

# **Water as a transnational element: a reflection on governance and global environmental management<sup>1</sup>**

## **A água como elemento transnacional: uma reflexão sobre a governança e gestão ambiental global**

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### **Abstract**

Considering water as an essential good for life on earth, reflecting on management and governance will be timely relevant. Governance for equitable water allocation is closely linked to a decentralized regime without strengthening competence at the subnational level. Having made such observations, the present study through the inductive method and the literature review through the thought of classical and contemporary authors, by the succinct writing format, does not wish to propose or hope to present solutions for water management, but rather to offer some contribution for a transnational look, as a possibility of a civilizing governance of an indispensable resource to life in all its senses, water. Considering that the causal elements of inequalities are territorial, there is a lack of coordination that seeks solutions to water, sometimes too much, sometimes in scarcity, sometimes polluted. From a demographic perspective, they reflect the intrinsic characteristics of local dynamics, diversity in access, including basic sanitation and the concentration of the deficit in certain population groups, whose

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priority is to make management decisions at mutually compatible and effective administrative levels. Thus, with the goal of identifying long-term trends, important factors and actors for defining issues on a global scale seek to understand variables that may influence the international scenario of sustainability and transnational water governance.

**Keywords:** Environmental Management. Sustainability. Transnationality. Water Governance.

### **Resumo**

Considerando a água como um bem essencial à vida na terra, refletir sobre as formas de gestão e governança é relevante de forma atemporal. A governança para a alocação da água de forma equânime está intimamente ligada a um regime descentralizado sem o fortalecimento da competência em nível subnacional. Feitas tais observações, o presente estudo através do método indutivo e da revisão bibliográfica através do pensamento de autores clássicos e contemporâneos, pelo sucinto formato de escrita, não deseja propor ou espera apresentar soluções para a gestão das águas, e, sim, pretende oferecer alguma contribuição em prol de um olhar de caráter transnacional, como possibilidade de uma governança civilizatória de um recurso indispensável a vida em todas as suas acepções, a água. Considerando-se que os elementos causadores das desigualdades sejam territoriais, carece de coordenação que busque soluções para a água, ora em demasia, ora em escassez, ora poluídas. Na perspectiva demográfica, refletem as características intrínsecas à dinâmica local, diversidades no acesso, na qual insere-se saneamento básico e a concentração do déficit em determinados grupos populacionais, cuja prioridade é tomar as decisões de gestão em níveis administrativos reciprocamente compatibilizados e efetivos. Assim, tendo como meta a identificação de tendências a longo prazo, fatores e atores importantes para a definição de questões em escala global buscam entender variáveis que podem influenciar o cenário internacional da sustentabilidade e a governança transnacional da água.

**Palavras-chave:** Gestão Ambiental. Governança da Água. Sustentabilidade. Transnacionalidade.

### **Introduction**

To analyze the challenges of water management and governance as a transnational element, it should be noted that the history of environmental governance is considered recent, but despite this it is driven by political changes

and theoretical debates concerning water management and its worldwide availability, involving different political actors and civil society<sup>4</sup>.

Thus, possibilities are opened to review the forms of management, insofar as the governance system achieves weighting to the various social, economic, and political realities in the actions and of the watershed management unit, in the construction of participatory and sustainable agendas, considering the effective implementation of the various instruments for changing water consumption patterns, establishing new mediations between the state and its democratic relations<sup>5</sup>.

It is not a cliché to say to each manuscript that “everything is water”, as the Pre-Socratic philosopher Tales de Milet observed, in Postmodern philosophy, contemporaneity is seen as “liquid modernity” according to the philosopher Zygmunt Bauman, that is, from timeless form water is present in everyday life in all its forms. Despite the relevance of water to human life and society, there is no way to disregard its economic value, which motivates the conflicts that end up threatening peace at the transnational level. In this sense, the multifaceted relevance of access to water is removed.

In this perspective, the vision of water as an essential common good for life and, emphasizing the need for an established approach to social, cultural and governance responsibility, imposes an affirmative duty to the protection of water as a common right to all, to efforts individual, local, regional, national, and transnational.

In this context, efforts to internationalize water issues began with the United Nations (UN) Conference in 1977, followed by the Dublin Principles, which

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<sup>4</sup> SENA, Aderita; et al. Medindo o invisível: análise dos objetivos de desenvolvimento sustentável em populações expostas à seca. **Ciência & saúde coletiva**, Rio de Janeiro, vol. 21, n.3, p. 671-684. Mar. 2016. Available at: <https://doi.org/10.1590/1413-81232015213.21642015>. Accessed on: 10 oct. 2020.

<sup>5</sup> BRAGA E SOUSA, Wander Lúcio; NEEMIAS, Milton. **Água e o desenvolvimento sustentável**. 2013. Available at: <http://catolicadeanapolis.edu.br/revmagistro/wp-content/uploads/2013/05/1-%C3%81GUA-E-O-DESENVOLVIMENTO-SUSTENT%C3%81VEL.pdf>. Accessed on: 10 oct. 2020.

set an agenda for water to be governed on a global scale and where it was first recognized as a common good, economic and law<sup>6</sup>.

In the 1990s, even the most essential public services, such as the provision of water and sanitation, under the neoliberal logic of privatization, began to emerge an era of global water with the formation of the World Water Council for sustainable development<sup>7</sup>.

Having made such observations, using the succinct writing format, it is not intended to propose or aim to present solutions for water management, but rather to offer some contribution towards an awakening, for a transnational look, as a possibility for governance civilization of an indispensable resource to life in all its meanings, water.

Within the scope of this essay, the Inductive Method was used in the data collection phase<sup>8</sup>, while in the data treatment phase the Cartesian Method was used<sup>9</sup>, enriched by the perspective of the Historical Method offered by Paolo Grossi and António Manuel Hespanha<sup>10</sup>.

In the opportunity to work properly with this theoretical tool, the research also used the Category technique<sup>11</sup> and the Operational Concept<sup>12</sup> to raise the Fundamental Categories, and the technique of Bibliographic Research from

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<sup>6</sup> POLLITT, Christopher. The new public management: revolution or fad? In: POLLITT, Christopher (Org). **The essential public manager**. Berkshire: Open university, 2003. cap. 2, p. 26-51.

<sup>7</sup> SCHULTZ, Gert A. Integrated water resources management: the requirements of the European Union, the problem of environmental impact assessment, and the implementation of the sustainable development principle. In: MARINO, M. A.; SIMONOVIC, S. P. **Integrated water resources management**. Oxfordshire: IAHS, 2001. p. 3-11. Available at: [http://hydrologie.org/redbooks/a272/iahs\\_272\\_003.pdf](http://hydrologie.org/redbooks/a272/iahs_272_003.pdf). Accessed on: 10 oct. 2020.

