

Critical analysis of legislation on degraded areas in Brazil

Análise crítica da legislação sobre áreas degradadas no Brasil

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ABSTRACT

This study survey and analyze the evolution of the main normative instruments for environmental protection in Brazil. The research showed that the environmental protection models in Brazil developed as ecological awareness and control over environmental issues became relevant points. In this sense, environmental degradation, especially of soils, is a concern that has always been under discussion in Brazil. As can be seen, over the years, the Brazilian legislation has sought mechanisms to improve the formulation of more efficient normative instruments.

RESUMO

Este estudo faz o levantamento e analisa a evolução dos principais instrumentos normativos para a protecção ambiental no Brasil. A investigação mostrou que os modelos de protecção ambiental no Brasil se desenvolveram como consciência ecológica e controlo sobre questões ambientais tornaram-se pontos relevantes. Neste sentido, a degradação ambiental, especialmente dos solos, é uma preocupação que tem estado sempre em discussão no Brasil. Como se pode ver, ao longo dos anos, a legislação brasileira tem procurado mecanismos para melhorar a formulação de instrumentos normativos mais eficientes.

1 INTRODUCTION

It is extremely important to recognize the role of the environment and to preserve the quality of life and all aspects necessary to acquire dignified life status, as presupposed by the Brazilian legislation. It is also necessary to recognize that Brazil is the owner of a very vast natural heritage, and that this natural heritage, although owned by all Brazilians, has not always been valued and taken care of in the most appropriate way.

This research analyzed the evolutions carried out by the Brazilian legislation in order to promote better quality in environmental protection, and to hold civil and criminal liability for individuals and companies directly involved in activities that impose risk to the environment. This activity, in fact, reveals the growing importance for the State of the need for intense preservation of natural resources available in Brazil. For a long time, it was thought that natural resources were practically impossible to exterminate. This culture, in fact, reflects the capitalist view of natural heritage. However, with the new perception of the world, fostered by several studies on the theme of ecology, it was observed that the environment is not only fundamental to human life, but is also in serious risk of becoming extinct, with negative consequences for humanity. In this sense, it is necessary to understand that all illegal work with the aim of protecting the environment

comes from the importance given to the recognition of the limits of natural resources, a concept that emerged only in the 21st century.

2 HISTORY OF PRESERVATION LEGISLATION IN COLONIAL BRAZIL

The first Brazilian ordinance model was the Afonsine Ordinances. This set of laws drawn up by Afonso V, defined the Lay and Canon Law in the State of Portugal. Its application meant an important implement in the sense of establishing limits to the legal controls of each sphere in question. Ordinances were influenced by the preservationist culture that was beginning in Europe. Initially, there was a concern in ensuring the integrity of fauna; however, as Batista (1987) explains, this first national legal moment did not have a purely preservationist bias, since the concern with the livestock came from the need to include them as heritage.

However, the Afonsine Ordinances, although initially not concerned with ensuring healthy environment, in fact the initial concern of these ordinances was the search for mechanisms that could ensure the squatters the necessary conditions to guarantee the financial return from the point of view of their investments on newly discovered lands. It is interesting that this perspective lasted a long time and significantly contributed, albeit indirectly, to ensure the preservation of the environment, since in many cases, the preservation of fauna was necessarily linked to the preservation of the natural space around it (MAGALHÃES, 2002).

The Philippine Ordinances were replaced in March 1521 by the Manueline Ordinances, a set of laws drawn up by King D. Manoel. This new legal set was very representative and what made it different from previous ordinances (legal sets) was the perception of the scope of environmental control. If in the Afonsine Ordinances, the possession of animals gave the land occupant complete autonomy, in the context of Manueline Ordinances, there were some new regulations that prevented certain abuses. Among them, the control of hunting, fishing and certain land cultures (such as the practice inherited from the Indians, of deliberate and uncontrolled burning of some areas), for economic purposes, causing further damage to the environment (PORTUGAL, 2018).

Naturally, like its predecessor, the Manueline Ordinances did not have a *de per se* preservationist character, on the contrary, the foundation in force at the time indicated that the existence of a control over the way in which squatters used their land could have a negative weight if there was no State interference. Thus, for control to become effectively valid, Portugal should take certain precautions (MAGALHÃES, 2002).

Another concern about the panorama of environmental protection regards the way in which the State presented protection to trees. It is true that these beings are responsible for basic functions such as soil protection, as well as the promotion of food for man, and, to some degree, to animals. In this plan, the Manueline Ordinations had two interesting predictions: the protection of bees (title XCVII), and the prohibition on degrading fruit trees (Book V, title LIX). This concern was joint, providing for the control of activities involving such animals (bees) as fundamental for maintaining the variety and importance of flora as a whole in the geographical space, and in the background, fruit trees in particular provided food and were considered elements of valuation of properties and areas in which they were grown (MINAYO & MIRANDA, 2002).

