Environmental policy, municipalities and intergovernmental cooperation in Brazil

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Effective environmental policies are indispensable for the sustainability of long-term development for meeting both domestic challenges and the so-called global issues. The purpose of this paper is to contribute to the understanding of environmental governance in Brazil through the exploratory analysis of the relationship between municipalities and environmental policy strategies developed by the Federal Government, from the perspective of the Brazilian federative state.

The central argument presented herein holds that in Brazil, for an important number of topics on the environmental agenda, the success of the initiatives promoted by the federal government depends to some extent on the adhesion of municipalities. Since 1988, endowed with the status of federated entities and enjoying unprecedented autonomy, municipalities can contribute to the failure of federal initiatives by not subscribing to said initiatives, especially these require the exercise of their exclusive powers and the allocation of their own resources.

Nationwide public policies promoted by central governments require the involvement of local government actors either to tailor policy objectives and regulations to local specificities, harmonize conflicting priorities, or optimize the use of increasingly scarcer public resources. The structure of intergovernmental relations is a crucial factor for the success of public policies implemented at central level, especially the promotion of the mutual and enriching adaptation of national and local perspectives (Villanueva, 2000, p.40).

The importance of the participation of local governments, however, is not restricted to the host of benefits pointed out in the literature about the advantages of localized state action - such as increased efficiency, less corruption, promotion of direct democracy practices, greater social control, transparency and greater capacity to meet local specificities and preferences. The federative structure is one of the most important references for understanding public policies in Brazil, which has undergone significant changes since the country’s de-
mocratization (Abrucio, 2005). In federative countries, local governments have autonomy to formulate policies according to their own priorities, in their area of competence. In the absence of the hierarchical mechanisms that characterize unitary states, they participate only voluntarily in programs proposed by the federal government. As highlighted by Arretche (1999, p.81), “the possibility for local governments to implement policies desired by the federal government directly depends on the latter’s ability to induce the first to adopt a given action strategy.”

The paper is organized in four sections. The first section discusses the role of intergovernmental cooperation in environmental policy. The main characteristics of municipalities as local government entities in the federative structure of the Brazilian state are presented in the second section. The third section discusses the relevance of the participation of municipalities in the main strategies adopted by the federal government on the environmental agenda, through examples taken from the constitutional environmental agenda in the areas of fight against deforestation and management of territorially protected areas. The main conclusions and developments are presented at the end.

**Environmental policy and intergovernmental cooperation**

Cooperation between actors is a key topic in the field of public policy, illustrated by at least two classic texts on public policy research. The term “complexity of joint action” was chosen by Pressman & Wildavsky (1973 p.87s) to designate relevant factors in the implementation of public policies - the number of participants with different perspectives and the multiplicity of decision points and clearance. The interdependence between actors, revealed by the imperative of cooperation, is illustrated by a well-known image used by Bardach (1977, p.37-8), who describes implementation as a process of assembling the parts of a machine and getting it to work, with the participation of many actors in several aspects that are independent of each other.

In the field of environmental policy, the need for cooperation is even more pronounced. The inevitability of joint action among organizations is underlined by the definition of environmental policy as a multi-agency policy (Vig & Kraft, 2010) and by the work of Oates (2001) on the distribution of environmental tasks, which recognizes environmental policy as essentially a joint activity between governments.

Five basic characteristics of environmental policy, discussed below, enable a more precise outlining of the need for cooperation among government entities for environmental purposes: the simultaneous involvement of multiple political and administrative spheres in the management of environmental processes; intersectionality; the multiplicity of actors and organizations present in the environmental arena; the multiple temporal and spatial scales of environmental processes; and the tension between trends towards the centralization and decentralization of state action.
Environmental goods and problems often cross administrative boundaries, simultaneously involving more than one political-administrative entity in its protection and management – whether local, regional or national (Fiorino, 1995; Paehlke, 1996). Common examples in the literature are water and air pollution processes, but there are many others on the wider environmental agenda.

