



Hydric recourse and basic sanitation: An analyze of the participative management under the brasilian legislation

Recursos hídricos y saneamiento básico: un análisis de la gestión participativa a la luz de la legislación brasileña

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Abstract: The main object for public political and garantee the access of this recources for all population including quality and quantity of them. The national politic of hydric recourses make newness when decentralizes the management of the hydric bodyes and garante the participation of the civil society on the decisions. In other way the new law of basic sanitation developing the investiments of privicy sector which looking for offer better services of sanitation and increase their reach. The cientifical search looked to analyze the participating management with focus on the hydric management and the basic sanitation on the light of Federal Law n° 9.433/97 and the law n° 14.026/2020, making juridical interpretation of the legal wordings and the institutional structure of the differentes faces of the power. The methodology used was the juridic hermeneutics because is enable to understand the real mean of the juridic laws, the institutional staff and social relationships. During the research realized the necessity of conversation between public management of water and sanitation, because they are complementary politics, forward the bigger integration between the public power and the social circles. In conclusion its necessary to exist a bigger atuation of the counties on the hidric management looking for fill the omission of management identifyed, observed too the importance to destiny a bigger importance to the coligate groupes which work on the sanitation secion for put in practice the management actions proposed.

Keywords: Water; Ambiental sanitation; Public politics; Government.

Resumen: La objetivo para la elaboración de políticas públicas capaces de asegurar el acceso a estos recursos a toda la población en cantidad y calidad. La Política Nacional de Recursos Hídricos - PNRH innovó al descentralizar la gestión de las masas de agua, asegurando la participación de la sociedad civil en la toma de decisiones. Por otro lado, el Nuevo Marco Legal para el Saneamiento Básico promovió el fomento de las inversiones del sector privado destinadas a mejorar la prestación de los servicios de saneamiento y aumentar su alcance. La investigación científica realizó un análisis de la gestión participativa en la gestión de los recursos hídricos y del saneamiento básico a la luz de las Leyes Federales nº 9.433/97 y nº 14.026/2020, haciendo uso de la interpretación jurídica de los textos legales y de la estructura institucional de las diferentes esferas de poder. La metodología utilizada se valió del método jurídico hermenéutico, ya que éste permite comprender el significado real de los nombres jurídicos, el cuerpo institucional y las relaciones sociales. Durante el estudio, se percibió la necesidad de interacción de las políticas públicas de gestión del agua y de saneamiento, ya que son políticas complementarias, además de una mayor integración entre el poder público y las esferas sociales. Se concluyó que era necesaria una mayor actuación de los municipios en la gestión hídrica viendo el avance de las lagunas de gestión identificadas, y se observó también que había que destinar una mayor relevancia a los órganos colegiados en el ámbito de la sanidad para conseguir llevar a cabo las acciones de gestión propuestas.

Palabras clave: Agua; Saneamiento ambiental; Políticas públicas; Gobernanza.

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INTRODUCTION

The area of Law dedicated to the study of water has been gradually distinguishing itself from the branch of Environmental Law, since its scope is the regulation and institution of public policies aimed at ensuring the conscious use of available water resources in an attempt to achieve the ideals of sustainable development. The increase in population and the disorderly growth of the cities, the capitalist production mode has promoted an over-exploitation of natural resources, which has triggered a concern with their protection and the implementation of public policies aimed at achieving a sustainable development model that ensures social development and respects the environment. The Federal Constitution of 1988 establishes the right to an ecologically balanced environment as a diffuse right, that is, it belongs to everyone and, consequently, the misuse of resources will affect everyone, besides defining the protection of water resources as a guarantee for the realization of this right.

The protection of the Brazilian natural heritage has developed gradually as the constitutional texts have been issued. The Magna Carta in force was innovative in dedicating an entire chapter to the environment and bringing in a new standard for water management. With the advent of Federal Law 9433, of January 8, 1997, the National Policy for Hydric Resources (PNRH) and the creation of the National System for the Management of Hydric Resources (SINGERH) emerged on the Brazilian political-legal scene. The new management paradigm is based on the decentralization and division of the different levels of public administration in decision making. The device in question outlined the norms and guidelines that regulate the use and destination of available resources, besides aiming at the integration of the federal policy with the state policies.

