

# The Right to Water: Human Rights and Industrial Exploitation

This paper is separated in three parts:

(i) **Human Rights**, where we can identify the main aspects of the right to water and sanitation, as well its history and current application worldwide;

(ii) **Industrial Exploitation**, where we can analyse the industry perspective, the complexity of managing water resources and companies' actions to preserve the environment; and

(iii) **Propositions**, where we seek to present a practical, sinergic and effective conclusion aligning the two parts above.

## Who we are?

Click on the following icon to check our profiles on Linked-in!



## How did we get here?

Click on the following icon to check the references used in this research!



## Human Rights

The human rights “constitute a set of norms governing the treatment of individuals and groups by states and non-state actors on the basis of ethical principles regarding what society considers fundamental to a decent life” (MARKS, 2014, p. 1). Beside, the principles that rule the human rights.

Universality

Indivisibility

Equality and Non-Discrimination

Interdependence

Inalienability

Participation and Inclusion

Accountability and Rule of Law

Interrelatedness

## The Right to Water

According to the UN, "the right to water entitles everyone to have access to **sufficient, safe, acceptable, physically accessible** and **affordable** water for personal and domestic use" and "the right to sanitation entitles everyone to have physical and affordable access to sanitation, in **all spheres** of life, that is safe, hygienic, secure, and socially and culturally acceptable and that provides privacy and ensures dignity"

Take a look on our Instagram.

@TheRightToWater



Click on the following icon to access our profile.



## The Right to Water at National levels

We have prepared a video to clarify **how countries** around the world **behave** in relation to the right to water from a **constitutional perspective**. You will also find there some statistics and analyses to better understand the scenario.

Click on the icon below to access the video.



We have also an online platform where you can check which countries recognize the right to water as a human right in their Constitutions and which countries do not. For those who recognizes, it is possible to read exactly what their Constitutions state about it.

Click on the icon below to access the map.



ArcGIS



## The Right to Water at International levels

The rights to water and proper sanitation had their international understanding and recognition in an express way a few decades later, considering the recent history of human rights since the end of the Second World War.

In the beginning, the referred rights were considered in global norms "by derivation" (deduction/inference), from an implicit interpretation, or in a secondary way that was never the main focus of Conferences and public debates.

**But why should the rights to water and sanitation be explicit on the normatives?**

- 1** The formalization would be instructive. It would allow individuals to better understand their rights to claim their vital needs.
- 2** The implicitness weakens the oversight power of official institutions, putting their authority into perspective, as there is no express provision to support their performance.
- 3** The implicitness also make the Judiciary lose strength in publishing judgments that validate a proper access to water and sanitation, once there is no express provision to back it up.

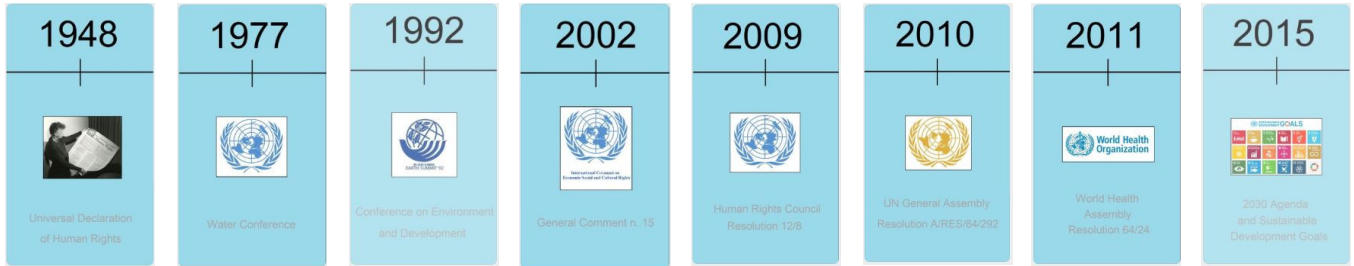
**The History of the Right to Water**

Click on the following icon to check the history of the right to water and sanitation after the Second World War. It is a Storytelling tool we launched that allows you to go back to the past century and find out how we came to the reality nowadays.

Click on the icon beside to access the History.



You will see that we had some important landmarks, such as:



The UDRH was considered a great guide around the world for the promotion of human rights, although it made no express mention of the right to water, only implicitly in article 25, through a broad interpretation.

An Action Plan was approved which recognized for the first time the access to water as a right for all people and providing recommendations for planning, education and efficient use of water.

The Conference predicted the essentiality of access to water and sanitation as a basic and vital right for the human person.

General Comment n. 15 expressly provides as a human right the access to water, safe, acceptable, physically sufficient and affordable, which are currently characterized as essential principles of the right to water.

The Human Rights Council issues a resolution recognizing that States have an obligation to resolve and end discrimination in terms of access to sanitation and safe drinking water.

UN, for the first time, formally recognized the right to water and sanitation, considering them as essential for the realization of all human rights.

Resolution 64/24 officially formalized the recognition of the right to water and sanitation by the World Health Organization, which identified this right as necessary for the pursuit of the due right to health.

UN published "Agenda 2030" which was a cooperative International Declaration that provided for seventeen Sustainable Development Goals that should be met by member countries.

**The Role of the First Sector (Governments)**

One of the Governments' role is to assure the promotion of the human rights to their population. When we talk about the right to water, there are some measures that could be taken by local states to enable the access to water and sanitation in a easier way. Find below some examples.

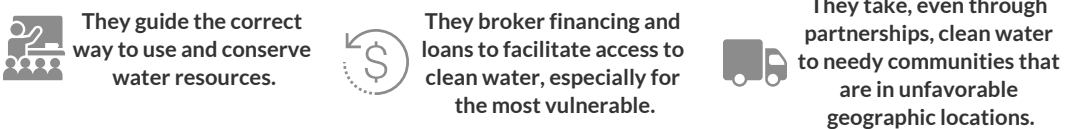


Click on the icon below to access the Targets and Indicators of the SDG 6 - Clean Water and Sanitation.



**The Role of the Third Sector (NGOs, non-profit organizations)**

The institutions from the third sector have a important role in the access to water mission, mainly represented by the following attributions:



**The Role of the International Courts**

The International Courts have an important role on insuring the application of international normatives worldwide. With this, it helps to guarantee the protection of human rights, notably the right to water. Check beside some examples.

**Inter-American Court of Human Rights**  
 Association v. Argentina  
 State was accused of having allowed the intervention on indigenous community, harming their water management. Convicted.

**European Court of Human Rights**  
 Zander v. Sweden  
 State was accused of having harmed a family by allowing a company to pollute their well indirectly. Convicted.



# Industrial Exploitation

The business world also had to adapt to this reality, especially to enforce precautions and special measures of care and preservation of water. This was due to a social perspective (given the evolution of the concepts of corporate governance), and a binding bias, since legal measures have been published in the process of reshaping the performance of the second sector, to enforce the promotion of human rights, such as the right to water and sanitation.

But how is this impact promoted by the business world?

Find below more (including examples in industry)



**PRODUCTION CHAIN**

↓

In general, the water is used for fabricating, processing, washing, diluting, cooling, or transporting a product. Find here some examples on how industries use water in their production chain.

Generation of steam, through boilers, serving to heat, generate energy and even sterilize materials.

Cooling machines in general, increasing their useful lives.

Cleaning equipment and products.

As supply for the manufacture of various products.

For agricultural production.

As part of the product itself.

Timber Industry

Dairy Products Industry

Power Generation Industry

Technology Industry

Pulp and Paper Industry

Consumer Products Industry

Apparel Industry

There are also some industries that use it in different ways, as you can see below.

Food and Beverage Industry

Oil and Gas Industry For extraction, refinery and petrochemical activities.

Automotive Industry For surface treatment and coating, paint spray booths, washing/rinsing/hosing, cooling, air systems, and boiler use.

Hydroelectric Power Generation Industry

Despite it generates renewable energy through the force of water, without directly polluting the external environment, it ends up being plants with structures that inevitably interfere with the local aquatic environment, especially because they are often responsible for changing the course of rivers and water flows in general.

This type of structure also often impacts the lives of residents of riverside communities (including the indigenous sometimes) in the region and interferes directly with local aquatic ecosystems, where several aquatic species essential to life live in the place

In general, the Industry can affect the water system in two different ways: by interfering directly in local ecosystems and by contaminating the water nearby. As it follows, check two different examples that illustrate these kinds of impact.

Textile Manufacturing Industry

There are some mixtures necessary for production that end up becoming polluted after use. Thus, if the company that manages them allocates these resources improperly, it can contaminate rivers, floras and faunas often irreparably. This is the case, in this sense, of the textile manufacturing industry, which requires the intensive use of chemicals for dyeing and textile treatment – elements such as lead, phthalates, organochlorines and other chemicals that when disposed of into water bodies for consumption, can cause severe health problems and diseases in humans.



**MISMANAGEMENT AND POLLUTION**

1



Managing this problem requires a robust corporate governance system, as well as there is a targeted need for operational and technical interventions by the Board of Directors.

This would mean realigning governance structures, implementing new lines of responsibility, policies and performance analysis, and structurally interfering with the company's line of operation, representing a complex change.

2



There is considerable difficulty in measuring the impacts of industry on local water resources and ecosystems.

This difficulty would be due to the absence of official data in the regions regarding the adjacent surface and underground water conditions, which would make it difficult to obtain metrics for analysis of the real industrial impact and hinder the planning of new means of operation. Moreover, companies cannot rely on official data on past hydrological records, since water reality has been changing considerably over time.

## What are the main difficulties of Companies in the management of industrial water?

Companies claim that the management of water resources is a complex mission to achieve.

But what are their main arguments to justify this complexity?

A study was conducted by **Ceres**, an international non-profit organization focused on promoting sustainable economic development, in which the authors conducted extensive interviews with water managers and sustainability executives of several Companies. At the end of the study, some factors were identified.



3

Water management should consider factors external to the industry, over which it has no interference.

Companies would have difficulties in reforming local regulatory and economic conditions, climate change that occurs and the actions of other companies that eventually reverberate in the region where they are present.

5



Water risk management should not be considered in isolation from other sustainability issues.

Water is related, for example, to energy consumption, biodiversity, food security, health, among other factors related to the promotion of human rights. Therefore, the management of water resources requires an inter-disciplinary analysis and action and synergy with other areas of impact.

4



It is necessary to evaluate the impacts of the company throughout the value chain.

Companies understand that properly managing water resources is not simply saving water at corporate headquarters but expanding the scope of risk assessment and management for the entire value chain. Thus, the company would need to verify the water risks also in the supply chain and in the use of the product by the consumer.

## What are the risks?

Nowadays, Companies are aware that the Sustainability is the new face of risk. Today, it is difficult to think of Companies with a stable financial system that ignores sustainability issues such as climate change, resource depletion, the destruction of ecosystems, and other new and emerging risks. Actually, Companies now are part of the pression to transform the world in a sustainable community. Investors now include sustainability considerations to decide, notably for three main reasons:

- 1 Environmental degradation and the impacts of climate change are important material risks to business.
- 2 Companies that damage the environment can no longer hide.
- 3 Sustainability is one of the main drivers of business strategy and competitiveness.

In this sense, we must highlight three pillars to enable a Company development nowadays: Economic, Environmental and Social. Considering them, we can describe different risks derived from a mismanagement of the Company in terms of Sustainability.



### LOSS OF COMPETITIVENESS

Sustainable development has definitely made its way to international competitiveness. The private sector has organized itself and committed itself to sustainability. Many companies seek best practices, share experiences and, in their portfolio, the sustainability area grows more than traditional areas. While companies that bet on sustainability gain space in the market, those that avoid taking this mentality to the company can suffer financial losses.



### REPUTATIONAL DAMAGE

An example that perfectly illustrates this scenario happened with one of the largest construction companies in the country. After being included in the "dirty list" of the Ministry of Labor for a complaint involving work analogous to slavery, the company recorded falls of up to Stock Exchange. In the construction sector, for example, less sustainable companies could lose 51% of market value amid such a problem, while the most sustainable ones would have a de-preciation of only 5.4%



### ADMINISTRATIVE SANCTIONS

In several countries, administrative sanctions are provided for by law and/or regulations. Usually, the penalty is not only for the authors, but also, for the co-authors of the environmental infraction. Penalties range from warning to the application of million-dollar fines, considering the damage caused as well as re-offense.



### LOSS OF CERTIFICATIONS

In addition to ensuring that the company has all certifications such as various environmental licenses or authorization from environmental agencies, it is important that the suppliers of the companies also present certifications and have the same sustainable philosophy to avoid the loss of certifications. It is in the approval and qualification of suppliers that it is possible to avoid errors and fraud, through public consultations and issuance of corporate certificates.