The term “intersectionality” refers to required state intervention in areas under the responsibility of other administrative sectors capable of impacting environmental quality, such as infrastructure projects and large industrial undertakings. Approaches that presuppose cooperative action among the sectors involved collide with the administrative tradition of the public sector, in which each public policy topic is organized in a compartmentalized way, such as the respective units responsible for developing and implementing programs. The environmental issue has invariably been treated as an airtight sector, far from core strategic government decisions. The administrative fragmentation and “encapsulation” of environmental policy in sectoral agencies have prevailed even in the administrative structures of advanced countries (Durant et al., 2004; Paehlke & Torgerson, 2005).

Environmental defense involves many actors, defining numerous arenas for each topic on the broad environmental defense agenda. Each of them involves different interests of civil associations, private companies, local representations, businesses and trade unions, global governance and transnational civil society organizations, as well as local, regional and national governments and institutional representatives of diffuse interests (in the case of Brazil, the Federal Public Prosecutor). Concerted and democratic solutions are essential: in their absence, conflicts and disagreeing interpretations of regulations lead to the submission of disputes to the judicial sphere, with paralyzing effects for the decision-making process (Lafferty & Meadowcroft, 1996).

Processes such as the provision of environmental services occur in a wide range of spatial and temporal scales (Tomich et al., 2004), requiring different policy actions at multiple spatial scales. The spatiality of environmental governance overlaps multiple geographical scales, differing significantly from the traditional geographies of the nation-state and from international relations (Eckerberg & Joas, 2004). In the temporal dimension, long-term environmental processes require strategies that combine short- and long-term measures, achievable only through the commitment of successive governments, so as to enable strategies to endure over successive electoral mandates, in the counter-current of the logic of short-term action by the political class.

The distribution of responsibilities between levels of government regarding a specific environmental problem is often an issue, allowing for gaps and overlaps. It is a challenge that for decades has been the object of debates that have outlined the field of tension between centralized and decentralized action. Much of the environmental movement has taken a stand in favor of decentral-
ized action for ideological reasons, according to the eco-localist model, of a political nature - local solutions would lend themselves more to a participatory and “bottom-up” policy approach. Despite the strength of the arguments raised by advocates of local environmental action, the adoption of local initiatives alone has proven theoretically inconsistent in empirically unfeasible (Mercier, 1994). The emergence of global environmental challenges is one of the factors showing that centralized environmental planning and management, even where its implementation tends towards decentralization, is vital. It depends on central governments initiatives for international agreements, associated with decentralized actions by intermediary or local government entities in a vertical intergovernmental cooperation arrangement.

**Characteristics of the municipality in Brazilian federalism**

Federalism was adopted in Brazil in the late nineteenth century to reconcile the aspirations of different areas of the territory: to preserve the national territorial unity threatened by loose economic ties between regions and by external relations maintained individually by each region; to accommodate the demands of elites with conflicting objectives; and to respond to regional disparities. For a century, oligarchic regionalism marked the trajectory of the Brazilian model, with advances and setbacks, until such time as it became the current federalism along the lines of the 1988 Federal Constitution (Rezende & Afonso, 2003; Souza, 2005). Some features of Brazilian federalism differ from the dominant patterns in federated countries, especially in four aspects of interest to this study for understanding the role of municipalities: number of government entities in the federation; distribution of the tax-levying power; socioeconomic disparities; and intergovernmental relations.

The predominant pattern in federations is the bigovernmental model, comprised of regional governments and the central government. In Brazil, triune federalism was adopted in 1988: municipalities have the same status as regional governments (states) and the central government (Union), as well as political and administrative entities with legal personality under internal public law. Consequently, the apparatus of the Brazilian State currently includes 5,565 municipalities, 26 States and the Federal District, indicating the complexity of the institutional architecture of these relationships.