The new policy adopted the hydrographic basin as a territorial unit for management, which facilitated the identification of the peculiarities of the area and the problems in its surroundings, setting new management parameters because it enables a new integration of the administration. The civil society, as well as the water users, gained a place in water management, including with decision-making power. As a result of the federative principle, the PNRH implied the creation of state policies for water resources by the member states.

Regarding basic sanitation, the first glimpse of a normative text regulating the theme came with the publication of the National Sanitation Plan in 1968 as a response to the increasing urbanization process in Brazilian cities. Similarly to what happened with water resources, the 1988 Constitution brought greater attention to the theme. With the enactment of the current constitution, the municipalities were given the title to perform sanitation services as well as the competence and consequent responsibility for the development of municipal sanitation policies (GRANGEIRO, et. al, 2020).

In 2007 the Federal Law n° 11.445 was approved, establishing the National Policy of Basic Sanitation where the national sanitation guidelines were set. Recently, in 2020, the Federal Law No. 14.026 of 2020 came into force inserting in the Brazilian legal system the New Legal Framework of Basic Sanitation in order to provide universal service provision and a higher rate of service to the population.

It is important to note that the management of basic sanitation services is linked to the management of hydric resources of the hydrographic basin, however, as far as the participation in the management of water is concerned, the role of municipal entities is reduced, since they do not own the dominiality of the hydric bodies. In this context, the aim of this article is to carry out a study of the participatory management of water resources and basic sanitation based on the National Water Resources Policy and the New Legal Framework for Basic Sanitation.

More specifically, it aims to analyze the public policies on sanitation and water resources in force in the Brazilian legal framework, to determine the advances of the aforementioned legislation regarding the management of resources, to identify the possibilities of integrating the policies and what obstacles exist to the effective management of such resources. The method used is called hermeneutic-legal that allows the understanding of the legal texts, the characteristics of the institutions and the social changes after the edition of the Federal Law 9.433/97 and Law 14.026/2020. With the use of hermeneutics, the objective is to uncover the normative and institutional changes that culminated in the current water and sanitation policies.

This research predominates the use of the bibliographical research technique, as well as the interpretation of the legal provisions, the consultation of theses, dissertations, scientific articles, doctrines and publications with relevant information about the subject. The results obtained allow us to infer that it is not acceptable to have a water governance model that is not linked to the management of basic sanitation services, since these are essential rights for the full development of society and human life.

METHODOLOGY

For a knowledge to be considered scientific, it is necessary to identify the method that allowed him to reach such knowledge. According to Gil (2019) the scientific method is the set of intellectual and technical procedures adopted to achieve knowledge. To conduct the present research, the method used is called hermeneutic-legal. According to Reale (2013), the legal hermeneutics (normative) is composed of four elements: a) literal interpretation, which allows the capture of the value of the expression; b) the logical-systemic, since no rule is separated from the whole; c) the historical-evolutionary interpretation, since the rule undergoes transformations of the environment and d) the finalistic interpretation to determine the end that the legislator pursues. The joint performance of the components allows the understanding of the meaning of the legal texts, the types of infractions and penalties culminated by the hydric legislation.

Thus, it seeks to interpret the scientific explanations in line with the characteristics of the existing legal conjuncture.

Therefore, through the use of hermeneutics, it seeks to clarify and analyze the realization of participatory management in the management of water resources and basic sanitation in a systemic way, highlighting the interrelationships between the two policies. The technique used will predominantly be bibliographic research, "its purpose is to put the researcher in direct contact with everything that has been written, said or filmed on a given subject". (MARCONI and LAKATOS, 2017). In addition to the interpretation of legal provisions, decisions, scientific articles, doctrines and any other type of material that brings relevant information about the topic will be used.