<sup>8</sup> It is the logical basis that corresponds to the identification and collation of the different parts of a phenomenon with a view to obtaining a general perception or conclusion. This definition was extracted, in the form of a paraphrase, from reading PASOLD, Cesar Luiz. **Metodologia da Pesquisa Jurídica: Teoria e Prática**. 13. ed. Florianópolis: Conceito Editorial, 2015, p. 97-99.

<sup>9</sup> Method proposed by René Descartes and described in the scope of research in law in: PASOLD, Cesar Luiz. **Metodologia da Pesquisa Jurídica**. p. 92.

<sup>10</sup> His historiographical perspective is found in the first part of his History of Law manual, dedicated to thinking about the role of this discipline in the training of jurists, which can be seen in: HESAPANHA, António Manuel. **Cultura jurídica europeia: síntese de um milénio**. Coimbra: Almedina, 2012. p. 13-90.

<sup>11</sup> Category is understood as “the strategic word or expression for the elaboration and / or expression of an idea”. PASOLD, Cesar Luiz. **Metodologia da Pesquisa Jurídica**. p. 27.

<sup>12</sup> In this work, the Operational Concept will be informed in the first citation of the Category in capital letters, in a footnote or in the body of the text itself, depending on the argumentative logic of the Article. When the Category is inserted in a citation, in order not to tarnish the copyright of the mentioned Author, the Category will not be capitalized with an initial emphasis. PASOLD, Cesar Luiz. **Metodologia da Pesquisa Jurídica**. p. 39.

classic and contemporary authors with their respective files<sup>13</sup>, to collect the historical-theoretical material necessary for the analysis of the data obtained. In the reporting phase (which is the present article) the Inductive logic base is used.

### **1. Transnational Law and the Relationship with Sustainability as a Paradigm**

In order to better understand the scope of this reflection, proposing a shared, transnationally cooperative environmental management of waters, requires a brief analysis of the proposal's guiding paradigm, sustainability.

It is necessary to clarify that the modern era went into exhaustion when its paradigm, based on freedom, ceased to be the fundamental value of orienting the way of life in the West. This happened because of the emergence of new powers and risks now global. These risks, disseminated globally, also present as distinctive characteristics of the historical moment prior to invisibility (scientific and sensory) and “transtemporality” (delayed effects).

Freedom has been losing ground, as a paradigm, since the implementation of the Social Rule of Law, the main legacy of the capitalism versus communism dispute during the Cold War. But the culmination of this process of relativizing freedom was the advance of the environmental issue, which was fermented by the new transnational scenarios typical of the risk society.

In this way, the emergence of a new paradigm that indicates the overlapping of values, following the emergence of a new era, guided by the preservation of life on the planet, has become consistent, what has become known as the vital environmental issue<sup>14</sup>.

The current transnational scenario can be characterized as a complex web of political, social, economic, and legal relations, in which new actors, interests and conflicts emerge, which demand effective responses from the Law. These responses depend on a new paradigm of law that better guides and harmonizes

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<sup>13</sup> Consult books or legal directories, under the terms presented by PASOLD, Cesar Luiz. **Metodologia da Pesquisa Jurídica**. p. 108. From this consultation, as the Author teaches, there are the files that greatly facilitate the post-data collection phase, which is the present report.

<sup>14</sup> On this topic see CRUZ, Paulo Márcio; BODNAR, Zenildo. La Transnacionalidad y la Emergencia del Estado y del Derecho Transnacionales. **Revista V-Lex**, Barcelona, v. 4. 2009.

the various dimensions involved. Paulo Márcio Cruz clarifies the opportunity when he confirms that the development of a new theoretical basis for law and justice is essential for the new transnational global environment<sup>15</sup>.

Thus, with the current transnational scenario, there is a need for the emergence and consolidation of a new paradigm of Law that must be more ductile and operationally adequate for the dialectical and democratic production of a repertoire of more dense and legitimate arguments in the current context of complexity.

Sustainability naturally emerges as a great axiological potential to be applied and recognized in the centrality of this new complex, plural and transnationalized legal order<sup>16</sup>.

Considering the solidification of a supranational state, given the fall of cultural, economic, social boundaries resulting from Globalization and Transnationalization, which does not respect borders between countries, and, considering democratic theories on the replacement of freedom and individualism as a modern paradigm of Legal Science by the probable postmodern paradigm - Sustainability - from Transnationality<sup>17</sup> and the new forms of democratic participation, the concept supported here is supported by Klaus Bosselmann<sup>18</sup> on Sustainability, it strongly defends the need for its application as the basic legal value of the general legal order. The author argues that Sustainability should contribute to the greening of other principles and, if it is properly driven by the real strength of civil society, it will also serve as a path to governance with ecological and social sustainability<sup>19</sup>.

Thus, sustainability can consolidate itself as the new paradigm that induces Law in postmodernity, as it currently works as a kind of “meta-principle”,

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<sup>15</sup>CRUZ, Paulo Márcio; BODNAR, Zenildo. **Globalização, transnacionalidade e sustentabilidade**. Itajaí: Univali, 2012. Available at: <https://www.univali.br/vida-no-campus/editora-univali/e-books/Documents/ecjs/E-book%202012%20GLOBALIZA%C3%87%C3%83O,%20TRANSNACIONALIDADE%20E%20SUSTENTABILIDADE.pdf>. Accessed on: 10 oct. 2020. p. 70.

<sup>16</sup> JESSUP, Philip. C. **Direito Transnacional**. Tradução de Carlos Ramires Pinheiro da Silva. Rio de Janeiro: Fundo de Cultura, 1956.

<sup>17</sup> Sobre a aplicabilidade da Transnacionalidade ver: JESSUP, Philip. C. **Direito Transnacional**.

<sup>18</sup> BOSSELMANN, Klaus. **The principle of sustainability**: transforming law and governance. New Zealand: ASHAGATE, 2008. p. 79 e ss.

<sup>19</sup> BOSSELMANN, Klaus. **The principle of sustainability**: transforming law and governance. p. 79 e ss.

with a vocation for applicability on a global scale. It should be noted that it also presents unchallenged flexibility and the necessary applicability to accommodate the discursive dialectic of the most diverse social forces, being able to amalgamate the other legitimate values and interests of the new empathic civilization as suggested by Rifkin<sup>20</sup>.