Unlike the majority of federations, in which there is relative revenue concentration in the central government, in Brazil the decentralization of tax powers to subnational governments is considered important, although it has evolved to the point of causing a mismatch between revenues and responsibilities and, in parallel, with the increase in taxes levied by the federal government (Rezende & Afonso, 2003). Although heterogeneity is a typical feature of federations, there are huge socioeconomic, environmental and institutional disparities among Brazilian municipalities - the term municipality includes “realities of scarce common content” (Affonso, 2000, p.27). Multiple inequalities lead to the institutional dilemma of how to treat deeply unequal entities, the so-called asymmetrical federalism (Almeida, 2001).
Intergovernmental relations in Brazil have conflicting characteristics. Considering the amount of tasks simultaneously assigned to the three levels of government, formally it can be said that the Brazilian federation is undoubtedly cooperative. However, the literature gives more emphasis to the predominance of an uncooperative profile in practice, expressed by predatory competition and the compartmentalized action of federated units (Abrucio, 2005). The ties between the levels of government are considered diffuse and conflicting, and responsible for the fragmentation of power. Relations between federated entities have been governed by tense coexistence between new democratic models of political action and traditional modes of action characterized by patrimonialism and clientelism, direct agreement between municipalities and the Union without the participation of the State, and centralizing and decentralizing trends of different motivations (Almeida, 2005).

The role of local governments in Brazilian federation

The autonomy of federated entities is defined as the power to manage their own affairs within a field pre-established by a higher level - the Federal Constitution – in the organizational, political, administrative and financial spheres. As a federated entity, the municipality has the power to organize its organic law (in the past delegated to the states), enjoys political autonomy (i.e., the power to elect its rulers; the possibility of appointing mayors no longer exists), has exclusive powers and common powers with other entities, and has had its tax base expanded (Silva, 1989).

The power to legislate is indicatively restricted: municipalities can legislate on all matters of local interest and supplementary to federal and state legislations, excluding matters falling under exclusive federal competence.

The main material powers of municipalities are organized in Table 1, distinguishing between legislative and materials powers - and within these, exclusive powers and concurrent powers with States and the Union.

Matters falling exclusively under municipal jurisdiction include, besides transportation (as shown in the table), services enshrined in the tradition of municipal administration: collection and treatment of municipal solid waste; basic sanitation that traditionally encompasses water supply, collection and treatment of domestic sewage; storm drainage; paving; management of solid domestic and urban waste; street lighting; traffic in urban areas; local roads; open markets; slaughterhouses; urban security; health; social assistance; sports; and leisure and recreation (Meirelles, 2001 p.407s).

Finally, although the topic is not expressly addressed in the constitutional sphere, it is worth pointing out, among the exclusive duties of municipalities, the responsibility for establishing their urban and rural areas,² dissociated from their responsibility for territorial planning, as it has important consequences for the urban, fiscal and environmental order.

Table 1 – Explicit constitutional powers of municipalities
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<th>Type of Power</th>
<th>Atribuições explícitas municipais</th>
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<tr>
<td>Exclusive power (FC Arts. 30 and 128)</td>
<td>Institute and collect taxes within their jurisdiction, as well as to apply their revenues. Organize its territory into districts. Organize and render, directly or by concession or permission, the public services of local interest, including mass-transportation, which is of essential nature (FC, Art. 30, V). Maintain, with the technical and financial cooperation of the Union and the states, programs of pre-school and elementary school education. Promote the protection of the local historic and cultural heritage. Promote adequate territorial planning, by means of planning and control of use, apportionment and occupation of the urban soil. Implement urban development policy.</td>
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<td>Material powers common to States, the Union and the Federal District (FC Art. 23)</td>
<td>Ensure that the Constitution, the laws and the democratic institutions are respected and that public property is preserved. Provide for health and public assistance, for the protection and safeguard of disabled persons. Protect documents, works and other assets of historical, artistic or cultural value, monuments, remarkable landscapes and archaeological sites. Prevent works of art and other assets of historical, artistic and cultural value from being taken out of the country, destroyed or deprived of their original characteristics. Provide the means of access to culture, education and science. Protect the environment and fight pollution/preserve forests, fauna and flora. Promote agriculture and cattle breeding and organize the supply of foodstuff. Promote housing construction programs and the improvement of housing and basic sanitation conditions. Fight the causes of poverty and factors leading to substandard living conditions. Register, monitor and control concessions of rights to research and exploit water and mineral resources. Establish and implement an educational policy for traffic safety.</td>
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<td>Legislative powers (FC, Arts. 24, 29 and 30)</td>
<td>Legislate upon matters of local interest – including Master Plan and Organic Law. Supplement federal and state legislations where pertinent. The Union, the states and the Federal District have the power to legislate concurrently on forests, hunting, fishing, fauna, preservation of nature, defense of the soil and natural resources, protection of the environment and control of pollution, protection of the historic, cultural and artistic heritage, as well as of assets of tourist interest and landscapes of outstanding beauty; liability for damages to the environment.</td>
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Concurrent powers, which entail intergovernmental cooperation, comprise specifically the areas of environment, health, education, environmental
protection, forests, fauna and flora. The rules for cooperation between government spheres are provided for in complementary laws. Once established, their enforcement depends on the development of federal arrangements, whose structures vary for each area of government action, as well as the concentration of authority, funding methods and relations between entities. Some duties already have institutional arrangements in place, including some that are considered successful in the literature, such as health and education (Arretche, 2004; Melo, 2002). Other areas of common responsibility such as the environment, historical heritage and housing still lack consistent federative arrangements.

