Chapter 47

Water governance as an instrument of democratization: reflections on the shared management of water resources in Brazil

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1 INTRODUCTION

Recent changes in society continue to call into question the ability of core states to manage increasingly complex development issues on their own. Water governance remains a critical issue, as it involves determining the roles and responsibilities of different interests – public, civil, and private – in the management and development of water resources, analyzing the balance of power and actions at different levels of authority. Water governance must be readapted and translated specifically into political systems, laws, regulations, institutions, financial mechanisms, civil society development, and consumer rights. It must go beyond the traditional public sector and market-oriented sectors of governance, seeking coordinated schemes in which new, more dynamic relationships emerge between different participants and stakeholders (Sandoval, 2007).

In recognition of the importance of water, the United Nations (UN) 2030 Agenda for Sustainable Development includes target 6, which aims to "ensure the availability and sustainable management of water and sanitation for all". The target highlights the need for an integrated approach to water, resource management, and development that recognizes the multiple competing demands on freshwater resources.

Water governance refers to the set of political, social, economic and administrative systems that are in place to develop and manage water resources, to deliver water services and implement solutions for improving water quality, at different levels of society (Sandoval, 2007; ANA, 2011a). It also includes a range of water-related topics, such as health, food security, economic development, land use and preservation of the ecological system on which water resources depend (UNDP, 2011).

The objective of this paper is to discuss water governance as a means of democratization and advances in the shared management of water resources. Through a literature review, the concept of water governance is presented and the development of environmental concern and water management is discussed. Although participatory management has increased in the country, seeking to resolve stakeholder problems and conflicts, there are still challenges to be overcome to reach effective agreements, both in terms of form and quality of decisions. In addition, the work offers an overview of the National Water Resources Management System and the creation of basin committees in Brazil.

This reflection on water governance and advances in the shared management of water resources considers this issue to be of paramount importance since water scarcity is an increasingly present reality throughout the world. Water governance, in turn, becomes an essential tool in the search for sustainable solutions for the management of water resources. With this, the work presented here seeks to contribute to the broadening of the debate and reflection on this theme that becomes increasingly relevant when discussing the survival conditions of many human groups and the maintenance of biodiversity on the planet.

2 WATER GOVERNANCE

As Amartya Sen (1999, p. 5) highlights, although democracy is still not universally practiced, nor even uniformly accepted, in the general climate of world opinion, democratic governance has already achieved the status of being understood as the most correct option. Democracy is a universal value, not because everyone agrees with it, but because it expresses a fundamental human right, which is to be able to have a say. It may allow, through the power, gives individuals and communities, some protection against exploitation and, finally, sharing experiences and thoughts can help us find solutions to complex problems (Chhotray and Stoker, 2009), such as access to water. According to Unesco (2015), unsustainable development choices and governance failures are causing enormous pressure on water resources, directly affecting their quality and availability.

Democracy demands space for governance and establishes conditions for the practice of governance. Thus, the emphasis of the concept is on discussion and decision-making processes, aimed at guaranteeing access to potable water, essential for a dignified human life. In 2010, the United Nations General Assembly declared clean and safe water and sanitation an essential human right for the full enjoyment of life and all other human rights (UN, 2010). And, for the management of this finite resource, cooperation and participation are key elements, which brings us to the concept of governance. In other words, the concept emphasizes the need to develop forms of political cooperation between all the actors involved with certain themes, obtaining not the imposition of a policy of one group on the others, but a common policy that meets, if not the totality, at least to the majority of the interests involved.

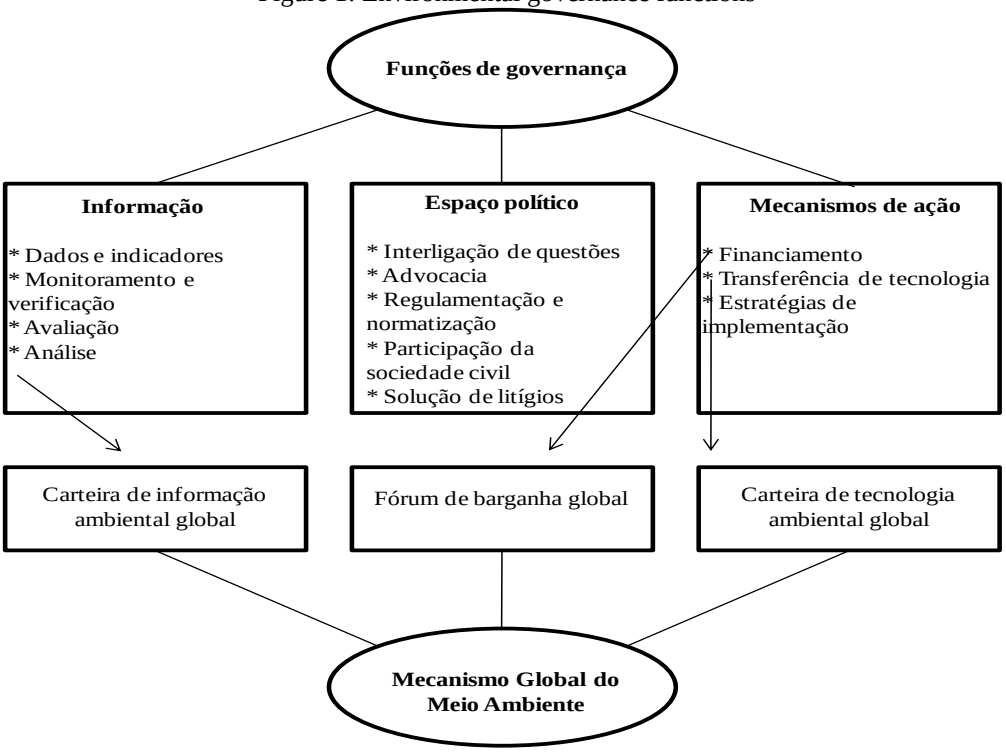
According to the analysis carried out by Chhotray and Stoker (2009, p.192) on environmental governance, the contemporary discourse on the subject can be understood from three focal points, which are: i) the nature of the environment and its governance as an issue "global"; ii) environmental governance

as a problem of collective action that raises institutional responses from states, markets and communities and iii) the tense governance dialogue between the developed world and the developing world. Among the three focal points observed by the authors, this work followed the second strand, that is, environmental governance is a problem of collective action that raises institutional responses from states, markets and communities. In other words, the ability to propose and implement protective measures for the conservation of this essential asset for survival depends on changes in governance, that is, in decision-making processes, institutions and the forms of participation of multiple actors.