Freedom, as a paradigm of modern law, from the well-known events of the late twentieth century, went into crisis with clear signs of insufficiency. This observation allowed, therefore, the emergence of a new paradigm in which, in a transition phase, areas of freedom and Sustainability coexist.

In this context, it makes no sense for human beings to insist that they can simply continue their evolution, enclosed in the dogmas of liberal capitalism and globalization. Modernity, despite having represented a significant advance for humanity, ended up being a whole theoretical system of justification of inequalities.

Demétrio Loperena Rota<sup>21</sup>, argues that the conception that suggests that a given social development requires a little environmental sacrifice is false and adds that sacrificing the environment to achieve greater economic development is a decision of those who do not know the environmental problem. For him there are no contradictions between the economy and the environment.

In that line, Ramón Martín Mateo<sup>22</sup> maintains that the postulates of economics and ecology are not necessarily opposed, since they can form a harmonious integration.

Such understanding is fundamentally relevant, because in the current model of globalization, with repercussions in the legal systems, it is the market that acts with enormous strength, fluidity, and freedom, practically imposing the rules of the game. The protagonist is no longer that of society or of States. This submission logic excludes or stifles other fundamental dimensions for

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<sup>20</sup> RIFKIN, Jeremy. **La civilización empática**: La carrera hacia una conciencia global en un mundo en crisis. Ediciones Paidós, 2010, p. 76.

<sup>21</sup> ROTA, Demetrio Loperena. El derecho al desarrollo sostenible. In: IRUJO, Antônio Embid (Coord.). **El derecho a un medio ambiente adecuado**. Madrid: Iustel, 2008. p. 63-86. p. 73.

<sup>22</sup> MATEO, Ramón Martín. La revolución ambiental pendiente. In: MAÑAS, José Luis Piñar (Coord.). **Desarrollo Sostenible y protección del medio ambiente**. Madrid: Civitas, 2002. p. 55.

Sustainability, such as ecology and the essential political and social control<sup>23</sup>. Given this scenario, it is valid to maintain that the Law can gain new momentum and strength from a new paradigm to positively influence the destinies of community life, the forms of management and governance and the destinies of humanity, sustainability.

Thus, the emergence of Environmental Law and the Stockholm (1972) and Rio (1992) Declarations represented a fundamental advance towards Sustainability. But they will not be able to build the new reality necessary for the preservation of life on earth without the inductive value of the Law ceasing to be only that of freedom and its contemporary concessions, represented by social democracies and the Social or Welfare State.

The understanding of Sustainability as a new law-inducing paradigm also results from the cognitive contribution provided by sociology, economics, and philosophy. It remains for Legal Science, the important function of appropriating this common axiological humanitarian agenda, capturing social realities, their deviations and risks and promoting strategies aimed at mitigating and controlling them for the full realization of the common good.

Based on the reflections exposed, Sustainability can be understood as a three-dimensional ethical imperative that must be treated in synchronic solidarity with the current generation, diachronic with future generations, and in harmony with nature, that is, in benefit of all community of life and the abiotic elements that support it, being a guiding principle of the forms of management and governance of vital natural resources in common use by humanity, such as water as a transnational element.

## **2. Transnational Environmental Management: reflections on water governance**

In the 21st century, the integration of water into the new world economy begins, seeking to minimize the crisis in the availability of water, the understanding that the lack of access is often the result of poor management

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<sup>23</sup> In addressing this theme Ulrich Beck calls this effect of globalization globalism, and characterizes it as an “ideology of the world market empire”. In: BECK, Ulrich. **O que é globalização**. São Paulo: Paz e Terra, 1999, p. 22.

practices, and that water as a value social and economic should be based on a participatory approach, whose integrated management of water resources should result in equitable and efficient actions for the sustainable use of water<sup>24</sup>.

The achievement of a sustainable society presupposes a resilient community that can deal with new problems and risks and is able to adapt to new circumstances, as previously seen, from the sustainability paradigm with a view to shared and cooperative management in a transnational way. A changing environment requires political conceptions related to administrative expenses and regulatory pressure, scientific discoveries that highlight the deficiencies of the oldest instruments and principles, all for the adjustment and modernization of organizational forms, instruments and principles that are central to environmental law<sup>25</sup>.

Such changes are related to the fragmentation of areas of competence, as well as geographically overlapping areas of jurisdiction, both between different states, as well as within individual states. This complexity is inevitable and is mainly caused by the fact that, with so many different actors involved, it is difficult to maintain a uniform and coherent process, such as environmental protection and economic development, as well as developing strategies to limit and control governance issues. for sustainability.

In this sense, strengthening governance for sustainable development below the international level, at the regional level, considers how to strengthen the coherence between normative and operational support to Member States, but also analyzes the issue of greater coherence and coordination with other relevant institutions. Thus, the dimensions of sustainable development encompass issues related to the economy, society, and the environment at a global level. With that, governance should be driven by transnational responsibility, seeking

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<sup>24</sup> GHILARDI, Hilariane Teixeira. Sustentabilidade da água: um novo caminho. In GARCIA, Denise Schmitt Siqueira; DANTAS, Marcelo Buzaglo; SOUZA, Maria Cláudia Da Silva Antunes de (Orgs). **Governança ambiental e sustentabilidade**. Itajaí: Univali, 2017. p. 233-248. Available at: <https://iuaca.ua.es/es/documentos/documentos/ebooks/ebook-gobernanza-ambiental-y-sostenibilidad.pdf>. Accessed on: 10 oct. 2020. p. 233-234.

<sup>25</sup> DANTAS, Marcelo Buzaglo; SOUZA, Maria Cláudia Da Silva Antunes de (Orgs). **Governança ambiental e sustentabilidade**. Itajaí: Univali, 2017. Available at: <https://iuaca.ua.es/es/documentos/documentos/ebooks/ebook-gobernanza-ambiental-y-sostenibilidad.pdf>. Accessed on: 10 oct. 2020. p. 82-83.

sustainability effectively, especially regarding production and consumption such as water, energy and food<sup>26</sup>.

As an essential element and as a common good the management of water resources, availability and consumption, as well as the profound changes that occur in the environment and that are related to the factors of production and consumption of water, in the economic, social and environmental plan<sup>27</sup>, to achieve the sustainability of water resources, it must be premised on modifying personal attitudes and practices, allowing communities to take care of their own environment, generating a national structure for the integration of development and conservation and constituting a global alliance<sup>28</sup>.

Sustainable development assumes a posture of defense of the environment and continuity of generations, indicating that it is necessary to develop in harmony considering the ecological limitations of the planet, without destroying the environment. It is intended that future generations have the chance to exist and live well, according to their needs, with the improvement of quality of life and survival conditions<sup>29</sup>.

