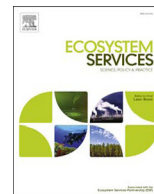




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The *densification normative* of the ecosystem services concept in Brazil: Analyses from legislation and jurisprudence

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ABSTRACT

The concept of ecosystem services acquired a growing attention in Brazil in the last fifteen years. This fact was observed in the development of legal norms and court decisions throughout the country. Using the theory of *densification normative* by Thibierge et al. (2013), this paper analyses the theory's seven parameters in two legal sources – legislation and jurisprudence – which identify a densification normative process over the concept of *ecosystem services*. This paper concludes that, under the prism of this theory, this densification normative process is being observed and it may contribute to the assignment of legal value to ecosystem services.

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1. Introduction

In the end of the 1990s, the concept of ecosystem services was an idea disclosed in various knowledge fields, but practically without any normative force. With the many academic studies and, mainly, with the *Millennium Ecosystem Assessment* (2005) publication, this concept starts getting an increasing attention from decision makers and, consequently, from legislators and jurists. From there, the concept starts guiding public policies, legislation and court decisions. In Brazil, the ecosystem services concept is relatively new in the law. Jurists have been devoted to developing the foundations of a legal concept of ecosystem services and environmental services to guide the creation of norms and judicial decisions in the country.

In order to understand the process in which an idea or concept gets *normativity*, the theory of *densification normative*,¹ elaborated

in France by Catherine Thibierge and Colleagues in 2013, is used. With this theoretical base, this article seeks to characterize the *densification normative* process of the ecosystem services concept in Brazil from two sources of law: legislation² and jurisprudence.³ Regarding the jurisprudence, the first court decisions on the issue in the country are considered. As far as the legislation, state regulations and the federal bills, which seek to regulate the issue, are analyzed. Thibierge et al. (2013) identifies seven assumptions for the *densification normative* phenomenon characterization. In this article, the legislation and the jurisprudence are analyzed from these assumptions in order to assess whether the ecosystem services concept is experiencing an increase in normativity in Brazil.

As to legislation, thirteen of the twenty-six Brazilian States had already adopted rules related to the ecosystem services concept by the year of 2017. Moreover, since 2007, several federal bills based on this concept are under discussion in The National Congress. However, if it is true that the norms increase in number, it remains to verify whether there has been an evolution in the normative force (qualitative aspect of the norm). Yet, in relation to the jurisprudence, the ecosystem services concept was completely unknown in the Brazilian law until very recently. The first decisions using the concept reveal that it has been getting an

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¹ It is possible to define the *densification normative* as a process of law evolution as detailed below. *Densification normative* is a neologism created by French jurists to define the process of quantitative and qualitative increase of *normativity*. "In a descriptive way, normative densification is defined as a process of reinforcement, a process of enrichment or an increase in normativity, a process of transformation, of concretization or of normative concentration." (Thibierge et al., 2013). In its turn, *normativity* is used to describe not only a legal norm, but *soft law* and other types of norms or standards. The uses of the term indicate two meanings: normativity as a quality of the norm or as a normative field. The normativity as the *quality* or *character* in which a norm is constituted, highlights the feature of *model*. The term normativity can also refer to a *normative field* (as law, moral, ethics).

² 'Legislation' here designates all written laws in force in the country. In the Roman-Germanic legal system (Civil Law), written laws are the most important source.

³ 'Jurisprudence' is the set of decisions taken by the country courts, adapting the norms to the situations of fact.

increasing attention in courts. In this sense, the meaning given to the concept evolved, its content has intensified and its accuracy has been reinforced, such elements that reveal a gain of normativity of ecosystem services in the set of the decisions taken.

Thus, the goal of this article is to assess the increase – *densification* – of the ecosystem services concept normativity in Brazilian law from the analysis of the legislation and the jurisprudence based on the assumptions which characterize the *densification normative* phenomenon. The work is divided into three parts: the first part highlights the importance of the ecosystem services concept adoption and how this concept gains normativity, that is, the *densification normative process* of this concept. This part also highlights the theory and methodology used for the assessment of the *densification normative* concept process of ecosystem services in Brazilian law. The second part analyzes, from the assumptions of the theory of *densification normative*, state norms, as well as federal bills which adopt the ecosystem services concept. The third part seeks to identify, in the early decisions of the Brazilian courts using the ecosystem services concept, the fulfilling of the assumptions required by this theory. From this analysis, it is possible to check if the ecosystem services concept has increased in *normativity* in Brazilian law.

2. The *densification normative* of the ecosystem services concept in Brazilian law

The origin of the modern use of the ecosystem services concept dates back to the late 1970s and early 1980s, with the works of Westman (1977), Ehrlich and Ehrlich (1981) and De Groot (1987). These authors emphasized the importance of ecosystems functions for people, creating a pedagogical concept of ecosystem services in order to spark the public interest for the biodiversity conservation (Gomez-Baggethun et al., 2010). In the late 1990s, Daily (1997) defined the ecosystem services as “the conditions and processes through which natural ecosystems, and the species that make them up, sustain and fulfill human life.”