# What could be done?

THERE ARE SOME ACTION PLANS THAT COULD BE TAKEN BY COMPANIES IN ORDER TO ENABLE A SUSTAINABLE DEVELOPMENT, MAINLY CONSIDERING THE PRESERVATION OF WATER RESOURCES. CHECK IT ALL BELOW.



**Greenwashing** can be defined as "the process of conveying a false impression or providing misleading information about how a company's products are more environmentally sound. Greenwashing is considered an unsubstantiated claim to deceive consumers into believing that a company's products are environmentally friendly."

How can we prevent this practice?  
Summing up, through a correct measurement of the impacts, effective action plans and transparency!

Aiming to ensure that the actions taken by Companies are efficient to neutralize the impacts caused to water resources, find below the script of a Proposition from our team:

- 1 Implement a system for accounting for all water resources spent in its operations, directly and indirectly;
- 2 Implement a system for accounting for all water resources preserved or recovered from their internal initiatives and in partnerships;
- 3 Inform the balance of the accounting indicated in the preceding items (i) and (ii) to the Board, investors, partners, governments of companies, in order to enable the adoption of measures that are necessary to achieve "neutrality" in the use of water; and
- 4 (Optional) Make available for public consultation the collected data and its consolidation (iii).

NEW PROPOSITION!

In the not-too-distant future, one can imagine that a "clean water credit market" or "preserved" will emerge, similar to what happened with the theme of carbon, led by the United Nations. Companies that have already mapped and cleaned up their impacts on water will certainly be more valued.

## OTHER MEASURES

Inclusion of water consumption reduction and conscious consumption targets in the company's Annual Bonus Program.

Incentive through internal innovation programs and development of processes aimed at conscious water consumption and reduction of its use.

## Top management's focus and effort on water issues

Companies must rethink their practices not only on their socio-environmental performance, but also on the internal governance to ensure that the measures highlighted above are implemented and incorporated in the culture of the company.

Integration of the Company with Government Programs that sponsor revitalization projects of watersheds and other initiatives.

Diversity of its managers, including the designation of people with the pre-dominant profile of sustainability.

## Creation of a Water Finance Framework

It could be enabled through investment funds and incentive programs of preservation initiatives, linked to projects and results. The analysis of eligible projects would be carried out by a multidisciplinary committee, which should fall into the category of products, production technologies and processes adapted to the circular economy, so the gains would also cover the social spectrum. It would also be monitored with follow ups and evaluations.

There would be a focus on projects with emphasis:  
(i) in the use of water resources in regions that are more arid and less assisted by the public authorities,  
(ii) increasing the participation of renewable energy and better energy efficiency in projects aimed at treating water resources,  
(iii) in increasing sustainable and circular economic activities.

## Support to incentive laws aiming the green investments

The idea is to take advantage of tax laws to offset taxes with investments in water resources preservation projects.

In summary, the idea would be to form a group of Companies with the same strategic objectives and consistent interests in the provision of more resources for this matter, through the approval of an incentive law.

# Data Gathering

IN A SURVEY WITH A LIMITED NUMBER OF ANONYMOUS PARTICIPANTS, MOST OF THEM FROM THE SUSTAINABILITY AREA OR ENERGY COMPANIES, WE WERE ABLE TO GATHER THE FOLLOWING DATA. CLICK ON THE ICON BESIDE TO CHECK MORE INFORMATION.



# Propositions

## When implementing a Project

1 Analyze the local situation.

Is there existing water source in use, or an unexplored reservoir must be used?

How the local community use water and for which purposes?

Is there a need for greater access to water, or lack of supply and sanitation infrastructure?

Identify current and future use and needs, whether it is a new source or improvement of existing infrastructure.

See opportunities that can be generated for the community (agriculture, supply, sanitation tourism, etc.);

How do your need of water and use affect the community and environment in the short and long term?

2 Contact and involvement of the community, governments, NGOs, MP, other potentially interested companies, etc.

3 Make sure of your rights of use, third party rights, usage priorities before making a commitment or decision.

4 Identify potential conflicts in the short and long term.

5 Negotiate the water sharing rights and priorities if possible.

6 Plan and create contingencies, even for the unexpected/unlikely.

7 Consider impacts and synergy with other SDG and CSV programs.

8 Advantages and disadvantages for the micro and macro region economy and the impact of your water usage.



You can also check these explanations on two different platforms made available by our team! Turn the left if you want to watch it in video or turn to the right if you want to read it schematized.



## Internal Measures

- 1 Change in governance and attitude.
- 2 Creation of impact measurement mechanisms – similar to carbon foot-print – related to clean water market for savings and involvement of the community, governments, NGOs, MP, other potentially interested companies, etc.
- 3 Inserting metrics into MBO.
- 4 Rotation and appointment of people of sustainability in the business and its management.

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## External Measures

- 1 Measurable commitments in financing for actual impact and savings carbon footprint, clean water savings and other SDGs achievements (SDG/ESG bond 2.0).
- 2 Dissemination of clean water saving culture and practice.
- 3 Selection of partners (supply chain) that has a green chain in all aspects (not only emissions, but rational use of water and other SDGs, circular economy, etc ) to accelerate positive results for the environment.
- 4 Measurement of the result and audit mechanisms.
- 5 Creation of a control and certification body for initiatives certification and measurement.
- 6 Incentive mechanism (lower interest in finance, discounts in products, and score mechanism, to compensate higher cost, for supplier proposal selection, making companies that invest in sustainable initiatives more competitive).



# The Right to Water: Human Rights and Industrial Exploitation

**TOPIC**

The right to water: human rights and industrial exploitation

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## 1. INTRODUCTION

In the past, water was believed to be an unlimited resource. However, with global growing and development, studies have increasingly demonstrated the depletion of this resource and the damage that its misuse has caused to the population and ecosystems around the globe.

According to recent data collected by the United Nations, 30% of the largest groundwater systems are running out, and currently approximately 4 billion people in the world live in places with physical water scarcity in at least one month during the year.

Conversely, 1.6 billion people suffer from economic water scarcity, which means that, although water is present and available, there are no adequate tools and infrastructure for its use and distribution. There is also, in this same scenario, the problem of access to water resources caused by pollution and the exacerbated use of water resources by organizations, which ends up promoting another obstacle to the proper development of access to water.

It is clear that water pollution occurs for several diverse reasons, such as pesticides and fertilizers from farms (agriculture), as well as industrial waste. Toxic substances originating from industrial processes should be of extreme concern to the responsible agencies, since they affect the environment and brings a result the commitment of water resources in the future.

Even groundwater is not protected against pollution, as most pollutants can leak into underground aquifers and immediately contaminate water, making it unfit for consumption.

As a result, serial losses can be caused. It interferes with health, first because people need water biologically to survive, second because the lack of clean water and sanitation causes hygiene problems and contributes to the spread of various diseases.

In addition, the lack of water interferes indirectly in several other systematics, from agricultural production, affecting the global problem of hunger, to the issue of biodiversity and even energy generation, which ends up moving society in all its aspects.

According to the Food and Agriculture Organization of the United Nations, 70% of the water itself for use from the environment is used for agriculture, while 19% is used by the industrial sector – for the sake of truth, as essential in production chains. In practice, the use of water in agriculture and industry is based on a correlated logic, since many industries depend on certain agricultural sectors, such as the fashion industry, which depends on the massive production of cotton.

However, it is not only water taken from the environment that harms the natural system and causes the social, and environmental damage caused. Companies are also responsible for polluting water resources or interfering indirectly in the aquatic environmental

course, impacting the system aggressively and often irreparably, through inadequate management of water resources.

This comes from a tradition in which proper access to water and sanitation were not rights expressed and encouraged in the international order. In fact, the history of the right to adequate water resources has had a late and gradual development, being constructed over time through various Conferences, Conventions and Treaties that outlined the concepts aimed at promoting access to water resources, as well assuring an adequate right to water and sanitation around the world.

A series of factors with which the first, second and third sector would adopt a different stance in the new international order. In the last decades, with human rights gaining more and more space and making social dynamics more integrated and sustainably responsible. New targets have been set around the globe and there has been an increase in pressure for the correct management of water resources and for the promotion and protection of proper access to clean water and sanitation by the world population.

Several organizations began to participate in this mission, from Public Authorities around the world, through non-governmental non-profit organizations, organized society, to the local and international judiciary. On the other hand, the new global guidelines have led to organizations in the second sector – industries in general – facing new challenges and articulating new forms of production.

Currently companies around the world are faced with new corporate governance mechanisms and management systems, as well as new risks in the most diverse areas. This means that organizations around the world will need to increasingly address the problem of water resources and promote effective measures to remove the "threats" they may face.

The purpose of this work is to recognize how to align respect for the preservation of water resources and their management and shared use to the performance of the business world (industry), so that the current risks arising from the performance of the second sector are prevented and in line with sustainable development and the protection of human rights.

For this, we have verified how access to water and sanitation has become an internationally recognized human right, identifying itself, in this context, how constitutional texts are placed around the world today.

Then, we looked into how the performances of the first and third sector take place, as well as some local and international courts today.

Therefore, we analyzed the performance of the second sector, to understand the difficulties in the corporate management of water resources and the current risks arising from business performance. The proposal, in the end, envisage show factors would be predominant to mitigate these risks and, finally, presents a synergistic conclusion on the approaches presented, in order to expose the current reality of the problem of water

resources and how companies can combine the human right to water with the use of water by organizations.

## **2. HUMAN RIGHTS**

### **2.1. The concept of "Human Rights"**

The human rights "constitute a set of norms governing the treatment of individuals and groups by states and non-state actors on the basis of ethical principles regarding what society considers fundamental to a decent life" (MARKS, 2014, p. 1).

Thus, human rights cover the most fundamental rights, from the right to life, to those that make a dignified life to be lived, such as the right to food, health, work, freedom, among others, all those being universal, inalienable, indivisible, interdependent and interrelated.<sup>1</sup> In addition, it is appropriate for any individual, regardless of their nationality, sex, religion, ethnicity or any other status that characterizes them, are therefore based on values such as justice, respect and equality – and should, in this sense, be effected by the global and local public authorities for the benefit of all, with the support of society in general.

Human rights became universally acknowledged and accepted with Universal Declaration of Human Rights (UDHR) in 1948, and was enhanced and developed in the last decades as a consequences and protection to conflicts and other humanitarian tragedies.

### **2.2. The concept of "Right to Water"**

According to the UN, "the right to water entitles everyone to have access to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic use" and "The right to sanitation entitles everyone to have physical and affordable access to sanitation, in all spheres of life, that is safe, hygienic, secure, and socially acceptable and that provides privacy and ensures dignity".<sup>2</sup> Below can be found the definitions that outline this concept of the right to water:

- (i) "Sufficient": the water supply for each person must be sufficient and continuous for personal and domestic uses. These uses ordinarily include drinking, personal sanitation, washing of clothes, food preparation, personal and household hygiene.
- (ii) "Safe": The water required for each personal or domestic use must be safe, therefore free from micro-organisms, chemical substances and radiological hazards that constitute a threat to a person's health. Measures of drinking-water safety are usually defined by national and/or local standards for drinking-water quality.

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<sup>1</sup> According to the United Nations Population Fund. Available at <https://www.unfpa.org/resources/human-rights-principles>.

<sup>2</sup> Available At <https://www.unwater.org/water-facts/human-rights/>.

- (iii) "Acceptable": Water should be of an acceptable color, odor and taste for each personal or domestic use. All water facilities and services must be culturally appropriate and sensitive to gender, lifecycle and privacy requirements.
- (iv) "Physically accessible": Everyone has the right to a water and sanitation service that is physically accessible within, or in the immediate vicinity of the household, educational institution, workplace or health institution.
- (v) "Affordable": Water, and water facilities and services, must be affordable for all.

This right is also acknowledged in the UN Sustainable Development Goals (“SDGs”), in particular in the SDG6, which deals with access to clean water and sanitation for all

### 2.3. The Right to Water at national level.

Although the concept of right to water is currently well defined in the international sphere, it is not all countries in the world that envision in their respective constitutional legal systems an explicit provision for water resources.

In fact, in a more global analysis, there are few countries that currently expressly defend the right to water as essential and their respective Constitutions, most of which depend on complementary or local laws on the issue.

A summary of the constitutional rules and laws relating to the right to water in several countries can be found on the website of our work at the address:



<https://storymaps.arcgis.com/stories/0caf64cc9bad481ab172903bd5344ec8>

## Americas

In North America, for example, only Mexico, among the three local independent countries, expressly provides for the right to water and *sanitation*, including bringing, in its Constitution, the modern precepts of the human right to *water* ("sufficient, *healthy, acceptable and feasible* ").