For sustainability criteria, a determination of the new priorities defined by society is required, with the adoption of a new ethics of human behavior and a recovery of social and collective interests, encompassing a set of key changes in the structure of production and consumption, with the reversal of the

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<sup>26</sup> BONISSONI, Natammy Luana de Aguiar. Brief observations on the historical evolution of international water law and its current scenario in mankind. In: GARCIA, Denise Schmitt Siqueira; DANTAS, Marcelo Buzaglo; SOUZA, Maria Cláudia Da Silva Antunes de (Orgs). **Governança ambiental e sustentabilidade**. Itajaí: Univali, 2017. p. 120-133. Available at: <https://iuaca.ua.es/es/documentos/documentos/ebooks/ebook-gobernanza-ambiental-y-sostenibilidad.pdf>. Accessed on: 10 oct. 2020. p. 120.

<sup>27</sup> GHILARDI, Hilariane Teixeira. **Sustentabilidade da água**: um novo caminho. p. 233.

<sup>28</sup> ARAÚJO, Adilson Ribeiro de. **Educação ambiental e sustentabilidade**: desafios para a sua aplicabilidade. Monografia (Especialização em Gestão e Manejo Ambiental em Sistemas Agrícolas). Universidade Federal de Lavras. Lavras, Minas Gerais, 2013. Available at: <http://pt.scribd.com/doc/50663454/8/A-I-Conferencia-de-Tbilisi-na-Georgia-1977>. Accessed on: 10 oct. 2020.

<sup>29</sup> BENHOSSI, Karina Pereira; FACHIN, Zulmar. O meio ambiente e o embate entre a preservação ambiental e o desenvolvimento tecnológico: uma discussão de direitos fundamentais. **Revista Jurídica Cesumar**, v. 13, n. 1, p. 237-262. Jan./jun. 2013. Available at: <https://periodicos.unicesumar.edu.br/index.php/revjuridica/article/view/2893/1901>. Accessed on: 10 oct. 2020.

environmental degradation situation and social misery from its causes, which is not currently occurring<sup>30</sup>.

Therefore, the recognition of water as a scarce resource, essential to life and essential, demonstrated the need for more comprehensive management policies, admitting the inevitability of an integrated management of water resources as a process that promotes the coordinated development and management of water, equitably, economically, and socially, without compromising the natural course of vital ecosystems<sup>31</sup>.

According to Garcia, the occupation of the Planet was almost always conducted by humanity under the logic that natural resources would be inexhaustible and could be exploited indefinitely. Recently, sustainability issues have gained greater relevance in the face of environmental degradation, in which water is vital for sustainability. Its importance, in particular, is due to the transversal nature of the resource, which unites the dimensions of sustainable development<sup>32</sup>.

According to Garcia<sup>33</sup>, improper and unsustainable water management, characterized by excessive use, waste and contamination, leads to a challenge of sustainable development, in finding a balance between impacts. Souza<sup>34</sup> says that balance would imply accepting a multiple criterion of meeting the needs of human beings and considering parameters of ecosystem resilience.

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<sup>30</sup> MISSIMER, Merlina; et al. Exploring the possibility of a systematic and generic approach to social sustainability. **Journal of Cleaner Production**, v.18, n.10-11, p.1107-1112, 2010. p. 1108.

<sup>31</sup> GHILARDI, Hilariane Teixeira. Sustentabilidade da água: um novo caminho. p. 233.

<sup>32</sup> GARCIA, Denise Schmitt Siqueira. Apresentação. In: GARCIA, Denise Schmitt Siqueira; DANTAS, Marcelo Buzaglo; SOUZA, Maria Cláudia Da Silva Antunes de (Orgs). **Governança ambiental e sustentabilidade**. Itajaí: Univali, 2017.p.VI-VIII. Available at: <https://iuaca.ua.es/es/documentos/documentos/ebooks/ebook-gobernanza-ambiental-y-sostenibilidad.pdf>. Accessed on: 10 oct. 2020. p. VII.

<sup>33</sup> GARCIA, Denise Schmitt Siqueira; SOARES, Wilson Deschamps. Águas subterrâneas: uma análise jurídica do Brasil. In: GARCIA, Denise Schmitt Siqueira; DANTAS, Marcelo Buzaglo; SOUZA, Maria Cláudia Da Silva Antunes de (Orgs). **Governança ambiental e sustentabilidade**. Itajaí: Univali, 2017. p. 20-40. Available at: <https://iuaca.ua.es/es/documentos/documentos/ebooks/ebook-gobernanza-ambiental-y-sostenibilidad.pdf>. Accessed on: 10 oct. 2020. p. 31.

<sup>34</sup> SOUZA, Maria Cláudia da Silva Antunes de; GHILARD, Hilariane Teixeira. O instrumento da avaliação ambiental estratégica e a possibilidade de contribuição no estatuto da cidade. In: GARCIA, Denise Schmitt Siqueira; DANTAS, Marcelo Buzaglo; SOUZA, Maria Cláudia Da Silva Antunes de (Orgs). **Governança ambiental e sustentabilidade**. Itajaí: Univali, 2017. p. 81-119. Available at: <https://iuaca.ua.es/es/documentos/documentos/ebooks/ebook-gobernanza-ambiental-y-sostenibilidad.pdf>. Accessed on: 10 oct. 2020. p. 83.

For Dias<sup>35</sup>, such resilience could be defined as the capacity of ecological systems to cope with disturbances and to absorb shocks and, even so, maintain the function and structure. When it comes to the existence of an imminent threat of scarcity and degradation of water resources, it characterizes the need for changes in the traditional ways of managing water policies, through the incorporation of concerns specific to sustainable development.

Since then, the consideration of sustainability principles has become a new paradigm for managing environmental policies, including water. The incorporation of concerns implied an evolution in management, which would now be based on broad policies, effective institutional arrangements, and incentives for efficient and sustainable use of water for various purposes<sup>36</sup>.

Sustainable management should focus on the development of water resources, in response to the growing demand for water by communities and industries, different projects and scales have been developed and managed to estimate their availability. Therefore, as the resource becomes scarcer (due to quantity or quality) there is a greater concern on how to use and protect it<sup>37</sup>.

At the social level, issues such as the supply of drinking water in municipal and rural systems, wastewater services, and sanitation, among others, have failed to reach the availability of the entire population, as well as the effective awareness that this resource is exhaustible. As a result, many countries struggle to shape fact-based water policy implementation, and water resources face inefficient allocation and poor investment patterns, as there is no consistent and economically rational basis for decision making. Even in countries with the most advanced water policies, there is still a long way to go, since a significant change in the management of water resources is essential in relation to sustainable consumption in order to benefit the world population<sup>38</sup>.