According to Lemos & Biwazu (2016),

Although the concern is not related to flora, but to wood and food that would be the property of the kingdom, at a time when food scarcity was significant, we indirectly understand the benefit of such a provision. This is because the benefit of the prohibition on cutting trees for environment was enormous (p. 07).

As previously mentioned, the concern with the environment is not autochthonous, but it is inspired by pre-established legal models in Europe, since at least the 14th century, and did not contain the general elements that form tropical biomes, which probably justifies the concern with fruit trees. A reflection is necessary: in colonial Brazil, there was great diversity of trees and fruits, the indigenous people knew a system of life completely integrated with the biological reality that surrounded them:

They do not plant or create. There is no cow, goat, sheep, chicken, nor any other food used by men. They do not eat anything but what has been around for a long time: seeds and fruits provided by the earth and trees. And with that, they are so healthy and strong, but we are not that much, with the amount of wheat and vegetables we eat (PORTUGAL, 2018, p. 12).

The Letter of Caminha (PORTUGAL, 2018) is a proof that the Brazilian context of nutrition was broader, because, mainly, despite the practice of some degrading forms of cultivation (such as “coivara”, the habit of burning wide strips of vegetation for cultivation of cassava and yam), the controlled population and a number of factors, from social to cultural, allowed that the control of this type of land would prevent the complete destruction of the environment. Simple issues, such as crop rotation, was, in Portugal, a novelty until the 18th century; however, there is evidence that areas cultivated by indigenous people go through “rest” periods between one burn and another. Furthermore,

in Portugal, the diversity of foods instigated frugality; in Brazil, such frugality was given by convenience, and hunting, where it existed, was controlled and very limited, given the technology of inhabitants of the time (PEZZUTI & CHAVES, 2009).

Other environmental anti-degradation measures were provided for in the Manueline Ordinances, including the protection of water sources and aquatic fauna as essential elements in the quality control of the environment. Although in the 16th century, this became avant-garde in Portugal (where aquatic fauna did not have the same variety), in Brazil, and in commercial practices related to this niche, measures had positive effects, as the inappropriate use of some indigenous techniques, such as fishing using certain plants, which sap caused the death of fish without poisoning its meat, were widely used by squatters from Europe (PEZZUTI & CHAVES, 2009).

In 1580, with the accession to the throne of King Philip II, Spanish who reigns in Portugal due to a series of factors that interfered in the production of an heir to the Portuguese throne, being necessary to adopt the name of Philip I in order to ensure sovereign rights over his reign, the so-called Philippine Ordinances were implemented. In that period (16th century), ordinations followed one another while maintaining the basic aspect of their structural organization. This is what occurred with Afonsine and Manueline Ordinations. The Philippine ordinances followed the same ideological principle, that is, they were based on the economic aspects that are important for the development of the colony and the Empire under the historical period in which the scarcity of resources was an even more relevant issue than it is today (STEINBERG & KINCHELOE, 2001).

This economic perspective, in the context of the national legal framework, came under the control of Filipe I and Filipe II, successors of the throne, always maintaining the general aspect of environmental protection measures. However, as colonizers took over the national physical space, they realized that some products, due to their exotic aspect, seasonality or any other characteristics, could not be so easily controlled from the economic point of view. In addition, economic agreements prevented Portugal from enjoying specific products in the country, mainly by prohibiting the existence of factories and manufactures in the country from the 17th century onwards. From 1600; however, Brazilwood, a noble wood of great durability and exceptional density, emerged as the main product in the colony (DIAS, 2018).

Brazilwood represented a form of wealth as versatile as necessary: its density and durability were perfect for the construction of naval fleets, its wood did not allow the

development of parasites that destroy structures; however, due to the quality of Brazilian lands, as well the genetic quality of trees, more than 70% of the national Brazilwood production literally became powder, being used for dyeing clothes and other items, with a characteristic red color highly valued in Europe. Until then, this resource was only available to those who had agreements with the East India Company, overseas industry that had monopoly over the only Brazilwood producers (which has this name due to the red color that its pigment provides) (DIAS, 2018).

In 1605, Filipe III, heir to the Portuguese throne after his predecessor, Filipe II, approved the so-called Brazilwood Regiment, with the ban on uncontrolled Brazilwood cutting, which since 1542, had already become a serious problem in the national economic context. Magalhães (2002) reports that the context of environmental protection in the country has always had economic backing. In this sense, with regard to protection against devastation, the Brazilwood Regiment can be considered as the first law that, in fact, was concerned with providing control of natural resources in a broad way, since it talks about “forests” (PORTUGAL, 2018, p. 01).

