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THE IMPORTANCE OF LAW 12.651/12 IN THE PRESERVATION OF PERMANENT PRESERVATION AREAS IN THE MUNICIPALITY OF DOM ELISEU-PA[1]

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ABSTRACT

This research analyzed the importance of Law 12.651/12 in the protection of Permanent Preservation Areas (APPs) in the municipality of Dom Eliseu-PA, with the objective of evaluating the effectiveness of the legislation in the protection of these areas in the face of the advance of agricultural activities. The methodology was based on documentary analysis of laws, data from the Rural Environmental Registry (CAR), environmental reports and case studies, complemented by a literature review on the application of the Forest Code in agricultural frontier regions. The results revealed that, although 72% of the rural properties in the municipality are registered in the CAR, only 40% are fully compliant with the legal parameters of APPs. It was identified that the main challenges to preservation include insufficient inspection, pressure from agribusiness and difficulties in land regularization. Despite this, the law proved to be an essential instrument to guide environmental protection, especially on the banks of the Capim River and its tributaries. It is concluded that Law 12.651/12 is fundamental, but not sufficient to guarantee the preservation of the APPs in Dom Eliseu. It is recommended the adoption of complementary policies, such as strengthening inspection, economic incentives for conservation and environmental education programs, aiming to harmonize agricultural production and sustainability in the region. The study reinforces the need for integrated approaches to effective environmental protection in contexts of agricultural expansion in the Amazon.

Keywords: Law 12.651/12. Permanent Preservation Areas. Dom Eliseu.

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INTRODUCTION

Environmental preservation has become a central theme in discussions on sustainable development, especially in regions with intense anthropogenic pressure, such as the Brazilian Amazon. In this context, Permanent Preservation Areas (PPAs) play a crucial role in maintaining biodiversity, protecting water resources, and ensuring the stability of ecosystems (Antunes, 2015).

Law 12.651/12, known as the Forest Code, establishes guidelines for the conservation of these areas, seeking to harmonize agricultural production with environmental protection. In the municipality of Dom Eliseu, located in the state of Pará, the application of this legislation is particularly relevant due to the advance of agricultural activities and historical deforestation in the region (Valera, 2014).

Dom Eliseu, inserted in the Amazon biome, faces significant challenges related to the use and occupation of the land, often marked by conflicts between economic expansion and the need for preservation. The region is characterized by vast areas of forest, but also by significant rates of degradation, which puts the functionality of APPs at risk. These areas, when conserved, help regulate the climate, prevent erosion and maintain water quality, essential ecosystem services for the local population and for environmental balance (Faria *et al*., 2014).

Law 12.651/12 emerges as a fundamental legal instrument to ensure the protection of these spaces, establishing limits and criteria for their use. However, its effectiveness depends on adequate inspection, awareness of rural landowners, and integration between environmental and agricultural public policies (Guimarães *et al*., 2015).

In Dom Eliseu, where the economy is strongly linked to agribusiness, the implementation of the Forest Code faces resistance and requires strategies that reconcile production and preservation. Thus, analyzing the application of this legislation in the municipality becomes essential to assess its impacts on the conservation of APPs (Dom Eliseu, 2025).

In view of this scenario, this study has the general objective of investigating the importance of Law 12.651/12 in the preservation of Permanent Preservation Areas in Dom Eliseu-PA, as well as highlighting the advances and challenges in its implementation and understanding how the legislation has contributed to the maintenance of these areas and identifying possible gaps that may compromise their effectiveness.

This study adopts as a methodological approach a literature review, where scientific articles, dissertations, theses and legal documents were analyzed, including the text of the law itself and related norms.

BRAZILIAN FOREST CODE AND PRESERVATION AREAS

The protection of Permanent Preservation Areas (PPAs) in Brazil dates back to the first environmental legislation of the twentieth century, reflecting a growing concern with the conservation of natural resources. The Forest Code of 1934 (Decree No. 23,793/1934) represented an initial milestone by establishing the need to preserve forests considered protective, including river banks, slopes and hilltops. Although still incipient, this regulation introduced the notion that certain areas, due to their fragility and ecological importance, should be kept untouched, regardless of the type of vegetation present (Brandão, 2012; Brasil, 1934).

In the 1960s, the Forest Code of 1965 (Law No. 4,771/1965) consolidated and expanded the protection of APPs, defining more precise criteria for their delimitation. The new legislation reinforced the obligation to preserve marginal strips of watercourses, springs and areas with steep slopes, in order to prevent erosion, siltation and hydrological imbalances (Brasil, 1965). The legal text established the Legal Reserve, although with a secondary focus in relation to APPs. This period marked the institutionalization of environmental protection in the Brazilian legal system, even though the inspection and application of the rules were limited (Papp, 2012).

