

All people have a right to safe drinking water. This is a basic human right and a central issue in today's world (cf. Laudato Si', 30; Caritas in Veritate, 27). This is a problem that affects everyone and is a source of great suffering in our common home. It also cries out for practical solutions capable of surmounting the selfish concerns that prevent everyone from exercising this fundamental right. Water needs to be given the central place it deserves in the framework of public policy. Our right to water is also a duty to water. Our right to water gives rise to an inseparable duty. We are obliged to proclaim this essential human right and to defend it – as we have done – but we also need to work concretely to bring about political and juridical commitments in this regard. Every state is called to implement, also through juridical instruments, the Resolutions approved by the United Nations General Assembly since 2010 concerning the human right to a secure supply of drinking water. Similarly, non-state actors are required to assume their own responsibilities with respect to this right.

The right to water is essential for the survival of persons (cf. Laudato Si', 30) and decisive for the future of humanity. High priority needs to be given to educating future generations about the gravity of the situation.

Forming consciences is a demanding task, one requiring conviction and dedication.

The statistics provided by the United Nations are troubling, nor can they leave us indifferent. Each day a thousand children die from water-related illnesses and millions of persons consume polluted water. These facts are serious; we have to halt and reverse this situation. It is not too late, but it is urgent to realize the need and essential value of water for the good of mankind.

Respect for water is a condition for the exercise of the other human rights (cf. ibid., 30). If we consider this right fundamental, we will be laying the foundations for the protection of other rights. But if we neglect this basic right, how will we be able to protect and defend other rights? Our commitment to give water its proper place calls for developing a culture of care (cf. ibid., 231) and encounter, joining in common cause all the necessary efforts made by scientists and business people, government leaders and politicians. We need to unite our voices in a single cause; then it will no longer be a case of hearing individual or isolated voices, but rather the plea of our brothers and sisters echoed in our own, and the cry of the earth for respect and responsible sharing in a treasure belonging to all. In this culture of encounter, it is essential that each state act as a guarantor of universal access to safe and clean water.

God the Creator does not abandon us in our efforts to provide access to clean drinking water to each and to all. It is my hope that this Conference will help strengthen your convictions and that you will leave in the certainty that your work is necessary and of paramount importance so that others can live. With the "little" we have, we will be helping to make our common home a more liveable and fraternal place, where none are rejected or excluded, but all enjoy the goods needed to live and to grow in dignity.

Thank you.

"INTERNATIONAL DECADE FOR ACTION: WATER FOR SUSTAINABLE DEVELOPMENT" FIRST DIALOGUE TO DISCUSS IMPROVING THE INTEGRATION AND COORDINATION OF THE WORK OF THE UNITED NATIONS ON THE WATER-RELATED GOALS AND TARGETS UNDER ITS SUSTAINABLE DEVELOPMENT PILLAR

ARCHBISHOP BERNARDITO AUZA, PERMANENT OBSERVER OF THE HOLY SEE TO THE UNITED NATIONS IN NEW YORK

22 March 2017

Distinguished Co-Moderators,

My delegation wishes to thank you for having prepared this working level dialogue and welcomes the opportunity to share its perspective on the questions related to water, also in view of the 2018-2028 International Decade for Action, "Water for Sustainable Development."

Today in the Vatican more than 400 water experts and grassroots advocates from all over the world have gathered to discuss replenishing water values for a thirsty world. His Holiness Pope Francis gave a message that said that the meeting was an important step in the common commitment of various institutions to increase awareness of the necessity of protecting water as a good for all, and underlined also the cultural and religious value of water.

Questions concerning the right to water are not marginal, but basic and pressing: basic, because where there is no water there is no life; and pressing, because there is urgency to protect and care better for our common home.

Not all water is life-giving, but only water that is safe and of good quality. Every day, water-borne diseases, like dysentery and cholera, remain a leading cause of death, especially among infants and children. Every day, millions of people imbibe polluted water, making them sick and pushing them ever deeper into extreme poverty. Access to safe drinking water is a basic human right and a condition for sustainable development. Thus, it needs to be put front and center in public policy, in particular in programs to lift people out of poverty.

