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Comparative analysis on the economic sustainability of the social rate for basic sanitation in Sousa-PB, 2021

Análisis comparativo sobre la sostenibilidad económica de la tarifa social de saneamiento básico en Sousa-PB, 2021

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Abstract: The present work addresses the new tariff policy implemented in the Municipality of Sousa-PB, which, in the execution of environmental sanitation services, through a municipal authority, the Department of Water Sewage and Environmental Sanitation (DAESA) adopted a social tariff policy for tax exemption . The general objective is to analyze the economic feasibility and sustainability of the tariff policy adopted in January 2021 by DAESA. The specific objectives of the work are: to carry out a documental survey on national and local legislation about the institution of social tariffs in environmental sanitation services; analyze the temporal evolution of tariffs applied in Sousa-PB by DAESA and, finally; to prepare a comparative study between the tariff structure proposed by Assis, Vieira and Oliveira in 2018, seeking to achieve the financial balance of the autarchy and the current tariff structure adopted in 2021. To do so, it uses the deductive approach method and the procedure method comparative in the construction of a documentary, bibliographic, applied and quali-quantitative research. Coming to the conclusion of the explicit economic unsustainability of the present social tariff policy, mainly considering that the bill at national level tends to adopt the social tariff policy by reduction, and not by exemption as in the case found in the municipality of Sousa-PB.
Keywords: *Social tariff; Environmental sanitation; Economic sustainability.*

Resumen: Este trabajo aborda la nueva política tarifaria implementada en el Municipio de Sousa-PB que, en la implementación de los servicios de saneamiento ambiental, a través de una autarquía municipal, el Departamento de Agua, Alcantarillado y Saneamiento Ambiental (DAESA), adoptó una política de tarifa social por exención de cobro. El objetivo general es analizar la viabilidad y sostenibilidad económica de la política tarifaria adoptada en enero de 2021 por la DAESA. Los objetivos específicos del trabajo son: realizar un relevamiento documental sobre la legislación nacional y local acerca de la institución de la tarifa social en los servicios de saneamiento ambiental; analizar la evolución temporal de las tarifas aplicadas en Sousa-PB por la DAESA y, finalmente; elaborar un estudio comparativo entre la estructura tarifaria propuesta por Assis, Vieira y Oliveira en 2018, buscando lograr el equilibrio financiero del municipio y la actual estructura tarifaria adoptada en 2021. Para ello, se utiliza el método de enfoque deductivo y el método de procedimiento comparativo en la construcción de una investigación documental, bibliográfica, aplicada y cuali-cuantitativa. Llegando a la conclusión de la insostenibilidad económica explícita de la actual política de tarifa social, sobre todo teniendo en cuenta que el proyecto de ley a nivel nacional tiende a adoptar la política de tarifa social por la reducción, y no por la exención como en el caso encontrado en el municipio de Sousa-PB.
Palabras clave: *Tarifa social; Saneamiento ambiental; Sostenibilidad económica.*

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INTRODUCTION

Access to water and basic sanitation are fundamental rights recognized by the United Nations Organization (UNO) and are part of the environmental sanitation services regulated by Law No. 11. 445/2007. This law establishes the National Policy of Basic Sanitation, which has as one of its fundamental principles the economic sustainability of sanitation services through tariffs.

However, if there is a social need to guarantee the right to water to the poor, the providers of this public service are allowed to create social tariffs by means of exemption or reduction of the tariff to be paid.

The municipality of Sousa, in the Sertão Paraibano, provides the environmental sanitation service indirectly, through a municipal autarchy, the Department of Water, Sewage and Environmental Sanitation (DAESA), and applies the social tariff in the exemption mode.

This paper aims to verify the feasibility of maintaining the model of social tariff by exemption adopted and maintained by the autarchy, in view of previous works that have addressed the issue and the progress of a federal bill that aims to establish a social tariff on environmental sanitation services by reduction.

The specific objectives of the work are to conduct a documentary survey of the national, state and local legal provisions on the social tariff in environmental sanitation services, to analyze the temporal evolution of the tariffs applied in Sousa-PB by DAESA and, finally, to prepare a comparative study between the tariff structure proposed to achieve the financial balance of the municipality and the tariff structure most recently adopted.

The research is relevant because it has direct application in the daily life of the Sousense community, aiming to analyze the financial and legal feasibility of the implemented social tariff policy.

