

## THE FORESTRY CONCESSION AS AN INSTRUMENT OF INNOVATION IN THE USE OF THE PUBLIC FORESTRY FOR LOCAL SUSTAINABLE DEVELOPMENT

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### ABSTRACT

The Forest Concession allows the use of the public forest, through a bidding process, allowing the sustainable exploitation of products and services in the area of forest management. The National Forestry Development Fund, created by Law 11284/2006, has the mission of promoting innovation and the development of sustainable forestry activities. In this sense, this article presents the relationship between forest concession as a process of innovation of the use of public forests in order to promote local sustainable development. The methodology used was the bibliographical research, exploratory of qualitative approach. The research allowed to conclude that the institution of the law and its effectiveness as public policy, as well as the forest concession brings as proposal innovative elements that require control and management tools with the same profile. Therefore, dialogue with the various actors involved also requires innovative elements and situations.

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### INTRODUCTION

The concept of sustainable development emerged at the Stockholm Conference in 1972, initially named as an "eco development approach" and then renamed as sustainable development. In a world where technological advances in productivity undergo an overwhelming wave of transformations, incorporating information technology concepts unprecedented in the development of humanity, the noxiousness of maintaining the sources and natural resources upon which human life depends was perceived. Thus, we enter the 21st century with the expectation of proposing a model of development based on the environment, economy, society. This model incorporates in its perspective of production elements considered as Green Economy, which according to the United Nations, is conceptualized as a type of economy that "results in improvement of human well-being and social equity, while at the same time significantly reducing environmental risks and ecological scarcity" (UNEP, 2011). The green economy has the prospect of reconciling economic growth with environmental quality and social inclusion,

boosting the composition and technology effects to achieve this goal (Almeida, 2012). Thus, the forest concession law, Law No. 11,284 of December 2, March 2006, arises to guarantee the valuation principles with the objective of managing forests. This law was created from the idea of environmental sustainability and development that has multiplied and spread throughout the world since the 1970s of the twentieth century. Law No. 11.284 / 2006 proposes the use and exploitation of forest resources in a sustainable way, rationalizing the use of forests and incorporating, in the calculation of benefits, the guarantee of the use of forest natural resources by future generations (Brasil, 2006). According to Carrillo-Hermosilla, Gonzalez and Konnola (2009) "The relationship between innovation and sustainability could contribute to the development of clean consumption and production ways in order to optimize environmental resources." Therefore, this article presents the relationship between forest concession as a process of innovation of the use of public forests in order to promote local sustainable development and can be evaluated by the application of sustainability indicators. In this way, it brings to the surface elements of this management process, considered as innovators, besides evaluating as innovation the very law of forest concession that was proposed.

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**Table 1. Actions developed for the Biodiversity Project of the Ministry of Science Technology, Innovations and Communications for PPA 2012-2015**

Description of the program	Goal	Initiative	Action
Biodiversity	Promote the development of C.T & I applied to biodiversity and ecosystem services and disseminate the available information, aiming at the conservation, valorization and sustainable use of the natural resources of the Brazilian biomes.	Support the implementation of a T & I program with knowledge exchange among indigenous peoples, traditional populations and scientific research networks.  Structuring of botanical gardens in Federal, State and Municipal scopes  Implementation of a national information platform on biodiversity.  Introduction of the national program of biological inventories incorporating molecular and bioinformatics techniques.  Scientific research on biodiversity, processes, ecosystem services and environmental modeling, integrating biological and geospatial data.	C.T & I applied to traditional knowledge associated with biological resources.  Support the structuring and development of botanical gardens at the federal, state and municipal Implementation of information systems on natural resources.  Support to networks of biota inventories and molecular identification.  Promotion of research and development on the composition and dynamics of Brazilian ecosystems.  Development of research on the ecosystems of the Pantanal.  Development of strategic studies for Brazilian biomes.  Development of strategic actions Support the research network for the conservation and sustainable Support and research and development in thematic areas of biodiversity.