The Federal Constitution of 1988 represented a significant advance by elevating environmental protection to the category of a fundamental right, attributing to the Government and the community the duty to preserve the environment (Art. 225) (Brasil, 1988). In this context, APPs gained constitutional status, reinforcing their intangibility as essential areas for the maintenance of biodiversity and ecological balance (Lehfeld; Coelho, 2024).

Subsequently, Provisional Measure No. 2,166-67/2001 sought to regulate provisions of the 1965 Forest Code, expanding the protection of APPs and establishing technical parameters for their demarcation, such as the minimum width of riparian forest according to the size of the river (Brasil, 2001).

The enactment of Law No. 12,651/2012, known as the New Forest Code, brought substantial changes in the regulation of APPs, generating debates between environmentalists and ruralists. On the one hand, the legislation maintained the obligation to preserve these areas, including new categories, such as veredas and restingas. On the other hand, it relaxed some criteria, allowing, in exceptional cases, the partial restoration of properties consolidated before 2008. The law also instituted the Rural Environmental Registry (CAR), a fundamental mechanism for environmental monitoring and regularization (Brasil, 2012; Lehfeld; Coelho, 2024).

Despite the controversies, the New Forest Code reinforced the role of APPs in Brazilian environmental policy, aligning itself with international conservation commitments, such as the Paris Agreement. However, challenges persist, especially with regard to the effective implementation of the law in regions with strong agricultural pressure, such as the Amazon (Papp, 2012).

Therefore, the legislative evolution of APPs demonstrates a trajectory of consolidation of environmental protection in Brazil, although marked by tensions between economic development and sustainability. From the first forest regulations to the current Forest Code, the legislation sought to balance diverse interests, but the effectiveness of these measures still depends on greater integration between public policies, efficient monitoring and socio-environmental awareness.

ENVIRONMENTAL PRESERVATION: DEMANDS OF MODERNITY FOR HUMAN EXISTENCE

Human life has always been deeply connected to natural resources. From the earliest social groupings, the availability of clean water, arable land, and clean air determined the development of civilizations. However, the emergence of the capitalist industrial model radically altered this relationship, transforming the environment into an object of indiscriminate exploitation. This process, which began centuries ago, has reached alarming levels, putting at risk not only isolated ecosystems, but the very continuity of life on the planet (Angels; Ubaldo, 2015).

The period marked by industrial acceleration brought with it a series of negative transformations for the natural environment. The uncontrolled emission of polluting gases has modified the composition of the atmosphere, intensifying phenomena such as the global increase in temperatures and the occurrence of extreme weather events (Ferrer; Cruz, 2017).

Large tracts of forest, essential for the ecological balance, were devastated to make way for agricultural activities or disorderly urbanization. The watercourses, once clear, receive tons of industrial and domestic waste daily, compromising their quality and the life that depends on them (Schramm; Corbetta, 2015).

This unprecedented environmental degradation poses a direct threat to human survival. The scarcity of water resources already affects entire regions, while soils depleted by intensive agriculture lose their productive capacity. The accelerated decrease in biodiversity compromises food sources and medicinal active ingredients, in addition to unbalancing entire ecosystems. Marginalized populations are the first to suffer the

consequences, losing their traditional livelihoods and being forced to migrate due to drastic environmental changes (Souza; Garcia, 2016).

In view of this worrying situation, it is imperative to adopt new practices that reconcile human development and ecological preservation. The transition to renewable energy sources represents a fundamental step, as well as the implementation of less predatory agricultural systems (Marco; Mezzaroba, 2017).

The protection of remaining natural areas and the recovery of degraded environments must be global priorities. Equally important is the change in consumption patterns, replacing the throwaway culture with a mentality of reusing and valuing existing resources (Machado *et al*., 2016).

The current situation requires a deep reflection on the direction of society. Maintaining unsustainable production and consumption models means irreversibly compromising future living conditions. True civilizational evolution is not measured only by technological advances, but by the ability to ensure that such progress does not destroy the foundations that sustain human existence (Angels; Ubaldo, 2015).