The United States, however, does not mention environmental protection, or defense and access to water resources, in its constitutional text – or any of its twenty-seven amendments). Canada, which has a history of an abundance of water resources and legislative controversies over its use because of the logging industry and fishing activity, very present in the country's (BENIDISCKSON, 2018), does not bear the right to water in its Constitution – although the Canadian Provinces signed cooperation in 1970 aimed at preserving water resources – the Canada Water Act.

In South America (BURCKHART, 2019, p. 402-418), only three of the twelve independent countries (a quarter of them, therefore) expressly have in their constitutional letters the right to water as fundamental: Bolivia, Ecuador and Uruguay – and for the latter two, the Constitution even prohibits the privatization of services focused on water resources.

Brazil and Colombia foresee in their Constitutions the need for public policies focused on water, but without necessarily expressly recognizing access to it as a constitutional right of all.

The seven other Countries do not even mention the protection of water resources literally, limiting themselves to the right to the environment properly preserved and free of contamination. Some of these other countries, however, had the local supreme court making court decisions in the process of considering the right to water as necessary for the right to life, such as Argentina and Chile, while others even published complementary legislation to discuss water, such as Peru and Paraguay.

In Central America, the proportion of independent countries that provide for the right to water expressly and fundamentally is also one quarter, as only five of the twenty local countries see water as the human constitutional right of the population: Costa Rica, the Dominican Republic, Cuba, El Salvador, Honduras and Nicaragua.

Four countries mention water in their respective Constitutions, but only laterally, either to determine state interference in its control, such as Belize, or to defend it as a natural asset of the state, such as Guatemala and Panama.

The other eleven countries make no mention of the local Constitution on water resources. In the case of Central America (RAMIREZ, 2015), although the region has a considerable rate of rainfall, a number of impediments hinder the strategic use of water and make proper access to clean water and sanitation a real regional problem. There, the prioritized technologies are the most expensive – and countries in general are not yet

developed – water has a high rate of contamination due to the excessive use of pesticides in agriculture and, moreover, sewage is not properly treated, so that historically the correct use of water resources has not been satisfactorily achieved.

### **Africa and the Middle East**

In Africa and the Middle East region (XERCAVINS, 1999, p. 165), then, the situation is not encouraging either, because the continent suffers an impactful and systemic problem of water scarcity – due to the climate, generally arid or semi-arid, and also by the lack of infrastructure (including sharing of it), which is still enhanced by dynamic demographics, especially with the growing urbanization that the continent has had over the years.

In addition, local countries use a lot of water for agriculture activity, which impacts the problem of scarcity.

Despite this context, only ten of the fifty-four countries on the African continent expressly provide for the right to water as<sup>3</sup>human: Algeria, Democratic Republic of Congo, Egypt, Kenya, Morocco, South Sudan, Burkina Faso, Niger, Somalia, South Africa, Tunisia, Uganda and Zimbabwe.

Among the other countries, there are even those who have in their Constitution a mention of clean and safe water, such as The Gambia, which guides the State to strive (endeavor to facilitate) to provide access Toit, Ethiopia, which holds the state responsible for promoting public policies of access to clean water to the extent available, and Eritrea, which holds the state responsible for managing water, among other natural resources, in a sustainable way.

There are a range of countries that are based on laws to discuss water resources, such as Algeria, Angola, Madagascar and Mozambique, and a remaining portion of countries that, on the other hand, have not even ratified important International Conventions or were concerned with establishing public policies aimed at promoting access to water, which further reinforces the regional problem (BISWAS, 2007, p. 216).

### **Asia and Oceania**

In Asia (GEALL, 2019, p. 38-39) and Oceania, only Thailand, Nepal, Maldives and the Fiji have in its Constitution the express provision of the right to clean water.

Besides, some different situations are established in the countries of the continent: there are, in the category of those who even mention water in their Constitutions, attributing control of it to the State, but with an incomplete approach, so that they came to need complementary legislation to regulate access to water resources – this is the case of China (WOUTERS, 2004), Indonesia, Cambodia and Laos.

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<sup>3</sup> Available at [https://www.rampedre.net/implementation/territories/national/world\\_table\\_constitution](https://www.rampedre.net/implementation/territories/national/world_table_constitution).

Other countries, despite having a more generic approach to water in the Constitution, do not have complementary legislation dealing with this, as is the case with Vietnam.

A third category is that of countries that have nothing on water expressly in the Constitution, but which have specific regulations in complementary law, as is the case of Japan,<sup>4</sup> or through formal acts of the State, as is the case of Australia<sup>5</sup> and New Zealand.<sup>6</sup> Fourthly, there are countries that do not have express provision in the legal order of the right to water, but understand it as part of the right to an adequate environment – which, in turn, would have its preservation recognized at the legislative level. This is the case of South Korea, Malaysia, Philippines and Myanmar. Finally, there are countries that have depended on the local judiciary to interpret the right to water and sanitation as fundamental to the proper right to life, such as India and Indonesia<sup>7</sup> itself.

## Europe

Overall, Europe has largely developed countries that are at the forefront of conferences and international movements. Thus, although most European countries do not bear in their Constitutions express predictions related to the right to<sup>8</sup> water, many of them guarantee the right through other mechanisms, even if they occasionally mention in their constitutions some provision for natural resources. This is the case of Spain, Poland, Romania, Belgium, Denmark, Croatia, Montenegro, Norway, Netherlands, Czech Republic and Turkey, for example.

However, European countries end up having more practical ease of operationalizing plans, either because they have better financial and technical conditions or because they can more easily share the necessary infrastructure and knowledge with international partners (the European Union, for example, strengthens synergy between most local states).

In some cases, however, although there is no such prediction, countries have had some way to compensate for the regulation of the water issue. Thus, some countries place on the state the responsibility of managing water resources, such as Hungary, Austria, Slovakia, Russia and Serbia.

There are the cases of Portugal, which provides that the State should adopt a National Water Policy, planning and managing water resources, and Sweden, which places on a Civil Commission the responsibility of the right and access to water.

In Switzerland, although the Constitution has a specific article aimed at water resources, does not establish the right to water as a right a fundamental right, it only regulates

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<sup>4</sup> According to Japan International Cooperation Agency. Available at [https://www.jica.go.jp/english/our\\_work/thematic\\_issues/water/c8h0vm0000ammj2q-att/activity\\_01.pdf](https://www.jica.go.jp/english/our_work/thematic_issues/water/c8h0vm0000ammj2q-att/activity_01.pdf).

<sup>5</sup> As it can be checked at <https://www.agriculture.gov.au/water/policy/legislation>.

<sup>6</sup> Available at <https://www.hrc.co.nz/files/5314/2398/4129/Human-Rights-and-Water-2012.pdf>.

<sup>7</sup> According to the United Nations. Available at <https://www.ohchr.org/documents/publications/fact-sheet35en.pdf>.

<sup>8</sup> Available at <https://constituteproject.org/constitutions>.



some provisions related to water, such as that the Confederation must ensure the economic use and protection of water resources and provide protection against the harmful effects of water<sup>9</sup>.

In Italy, complementary laws have been created to regulate the guarantee of access to water.

In<sup>10</sup> France, likewise, the legal rules applicable to water resources are laid down in several separate laws, such as the Environmental Code, the Local Authorities Code and the General Code of Public Property.

In Germany<sup>11</sup>, although Constitution does not explicitly recognize the right to water as well, that right is indirectly recognized as part of the Constitution by the way in which the most relevant provisions are interpreted by the courts and by legal doctrine.

Exception on the continent is Slovenia, in whose Constitution it is expressly provided that everyone has the right to drinking water and that water resources must be managed and guaranteed by the State.

## **2.4. The Right to Water at the international level.**

### **2.4.1. The right to water in international public law**

Despite the current constitutional and legislative situation around the world, in which some countries already provide for the right to water in their order, the history of recognizing this right was not so simple.

Until we reached the concepts currently outlined for the right to clean water and sanitation, several Conferences, Conventions, Treaties and Movements of international order around the globe were necessary.

The Rights to Water and Proper Sanitation have had their international understanding and recognition expressly with a few decades of delay, if we analyze the recent history of human rights since the end of World War II.

### **1945 – 1966: the right to water (or absence thereof) an "Bill of Rights".**

After World War II, nations that emerged as powers began to articulate to develop treaties that provided for world peace and the concomitant policy of human rights at the international level.

The beginning of this process was based on the Charter of the United Nations, written in 1945, which composed a structural part of the system of protection and promotion

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<sup>9</sup> Available at <https://www.fedlex.admin.ch/eli/cc/1999/404/en> And <https://sites.stedwards.edu/pan-gaea/a-sustainable-switzerland-water-policy-to-serve-and-protect/>.

<sup>10</sup> Available at <https://www.encyclopedie-environnement.org/en/society/water-law-in-france/>.

<sup>11</sup> Available at <https://www2.ohchr.org/english/issues/water/contributions/Germany.pdf>.

of human rights, having formatted the UN itself and was subsequently accompanied by a network of treaties that outlined concepts and action plans in the global humanitarian sphere.

With the creation of the UN, the so-called "Commission on Human Rights" was constituted, composed at the time of 54 elected government representatives, through which the Universal Declaration of Human Rights (UDHR) was formed, an instrument published in 1948 that came to be one of the main international precepts of human rights made possible by the United Nations at the time. The UDRH, for its relevance, was marked as a great guide and model around the world of the design and precepts aimed at the promotion of human rights (DAS, 2016, p. 56), coming to be assumed as the true norm of customary international law.<sup>12</sup>

This Declaration, however, which was given as the first and great step towards the progressive codification of international human rights, no longer made any express mention of the water issue.<sup>13</sup>

All it could be taken from it, as in article 25, was an implicit reading that could consider water as part of an human right to adequate living, : "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control"<sup>14</sup>.

This implicit reading would be given by the word "including", which would have brought an implied understanding that the following list for an adequate standard of living would not be exhaustive, allowing the extensive interpretation that access to water should be recognized as paramount to the world population along with the other elements indicated (GLEICK, 2003, p. 119).

It is a view that the right to water would be "basic", "obvious" and would logically be implicit in the wording of the Declaration, as would have been the right to air. It is an understanding that brings a positive perception about the absence of an express prediction of the right to water and sanitation in this first major official instrument.

Another view, in turn of a political nature, about the lack of an express protection to this human right, is that at that time the powers that had decision-making power over international norms had no water problems, which would be a reason not to worry about this problem.<sup>15</sup>

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<sup>12</sup> According to Dr. Frans Viljoen, Director of Centre for Human Rights, Faculty of Law, University of Pretoria, South Africa. Available at <https://www.un.org/en/chronicle/article/international-human-rights-law-short-history>.

<sup>13</sup> According to the Office of the High Commissioner for Human Rights, from the United Nations. Available At <https://www.ohchr.org/Documents/Publications/HRhandbooken.pdf>.

<sup>14</sup> Available at <https://www.un.org/sites/un2.un.org/files/udhr.pdf>.

<sup>15</sup> According to the former UN Special Rapporteur on the human right to safe drinking water and sanitation Catarina de Albuquerque. Handbook available at <https://www.ohchr.org/en/issues/waterandsanitation/srwater/pages/handbook.aspx>.

Another point that contributes to this understanding is the fact that the concern with the water issue would have gained strength only when developed countries realized that water scarcity would bring harm beyond the human issue, since it is also used, under capitalist logic, for the production of goods and services.

Despite these analyses and regardless of perception, the fact is that the treaties, pacts and conventions that followed the UDHR took a few decades to bring a specific and expressed focus to the issue of water and sanitation.

Until this event, access to water resources continued to be envisioned in global norms by "derivation" (deduction/inference) or in a secondary way, supporting, in international debates, which had another main theme as a focus.

As an example of this, the post-Universal Declaration of Human Rights in 1948, which, as stated, would have implicitly brought the right to water, the first express mention of drinking water took place in 1949, in the third and fourth Geneva Conventions, but limiting that right to the context of war (being an example, therefore, of a specific milestone, in a secondary way), in particular the rights of the military of the signatory countries of that Convention.

On this occasion, the prediction of the right to water was almost a mere mention, having been complementary to the main focus, which was the prediction of basic rights in times of war.

After, in 1966, the International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social and Cultural Rights (ICESCR) brought, once again implicitly, the right to water. In both cases, there was an extensive interpretation, without any express mention or protection of water resources.