Other topics that can be considered of local interest include: definition of the predominance of local interests varies from municipality to municipality over different periods of time, according to its occupation and development history. Finally, mentioned should be made of municipal powers that are not explicitly provided for, but that result from the logical consequence of a constitutional power (Meirelles, 2001 p.131s).

This set of duties shows the variety and importance of the matters under municipal jurisdiction and the scope of its power-duty binomial. By promoting the municipalization of multiple duties and the inclusion of the municipality amongst federated entities, the federalism introduced in 1988 caused a “massive institutional transformation” (Melo, 1996) in Brazilian municipalities through changes in public policies that reinforced their role, thus consolidating their action in matters already within their competence and formally expanding their actions to new areas.

Currently, Brazilian municipalities are considered essential in the so-called welfare functions because of their duties, this being a unique position in the international context. However, the conditions for fulfilling their responsibilities are extremely diverse. Often municipal governments abdicate their autonomy due to financial or technical weakness, to political dependence, or still to lack of political and institutional conditions to fulfill their common duties.

Municipalities, environmental agenda and intergovernmental cooperation

From the standpoint of environmental defense, municipalities are entirely co-responsible for the environmental mandate, and sole holders of responsibilities that are fundamental for environmental quality: basic sanitation, territorial planning and regulation of urban land use.

No further analysis is needed to identify the importance of local governments as protagonists in water management, which is under federal and state responsibility because the municipality is the only government entity capable of integrating water management, sanitation and land use management for the protection of waters. The municipality is responsible for sanitation, which includes in its definition, the management of domestic and urban solid waste, water supply, sewage disposal, urban cleaning, drainage and management of rainwater.
The recognition of this ownership in 2007, although implicitly supported the late regulation of sanitation services in Brazil, already under the environmental paradigm. The municipality is the only State actor capable of modeling the occupation of the territory through its exclusive prerogative to determine the strategic planning of the municipal territory through the Master Plan; the allocation of areas for urbanization, by defining the urban area; the promotion of specific land uses on an exclusive basis or in conjunction with other uses; the definition of the ration between free and built spaces; and the determination of housing density and licensing of location for economic activity. As important as the prerogative of using these policy instruments is the enforcement power of the municipality to control and curb illegal occupations that may affect riverbanks, fragile slopes and watersheds that interfere in the quantity and quality of water resources.

As it is outside the scope of this article to examine thoroughly the federal environmental agenda,\(^4\) two topics chiefly under federal and state jurisdiction have been selected, in which the relevance of municipal participation in federal initiatives is not obvious at first glance: the control of deforestation in the Amazon and the management of Environmental Conservation Units.