THEORETICAL FOUNDATION

Historical-legal analysis of the pricing policy for environmental sanitation services

The fundamental right to access to water and the pricing of its services

Access to drinking water is recognized as a human right essential to life and is directly linked to the principle of human dignity, the latter being one of the founding principles of our legal system. In 2010 the United Nations Organization (UNO), consolidated the access to drinking water as a universal right by approving the resolution A/RES/64/292 "the right to safe and clean drinking water and sanitation as a human right essential for the full enjoyment of life of all human rights" (REIS, 2021, p. 124).

The principles applicable to the human right to water and sanitation are equivalent to those applied to other human rights, but also have some points unique to them, such as availability, which refers to the continuous supply and sufficient quality to meet the basic needs of each consumer; quality, which refers to wholesomeness without the presence of microorganisms or harmful substances, as well as acceptable color, smell, and taste. Finally, the two main characteristics: "Accessibility" and "Non-discrimination and transparency", both deal with the need for drinking water to be affordable, either with regard to access to the service or to facilities within the physical reach of all sectors of the population, as well as the need for special treatment directed to the most vulnerable and marginalized populations. (ALBUQUERQUE, 2014).

On this bias, it is worth noting that in Brazil, in addition to the right to access to drinking water is established in art. 5 of its Federal Constitution, which presents in its caput, that everyone, whether Brazilians or foreigners residing in the country has the right to life - this being impossible without access to water. The Law of Strike and the Consumer Defense Code (Laws no. 7.783/1989 (BRASIL, 1989) and no. 8.078/1990 (BRASIL, 1990), respectively, give the water supply the status of an essential service, making it, therefore, a service that cannot be interrupted.

However, despite all these laws that ensure the access to water, both internationally and nationally, companies that work with the distribution of this essential good are still allowed to suspend the service in case of consumer default. This is protected by the Brazilian legal system, which expresses it in Law 8.987/1995, in its article 6, §3, II:

> Every concession or permission presupposes the provision of service adequate to the full service of users, as established in this Law, in the pertinent norms and in the respective contract.
> §A service interruption in an emergency situation or after previous notice is not characterized as a discontinuity of service, when
> II - by default of the user, considering the interest of the collectivity.

Note that the right to drinking water is more important than the economic value earned by the work, but in a logical line of reasoning, it becomes unfeasible the coercion by the State to force the concessionaire to perform its services for free.

The fact is that Law No. 11.445/2007, which establishes the National Policy of Basic Sanitation, in its articles 11, IV, a and 11-A, § 3, states that in order to ensure efficiency and economic sustainability, public services of basic sanitation must be paid by consumers through a modest tariff.

The doctrinal divergence is expressed, and in the midst of this legal and social conflict, Senate Bill No. 9.543/18 arises, which presents the creation of a social tariff as an effective response to the problem.

The Social Tariff adopts cross-subsidies for different categories of users, providing the idea of social justice, that is, those who earn more pay a little more, subsidizing those who earn less and are in a momentary situation of social vulnerability, it is an instrument created to reduce this social inequality, providing the universalization of drinking water supply, respecting the principles of accessibility and non-discrimination and transparency mentioned above.

It also establishes a coherence between the laws of our legal system, respecting both the right of the private supplier and the right of the consumer and citizen to have their essential right respected. The bill benefits families with incomes of up to half a minimum wage per person, and the rate reduction is staggered. With a monthly consumption of up to 10 cubic meters (m^3), the discount will be 40%; in the range of 10 to 15 m^3, 30%; and, finally, from 15 to 20 m^3, 20%. If there is a consumption greater than the portions presented there will be no discount (AGÊNCIA CÂMARA DE NOTÍCIAS, 2019).

The Finance and Taxation Committee of the House of Representatives approved the bill on Wednesday, August 4, 2021. By changing the initial proposal, with the exclusion of the 20% discount for consumption between 15 and 20 m^3, it was alleged that such discount would be an incentive for the inefficient use of water, leaving only the 40% discount at the limit of 10 m^3 per month, taking into account the average consumption recommended by the World Health Organization (WHO) and the size of families ascertained by the Brazilian Institute of Geography and Statistics (IBGE). The project is being dealt with conclusively, and for families to have access to this social benefit, they must enroll in the federal government's Unified Registry for Social Programs, popularly known as CadÚnico. (AGÊNCIA CÂMARA DE NOTÍCIAS, 2021).