For example, in the International Covenant on Economic, Social and Cultural Rights (ICESCR), which had a slightly more targeted scope on basic humanitarian needs, Art. 11 of the Convention suggests, as in the UDHR, the right to adequate housing, food, clothing, but without mentioning anything expressly about clean water –<sup>16</sup>assuming, by extensive interpretation, that it would be a necessary link to positive rights. Article 12 of the same Convention expressly mentions the right to health, without literally describing the importance of water and sanitation to do so.

In this sense, it is worth noting that ICCPR and ICESCR became two more international regulations that guided the right to water and sanitation in a subtle and not evident way.

Thus, although optimistic perspectives are envisaged, that this right would be implicitly contemplated in the precepts of the Convention, it is prudent to mention that the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social and Cultural Rights (ICESCR) together structurally make up what the world recognizes by "International Bill

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<sup>16</sup> Available at <https://www.ohchr.org/documents/professionalinterest/cescr.pdf>.

of Human Rights" - a central instrument of reference to the promotion and protection of human rights in the world and in recent history (VAN BOVEN, 1995, p.3).

Together, they bear considerable historical relevance to the development of international public law, and the aforementioned "International Bill of Human Rights" has been a true corollary of a series of international treaties that have been able to take shape since then.

The implicit protection of the right to water, thus, could have been avoided by these instruments. This may have delayed the effective development of the human right to water resources, since the formalization of access to water and sanitation as an express would bring relevant benefits to the international community (SCANLON, 2004, p. 18; CAVALLO, 2012, p. 152-154).

This is because, first, the formalization of the right to water as a human right would have an instructive character, since it would allow individuals, especially the neediest, to understand about their rights in order to be able to claim their vital needs related to water resources.

As individuals now bear the right to water as expressly fundamental, they have it not only as an obligation of the State, but as a natural good from which they cannot be separated, which would enhance their ability to demand redress mechanisms from the State itself.

Secondly, conceptually, the non-literal recognition of the right to water can weaken the supervisory power of official institutions, relativizing their authority because there is no express prediction that supports their performance.

Literalness thus ends up representing a tool that civil society has to hold governments accountable in ensuring access to water, official collections and other formal measures.

Thirdly, without an express provision, the judiciary - both globally and locally - loses the strength in publishing judgments that validate proper access to water and sanitation.

The courts, therefore, end up limiting themselves to extensive, non-positive interpretations, which relativize to some degree the legitimacy of such decisions. If the right to water were expressly recognized, violations would be much more evident, and more easily attributable, contributing to the due accountability of agents and to the contiguous creation of consistent and targeted jurisprudence.

The lack of an express provision of the right to water in the regulations of the "International Bill of Human Rights" is a missed opportunity in recent history.

This lack, however, did not take long to be noticed by the instruments of the following years, which, in its own way, began to score on the theme – initially in a secondary way (complementary to other main focuses) and, more recently, in a primordial way (especially during the last two decades).

## **1966 - 2010: the express emergence of the right to water in the international community.**

Over the years, some milestones have become present for the advancement of the right to water and sanitation.

After the 1966 Conventions, the world saw the 1972 United Nations Conference on the Human Environment held in Stockholm, Sweden. The Conference, in its Resolution, generically addressed the preservation of natural resources and the finalization of the discharge of toxic substances not neutralized by the environment, which would include, by concept, the fight against water pollution.

On this occasion, the theme began to be glimpsed more focally, even though the reference to the water issue was guided in a subtle way. It was a first – shy, one might say – called attention to the business world.

In 1977, then, the UN Conference on Water was held in Mar del Plata, Argentina, which brought to the presence of 116 countries the consensus that human development required greater attention on the regulation of water resources (DEL CASTILLO, 2009, p. 44). The Conference then had the proposal to raise funds to avoid a water crisis, seeking to strengthen international cooperation.

An Action Plan was approved that recognized access to water for the first time as a right of all and provided for a series of recommendations for planning, education and efficient use of water and control of water pollution. In addition, an International Hydrological Program was planned to standardize the collection of water data in the world.

Although it permeates the theme with a little more depth, the occasion had much more of an exhibition character than a binding one, especially since it is conceptually an International Conference, and not a Convention to be officially ratified by the participating countries.

The first expressed and positive international recognition of the right to water came two years later, in 1979, in a timely manner, in the Convention on the elimination of all forms of discrimination against women (CEDAW). At the time, although the Convention focused on the protection of women, it came to ensure, in Article 14, 2, h, the right for women to enjoy adequate living conditions, particularly with regard, among other factors, to the health and water supply.

Then, in 1989, also in a timely manner, the right to water was contemplated in the Convention on the Rights of the Child, through Art. 24, 2, which determined that the Signatory States of the Convention should take appropriate measures to combat disease and malnutrition, making it possible to provide drinking water, in addition to environmental hygiene and sanitation – of course, among other forecasts.

In the years that followed, three notable international conferences were held, all providing for the essentiality of access to water and sanitation as a basic and vital right for the human person - the International Conference on Water and Sustainable Development in Dublin (1992), the United Nations Conference on Environment and Development, in Rio de Janeiro (1992) and the United Nations International Conference on Population and Development in Cairo (1994).

In 1999, then, UN General Assembly Resolution A/Res/54/175 "The Right to Development" was published, characterizing the right to clean water as fundamental and placing its promotion as a moral imperative for national governments and the international community. In 2002, three years later, the Political Declaration on Sustainable Development was published in Johannesburg, South Africa, which predicted the acceleration of access to clean water and sanitation by the world population.

Then, also in 2002, one of the main milestones of the human right to water and sanitation took shape in the twenty-ninth session of the Committee on Economic, Social and Cultural Rights. On this occasion, the Committee published "General Comment No. 15",<sup>17</sup> seeking, through it, to explicitly discuss the importance of water and sanitation and clarify the interpretation due to the International Covenant on Economic, Social and Cultural Rights (ICESCR), published in 1966, which composed, together with the International Covenant on Civil and Political Rights (ICCPR) and the Universal Declaration of Human Rights, the structural tripod of post-war international public law (the so-called "International Bill of Human Rights").

General Comment No. 15 expressly provides as a human right to sufficient, safe, acceptable, physically accessible and affordable water, which are currently characterized as essential principles of the right to water. In addition, the Commentary ratified that the rights to adequate housing and health standards, both of which were previously provided for in the 1966 Convention, would in fact include access to water, even if there was no express mention of it. Thus, the UN in 2002 solidified the understanding that the right to water and sanitation had primary relevance, giving scope for the following years to receive a special focus on the problem of water resources.

In July 2005, the Draft Guidelines for the Realization of the Right to Drinking Water and Sanitation were published, which supported legislators around the world working in the water and sanitation sector, in order to contribute to the global development of the implementation of this right.

In 2006, in the Convention on the Rights of Persons with Disabilities, once again the right to water was expressed and punctually envisioned in Art. 28:2 as a necessary measure for the social protection of persons with disabilities.

In 2007, the report by the High Commissioner for Human Rights officially considers access to safe drinking water and sanitation as a human right.

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<sup>17</sup> Available at <https://www.refworld.org/pdfid/4538838d11.pdf>.

The following year, in 2008, the Human Rights Council published a Resolution to appoint an independent expert to develop a study on the obligations and recommendations necessary for the global operationalization of access to water, through a dialogue between governments, institutions, authorities, the private sector and civil society organizations.

By this time, the business world was already involved in the problem and showed signs that it would need to follow the issue in practical terms. Already with the first annual report of the expert, in 2009, the Human Rights Council publishes a resolution recognizing that States have an obligation to resolve and end discrimination in terms of access to sanitation.

In July 2010, in the wake of the study carried out by the appointed expert, the UN published, for the first time through a General Assembly, a Resolution - 64/292<sup>-18</sup> which formally recognized the right to water and sanitation, considering them as essential for the realization of all human rights.

This was a historic milestone in international public law that found caveats by some jurists in relation to its applicability, and they claimed that the Resolution could be understood as an instrument without binding power, not having hard law status, but assuming itself as a soft law standard, coating itself as a kind of political guideline rather than forcing states to solve the problem itself (THIELBÖRGER, 2014, p. 59).

This position, however, is rejected by several other renowned authors, who would have understood this instrument as an extensive interpretation of what would be a previous international treaty, an understanding that would reinforce its consistency and applicability around the globe.

Fact is, nevertheless, that the Resolution emerged as the nerve result of years of international research and dialogue, having been operationalized after a series of specific measures defined in specific Conventions and Conferences, responsible for developing concepts and applications of water and sanitation rights as fundamental rights to be implemented (CAVALLO, 2012, p. 174-175).

It is uncontroversial that the Resolution published by the General Assembly is more complete and powerful than the previous ones, representing the result of an extensive and laborious path taken by agents and institutions in modern history.

It is a fact that the UN General Assembly, in publishing this instrument, has made a milestone in the history of the right to water, signaling to the world that the path of water preservation and the promotion of access to water and sanitation would – fortunately – be a path without return for the international community.

**2010 - 2021:** the maturation of the right to water.

After Resolution - 64/292 of 2010, which, as seen, is one of the major milestones in the development of the right to water and sanitation, several Resolutions were published

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<sup>18</sup> Available at <https://undocs.org/pdf?symbol=en/a/res/64/292>.

by the UN providing for the consolidation of that right as a fundamental part of international humanitarian law.

In 2011, for example, Resolution 64/24 officially formalized the recognition of the right to water and sanitation by the World Health Organization, which pointed out this right as necessary for the pursuit of the right to health.

In addition to this regulation, others were launched by the UN Human Rights Council to (i) encourage adequate global access to water resources, even adopting an incisive tone to bind states (such as Resolution 15/9, 2010), (ii) articulate ways to continue the multidisciplinary work that had been developed (such as Resolution 16/2, 2011), (iii) reinforce the importance of water as necessary to an adequate standard of living (Resolution 24/18, 2013) and (iv) associate the right to sanitation to state obligations (Resolution 27/7, 2014).

In 2015, then, the world may experience another major mobilizing milestone for the promotion and international protection of human rights. In a historic assembly that brought together the 193 member countries, the UN published the so-called "Agenda 2030", which was a cooperative International Declaration that provided for seventeen major Sustainable Development Goals (see figure below) that should be met by member countries.

These objectives were divided in seventeen different lines of action and had, among them, the establishment of one hundred and sixty-nine practical goals that should be achieved by the planet in general.



Image1, available at <https://news.un.org/en/story/2015/09/509732-un-adopts-new-global-goals-charting-sustainable-development-people-and-planet>, accessed in 02/06/2021

In addition, according to the "Agenda 2030 Platform"<sup>19</sup>, a portal provided by the United Nations Development Program,

<sup>19</sup> Available at <http://www.agenda2030.org.br/sobre/>.



The 17 Objectives are integrated and indivisible, and blend, in a balanced way, the three dimensions of sustainable development: economic, social and environmental. They are like a list of tasks to be fulfilled by governments, civil society, the private sector and all citizens on the collective journey to a sustainable 2030. In the coming years of implementation of the 2030 Agenda, the SDGs and their goals will stimulate and support actions in areas of crucial importance to humanity: People, Planet, Prosperity, Peace and Partnerships.

Thus, the international community has found a synergistic, centralized and targeted way of facing the major problems that the world faces daily, starting, this time, from practical goals to be achieved and with the literal and expressive participation of all the bodies involved at the global and regional level.

In practice, all targets to be operationalized are accompanied by metrics for performance analysis through specific indicators based on official statistics.

In order to consider the major Sustainable Development Goals, the UN has foreseen an objective specifically for clean water and sanitation: number "6". Through it, the United Nations postulates "ensuring the availability and sustainable management of water and sanitation for all."

To this end, the proposal for international cooperation is aimed at the protection of springs, rivers and basins and on the sharing of water treatment technologies, aiming to minimize the scarcity of water resources around the world and inadequate management of natural resources. With this guideline, the United Nations will sector six main targets to be considered by local and international<sup>20</sup> organizations.

In them, the priorities are well delineated and revolve around

- (i) to provide universal and equitable access to safe and affordable water for all,
- (ii) hygiene and reduce open sewage problems, also meeting the needs of women in a state of vulnerability,
- (iii) reduce pollution and improve the quality of water that reaches people, valuing recycling,
- (iv) (d) and promote the efficient use of water on a global scale, minimizing water scarcity problems,
- (v) integrate the water resources management at all levels and
- (vi) to protect and restore the water-related ecosystems, making the international community act appropriately in protecting water resources.

With these goals articulated by the United Nations, the effort committed at the international level and the advance of regulatory modernization at the global level, the world

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<sup>20</sup> Available at <https://sdgs.un.org/goals/goal6>.

has been garnering important results in the prevalence of the human right to adequate water resources, especially with respect to access to clean water and sanitation.

