DECENTRALIZATION OF ENVIRONMENTAL LICENSING AND IMPACT ASSESSMENT IN BRAZIL: LITERATURE AND REGULATORY REVIEWS[1]

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1 Introduction

The last decades have witnessed an unprecedented increase in the world's population, which has been resulting in worrisome levels of natural resource scarcity and pollution. Government organizations around the world are responding to this environmental crisis with environmental policy instruments, such as environmental licensing and environmental impact assessment (EIA), which have become mandatory in virtually every country on Earth (MORGAN, 2012).

EIA has been extensively studied since it was first regulated in 1969 in the United States (ECCLESTON, 2008). However, research gaps remain, such as the issue of decentralization. With the exception of few scientific studies that explicitly addressed the decentralization of EIA and licensing in countries such as Indonesia (BEDNER, 2010) and China (MAO; HILLS, 2002), the literature generally addresses decentralization as a marginal or tacit issue. For example, the concept of decentralization has not even been mentioned in recent studies addressing the state of the art of EIA (FISCHER; NOBLE, 2015; MORGAN, 2012; MORRISON-SAUNDERS et al., 2014; POPE et al., 2013). This gap is worrisome, given that with the growing complexity of global environmental governance, it is becoming increasingly important to understand how environmental policy instruments can be articulated across different jurisdictions, from local to global (KEMP; PARTO; GIBSON, 2005; NAJAM; PAPA; TAIYAB, 2006). This is particularly relevant in economic blocs, such as the European Union, and large territorial countries,

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such as Brazil, which need to harmonize environmental policies across different levels of government (JORDAN, 2000; MARSHALL, 2008).

The first laws addressing environmental licensing in Brazil emerged in the 1970s in the states of São Paulo and Rio de Janeiro (SÁNCHEZ, 2013). At the federal level, licensing was formalized, together with EIA, among the main instruments of Brazil's National Environmental Policy[5] (BRAZIL, 1981). The first regulations addressing EIA and environmental licensing favored their linked use within federal and state governments (FONSECA; RODRIGUES, 2017). While the 1988 Brazilian Constitution highlights environmental protection as a common responsibility of federal, state and municipal governments, only a relatively small fraction of the more than 5000 Brazilian municipalities implemented environmental licensing in the late 1980s and 1990s. There was some legal confusion regarding municipal authority to license until 2011, when Complementary Law 140 (LC140) regulated article 23 of the Federal Constitution, thus clarifying the authorities of federative entities in environmental protection (BRAZIL, 2011). It is now clear that Brazilian municipalities can create their own licensing and EIA systems for activities and projects that are likely to have local impacts. Municipalities can also assist or supplement the federal and state governments. Hybrid arrangements of cooperation between municipal and upper-level governments are also possible. The implementation of these different types and levels of implementation of environmental licensing and EIA in Brazilian municipalities are often referred to as a process of 'municipalization', which is a Portuguese concept that is rarely used in the English language. 'Municipalization', which is a type of decentralization[6], refers to the adoption, at the municipal level, of instruments that were historically centralized in state or federal governments.

The implementation of municipal licensing and EIA has grown significantly in recent years. In 2015, about 30% of Brazilian municipalities declared to be issuing environmental licenses in their jurisdictions (IBGE, 2016). This is seen by many as a controversial phenomenon, as Brazilian municipalities have profound inequalities and serious financial and managerial constraints (SOUZA, 2005), a situation that generates skepticism about the effectiveness of decentralization in the country. Such concerns are generally related to 'procedural' effectiveness (LOOMIS; DZIEDZIC, 2018), i.e. the ability of governments to carry out procedures in accordance with the law.

The decentralization trend is, in part, a consequence of the aforementioned LC140, which assigned to state environmental councils the responsibility of defining the lists of projects and activities that are likely to cause 'local' impacts and therefore be subject to licensing and EIA at the municipal level (BRAZIL, 2011). This legal provision led to the review and creation of new state regulations that seek to define such lists of activities and set the minimum rules and requirements that municipalities need to meet in order

5. In Brazil, the concept of environmental impact assessment (EIA) is almost always discussed in connection with 'environmental licensing'. While, in Brazil, there are licensing processes without EIA and vice-versa, legislation and regulations tend to address these two instruments together (FONSECA; RODRIGUES, 2017). The decentralization discussed in this paper is also targeting both 'licensing' and 'EIA', although EIA is most often considered to be implicit or embedded in Brazilian environmental licensing.

