

Implications of a new licensing framework on the impact assessment of water and sewage systems

*Implicações do novo Marco do Licenciamento sobre a
avaliação de impacto de sistemas de água e de esgoto*

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ABSTRACT

A bill pending in the Brazilian Senate may change profoundly the characteristics and practice of environmental licensing in Brazil, including removing the obligation to obtain an environmental license for specific projects, such as those related to water supply and sanitary sewage. This timely bibliographical and documental study aims to analyse the development of specific legislation on environmental impact assessment (EIA) and environmental licensing of these two types of projects and compare them with the changes provided by the proposed Licensing Law. The work uses the identification and analysis of specific rules and legal documents that make up the current regulatory framework for licensing and the changes provided by the bill. The flexibility and exclusion of environmental licensing, without scientific rigour, ignore the importance of this instrument for environmental integration into decision-making. Furthermore, projects could damage the environment without such analysis due to the need to expand water supply and sanitation systems.

Keywords: Environmental impact assessment. Water. Sanitation. Water supply. Sustainable development.

RESUMO

O conceito de inovação verde refere-se ao tipo de inovação dedicada para a obtenção de melhorias radicais ou incrementais de produtos ou processos que contribuam para o desenvolvimento sustentável. A inovação verde pode melhorar a imagem geral de uma empresa e, como consequência, pode levar a um melhor desempenho no mercado. Os projetos de inovação verde podem colaborar para o crescimento econômico, possibilitando qualidade de vida sem prejudicar o meio ambiente. Assim, o objetivo deste estudo é verificar como se caracteriza a relação do desenvolvimento de tecido derivado da inovação verde com o gerenciamento de projetos. Para alcançar o objetivo da pesquisa, foi realizado um estudo de multicasos com empresas desenvolvedoras e utilizadoras de tecidos derivados da inovação verde. Os resultados obtidos indicam que as empresas estudadas não usam gestão de

projetos formal na condução de seus programas de inovação verde. A gestão de projetos é totalmente intuitiva. Embora as empresas pesquisadas estejam preocupadas com a sustentabilidade e querendo cada vez mais inovarem com responsabilidade para satisfazerem seus clientes, as práticas de gestão de projetos são informais. Este estudo contribuiu para a prática, no sentido de que existe a oportunidade de implementação da gestão de projetos nas empresas com o intuito de melhoramento da inovação verde, embora com a necessidade de adaptação ou uso de técnicas menos formais e burocráticas.

Palavras-chave: Gestão de Projetos Inovadores. Gestão de Projetos Sustentáveis. Inovação Verde. Tecidos Sustentáveis.

1 INTRODUCTION

The environmental licensing and environmental impact assessment (EIA) are instruments of the Brazilian National Environmental Policy (PNMA) regulated and implemented by an extensive legal and institutional framework that is undergoing a period of criticism by several actors involved in its operation (BRAGAGNOLO, 2017; FONSECA; SÁNCHEZ; RIBEIRO, 2017). In this context, a proposed bill (PB) pending in the Federal Senate (PB 3,729/2004 renumbered in the Senate to PB 2159/2021) can profoundly change the characteristics and practice of environmental licensing in Brazil, streamlining or dismissing its mandatory nature for specific projects, such as water supply (WSS) and sanitary sewage (SSS) systems.

Currently, 83.7% of the Brazilian population is served by the public water distribution grid and only 54.1% by sewage collection (SNIS, 2019), revealing an insufficiency in the provision of these services to the population and a considerable demand for expansion. These undertakings are priorities and essential, but they can cause environmental impacts, including significant ones, potentially polluting water resources. WSS and SSS have an ambiguous relationship with the environment since they are necessary for health and human dignity (WHO, 2018), but they consume water and can negatively affect the environment (ANA, 2019; HELLER; PADUA, 2016).