Source: Adapted Ministry of Science, Technology, Innovation and Communications

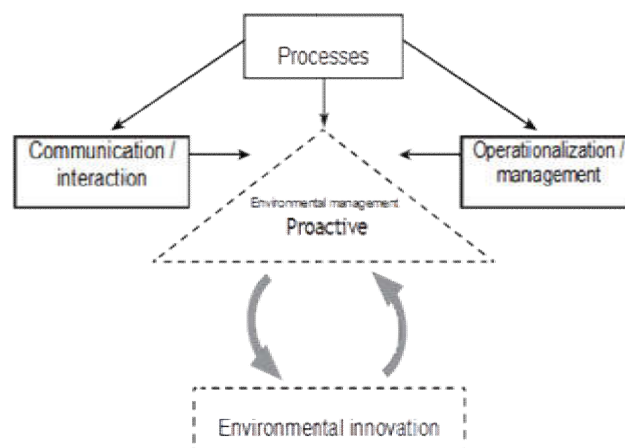
## MATERIALS AND METHODS

A bibliographical, exploratory qualitative approach was carried out. According to Lakatos and Marconi (2010) the bibliographic research enables the researcher to have direct contact with everything that has been written about a certain subject. In addition, it approximates the researcher to the different theoretical parameters that give support to the scientific analyzes. Exploratory descriptive research contributes to the establishment of conceptual precepts and analytical assumptions when comparing the idea and the process of effecting this idea. The qualitative approach, in turn, brings out interdisciplinary elements, bringing to light the ontological and ethical components that underlie the research. It is the same way, through the qualitative approach, that the researcher clarifies the axiological principles of his sources and the ideological designs that lead to the formatting of the works and data chosen (Flick, 2004). In this way, the method chosen for this article demonstrates its importance and relevance by pointing out, in an embryonic way, innovation as an inseparable part of sustainable development projects. Therefore, Law 11.284 and the indicators of controls arising from the idea of sustainability, is an inherent part of a dialectic where the synthesis is represented by the proposed renewal in the teleological factors in the forest concessions. Innovation, therefore, is related to the principles of sustainability (Economic, Social and Environmental).

## RESULTS

Regarding the forest concession, the innovative environment requires, as an indispensable element in its execution, management alternatives that involve the governmental sector,

companies and non-governmental institutions. The model that emerges from this heterogeneity distributes the responsibilities of execution and control of innovative projects among the various actors of society, thus forming an administrative standard centered on the concept of governance.



Source: Angelo, Gali na adn Jabbour (2011).

**Figure 1. Relationship of proactive environmental management and innovation**

The forestry concession was designed to be a tool for local development. However, this type of development must be in line with the demands placed on a global level of sustainability. Thus, it is possible to affirm that the forest concession, provided that the forest management is correctly carried out, allows the protection and conservation of the forests, as well as generating economic, social and environmental benefits (Marques, Marques and Roriz, 2009).

Search	Method	Term	Context
Del Brio; Junquera, 2003	Del Brio	<i>Environmental innovation</i>	The study was a review of the literature that identified the main barriers of Environmental Management Systems (EMS) for environmental innovation.
Wagner, 2007	Empirical	<i>Environmental innovation</i>	This study reveals the relationships between environmental management, environmental and potent innovations. The study concludes that environmental innovation can be identified using powerful data and that environmental innovation defined in this way is less consolidated than just as environmental innovation.
Brunnermeier; Cohen, 2003	Empirical	<i>Environmental innovation</i>	The study shows that environmental innovation is more likely to occur in sectors that are internationally competitive.
Ming-Ji, Ching-Hsun, 2009	Empirical	<i>Green innovation</i>	The study identifies that the green learning process has a positive effect on the company's environmental ethics and that it affects green innovation in a positive way as well
Yu-Shan, 2008	Empirical	<i>Green innovation</i>	The study identified that investing in the development of key competencies in companies, in favor of environmental commitment, are key factors for the company's green innovation capability.
Hillestad; Xie, Haugland, 2010	Empirical	<i>Green innovation</i>	The study understands the importance of the role of the manager that influences the company image as well as its capacity for environmental innovation.
Yang, Chen, 2011	Empirical	<i>Eco-Innovation</i>	Eco-innovation offers technical support from fields of different technologies, to increase creativity in product innovation and environmental commitment.
Pajuri, 2006	Empirical	<i>Eco-Innovation</i>	The process of product innovation has been studied by researchers and are products with good performance in the market.
Carrillo-Hermosilla; Del Rio; Könnölä, 2010	Empirical	<i>Eco-Innovation</i>	The capacity for eco-innovations provides new business opportunities and contributes to the transformation to a sustainable society, depending on the interaction of these dimensions and the engagement of stakeholders in the innovation process.

Source: Angelo, Galina e Jabbour, 2011

Figure 3. Studies on environmental innovation and terminologies

On the other hand, the new public forest management system benefits sectors such as local communities living off forest products formalizing their entry into the market, increasing multiple use and enjoying the non-costly condition. In addition, private entrepreneurs are benefited by not having to buy areas to carry out the forestry activity in a legal way, so that they can access credit, export, seek certification; and the government that with the generation of employment and income, and with the guarantee of the possession of the natural patrimony whose income should be destined to technical assistance and extension, research, recovery of degraded areas with native species, among other fomentation actions (Azevedo and Tocantins, 2006). Figure 1 presents, as an example, the actions and initiatives related to the Biodiversity