The Unified Registry for Social Programs of the Federal Government (CadÚnico) interconnected several existing registration systems on the national scene and consolidated itself as an important means that enabled and facilitated the identification of low-income families, enabling the screening and inclusion of these family groups in social programs (PAZ, 2020).

It is also important to emphasize that the social tariff will be applied only to one consumer unit per family. When requested and provided it is technically possible, the service providers must install water meters for each family living in regular or irregular multi-family dwellings (AGÊNCIA CÂMARA DE NOTÍCIAS, 2021).

In general, the companies that provide water supply services in Brazil, whether they are public or private, offer the social tariff, mostly aimed at the low-income population. However, the number and nature of the requirements imposed for users to be eligible to receive this benefit go beyond the (low) income criterion, and start demanding additional requirements, resulting in an exclusionary character for an instrument that should be inclusive (AGUIAR; MORETTI; SILVA, 2020).

Historical overview of the pricing of environmental sanitation services by the department of water, sewage and environmental sanitation (DAESA) in Sousa-PB

According to Oliveira (2015):

> The city of Sousa is located in the extreme west of the State of Paraíba, in the mesoregion of sertão Paraibano, it was created by Law No. 28 of July 10, 1854 and installed on the same date. The municipal seat is cut by the Peixe River, bordering to the south with the municipalities of Nazarezinho and São José da Lagoa Tapada, to the west with the municipalities of Marizópolis and São João do Rio Peixe, to the north with the municipalities of Vieirópolis, Lastro, Santa Cruz and to the east São Francisco and Aparecida. (OLIVEIRA, 2015. p 66).

It occupies an area of 728.492 km², according to the 2020 data from the Brazilian Institute of Geography and Statistics[1]. Access from João Pessoa is via BR-230 to the municipal seat, about 430 km from the capital.

According to IBGE (2021), the community has an estimated population of 69,997 people. Its urbanization rate is 78.84%, according to the Atlas of Human Development (Atlasbrasil 2013) its (HDI) is 0.668 considered as medium by the United Nations Development Program (OLIVEIRA, 2015).

The Department of Water, Sewage and Environmental Sanitation of Sousa (DAESA) is the municipal authority responsible for the environmental sanitation of the city of Sousa, in Paraíba. It was created in 2004, by Municipal Supplementary Law No. 31, which states in its article 1 the intention of raising "the level of quality of life, welfare of the population and improvement of environmental sanitation.

Before the creation of DAESA, the environmental sanitation of the city of Sousa was done by the Water and Sewage Company of Paraiba (CAGEPA). Thus CAGEPA, operating an expired concession since 1989 (OLIVEIRA, 2015), drew water for the city's supply from the São Gonçalo Dam and discharged sewage directly into the Peixe River.

It is worth noting that DAESA only started to exercise its activities in 2006, after the judicialization of the municipalization of the provision of environmental sanitation services by CAGEPA (GADELHA 2006, apud OLIVEIRA 2015).

According to Assis, Vieira and Oliveira (2018), among the competencies that were conferred to DAESA, on the occasion of its creation in art. 4 of the Complementary Law -LC, 31/2004, few are effectively performed. It happens that CAGEPA continues to operate the collection and treatment of water

[1] Source: https://cidades.ibge.gov.br/brasil/pb/sousa/panorama.

in the São Gonçalo Dam, while DAESA is in charge of distribution for the municipality of Sousa, making and shutting down facilities, collecting and managing sewage, and charging for these services.

It is worth pointing out that it was also DAESA's competence in art. 4, V, VI and VIII, the management, collection and treatment of solid waste. However, as pointed out by Oliveira (2015), this service was provided directly by the municipal executive power through the Planning Secretariat of the Municipality of Sousa.

In September 2018, however, Municipal Supplementary Law 169 removed DAESA's competence over the management of solid waste, leaving only the competence over its final disposal. The management of solid resources, as well as the urban cleaning services were left in charge of the Secretary of Infrastructure of the Municipality.