The WSS and SSS have recently been the subject of other legislation with an intrinsic relationship with the environment. In 2020, the Legal Framework for Sanitation Law was enacted, Law N° 14.026/2020, to facilitate private sector investment and, consequently, increase the number of WSS and SSS initiatives. Leite *et al.* (2021) highlight that this legislation can accelerate the privatisation process and centralise some decision-making powers related to services, besides hampering sanitation coverage in smaller municipalities.

In a scenario of changing regulatory frameworks, exploring the scope of the specific legislation that make up the legal framework prior to the proposed changes allows us to discuss what to maintain and what to change given the peculiarities and potential impact of each type of project. Thus, this work aims to analyse the development of specific legislation on EIA and environmental licensing of WSS and SSS projects and protection of water resources, also compares them with the changes presented in the proposed Licensing Law.

Therefore, this work can contribute with evidence to the technical discussion for potential interactions of the new legal framework for sanitation and the new licensing Law, their implications for the lessening of rules and even the exclusion of WSS and SSS projects from the list of susceptible to licensing.

2 THEORETICAL FOUNDATION

This study uses bibliographic and documentary analysis of legal frameworks on environmental licensing rules, EIA process and protection of water resources in Brazil.

The bibliographic data for the analysis was carried out in the primary databases of technical-scientific articles from journals available in Web of Science, Scopus, Scielo Brazil and Google Scholar repositories.

The search follows the integration of keywords (also in Portuguese): evaluation of environmental impact; environmental licensing; simplification, WSS and SSS. However, the search is not exhaustive since it does not aim to undertake a bibliometric analysis of these issues but rather to identify technical works that allow for an in-depth exploration of the research object.

The documentary analysis uses selected laws and regulations that determine: the procedures, objectives, tools, and guidelines at the federal level regarding the environmental licensing of WSS and SSS, from 1981, when the PNMA was established, until June 2021.

The following legal texts, available on the Legislation Portal, were analysed: Federal Constitution, Ordinary Laws, Complementary Laws and Decrees. In addition, the Normative Resolutions of the National Environment Council (Conama) and PB 2159/2021¹ were also analysed, available on the Conama² website and at the Chamber of Deputies, respectively.

The screening of documents was carried out in two parts. First, a manual selection was made by reading the syllabus of the texts in a search for legislation that had links with the issues and keywords: environmental licensing, EIA, water, sanitation, WSS and SSS. Then, a filter applied to this sample allowed excluding legislation and resolutions that had no direct relationship with the protection of water resources or regulation of the environmental licensing of WSS and SSS.

Thus, the legal documents selected were: the Federal Constitution of 1988, four ordinary laws, a supplementary law, six Conama resolutions and an interministerial decree. The selected legislation and syllabus, which are part of the legal structure for licensing and protecting water resources at the Brazilian federal level, are summarised in Table 1.

Table 1 | Legislation and menus of the legal framework for licensing supply and sanitary sewage systems.

Legislation	Syllabus
Law No. 6.938/1981	Enact the National Environmental Policy, its purposes and mechanisms of formulation and application, and other provisions.
Decree 88.351/1983 (Revoked)	Regulates Law No. 6,938, of August 31, 1981, and Law No. 6,902, of April 27, 1981, which provide, respectively, on the National Environmental Policy and the creation of Ecological Stations and Environmental Protection Areas, and other provisions.
Conama Resolution 01/1986	Enact for basic criteria and general guidelines for environmental impact assessment.
Conama Resolution 20/1986 (Revoked)	Establishes the classification of fresh, brackish and saline waters in the National Territory.
Federal Constitution of 1988 Chapter VI	Establishes the classification of fresh, brackish and saline waters in the National Territory.
Law No. 9.433/97	Establishes the National Water Resources Policy, creates the National Water Resources Management System, regulates item XIX of art. 21 of the Federal Constitution, and amends art. 1 of Law No. 8,001, of March 13, 1990, which modified Law No. 7,990, of December 28, 1989.
Conama Resolution 357/2005	Enacts the classification of bodies of water and environmental guidelines for their classification and establishes the conditions and standards for the release of effluents and other measures.
Conama Resolution 377/2006	Provides rules for simplified environmental licensing of Sanitary Sewage Systems.