6. This article uses the term decentralization instead of 'municipalization' to facilitate understanding among international non-Brazilian audiences.

to exercise their licensing authorities. These state regulations, up to the point of writing this article, were dispersed across Brazilian states.

For many years, Brazilian researchers have been investigating the decentralization of environmental licensing and EIA (AZEVEDO, 2007; STRUCHEL, 2016; NASCIMENTO; FONSECA, 2017). Such researchers, however, as shown later in this article, have been mostly interested in studying one or a few 'cases' of decentralization. Few studies have attempted to synthesize and integrate knowledge and learning from different municipalities and states. Aware of this knowledge gap, this article aimed at reviewing the state regulations and the empirical scientific studies addressing the decentralization of environmental licensing and EIA in Brazil. It also aimed at exploring the perceptions of Brazilian EIA specialists about the challenges of decentralization in budget-constrained contexts. The results presented here may be relevant to researchers interested in the issue of decentralization of environmental policies not only in Brazil, but also in economic blocs and countries of federal administrative arrangements, where issues of scale and levels of policy implementation are relevant. The article may also be of interest to managers and regulators interested in the governance of environmental licensing and EIA.

2 Methodological Approach

This study followed a predominantly qualitative approach, which is indicated for the investigation of social problems that have not been deeply explored (CRESWELL, 2014). Data were collected and analyzed in three stages: content analysis, literature review and focus group.

2.1 Content Analysis of State Regulations

The identification of Brazilian state regulations targeting the decentralization of licensing and EIA was based on searches in the official state government registries of terms such as "local environmental impact", "municipal environmental licensing" and "municipalization of environmental licensing". Searches were also carried out on the websites of all state environmental councils and agencies to either confirm or update the regulations found in the official registries. Table 1 lists the identified regulations (issued until December 31, 2018), which were analyzed here. To facilitate communication, this study adopted the term "regulation" to refer to various types of legal requirements related to decentralization including, for example, resolutions, deliberations, and decrees.

Table 1 – State regulations addressing the decentralization of environmental licensing and impact assessment

Brazilian Region	Brazilian State	Regulations
North	Acre	No regulation identified.
	Amapá	Resolução COEMA 46 de 2018
	Amazonas	Resolução CEMAAM 15 de 2013
	Pará	Resolução COEMA 120 de 2015
	Rondônia	Resolução CONSEPA 07 de 2015
	Roraima	Resolução CEMACT 01 de 2017
	Tocantins	Resolução COEMA 73 de 2017
Northeast	Alagoas	Resolução CEPRAM 99 de 2014
	Bahia	Resolução CEPRAM 4327 de 2013
	Ceará	Resolução COEMA 01 de 2016
	Maranhão	Resolução CONSEMA 24 de 2017
	Paraíba	Deliberação COPAM 3458 de 2013
	Pernambuco	Resolução CONSEMA 01 de 2018
	Piauí	Resolução CONSEMA 23 de 2014
	Rio Grande do Norte	Resolução CONEMA 03 de 2009
	Sergipe	Resolução CEMA 84 de 2013
Center-West	Goiás	Resolução CEMAM 02 de 2016
	Mato Grosso	Resolução CONSEMA 85 de 2014
	Mato Grosso do Sul	Decreto Estadual 10.600 de 2001
Southeast	Espírito Santo	Resolução CONSEMA 002 de 2016
	Minas Gerais	Deliberação Normativa COPAM 213 de 2017
	Rio de Janeiro	Resolução CONEMA 42 de 2012
	São Paulo	Deliberação Normativa CONSEMA 01 de 2018
South	Paraná	Resolução CEMA 88 de 2013
	Rio Grande do Sul	Resolução CONSEMA 37 de 2018
	Santa Catarina	Resolução CONSEMA 11 de 2017

Source: Designed by the authors.