According to Speth (2005), three directions for global governance can be highlighted. First, new institutions and new standard-setting procedures are needed at the international level. The second is to encourage initiatives from the bottom up, from non-governmental organizations (NGOs), the business community, local governments and other actors. Third, we need to tackle more directly the underlying causes of environmental degradation, such as population growth, poverty and underdevelopment, inadequate technologies, and the market's insistence on not charging environmentally friendly prices.

For Esty and Ivanova (2005), the conceptual basis underlying environmental problems are the notion of the public good. And, the nature of environmental problems requires new governance mechanisms that change incentives in favor of environmentally correct choices. For the authors, there are three major sets of critical functions for dealing with the global collective action problem (FIG.1: providing adequate information about immediate problems and about what or who is causing them; creating a forum for interaction for permanent bargaining and regulation, and the establishment of concrete mechanisms for the implementation of the deals and rules on which an agreement was closed.

Figure 1: Environmental governance functions



Source: Esty and Ivanova (2005)

The term environmental management has its roots in the Latin language. In its scope, it includes public health and territorial planning, whether urban or agricultural, to promote quality of life. The term can be defined as the act of managing the environment or administering “the natural and social ecosystems in which man is inserted”. Its objective is to establish, recover or maintain the balance between man and nature (PHILIPPI JÚNIOR; BRUNA, 2004, p. 700).

According to Jacobi (2009), governance is centered on the notion of social power that mediates relations between the State and civil society, as a space for building alliances and cooperation, but also permeated by conflicts that result from the impact of social asymmetries, forms of resistance, organization and participation of the various actors involved. The concept of governance, says Hollanda (2009), appears to complete the "empty of effectiveness in management" and planning of the public good, originated by the deficiency of human and financial resources, in addition to the fragility of environmental control. It proposes methodologies for strengthening communities to qualify them for participation in local decision-making processes. Likewise, the concept of water governance emerges as an opportunity to build new models for the exercise of local management

Along these lines, water governance deals with alternative institutional arrangements used in water management, to contribute to economic development and the well-being of populations. This includes creating management institutions, with trained technical personnel and permanent links; the creation of decision-making instances involving different levels of government and organizations in society; instances of articulation with the locations that suffer from the lack of water and civil defense organizations, among others.

The lack of good governance (including ineffective policies, poor enforcement, weak institutions, and corruption), lack of adequate infrastructure, and scarcity of new investments to build human resources contribute to the spread of water quality problems. Therefore, water pollution and scarcity are, to a large extent, social and political challenges and how people, as part of a collective society, manage water resources and the associated benefits (ANA, 2011).

According to Jacobi (2009), governance, in water management, proposes alternative theoretical and practical paths that make a real connection between social demands and their dialogue at the government level. In this sense, therefore, it can be emphasized that the concept of governance encompasses more than institutional aspects, such as laws, norms and organizations. It also refers to government policies and actions, local initiatives and networks of influence, including international markets, the private sector and civil society, which are influenced by the political systems in which they are inserted.

As Sandoval (2007) points out, in addition to determining the roles and responsibilities of different interests – public, civil and private – in the management and development of water resources, it also involves analyzing the balance of power and actions at different levels of authority, which should be readapted, as well as financing mechanisms, civil society development and consumer rights. Governance of water resources, therefore, must go beyond the traditional public sector and market-driven sectors of

government, towards coordinated schemes in which new, more dynamic relationships emerge between different participants and stakeholders. Hence arises the concern with the involvement of civil society actors, such as social movements, NGOs, associations, etc. (SANDOVAL, 2007).

For Ribeiro (2009, p. 112), establishing a water governance pact in the country is essential, because "without it, new conflicts, such as the transposition of the São Francisco River, will arise and may gain more violent contours". It should be noted that Brazil has been facing significant challenges in the management of water resources, including the growing scarcity of water in some regions of the country and the contamination of water resources by industrial pollutants and pesticides. Although participatory management is growing in the country, seeking to solve problems, there is still a long way to go in achieving consensus, both in the form and in the quality of its decisions.

Participatory management is still a practice under development in Brazil, seeking solutions to these challenges. According to the National Water Agency (ANA, 2011), the efforts of the United Nations, other international organizations and NGOs are important to encourage the mobilization of political will around the world and address water quality problems. In addition, ANA provides technical and financial support to develop the necessary capacities and present effective solutions to the challenges of protecting water quality.

3 THE CONSTRUCTION OF THE WATER AGENDA IN BRAZIL

The Brazilian legislative history dealing with the theme of "Water" is quite old. Young (2004, p. 70) cites the Ordinances of the Kingdom, in the form of the Resolution of August 17, 1775; the Charter of November 27, 1804, and the Consolidation of Civil Laws by Teixeira de Freitas as institutes mentioned, in a few articles, legal norms referring to the protection of private waters. The waters were not subject to protection, but some kind of punishment was already foreseen for those who polluted them. The Penal Code of 1890 dealt with the protection of water. Article 162 provided, in case of "corrupting or defiling potable water for common or private use, making it impossible to drink or harmful to health. Penalty: cellular imprisonment from 1 (one) to 3 (three) years".