<i>Legislation</i>	<i>Syllabus</i>
Law No. 11.445/2007	Establishes national guidelines for basic sanitation; creates the Interministerial Committee on Basic Sanitation; amends Laws 6,766, of December 19, 1979, 8,666, of June 21, 1993, and 8,987, of February 13, 1995; and revokes Law No. 6,528, of May 11, 1978. (Writing by Law No. 14,026, of 2020).
Conama Resolution 396/2008	Provides rules for the classification and environmental guidelines for classifying groundwater and other provisions.
Decree No. 7.217/2010	Regulates Law No. 11,445, of January 5, 2007, establishing national guidelines for basic sanitation and other provisions.
Conama Resolution 430/2011	Provides rules for the conditions and standards for the release of effluents, complements and amends Resolution No. 357, of March 17, 2005, of the National Council for the Environment-Conama.
Complementary Law No. 140/2011	Establishes rules under the terms of items III, VI and VII of the caput and the sole paragraph of Art. 23 of the Federal Constitution, for cooperation between the Union, the States, the Federal District and the Municipalities in administrative actions arising from the exercise of standard competence related to the protection of remarkable natural landscapes, the protection of the environment, the fight against pollution in any of its forms and the preservation of forests, fauna and flora; and amends Law No. 6,938, of August 31, 1981.
Interministerial Ordinance No. 60/2015	Establishes administrative procedures that govern the performance of federal public administration bodies and entities in environmental licensing processes within the competence of the Brazilian Institute of the Environment and Renewable Natural Resources – Ibama.
Law No. 14,026, of July 15, 2020	Updates the legal framework for basic sanitation and amends Law No. 9,984, of July 17, 2000, to give the National Water and Basic Sanitation Agency (ANA) the authority to edit reference standards on the sanitation service, Law No. 10,768, of November 19, 2003, to change the name and attributions of the position of Specialist in Water Resources, Law No. Art. 175 of the Federal Constitution, Law No. 11,445, of January 5, 2007, to improve the structural conditions of basic sanitation in the country, Law No. 12,305, of August 2, 2010, to address the deadlines for the environmentally adequate final disposal of tailings, Law No. 13,089, of January 12, 2015 (Metropolis Statute), to extend its scope of application to microregions, and Law No. 13,529, of December 4, 2017, to authorise the Union to participate in for the sole purpose of financing specialised technical services.

Source: Prepared by the authors.

The data analysis uses the information extracted from the selected legal documents and compared with the forecasts of the processed PB in the Federal Senate (PB 2159/2021). The topics covered during the review of the documents use the comparison criteria.

3 BRIEF HISTORICAL REVIEW OF LEGISLATION

The first legal texts providing environmental licensing and EIA in the Brazilian territory appeared in the 1970s when some states began to mention and apply EIA in their legislation and licensing processes (SÁNCHEZ, 2013). Also, in this period, the World Bank began to require EIA for financing large hydroelectric projects (FONSECA; RESENDE, 2016). However, at the national level, the first legal framework for environmental licensing occurred in 1981, when Law 6,938/1981 was enacted, establishing the PNMA, creating the National Environment System (Sisnama), and instituted environmental licensing and the EIA in Brazilian federal laws.

The Law 6,938/1981 was put into practice in 1983 when Decree 88,351/1983 began to regulate environmental licensing and the responsibilities of PNMA participating members in the process of licensing and generating standards. This decree established the primary responsibility of the states to undertake the licensing processes and the federal government to act in a supplementary way.

Specific EIA and licensing regulations began to appear in 1986 when the National Environment Council (Conama) approved the first Resolution with guidelines for EIA (FONSECA; SÁNCHEZ; RIBEIRO, 2017). The Conama Resolution 01/1986 brought the first list of activities that modify the environment depending on an environmental impact statement (EIS) and the respective environmental impact report (EIR). This Resolution included hydraulic works, such as sanitation dams, sewer collectors, and outfalls. In addition, the Conama Resolution 20/1986 defined the classifications of fresh, brackish and marine waters to establish a parameter for the values to follow in the environmental licensing of enterprises that use these waters.