The content analysis, based on the methodological recommendations of Krippendorff (2004), used the articles[7] within each regulation as the unit of analysis. The analysis aimed at answering 10 questions (explicit in Figure 2) related to three key areas of concern: i) how the concept of 'local impact' is used to define municipal authority; ii) what specific requirements and procedures municipalities need to follow in order to start

7. The provisions of Brazilian legislation and regulations tend to be organized in articles.

exercising their licensing and EIA authority; and iii) how state governments coordinate the decentralization process.

2.2 Analysis of empirical studies

The review of the academic literature sought to synthesize the empirical knowledge on the decentralization of environmental licensing and EIA. Publications restricted to theoretical, conceptual, essayistic or strictly legal discussions, very commonly found in the environmental law literature, were not analyzed here. Searches were carried out in the following databases: Directory of Open Access Journals (DOAJ), Scielo, Science Direct, Scopus, and Web of Science. In each database, searches were performed using terms in Portuguese and English, combined as follows: "municipalization" AND "environmental licensing"; "decentralization" AND "environmental licensing"; "municipalization" AND "environmental impact assessment"; "decentralization" AND "environmental impact assessment"; "municipal environmental licensing"; "decentralization" AND "environmental licensing" AND "brazil"; "decentralization" AND "environmental permitting" AND "brazil"; "decentralization" AND "environmental approval" AND "brazil"; and "decentralization" AND "environmental impact assessment" AND "brazil".

Searches were also carried out in Google Scholar and in the Brazilian Digital Library of Theses and Dissertations. Publications that, although not found in the searches, had been cited in the identified empirical studies were also included in the analysis. Given that this study is one of the first to explore the literature on licensing and EIA decentralization, it was considered pertinent to include publications of various kinds, not only articles published in scientific journals. The searches included publications available online until April 29, 2019. After the first screening, a preliminary reading of the publications was carried out in order to verify if they met the review criteria. For example, many publications were found to have no content on municipal environmental licensing and EIA, despite mentioning this topic. Identified publications were independently pre-evaluated by each author of this article, who later compared their findings and reached consensus over the final list of empirical studies. The objectives and main findings of each publication were systematically evaluated, and then organized according to their year of publication and type of publication.

2.3 Focus group

Focus groups refer to a form of qualitative interview with groups of people with similar knowledge and experience to generate data of interest to the researcher (MORGAN, 2008). The focus group in this study did not attempt to capture the perception of a representative sample of Brazilian specialists. As is commonly the case in social science methodologies (BABBIE, 2013), the sample was purposely chosen to include participants with extensive technical and administrative experience in topics related to municipal environmental management. Due to budget and time constraints, it was possible to include 4 specialists in the focus group. Despite the apparently limited number of participants,

in focus groups with this profile, a small number of participants is recommended to allow their perspectives to be further explored (BLOOR et al. 2001). The four participants (coded with the letter "P") had the following profiles:

- P1) more than 10 years of experience in municipal environmental secretariats in the state of Minas Gerais, as well as in the state environmental secretariat, exercising various leadership roles related to the decentralization of environmental licensing;
- P2) 5-year experience in a municipal sanitation company and more than 10 years of experience in the environmental agency of Rio Grande do Sul, which is the Brazilian state with the largest number of municipalities exercising authority over environmental licensing and EIA;
- P3) More than 40 years of experience in leadership positions in various environmental agencies at the federal, state and municipal levels, as well as in international institutions; and
- P4) More than 20 years of experience in leadership positions in municipal environmental secretariats in the state of São Paulo, as well as in political parties.

The focus group, which was open to external observations, had its audio and video recorded. It was moderated by one of the authors of this article. The discussions aimed at understanding how the decentralization of licensing and EIA can be done in contexts of budgetary and administrative constraints, like the ones faced by Brazilian municipalities. Participants also provided interpretive support for the study's previous findings and further helped to understand some issues that were not sufficiently clear in the literature. The discussion lasted about two hours and was fully transcribed and coded for analysis.