The control over Brazilwood implied the construction of a stricter control in relation to aspects that consolidate exploitation in terms of quantity, quality (only wood with certain characteristics was allowed for local trade), allowing this protection to be extended to other plants. The protection of Brazilwood implied the protection of its main biome: the Atlantic Forest, which is currently registered in the 1988 Constitution (BRAZIL, 2018), together with the Amazon rainforest, Serra do Mar, Pantanal Matogrossense and coastal zone (the caatinga biome was included by the jurisprudential process); however, its high biological production cost in its first stages until the year 1542 resulted in several losses.

3 PREVENTION OF DEGRADATION IN THE BRAZILIAN EMPIRE

The social tensions that arose in Brazil between the 16th and 17th centuries, the attempts of foreign invasions and the extremely exploratory way in which the Metropolis treated the colony and its inhabitants gave rise to the political desire for autonomy in the local people. The emergence of Brazil as Empire was a particularly troubled period, full of revolutions and interventions throughout Brazil. The dissatisfaction with the way in which Portugal led the nation was not limited only to political aspects, but to economic aspects (restriction of trade, imposition of high taxes and fees, etc.) caused complex aggravations, which generated the desire for Brazilian empire beyond Portuguese control.

Dom João and his court arrived in Brazil in 1815, which implemented several changes in the Brazilian social and economic life, starting with the modernization of the agricultural economic sectors; Brazilian farms were archaic compared to those of other countries. However, due to the need to identify agricultural cultural models suitable to the Brazilian environmental reality, in order to promote profit generation, there was a perception that sugarcane would be an interesting culture model to be implemented. Its characteristics allowed exceptional adaptation to the Brazilian climate, ensuring greater production compared to other states where it was native to. However, the environmental costs of its monoculture have become heavy over time: the lack of care, as well as the extensive planted area, caused common problems that remain until today (FRANCO, 2003).

In 1822, after the political crisis that hit Europe, the Brazilian Emperor extinguished the *sesmaria* model (land grant), restoring possession and property to all holders of permit titles that were covered by past Laws, Regulations and Ordinances, provided that they had not been explicitly revoked. As initial result, the emergence of a large number of small properties, with their own exploitation systems, caused an environmental collapse in early 1850, as explained by Magalhães:

Evidently, the proliferation of small possessions was also a factor of destruction of natural resources. This is because in the period when there was no land legislation (1822-1850), small squatters made use of fire to clean up the area, characterizing the occupation with effective culture and habitual home (MAGALHÃES, 2002, p. 33).

Therefore, the emergence of a legal culture of preservation against degradation was necessary, and in an emergency regime, Law 601 was approved in 1850, which was characterized as the first Land Law in Brazil, and according to article 2:

Those who take possession of unoccupied lands or those of others, and cut down trees or set fire to them, will be evicted, with loss of property, and will suffer the penalty of two to six months in prison and fine of 100 \$, in addition to repairing the damage caused. This penalty, however, will not play a role in possessive acts between confining heirs (BRAZIL, 2018, p. 01).

The attempt, with this legal document, had been to promote the legalization of possession, establishing unoccupied lands, and their redistribution, through purchase for people, companies and national and foreign groups, thus opening space, also for the entry of foreign capital in Brazil. In Article 5 of the Land Law, (601/1850), there was also the

establishment of specific conditions to determine ownership, including the effective constitution of housing and cultivation establishment (BRAZIL, 2018).

These two characteristics were free and should be fully proven by land occupants. The State imposed almost no limitation on these aspects; however, as one of the objectives of Law 601/1850 was also the promotion of environmental preservation, the poor land management by the imposition of non-environmentally healthy resources for its control and exploitation were conditions that could imply the loss of ownership and property:

Art. 6 There will be no principle of culture for the revalidation of *sesmarias* (land grant) or other government concessions, nor for the legitimation of any possession; simple clearings or burning of bush or fields, raising of ranches and other acts of similar nature, not being accompanied by the effective culture and usual housing required in the previous article (BRAZIL, 2018, p. 01).

Until then, there were practically no limits either to the form of occupation or to the economic models implemented by subjects who owned lands in Brazil. This lack of rules in relation to the work of environmental control caused both the perception of risks on the panorama of control of the country's economic conditions, as well as the risk to society on the loss of environments and of strategic reserve mechanisms.

The political aspect continued to emphasize Brazilian legal movements. Law 601/1850 remained in force until 1889, when the period of political and ideological effervescence created the conditions for the proclamation of the Republic.