**Control of Deforestation in the Amazon** - About four million square kilometers of the Brazilian Amazon were originally occupied by forests. Deforestation of the largest existing tropical rainforest has increased in the last four decades: 18 percent of the Amazon forests have been removed (Brazil, 2009). The Federal Government has led the coordination of programs and actions to combat deforestation in the Amazon, in cooperation with the states concerned. The protection and management of forests has historically fallen to the federal level, and only in 2006 it began to be shared with the states. The inclusion of States in the fight against deforestation in the Amazon dates to the first decade of the twenty-first century, through a strategy that included improving the satellite monitoring of deforestation carried out by the National Institute for Space Research/INPE, in partnership with the Ministry of Environment; focusing control on the most heavily deforested region, known as the Arc of Deforestation; developing agendas on federal pacts for joint action between the Federal Government and Amazonian states; integrating environmental inspection agencies; focusing on the economic value of the forest; and licensing rural properties (Menezes, 2001). A new plan of action was released in 2004, supported by four pillars: land and territorial planning; environmental monitoring and control; promotion of sustainable productive activities; and federal agreements. These initiatives have been limited by governmental failures to comply with environmental regulations, lack of coordination between environmental agencies and lack of definition of property rights.

A change in strategy was adopted in 2007-2008 through Operation Green Arc\(^5\), whose action focused on those municipalities where deforestation was occurring at a faster pace, thus municipalizing the fight against deforestation.
tion by restricting credit to irregular producers, holding the entire production chain accountable for illegal deforestation, and publicizing the list of offenders and municipalities in more critical situations (Guimarães et al., 2011). The Ministry of Environment has begun to periodically publish a list of the 36 municipalities leaders in deforestation, determining the cut of federal credits for agricultural and forestry activities, and establishing conditions for lifting the embargo, involving environmental control, monitoring and inspection, territorial planning and land regularization. The government has also demanded a drastic reduction in deforestation rates and the inclusion of four-fifths of the municipal area in the Rural Environmental Registry (CAR), a georeferenced system managed by state environmental agencies.

Since then, the list of the worst illegal among all municipalities has been published annually. In the third edition of the list, the municipality of Paragominas (in southeast of the State of Pará), which is known for housing hundreds of sawmills in its territory, was the first municipality to be removed from the list by initiative of the municipal government which, underpinned by a local pact between the municipality, productive sectors and producers’ organizations, the Public Prosecutor and non-governmental organizations (such as IMazon and the Nature Conservancy/TNC), totaling about 40 organizations, intensified supervision procedures and promoted alternatives to a new development model. The municipality has become a role model for other municipalities in the Amazon and inspired a pact involving the Federal Public Prosecutor, the State of Pará, IBAMA, and the federations of associations of municipalities and agriculture of the State of Pará (Brito et al. 2010; Guimarães et al., 2011).

Management of conservation units - Conservation Units (CU) are areas protected for environmental purposes, which can be established by the three levels: federal, state and municipal. Systematized in the National System of Conservation Units (SNUC), the CUs cover twelve categories of protected areas, organized into two major groups: Integral Protection⁶ and Sustainable Use.⁷ With varying degrees of environmental protection restriction and goals, the CUs share the fact that they are subject to a special statute for land use and occupation and management of ecosystems and environmental resources. About nine percent the Brazilian territory is protected by federal CUs. The CUs under state and municipal jurisdiction cover 422,000 km² and 35,000 km² respectively, excluding Environmental Protection Areas (APA) (IBGE, 2010).

There are two key instruments for the management of areas protected CUs: the management plan (mandatory for all CUs) and the buffer zone (non-mandatory only for the APA and RPPN). The management plan establishes the zoning of the area, rules for the use and management of environmental resources and the construction of physical structures. The buffer zone, which must also be provided for in the management plan, is established outside the limits of the CU. Its function is to mitigate the effects of existing activities that can influence
the CU by setting limits to their occupation, and promote the harmonious co-existence between populations and activities and the CU.⁸

Fulfillment of the rules established by the management plan lies solely with the agency responsible for its jurisdiction as regards the surface covered by the protected area. In the buffer zone, on the other hand, the situation is different: the entity responsible for the CU cannot enforce the rules solely and immediately. In this case, the municipal action gains importance for two factors. The first is the recognition of the huge lack of human, technical and logistic resources for the CU management system, which makes it impossible for the oversight body to inspect illegal activities by itself. Only partnerships with local governments and communities will increase the chances of more effective law enforcement in the CUs and their surroundings.