The social tariff policy adopted by DAESA

Law 14.026/2020 changes the National Policy for Basic Sanitation (PNSB-Law 11.445/2007) in many points, so that now, besides the remuneration by charging for the services, art. 29 of PNSB points out the possibility of ensuring the economic and financial sustainability of public basic sanitation services through additional forms of revenue collection, such as subsidies and grants. Paragraph 1 of the aforementioned article also lists the guidelines for charging for public basic sanitation services:

> § 1o Subject to the provisions in items I to III of the caption sentence of this article, the establishment of tariffs, public prices and fees for basic sanitation services will observe the following guidelines:
> I - priority for serving the essential functions related to public health;
> II - expansion of the access to services to low-income citizens and localities;
> III - generation of the necessary resources to make investments, aiming at the fulfillment of the goals and objectives of the service;
> IV - inhibition of superfluous consumption and waste of resources;
> V - recovery of the costs incurred in the rendering of the service, under an efficiency regime;
> VI - adequate remuneration of the capital invested by the service providers;
> VII - stimulus to use modern and efficient technologies, compatible with the required levels of quality, continuity and safety in the rendering of services;
> VIII - incentive for the efficiency of the service providers.

In addition, §2 establishes the possibility of adopting "tariff and non-tariff subsidies for users that do not have sufficient payment capacity to cover the full cost of the services". Thus, one can see the ability of the public service provider to institute a social tariff policy. Moreover, item VI of art. 30 of the PNSB

also says that the remuneration and charging structure for the services mentioned here must take into consideration the payment capacity of the consumers.

Article 31 speaks expressly of low-income users:

> Art. 31 - The subsidies destined to attend determined low-income users will be, depending on the origin of the resources: (Redrafted by Law No. 14,026, of 2020)
> I - (revoked); (Text was reworded by Law 14,026, dated 2020)
> II - tariffs, when they are part of the tariff structure, or fiscal, when they result from the allocation of budget resources, including by means of subsidies; and
> III - internal to each holder or between holders, in the hypotheses of regionalized provision. (Composed by Law No. 14,026, dated 2020).

Article 37 of the same law states that tariff adjustments must be made respecting a minimum interval of 12 months. In Article 38 the modalities of tariff revision are listed, namely; periodic, which are based on the re-evaluation of the market, and extraordinary. This is when facts not foreseen in the contract that alter its economic-financial balance are verified. It is established that the readjustments and revisions must be made public at least 30 days in advance. It must be emphasized, finally, that article 40 of the PNSB, in its §3º establishes that:

> § 3º The interruption or restriction of the supply of water due to default to health establishments, educational institutions and collective housing institutions and to low-income residential users who are beneficiaries of the social tariff must comply with the deadlines and criteria that preserve the minimum conditions for maintaining the health of the people affected.

At first, according to Oliveira (2015), DAESA had instituted its tariff policy in 2009, and only came to readjust it in 2021.

TABLE 1: Comparison of the fees charged.

CATEGORY/CONSUMPTION RANGES	**WATER (2009)**	**WATER (2021)**	**WASTE (2009)**	**WASTE (2021)**	**% WASTE (2009)**	**% WASTE (2021)**	**A + E RATE em (real) (2009)**	**A+E RATE em (real) (2021)**
TARIFA SOCIAL - Registered in the "NIS" (Social Security Number) ...								
CONSUME até 10m³ (NOT MEASURED)	0	-	0	-	0%	-	0	-

CONSUME até 10m³ (MEASURED) MINIMUM RATE	0	0	0	0	0%	40%	0	0
CONSUME até 10m³ (NOT MEASURED)	10.37	-	0	-	0	-	10.37	-
CONSUME até 10m³ (MEASURED) NORMAL RATE	14.22	19.62	2.30	3.17	-	40%	16.52	22.79
0 à 10m³	14.22	19.62	5.69	7.85	40%	40%	19.91	27.48
11 à 20m³ (p/m³)	1.83	2.53	0.73	1.01	40%	40%	2.56	3.53
21 à 30m³ (p/m³)	2.41	3.33	1.30	1.79	53%	53%	3.71	5.12
Up de 30m³ (p/m³)	3.30	4.55	2.31	3.19	70%	70%	5.61	7.74
COMMERCIAL								
0 à 10m³	25.39	35.04	10.16	14.02	40%	40%	35.55	49.06
Up de 10m³ (p/m³)	4.40	6.07	1.76	2.43	40%	40%	6.16	8.50
INDUSTRY								
0 à 10m³	30.75	42.44	12.30	16.97	40%	40%	43.05	59.41
Up de 10m³ (p/m³)	4.90	6.76	1.96	2.70	40%	40%	6.86	9.47
PUBLIC								
0 à 10m³	28.83	39.79	11.53	15.91	40%	40%	40.36	55.70
Up de 10m³ (p/m³)	4.85	6.69	1.94	2.68	40%	40%	6.79	9.37

SOURCE: OLIVEIRA (2015) and SOUSA (2021), authors' adaptation.