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<sup>35</sup> DIAS, Reinaldo. **Gestão ambiental**: responsabilidade social e sustentabilidade. São Paulo: Atlas, 2007.

<sup>36</sup> VARGAS, Éverton Vieira. Água e Relações Internacionais. **Revista Brasileira de Política Internacional**. Brasília, vol. 43. n. 1. Jan/June, 2000. Available at: [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0034-73292000000100010](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-73292000000100010). Accessed on: 10 oct. 2020.

<sup>37</sup> GHILARDI, Hilariane Teixeira. **Sustentabilidade da água**: um novo caminho. p. 233.

<sup>38</sup> MASS, Ana Paula Tavares. A necessidade da avaliação ambiental estratégica como instrumento de identificação prévia do limite de tolerabilidade do impacto ambiental. In: GARCIA, Denise Schmitt Siqueira; DANTAS, Marcelo Buzaglo; SOUZA, Maria Cláudia Da Silva Antunes

The complexity of water management and the existence of different realities in which it is widespread at the international, national and regional levels for the intangibility of biodiversity, obeying the primacy of environmental law, whose coordinated approach so that sustainable development is protected, forming the basis of protection, maintenance and recognition of the right to protection, sustainable consumption and the availability of water, considering historical, social, cultural, economic, political aspects, transnational issues, with a view to future generations, whose possibility and / or need for foundation of one or more public spaces for governance, regulation and intervention, whose control and functioning mechanisms are submitted to transnationalized societies<sup>39</sup>.

In this sense, the management of drinking water distribution should be extended, covering, for example, spiritual and cultural aspects of water, the management of transboundary basins, fishing and aquaculture, the release of nutrients and sediments in estuaries and coastal zones and ecological restoration of the natural watercourse<sup>40</sup>.

Achieve a balanced, integrated, and consensual use between social, environmental and economic needs, and, in view of the scarcity, demands and vulnerability of the resource, promote social equity, guaranteeing to all people the basic right to water in quantity and quality.

For Moura, while states still occupy a prominent position in the regulation of environmental resources, they increasingly share the responsibility for environmental governance and the use of treaties as the primary mechanism for international cooperation, complemented by approaches to the creation and implementation of global norms, such as trans governmental networks, epistemic communities, and the extraterritorial application of laws<sup>41</sup>.

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de (Orgs). **Governança ambiental e sustentabilidade**. Itajaí: Univali, 2017.p.134-149. Available at: <https://iuaca.ua.es/es/documentos/documentos/ebooks/ebook-gobernanza-ambiental-y-sostenibilidad.pdf>. Accessed on: 10 oct. 2020. p. 134.

<sup>39</sup> D'ISEP, Clarissa Ferreira Macedo. **Água juridicamente sustentável**. São Paulo: Revista dos Tribunais, 2010.

<sup>40</sup> MILARÉ, Édís. **Direito do ambiente: a gestão ambiental em foco: doutrina, jurisprudência, glossário**. 7. ed. São Paulo: Revista dos Tribunais, 2011.

<sup>41</sup> MOURA, Adriana Maria Magalhães de (Org.). **Governança ambiental no Brasil: instituições, atores e políticas públicas**. Brasília: Ipea, 2016. Available at: [https://www.ipea.gov.br/portal/images/stories/PDFs/livros/livros/160719\\_governanca\\_ambiental.pdf](https://www.ipea.gov.br/portal/images/stories/PDFs/livros/livros/160719_governanca_ambiental.pdf). Accessed on: 10 oct. 2020. p.352.

Even where treaties form the basis of environmental cooperation, they are in their nature more regulatory, in the sense that their structure may include rules and guidelines for environmental governance requiring a form of legitimation that is not inextricably linked to territorial boundaries or political structures, and this legitimacy must be based on both procedural and substantive rules and the formulation of environmental policies<sup>42</sup>.

Ulrich Beck<sup>43</sup> elucidates by mentioning that, theoretically, transnationalism in environmental governance stems from the very nature of environmental problems, in which regulated entities are mostly private companies, and regulatory beneficiaries are individuals and groups. In environmental matters, it is concerned with a greater density of transnational interactions and that consistent forms of environmental governance and their protection can go beyond the purely consensual model of drafting treaties commonly under international law.

Along these lines, for Cruz and Bodnar<sup>44</sup>, compliance arises when legal rationality, in the case of states and internalization can lead to a variety of ways in which legislation should ensure inclusive participation, making government institutions more effective, responsive, and accountable, and respecting the rules and principles of the rule of law, other states and international organizations, for the purpose of universal environmental sustainability.

Thus, according to Dantas, Souza and Pilau Sobrinho, it is possible to mention that many of the environmental challenges that the world faces are cross-border and must be faced through joint actions. The international system of environmental governance provides an important basis for addressing these types of common environmental challenges, and the past few decades have

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<sup>42</sup> STEPHANOU, João Jorge. **Gestão de resíduos sólidos**: um modelo integrado que gera benefícios econômicos, sociais e ambientais. Trabalho de Conclusão de curso de Especialização (Especialização em Econegócios e Gestão Socioambiental). Universidade Federal do Rio Grande do Sul. Porto Alegre, 2013. Available at: <https://www.lume.ufrgs.br/handle/10183/26749>. Accessed on: 10 oct. 2020.

<sup>43</sup> BECK, Ulrich. **Sociedade de risco**: rumo a uma outra modernidade. 2. ed. Tradução de Sebastião Nascimento. São Paulo: Editora 34, 2011.

<sup>44</sup> CRUZ, Paulo Márcio; BODNAR, Zenildo. **Globalização, transnacionalidade e sustentabilidade**.

witnessed a rapid development of the international system of environmental governance<sup>45</sup>.

According to Gabriel Ferrer<sup>46</sup>, on the road to sustainability there is a consonance for the harmony of the elements that make up society: the environmental, the social and the economic. This tripod unanimously forms an economically viable, fair and environmentally sustainable community. Therefore, it is essential that governance be the mainstay, enabling the articulation of the whole for the common good through a development model that meets the needs of the present population, guaranteeing natural resources and good quality of life for the future population.

In this perspective of governance, the State assumes responsibility and the posture of defense of the environment and of continuity of generations, constitutionally established competences, and attributions, thus the role of coordinating, conditioning strategies and commitment to the other actors of society through a national structure for integration of development and conservation, constituting a global alliance in the direction of effective sustainability.