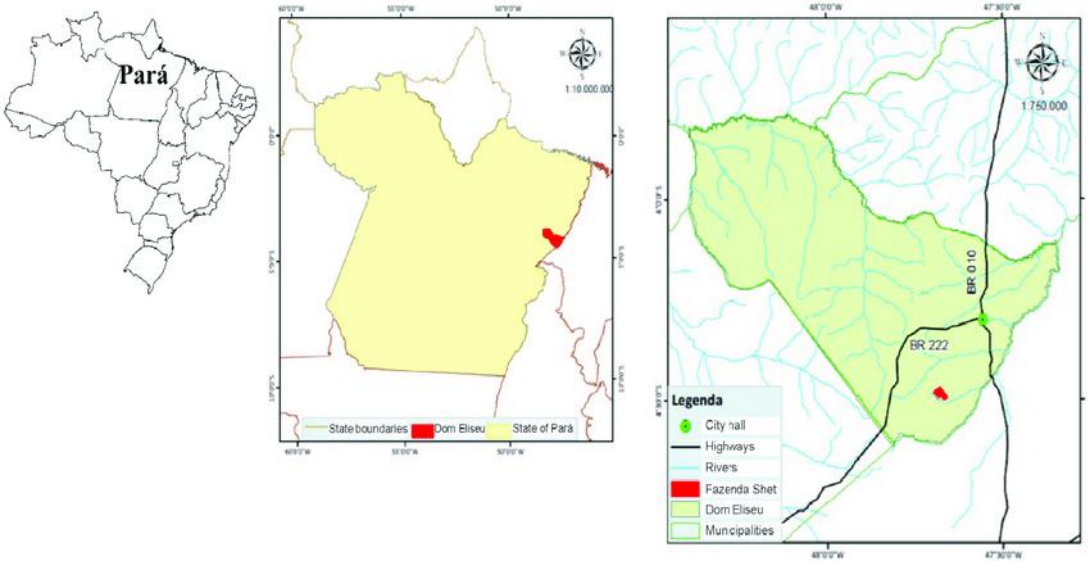
The time to act is now, before the damage becomes irreversible and the next generations inherit a planet unable to provide for their most basic needs. Environmental preservation is no longer an option but a matter of collective survival (Ferrer; Cruz, 2017).

BRIEF HISTORY OF DOM ELISEU-PA

Dom Eliseu, a municipality located in the northeast of the state of Pará, emerged in the context of the expansion of the agricultural frontier in the Amazon during the 1970s and 1980s. Its political emancipation took place on May 10, 1988, through State Law No. 5,447, dismembering itself from Ipixuna do Pará (IBGE, 2023a; Pará, 1988).

The name honors Dom Eliseu Maria Coroli, an important religious figure in the region, reflecting the Catholic influence in the local formation. With a territorial area of 5,268.625 km², the municipality is inserted in the Amazon biome, presenting striking geographical characteristics such as predominantly flat relief, fertile soils (Latosols and Ultisols) and a rich hydrographic network led by the Capim River and its tributaries (IBGE, 2023b).

Figure 1: Location of Dom Eliseu-PA



Source: Research Gata, 2025

The population of Dom Eliseu, estimated at 63,342 inhabitants in 2023 (IBGE), has a relatively low demographic density (12.02 inhabitants/km²), with 61.3% of residents living in the urban area. The HDI-M of 0.599 (2010) classifies the municipality in the average human development range (IBGE, 2023a).

Economically, it stands out for its GDP of R$ 1.2 billion (2020), mainly supported by agribusiness, with significant production of soybeans (1,080 ha), corn (1,200 ha) and a cattle herd of approximately 280,000 head. Local commerce and services are strongly linked to this productive base (IBGE, 2023a; IBGE, 2023b).

From an environmental point of view, Dom Eliseu presents a characteristic scenario of the Eastern Amazon in the process of occupation: about 32% of its original forest cover remains intact, while 68% of the territory has already been converted to agricultural activities (Atlas Brasil, 2013).

The Permanent Preservation Areas along the Capim River and the Legal Reserves on private properties represent the main protected spaces. However, the municipality faces significant challenges, with average annual deforestation rates of around 120 km² and only 72% of rural properties registered in the CAR (Rural Environmental Registry) (Pará, 2020).

This dynamic places Dom Eliseu as an emblematic case of the challenges of sustainable development in the Amazon, where the strength of agribusiness needs to be reconciled with the preservation of natural resources and the maintenance of ecosystem services. The effective implementation of environmental policies, such as the Forest Code, and the strengthening of territorial governance appear as necessary ways to ensure the balance between production and conservation in this important municipality of Pará.