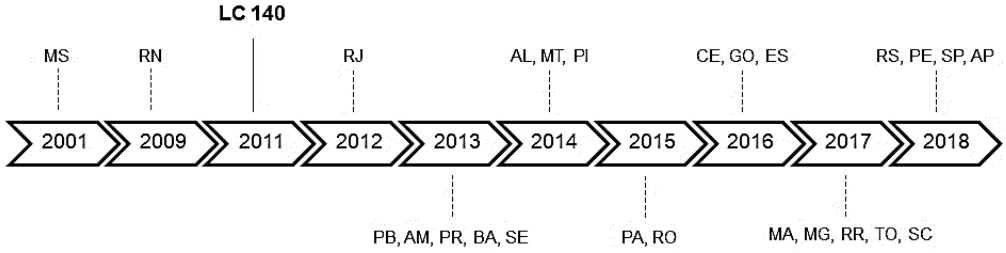
3 Results and Discussions

This section presents findings associated with the three methods of this study: review of state regulations, content analysis of empirical studies, and focus group.

3.1 State regulation of municipal environmental licensing and EIA

Most of the 25 regulations identified in this study were published after LC140 (Figure 1). In Figure 1, the states acronyms appear according to the order of publication of their most current regulations. Some jurisdictions did not have regulations on the subject until the publication of the LC140; moreover, some municipalities updated existing provisions after LC140.

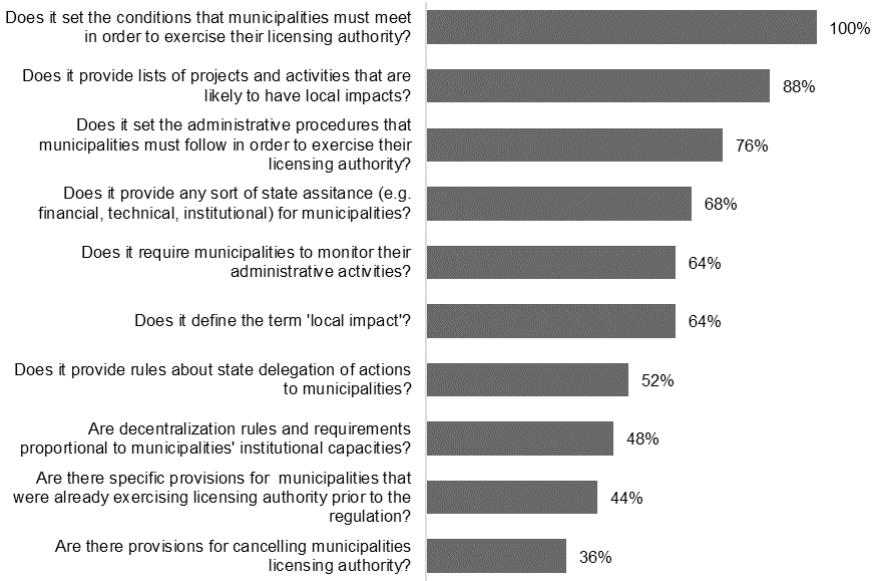
Figure 1 – Chronology of state regulations on municipal licensing and EIA



Source: Designed by the authors.

Key findings from the content analysis of all 25 state regulations are presented in Figure 2. Requirements for municipalities wishing to start exercising authority over environmental licensing, as expected, were present in all regulations. However, levels of detail varied substantially. Out of the 25 regulations, 48% provided specific provisions on human resource capacity, defining a minimum number of technical analysts in municipal environmental agencies that are needed to start the licensing process - a number that varied according to the municipality size and to the type of licensing procedures. The study also identified 17 regulations (68%) that had provisions for the assistance of state government to municipal agencies in charge of licensing and EIA. Such assistance is relevant because Brazilian municipalities that are beginning to exercise their licensing authority may benefit from the decade-old experiences of state agencies. As Neves (2016) argues, Brazilian municipalities cannot fully address their environmental agendas without intergovernmental support.

Figure 2 – Percentage of the 25 state regulations on licensing and EIA decentralization that meet the 10 content analysis questions



Source: Designed by the authors.

The fact that LC140 does not provide an explicit definition of "local environmental impact" has led states to address this issue through regulations. This was reflected in 16 (64%) of the 25 regulations reviewed here, which, although vaguely, explicitly defined 'local impact'. Despite the differences in wording, all 16 of these definitions considered as 'local' the impact restricted to the territorial boundaries of a single municipality. In addition, 88% of the 25 regulations provided a list of activities and projects that, based on their size and pollution potential, can cause local environmental impact.