RESULTADOS E DISCUSSÕES

In view of the advances in the editing of regulatory norms that determine the guidelines and objectives of the water resources and basic sanitation policies with the aim of guaranteeing the realization of the constitutional right of all to an ecologically balanced environment, based on the literature review, the results and discussions of this article focus on the evolution and main difficulties faced in the realization of public policies on sanitation and water resources over the years.

The national water resources policy

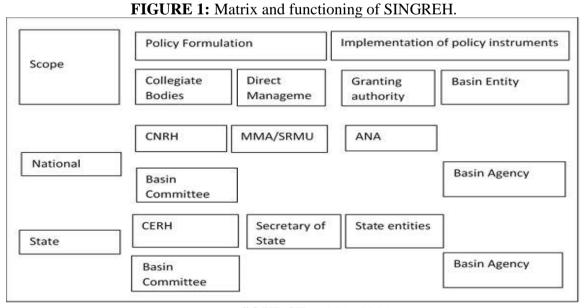
The environmental theme has gradually gained relevance in the Brazilian legal system, especially in the elaboration of the country's public policies. By studying the legislation we can see the attempt to solve the problems of water management that have arisen as a result of the evolution of social relations and their needs. With the change in paradigm about natural resources, in which they started to be understood as limited resources, the concern with their quantity and quality reflected in the need for policies that would provide the preservation of these resources and guarantee the healthy development of society.

The first hydric legislative landmark in our legal system was Decree no. 24.634 of 1934, the Water Code, which gave greater emphasis to the treatment of the subject; however, it instituted a centralized management model with a hierarchical action characteristic. This device created conservation measures, however, there were no regulatory standards for the materialization of those. (DANIELI, 2015). The treatment given to water management had a very strong economic bias, because at the time the decree was issued, the country's industrial development was prized. It is important to inform that this legislation is still in force in the country, but it was partially revoked because the 1988 Federal Constitution abolished the existence of private waters and attributed the dominion of water bodies to the Union and the Member States.

In Title VII, Social Order, Chapter VI was dedicated to the environment, giving special treatment to water, which was recognized as an essential element for the continuity of life and social development, and a diffuse right for all. It established the competence of the Union to create the national hydric management system and to define the criteria for granting rights of use. Meanwhile, in 1997 Federal Law No. 9.433 was issued, creating the National Policy of Hydric Resources - PNRH and the National System of Hydric Resources Management - SINGERH, determining the goals and guidelines to be followed by the federative entities.

The main changes introduced were the adoption of the hydrographic basin as the main administration and planning unit, and the forecast of a decentralized and participatory management model allowing the participation of the various sectors of society in the decision making process. Among the fundamentals present in the aforementioned law are: water understood as an asset of public domain; a finite natural resource with assigned economic value; its use is destined in a priority way, in cases of scarcity to human consumption and the desedentation of animals.

Created to implement the National Policy on Hydric Resources, SINGERH's main objectives are: to coordinate the integrated management of water; to administratively arbitrate conflicts related to hydric resources; to plan, regulate and control the use, as well as the recovery of water bodies, and to promote charging for the use of water. It is composed of the National Council of Hydric Resources -CNRH, the Hydric Resources and Environmental Quality Secretariat - SRQA, the National Water and Basic Sanitation Agency -ANA, the State Councils of Hydric Resources - CERH, the state hydric resources managing bodies (State Entities), the Hydrographic Basin Committees - CBH and the Water Agencies. (ANA, 2021).



SOURCE: ANA, 2021.

For Ferreira, et.al (2008, apud GRANGEIRO, et. al, 2020) "the formulation and approval of the PNRH and the SINGREH occurred in a period when Brazil was producing legislation and public policies that gradually sought to consolidate a form of valuation of its hydric resources. Thus, it seeks to balance the demands for the different uses of the hydric resources in order to benefit the society with the effectiveness of the mechanisms foreseen in the law.

The basic sanitation policy

According to the Basic Sanitation Manual of the Trata Brasil Institute (2012) "sanitation is the set of measures that aims to preserve or modify environmental conditions in order to prevent diseases and promote health, improve the quality of life of the population and the productivity of the individual, and facilitate economic activity." It is composed of public services, infrastructure, and operational facilities for: drinking water supply; sanitary sewage; urban cleaning and solid waste management; and urban rainwater drainage and management.