Both Oliveira (2015) and Assis, Vieira, and Oliveira (2018) had pointed out the financial unsustainability caused by the payment exemption for families with up to one minimum monthly wage, registered in the NIS. This exemption was maintained in the 2021 adjustment.

Articles 15 of Municipal Supplementary Law No. 31/2004 are pointed out, which establish that social tariffs can be set, through reduction or exemption, but within the possible and necessary. Thus, Oliveira (2015) argues that, in the midst of the financial difficulties diagnosed in the survey, it would be unfeasible that the social tariff be given by exemption. This thought is consistent with art. 18 of the same law, which establishes that a minimum monthly price should be set to be charged, even if consumption does not reach this limit.

TABLE 2: Comparison between the rebalancing model and the adopted adjustment.

CONSUME	**TYPE RATE**	**WATER + WASTE Adopted in 2009**	**WATER + WASTE Proposed for rebalancing in 2018**	**WATER + WASTE Adopted in 2021**

Consume até 10 m³	Minimum	16.52	28.90	22.79
0 à 10 m³	Normal	19.91	34.83	2.48
11 à 20 m³	Normal	2.56	4.48	3.53
21 à 30 m³	Normal	3.71	6.49	5.12
Up de 30 m³	Normal	5.61	9.81	7.74
0 à 10 m³	Commercial	35.55	62.18	49.06
Up de 11 m³	Commercial	6.16	10.78	8.50
0 à 10 m³	Industry	43.05	75.30	59.41
Up de 11 m³	Industry	6.86	12.00	9.40
0 à 10 m³ *	Public	40.36	70.60	55.70
Up de 11 m³	Public	6.79	11.88	9.37

SOURCE: Prepared by the authors based on data from Oliveira (2015), Assis, Vieira and Oliveira (2018), and Sousa City Hall (2021).

In fact, all other consumption ranges presented in the table above have a fixed minimum tariff, except the range contemplated by the social tariff by exemption, which was maintained in 2021. It is noteworthy that Assis, Vieira, and Oliveira (2018), proposed a tariff adjustment to achieve the financial balance of the municipality. However, the 38% adjustment made in the consumption ranges that do not cover the social tariff is outdated. Taking for example the range of public users with a consumption of 0 to 10 m³ *, an increase of 74.92% was proposed, i.e. from R$ 40.36 to R$ 70.60. However, the readjustment made in 2021 gave an increase of 38%, i.e., from R$ 40.36 to R$ 55.70.

Facing the increases, one can see that the increase actually given, of 38%, corresponds to a little more than 50.7% of the increase that should have been given. It is noteworthy that the figures proposed in 2018 are already subject to monetary correction and that the market and the economy have not remained stable, in view of the New Coronavirus (Sars-Cov-2) pandemic in the years 2020 and 2021.

It is worth noting that, according to the model proposed by Assis, Vieira, and Oliveira (2018), the social tariff would not occur by exemption, but rather by reduction. Thus, one can conclude the financial unsustainability of the mentioned autarchy, whose legal regime demands financial and administrative autonomy, which is not in accordance with art. 2, VII of PNSB, which establishes that financial sustainability is one of the fundamental principles of basic sanitation services.

METHODOLOGY

Prodanov and Freitas (2013, p. 24) define the scientific method as a "set of procedures adopted for the purpose of attaining knowledge." It is the methods that enable the researcher to determine the scope of his investigation and the validity of his generalizations.

In this way, the present work uses the deductive approach method, starting from general doctrinal and social explanations about basic sanitation and its pricing, and proceeding to the analysis of the evolution of the reality of Sousa-PB, through data collected in other researches and those primarily made available

by the competent official bodies. Thus, it is used a logical construction between two premises to extract a third premise logically arising from the first two (PRODANOV; FREITAS, 2013).