Mandatory administrative procedures that municipalities must follow were provided for in 76% of the regulations. There was a degree of similarity in state regulations, which, overall, guided municipalities to apply for licensing authority to the state environmental agency or council. The regulations required municipalities to specify the activities and the levels of licensing and impact assessment that they want to coordinate at the municipal level. Based on this information, the state government decide on whether or not municipal governments can start exercising authority over licensing and EIA.

In 16 of the 25 regulations (64%), states required municipalities to submit monitoring reports on the status of licensing and EIA in their jurisdiction. This could be done through the submission of reports to the state agency (it was not explicit in regulations whether this could be done electronically) or through the submission of information in electronic information systems. The analysis also identified 9 regulations (36%) in which state governments specified compliance conditions that, if left unmet, could culminate in municipalities losing their licensing authority.

Municipalities' institutional capacity is a major concern in Brazilian regulations. Such a concern was also found in the decentralization of impact assessment in Indonesia (BEDNER, 2010), which suggests that Brazil may be mirroring a broader problem found in developing countries. Brazilian regulations are, in general, trying to make sure that municipal agencies meet minimum administrative conditions to exercise their authority, thus avoiding a precarious implementation of licensing and EIA. However, published empirical studies on this topic, as presented below, show that regulations' expectations are not always reflected in practice.

3.2 Empirical knowledge about decentralization

The search for empirical studies (published until April 29, 2019) resulted in 20 articles published in scientific journals, 11 articles published in congress proceedings, 21 master's dissertations and 1 doctoral thesis, totaling 53 publications, which are presented in Table 2. The pace of publications remained relatively low until 2010, and back then most publications were master's dissertations. From 2011 on, there is an increase in the number of publications, a fact that might be associated with the stimulus provided by LC140. There is also an increase in articles in scientific journals, which until then were scarce in the literature. The growing attention of the scientific community is also reflected in the growing number of congress proceedings addressing decentralization since 2011.

Most publications are addressing case studies, particularly single case studies of municipalities (30 out of 53 publications). Examples of comparative analyzes between

different municipalities, states and geographic regions can be found in the works of Panta (2006), Sanjuan (2007), Vilas-Boas (2008), De Souza (2013), Macedo Jr. (2014), Abreu e Fonseca (2017) and Nascimento and Fonseca (2017). Similarly, most empirical studies have been methodologically based on information collected from representatives of municipal licensing bodies. Few studies have sought to understand the perceptions of different stakeholders, such as consultants, entrepreneurs and civil society. Exceptions include the works of Senff (2008), Prearo Jr. and Barros (2013), Battistella et al. (2015), Abreu and Fonseca (2017), Barros et al. (2017) and Nascimento and Fonseca (2017).

Table 1 – Empirical studies about the decentralization of licensing and EIA in Brazil

Year	Authors	Type of publication	Number of municipalities addressed in publications
2001	Schneider (2001)	DM	1
2006	Demarchi and Trentini (2006)	AC	1
	Panta (2006)	DM	6
2007	Mendes (2007)	DM	1
	Moreira (2007)	DM	1
	Sanjuan (2007)	DM	3
2008	Senff (2008)	DM	1
	Vilas-Boas (2008)	DM	2
2009	Chuvas (2009)	DM	48
	Monteiro (2009)	DM	1
	Silva (2009)	DM	1
2010	Blazina and Lipp-Nissinen (2010)	AJ	70
	Portela et al. (2010)	AJ	1
2011	Almeida Neto et al. (2011)	AJ	1
	Araújo and Costa (2011)	DM	1
	Correa (2011)	AJ	1
	Daneluz et al. (2011)	DM	1
	De Oliveira (2011)	AJ	1
	Escobar (2011)	AJ	5
	Nascimento and Bursztyn (2011)	AC	10
	Pereira et al. (2011)	AJ	33
2012	Lima (2012)	AJ	1
	Marconi, Borinelli and Capelari (2012)	AC	1
2013	Brandt et al. (2013)	AJ	1
	Cetrulo et al. (2013)	AC	1
	De Souza (2013)	TD	2
	Guilherme and Henkes (2013)	AJ	1
	Prearo Jr. and Barros (2013)	AC	1
	Ribas, Köhler and Costa (2013)	AJ	5