If these advances have been made from the actions of various bodies at the local and international levels – both by governments and private initiative and NGOs, on the other hand, many achievements have been achieved through relevant judgments and the consequent formation of jurisprudence in the international area.

In this sense, the advances were made both by the local judiciaries (which began to have basic legislation to judge in a more incisive and directed way), and by the international courts (which have been present with more property over the past years).

#### **2.4.2. The right to water and the performance of the first sector (public sector - States, governments, etc.)**

As already instilled by several UN resolution, States around the world have come to bear responsibility for promoting effective measures to ensure the right and access to water and sanitation for the entire population. Although not all states are able to strictly comply with this duty, some of them already promote policies and measures that ensure these rights, especially those most vulnerable.

As an example, there is the case of French cities that, in the last 15 years, have municipalized water supply services, including Paris, Montpellier, Niza, Rennes and Grenoble.

It was observed that the infrastructure and services were not of much quality and, still, that the tariffs were very high, which prevented access to water for the large part of the population. According to studies and research, municipalization promotes the reduction of the value of tariffs, the reduction of losses and maintenance of the network, directly linked to sustainability issues, and brings greater financial transparency, since it is the municipality that determines how the public water service will be organized, who gives the management guidelines , as well as directing the level and quality of services.

Thus, municipalities have greater control of these services and can ensure that most of the population enjoys them.

In Paris, after 10 years of this measure, the value of tariffs was 20% cheaper than that of the tariffs of the companies with water supply.

In addition, Paris also has other measures that guarantee access to water, such as public sources, managed by the United States in Paris, a public company responsible for water supply in the French capital, to ensure access in most places, especially for the most vulnerable, homeless and refugees. In places where there is a higher concentration of these people, public taps were installed, with access to water for drinking and for personal hygiene.

In addition, a strategy was also created in Paris to protect water resources through partnerships with farmers. The UAE partially encourages, assists and finances farmers who support the proposal to protect water resources by reducing the use of nitrates and

pesticides, or by switching to organic agriculture and completely suppressing unnatural sources.

In addition to these, they require several other measures to protect water resources, since they understood that the protection of resources at their origin benefits the Paris river basin.

Another example, more recent, of government intervention in ensuring access to water, is that of the Brazilian State, which, in September 2020, due to the context of the Covid 19 pandemic, allocated a credit of more than 260 million reais to be used to ensure access to water for more than 6,500 rural public schools, mainly in the North, Northeast and Midwest regions.

The intention is to build polyethylene tanks as an instrument for capturing and storing water in these places, in order to provide water supply to schools located in the rural area and affected by drought or regular lack of water. The main objective is to enable a healthy water for human consumption and ensure the improvement of the health of both students and teachers.

These measures, among several others around the world, contribute partially to the development of proper access to water in the international system. The states, however, alone do not yet bring the necessary result for the world's population to move forward satisfactorily. Thus, it is necessary to act in other sectors, which are also complemented by the supervision of local and international courts.

#### **2.4.3. The right to water and the performance of the third sector (social sector - NGOs, charities, non-profit, etc.)**

As stated, for financial and often political reasons, states are unable to guarantee access to water for all.

In this context, the role of non-governmental and non-profit organizations, which are present in several continents, is fundamental. They help to promote the guarantee of the right to water, as well as guide the way in which it is used and conserving, since, although it is a natural resource and a fundamental right, it is not yet a reality for a large part of the population.

Many of these organizations, in addition to actively participating in policies related to the use of water resources, directly and indirectly promote access to quality water.

One of these organizations that has a very positive and comprehensive impact is Water.org., a non-profit organization founded in 2009 that operates in 13 countries in Africa, Latin America, Asia and the Caribbean. In Asia, they operate especially in Cambodia, India, Indonesia and the Philippines, in Africa, they operate in Kenia, Uganda and Tanzania and, in Latin America, they operate in Mexico, Brazil and Peru. They help people access to clean water and sanitation through small affordable financing called Water

Credit. In this way, they can reduce the financial difficulties faced by those living in poverty so that they can have access to clean water and sanitation.

These entities have financial partners in the countries to enable loans for water solutions. These partners make affordable loans to people who need water who use these loans to put faucets or toilets in their homes.

It is an advance payment system that makes it possible to help more people in the long run. This method prevents poorer people from paying high prices to water suppliers or seeking water in unsafe places where water quality is dubious. With this approach, they have helped more than 10 million people with access to clean water and sanitation.

In 2017, in Brazil, they certified their first partner as a microfinance institution. From this, Water.org was able to expand its work in the country and make more financial partners, which affected more than 107,000 people with access to clean water and sanitation.

Like water.org, Charity: water, founded in 2006, also a non-profit, has as its main objective to promote access to clean and safe drinking water for people in developing countries.

With the help of local partner organizations, they operate in 24 countries in Africa, Latin America and Asia. They bring drinking water to vulnerable areas and populations by identifying by their partners of water point places based on geography and needs assessments. In addition, they are assisted by industry experts in identifying which approaches and methods are most effective in providing water services.

To date, they have funded 38,113 water projects for 9.6 million people in 24 countries around the world. In recent years, the organization has promoted more than 16,000 water projects, with the help of more than \$200 million from donors.

In Brazil, WWF-Brazil, a civil society, non-governmental and non-profit organization created in 1996, operates, whose main objective is to reduce environmental degradation in order to enable a harmonious life between society and the environment. Unlike the organizations mentioned above, their work does not allow direct access to drinking water, but rather the assurance of effective means for the proper conservation and use of water in the long term.

Due to the approval of the National Water Resources Policy (Law 9.433 - 1997), a new form was instituted for the administration of these resources, with new tools to promote the effective use of water.

At that moment, the WWF-Brazil Freshwater Conservation and Management Program emerged, with the mission of assisting in the development of the restructuring of water resources management in Brazil, stimulating and demonstrating in general that water is essential for human life and must be conserved through a long-term vision.

The main objectives of the program are:

- (i) promote water stewardship by engaging user companies to calculate their water footprint and risks in the basins, resulting in the adoption of footprint reduction measures and the evaluation of incentives and certifications for sustainable production; and
- (ii) promote good water governance, ensuring the integration of policies and instruments in the watersheds of operation, the training of representatives of basin bodies and water resource management bodies so that the objectives of the National Water Resources Policy are achieved".

The role of WWF-Brazil, thus, is to actively participate in the debates on policies related to Brazilian water resources. In addition, it is responsible for conducting periodic analyses on the status and administration of these resources and making the population aware of their importance and use, encouraging the individuals to take initiative to promote conservative measures on water resources.

#### **2.4.4. The right to water and the action of the International Judiciary**

Although it is a fundamental right, as seen, several families still lack quality drinking water, even with the help of various organizations, ensuring universal access to this essential right remains a challenge to be solved.

Since the right to water has been formally recognized as Human Rights, the competent judicial bodies have been used and have contributed to ensuring that everyone, especially those historically discriminated against, can have access to that right.

Recently, in February 2020, the Inter-American Court of Human Rights held Argentina responsible, with several reparatory measures, for violation of indigenous rights, including the right to water. Briefly, the case deals with an application for recognition of the ownership of their lands by indigenous communities in the province of Salta, bordering Paraguay and Bolivia.

The Court understood that the State was violating the property rights of this people, not providing legal certainty, since they allowed the presence of non-indigenous "Creole" settlers in these areas, who practiced activities harmful to indigenous peoples, violating several of their fundamental rights, such as their traditional way of feeding and access to quality drinking water.

In the ruling, the Court determined that, within 6 months of the sentence, the country would study to identify, within the group of people who make up the indigenous communities in the territory, harmful situations of lack of access to drinking water and food that could cause serious risks to the health or life of that population and then formulate an action plan for the measures that will be carried out by the country.

In addition, it was determined by the Court that the country carry out the following measures directly related to water: "a) the conservation of water, surface or ground,

existing in the indigenous territory within lots 14 and 55, which are for use by victims of indigenous communities, as well as to avoid their contamination or remedy the existing contamination; and b) ensure permanent access to drinking water for all people who are members of indigenous communities who are victims in this case."

Another case, also initiated in 2020, still in the process, related to the protection of the right to water by the Inter-American Court, involves the Brazilian State, which was sued in this Court for the lack of regular supply of running water, electricity and basic sanitation in the Valinhos II Occupation, in Passo Fundo.

In view of the context of the Covid 19 pandemic, a precautionary measure was filed with a claim of risk to the life and health of more than 100 families living there, where there is no adequate infrastructure to ensure the human integrity of the residents. Water and light facilities are made by the population itself, which further increases the risks related to the lives of these people.

Before the protocol of the injunction in court, a judicial process was initiated in Rio Grande do Sul, the Brazilian state where Passo Fundo is located, since only one measure can be filed in the Inter-American Court if there is already a judicial pre-questioning of the matter in the country of origin.

Although the national court decisions so far have not been so favorable, with the justification that residents built houses in irregular locations, in May 2020, the Court of Rio Grande do Sul determined the installation of water spouts in certain occupations, which benefited more than 600 families living in indigenous settlements, in which water was made available by water truck.

In addition to these cases, the *Zander v. Sweden* judgement<sup>21</sup>, in which a Swedish family had to stop using drinking water from their well because the company that ran the sanitary dump that was near their home began to contaminate the local water.

In this case, the Swedish government even came to support with a cost aid but came to withdraw it by a regulatory adjustment on the amount of cyanide that could be released into the water, a fact that supported the polluting company.

Upon being taken to the European Court of Human Rights, the case was tried in favor of the family, and the court took into account access to water as a civil right and tied to the Zanders' property, as well as ordered the Swedish government to pay 30,000 Swedish Kronor to each claimant for immaterial damages.

Thus, it is verified that the judiciary has played a fundamental role in ensuring access to water, since, through its sentences, it can determine that the State complies with its duty to implement effective measures that allow adequate access to water resources.

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<sup>21</sup> Braig, Katharina Franziska( The European Court of Human Rights and the right to clean water and sanitation. Water Policy. 20. 10.2166/wp.2018.045. P. 6.

### 3. Industrial Exploration

As seen, thus, international regulations, public policies around the world and actions of non-profit organizations have been created in recent times to provide proper access to water and sanitation to the populations.

Regardless, however, not only the first and third sector have been impacted by the development of human rights related to water resources.

The business world also had to adapt to this reality, especially to enforce precautions and special measures of care and preservation of water. This was due to a social perspective (given the evolution of the concepts of corporate governance), and a binding bias, since legal measures have been published in the process of reshaping the performance of the second sector, to enforce the promotion of human rights, such as the right to water and sanitation.

But how is this impact promoted by the business world?

#### 3.1. How does "industrial exploitation" of water resources take place?

It can be said that the industrial use of water resources affects the environment in two major ways.

The first form of impact is through the use of water in the production chain itself, occasion when it is necessary for the operation of the industry in question. Thus, in general, "the water is used for fabricating, processing, washing, diluting, cooling, or transporting a product".<sup>22</sup>

In this sense, water contributes, for example:

- (i) generation of steam, through boilers, serving to heat, generate energy and even sterilize materials. This form of water use is very found in the timber industries (heating for the drying process of the material), dairy products (heating of tanks, for sterilization of containers and also necessary for processes such as pasteurization and fermentation) and energy generation (through the use of steam for the generation of mechanical energy and conversion into electric energy).
- (ii) For cooling machines in general, increasing their useful lives. This use is independent of the sector, being a more common industrial practice.

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<sup>22</sup> Available At <https://www.aquatechtrade.com/news/industrial-water/industrial-water-essential-guide/#>, accessed on 06/20/2021.

- (iii) For cleaning equipment and products. In addition to cleaning large equipment, we have the case, for example, of the technology industry (production of computers and mobile phones), which requires ultra-pure water for the proper manufacture of semiconductors (water is used throughout the process, including the step of removing impurities from silicon rubbers, essential in the chain).
- (iv) As supply for the manufacture of various products. On the one hand, water serves, for example, as a solvent in the production chain, being part of chemical reactions necessary for the development of the product, case and many products in the consumer goods industry, such as plastic and cleaning materials.
- (v) Agricultural production.
- (vi) As part of the product itself, like the food sector, which has water as part of the product in most cases, or the beverage industry, which has its products consisting largely of water.

Some sectors also end up using water cumulatively in relation to the above, such as the oil and gas industry (for extraction, refinery and petrochemical activities), the pulp and paper industry (for manufacturing and processing the product, especially in cooking, bleaching and washing activities) and the automotive industry (which includes surface treatment and coating, paint spray booths, washing/rinsing/hosing, cooling, air systems, and boiler use).

The second major form of impact on the environment by industry, on the other hand, is indirectly. This impact does not occur through production itself, but because of the company's mismanagement related to the improper management of the water used.