3 HISTORY OF PRESERVATION LEGISLATION IN BRAZIL

It could be said that the republican period is where, in fact, the first preservationist aspirations on the legal plan in Brazil emerged. According to Lemos & Bizawu (2016):

In the republican period, the protection of the environment evolved and extended. In the early years, legislation was concerned solely with forestry defense for simple economic reasons, since when defending the forest, national wealth was being defended. It is perceived that it was one of the inheritances inherited from colonizers. Subsequently, the view changes and the legislator tends to express maturity in the ecological aspect (p. 15).

Decree 8.843 / 1911 appeared in this period, which innovated by creating the first ecological reserve in the national territory. Entry, permanence, as well as hunting and fishing in the territory described in article 1 of the decree were prohibited. In addition, logging was a strictly prohibited activity (BRAZIL, 2018).

Although of patrimonialist nature, the Civil Code of 1916, which was in force until its replacement in 2002, foresaw in its article 584 the prohibition of constructions that could cause damage to springs and water sources (BRAZIL, 2018).

In 1934, the Forest Code and the Water Code were sanctioned, which imposed express limits to the degrading use of water sources and lands. In 1964, during the period of the military regime, Law 4.504 / 64 was published, which, as a result of demands from political and social groups, ensures minimum land possession rights:

Art. 2 The opportunity of access to land ownership is ensured to everyone, conditioned by its social function, in the form provided for in this Law.

§ 1 Land ownership fully performs its social function when, simultaneously:

- a) favors the well-being of owners and workers who work there, as well as their families;
- b) maintains satisfactory levels of productivity;
- c) ensures the conservation of natural resources;
- d) observes legal provisions that regulate working relationships between those who own and cultivate it (BRAZIL, 2018, p. 01).

In 1965, the Forest Code was reissued, further increasing the spectrum of flora and fauna protection. In 1975, with the publication of Decree-Law 1.143 / 75, control of pollution and environmental contamination was established in urban and rural environments. In 1977 Law 6,453 / 77 was published, which establishes civil liability for agents that cause nuclear damage (BRAZIL, 2018).

The 1980s opened up to the perception of the environment and its importance even for biological perception at global level. Brazil approves Law 6.938 / 81, which establishes the National Environmental Policy, CONAMA Resolution 001, on economic activities and environmental impacts promoted by individuals and the private sector and in 1985, Law 7.347 / 85 recognizes the possibility of protecting the environment through the instrument of public civil action, giving society the possibility of protagonism also in these issues (BRAZIL, 2018).

A great advancement in the issue of environmental protection, the Federal Constitution of 1988 establishes that the State is responsible for environmental protection and preservation, in Article 225, and seeks to integrate the environment as a collective right, opening space in the following decade for the approval of a more extensive legal framework, thus avoiding environmental degradation. Another important advancement in this context was the approval of Decree 97.832 / 89, which establishes the Plan for the Recovery of Degraded Areas (PRAD). The recovery of an area by whatever technique,

as long as it is adequate, should aim to return it, to a form of use that is in accordance with the pre-established plan for land use, aiming at obtaining a more stable ecosystem (COSTA et al, 2020).

Law 8.171 / 90 establishes the Agricultural Policy Law, giving meaning to institutional actions aimed at the environment and agriculture. Law 9.274 / 90 provides for liability for environmental impacts of the industry, while Law 9.605 / 98 establishes the main environmental crimes. This legislation complements Law 9.985 / 00, which regulates conservation units in the national territory (BRAZIL, 2018).

In the 2000s, one of the most important milestones in the environmental issue was the Statute of Cities, of 2002. Decree 3.420 / 02 establishes the National Forest Plan, and CONAMA resolutions 369/96 (intervention or suppression of vegetation in permanent areas), 387 (environmental licensing) and 429 (recovery of Permanent Preservation Areas - APP). Also in 2012, the Environmental Code is replaced by Law 12.615 / 12, which institutes the protection of native vegetation.

Normative Instruction 4/2011 of IBAMA, restores the importance of PRAD, and Law 11/2014 creates the simplified modalities of this document, thus allowing the rehabilitation of degraded areas.

4 CONCLUSION

The environmental protection models in Brazil have developed as ecological awareness and control over environmental issues also became relevant points. In this sense, this study shows that environmental degradation, especially of soils, is a concern that has always been under discussion in Brazil; however, these issues demand not only time, but also considerable support from civil society, as well as investments in research and other information acquisition models so that efficient instruments can be formulated. Much has evolved and there is still room for improvement in this area; however, as can be seen, the Brazilian legislation has sought to improve mechanisms in all aspects, which will invariably generate positive results.

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