The resolutions for framing water bodies were inserted in Conama's resolute framework at other times. For example, in 2005, Resolution 357/2005 revoked Resolution 20/1986, presenting a new classification for bodies of water and conditions for effluent discharge. In 2008, Resolution 396/2008 also established the framework for groundwater and, in 2011, Resolution 430/2011 complemented and updated the conditions and standards for launching Resolution 357/2005.

This set of resolutions on the classification of bodies of water and guidelines formed a framework of criteria that currently make up the water resources pollution-control system and guide the elaboration of WSS and SSS projects, which need observation in the licensing of these projects. The parameters adopted in these resolutions are considered rigid compared to those of other countries, but improvements are still pending, such as the insertion of effluent discharge limits based on industrial activities, based on fixed standards today (VEIGA; MAGRINI, 2013).

In 1988, environmental legislation gained higher notoriety with the inclusion of Chapter VI, focused on the environment, in the Federal Constitution. Article 225 was included in this chapter, which also mentions the EIA required to install work or activity potentially causing significant degradation of the environment. This article, which also guarantees the right to an ecologically balanced environment and an essential asset to a healthy quality of life, was strongly influenced by the international moment (TAMBELLINI, 2012) and sought to comply with the Stockholm Declaration of 1972, a letter that exposes the concerns and guidelines for world environmental preservation (SCHIAVO; BUSSINGUER, 2020). The Constitution also assigned legislative powers, dividing responsibilities for the environment between the Union, states, and municipalities, but lacking specification.

In 1997, it came to the water to gain legislative attention with Law No. 9,433/97, which created the National Policy on Water Resources (PNRH). The PNRH is a landmark for the environmental planning of water resources; however, since the 1980s, it has not had any integrated planning of the sectors that used this resource (TUCCI, 2005). This policy has the National Water Resources Council (CNRH) as one of the managers and the granting of water use as an instrument of control and planning (DE SOUZA ABESSA; AMBROZEVICIUS, 2020). The grant is usually required in a manner linked to the licensing process for activities that use water resources, such as WSS and SSS, and, like the environmental license, is expected to guarantee environmental preservation.

In 2007, Law N°. 11,445/2007 was enacted, referring to the Federal Basic Sanitation Policy (PFSB). The PFSB regulation made by the Decree No. 7,217/2010 creates a relationship between this policy, the PNMA and the PNRH determining that Conama and the CNRH establish norms for the licensing of sanitation services. In this way, the policies complement each other and create an integrated political ordering among their participating bodies. However, policies still lack coordination, including those under the same governmental body, such as the PNMA and PNRH (GRANGEIRO, 2020).

The Law that instituted the PFSB also instructed licensing bodies to consider efficiency steps with progressive targets to achieve the environmental standards established in the legislation. It also determined that streamlined licensing procedures for sanitary sewage treatment units can be established. The Conama Resolution 377/2006 established criteria for this licensing, defining the maximum values of flow or population served for which simplified licensing must be applied. For

transport units, these maximum values are 1000 L/s, and for treatment units, up to 400 L/s or 250,000 inhabitants served.

Streamlining EIA processes are widely used worldwide, used for procedural terms for the application of the instrument, which aims to adapt the analysis procedures to the expected level of expected impact (GASPAR; SANTOS; SOUZA, 2020). However, it should be applied with caution, considering that its use in an unlimited way can result in oversimplified processes that shorten deadlines and procedural steps, but with potentially harmful environmental results (ENRÍQUEZ-DE-SALAMANCA, 2021).

In 2011, the Complementary Law 140/2011 finally specified the powers of federal entities established in 1988 for environmental licensing, leading to an increase in the participation of municipalities in licensing (NASCIMENTO; ABREU; FONSECA, 2020). From this Law, the states gain the competence to license WSS and SSS, and this function could be delegated to the municipalities in a case where impacts affect only the local area.

