

Comparison of Deforestation Control Policy and Law Enforcement in Indonesia and Australia

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Abstract

This study comparatively analyzes deforestation control policies and law enforcement in Indonesia and Australia. The research uses normative juridical methods with legislative and comparative approaches, supported by secondary data on deforestation trends, regulatory instruments, and law enforcement practices in both countries. The analysis shows that Indonesia has a relatively comprehensive regulatory framework but faces serious obstacles at the level of implementation, including weak institutional coordination, inconsistent enforcement of sanctions, and the influence of economic interests in forest utilization. In contrast, Australia tends to rely on a combination of command-and-control instruments, market mechanisms, and a more stringent and transparent surveillance and sanctions system at the federal and state levels, thus providing a relatively stronger deterrent effect. This comparison reveals that differences in institutional design, quality of governance, and level of public participation contribute significantly to the effectiveness of deforestation control in each country. This article recommends strengthening cross-sectoral coordination, increasing the independence and capacity of law enforcement, and expanding public participation and oversight mechanisms as policy lessons that can be adapted to improve deforestation control in Indonesia.

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I. Introduction

Deforestation remains one of the most pressing global environmental challenges of the twenty-first century, closely linked to climate change, biodiversity loss, and the degradation of ecosystem services essential for human well-being (Markovic et al., 2025). Despite numerous international commitments-such as the Paris Agreement, the Glasgow Leaders' Declaration on Forests and Land Use, and various biodiversity frameworks-the rate of forest loss worldwide continues to exceed targets set for halting deforestation by 2030. Forest ecosystems play a crucial role in carbon sequestration, regulation of hydrological cycles, and the preservation of biological diversity (Markovic et al., 2025). Consequently, the failure to effectively control deforestation not only undermines environmental protection efforts but also threatens long-term economic sustainability and social stability, particularly in countries with significant forest resources and land-based economies.

Indonesia and Australia occupy strategically important positions in the global deforestation discourse. Both countries possess vast forested and vegetated landscapes and are major producers of land-based commodities that exert significant pressure on forest and natural vegetation cover. Indonesia is home to one of the world's largest areas of tropical rainforest, while Australia contains extensive native forests and woodland ecosystems that are critical for biodiversity conservation and carbon storage (Indrajaya et al., 2022). At the same time, both countries face strong economic incentives for land conversion, driven by agricultural expansion, extractive industries, infrastructure development, and population growth. These parallel pressures render Indonesia and Australia particularly relevant for a comparative analysis of legal and institutional approaches to deforestation control.

In Indonesia, deforestation has long been associated with the expansion of oil palm plantations, logging activities, mining operations, and large-scale infrastructure projects. Over the past decade, the Indonesian government has introduced a range of regulatory and policy instruments aimed at reducing forest loss, including moratoriums on new licenses in primary forests and peatlands, strengthened environmental permitting regimes, and participation in international mechanisms such as REDD+. Official data suggest that deforestation rates declined for several consecutive years, reflecting the impact of these measures. However, recent trends indicate renewed forest loss, and discrepancies between government statistics and independent monitoring data have generated debate regarding the actual effectiveness

of existing legal and enforcement frameworks. These dynamics highlight enduring challenges related to regulatory consistency, coordination between central and regional authorities, and the enforcement of environmental laws in practice (Austin et al., 2017).

Australia presents a different but equally complex picture. As a federal state, Australia allocates primary responsibility for land management and vegetation clearing to state and territory governments, while the federal government retains authority over matters of national environmental significance through instruments such as the Environment Protection and Biodiversity Conservation Act. This division of powers has resulted in considerable variation in deforestation-related policies and enforcement practices across jurisdictions. Some states have implemented relatively strict vegetation management regimes supported by advanced satellite-based monitoring systems, whereas others have adopted more permissive approaches that allow extensive land clearing for agricultural and pastoral purposes. Although Australia is often perceived as having strong environmental governance and transparent data systems, significant levels of land clearing persist in certain regions, raising questions about the adequacy of existing legal controls and enforcement incentives (Hamman et al., 2021).