2014	Abreu (2014)	DM	4
	Gurgel Jr. (2014)	AJ	1
	Macedo Jr. (2014)	AC	4
	Machado and Krieger (2014)	AC	28
	Moraes and Souza (2014)	AC	1
	Tassi and Kühn (2014)	AJ	1
2015	Battistella et al. (2015)	AJ	1
	Costa (2015)	DM	2
	Fredo (2015)	DM	4
	Lima (2015)	DM	1
	Rodrigues (2015)	DM	1
	Santos (2015)	DM	1
	Santos and Mendez (2015)	AJ	7
2016	Magrinelli (2016)	AC	13
	Marçal and Oliveira (2016)	AJ	16
2017	Abreu and Fonseca (2017)	AJ	4
	Barros et al. (2017)	AJ	1
	Ferreira Filho and Beltrão (2017)	AC	3
	Nascimento and Fonseca (2017)	AJ	84
	Pagotto and Pizella (2017)	AC	1
2018	Alencar (2018)	DM	1
	Chiochetta and Tedesco (2018)	AJ	2
	Machado (2018)	DM	3
	Monte (2018)	DM	8

AC – Article in congress proceedings; AJ – Article in scientific journals; DM – Master's dissertation; TD – Doctoral / PhD thesis.
Source: Designed by the authors.

The analyzed empirical studies present several similar results regarding the positive and negative aspects of the decentralization processes. For example, municipal environmental licensing was characterized as being more agile when compared to state level's, as well as being potentially more effective in controlling activities, due to the geographical proximity of local authorities, entrepreneurs and communities (PANTA, 2006; SILVA, 2009; PORTELA et al., 2010; DANELUZ et al., 2011; MACHADO; KRIEGER, 2014; FREDO, 2015). Parallel to the identification of some positive aspects, the studies have revealed problems of institutional capacity of municipal licensing agencies. The lack of sufficient financial resources in the municipal environmental secretariats has emerged as one of the main obstacles to the decentralization of licensing, being reported, for example, by Schneider (2001), Monteiro (2009), Costa (2015), Marçal and Oliveira (2016), and Monte (2018). Other studies, although not explicitly mentioning budgetary difficulties in municipalities, report problems related to the lack of staff and material resources in municipal environmental agencies (DEMARCHI; TRENTINI, 2006; CHUVAS, 2009; PEREIRA et al., 2011; BRANDT et al. , 2013; GURGEL JR, 2014; RODRIGUES, 2015; PAGOTTO; PIZELLA, 2017; ALENCAR, 2018).

In general, the analysis of the empirical studies has revealed a growing academic interest in the topic of decentralization – and, more importantly, it revealed that the practice exposed by those various studies contrasts with the objectives of state regulations. While state regulations require a number of conditions to be met to ensure the administrative capacity within municipalities, the empirical literature has shown persistent problems of institutional capacity in local environmental agencies that, in theory, were formally qualified to exercise their licensing authority. This contrast between regulatory objectives and actual practice on the ground opens question marks about the efficiency of the regulatory model of environmental licensing and EIA decentralization in Brazilian states. For example, the mere state verification of institutional and legislative attributes in municipalities does not seem to capture the difficulties faced by municipal administrations in the country. As highlighted by Neves (2016), these difficulties are related to the very limited budgets for municipal environmental programs and initiatives. In this context, it is important to understand the following: how can Brazilian municipalities carry out environmental licensing and EIA in a context of persistent budgetary and administrative constraints? This was the main issue addressed in the focus group.

3.3 Focus group

In addition to corroborating the administrative barriers to effective decentralization, the focus group generated information that helps to understand its causes. For the participants, the perceived problems in municipal environmental management have different origins, one of the main ones being the fiscal imbalance of the Brazilian federative pact, which gave various administrative attributions to municipal entities, but without the proper allocation of financial resources to implement such attributions. As pointed out by one of the participants, there is a difficulty "that is not about environmental management, it is not about decentralization of environmental licensing, it is about 'municipal administration' in general, that suffers from a federative pact that privileges, from the point of view of taxes and income, the federal and state governments "(P4).

Participants agreed that the political particularities of each state also affect the licensing decentralization process. This was clear in the discussion about the contrast of practices between the states of Rio Grande do Sul and Minas Gerais. Participant P2 points out that by 2011, 60% of Rio Grande do Sul municipalities were already licensing, while less than 1% of Minas Gerais municipalities were formally authorized by the state to exercise licensing, as pointed out by P1. For P3, this difference is essentially explained by differences of political leadership between the two state environmental agencies.