Among the challenges related to water governance, there is a need for existing disarticulation between policies, plans and programs related to sectors that use water and, also, between water resource plans themselves.

The established concept of water scarcity enables the understanding that there is an idea of crisis, conferring on the absence of options and the indispensability of alternatives, whose management pattern requires a new form of governance on the globe, aimed at the common, responsible, and rational,

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<sup>45</sup> DANTAS, Marcelo Buzaglo; SOUZA, Maria Cláudia Da Silva Antunes de; PILAU SOBRINHO, Liton Lanes (Orgs.). **Transnacionalidade, direito ambiental e sustentabilidade**: contribuições para a discussão na sociedade hipercomplexa. Passo Fundo: Editora UPF, 2014. Available at: [http://editora.upf.br/images/ebook/transnacionalidade\\_direito\\_ambiental\\_e\\_sustentabilidade.pdf](http://editora.upf.br/images/ebook/transnacionalidade_direito_ambiental_e_sustentabilidade.pdf). Accessed on: 10 oct. 2020.

<sup>46</sup> FERRER, Gabriel Real. Sostenibilidad, transnacionalidad y transformaciones del Derecho. In: SOUZA, Maria Cláudia da Silva Antunes de; GARCIA, Denise Schmitt Siqueira (Orgs.). **Direito ambiental, transnacionalidade e sustentabilidade**. Itajaí: Univali, 2013. p.7-30. Available at: <https://www.univali.br/vida-no-campus/editora-univali/e-books/Documents/editora-univali/Direito%20Ambiental,%20Transnacionalidade%20e%20Sustentabilidade.pdf>. Accessed on: 10 oct. 2020.

employing technical-scientific measures, truly consolidating this essential element in an integrative way, improving the multiple uses<sup>47</sup>.

The lack of economic wisdom in water management according to Pedro Arrojo, can be understood by the lack of economic judgment of the serious social and territorial impacts, and the administrative and bureaucratic insufficiency, demonstrated in the statements of public policies, methodological, hermetic, and centralized in management of the waters<sup>48</sup>.

New approaches to participatory management can supply the classic examples of technocratic management allowing effective sustainable management and no longer inefficient for the available resources. In particular, regarding the supply and access of drinking water, it must be considered under the extension of the globalization policy, driven by a transnational management model, which concerns the search for solutions to face the consequences of the effects of global changes in resources hydric<sup>49</sup>.

What is currently characterized as the global water management crisis is in fact the convergence of unsustainability, depredation, and exploitation of ecosystems; inequalities in all senses, and the crisis of democratic governance of basic services based on a paradigm of domination of nature, without the essential approach and the abusive extraction of water or even the systematic contamination of water resources.

### **3. Water Management and Governance Challenges**

The global water crisis has been recognized, in part as an extension of the governance, management crisis and the absence of discussions on the new challenges arising from global warming and, consequently, water scarcity<sup>50</sup>. Thus, considering water governance, this issue is part of provisions aimed at

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<sup>47</sup> VOSSOLE, Jonas Van; CASTRO, Irina. Narrativas divergentes sobre a democracia no conflito social português: o caso da privatização da água. In: ARAGÃO, Alexandra; BESTER, Gisela Maria; HILÁRIO, Gloriete Marques Alves (Coords.). **Direito e ambiente para uma democracia sustentável: diálogos multidisciplinares entre Portugal e Brasil**. Curitiba: Instituto Memória, 2015. p. 468-492. p. 479.

<sup>48</sup> AGUDO, Pedro Arrojo. **El reto ético de la nueva cultura del agua**. Barcelona: Paidós, 2006. p. 49-57.

<sup>49</sup> AGUDO, Pedro Arrojo. **El reto ético de la nueva cultura del agua**. p. 75.

<sup>50</sup> GLOBAL WATER PARTNERSHIP (GWP). **Introducing effective water governance**. GWP Technical Paper. Stockholm: Global Water Partnership, 2002.

administration and public policies, inclining to demand initiatives, local, national and international <sup>51</sup>.

In this way, the legal framework and the progress made for water governance are still major challenges to be overcome regarding the objective of transnational management. These challenges refer to the connection between water management and the environment; relationship of quantity and quality of water; connection of the management of surface and underground water resources, as well as their use; and, above all, the way that water resources policies should be associated with sectoral policies<sup>52</sup>.

Another important challenge concerns the need to adapt water resources legislation to the reality of nations, since there is little synergy between different countries. This fact refers to one of the major concerns regarding the integrated management of water resources (Figure 1), that is, the asymmetry and how to determine an institutionality and guaranteed access to water on an equal basis.<sup>53</sup>

It is conceived that, although there is recognition that the process of implementing public policies can come from cooperation, there is relative consensus on the need for arguments aimed at socioeconomic development and social cohesion of different nations<sup>54</sup>.

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<sup>51</sup> JACOBI, Pedro Roberto. et al. Governança da água no Brasil: dinâmica da política nacional e desafios para o futuro. In: JACOBI, Pedro Roberto; SINISGALLI, Paulo de Almeida (Orgs.). **Governança da água e políticas públicas na América Latina e Europa**. v.1. São Paulo: Annablume, 2009. p. 49-82.

<sup>52</sup> FERRER, Gabriel Real. Sostenibilidad, transnacionalidad y transformaciones del Derecho.

<sup>53</sup> GARCIA, Denise Schmitt Siqueira; SOARES, Wilson Deschamps. Águas subterrâneas: uma análise jurídica do Brasil. p. 32.

<sup>54</sup> GHILARDI, Hilariane Teixeira. Sustentabilidade da água: um novo caminho. p. 234.

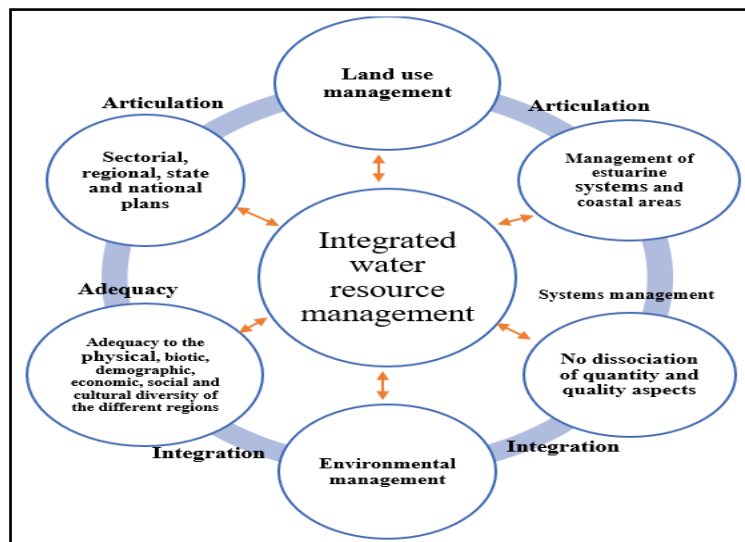


Figure 1: Integrated management of water resources.  
Source: National Water Agency- ANA- Brazil (2019).