The most recent legislation on the subject was the Interministerial Ordinance N°. 60 of 2015, which regulated the actors' participation in the process. According to the Ordinance, they may be called upon to participate in preparing a term of reference, giving an opinion on the information presented in environmental studies and monitoring compliance with the conditions and measures required in the environmental licenses. Each of these actors is responsible for (BRAZIL, 2015):

- I. in the case of Funai³, the assessment of impacts caused by any activity or undertaking on indigenous lands, and the assessment of the adequacy of proposals for control and mitigation measures resulting from these impacts;
- II. in the case of FCP⁴, the assessment of impacts caused by any activity or undertaking on quilombo land, and the assessment of the adequacy of proposals for control and mitigation measures resulting from these impacts;
- III. in the case of Iphan⁵, the assessment of impacts caused by any activity or undertaking on the safeguarded cultural assets referred to in this Ordinance, and the assessment of the adequacy of the proposals for control and mitigation measures resulting from these impacts; and
- IV. in the case of the Ministry of Health, the assessment and recommendation around impacts on risk factors for the occurrence of malaria cases, if the activity or enterprise is located in risk areas or endemic for Malaria.

4 IMPLICATIONS OF ENVIRONMENTAL LICENSING LAW FOR WSS AND SSS

In recent years, claimed legal changes aimed at improving and accelerating the environmental licensing process gained extensive discussions at a political and business level (FONSECA; SÁNCHEZ; RIBEIRO, 2017). The demands of these groups press for the review of licensing and often seek simplifications of environmental legislation and the licensing process (BRAGAGNOLO, 2017; FONSECA; RODRIGUES, 2017). These discussions culminated in a bill that aims to unify a part of the primary environmental licensing laws and regularise several points of divergence between environmental agencies. A 2004 PB was discussed and approved in the Brazilian Chamber of Deputies in this context.

The second context that emerged politically concerns the moment of setback and dismantling in the Brazilian environmental legislation, driven by the current government (ATHAYDE *et al.*, 2022; FERRANTE; FEARNside, 2019; SIQUEIRA-GAY *et al.*, 2020). This process followed facts of a dubious nature built on the precarious methodology that influence policy within the Brazilian Congress and "technically" support the ongoing environmental dismantling (RAJÃO *et al.*, 2022).

The PB 3729/2004, renumbered in the Senate PB 2159/2021, despite not being recent, adopted new proposals and is quite different from the previous one proposed in 2004 regarding the changes and insertions made since it was first presented. The PB has a broad scope with another 23 bills formulated between 2004 and 2017 and has gone through five substitutes between June 2019 and May 2021. The last of the substitutes, despite the strong rejection of society – in the poll about the bill made available by the Chamber of Deputies, 95% of the population rejected the bill (CÂMARA DOS DEPUTADOS, 2022) – and the academic community, which was against the text (RUARO; FERRANTE; FEARNside, 2021; SÁNCHEZ; FONSECA; MONTAÑO, 2019). Nevertheless, the bill was approved by more than 70% of the votes and forwarded to the Senate on May 13, 2021.

Some of the fundamental and controversial aspects of the PB remain to the potential to significantly influence the EIA and regulation of WSS and SSS projects. For example, the release of licensing for some projects will allow the issuance of a license by adhesion and commitment (LAC), which will be obtained automatically over the internet, without technical analysis by environmental agencies (RUARO; FERRANTE; FEARNside, 2021).

In this way, the bill goes in the opposite direction of what the academic literature and scientific debates have pointed out over time as necessary (ATHAYDE *et al.*, 2022; BOND *et al.*, 2014; ENRÍQUEZ-DE-SALAMANCA, 2021).

The problem for WSS and SSS projects can be even more significant, as the PB intends to extinguish this type of project licensing. Table 2 illustrates the comparison between the current regulation and the one foreseen in the PB, emphasising the changes for these types of projects.

Table 2 | Comparison between the applicable legislation for environmental licensing today and the foreseen one with the General Environmental Licensing Law for WSS and SSS projects.