The scarcity of funding for environmental policies was highlighted as one of the main barriers to the effectiveness of environmental licensing in municipalities. Environmental secretariats have struggled to structure themselves and are often competing with other non-environmental local administration secretariats. The discussions revealed that this problem of lack of funding was supposed to be mitigated by Brazil's Environmental Control and Inspection Fee (TCFA), whose revenues should be divided among federal, state and

municipal governments. However, participant P4 claimed that the TCFA resources were being withheld by the states, not reaching municipalities.

Several sources of financing that could be used by municipalities to enable their environmental policies were mentioned by participants. Oil and mining royalties, environmental fines, and environmental licensing fees themselves were sources highlighted by P4. Participant P2 stressed the experience of Rio Grande do Sul: "What motivated municipalities to license? It was precisely the collection of licensing fees. Much happened because of this" (P2). Participant P1 also mentioned the collection of licensing fees and emphasized that "(...) it is the implementation of the licensing process that brings the financial resources; availability of financial resources should not come first" (P1).

Other participant reinforced the argument that the environmental licensing system itself generates financial resources for its maintenance. One of the participants explained that "exercising the licensing authority made the municipality technically stronger, capable of managing hiring processes, attract professionals and set up a basic multidisciplinary team" (P4). Similarly, another participant argued that, in the municipalities where he worked, the environment secretariat was "the second largest in revenue collection, second only to treasure [secretariat]" (P1).

The focus group was permeated by optimism regarding the feasibility of decentralizing environmental licensing and EIA. One of the participants warned that municipal environmental managers should not wait for budget improvements, but to act so that "the implementation of the instrument [licensing and EIA], create the conditions to enable the municipal environmental budget to be independent of the overall municipal budget" (P4).

4 Final Remarks

This article aimed at summarizing the experience of Brazilian municipalities with the decentralization of environmental licensing and impact assessment. More specifically, the main objective was to synthesize the contents of state regulations and empirical knowledge on the subject, and understand the perception of specialists on the challenges of implementing licensing and EIA in the context of budgetary constraints. Findings revealed that, while the decentralization process has been increasingly regulated by Brazilian states and while licensing is being increasingly practiced by municipalities, there is still a relatively small number of academic publications targeting this phenomenon. Of the 53 empirical studies analyzed here, just a fraction was found in peer-review journals. The studies identified are persistently concerned with the characterization of the institutional capacity of local governments in one or a few cases. In addition, they tend to adopt methodologies that favor the characterization of problems rather than the proposal of solutions. The focus group corroborated the information available in the literature, but contrary to the perception that financial barriers make decentralized licensing difficult, it indicated that local managers should not wait for budget reforms but rather use licensing and EIA as capacity-building mechanisms.

The potential benefits of environmental policy decentralization, so often mentioned in the international literature (JORDAN, 2000; MARSHALL, 2008), have not yet been

thoroughly analyzed in the context of licensing and impact assessment. As shown here, there are several issues to be explored, such as the means of ensuring decentralization in contexts of low institutional capacity. This debate, in the Brazilian context, needs to go far beyond defining what is 'local impact' or determining criteria for enabling municipalities to exercise licensing authority, to include issues of effectiveness, collaboration and administrative and institutional innovation. The heterogeneity of Brazilian municipalities makes it difficult to adopt simple formulas for existing problems. However, the results obtained here indicate the value of exploring three research avenues.

First, it is important to understand how cooperation mechanisms can be strengthened to ensure that municipalities carry out licensing and EIA effectively. Despite the subjection of municipal agencies to state-defined criteria and rules, the consolidated experience of state environmental agencies can be a valuable source of technical and administrative knowledge that needs to be more systematically harnessed by municipal entities. And vice-versa: municipal experiences can support the improvement of state practices and policies.

Secondly, the extent to which the difficulties of municipal environmental management are related to imbalances of the Brazilian federalism is still unclear. Both the literature and the focus group indicated that the decentralization of licensing is profoundly influenced by the historical precariousness of municipal finances. However, the extent to which overall budget constraints affect municipal environmental secretariats is unclear.