The economic crisis at the end of the 19th century and the beginning of the 20th century, centered on changing the economic model from agrarian to industrial, demanded greater use of electricity to generate wealth in the country. In this socioeconomic context, Law No. 1617 of December 30, 1906, was published, which, in its art. 35, item XX, defines

> order to organize the bases of the Rural and Forestry Code and of the Mining and Waters of the Republic, submitting them to the approval of the Congress in its next session, and, as well, the registration of the roads in traffic in the country and the rivers and waterfalls susceptible of application for public utility purposes, opening the necessary credits for this. (Brazil, 1916)

Teles and Vieira (2004, p.55) consider, as a starting point in this field, the presentation of the Water Code, by the federal government to the national congress, in 1907. Despite the referral, it was in the Civil Code of 1916 that the seas were inserted and the rivers as public goods, and of common use by the people, and constructions capable of polluting or making unusable for ordinary use, water from a well or source alien to them, pre-existing them (Brasil, 1916). The Civil Code, as stated by Young (2004, p. 70), "brought, literally, the concern with the protection of water resources and assigned the water regime to the norms of common law".

Despite these initiatives, only in 1934 did government actions in the field of environmental policies take effect. Among them, the first Forest Code (Decree nº 23.793, of January 23) established that national forests were goods of common interest to all inhabitants of the country, regulated forest exploitation and defined a series of infractions and penalties, as well as supervisory powers that aimed to guarantee the faithful fulfillment of the legal principles that aimed at the protection of nature. This code also created the Federal Forestry Council, whose attributions were to guide the competent authorities on the application of resources from the forestry fund, establishing in it also the duty to promote and ensure compliance with legislation, resolve omitted cases, as well as propose to the government its amendment or any alteration (BRASIL, 1934a).

Franco and Drummond (2009) mention that the holding of the first Brazilian Conference on Nature Protection was also a milestone for the environmental agenda in the country. The event was held between April 8 and 15, 1934, in the city of Rio de Janeiro, organized by the Sociedade dos Amigos das Árvores. According to the authors, the theme “protection of nature” became increasingly visible, contributing to the strengthening of the theme in other policies, such as specific legislation.

The Mining Code (Decree No. 24,642) and the Water Code (Decree No. 24,643) were instituted on the same day, on July 10, 1934 (BRASIL, 1934b; 1934c), establishing legislation controlling natural resources. The Water Code defined property rights for the use of water resources for supply, irrigation, navigation, industrial uses and energy production, and norms for protecting the quality of territorial waters.

At the time, the Water Code established a policy considered bold due to the principles contained therein, but which were not implemented. In this way, it regulated the appropriation of the resource at the national level, bearing in mind the need for industrialization. Yassuda (1993, p.14), when discussing the concession for the exploitation of hydroelectric energy from a watercourse, states, about the Water Code, that “in practice, due to omission of the multiple equations of water values, this management mechanism behaved as a legal instrument to assure the concessionaire company, allowing it to invest in the long term, with optimized planning of the electric sector.”

Campos and Vieira (1993 p.84), when criticizing the Water Code, point out that it was established “being largely inadequate for the conditions of the northeastern semi-arid region”, because, in addition to being almost entirely dedicated to using in the generation of electricity, "also defines points, based on the concept of navigability, that does not apply to intermittent rivers".

In the Constitution of the United States of Brazil, enacted on July 16, 1934, natural resources, including water and forests, were assumed to be a subject of Union domain and responsibility. In 1937, the first National Park in Brazil was created, located in the Mantiqueira mountain range, in the case of the Itatiaia National Park, which covers the municipalities of Itatiaia and Resende, in the state of Rio de Janeiro, and Bocaina de Minas and Itamonte, in the state of Minas Gerais, through Decree nº 1.713, of June 14 of that year (BRASIL, 1937).

The period that followed, after the second war, in Brazil, there was a deepening of the power sector's dominance over the waters of Brazilian rivers. In 1957, the provision of electricity services was regulated and, in 1961, Eletrobrás was founded. From 1964 onwards, with the advent of the military cycle, the centralization of the electricity sector intensified (Teles and Vieira, 2004, p.56). The model that Brazilian industrialization, in the period from 1967 to 1973, caused serious environmental problems. The negative impacts take on different forms, such as poverty, the generation of pollutants and the overexploitation and degradation of natural resources (SÁNCHES, 2008).

Until the 1970s, the management of public sanitation services was largely exercised by the municipalities, through the Autonomous Water and Sewage Services (SAAE) which relied, in most cases, on technical and financial support from the National Health Foundation (Funasa), a federal body. This is how it happened with the electricity sector. With the advent of the centralized model of public policies, the National Plan for Basic Sanitation (Planasa) was created in 1971, which came to represent the definitive form of intervention by the federal government in the management of the sanitation service and adopted the Companies State Basic Sanitation Companies (CESB), which began to manage water and sewage services through concession contracts in most Brazilian municipalities. (Barbosa, 2008, p.5-6)

At the international level, in the 1970s, the governments of developed countries created environmental laws as a result of their awareness of the damage caused by the intense post-war industrialization process. In Brazil, emphasis was placed on the construction of large-scale hydroelectric plants, which require huge dams and the formation of extensive lakes (Teles and Vieira, 2004, p.56). The position of the Brazilian government in defense of the development model was criticized during the Stockholm Conference, in 1972. And due to a diplomatic necessity, the Special Secretariat for the Environment was created, through Decree 73,030, of October 30, 1973. creation of this secretariat had the prerogative to promote the conservation of the environment and rational use of natural resources.

From the 1970s onwards, interest in issues related to environmental issues increased among the "technical and academic, governmental and political communities, and a dynamic process of debates and studies began to take place in the country", including in the area of water resources management. The change in the behavior of the Brazilian government came as a result of pressure from international banks, which began to require environmental impact studies to finance projects, from international environmentalist societies, such as the World Wildlife Foundation (WWF) and NGOs, which began to demand decision-making about the protection of the environment (Luchini, 2000, p.127).