Inherent in the basic right to water is the equally basic responsibility to care for and share this life-sustaining resource. As Pope Francis affirmed a month ago[1], our right to water is also a duty regarding water, including the duty of every State to implement, also through juridical instruments, policies concerning the need for a secure supply of drinking water.

Competition for water can be very destabilizing, in particular where vital aquatic sources cross national boundaries, like rivers running through several countries and lakes territorially shared by several States. The implications of water for national, regional and international peace and security can hardly be overstated. Indeed, water experts and advocates ominously predict that the Third World War will be about water. When he visited the Food and Agricultural Organization in 2014, Pope Francis said: "Water is not free, as we so often think. It is a grave problem that can lead to war." Thus, rather than causing conflict, the need for water sharing should be an opportunity for cross-border cooperation and greater efforts toward adopting binding instruments to ensure stable and predictable transnational relations.

Moreover, non-state actors, and each one of us, are called to assume our responsibilities in this field so decisive for present and future generations, indeed, for the future of humanity. Rather than remaining indifferent to the water-related challenges we face, we must develop a culture of care and solidarity, making our common home a more habitable and fraternal place, where no one is left behind and all are able to eat, drink, live healthy lives and grow in accordance with their dignity.

Thank you, Co-Moderators.

1. Pope Francis, Address to the Participants in the Fourth Workshop organized by the Pontifical Academy of Sciences entitled "The Human Right to Water: An Interdisciplinary Focus and Contributions on the Central Role of Public Policies in Water and Sanitation Management", Vatican City, 24 February 2017.

STATEMENT AT THE HIGH-LEVEL PANEL ON WATER AT THE VATICAN CITY

CARDINAL GIANFRANCO RAVASI, PRESIDENT OF THE PONTIFICAL COUNCIL FOR CULTURE

23 May 2017

I would like to convey my personal greetings to the organizers and participants of the High Level Panel on Water and express my congratulations for having put together this significant meeting. There are two reasons why I would like to be with all of you. First and foremost, the importance of a topic that we all see as one of the primary issues touching not only humans but all living creatures and the entire ecosystem. The second reason is more personal. You have chosen Bellagio. A marvellous place surrounded by water and the setting of my family home. In this splendid environment, you will discuss and reflect on valuing water.

Introduction

Today we all concerned about some grave issues: poverty, inequality, and the suffering of both people and planet. Together we seek a common course to navigate a future of justice and compassion, and we begin with the basic denominator of all life: water.

Across faiths, water's centrality to our physical existence is mirrored in its role in our religions. In fact, in all great religions, and in all great civilizations, water was always considered as a primordial and universal symbol of fertility and purity that leads into spiritual Catharsis. This profound yet humble servant of life is a sacred connection to all that we depend upon, and all that we value. It is vital to note that these two aspects are presently disconnected for many of us. This year, on World Water Day, we initiated the global conversation "Watershed" to give voice to many perspectives and faiths, for a more united vision of a better world.

Watershed was born in harmony with the concerns and counsel of Pope Francis' encyclical Laudato Si', and in its spirit of reaching out across cultures, religions, ages and boundaries whether seen or unseen on "Sister Earth." Watershed, springing from a place of contemplation and gratitude, aims to reaffirm the bond between the value and values of water.

What did we discover in this global conversation across geographies, across faiths, cultures, and history?

Awareness

The global water crisis is not new to us, but we have glimpsed our relationship to it in new ways, through the lens of our advanced capabilities

as well as our limitations. Our technologies expand our potential, from satellites that monitor the Earth to artificial intelligence that collects data and analyses our options. The urgency of water stress and the fragility of our ecosystems and our common home, and the difficulty of overcoming human fears, competing needs and the short-sightedness that threaten our success in this, the challenge of the 21st century.

Interdependence

The Earth and all its life form a holistic and inseparable system. In this age of globalization, we are not merely connected to each other and to the environment, we are interwoven and interdependent. Thus, our actions must be based not on boundaries, but on a stewardship that harkens back to the values that honour water as central, as sacred to life. Even beyond water as a human right, Pope Francis reminds us, our common home must be protected. Our watersheds, our ecosystems, our very planet Earth itself must be the fourth axis at the heart of the food, water and energy nexus.