As methods of procedure, the comparative method is used, when one compares the data published by the updated official agencies with the previous ones and with the fruits of other researches.

Fonseca (2012) states that all scientific work must build a theoretical foundation based on pre-existing public bibliography. The bibliographical research is fundamental to reference the present work, through the survey of previous data about the object of study, as well as about the current legislative situation addressed. The bibliographical research was used, searching national periodicals, theses, dissertations, books, and governmental institutions' bulletins.

Notwithstanding the use of bibliographical research, documentary research was also used, consulting the legislation in force and the tariff tables as primary sources of information. This is an applied research since it analyzes the reality of Sousa-Pb against the national legislation, quali-quantitative since there is a quantitative comparison of data and analysis of these in the face of relevant principles and standards (MAZUCO et al., 2018).

RESULTS AND DISCUSSIONS

It results from the research that the national trend is to adopt a model of social tariff by reduction, in view of the need to obey the principle of efficiency, and the principle of economic sustainability through the tariffs charged for environmental sanitation services, as can be seen in the bill approved in the due parliamentary commission.

It is noted that the tariff adjustment adopted in Sousa-PB in 2021 is below what is necessary to ensure the economic and financial balance required by the National Environmental Sanitation Policy and the nature of DAESA as a municipal autarchy. It also shows the economic unsustainability of the social tariff by exemption, since even with a higher increase in the other ranges, the model for economic rebalancing requires a minimum tariff of R$ 28.90 for the residential consumption range of up to 10 m³.

CONCLUSIONS

The research shows that the Brazilian legislation, aiming to guarantee the fundamental right of access to water to the poor, tends to apply a national policy of social tariff reduction. In fact, although there is a need for efficiency and economic sustainability in public services of environmental sanitation, one cannot forget those who will be deprived of an essential service due to their inability to afford the tariff charged.

Next, it is ascertained that the legislation of Sousa instituted a policy of social tariff exemption for the payment of public services of water supply and sewage collection. This tariff structure was implemented in 2009 and only revised in 2021.

The comparative study between the model proposed to achieve economic and financial balance in 2018 and the tariff structure adopted in January 2021 shows that it is not feasible to maintain the current model, so a new study is required to determine the model of increase needed to ensure DAESA's economic and financial balance. It is emphasized that the tariff increase in the other ranges is not the only solution.

It is recommended the adoption of the national model in progress, which is the social tariff by reduction, in addition, Law 11.445/2007 establishes that it is possible to have non-tariff subsidies, such as grants and subsidies. All the research objectives have been achieved.

REFERENCES

[1] AGÊNCIA DE NOTÍCIAS DA CÂMARA . Proposta cria tarifa social de água para as famílias de baixa renda - Notícias. Portal da Câmara dos Deputados. Disponível em: https://www.camara.leg.br/noticias/791350-proposta-cria-tarifa-social-de-agua-para-as-familias-de-baixa-renda/. Acesso em: 6 Oct. 2021.

[2] AGÊNCIA DE NOTÍCIAS DA CÂMARA. Comissão aprova projeto que cria tarifa social de água e esgoto - Notícias. Portal da Câmara dos Deputados. Disponível em: https://www.camara.leg.br/noticias/791353-comissao-aprova-projeto-que-cria-tarifa-social-de-agua-e-esgoto/. Acesso em: 6 out. 2021.

[3] AGUIAR, A. M.S.; MORETTI, R.S ; SILVA, E. A:A tarifa social e o direito humano à água e ao saneamento. Disponível em: https://ondasbrasil.org/a-tarifa-social-e-o-direito-humano-a-agua-e-ao-saneamento/.Acessoem: 6 out. 2021.

[4] ALBUQUERQUE, C. Realising the human rights to water and sanitation: a handbook by the unspecial rapporteur. Portugal: booklet 1, 2014.

[5] ASSIS, L. F. de; VIEIRA, A. S; OLVIERA, M. M. Tarifação para equacionar os serviços de saneamento ambiental, na cidade de Sousa, no Estado da Paraíba. Revista Verde de Agroecologia e Desenvolvimento Sustentável. V. 13, n4, p. 544-556. Pombal, outubro de 2018.