In 1976, the agreement established between the Ministry of Mines and Energy and the Government of the State of São Paulo, aimed at improving the sanitary conditions of the Alto Tietê and Cubatão basins, resulted in the creation of the Special Committee for Integrated Studies of Hydrographic Basins (CEEIBH), in 1978 (ANA, 2002, p.12). The CEEIBH had the task of classifying the Union's watercourses, in addition to carrying out studies and monitoring the rational use of water resources in the hydrographic basins of federal rivers, to obtain the multiple uses of each one and minimize the harmful consequences to the ecology of the region (Bursztyn and Assunção Neta, 2001). He was also involved in the creation of executive committees in several hydrographic basins of rivers under Union jurisdiction, such as the Paraíba do Sul and São Francisco. These committees had advisory attributions, which made it difficult to implement their decisions, and only government agencies participated in them.

On June 25, 1979, the National Irrigation Policy, Law No. 6662, was sanctioned, to rationally use water and soil resources for the implementation and development of irrigated agriculture. In the early 1980s, the technical sectors of the government, largely located in the Ministry of Mines and Energy, contributed to include, among the guidelines established in the III National Development Plan for the years 1980 to 1985, the decision that "the Government should sponsor the establishment of a National Water Resources Policy". (ANA, 2002, p.12)

Subsequently, the National Environmental Policy was instituted, Law 6938/81, establishing instruments aimed at environmental management and the effective application of the user/polluter pays principle. This policy included important mandatory control and inspection instruments for the use of environmental goods, such as the environmental impact study, becoming a milestone in the modification of the mechanisms for managing the country's natural resources. (Young, 2004, p.71)

In 1983, the last year of a period of scarce rainfall (1979-1983), the government of Ceará created a working group to formulate a new public policy on water resources, a process that resulted, in 1987, in the implementation of an institutional system, composed by the Secretariat of Water Resources of Ceará, by the Superintendence of Hydraulic Works and by the Cearense Foundation of Meteorology and Water Resources.

From 1985 onwards, discussions around the decentralization of public policies in Brazil became frequent. Centralized models were questioned, such as Planasa, which no longer suited the process of decentralization and democratization that was taking hold in the country (Barbosa, 2008, p. 6). Then, CONAMA Resolution 020/86 was created, establishing, for the Brazilian territory, five classes of predominant use for fresh water, two classes for brackish waters and two classes for salt pans, setting limits and qualitative conditions for each class. The purpose of framing water courses into classes or categories of uses is to establish the level of quality (or class) to be achieved and/or maintained in a water body (Young, 2004, p.71).

In 1986, the Ministry of Mines and Energy created a working group, with the participation of federal and state bodies and entities, to propose the organization of a water resources management system. The

final report recommended the creation of a national system and the communication, to the states, territories and the Federal District, of the need to establish similar systems. (ANA, 2002, p.13). Campos and Vieira (1993 p.83) highlighted that in Brazil the management of water resources was being the center of many discussions, contributing for the subject to be contemplated in the Constitution.

The 1988 Federal Constitution also represented a milestone in the history of water resources legislation, by modifying the ownership of water and including it among public domain goods. The Constitution, in its article 21, item XIX, established that the federal government should institute a national system of management of water resources and define criteria for granting rights of its use. The Constitution also divided the domain of water between states and the Union, establishing a new decentralized system (Brasil, 1988).

According to Lahóz et al (2007), in the late 1980s and early 1990s, the first inter-municipal consortia (agreements signed between municipalities) were created for the management of water resources and the environment. “Among them, the Consortia stood out: Piracicaba and Capivari (SP), ABC (SP), Rio Sorocaba (SP) and Santa Maria and Jucu (ES)”. According to the authors, the consortia, in their regions and states, began to develop an important contribution aimed at implementing the management of water resources and the environment in the country. Such consortia worked on basic awareness, involving society and establishing a direct dialogue with government agencies and promoting debates on legislation relevant to the sector.

The state of Espírito Santo was one of the precursors in the management of water resources in the country, being the first to constitute, in 1987, the Intermunicipal Consortium Santa Maria/Jucu, to facilitate the negotiation between users, in a dry period and, therefore, with difficulties in managing their conflicts (Porto and Porto, 2008; ANA, 2002). However, it was only on December 30, 1998, that the state instituted its State Water Resources Policy and the State Water Resources Council, Law No. 5818, incorporating the precepts of the Federal Water Resources Law.

The first basin committees appeared in the state of Rio Grande do Sul, with the creation of the basin committees of the Sinos rivers (in 1988) and Gravataí rivers (in 1989). Although they only emerged with advisory attributions, the great mobilization made them productive and, later, incorporated into the management system of that state. However, the Water Resources Policy in this state was only established in 1994, by State Law No. 10,350 (12/30/1994) (Rio Grande do Sul, 2020).

In 1989, the Intermunicipal Consortium of the Piracicaba and Capivari River Basins was formed, to promote the environmental recovery of the rivers, regional integration, and planning for the development of the basin. This initiative consolidates an innovative vision, born within the scope of local administrations and increasing the participation of civil society in the decision-making process in water resources. (ANA, 2002, p.20)

For Cavalcanti (1994, p.3), about the formulation of a national water resources policy, measures aimed at putting it into effect within the recommendations produced by international specialists, since 1983, were outlined by a working group created through the Decree at 99,400 (Cavalcanti, 1994, p.3).

Although the author states that such a group was created in 1991, it can be seen from the publication in the Diário da Câmara dos Deputados (1991, p.35) and from the decree itself, that it was established on July 18, 1990, by the then president Fernando Collor. The working group, under the coordination of the Secretariat for Strategic Affairs of the Presidency of the Republic, is composed of representatives of the ministries of the Navy, Foreign Affairs, Health, Economy, Finance and Planning, Agriculture and Agrarian Reform, Infrastructure and Social Action, and the secretariats for Science and Technology, the Environment, Regional Development and Strategic Affairs, had a period of 120 days to study the management and administration of water resources at the national level and propose measures aimed at establishing the National Water Resources Policy (Brazil, 1990).