	Legislation in force to date	With the proposal of PB 2159/2021
Licensing requirement for WSS and SSS	Mandatory (BRAZIL, 1986) (BRAZIL, 1997) SSS – “a) works of trunk collectors; b) interceptors; c) elevators; d) treatment plants; e) emissaries; and f) final disposal” (BRAZIL, 1988). WSS – “Capture works whose flow is above 20% of the minimum flow of the supply source at the point of capture and that modify the physical and/or biotic conditions of water bodies” (BRAZIL, 1988).	Not requestable ⁶
Simplification forecast for WSS and SSS	SSS – Simplified licensing applies to transport and treatment units up to 1000l/s and 400l/s or 250,000 inhabitants, respectively. (BRAZIL, 2006). WSS – Licensing of effluents generated in water treatment should be simplified. It is up to the licensing bodies to define the criteria (BRAZIL, 2007).	In Article 10, simplified environmental licensing is ensured for all basic sanitation activities when licensing is required. However, exceptional cases must be justified.
Licensing responsibility for WSS and SSS	The responsibility is state-wide and can be delegated to municipalities when there is a local impact, except in the cases provided for in Complementary Law 140/2011, when they may be the responsibility of the Union. (BRAZIL, 2011).	Law 140/2011 continues to be valid for determining competencies.

	Legislation in force to date	With the proposal of PB 2159/2021
Licensing Rites	States are free to define environmental licensing rites and issue different licenses (BRAZIL, 2011; BRAZIL, 1988).	The license types have been defined and are: For ordinary three-phase licensing, LP, LI and LO merged into one for two-phase licensing and LAU for simplified single-phase licensing. LAC and corrective operating license can also be issued. Other specific licenses can be defined by the normative act respecting Law 140/2011.
Actors involved	It provides public participation through public hearings (BRAZIL, 1997; BRAZIL, 1986). Different public authorities may be called upon to participate in the process depending on the area in which each project is affected (BRAZIL, 2015): Fundação Nacional do Índio; National Health Foundation; Palmares Cultural Foundation; National Historical and Artistic Heritage Institute; ICMBio or body responsible for managing a protected area (BRAZIL, 2010)	It defines the forms of public participation in: "I – public consultation; II – taking technical subsidies; III – participatory meeting; IV – public hearing". The participation of public power entities is maintained, despite not explicitly mentioning which entities are. Limitations on participation were also included. Among them: the influence distance is predetermined, no longer being defined in the EIA process; the cases in which these entities must act have been redefined and are more restrictive; Failure to comply with the bodies' manifestation deadline does not prevent the progress of the environmental licensing process.
Environmental studies for WSS and SSS	EIS and EIR for more complex cases. In the case of simplification: SSS – Simplified environmental studies may be required (BRAZIL, 2006). WSS – It is up to the licensing body to determine the required documents (BRAZIL, 2011).	EIS and EIR are exceptions. The licensing authority must determine the technical documents required in the process.
Other applicable legal instruments for WSS and SSS	SSS - Granting the right to use water resources to release treated effluent (BRAZIL, 1997). WSS – Granting the right of use for capture (BRAZIL, 1997).	Grants continue to be mandatory outside the environmental licensing process, but only the grant for releasing the treated effluent from the ETE is specified in the PL.

Prepared by the authors.

The federal bill provides significant changes on the licensing requirement topic previously delegated to the states, including excerpts from the PB mentions in the Art. 4:

§ 1 The federative entities must define the typologies of activities or undertakings subject to environmental licensing, respecting the attributions provided by the Complementary Law No. 140, of December 8, 2011, updated whenever necessary and observing the provisions of Arts. 8 and 9 of this Law.

The Complementary Law 140 and its regulations follow the provisions of the Federal Constitution, and they do not include the WSS and SSS as the responsibility of the Federal or the municipalities,

leaving the states with the residual competence to determine the licensing rites of these typologies, including requirement criteria of EIS and license waiver. It raises the question of whether this exclusion of WSS and SSS from the environmental licensing list would be extrapolating federal regulatory powers and overlapping state decision-making powers, also infringing the legality of the text. The abstract waiver of environmental licensing for projects potentially harmful to the environment is considered unconstitutional by the STF, given the principle of prohibition of inadequate protection (ANPR, 2021).