Project of the Ministry of Science Technology, Innovations and Communications. The actions and initiatives of the Biodiversity Project were chosen to be a direct reference to Innovation and Research closely linked to the forest. Such actions, if used efficiently, can favor local governments and companies benefiting from the forest concession, helping concessionaires to comply with contractual terms related to the environment and economic and social development. However, for these benefits to be shared, there is need for governance that involves the participation of all actors involved. This participation would be driven by proactive environmental management. Figure 1 demonstrates the relationship between proactive environmental management and innovation, a relationship that synthesizes the need for forest concession to

be made through a management that combines innovation and proactivity, adding efficiency in planning, communication and operationalization. It is possible to ensure that change management achieves the expected results of innovation projects, overcoming contingencies and social, economic and environmental sustainability. The way to do this requires its execution from the bilateral relations of environmental management and innovation, through the adaptation and implementation of several methods of environmental innovation, as suggested in Figure 2.

## DISCUSSION

The reality embodied in a public project brings, though complementary, the difference between private projects. It is selected for some analysis, as an item given to the fiscal year, the social aspect and a vision for the collective. In addition, the management of resources, rationalization of money should be considered on the basis of established criteria for information. These benefits include social aspects and sustainability that are so? In this sense, Coelho (2009) clarifies how aspects, characteristic of public management, intertwine with the private sector. The incorporation of the idea of environmental sustainability contributes to the approximation, and the whitening, of the need of combining aspects of the efficiency of the private sector with the scopes of the public administration function. This conjunction is pointed out in the benefits provided by such partnership. It is possible to measure the benefits of public and private partnerships, such as forest concession policies, based on economic, social, technological, financial and environmental criteria. To estimate the sustainability of a society is a difficult task because it involves the integration of numerous information from several disciplines and areas of knowledge (Braga *et al.*, 2004). Thus, the use of indicators that allow the identification of environmental, social, political and economic problems allow the measurement of the sustainability of a region. The use of sustainability indicators allows integrating several data in a given dimension, generating a better understanding of the reality of a given region, helping decision making (Silva, 2008).

The perception that these criteria can only be established from the awareness that nature should be considered as a limit to the economy is present in the work of Cechin (2010) called: Nature as the limit of the economy. The incorporation of private sector models, aimed at results, by the public administration can be found in Marini (2008). The author reflects on the state reform, conjunctures and challenges of a quality public administration. The use of the PPPs model by several countries in the world and their impact on legislation can be found in Pastori (2007). The author clarifies how more than sixty countries have used this modeling to make the use of public money more efficient and effective. The public-private partnership is, in this sense, signed by environmental licensing, an administrative procedure that allows the location, installation, expansion and operation of enterprises and / or activities that use environmental resources (Fiorillo, 2006) and administrative contract that is a type of treaty between the Administration and third parties in which, by virtue of law, clauses agreed or the type of object, the permanence of the bond and the pre-established conditions are subject to exchangeable tax of public interest, except for the property interests of the private contractor. This contract is, according to Di Pietro (2006), which establishes characteristics as:

1. The presence of the administration in a position of supremacy over the particular;
2. The purpose public;
3. Due obedience to the form prescribed by law (Law 8.666 / 93);
4. The proper legal procedure for each contract;
5. The legal nature of an adhesion contract;
6. Which is intuitu personae;
7. The presence of exorbitant (or essential) clauses; and
8. The possibility of unilateral mutability of the contract.

## Conclusion

This article provides the reader with a more comprehensive view of the Forest Concession as an element of innovation. If thought from the elements appropriate to the public forests will undoubtedly promote local sustainable development. By instituting the law and its effectiveness as a public policy, the forest concession proposes innovative elements that require control and management tools with the same profile. As well, dialogue with the various actors involved in such a project requires innovative elements and situations. The monitoring, planning and execution of this type of project requires the participation and leadership of several actors, and they are also innovative governance instruments. In addition, supranational elements, such as environmental issues, require the construction of indicators, regulatory, organizational and normative, structured on an innovative and dynamic matrix. Thus, the research results point to the need for innovation and research projects to be congruent with the programs and projects related to Sustainable Development. More than this congruence, it is necessary that the governmental actions present themselves in a holistic way, accentuating the transversalities and connections between governmental policies and business actions. Regarding the Forest concessions, the Law that regulates the Management and Management of forests already indicate, in their various articles, the axiological principles that regulate the search of human rights with economic development. All this built on a sustainable growth base that guarantees the maintenance of biodiversity. Thus, the forest concession is an instrument of innovation in the use of the public forest, which adopts, or can adopt, one or more methods of environmental innovation, with the concession policy being the objective of sustainable development. If thought from the elements appropriate to the public forests will undoubtedly promote local sustainable development.

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