This process gave rise to Bill No. 2,249/91. (Lanna and Dorfman, 1993: 66; Cavalcanti, 1994:3; Luchini, 2000, p.127, ANA, 2002, p.21). Although some authors claim that the project was sent to Congress in January, it is clear from the publication in the Diário do Congresso Nacional, on December 3, 1991, that the referral took place on November 14, 1991, and its presentation only on the 2nd of December of that year. The project provided for the National Water Resources Policy, and the creation of the National Water Resources System, in addition to other measures (Brasil, 1991).

The state of São Paulo was the first Brazilian state to issue a water resources policy, through Law No. 7663, of December 30, 1991. According to Lanna and Dorfman (1993, p. 66), the project proposal of the law of the state of São Paulo originated in its State Water Resources Council, "created with the task of proposing a water resources system. This council was structured into work units, one of which was the System Technical Group, in charge of proposing the aforementioned system." Regulated by Decree No. 36,787, of May 1993, the Integrated Water Resources Management System of the State of São Paulo (SIGRH) aims at executing the state water resources policy and formulating, updating and applying the State Resources Plan (PERH), bringing together state and municipal agencies and civil society organizations. Granja and Warner (2006, p. 1101). Although the state was based on constitutional principles, it left aspects such as charging mechanisms unregulated.

Ceará was the second state to edit its policy on July 24, 1992, through Law No. 11,996. The constitution and operationalization of the management of surface and underground water supply in this state came to fruition with the creation of the Water Resources Management Company (COGERH), in 1993. It is worth highlighting the pioneering experience of COGERH in initiating the collection process of raw water in urban areas for the industrial and public supply sectors. The funds collected are used to run the management system itself, applied by COGERH itself (Ceará, 2020; Abers and Jorge, 2005).

Minas Gerais also took precedence over the creation of the National Water Resources Policy and the legal developments, directly linked and linked to it, which would later occur throughout the country,

instituting Law No. 11,504/94. This Law provided for the PERH, guiding the elaboration of the State Water Resources Plan, charging for the use of water resources and the composition of the State Water Resources Management System, among others (Minas Gerais, 1994).

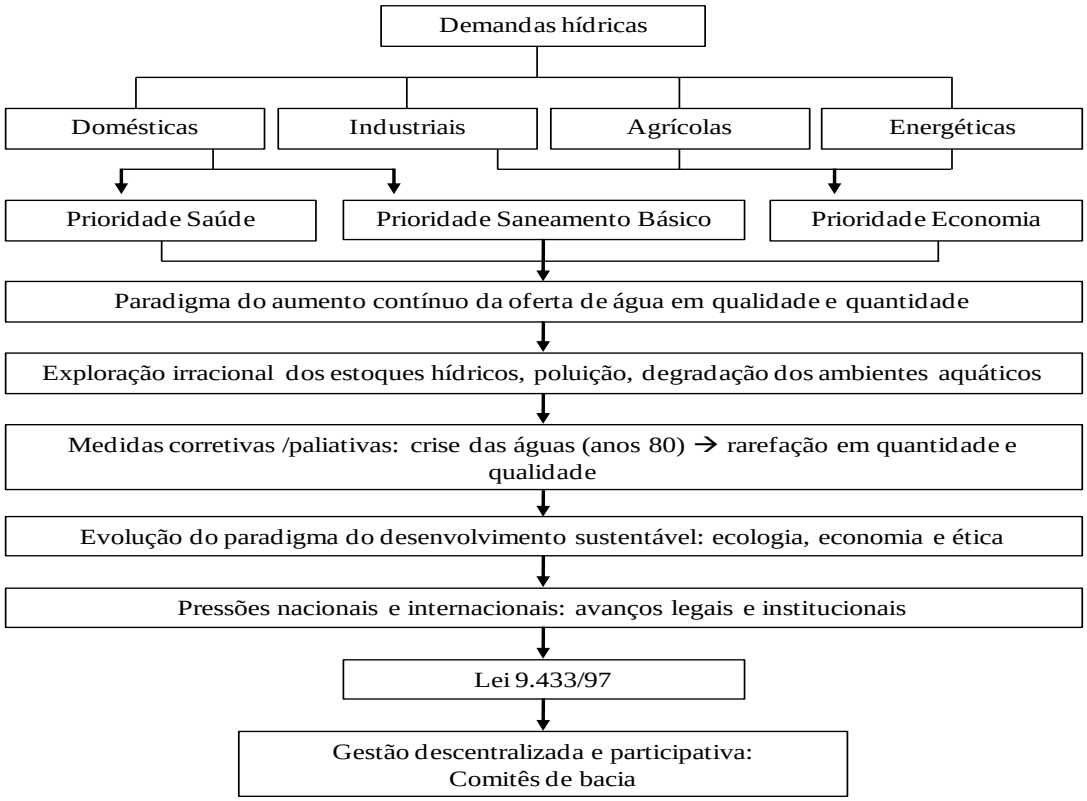
During the Bill of Law, negotiations between states and the federal government allowed the publication of Federal Decree no. those that existed until then. (ANA, 2002, p.23). The Committee for Integration of the Paraíba do Sul River Basin (CEIVAP), created by Federal Decree No. 1,842, of March 22, 1996, was installed on December 18, 1997. The Committee is the result of experience, through the agreement of technical cooperation established with France, for the integrated management of the Rio Doce Hydrographic Basin, later suspended, but which gave rise to initiatives such as the one that gave rise to CEIVAP. (Young, 2004, p. 78)

4 THE LAW OF THE WATER

On January 8, 1997, Law nº 9.433/97 was sanctioned by then President Fernando Henrique Cardoso, which instituted the National Water Resources Policy (Water Law), whose main objective was to ensure the availability of water with adequate quality standards. to the respective uses, seeking prevention and sustainable development through the rational and integrated use of water resources. Some of its principles were: i) the recognition of water as good in the public domain, to ensure that current and future generations have the necessary availability of water, with adequate quality standards for their respective uses; ii) consider water as a finite and vulnerable resource, endowed with economic value, which requires a rational and integrated use of water resources with a view to sustainable development; iii) the adoption of the hydrographic basin as a planning unit, aiming at adapting the management of water resources to the physical, biotic, demographic, economic, social and cultural diversity of each region and iv) the adoption of decentralized and participatory management, for the articulation of water resources planning with user sectors and with regional, state and national planning (BRASIL, 1997).