Furthermore, the Federal Constitution advocates in Article 225 the competence of the Union for issuing general rules on environmental protection, which must be in line with the principles of prevention and precaution. However, when declaring the unenforceability of licensing of WSS and SSS, the State assumes that such activities would not, as a rule, be potential causes of environmental impact, which may not correspond to reality (ANA, 2019; HELLER; PÁDUA, 2016).

Aiming to comply with the principles of prevention and precaution fixed by the Brazilian Law, it is necessary that criteria for the circumstances of unenforceability of licensing are determined, ruling out arbitrariness and the risk of generating irreversible damages. The states define these criteria and are indicated with technical support by the Conama resolutions. However, even in the case of enterprises, such as the WSS and SSS, which are fundamental for society, this essentiality should not override the need to assess the environmental impacts, nor promote speed in the licensing processes under the same argument, given the potential to cause environmental impacts. The EIA processes have provided an adoption of quick procedures compatible with the importance of specific projects (BOND *et al.*, 2014; ENRÍQUEZ-DE-SALAMANCA, 2021), but without a burden to reveal significant impacts to the environment due to the lack of appropriate environmental licensing supported by EIA.

In addition to the change in the licensing requirement for the WSS and SSS, public participation could be the most impacted, mainly due to the default area of influence, which determines when an authority should be convened. The estimated distance for unspecified projects, such as WSS and SSS, and not subject to EIS is only 2 km in the Amazon and 1 km in other Brazilian biomes. However, when an EIS is required, the distance reaches 3 and 1km, respectively, according to the Annex in the PB.

The concept of an area of influence is a complex topic and insufficiently addressed in the Conama Resolution 01/1986, which defines it, in the EIS, as the area of the hydrographic basin where the project is located, which in practice is not always adopted (SANTOS; FONSECA, 2016). Currently, the definition of the area of influence is carried out during the EIA process and presents several difficulties, mainly regarding the lack of clarity, standardisation and scarcity of criteria to define it (BORIONI; GALLARDO; SÁNCHEZ, 2017; FONSECA; BITAR, 2012; ROCHA; WILKEN, 2020).

The predefinition of the influence area adopted in the PB can be an attempt to solve these problems. However, it ends up being arbitrary and harmful in the case of projects that tend to cause environmental impacts over wider areas. Furthermore, this arbitrariness should affect the WSS and SSS projects associated with impacts on water bodies that tend to extrapolate the space delimited in the PB.

Regarding public participation, the literature clarified the risk of decreasing the participation of indigenous peoples and quilombolas (people who live in quilombo land) in licensing (FERRANTE; FEARNside, 2019; INSTITUTO SOCIOAMBIENTAL, 2021; SIQUEIRA-GAY *et al.*, 2020). Also noteworthy is the exclusion of lands that have not yet been legally demarcated as indigenous land and will not be entitled to mitigation and compensation for socio-environmental impacts (ATHAYDE *et al.*, 2022).

The other characteristics of the WSS and SSS licensing, such as the competence to license, the required rites and licenses and the requested environmental studies, would undergo few changes with the proposed new regulation, given that the procedural definitions would be in charge, mainly, of the states, as currently envisaged. Simplification of the licensing process would be guaranteed in the Law, as is also provided for in existing provisions. However, specific cases that diverge from the rule must be justified. This shows the inconsistency of the PB to eliminate the licensing of two types of

projects that have the rule of simplifying and facilitating their development. The proposed rule has also neglected that these regulations provide measures proportional to the size and degrading potential of the projects, such as the Conama Resolution 377/2006, which has explicitly simplified procedures for sanitary sewage projects.