On the other hand, transnational governance of water resources is an indispensable element for sustainable development, essentially the ability of the government and other political actors to manage the systemic objective of democracy, the market and equality. In this way, nuances and multiplicities in governance performance need to be analyzed, especially the disparities of democracies that exist on the planet. In general, the *Organización de Cooperación y Desarrollo Económico* (OECD)<sup>55</sup> represents more consistent cooperation initiatives in the transnational scope of water governance (Figure 2) corresponding to the strategic dimension of principles, planning, objectives and goals to the programmatic functional characterization related to water governance<sup>56</sup>.

<sup>55</sup> OECD. **About**. Available at: <http://www.oecd.org>. Accessed on: 10 oct. 2020.

<sup>56</sup> DANTAS, Marcelo Buzaglo; SOUZA, Maria Cláudia Da Silva Antunes de (Orgs). **Governança ambiental e sustentabilidade**.p. 843.

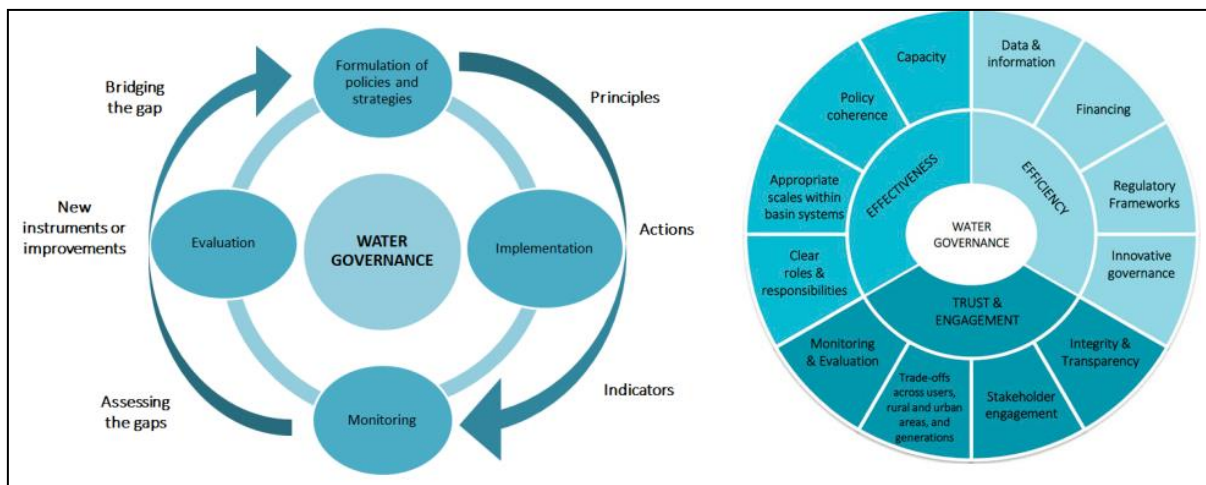


Figure 2: Water governance.  
Source: OCDE (2015).

Thus, although significant guidelines have been presented to describe objectives, goals and initiatives linked to management, it is understood that there is still an insufficiency of an instrument for the correspondence of public policies instituted in the analysis of governance and sustainability of the water resources system.

In this attempt, it is slow to say that the governance of water resources is an essential topic at the transactional level, with emphasis on its applicability in the management of transboundary water resources. Currently, the form of governance of this very precious and necessary resource is categorical, and it is asked how it will be possible to manage water in order to avoid conflicts, inevitably involving an indispensable hydrodiplomacy. As Philip Jessup explains<sup>57</sup>:

The use of Transnational Law would provide a more abundant source of rules to be guided by and it would be unnecessary to ask in certain cases whether it is Public or Private Law that should apply. We can find that some of the problems that we considered to be essentially international and inevitably generate violence and conflicts between governments and peoples of two different countries are, after all, simply human problems that could arise at any level of human society - individual, community, interregional, or international.

<sup>57</sup> JESSUP, Philip. C. **Direito Transnacional**. p. 21-22.

Thus, it becomes a great challenge to think of water not as a property of sovereign nations, but as a common good, as an eminently humanitarian issue.

Water management needs to integrate ecology and economics, engineering, and social sciences, to achieve long-term, that is, sustainable solutions. These are values that, when formulating policies, namely in diagnosing and overcoming governance challenges, must include inclusion, equality, popular control, transparency, responsibility, deliberation, or anything else. These values must be pursued in different institutional locations by various actors in an ongoing process. In this thought, political equality, participation, and representation as key values, through the search for responsibility, deliberation and contestation in different spaces, in which global legal orders really allow these values to come to the fore<sup>58</sup>.

In all this process, according to Souza, the effectiveness on water as an element of transnational treatment is a matter of concern in the debate among experts, a fact that culminated in international conventions, treaties and forums concerning the protection of underground aquifers, fully recognized, determining, the commitment of States to ensure, conditioning their sovereignty (previously absolute) in the form of consolidating the effective recognition that water is vital for the survival of living beings<sup>59</sup>.

The structural change identified in recent decades refers to a set of adjusted aspects, involving both the forms of production and management, the nature and role of the State, and new parameters of articulation and organization. Development is associated with countries that choose prosperity when organizing their policies, laws, and institutions on the basis of productivity and diversification, recognizing and respecting the morality of rights and because human beings themselves are an integral part of nature. In short, explains Bosselmann, humanity's interests and duties are inseparable from environmental protection<sup>60</sup>.

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<sup>58</sup> DE BURCA, Grainne. Developing democracy beyond the state. **Columbia Journal of Transnational Law**, v. 46, n. 2, p. 101–158. 2008. p. 101-102.

<sup>59</sup>SOUZA, Maria Cláudia da Silva Antunes de; GHILARD, Hilariane Teixeira. O instrumento da avaliação ambiental estratégica e a possibilidade de contribuição no estatuto da cidade. p. 84.

<sup>60</sup>BOSELLEMAN, Klaus. **The principle of sustainability**: transforming law and governance. p. 164.