With the advancement of the urbanization process of Brazilian cities over the years, there has been an increase in the need to foster a management model that would create the guidelines and objectives and set the functions of each sector of the administration in order to promote an improvement in the basic sanitation offered and an increase in the rate of the population benefited.

For Carneiro, et. al (2018) there were several factors that hindered the country's basic sanitation, namely:

The lack of adequate planning, the insufficient volume of investments, the deficient management of the sanitation companies, the low technical quality of the projects, and the difficulty in obtaining financing and licenses for the works - these are some of the factors that prevented (and still prevent) that the development of this area has not achieved expressive growth during this period.

The first step in the development of regulatory standards on the subject was taken with the elaboration of the National Sanitation Plan (PLANASA) in 1968 with the main scope of creating water supply and sewage systems and the industrial development of the country, expanding the services and coverage of sanitation.

With the advent of the CF/88, the theme gained greater relevance in the Brazilian legal system, as it became a constitutional right assured to the population and, in 2007, Law No. 11.445 was issued, considered the main sanitation regulatory milestone in Brazil, as it established the Federal Policy of Basic

Sanitation with the intention of promoting the universalization in the provision of sanitation services, in addition to establishing the creation of the Municipal Sanitation Plan.

Here we notice that the municipalities were granted, differently from the treatment given by the PNRH, a more active role in the management of sanitation. Let's see:

The municipal governments are responsible for elaborating the Municipal Sanitation Plan and for involving the community in its discussion. The municipal plan is essential in regulating the concession of water supply and sanitary sewage collection and treatment services, and in preparing diagnoses that help municipalities obtain loans for sanitation works from the federal government and financial institutions. (INSTITUTO TRATA BRASIL, 2012).

In the institutional structure of sanitation in Brazil there are collegiate bodies, executive secretariats and regulatory agencies, at the state and municipal levels. In the federal sphere, the national secretariat for basic sanitation is part of the structure of the Ministry of Cities. According to art. 47 of Law No. 11,445, the collegiate bodies are only advisory and not obligatory for the social control of public sanitation services.

In July 2020, Federal Law No. 14.026 was published, promoting updates in the regulatory framework of basic sanitation and attributing to the National Water and Basic Sanitation Agency (ANA) the competence to edit reference standards on sanitation services. The new legislation was enacted in response to the current national scenario, according to BELCHIOR, 2020, let's see:

In Brazil, the Sanitation Panel reports, supported by data from 2018, that 83.6% of the population has access to water, while 46.9% has no sewage collection. In a public hearing in the Federal Senate in September 2019, the Trata Brasil Institute reported an indicator associated with water delivery efficiency, according to which in 2017 the country had a loss of R\$11 billion in this area.

Faced with such alarming data, this law aims to attract private investment, stimulating competition and consequent increase in the privatization of the sector, the obligation of contracts to provide performance goals and universalization of services, adopts the principle of regionalization of sanitation services, among others. (D'OLIVEIRA, 2020). Furthermore, it sets high targets such as meeting 99% of the population with drinking water and 90% of the population with sewage collection and treatment by the end of 2033.

Of participatory management in water management and basic sanitation

Throughout this study we have visualized the gradation of importance of the environmental theme in the elaboration of laws and public policies in the country. In special to the hydric resources and basic sanitation we can consider the legislations in force as advanced regarding protection and the management model. Nevertheless, it is noticeable that both structures were created in distinct and complementary ways.

The PNRH, by determining the hydrographic basin as the management unit for the effective management of the hydric resources, has caused significant changes in the administration developed up to then, because it has brought new actors to participate in the decision making, besides considering the physical, social and economic aspects of the territory of the area covered by the basin, and due to territorial issues it is possible for the Member State and the Union to act jointly in a single territory.