[6] BRASIL. Lei n.º7.783, de 28 de junho de 1989. Dispõe sobre o exercício do direito de greve, define as atividades essenciais, regula o atendimento das necessidades inadiáveis da comunidade, e dá outras providências. Disponível em: http://www.planalto.gov.br/ccivil_03/leis/l7783.HTM.Acesso em: 06 de out.2021

[7] BRASIL. Lei n.º8.078, de 11de setembro de 1990. Dispõe sobre a proteção do consumidor e dá outras providências. Disponível em:http://www.planalto.gov.br/ccivil_03/leis/l8078compilado.htm.Acesso em: 06 de out. 2021.

[8] BRASIL. Lei n.º8.987, de 13de fevereiro de 1995. Dispõe sobre o regime de concessão e permissão da prestação de serviços públicos previsto no art. 175 da Constituição Federal, e dá outras providências. Disponível em: http://www.planalto.gov.br/ccivil_03/leis/l8987compilada.htm. Acesso em: 06 de out. 2021.

[9] BRASIL. Lei nº 11.445 de 05 de Janeiro de 2007. Estabelece diretrizes nacionais para o saneamento básico. Disponível em: http://www.planalto.gov.br/ccivil_03/_ato2007-2010/2007/lei/l11445.htm. Acesso em: 04 de out. de 2021.

[10] BRASIL. Lei 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/l14026.htm. Último acesso em: 30 de out. de 2021.

[11] FONSECA, R. C. V. Metodologia do Trabalho Científico. Edição revisada. IESDE Brasil S.A. Curitiba, 2012.

[12] MAZUCATO, T (Org.) et al. Metodologia da Pesquisa e do Trabalho Científico. Editora FUNEPE. Penápolis-SP, 2018.

[13] OLIVEIRA, P. A. A municipalização dos serviços de saneamento: Uma análise jurídico-hídrica do gerenciamento em Sousa-PB, adotado pelo Departamento de Águas, Esgotos e Saneamento Ambiental-DAESA. Universidade Federal de Campina Grande. Campina Grande, PB. 2015.

[14] PAZ, R. D. O. D: Notas sobre cadúnico e BPC. Disponível em:https://ondasbrasil.org/o-cadunico-e-a-tarifa-social-para-os-servicos-de-agua-potavel-e-esgotamento-sanitario/. Acesso em 05 de out. de 2021.

[15] PRODANOV, C.C; FREITAS, E.C de. Metodologia do Trabalho Científico: Métodos e Técnicas da Pesquisa e do Trabalho Acadêmico. 2º edição. Universidade Freevale. Novo Hamburgo-RS, 2013.

[16] REIS, Camila Antonieta Silva; CARNEIRO, Ricardo. O direito humano à água e a resolução do saneamento básico no Brasil: Tarifa Social e acessibilidade econômica. Desenvolvimento em Questão, ano 19, n.º 54, pp.122-142,2021.

[17] SOUSA. Diário Oficial do Município, Nº 295-Edição Especial de Janeiro de 2021. Disponível em:http://sousa.pb.gov.br/uploads/files/295%20-%20edicao_especial_de_janeiro_01.pdf. Sousa-PB, janeiro de 2021. Acesso em: 03 de out. de 2021.

[18] SOUSA. Lei Complementar nº 031/2004. Dispõe sobre os serviços públicos de água e esgoto no tocante a retomada da gestão e operação destes serviços pela Administração Municipal, cria o ―Departamento de Água, Esgotos e Saneamento Ambiental de Sousa‖ - DAESA, e dá outras providências. Disponível em: https://www.camarasousa.pb.gov.br/arquivos/374/LEIS%20COMPLEMENTARES_31%20_2004_00000 01.pdf.Acesso em: 04 de out. de 2021.

[19] SOUSA. Lei Complementar nº 169/2018. Altera a redação dos dispositivos das leis complementares municipais 008/1998 que dispõe sobre a estrutura administrativa da Prefeitura Municipal de Sousa, 031/2004, que cria o "Departamento de Água, Esgotos e Saneamento Ambiental de Sousa"-DAESA e 059/2009 que dispõe sobre a criação da Estrutura Administrativa do DAESA e dá outras providências. Disponível em:

https://www.camarasousa.pb.gov.br/arquivos/2286/LEIS%20COMPLEMENTARES_169_2018_0000001.pdf. Acesso em: 03 de out. de 2021.