Therefore, it is essential, in view of the current and future challenges of water governance, to require stronger public policies, willing to measure real and effective sustainability objectives based on shared responsibility, between different levels of government, civil society, companies. In this way, expanding actions and knowledge aimed at carrying out justice and rationality alongside political decision makers in the face of ecological sustainability, so that the economic, social, and environmental benefits of good water governance are reaped<sup>61</sup>.

According to Bauman's teachings, it is recognized that governance is highly contextual, that public policies must be adapted to different water resources and territories, and that governance models have to adapt to changing circumstances. Likewise, due to the mutual dependence on planetary dimensions, good governance<sup>62</sup> must be based on legitimacy, transparency, accountability, human rights, rule of law and inclusiveness<sup>63</sup>. Bauman still clarifies by corroborating that the logic of planetary responsibility is geared, at least in principle, to take the problems generated globally and face them at point-blank range - at his own level<sup>64</sup>.

As such, water governance should be considered as a means to an end and not as an end in itself, that is, a set of precepts, policies, institutional and administrative, in addition to practices and processes (formal and informal) through which decisions are made and practiced, in the collective interest of improving the governance systems that make it possible to manage water when it is "too abundant", "too scarce" or "too polluted", unified and inclusive, in a sustainable way.

Governance is considered to allow the main water challenges to be deliberated using a combination of "bottom-up" and "top-down" coordination processes and promoting constructive inclusions between the State and society, between society and the State and between nations. Governance is bad if it

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<sup>61</sup> BOSSELMANN, Klaus. **The principle of sustainability**: transforming law and governance. p. 36-37.

<sup>62</sup> BAUMAN, Zygmunt. **A ética é possível num mundo de consumidores?** Tradução de Alexandre Werneck. Rio de Janeiro: Zahar, 2011. p. 32-33

<sup>63</sup> MASS, Ana Paula Tavares. A necessidade da avaliação ambiental estratégica como instrumento de identificação prévia do limite de tolerabilidade do impacto ambiental. p. 1354.

<sup>64</sup> BAUMAN, Zygmunt. **A ética é possível num mundo de consumidores?** p. 35.

generates unnecessary transaction costs and does not respond to the real needs of each territory. With that, Bauman stands out by citing that, whatever the meaning of “globalization”, it means that we are all dependent on each other. Distances matter little now. Anything that happens locally can have global consequences<sup>65</sup>.

Whatever their constitutional and social systems, in the quest for quality of life for all peoples, Gudynas<sup>66</sup> first describes that:

The recognition of Nature as a subject of rights, and the possible changes in environmental policy and management from a biocentric perspective, are closely associated with questions of justice, a complex concept that refers to different fields and in different senses. It is abundant that it is invoked when it denounces the breach of legal norms of environmental protection. In this sense, it is aimed at justice embodied in the judiciary, as a system that guarantees the fulfillment of rights and obligations. It also appears in another sense, when it is alerted about the injustice of allowing, for example, the disappearance of a wild site, beyond that it is not prevented by a legal norm. In turn, these and other senses superimpose the idea of justice on the field of morality, in which the virtue of being just is even defended.

It is accepted, and it is necessary to create necessary conditions for maintenance and international protection of water as the object of an emerging direction that permeates territoriality. From that point, there arises or an understanding that water can relate to no external sphere from the cooperation between the poor, a transnational Directorate located not a global legal framework, from the recognition of Water as a human direction.<sup>67</sup>. For this reason, he was taught that he was unaware that the water was the common property of all nations and that its governance was cumulated with the management of two water resources that had to be considered globally, whether they were challenged.

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<sup>65</sup> BAUMAN, Zygmunt. **A ética é possível num mundo de consumidores?** p. 77-78.

<sup>66</sup> GUDYNAS, Eduardo. **Derechos de la Naturaleza: ética biocéntrica y políticas ambientales**. Lima: Claes, 2014. Available at: <http://gudynas.com/wp-content/uploads/GudynasDerechosNaturalezaLima14r.pdf>. Accessed on: 10 oct. 2020. p.135.

<sup>67</sup> TOMAZ, Roberto Epifanio. **A possibilidade e a necessidade do direito empresarial transnacional**. Tese (Programa de Doutorado em Ciência Jurídica. Constitucionalismo, Transnacionalidade e Produção do Direito). Universidade do Vale do Itajaí. Itajaí, 2015. Available at: <https://www.univali.br/Lists/TrabalhosDoutorado/Attachments/70/TESE%20-%20Roberto%20Epifanio%20Tomaz%20-%20Dupla.pdf>. Accessed on: 10 oct. 2020. p. 61.

## **Final Considerations**

Regardless of the proposed path, some common premises are present in these discussions of water resources management and water governance. In addition to the search for fair governance, whether through transparency, integrity, accountability, participation and looking at issues of gender, poverty, socio-environmental justice and ethics, other “ingredients”, such as collaboration, cooperation, trust and learning are essential.

In the present study, it was possible to briefly analyze Transnational Law and its necessary relationship with Sustainability as a Paradigm, from the perspective of a shared, transnationally cooperated environmental management of waters. Culminating with the conclusion that sustainability is a guiding principle for the forms of management and governance of vital natural resources in common use by humanity, such as water as a transnational element.

Notably when addressing Transnational Environmental Management, it was realized that governance for equitable water allocation is linked to a decentralized regime without strengthening competence at the subnational level. In its multiple approaches, it instrumentalizes the inefficiency of physical, economic access, quantity, and quality of water for society in its majority. This condition is the result of exogenous, socioeconomic, demographic, and cultural aspects, arising from the continued presence of market water treatment, lack of strategic planning and management, and the many existing challenges to ensure adequate access.

In addition, water governance systems are dispersed at different levels and scales, and the challenge is to coordinate efforts, avoid dysfunctions and move towards a system based on trust between multiple actors. It is clear, above all, that there is no ideal “model” of governance.

Thus, motivating knowledge related to the area of environmental and legal science, as a basic condition for social intervention in the supreme appreciation of the condition of human life, as well as, an adequate management of water resources and good water governance, aimed at the realization of sustainable transnationality, to the needs of the different nations, so that allied to the public power can make effective decisions in terms of public policies for the protection

and conservation of the environment, we will be moving towards a possible sustainable development.

The relevance of water resources in international geopolitics is no longer a matter of choice, since climatic factors and excessive demands are pressing the international community every day, to articulate cooperation. Although the panorama of competition for water resources is what is identified, which corroborates the growing need for instruments of Transnational Law, which through treaties and conventions, bilateral or multilateral, seeks a governance of water resources with the aim of primary purposes are sustainability and intergenerational justice. Finally, it is expected that the reflections presented here are constructive with regard to the construction of Transnational Law for water management and governance systems.

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