The new model of water management allows the approximation and greater participation of the local society in the resolution of existing conflicts. In the view of Araújo, 2010:

In the planning and management phases of the watersheds it is essential that the participation of the community occurs, so that the users of the natural resources can express their opinion and negotiate the norms and guidelines for the use, conservation and development of their region in a sustainable way. In this sense, it is essential that the users have knowledge of the environment that surrounds them, its weaknesses and potentials, thus avoiding environmental impacts in the watershed area.

After the PNRH, each Member State had to edit its State Water Resources Policy-PERH and within the institutional structure of water management there is an exclusive body to carry out the realization of deliberative and participatory management, namely, the river basin committee. For Oliveira, et. al (2017):

The Hydrographic Basin Committee is an entirely new type of organization in the Brazilian institutional reality that counts on the participation of users, municipalities, organized civil society, and the other levels of government (state and federal). The river basin committee is a State entity, collegiate, responsible for the management of waters, within the scope of a river basin, with political and administrative functions.

Among the main attributions of a hydrographic basin committee, according to art. 38 of Federal Law 9433/97, we have: to promote the debate on issues related to hydric resources and to articulate the actions of the intervening entities; to arbitrate conflicts related to hydric resources; to approve and follow up the execution of the Hydric Resources Plan of the basin; to establish charging mechanisms for the use of hydric resources and suggest values to be charged, among others.

Although the municipalities lost the ownership of the hydric bodies with the advent of the CF/88, their participation in the actions promoted and discussions fostered in the scope of the hydrographic basin committees is of utmost importance, since they are responsible for the structuring of the municipal

sanitation plan and for knowing the peculiarities of the hydric resources in the area of their territory, as we cannot forget that the hydric resources are one of the inputs for the accomplishment of the basic sanitation.

Regarding the National Policy of Basic Sanitation, the execution of a participative management with the presence of the social sectors leaves a little to be desired because the existence of collegiate organs for discussions about the realization of the sanitation management are not of a mandatory nature and do not have the power to make decisions, when created, they only have a consultative character. Such bodies serve for the realization of the social control over public sanitation services, providing opportunities for the representation of service holders, governmental bodies, public service providers, users, technical entities, civil society organizations and consumer protection related to basic sanitation.

The public policies for water management and basic sanitation are elaborated in different ways. While the management plans for water resources are elaborated at the federal and state levels with the active participation of the various social sectors, the sanitation policies are limited to the urban policy of the municipality, where in most cases it does not have an articulated and efficient institutional structure.

While the municipal entity acts as a protagonist in the field of basic sanitation administration, in water management it only has a representative character of the civil society, which hinders the process of integration of public policies due to the fact that sanitation management directly influences the administration of hydric resources.

CONCLUSIONS

In view of the information presented in this research, we have observed the legislative changes in the Brazilian legal system aimed at the implementation of effective public policies for water management and basic sanitation, seeking to promote access for all to quality water and the quantity needed to meet basic needs, as well as the existence of quality environmental sanitation, thus guaranteeing an ecologically balanced environment for the present society and future generations.

In the water sector the main change came with the implementation of a decentralized management model with the participation of the various sectors of society, however, in the model adopted the municipal public entity has a reduced role, making the interaction between the administration of water bodies and the basic sanitation services difficult, representing an institutional articulation gap.

In relation to the basic sanitation sector, the municipality plays a leading role, but the existence of collegiate bodies in the management structure is not mandatory and is only advisory, which weakens the active participation of the various sectors of society in the management of public sanitation services.

With the edition of the New Legal Framework of Sanitation we notice the concern of the federal government in providing a quality service and an increase in the rate of the population benefited by the

sanitation services by establishing ambitious goals for attendance, besides that with the incentive to private investment it tried to attract more investments for the sector and with the attribution of competence to the ANA for the edition of reference norms it intended to establish a connection between the hydric and sanitation managements.

Finally, we emphasize the importance of the integration of public policies for water resources and sanitation, since they are complementary and need to be aligned for an effective management of resources, as well as the lack on the part of society in general of an understanding of its role in the administration, since only with the joint action of all the social sectors can we guarantee access for all to drinking water and quality basic sanitation and the preservation of the environment.