By recognizing the hydrographic basin as a planning and management unit, the legislation established a participatory policy, with a decision-making process that involves different economic and social agents linked to water use, in a context that includes a new vision of the powers of the State and users (Cardoso, 2008).

Figure 2: Basis of legal and institutional reform of the water management system in Brazil.



Source: Magalhães Júnior (2010, p.135)

Cavalcanti and Cavalcanti (1998) recognized as being challenges to the implementation of the proposed new institutional dynamics, "not only on the preexisting institutional and organizational modeling but also on the beliefs, uses and customs of the management of the water resource in Brazil". This is due, still according to the authors, to the expansion and change in the institutional basis of the decision and the shift of power over the management of the resource in the period. The creation of the Water Resources Secretariat, placing it as the central management body at the federal level, left the "newly created National Electric Energy Agency (Aneel), a substitute for the defunct National Electric Energy Department (Dnaee) of the Ministry of Mines. and Energy, the regulatory role of a strictly sectoral nature, in the new scenario of privatization of energy companies" (Cavalcanti and Cavalcanti, 1998, p.89).

It should be remembered that Cavalcanti and Cavalcanti (1998), Young (2004, p. 78) and other authors, highlighted in the previous topic, drew attention to the fact that the electricity sector established and consolidated itself as a leader in the water sector.

They are part of the National Water Resources Management System, for the formulation and deliberation on water resources policies, the National Water Resources Council, the state water resources councils and the river basin committees. Also part of it is federal, state and municipal public authorities whose competencies are related to the management of water resources, and water agencies (which have the role of executive secretariats, and civil organizations of water resources in which the inter-municipal basin consortiums).

The CNRH is a collegiate body that develops rules for mediation between different water users. Having the competencies to analyze proposals for alteration of legislation about water resources; establish complementary guidelines for the implementation of the National Water Resources Policy; promote the articulation of water resources planning with national, regional, state and user sector planning. It must also arbitrate conflicts over water resources; deliberate on projects for the use of water resources whose repercussions go beyond the scope of the states in which they will be implemented; approving proposals for the institution of river basin committees. Also, establish general criteria for granting the right to use water resources and charging for their use; and approve the National Water Resources Plan and monitor its execution

The State Water Resources Council (CERH) is a central deliberative and normative body of the State Water Resources System, with the competence to establish the principles and guidelines of the State Water Resources Policy to be observed by the State Water Resources Plan and by the Master Plans for Hydrographic Basins. The CERH is also responsible for approving a proposal for the State Water Resources Plan, deciding conflicts between river basin committees and acting as an appeal body in the decisions of river basin committees.

As a result of the enactment of the Water Law, the National Water Agency (ANA) was created to implement the national water policy, aiming to regulate the use of water and ensure its sustainability (Law No. on the creation of the National Water Agency), was renamed in July 2020, is now called the National Water and Basic Sanitation Agency, following the new Brazilian Basic Sanitation framework. ANA has played a key role in managing water resources and supporting the development of basin committees, which are responsible for implementing water resource plans and promoting public participation in decision-making processes (ANA, 2021).

5 THE WATER BASINS

As established by the PNRH, the river basin committees are forums for decision-making within the river basins that are intended to act as a “Water Parliament”, that is, they are consultative and deliberative collegiate bodies for the management of water resources in the respective hydrographic scale. They are characterized by the decentralization of decision-making power, the integration of public and private actions and the participation of all social sectors. However, committees are not organized in the same way; they differ according to the laws that created them, local organizations, the territorial dimension of the basin, its location and whether they operate in a metropolitan basin or in a basin that encompasses smaller municipalities, among other peculiarities. Therefore, its operation has been provided with structures built according to these specificities.

Basin committees are State bodies and, within the scope of state river basins, are created by decree of the state governor. The decision to create a basin committee is a political act, and the constitution of

these collegiate bodies is closely related to the conjuncture of water resources policy at the national and state levels.

As established by the National Water Resources Policy, the main competencies of the basin committees, within the scope of their area of action, are highlighted below: i) promoting the debate on issues related to water resources and articulating the performance of intervening entities; ii) arbitrate, in the first administrative instance, conflicts related to water resources; iii) approve the water resources plan for the basin; iv) monitor the execution of the basin's water resources plan and suggest the necessary measures to meet its goals; vi) establish the charging mechanisms for the use of water resources and suggest the amounts to be charged and ix) establish criteria and promote the apportionment of cost of works of multiple uses, of common or collective interest.

Observing the attributions of the basin committees as potential spaces for innovation in the management of water resources, it is clear that the main attributions are related to planning, articulation and conflict management resulting from the scarcity or excess of water. Thus, the approval of the hydrographic basin water resources plan is carried out by the committee, defining rules for the use of water, such as grant priorities, operating conditions of reservoirs, and guidelines and criteria for charging for water use, among others. In this sense, the management of water resources must consider the risks associated with climate change more recurrently. However, low effectiveness is observed in the implementation of actions proposed in these plans, as well as committees that have not yet approved their plans. In some river basins, even after approval of charging for water use, few interventions have been implemented, among those planned. In addition, there is the very little alignment of basin plans in the programming and budget of state water resources management bodies, as observed by the OECD (2015).