It is important to emphasize the distinction between ecosystem services and environmental services. Although they are often used as similar expressions, various authors distinguish them. The ecosystem services concept used on Millennium Ecosystem Assessment (2005)⁴ is widely accepted, but, on the other hand, the environmental services concept is more controversial. Derissen and Latacz-Lohmann (2013) highlight that “definitions are less clear when it comes to environmental services (unlike the ecosystem) and the attempts to distinguish each other increase the confusion”. The authors propose a definition that considers the environmental services “the services provided through countryside management in the broader sense whilst produced either unintentionally or intentionally” (Derissen and Latacz-Lohmann, 2013).

Karsenty and Ezzine-de-Blas (2016) propose a distinction between ecosystem services and environmental services which the first ones are “services obtained from nature by the people” while the second ones are “services provided by people to other people”. According to the authors, the “ecosystem services are, by nature, collective goods (non-rivalry) or public goods (non-excludable and non-rival), because they are features associated with a particular ecosystem state. These services, for their nature, would not be tradable in the markets. On the other hand, the environmental services can be “understood as remuneration for

services rendered by people to other people for the maintenance or the improvement of a given ecosystem service” (Karsenty and Ezzine-de-Blas, 2016).

Following the concept adopted by Millennium Ecosystem Assessment (2005), we understand that the ecosystem services, while direct or indirect benefits which people obtain from ecosystems, are broader and encompass environmental services. Yet, the ecosystem services are the benefits which people obtain from ecosystems managed by other people. Therefore, this article approaches the *densification normative* of the ecosystem services concept in a broader way, that is, to managed (or not) ecosystems. In addition, we do not understand the ecosystem services concept as “only one rhetorical tool in conservation approaches” (Fisher and Brown, 2014). On the contrary, the ecosystem services concept makes the environmental externalities visible, thus ensuring the ecosystems preservation to the extent that their services are recognized, measured and incorporated within decision-making, both public and private (Gomez-Baggethun and Muradian, 2015).

Among the Brazilian authors, Nusdeo (2012) understands the environmental services as “those related to ecological processes in which nature reproduces itself and keep environmental conditions which are the life support base on the planet and the well-being of the existing species”. In the recent years, the ecosystem services concept has got several criticisms in Brazil because, for some authors, the adoption of this concept in the country would lead to the ‘commodification of the environment’ (Packer, 2015; Mamed, 2016; Melo, 2016). Despite such criticism, the ecosystem services concept has received a greater attention in Brazil. In relation to law, it remains clear that the number of norms and court decisions, which use this concept, are increasing in the country. In other words, there is a growing normative phenomenon about the concept.

The idea of economic valuation of ecosystem services received strong impulse in the 1990s from the works of Costanza et al. (1997). The Millennium Ecosystem Assessment (2005) “contributed a lot to put the ecosystem services firmly on the political agenda and, since its publication, the literature on ecosystem services has been growing exponentially” (Gomez-Baggethun et al., 2010). Despite notable advances in other fields of knowledge, law developments related to ecosystem services are even more recent. In the 2000s, Ruhl (2006) drew attention to the fact that “the component that is least developed in the literature on ecosystem services is the law, particularly as it relates to property rights and governance institutions.” Currently, the use of the ecosystem services concept “transcended the academic arena to reach Governmental policy, as well as the non-profit, private and financial sectors” (Gomez-Baggethun et al., 2010). This shows the importance of the law role in the promotion and regulation of ecosystem services.

In fact, the ecosystem services concept involves many doubts about its law potential and, as Herve-Fournereau and Langlais (2012) emphasize “the answer to these questions is necessarily delicate because legal translations are recent and still incomplete.” The ecosystem services concept adopted by the legal norm must sign clearly that law values and supervises these services. It is not enough to only highlight its monetary value: the ethical-legal option must be clear in favor of the ecosystem services conservation for the present and future generations. In this sense, Sikor (2013) warns that the ecosystem services involve in environmental and social justice issues, and “the challenge is to expand the attention to human well-being in the ecosystem services framework to extend to the well-being of socially differentiated people.” In this sense, Aragão et al. (2016) remember that the legal science provides the teleological framework needed to prevent ethical conflicts on valuation of ecosystem services, thus contributing to achieving “environmental justice and ensure fair and acceptable answers to complex issues of real life.”

⁴ According to the Millennium Ecosystem Assessment, ecosystem services are “The benefits people obtain from ecosystems. These include provisioning services such as food and water; regulating services such as flood and disease control; cultural services such as spiritual, recreational, and cultural benefits; and supporting services such as nutrient cycling that maintain the conditions for life on Earth. The concept “ecosystem goods and services” is synonymous with ecosystem services.”

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