Thus, for example, we can mention the case of hydroelectric plants, which, despite generating renewable energy through the force of water, without directly polluting the external environment, end up being plants with structures that inevitably interfere with the local aquatic environment, especially because they are often responsible for changing the course of rivers and water flows in general.

Thus, the implementation of this type of structure often affects the lives of residents of riverside communities in the region and interferes directly with local aquatic ecosystems, where several aquatic species essential to life live in the place.

Another possible example would be the undue dumping in the environment of water that cannot be reused. The water resources used for cooling or heating of the machines, or for the transport of substances or energy generation, and for some mixtures necessary for production, end up becoming polluted after use. Thus, if the company that manages them allocates these resources improperly, it can contaminate rivers, floras and faunas often irreparably.

This is the case, in this sense, of the textile manufacturing industry, which requires the intensive use of chemicals for dyeing and textile treatment – elements such as lead,



phthalates, organochlorines and other chemicals that when disposed of into water bodies that will eventually reach water bodies for consumption, and can cause severe health problems and diseases in human beings’.

Another example is that of the petrochemical industry. There is also the example of water pollution by thermal power plants, in the face of the mixture of toxic metals (such as arsenic, boron and Mercury), which, if improperly dumped into the water, contaminate it considerably.<sup>23</sup>

### **3.2. What are the main difficulties of companies in the management of industrial water?**

If, on the one hand, there is currently an international movement pressuring the second sector to preserve water resources in industrial production, on the other hand, there are a number of difficulties presented by these companies that are making an efficient advance in sustainable development. According to them, the whole issue is not as simple as it sounds.

In this sense, a study was conducted by Ceres, an international non-profit organization focused on promoting sustainable economic development, in which the authors conducted extensive interviews with water managers and sustainability executives of several companies that intensively used water resources in their production chains. At the end of<sup>24</sup>the study, some factors were identified that help clarify the complexity present in the management of water-related risks:

- (i) Managing this problem requires a robust corporate governance system, as well as there is a targeted need for operational and technical interventions by the Board of Directors. This would mean realigning governance structures, implementing new lines of responsibility, policies and performance analysis, and structurally interfering with the company's line of operation, representing a complex change.
- (ii) There is considerable difficulty in measuring the impacts of industry on local water resources and ecosystems. This difficulty would be due to the absence of official data in the regions regarding the adjacent surface and underground water conditions, which would make it difficult to obtain metrics for analysis of the real industrial impact and hinder the planning of new means of operation. Moreover, companies cannot rely on official data on past hydrological records, since water reality has been changing considerably over time. Therefore, it would be necessary to direct investments and studies to

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<sup>23</sup> According to Aquatech, a platform for professionals in the world of water technology. Available at <https://www.aquatechtrade.com/news/industrial-water/industrial-water-essential-guide/#>.

<sup>24</sup> All the presented factors have been described in the study, which can be obtained in <https://www.ceres.org/resources/reports/ceres-aqua-gauge-framework-21st-century-water-risk>.

verify risks and scenarios applied by prospective and up-to-date data – which makes the process difficult.

- (iii) Water management should consider factors external to the industry, over which it has no interference. In other words, companies would have difficulties in reforming local regulatory and economic conditions, climate change that occurs and the actions of other companies that eventually reverberate in the region where they are present. The mission, therefore, is not individual and simple, should consider other factors and characters, making the problem much more complex.
- (iv) It is necessary to evaluate the impacts of the company throughout the value chain. In other words, companies understand that properly managing water resources is not simply saving water at corporate headquarters but expanding the scope of risk assessment and management for the entire value chain. Thus, the company would need to verify the water risks also in the supply chain and in the use of the product by the consumer, which makes the company's performance and its positioning in the market in practical terms more complex than it seems.
- (v) Water risk management should not be considered in isolation from other sustainability issues. Water is related, for example, to energy consumption, biodiversity, food security, health, among other factors related to the promotion of human rights. Therefore, the management of water resources requires an interdisciplinary analysis, action, and synergy with other areas of impact, making the mission much more laborious and complicated.

Thus, as can be seen, the industrial sector faces a series of difficulties in the corporate management of water resources, which is very complex and requires participation in various aspects. On the other hand, the world has been experiencing a new global order and increasingly demands action aimed at respecting human rights and promoting sustainable development.

Thus, the failure of companies to comply with the protection of water resources can pose serious risks to the organization. These risks – mainly assessed by a legal bias – are capable of bringing radical impacts to companies today, and can even, as will be seen, put in check even the existence of the organization itself.

### **3.3. The legal risks of the performance of the second sector - Risk Factors**

#### **3.3.1. Global Situation**

The outlook for 2050, according to a report published by the OECD (OECDa, 2012), indicated that more than 40% of the world's population will live in watersheds with severe water scarcity, mainly in North Africa and Southern Africa, and South Asia and Central Asia, which will significantly affect the competitiveness of these regions.<sup>25</sup>

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<sup>25</sup> <https://www.oecd.org/env/indicators-modelling-outlooks/waterchapteroftheoecdenvironmentaloutlookto2050theconsequencesofinaction.htm>

Water scarcity is constantly among the world's most worrying risks for policymakers and business leaders (*World Economic Forum, 2019*). In a survey of 525 investors with \$96 trillion in assets, 45% reported exposure to substantial risks of water insecurity – risks that threaten their reputation and licensing to operate, the security of their supply chains, their financial stability and their ability to grow.

Among companies that reported exposure to risk, the combined value of business at risk reached US\$ 425 billion, with about 40% of the risks expected to reach in the next three years (CDP, 2020). The World Bank (2016a) estimates that regions affected by water scarcity could see their growth rates fall to 6% of GDP by 2050 as a result of losses in agriculture, health, income and property, a situation that would lead to sustained negative growth.<sup>26</sup>

Water pollution problems in India and China mean that governments are making increasing efforts on the subject. The study "OECD Environmental Outlook to 2050 - The Consequences of Inaction" signals an increasing demand for water.

It is estimated, in a scenario of continuity of current practices, models and policies, that is, if nothing is done to change, an increase of 55% of global water requirements, due to the growing demand for industry (+400%), thermoelectric generation (+140%) and household consumption (+130%).<sup>27</sup>

The study indicates, in a prominent way, a significant increase in water demand caused by population growth and the economy in the emerging countries of the BRIICS (Brazil, Russia, India, Indonesia, China and South Africa).

For the same global economic scenario, OECD countries reduce water demand in virtually all sectors except industrial ones, indicating the disability between increased economic activity and increased water consumption.<sup>28</sup>

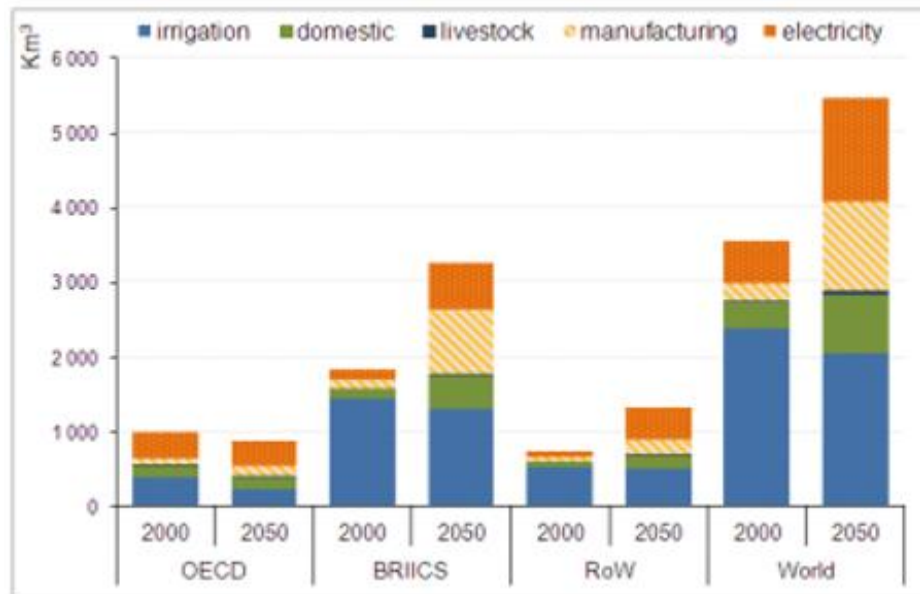
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<sup>26</sup>[https://d15k2d11r6t6rl.cloudfront.net/public/users/Integrators/7ba73aaa-3da9-4cf1-abf2-ccc85dea5875/uid\\_3084837/Facts-Figures\\_Portoguese-WWDR-2021.pdf](https://d15k2d11r6t6rl.cloudfront.net/public/users/Integrators/7ba73aaa-3da9-4cf1-abf2-ccc85dea5875/uid_3084837/Facts-Figures_Portoguese-WWDR-2021.pdf).

<sup>27</sup> <https://www.oecd.org/env/indicators-modelling-outlooks/waterchapteroftheoecdenvironmentaloutlookto2050theconsequencesofinaction.htm>.

<sup>28</sup> <https://www.oecd.org/env/indicators-modelling-outlooks/waterchapteroftheoecdenvironmentaloutlookto2050theconsequencesofinaction.htm>.

### Global demand, base case 2000 and 2050



Agriculture uses the majority (69%) of global freshwater resources and the other 31% are consumed by industries and household use.

However, there is a growing debate about the use of water in food production as inter-sectoral competition for water intensifies and its scarcity increases. In addition, in many regions of the world, water is used inefficiently in food production.

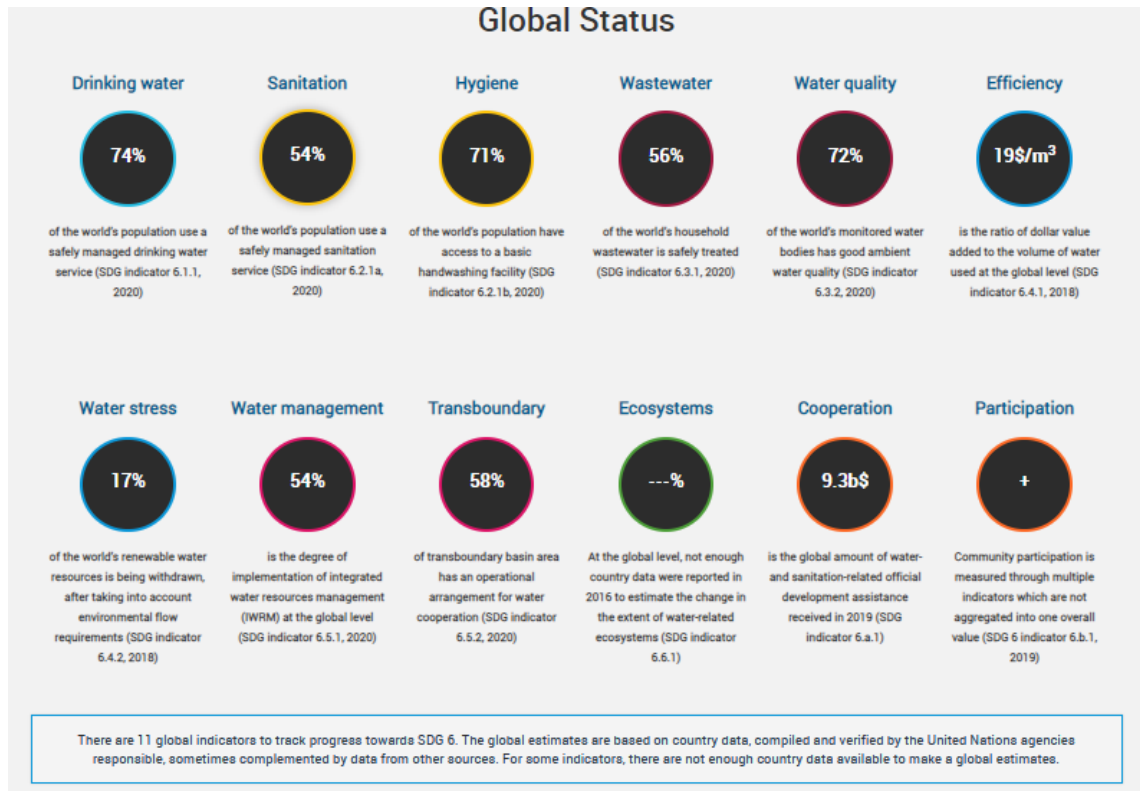
This misuse is one of the main drivers of environmental degradation, including aquifer depletion, reduced river flow, degradation of wildlife environments, and pollution. In general, the value attributed to water in food production is low compared to other uses, usually being very low (usually less than US\$ 0.05/m<sup>3</sup>) where water is used to irrigate food grain crops and fodder, although it can be relatively high (of the same order of domestic and industrial uses) for high-value crops such as vegetables, fruits and flowers.<sup>29</sup>

With this, water is not just a local issue, where each country makes its decisions regarding its policies. The theme is reflected all over the world because the lack of this resource endangers life on the planet.