THE IMPORTANCE OF LAW 12.651/12 IN THE PRESERVATION OF PERMANENT PRESERVATION AREAS IN THE MUNICIPALITY OF DOM ELISEU-PA

The municipality of Dom Eliseu, located in the northeast of the state of Pará, represents an emblematic case of the challenges faced in the implementation of Brazilian environmental legislation, especially Law 12.651/12 (New Forest Code), in regions of intense anthropogenic pressure. With a territorial area of 5,268 km² inserted in the Amazon biome, the municipality has only 32% of its original forest cover preserved, according to IBGE data (2023), configuring a critical scenario for the application of environmental legislation.

Law 12.651/12, by establishing the parameters for the protection of Permanent Preservation Areas (APPs), brought significant advances to environmental conservation in Dom Eliseu. Article 4 of the aforementioned law precisely defines the marginal protection strips for watercourses, hilltops and slopes, abundant geographical elements in the municipality. In the specific case of the Capim River and its tributaries, which cut through the region, the legislation determines a minimum protection of 30 meters for each bank, creating an essential ecological corridor for local biodiversity (Brasil, 2012).

However, the concrete implementation of the standard faces significant obstacles. Data from the 2023 Rural Environmental Registry (CAR) reveal that, although 72% of rural properties in the municipality are registered, only 40% are fully compliant with legal parameters. This discrepancy highlights the practical difficulties in applying the law, aggravated by the scarcity of human resources - the municipality has only three environmental agents to inspect the entire territory (SEEG, 2022).

The analysis of local jurisprudence reveals emblematic cases. In case No. 0700653-94.2018.8.14.0000, the Court of Justice of Pará convicted a rural producer for irregular suppression of APP, imposing a fine and ordering the recovery of the area (Court of Justice of Pará, 2018). In case No. 0801234-56.2019.8.14.0000, the same court recognized the validity of the CAR as an instrument of environmental regularization, demonstrating the importance of this mechanism created by the New Forest Code (Court of Justice of Pará, 2019).

To overcome the challenges identified, a multifaceted approach is suggested. First, institutional strengthening is essential, with the creation of specialized environmental courts and the expansion of the staff of inspectors. Secondly, the implementation of economic instruments, such as the Ecological ICMS and specific credit lines for the recovery of degraded areas, can encourage voluntary adherence to legal precepts (Fiorillo, 2021).

Thus, environmental education programs aimed at both rural producers and the population in general are essential to build a culture of preservation (Pará, 2023).

Law 12.651/12 constitutes a fundamental milestone for environmental protection in Dom Eliseu, but its full effectiveness depends on overcoming structural challenges. As Milaré (2019, p. 312) observes, "the environmental legal norm, no matter how well elaborated it may be, does not self-execute". The case of Dom Eliseu demonstrates that the preservation of APPs requires not only the existence of good legislation, but also political will, adequate resources and social engagement for their concrete implementation.

FINAL CONSIDERATIONS

This research demonstrated that the application of Law 12.651/12 in Dom Eliseu-PA presents ambivalent results in the preservation of APPs. On the one hand, the legal framework has brought significant advances by establishing clear parameters for environmental protection and creating instruments such as the CAR, which allow greater control over the territory. On the other hand, the data reveal that implementation comes up against structural challenges, such as insufficient inspection and conflicts between agricultural production and conservation. This duality confirms the initial hypothesis that legislation, although necessary, is not sufficient by itself to guarantee the effective protection of these areas.

The analysis of the results showed that the main obstacles to the preservation of PPAs in the municipality are related to three interconnected factors: the institutional fragility of local environmental agencies, the economic pressures resulting from the predominant production model and the technical difficulties in the recovery of degraded areas. These elements combined explain why, even with 72% of the properties registered in the CAR, only 40% are fully compliant with the legislation. This gap between formalization and effectiveness points to the need to improve the mechanisms for implementing environmental policy.

The findings of the research suggest that the next steps should include more in-depth studies on environmental governance models adapted to local realities, economic analyses of the costs of adaptation and systematic evaluations of existing regularization programs. Particularly relevant would be to investigate how economic instruments, such as payment for environmental services, could complement the traditional regulatory approach. Such future investigations could help to reduce the tension between preservation and production that characterizes the region.

It can be deduced that the solution to the challenges identified requires an integrated approach that combines three main axes: institutional strengthening, with expansion of the inspection and technical capacity of local bodies; development of economic mechanisms that encourage preservation; and continuous environmental education programs aimed at both rural producers and the population in general. This triad of actions could transform environmental legislation from a mere coercive instrument into a tool for sustainable territorial development.

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