REFERENCES

- [1] AESA, AGÊNCIA EXECUTIVA DE GESTÂO DE ÀGUAS DO ESTADO DA PARAÍBA. **Comitês nas Escolas.** 2021. Disponível em: http://www.aesa.pb.gov.br/aesa-website/comites-nas-escolas/. Acesso em: 8 de out. de 2021.
- [2] ANA, AGÊNCIA NACIONAL DE ÁGUAS E SANEAMENTO BÁSICO. Fortalecimento dos entes do SINGERH. 2021. Disponível em: https://www.gov.br/ana/pt-br/assuntos/gestao-dasaguas/fortalecimento-dos-entes-do-singreh. Acesso em: 01 de outubro de 2021.
- [3] ARAÚJO, Lincoln Eloi de. Climatologia e Vulnerabilidade Socioeconômica e Ambiental da Bacia Hidrográfica do Rio Paraíba- Estudo de Caso do Açude Epitácio Pessoa (Boqueirão). Tese de Doutorado em Recursos Naturais. Área de Concentração: Processos Ambientais. Linha de Pesquisa: Climatologia Aplicada a Recursos Naturais. Universidade Federal de Campina Grande, Campina Grande, PB, p.25, Março de 2010. Disponível em: http://www.recursosnaturais.ufcg.edu.br/index.php/component/content/article?id=114. Acesso em: 02 de out. de 2021.
- [4] BELCHIOR, Wilson Sales. **Os Impactos do Novo Marco Legal de Saneamento Básico.** 19 de agosto de 2020. Disponível em: https://www.conjur.com.br/2020-ago-19/wilson-belchior-impactos-marco-saneamento. Acesso em: 07 de out. de 2021.
- [5] BRASIL. **Constituição da República Federativa do Brasil de 1988**. Disponível em: http://www.planalto.gov.br/ccivil_03/constituicao/constituicao.htm. Acesso em: 25 de set. de 2021.

[6] BRASIL. **Lei Federal nº. 9.433, de 08 de janeiro de 1997**. Institui a Política Nacional de Recursos Hídricos, cria o Sistema Nacional de Gerenciamento de Recursos Hídricos, regulamenta o inciso XIX do art. 21 da Constituição Federal, e altera o art. 1º da Lei nº 8.001, de 13 de março de 1990, que modificou a Lei nº 7.990, de 28 de dezembro de 1989. Disponível em: http://www.planalto.gov.br/ccivil_03/LEIS/L9433.htm. Acesso em: 25 de set. de 2021.

- [7] BRASIL. Lei Federal de nº. 11.445, de 05 de janeiro de 2007. Estabelece as diretrizes nacionais para o saneamento básico; cria o Comitê Interministerial de Saneamento Básico; altera as Leis nºs 6.766, de 19 de dezembro de 1979, 8.666, de 21 de junho de 1993, e 8.987, de 13 de fevereiro de 1995; e revoga a Lei nº 6.528, de 11 de maio de 1978. Disponível em: http://www.planalto.gov.br/ccivil_03/_Ato2007-2010/2007/Lei/L11445.htm. Acesso em: 02 de out. de 2021.
- [8] BRASIL. Lei Federal de nº. 14.026, de 15 de julho de 2020. Atualiza o marco legal do saneamento básico e altera a Lei nº 9.984, de 17 de julho de 2000, para atribuir à Agência Nacional de Águas e Saneamento Básico (ANA) competência para editar normas de referência sobre o serviço de saneamento, a Lei nº 10.768, de 19 de novembro de 2003, para alterar o nome e as atribuições do cargo de Especialista em Recursos Hídricos, a Lei nº 11.107, de 6 de abril de 2005, para vedar a prestação por contrato de programa dos serviços públicos de que trata o art. 175 da Constituição Federal, a Lei nº 11.445, de 5 de janeiro de 2007, para aprimorar as condições estruturais do saneamento básico no País, a Lei nº 12.305, de 2 de agosto de 2010, para tratar dos prazos para a disposição final ambientalmente adequada dos rejeitos, a Lei nº 13.089, de 12 de janeiro de 2015 (Estatuto da Metrópole), para estender seu âmbito de aplicação às microrregiões, e a Lei nº 13.529, de 4 de dezembro de 2017, para autorizar a União a participar de fundo com a finalidade exclusiva de financiar serviços técnicos especializados. Disponível em: http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2020/lei/114026.htm. Acesso em: 02 de out. de 2021.
- [9] CARNEIRO, Marta Camila Mendes de Oliveira, et.al. **A Gestão do Saneamento no Brasil e Sua Relação com a Gestão de Recursos Hídricos.** INOVAE ISSN: 2357-7797, São Paulo, Vol.6, JANDEZ, 2018 pág. 100-116. Disponível em:

https://revistaseletronicas.fmu.br/index.php/inovae/article/view/1785/1375. Acesso em: 28 de set. de 2021.

- [10] DANIELI, Adilor. **A água sob a ótica do Direito**. Revista Justiça do Direito, vol.29, n.2, p.346-361, maio/ago. 2015. Disponível em: http://seer.upf.br/index.php/rjd/article/view/5595/3810. Acesso em: 01 de out. de 2021.
- [11] D'OLIVEIRA, Rafael Daut. **Reflexões Sobre o Novo Marco Regulatório do Saneamento Básico.** 12 de novembro de 2020. Disponível em: https://epbr.com.br/reflexoes-sobre-o-novo-marco-regulatorio-do-saneamento-basico-por-rafael-daudt-doliveira/. Acesso em: 04 de out. 2020.
- [12] GIL, Antônio Carlos. **Métodos e Técnicas de Pesquisa Social**. 7ª ed. São Paulo: Atlas, 2019.
- [13] GRANGEIRO, Ester Luís de Araújo, RIBEIRO, Márcia Maria Rios e MIRANDA, Lívia Izabel Bezerra de. **Integração de Políticas Públicas no Brasil: o caso dos setores de recursos hídricos, urbano e saneamento.** Cad. Metropole, São Paulo, v.22, n.48, pp.417-443, maio/ago 2020. Disponível em: https://doi.org/10.1590/2236-9996.2020-4804. Acesso em: 01 de out. de 2021.
- [14] INSTITUTO TRATA BRASIL. Manual do Saneamento Básico. Entendendo o Saneamento Básico Ambiental no Brasil e sua Importância Socioeconômica.

Disponívelem:https://www.tratabrasil.org.br/datafiles/uploads/estudos/pesquisa16/manual-imprensa.pdf. Acesso em: 05 de out. de 2021.

- [15] MARCONI, Marina de Andrade e LAKATOS, Eva Maria. **Fundamentos da Metodologia Científica**. 8ª ed. São Paulo: Atlas, 2017.
- [16] OLIVEIRA, Paulo Abrantes de, BARBOSA, Erivaldo Moreira, BARBOSA, Maria de Fátima Nóbrega e ABRANTES, Geórgia Graziela Aragão de. **Conflitos Ambientais Relacionados ao Uso da Água no Canal da Redenção em Sousa- PB.** In:SEABRA, Giovanni (Org.). Educação Ambiental: Natureza, Biodiversidade e Sociedade. Ituiutaba, MG: Barlavento, 2017. Disponível em: https://www.researchgate.net/profile/Luciano-

Franca/publication/322041667_ELABORACAO_DA_CARTA_DE_FRAGILIDADE_AMBIENTAL_N ATURAL_A_EROSAO_DE_SOLOS_PARA_TURMALINA_MINAS_GERAIS_BRASIL/links/5a400b b4aca272d294527353/ELABORACAO-DA-CARTA-DE-FRAGILIDADE-AMBIENTAL-NATURAL-A-EROSAO-DE-SOLOS-PARA-TURMALINA-MINAS-GERAIS-BRASIL.pdf. Acesso em: 05 de out. de 2021.

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| [17] REALE, Miguel. Lições preliminares do direito. 27 ed. São Paulo: Saraiva, 2013. |
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