Considering the relevance of the theme, the United Nations seeks to monitor indicators worldwide according to Sustainable Development Objective 6 (IMI-ODS6). The UN supports countries in monitoring water and sanitation issues under the 2030 Agenda for

<sup>29</sup>[https://d15k2d11r6t6rl.cloudfront.net/public/users/Integrators/7ba73aaa-3da9-4cf1-abf2-ccc85dea5875/uid\\_3084837/Summary\\_Portoguese-WWDR-2021.pdf](https://d15k2d11r6t6rl.cloudfront.net/public/users/Integrators/7ba73aaa-3da9-4cf1-abf2-ccc85dea5875/uid_3084837/Summary_Portoguese-WWDR-2021.pdf), and <https://www.scielo.br/j/rbeaa/a/FWpZyigjvwVwnxN8v4rbq9c/?lang=pt>. Accessed 07/07/2021

Sustainable Development and compiles country data to report on global progress towards SDS 6. IMI-SD6 brings together UN organizations that are formally commissioned to compile the country's data on the global indicators of SDS 6.<sup>30</sup>



Source: <https://www.sdg6data.org/>

In addition, it is within this reality that the industry, with all its productive potential, has been shaping itself to tend to all these precepts and with the great challenge of continuing to profit and enable the maintenance of that financially sustainable business. The risks are many in case of non-observance of this premise that has different reflexes, of various natures.

### 3.3.2. Risks to the company

John Elkington presented the Triple Bottom Line in 1994. The initial idea was to associate sustainable development when a company manages to promote the meeting between successful social, environmental and economic policies. That would be the three pillars.<sup>31</sup>

The social pillar evaluates as sustainable organizations those that have the support and approval of their employees, stakeholders and the community in which they operate.

<sup>30</sup> <https://www.sdg6data.org/>, access in 26/07/2021

<sup>31</sup> <https://rockcontent.com/br/blog/triple-bottom-line/>, access in 10/07/2021

Looking at employees, companies focus on retention and engagement strategies, including benefits such as learning and development opportunities. For community involvement, corporate sustainability focuses on investments in local public projects.

Regarding the economic pillar, it is important to understand that it does not deal with companies with a vision of "profit at any cost". On the contrary, activities that fall under the economic pillar include compliance, proper governance, and risk management.

Within this understanding, what is observed is the implementation, in companies, of a risk management, in order to minimize or avoid losses and maximize opportunities. But what do we refer to when we deal with sustainability risks? To answer the question, we arrive at sustainability and risk management: a sustainability risk is an uncertain social or environmental event or condition that, if it occurs, can cause a significant negative impact on the company.

The Risk Management article cites something interesting and deserves to be highlighted: sustainability is the new face of risk. Today, it is difficult to think of companies with a stable financial system that ignores sustainability issues such as climate change, resource depletion, the destruction of ecosystems, and other new and emerging risks.

In other words, what an organization focused on being sustainable and socially responsible is one that also enjoys improved financial performance.

As we know that the financial side weighs heavily on companies, more and more investors include sustainability considerations in their decisions. The three main reasons are:

- Environmental degradation and the impacts of climate change are important material risks to business;
- Companies that damage the environment can no longer hide;
- Sustainability is one of the main drivers of business strategy and competitiveness.

For this reason, it is imperative that companies that want to survive detect risks that go beyond financial or operational.

In this way, a robust risk management and sustainability strategy means being able to assess the risks of how sustainability can affect a company's prospects. And for sustainability, remember that we always refer to the three pillars mentioned above: economic, environmental and social.

But what would be these risks?

Below, we list some risks that we identify to be common anywhere in the world<sup>32</sup>:

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<sup>32</sup> <https://www.linkana.com/blog/forneceadores-sustentaveis/>, access in 10/07/2021

### 3.3.3. Loss of competitiveness

Sustainable development has definitely entered the account of international competitiveness. The private sector has organized itself and committed itself to sustainability. Many companies seek best practices, share experiences and, in their portfolio, the sustainability area grows more than traditional areas.

While companies that bet on sustainability gain space in the market, those that avoid taking this mentality to the company can suffer financial losses – and there are data that corroborate this statement.

The vision of sustainability, for Marina Grossi, is a reflection of the trend of increase in conscious consumption. This has also become a competitive advantage that can influence profitability.<sup>33</sup>

Competitive loss causes a large financial impact on a company.

In the survey conducted by Opinion Box in 2019, it found that 58% of the people interviewed (2,065) said they would not buy from a company that is involved in slave labor cases. Companies known for polluting the environment and involved in corruption cases also lose 52% and 50% of respondents. The number of respondents who do not care about any of these factors is only 7%.<sup>34</sup>

### 3.3.4. Reputational damage

Reputational damage is another risk the company may take if it does not mind working with suppliers that are not sustainable.

An example that perfectly illustrates this scenario happened with one of the largest construction companies in the country. After being included in the "dirty list" of the Ministry of Labor for a complaint involving work analogous to slavery, the company recorded falls of up to Stock Exchange.

Reputation plays an important role within companies and sustainability can be a major positive or negative influence.

In the construction sector, for example, less sustainable companies could lose 51% of market value amid such a problem, while the most sustainable ones would have a depreciation of only 5.4%.<sup>35</sup>

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<sup>33</sup> <https://epoca.oglobo.globo.com/colunas-e-blogs/blog-do-planeta/noticia/2016/05/marina-grossi-sustentabilidade-nao-e-custo-mas-investimento-e-lucro.html>, access in 19/07/2021.

<sup>34</sup> <https://blog.opinionbox.com/pesquisa-de-mercado-sustentabilidade/>, access in 19/07/2021.

<sup>35</sup> <https://www.linkana.com/blog/fornecedores-sustentaveis/>, access in 19/07/2021.

### 3.3.5. Administrative sanctions

In several countries, law and/or regulations provide administrative sanctions. In Brazil, we have, among others, the Environmental Crimes Law (Law 9.605/98), created to address environmental administrative responsibility, its objective is to get environmental irregularities to be cleared and punished in the administrative sphere itself, without necessarily resorting to the judiciary.

In addition, as in other countries, the penalty is not only for the authors, but also for the co-authors of the environmental infraction.

Penalties range from warning to the application of million-dollar fines, considering the damage caused as well as recidivism.

### 3.3.6. Loss of certifications

In addition to ensuring that the company has all certifications such as various environmental licenses or authorization from environmental agencies, it is important that the suppliers of the companies also present certifications and have the same sustainable philosophy to avoid the loss of certifications.

It is in the approval and qualification of suppliers that it is possible to avoid errors and fraud, through public consultations and issuance of corporate certificates.

## 3.4. Mitigation of social and environmental risks

As already explained in this work, the concern of economic groups with social and environmental issues is no longer an act of benevolence, even if they are not arising or in any way linked to the business they have carried out, it has now become a real necessity. The *Triple Bottom Line theory* defines that "a Project must be economically viable, socially fair, and environmentally correct." (Rocha, 2020)<sup>36</sup>

Nowadays, the socio-environmental issues are a relevant aspect and indispensable matter to the design of new projects, nothing more logical that the companies seek to unite the realization of the social-environmental good common to actions that will mitigate potential risks arising from these projects, from the business of companies as a whole and even when no socio-environmental impact arises directly from the company's activity.

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<sup>36</sup> ROCHA, Alessandra. Concept of Sustainable Tripod Theory in a Project Environment. **Project Management Knowledge Base - PMKB**, 13 from set. of twenty20. Available in: <<https://pmkb.com.br/artigos/conceito-da-teoria-do-tripe-sustentavel-em-um-ambiente-de-projetos/>>. Access in: 03 from Jul. of twenty21.



In Brazil, a country that maintains vast areas of forest (59% of the entire national territory, being only behind Russia) and also the largest freshwater reserve on the planet (12% of the total of all fresh water in the world), such initiatives are even more valued and a non-negotiable condition for investors.

In 2020, at the height of international pressure for more environmental protection actions, in institutional investors who manage about US\$ 3.7 trillion in assets, led by Storebrand, Norway, requested video calls with Brazilian authorities to discuss the matter. Asset managers said the Brazilian government's failure to protect forests could force them to reconsider their investments.

According to Jan Erik Saugestad, CEO of Storebrand Asset Management, "deforestation and its consequences have the potential to negatively impact long-term returns. The inherent risk of operating in a politically unstable country or in a country that neglects the climate situation and the environment is part of our ESG analysis."<sup>37</sup> This is just one example of how much concern with the preservation of the environment is a necessity today.

Contrary to what it may seem, the environmental legislation in force in Brazil is extremely restrictive, including the one related to the use of natural resources by entrepreneurs, making creativity and innovation in the solutions developed an indispensable requirement for the feasibility of projects.

Unfortunately, however, the legal rigor existing in Brazil is not spread in the implementation of surveillance measures. In the last five years, as previously reported in this work, two major environmental tragedies have plagued the country – Mariana and Brumadinho – both occurred in the state of Minas Gerais and due to the disruption of dams used to treat "tailings" of ores by Vale.<sup>38</sup>

These two tragedies that occurred in such a short period of time show that in Brazil the government surveillance, at all its levels of administration, federal, state and municipal, is not effective, and therefore an autonomously and independently company action is essential to avoid and at worst mitigate events that can cause environmental damages.

Considering that the main problem of water is directly associated with the lack of drinking water in the world, due to inadequate management of water resources, being the main responsible for the contamination of water on our planet:

- (i) lack of basic sanitation and the discharge of *fresh domestic sewage*,
- (ii) the discharge of industrial waste without proper treatment and

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37 Funds with US\$ 3.7 trillion warn Brazil about deforestation, **Infomoney**. 2020. Available at <<https://www.infomoney.com.br/onde-investir/fundos-com-us-37-trilhoes-alertam-brasil-sobre-desmatamento/>>.

<sup>38</sup> Originally established on June 1, 1942 as the state-owned company River Valley sweet, Vale became a private company ranking among the largest miners in the world. Our operations abroad cover approximately 30 countries that share our mission to transform natural resources into prosperity and sustainable development.

- (iii) contamination by chemicals from agricultural activities, nothing more natural than a socio-environmental action focus on its initiatives in order to solve such situations.

In this sense, the present work intends to present some initiatives that contribute to the solution of this problem that afflicts society as a whole, also associating the companies brand with initiatives to preserve the environment, which in the end minimizes the possibility of negative media impacts due to the group's economic initiatives.

### **3.5. Greenwashing and the necessary measurement of environmental impact by consumption of water resources and the environmental actions promoted (measurement *and neutralization*).**

The Greenwashing can be defined as "the process of conveying a false impression or providing misleading information about how a company's products are more environmentally sound. Greenwashing is considered an unsubstantiated claim to deceive consumers into believing that a company's products are environmentally friendly."<sup>39</sup>

Greenwashing is a practice that has been debated for a long time, it can be practiced by companies that disclose their information in a distorted or incomplete way, as well as by organizations whose main objective is the defense of the environment. Let's look at the case of the World Wide Fund for Nature – WWF, which was "awarded" the Greenwashing of the year award in 2017.

The World Wildlife Fund (WWF) has won Survival International's "Greenwashing of the Year" award for partnering with seven companies logging nearly 4 million hectares of forests belonging to the Baka and Bayaka "Pygmies" in central Africa.

Survival's Director Stephen Corry said: "WWF's supporters might be surprised to learn that it's working so closely with the loggers who are destroying one of Earth's great rainforests. Congo Basin tribes, the original guardians, are being pushed aside and their societies wrecked. Across Africa and Asia, the big conservation organizations partner with industry and tourism and destroy the environment's best allies. It's a con, and it's harming conservation. Perhaps this "award" might encourage people inside WWF and WCS to put pressure on their organizations for reform. It's time to listen to tribal conservationists."<sup>40</sup>

Greenwashing (or possible accusations of its practice) is the motivation for the first initiative proposed in this work, which does not concern a measure of protection or direct reversal of environmental impacts caused by water consumption in industrial projects and activities, but initiative that aims to ensure that the actions taken by companies to efficiently manage the sharing and reduce the consumption of water resources are sufficient to neutralize the impacts caused.

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<sup>39</sup> Greenwashing. **Investopedia**. 2021. Available in: <<https://www.investopedia.com/terms/g/greenwashing.asp>>.