Finally, political will and engagement by local governments are essential in local licensing and EIA. A genuine commitment from municipal administrations is needed, so that licensing is not regarded as a mere bureaucratic rite of the executive branch, but an instrument capable of promoting local sustainability. Without this commitment, decentralization could add another layer of administrative responsibilities to local governments, replicating the problems that already exist at the state and federal levels.

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DECENTRALIZATION OF ENVIRONMENTAL LICENSING AND IMPACT ASSESSMENT IN BRAZIL: LITERATURE AND REGULATORY REVIEWS

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DECENTRALIZATION OF ENVIRONMENTAL LICENSING AND IMPACT ASSESSMENT IN BRAZIL: LITERATURE AND REGULATORY REVIEWS

Abstract: Environmental licensing and environmental impact assessment have been increasingly implemented by Brazilian municipalities, which have been historically plagued by problems of institutional capacity. The aim of this article was to critically synthetize the regulations and scientific empirical studies about the decentralized implementation of such tools in Brazilian municipalities, as well as to explore the perception of specialists about this phenomenon. This study adopted a predominantly qualitative and sequential approach, informed by data collected through content analysis of state regulations and a focus group. Overall, findings show that part of the objectives of the 25 reviewed regulations is not clearly reflected in practice. The 53 identified publications corroborate the existence of problems of institutional capacity in municipalities. The focus group revealed that decentralization, despite the challenges, could be a driver of institutional capacity at local administrations. The article highlights the need for capacity-building and institutional innovation, and suggests future avenues of research.

Keywords: Environmental licensing; impact assessment; political decentralization; learning; Brazil.

DESCENTRALIZAÇÃO DO LICENCIAMENTO E DA AVALIAÇÃO DE IMPACTO AMBIENTAL NO BRASIL: REGULAÇÃO E ESTUDOS EMPÍRICOS

Resumo: O licenciamento e a avaliação de impacto ambiental são cada vez mais implementados pelos municípios brasileiros, que historicamente têm problemas de capacidade institucional. O objetivo deste artigo foi sintetizar criticamente os regulamentos e os estudos científicos empíricos sobre o uso descentralizado desses instrumentos no Brasil, bem como explorar a percepção de especialistas sobre esse fenômeno. A metodologia seguiu uma abordagem qualitativa sequencial, com dados coletados por meio de revisão da

literatura, análise de conteúdo dos regulamentos estaduais e grupo focal. Verificou-se que parte dos objetivos dos 25 regulamentos analisados não está claramente refletida na prática. As 53 publicações identificadas corroboram diversos problemas de capacidade institucional nos municípios. O grupo focal revelou que o licenciamento municipal, apesar dos desafios, poderia funcionar como um mecanismo de construção de capacidade institucional local. O artigo acentua a importância da capacitação e da inovação institucional nos municípios e sugere estudos futuros.

***Palavras-chave*:** Licenciamento ambiental; avaliação de impacto; descentralização política; aprendizado; Brasil.

DESCENTRALIZACIÓN DEL LICENCIAMIENTO AMBIENTAL Y DE LA EVALUACIÓN DE IMPACTO AMBIENTAL EM BRASIL: REGULACIÓN Y ESTUDIOS EMPÍRICOS

***Resumen*:** El licenciamiento y la evaluación de impacto ambiental son cada vez más implementados al nivel de los municipios brasileños, que históricamente tienen problemas de capacidad institucional. El objetivo de este artículo fue sintetizar críticamente los regulaciones y los estudios científicos empíricos sobre la municipalización en Brasil, así como explorar la percepción de especialistas sobre ese fenómeno. La metodología siguió un abordaje cualitativo secuencial, con datos recolectados por medio de revisión de la literatura, análisis de contenido de los reglamentos y grupo focal. Se ha comprobado que parte de los objetivos de los 25 reglamentos analizados no están claramente reflejados en la práctica. Las 53 publicaciones identificadas corroboran diversos problemas de capacidad institucional en los municipios. El grupo focal reveló que el permiso municipal podría funcionar como un mecanismo de construcción de capacidad institucional local. El artículo enfatiza la importancia del desarrollo de capacidades y la innovación institucional en los municipios.

***Palabras clave*:** Licenciamiento ambiental; evaluación de impacto ambiental; descentralización; aprendizaje; Brasil.