Secondly, at the expense of turning management guidelines into dead letter, the rules established for the buffer zone should be adopted by the municipalities and expressed in their Master Plan, urban perimeter law, land allotment regulation, urban land use and occupation, and guidelines for licensing locations suitable for economic activity. It should be pointed out that environmental licensing procedures for projects in the buffer zones of CUs have recently incorporated the more effective participation of the oversight body⁹ and that the buffer zones of integral protection CUs will be considered, through SNUC regulation, as rural areas in which the division of land for urban purposes is prohibited. However, these measures do not affect the essential issue: the participation of municipalities is crucial in planning the surroundings of protected areas, both for the internalization of rules and restrictions and for control and supervision.

Conclusions and developments

The combination of the typical features of nationwide public policies with the continental dimensions of Brazil and the large inter- and intra-regional disparities reveals a sharp demand for intergovernmental cooperation, so that national policy guidelines can be tailored to local specificities. In terms of environmental policy this requirement is even stronger because of the structural characteristics of environmental processes: more than just a policy style or an alternative to overcome the scarcity of resources, intergovernmental cooperation is a sine qua non condition for environmental protection actions to work. The analysis of the institutional characteristics of intergovernmental cooperation from the perspective of federative organization shows that municipalities enjoy unprecedented importance before the other government spheres owing to their status in the triune federation, the extent of their autonomy and the size of their constitutional agenda. The implementation of environmental strategies developed by the federal government¹⁰ often depends on the participation of municipalities in the exercise of their exclusive prerogatives such as inspection activities, sanctions, territorial planning, control and use of urban land, provision of infrastructure and facilities responsible for basic habitability conditions.
The study of the interdependence condition between government levels for environmental action vis-à-vis the municipality has been neglected in favor of the focus on the autonomy of each federative entity, considered only in its self-determination dimension. The interdependence that demands shared rules is the reverse of autonomy (self-rule) in federative systems. Underestimating the importance of municipal to the success of federal environmental policies is one of the biggest obstacles to be overcome in the implementation of federal policies and in the very process of building environmental institutionality in Brazil. The recognition of interdependence relations paves the way for a new approach in which investigating the barriers to cooperative action, implementing strategies and instruments that induce and encourage joint action, improving the design of environmental institutionality and facing the challenges related to disparities in the institutional and political capacity of local governments is of the utmost importance.

Notes
1 Federal Constitution, Articles 1 and 18.
2 Provided for in Decree-law 311/1938.
3 As said by Silva (2009), the municipal organic law may specify, for each municipality, what is of local interest. It is not necessary, however, to have an exhaustive definition of what is of local interest in order to exercise related powers.
4 The exhaustive identification of interfaces between the exclusive competence and the broad range of subjects that make up the environmental agenda is not within the scope of this article.
5 Through Federal Decree 6321-07.
6 Ecological Station, Biological Reserve, National Park, Natural Monument and Wildlife Refuge.
7 Environmental Protection Areas, Areas of Relevant Ecological Interest, National Forest, Extractive Reserve, Wildlife Reserve, Sustainable Development Reserve, and Private Natural Heritage Reserve.
8 Law No. 9985, Article 25.
9 Through CONAMA Resolution No. 428 of 2010.
10 The same reasoning applies to the States.

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Abstract – The purpose of this paper is to explore the role of intergovernmental cooperation in federal environmental policies from the perspective of Brazilian local governments, considering the Brazilian federal institutional framework. The analysis of the constitutional municipal agenda highlights that environmental defense activities provide the background for the analysis of selected examples of federal environmental policy. We conclude that federal success depends to a great extent on municipal support because they are in a unique position to combine the use of typical environmental strategies and instruments with policy instruments exclusive to municipalities.

Keywords: Environmental policy, Local government, Federalism, Environmental governance, Intergovernmental relations.

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