<sup>40</sup> WWF wins Survival's "Greenwashing of the Year" award. **Survivalinternational.org**. 2017. Available at: <https://www.survivalinternational.org/news/11677>

The proposal has a very simple concept, consisting of:

- (i) Implement a consolidation system for all water resources spent in its operations, directly and indirectly;
- (ii) Implement a consolidation system for all water resources preserved or recovered from their internal initiatives and in partnerships;
- (iii) Inform the balance of the consolidation system indicated in the preceding items (i) and (ii) to the Board, investors, partners and corporate companies bodies in order to enable the adoption of measures that are necessary to achieve "neutrality" in the use of water; and
- (iv) (Optional) Make available for public consultation the collected data and its consolidation (iii).

In the not too distant future, we can imagine a "clean water credit market", like what happened with the theme of carbon, led by the United<sup>41</sup>Nations. Companies that have already mapped and cleaned up their impacts on water will certainly be more valued.

### **3.6. Top management's focus and effort on water issues**

Nowadays, in the business world there has been a lot of discussion regarding the ESG (as already occurred in relation to SDGs), any company that wants to associate its image with good practices of socio-environmental governance and be global leaders in "green" initiatives, capturing the benefits of practical activities, including loyalty maintenance of clients that increasingly seek to consume sustainable companies, must rethink their practices not only of socio-environmental performance, but of internal governance to ensure that the measures highlighted above are not only, greenwashing, but that they are effective, incorporated in the culture of the company and implemented.

#### **Climate change is at the top of the list**

For companies Climate Action (SDG 13) represents the biggest challenge and opportunity to consolidate its brand as a sponsor of the energy transition by accelerating the decarbonization process, aiming for complete decarbonization by 2050, in line with the targets of the Paris Agreements.

Naturally, we are also increasing our capacity for producing Affordable and Clean Energy (SDG 7).

Society's sustainable growth also depends on Industry, Innovation and Infrastructure (SDG 9). Sustainable Cities and Communities (SDG 11), and investment in other SDGs.

Several companies have worked in this line and sought to disseminate their actions to the carbon footprint and pollutant, whether with the purchase of credits, rationing of emissions, purchase of clean energy etc.

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<sup>41</sup> available in: <<https://unfccc.int/process/conferences/pastconferences/bali-climate-change-conference-december-2007/statements-and-resources/the-carbon-market>>.

However, when it comes to water use, even more could be done. The conscious use of water and measures to preserve this valuable natural resource is a recurring agenda in corporate discussions

Another factor that draws our attention is the low frequency of internal and external campaigns (developed with the community and other stakeholders) on the subject by companies in general. This absence of bolder measures of preservation and conscious use of water indicate that the company's senior management may not be properly focused on this subject, which in our sense is one of the most relevant for maintaining a sustainable life in the world.

The support (and why not say commitment) of the company's senior management with the theme – Water – is the first step so that the subject can be raised to priority category. And in order not to be in a philosophical discussion, we quote below some measures that we can contribute to highlight this support/commitment:

- (i) Inclusion of water consumption reduction and conscious consumption as a target in the company's Annual Bonus Program,
- (ii) Incentive through internal innovation programs and development of processes<sup>42</sup> aimed at conscious water consumption and reduction of its use,
- (iii) Integration of the company in the Brazilian Waters<sup>43</sup> Program, newly created government program that will sponsor revitalization projects of the main watersheds in the country.
- (iv) Diversity of its managers, including the designation of people with the predominant profile of sustainability, or with this experience in their career in other departments, in order to demonstrate the importance given by the company and to soften the change. An example would be the appointment of a business direction or operations coming from this area. This raises the question of sustainability to the same level of business, showing that the area of susceptibility is not and mere area of support, but one of the main objectives of the company.

### **3.7. Water Finance Framework**

The change in the current scenario depends on examples and leaders. The preservation of the environment has the attention from world leaders for at least 30 years (Rio 92).<sup>44</sup>

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<sup>42</sup> ANEEL has a Research and Technological Development Program of the Electric Energy Sector that can contribute as a source of costing - partial or integral - of the projects..

<sup>43</sup> WORLD WATER DAY - 10 companies partner with the Brazilian Waters Program (Anglo American, Rumo Logística, Ambev, MRV Engenharia, Stone, Vale S.A, Engie Brazil, Bradesco, Caixa Econômica Federal and JBS) <https://www.gov.br/pt-br/noticias/meio-ambiente-e-clima/2021/03/dez-empresas-firmam-parceria-com-o-programa-aguas-brasileiras>

<sup>44</sup> In June 1992, in Rio de Janeiro/Brazil, more than 180 nations met for the first time after the Cold War to discuss the environment.

Despite the preservation of water resources seems to be covered by the preservation of the environment, it is easily noted that initiatives are relegated to a second level.

The lack of attention of public authorities in relation to the subject is evident when it becomes aware of a recent decision of the Brazilian National Congress, which approved on July 15, 2021 the budget increase for the 2022 election campaigns. The approved bill will provide 5.73 billion reais for next <sup>45</sup> year's elections, the amount in question is equivalent to 6 years of the budget granted for investments in basic sanitation for the whole country. It should be emphasized that the lack of basic sanitation is the major cause of water pollution in the country and is also responsible for serious health problems and social inequality.

Considering the absence of the state for the preservation of water resources and investments in the area, which the environment (green) is already supported for several national and international initiatives, we imagine that the structuring of a "Water Finance Framework", through investment funds and incentive programs of preservation projects, linked to projects and results, could be a good contribution to the protection of this universal right.

In sum, the Water Finance Framework would allocate resources – funded or not by tax benefits – to finance projects related to the preservation of water resources, in regions where there are generation projects.

The eligible projects analysis would be carried out by a multidisciplinary committee, which should fall into the category of products, production technologies and processes adapted to the circular economy, so the gains would also cover the social spectrum. The use of the feature made available would focus on projects with emphasis:

- (i) in the use of water resources in regions that are more arid and less supported by the public authorities,
- (ii) increasing the participation of renewable energy and better energy efficiency in projects aimed at treating water resources,
- (iii) in increasing sustainable and circular economic activities,

Once the practice is instituted, the monitoring of such activities and their publication through a report of allocation of resources and impacts will be carried out, always with a view to evidencing the neutrality (item 3.7) desired by the company.

The proposal would be a complementary measure to ongoing initiatives at companies aimed at (i) the efficient use of water resources also through control of leaks, (ii) the optimization of wastewater treatment and protection of the water quality in the destination environment, and (iii) the responsible and integrated management of the hydrogeological basins to preserve their multiple land and water quality.

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<sup>45</sup> Available in <https://www.cnnbrasil.com.br/business/2021/07/15/comissao-mista-do-orcamento-aprova-texto-base-da-ldo-de-2022>

### 3.8. Institutional performance

As exemplified, state initiatives in relation to the preservation of water resources are rare and certainly deficient, often because this type of<sup>46</sup>public investment cannot be visually presented by politicians to their voters.

As an example, in Brazil there is a goal of universalization of basic sanitation for the year 2033, however half (47.6%) of the Brazilians had not sewage collection in their homes and less than half (45%) the total collected is properly treated, i.e. almost 3/4 of all sewage produced does not receive any treatment.

Considering the historical inertia of governments in relation to the subject, the participation of the initiative deprived in the search for solutions to this problem is essential, which could occur in several ways.

Again, considering the example of Brazil, there are several laws of tax purposes, which function as a kind of tax waiver created by the government. That is, it aims to stimulate investment, growth or job creation in a specific economy sector or region, promoting its social and economic development.

In short, the government gives up resources it would receive through taxes. In this way, it generates incentives for culture, sport, health and social development. The main beneficiaries of these incentive laws are:

- (i) Elderly Funds
- (ii) Child and Adolescent Rights Funds
- (iii) Projects of cultural and artistic
- (iv) Sports and parasport projects
- (v) Projects implemented by entities that implement the National Program to Support The Health Program - PRONON, or the National Program of Support to The Health of the Person with Deficiency - PRONAS /PCD

Despite the relevance of all funds and projects benefited by the tax incentives guaranteed by the legislation in force, it cannot be overlooked that a tax waiver, similar to those listed above, would be fully applicable to fund projects aimed at preserving the environment and water resources in the country.

In summary, the idea would be to form a group of companies with the same strategic goals in order to grant more resources for this matter, through the approval of a law, that would enable the execution of important projects for the preservation of water resources.

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<sup>46</sup> <https://g1.globo.com/natureza/desafio-natureza/noticia/2019/07/23/principal-cao-de-poluicao-da-agua-falta-de-coleta-de-esgoto-atinge-83percent-dos-alagoanos-e-ameaca-saude-e-turismo.ghtml>

#### 4. CONCLUSION AND PROPOSITIONS

Based on the research and analysis for the present work, we believe that the good news is that there is now momentum and a desire of the companies to further contribute to sustainable development by taking more direct action and rational view in the use and sharing of water resources. Bad news is, that there is much to be done, and global climate change is accelerating impact on water resources, and some additional incentive mechanisms, like a “clean water credit market” should be considered as soon as possible to help accelerate the change-.

Moreover, in a survey with a limited number of anonymous participants, most of them form the sustainability area or energy companies, we were able to gather the following data:

- Clean water and sanitation are not among the main SDGs, and not as a priority for half of the 6 participants, although water is considered fundamental,
- The risks associated to the use of water are considered, but the legal risk is not considered for 2/3 of the participants;
- Participation of stakeholders, such as community, local government and ONGS is essential.
- In most cases, conflicts are solved amicably;
- Companies have a perception that, although community participation already exist, it could be done more.

Link to survey results

<https://forms.office.com/Pages/AnalysisPage.aspx?id=v9Q51RBWGkevwhx2aFz--jTfJW9ySPRNuo7JkH-soX1RURTZFWkg5MU1ETEZPM1U5MVQwTkZaOVJYTS4u&AnalyzerToken=xcJixwS4BjTpIM4LAhQJZd9NLSEFrQ9k>

You are welcome to participate in the Survey in the following link:

<https://forms.office.com/Pages/ResponsePage.aspx?id=v9Q51RBWGkevwhx2aFz--jTfJW9ySPRNuo7JkH-soX1RUMiBKRENBTVFXTIdHNzQxRDkzUkMOUkYONi4u>

In addition to the above, considering the risks raised, the current scenario of the companies in ESG and SDGs, below are some measures that we understand should be considered by all companies when developing some project or activity that may have an environmental impact, in particular in the use of water and its sharing Consider the need for water use by your company.

- Analyze the local situation:
  - is there existing water source in use, or an unexplored reservoir must be used
  - How the local community use water and for what purposes

- is there a need for greater access to water, or lack of supply and sanitation infrastructure;
  - Identify current and future use and needs, whether it is a new source or improvement of existing infrastructure;
  - See opportunities that can be generated for the community (agriculture, supply, sanitation tourism, etc.);
  - How your need of water and use affects the community and environment in the short and long term;
- Contact and involvement of the community, governments, NGOs, MP, other potentially interested companies, etc;
  - Make sure of your rights of use, third party rights, usage priorities before making a commitment or decision;
  - Identify potential conflicts in the short and long term;
  - Negotiate the water sharing rights and priorities if possible;
  - Plan and create contingencies, even for the unexpected/unlikely;
  - Consider impacts and synergy with other SDG and CSV programs; and
  - Advantages and disadvantages for the micro and macro region economy and the impact of your water usage (pros and cons).

Click in the links below to go to a presentation and video on the propositions above:

#### Presentation



<https://sway.office.com/YiV1ziDiLjZmjggH?ref=Link>

#### Video

<https://youtu.be/OuXHzBUBJnM>


In addition to these procedures propositions, some changes in company culture and behaviors must be adopted to effectively produce and accelerate results to incorporate the right to water as an SDG to be achieved by corporations.-

- Internal propositions:
  - change in governance and attitude;
  - creation of impact measurement mechanisms – similar to carbon footprint – related to clean water market for savings;
  - inserting metrics into MBO; and
  - rotation and appointment of people of sustainability. in the business and its management.





- External propositions:
  - measurable commitments in financing for actual impact and savings carbon footprint, clean water savings and other SDGs achievements (SDG/ESG bond 2.0);
  - dissemination of clean water saving culture and practice;
  - selection of partners (supply chain) that has a green chain in all aspects (not only emissions, but rational use of water and other SDGs, circular economy, etc ) to accelerate positive results for the environment;
  - measurement of the result and audit mechanisms;
  - creation of a control and certification body for initiatives certification and measurement; and
  - incentive mechanism (lower interest in finance, discounts in products, and score mechanism, to compensate higher cost, for supplier proposal selection, making companies that invest in sustainable initiatives more competitive).

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