5 FINAL CONSIDERATIONS

The environmental licensing of the water supply (WSS) and sanitary sewage (SSS) systems, based on the analysis of the legislation launched since the 1981 PNMA, are emerged into a broad framework of legal and administrative basis. This framework follows guidelines built from the increased complexity of regulatory apparatus, assessment criteria and environmental control tools.

An essential contribution to this framework is the release of objective norms, especially the Conama Resolutions 357/2005, 20/1986, 396/2008 and 430/2011 that established criteria for the classification of bodies of water and provided technical support with the direction of the WSS and SSS environmental licensing.

The National Water Resources Council (CNRH) also presents resolutions and instruments supporting the WSS and SSS decision-making, such as the grant, an environmental planning tool, and complements environmental licensing.

These concerns become even more relevant given the need to increase the number of the WSS and SSS projects to cover the gap in serving the population in the coverage of environmental sanitation in Brazil.

The current proposal for a General Licensing Law (PB 2159/2021) entails contradictions to the legal framework for licensing by excluding the licensing of the WSS and SSS projects. The bill ignores the resolutions and laws presented built in the past that also provide means for streamlining sanitation projects. It also ignores that the states can define their simplified licensing procedures and adopt strategies tailored to each project's potential impact.

The points that will change with the PB in the way it is proposed refer to:

- No licensing requirement for the WSS and SSS as a rule; currently, these systems are subject to licensing, and the non-enforceability criteria are defined by the states, when applicable;
- Delimitation of the area of influence that will reduce the scope of public participation in the licensing and the receipt of environmental compensation by communities and conservation units possibly affected; this delimitation occurs during the EIA process;
- The simplification of environmental licensing becomes a rule for sanitation projects; today, there are criteria proposed by the Conama to guide when these projects should be simplified, but it is up to the states to ratify or define their own rules.

The exclusion of environmental licensing from the WSS and SSS can protect licensing processes and litigation between states and proponents, as discussed in a technical note by the National Association of Attorneys of the Republic (ANPR, 2021). Nevertheless, ultimately, it may result in questioning its constitutionality, based on statutory environmental principles of prevention and precaution and the overlapping of regulatory powers between federative entities.

Contradictory consequences with the changes provided by this Law can happen, regarding the provisions of the legal framework for sanitation, such as speeding up the approval of the expansion of projects in the sector. Some of the contradictory issues possibly caused by the Law are the delay in building these WSS and SSS, considering that states can legislate on the matter and provide for the licensing of these

typologies, differing from what is in the proposed Law; and damage to the environment that can also lead to protection of decision-making processes in the light of action by the Public Ministry.

For future works, we recommend exploring continuous updating of these changes in the bill, now in the Senate, and the analysis of the Law after approval. It is also recommended to study the relationship of this PB with other Laws that are being approved in this period of release of environmental legislation, such as the New Sanitation Marco, Law Nº. 14.026/2020; mainly due to the contemporaneity of this issue and mutual relationship with water resources and sanitation.

NOTES

1 | Available at: <http://www4.planalto.gov.br/legislacao/>

2 | The original text approved by the Chamber of Deputies without amendments by the Senate was used.

3 | Available at: <http://www2.mma.gov.br/port/conama/>

4 | Available at: <https://www.camara.leg.br/proposicoesWeb/fichadetramitacao?idProposicao=257161>

5 | National Indigenous Foundation

6 | Palmares Culture Foundation – Represents afro-descendants living in quilombos.

7 | National Institute of Historic and Artistic Heritage.

8 | Although the text of the article makes explicit the non-requirement of licensing for the projects of water treatment and sewage stations and systems, there are contradictions in Art. licensing of states and with previous regulations, such as Complementary Law 140/2011, which allows states to legislate on this topic.

9 | ICMBio, the agency responsible for protecting the conservation areas, has a peculiarity concerning the other intervening bodies as it is one of the governmental executing bodies of the PNMA and its participation in licensing, when necessary, has veto power. In addition, their involvement in licensing is presented in the PNMA, while the other bodies are dealt with in Interministerial Ordinance No. 60, of March 24, 2015.

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