Strategy

The pace of change presses us to adapt as never before. Climate change, human use of natural resources, population shifts, economic fluctuations, disease, disaster, famine and conflict require actions that are nimble, informed, adaptive and equitable. Dr. Fred Boltz of the Rockefeller Foundation advised us that "the greatest challenges spark the greatest levels of ingenuity. Presently, we face some of the most daunting challenges in human history. Yet, we are too complacent – we cannot rely on conventional solutions to unconventional problems."

We risk living beyond the capacity of our planet, and we cannot content ourselves with meager measures. We need to embrace a longer perspective and a larger vision. We cannot merely "fix the pipes," as Jennifer Sara of the World Bank noted, "we must fix the institutions that fix the pipes." And we can only do that together.

Solidarity

In our religious and cultural narratives, water bridges differences. We are bound by our common need, and historically, even enemies have been transformed by the gift of water.

Water is a common good, and we are both heartened and hastened by the proof that our peoples are capable of coming together for a common global good. As Dr. Assia Bensalah Alaoui, Ambassador of Morocco stated, "It is a global world, a global continent. Either we succeed together or we fail altogether."

We need to unite people from different realms – philanthropy, education, research, economics – from every dimension of the social sphere, through every cultural context.

Empathy

We reach one another by finding and expressing our shared values about water. We touch one another by listening and responding with compassion. We move beyond the singular self and understand our brothers and sisters through empathy. Empathy speaks not through the modern parlance of data and statistics, but in the ancient and absolute tongue of stories.

Stories are the intrinsic way that human beings relate to one another and their world. Every faith, every culture, every civilization is leavened with legends, parables and scriptures … with art, music and architecture.

We are creatures of metaphor. Stories allow us to transcend, to see new perspectives that lead to new possibilities. To recognize our common values gives us reasons to endure.

Legacy

In closing, I will touch on one overarching and abiding value shared by all: our children, the flower and fruit of the human family tree. A family tree with roots deep in the Earth. A family tree that grows toward the light and is nourished by water.

We have always known that our survival depends on our children, but we have been slow to realize a global sense of shared parentage. We have been slow to comprehend what our children will inherit and what they themselves are ready and able to do about it. Our children will lead if we see through their eyes, if we give them the opportunity, the respect, and the resources of substance and spirit.

As was mentioned during our Watershed initiative, the Holy See acknowledges that "perhaps it is in this very work of education and formation of the young that we find our moral mandate and our sacred legacy."

His Holiness Pope Francis underlined this belief in his encyclical Laudato Si': "Leaving an inhabitable planet to future generations is, first and foremost, up to us. The issue is one which dramatically affects us, for it has to do with the ultimate meaning of our earthly sojourn" (LS, 160).

It is evident to all of us that true change can occur only through combined efforts by all stakeholders. I can assure you that the Pontifical Council for Culture, which corresponds to the Ministry of Culture in other countries, and other Vatican entities are ready to work with all institutions and people of good will who across the world care about this precious and essential element of life.

To all of you I wish a blessed time of fruitful discussion and exchange of knowledge during this important event.

Imprimé en Slovenie par Camera D.O.O.

Dépôt légal août 2017

ISBN 978-2-8399-2189-3

Water is an essential element in all aspects of life. Safe drinking water is indispensable to sustain life and health, and they are fundamental to the dignity of all. However, at the present time, almost 2 billion people are forced to live without a sufficient amount of water for their domestic or personal use. Water scarcity and deprivation is experienced most dramatically by those living in poverty, and often in the poorest countries. However, the concept of "family of nations" should remind us that responsibility for those who are poor rests, in particular, with those who enjoy a richer lifestyle.

The right to water is a basic human right and affects everyone; it is a source of great suffering in our common home. In the last decades, the crucial role of water in development has been recognized by the International Community and the issue of water has become a top priority. There seems to be common agreement that the survival of humanity and all species on earth depends, to a great degree, on the availability of potable water. Such access is key to life with dignity and to promoting and upholding human rights. Looking at the work done over the last years, the International Community is called to continue its action in finding practical solutions capable of surmounting selfish concerns that prevent everyone from exercising this fundamental right. In achieving the 2030 Agenda, water concerns of the poor become the concerns of all in a prospective of solidarity. Water needs to be given the central place it deserves in the framework of public policy and thus water management should be based on a participatory approach, involving users, planners and policy makers at all levels.

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ISBN: 978-2-8399-2189-3