The committees are composed of regular and alternate members, and their equal structure is constituted by the state public authorities whose territories are located, even if partially, in their respective areas of activity, in addition to the municipal public authorities, the water users in their area of activity. and representatives of water resources civil entities with proven performance in the basin. In the committees whose territories cover indigenous lands, representatives of the National Indian Foundation (Funai) must be included, as part of the representation of the Union and the indigenous communities residing there or with interests in the basin.

The formation of basin committees is considered one of the main strategies for the integrated and participatory management of water resources since it allows society to participate in decision-making about water use and the implementation of public policies aimed at managing water resources. water resources. As Braga (2020, p. 10) states, "basin committees are important instruments for managing water resources, as they represent a space for dialogue and negotiation between the different sectors involved in water management".

According to Ribeiro (2009), the analysis of a watershed necessarily refers to the use of the soil in its area, including subsoil, relief, fauna, flora and riverbeds as an integrating element, and must be evaluated

in the light of water replacement capacity. As land use is socially defined, there is no escaping the political dimension (Fracalanza, 2009). Therefore, watershed management requires the cooperation of all stakeholders in its scope. The greater its extension, the greater the complexity of this cooperation process becomes, because of cultural and political differences, institutional differences and differences in views on water use (Van Leussen et al., 2007).

The main water resources management instruments in Brazil are the water resources plans, the classification of water bodies, the granting of water use rights, the charging for water use and the information system as management instruments. The resource plan is the basis for planning and managing water resources, from which current and desirable uses of water are defined. In sequence, the framework establishes the quality goals of water bodies, according to their main uses, and provides subsidies for granting and charging (Medeiros et al., 2009).

Jacobi (2009, p. 44) argues that water management from the hydrographic basin requires a wide range of relationships with stakeholders from the committees. In this way, water management needs to take into account the specificities, that is, "analyze the basins at different levels of the physical structure and differentiated practices of integrated management", which involves complex solutions covering diffuse rights such as water rights.

According to the National Water Agency (ANA) in 2019, Brazil currently had 10 Interstate River Basin Committees and 227 State River Basin Committees. In the North region, there are 13 committees, two in the state of Amazonas, six in Tocantins and five in Rondônia. In the Midwest region, there are 26 committees, 10 in the state of Mato Grosso, 10 in Goiás, three in the Federal District and three in the state of Mato Grosso do Sul. In the Northeast region, there are 47 committees, two in Piauí, 10 in Ceará, three in Rio Grande do Norte, three in Paraíba, seven in Pernambuco, five in Alagoas, three in Sergipe and 14 in Bahia. In the South region, there are 53 committees, 11 in Paraná, 17 in Santa Catarina and 25 in Rio Grande do Sul. In the Southeast region, there are 81 committees, nine in Rio de Janeiro, 14 in Espírito Santo, 35 in Minas Gerais and 21 in São Paulo (ANA, 2019)

However, according to research surveys carried out, some committees were created, but have not yet been implemented, and, still, other hydrographic basins whose committees have not yet been created. It can be seen that the National Water Resources Policy has advanced further in the southeastern and southern regions of the country, where all the committees were constituted and have more resources to contribute to its installation and the development of its actions. However, the same is not observed in the northeast region (the semi-arid region with most of its intermittent rivers) and, mainly, in the northern region, with large basins (MATOS, 2020).

It should also be mentioned that the implementation of the committee's decisions will be carried out by the Basin Agency, which acts as the executive secretary, in addition to being the technical support and operational support entity for the respective committee. If there is no definitive Water Agency, its functions may be delegated to civil water resources organizations, at the discretion of the Basin Committee,

provided that it is approved by the National Water Resources Council. In this sense, Consortia and Intermunicipal Water Basin Associations, despite not being directly part of the National Water Resources System, may be delegated to act as Agencies.

Although the formation of basin committees is considered an efficient strategy for the integrated and participatory management of water resources, its implementation still faces significant challenges in Brazil. One of the main challenges is the lack of financial and human resources for the formation and maintenance of basin committees, which compromises the effectiveness of their performance in the management of water resources. In his research, Matos (2020) also identifies limitations related to integration, communication and return to society, adequate investment of resources and implementation of management instruments (such as basin management plans), in addition to the scarcity of financial resources where there is still no charge for the use of water. He also noted failures in governance due to asymmetry in the social partnership, caused by a lack of understanding of the water management system and technical knowledge, and failures due to lack of accountability of representatives, caused by lack of interest on the part of representatives. Regarding the difficulties faced by the committees, the lack of resources and the lack of government support were pointed out, which were also considered governance failures, in addition to failures caused by the breakdown of ongoing reflection and negotiation between the partners. Disinformation or lack of knowledge on the part of some representatives are points that weaken the process of exchanging ideas and a fair balance in the participation of members in the committees, in addition to the overlapping of interests of a specific group in decision-making. Although the Committees constitute participatory and deliberative mechanisms in which the different actors linked to the management of water resources are articulated when considering a configuration of governance, the problems faced by the actors interested in the debate make it difficult to engage in participatory forums. Thus, when analyzing the challenges faced by the committees, the limitations pointed out in the representatives' perceptions reverberate in the difficulty in fully exercising the deliberation in which all interested parties participate, regardless of their capabilities and resources.

Furthermore, the lack of integration between sectoral policies, such as basic sanitation and environment policies, also represents an obstacle to the formation and implementation of basin committees. This is how the integration of sectoral policies is fundamental for the effectiveness of the basin committees since the challenges faced in the management of water resources are complex and require integrated and coordinated actions.

Another important challenge is the lack of effective participation by civil society in the formation and performance of basin committees. Although civil society participation is one of the pillars of participatory management of water resources, civil society participation is often limited, which compromises the representativeness and legitimacy of basin committees. Cardoso (2008) problematizes the discussion about the segments that make up the committee, remembering that the interpretation of public power, user and civil society is extremely varied. The author problematizes, for example, the case of public

sanitation and electricity companies included in the category of users, when, generally, they defend government interests. Thus, in the cited examples, one could ask who these companies answer to, about the sector of representation and which interests are defended. In surveys on the websites of the basin committees, different frameworks for state sanitation companies were observed. In the state of Minas Gerais, for example, Companhia de Saneamento de Minas Gerais (Copasa) and Companhia Riograndense de Saneamento (Corsan) are part of the water user segment. In Sergipe, the State Sanitation Company (DESO) and in São Paulo, the Department of Water and Electric Energy (DAEE) are part of the state segment.

Despite the challenges faced, in recent years several initiatives have been implemented for the formation and strengthening of basin committees in Brazil. Among the main initiatives, the creation of the National Program for Strengthening Basin Committees (Procomitês) stands out, which was instituted as established by ANA Resolution No. Federal Districts that are part of the National Water Resources Management System (SINGREH). The committees are spaces for representing the communities of the river basins and have the prerogative to deliberate on the instruments of the National Water Resources Policy (PNRH), following the principles of decentralization and participation established by Law No. 9,433/1997. The voluntary adherence of river basin committees to the Procomitês has the main objective of consolidating these collegiate bodies as effective spaces in the implementation of the water resources policy. (ANA, n/d)

The installation of the National Water Agency and the basin committees, together with the instruments for managing water resources defined by Federal Law 9,433/97, provided conditions for the governance of water resources in Brazil. According to Pereira (2003), the Brazilian State prioritized the systemic and institutional conditions under which water resources management takes place.

Water governance emerges as a democratization mechanism, allowing local society to have a greater capacity to control political decisions at the local level than at the central level. However, as highlighted by Ribeiro (2009), there is still a long way to go in achieving consensus, both in terms of the form and quality of the decisions taken by the basin committees.

It is necessary to institute the governance of water resources, establish the most general systemic conditions under which power is exercised, and create a space for discussion with the different levels of government and society's organizations. This includes investments in adequate infrastructure and training of human resources, to create decision-making instances that involve the reduction of water quality problems.

In recent years, the water crisis has worsened in many regions of the country, such as the Southeast, which faced a severe drought that affected water supply and energy generation. The problem of water scarcity has been exacerbated by climate change and increased demand for water due to population growth and economic development. In this context, the management of water resources has become a top priority for the government and society, and new policies and programs have been developed to address the issue.

One of the main initiatives implemented by the government is the National Basic Sanitation Plan (Plansab), launched in 2013, which aims to provide universal access to water supply and sanitation services by 2033. The plan includes investments in infrastructure, capacity building and institutional strengthening, and focuses on ensuring the sustainability of water supply and sanitation systems. And it consists of the integrated planning of basic sanitation considering its four components: supply of potable water, sanitary sewage, garbage collection and solid waste management and drainage and management of urban rainwater, and has a horizon of 20 years (2014 to 2033) , and should be evaluated annually and revised every four years. (MIDR, 2021).

Despite these advances, there are still challenges to be faced in the management of water resources in Brazil, such as improving water quality, increasing water use efficiency, the unequal distribution of water resources between different regions of the country and the lack of effective measures to address the impacts of climate change on water availability and quality. Furthermore, the participation of civil society and the private sector in water management still needs to be strengthened, as well as the integration of different sectors and levels of government in the planning and implementation of water policies and programs. As Ribeiro (2009) points out, the establishment of a water governance pact in the country is essential to face these challenges and prevent conflicts.

Management of water resources must also take into account climate change and its impacts on water availability and quality. Climate change can affect the amount and distribution of precipitation, increase evaporation and reduce water availability in some regions, as well as increase the frequency and intensity of extreme events such as floods and droughts. In this context, it is important to adopt measures to adapt to climate change and promote the efficient and sustainable use of water resources.

In a global context, the management of water resources has become an increasingly pressing issue, given the growing demand for water resources and the impacts of climate change. As the United Nations (UN) observes, "water is at the heart of sustainable development and is fundamental for socio-economic development, energy and food production, healthy ecosystems and for human survival itself" (UN, 2021). The UN has designated 2018-2028 as the International Decade of Action on Water for Sustainable Development, to promote the sustainable management of water resources and universal access to safe water and sanitation.

6 FINAL CONSIDERATIONS

The management of water resources is a complex challenge and requires integrated planning, considering the watershed as a territorial reference unit. Water governance is essential to deal with problems such as pollution and water scarcity, involving society in the management of water resources and their benefits. Participatory management has grown in the country, but it is still necessary to advance in obtaining consensus and in the quality of decisions. The world's demand for water has been growing and will continue to increase significantly over the next two decades. In this worrying scenario, there is a need to discuss

what should be the role of water in our future. It is necessary to encourage discussion about understanding, valuing and managing water, to contribute to political decision-making about our water resources. This challenge involves consolidating three fundamental components of a democratic process: participation, citizenship and politics, which are deeply interconnected. The full exercise of citizenship presupposes political participation in decision-making; policy in the sense of dialogue, exchange of opinions and respect for the contradictory, with the pursuit of the common good as a backdrop.

Governance, therefore, emerges as a democratization mechanism, assuming that local society will have a greater capacity to control political decisions at the local level than at the central level. But, as highlighted by Ribeiro (2009), although participatory management is growing in the country, seeking to solve problems, there is still a long way to go in obtaining consensus, both in the form and in the quality of its decisions. It is also important to highlight that the participation of representatives is a critical factor and a fundamental principle for water management and governance, because of the possibility of improving the quality of decisions, giving legitimacy to management, and improving relations between the actors involved.

To achieve governance of water resources, it is necessary to create a space for discussion with different levels of government and organizations in society, as well as invest in infrastructure and training human resources. Reducing water quality problems should be one of the main goals of these decision-making bodies. Therefore, integrated management and participatory governance of water resources are essential to ensure access to quality water and balance the use of water resources with environmental conservation.

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