From a legal perspective, deforestation is not merely an environmental problem, but a governance issue shaped by the design of regulatory frameworks, institutional authority, and enforcement mechanisms (Hamman et al., 2021). Laws governing land use, forestry, environmental protection, and spatial planning establish the formal rules that determine whether forest conversion is permitted, restricted, or prohibited. However, the effectiveness of these laws depends not only on their normative content but also on how they are implemented, enforced, and integrated across sectors and levels of government. In both Indonesia and Australia, deforestation control involves multiple legal regimes and institutions, creating potential overlaps, gaps, and conflicts that may weaken enforcement outcomes.

Comparative legal analysis offers a valuable lens for understanding how different legal systems respond to similar environmental challenges under distinct constitutional, institutional, and political conditions. Indonesia's governance structure combines a unitary state framework with significant decentralization, resulting in a strong normative role for central government alongside substantial discretion at the regional level. Australia's federal system, by contrast, disperses regulatory authority horizontally among states and territories, with the federal government exercising oversight through national environmental standards. These structural differences

shape not only the content of deforestation-related laws but also the incentives and constraints faced by enforcement agencies, policymakers, and land users.

Existing scholarship on deforestation in Indonesia and Australia has largely focused on policy evaluation, economic drivers, or ecological impacts, often drawing on empirical data from remote sensing and environmental monitoring. While such studies provide important insights into the scale and drivers of forest loss, fewer analyses have examined deforestation control from a comparative legal perspective that foregrounds institutional design and enforcement mechanisms. Limited attention has been paid to how differences in legal authority allocation, regulatory instruments, and enforcement strategies influence deforestation outcomes across jurisdictions. This gap is significant because similar levels of forest loss may persist even where legal frameworks appear robust on paper, suggesting that structural and institutional factors play a decisive role.

Moreover, debates on deforestation governance increasingly emphasize the importance of transparency, accountability, and public participation in environmental decision-making. Indonesia has witnessed the growth of independent forest monitoring initiatives that complement official data and enhance public scrutiny, while Australia benefits from relatively open access to land clearing and vegetation data in several states. Nevertheless, transparency alone does not guarantee effective enforcement if political, economic, or institutional incentives undermine regulatory objectives. A comparative examination of how transparency and data availability interact with legal enforcement in both countries can therefore yield valuable lessons for strengthening deforestation governance.

Against this background, a comparative analysis of deforestation control in Indonesia and Australia is both timely and necessary. By examining how each legal system structures authority, regulates land use, and enforces environmental norms, this study seeks to move beyond descriptive accounts of forest loss toward a deeper understanding of the legal determinants of deforestation outcomes. Such an approach enables the identification of strengths and weaknesses in each system and facilitates the extraction of policy-relevant lessons that may inform future legal reforms. In an era of escalating climate and biodiversity crises, improving the effectiveness of deforestation control through sound legal and institutional design is not only a national priority but also a global imperative.

2. Research Method

The research uses normative juridical methods with legislative and comparative approaches, supported by secondary data on deforestation trends, regulatory instruments, and law enforcement practices in both countries. The analysis shows that Indonesia has a relatively comprehensive regulatory framework (Rustan et al., 2021).

3. Results and Discussion

A. Legal and Institutional Framework for Deforestation Control in Indonesia

The legal framework governing deforestation control in Indonesia is characterized by a complex interaction between constitutional principles, statutory regulations, and sectoral policies. At the constitutional level, natural resources, including forests, are controlled by the state, and utilized for the greatest benefit of the people. This principle provides a normative foundation for state intervention in forest governance, but it also creates a persistent tension between economic development objectives and environmental protection. Forestry and land-use regulation in Indonesia is therefore shaped by the need to reconcile resource exploitation with sustainability and social welfare (Suparto et al., 2025).

Statutorily, deforestation control is regulated through a combination of forestry law, environmental protection law, spatial planning law, and sector-specific regulations concerning plantations, mining, and infrastructure development (Suparto et al., 2025). The forestry regime establishes the classification of forest areas, delineates permitted activities, and imposes obligations on permit holders, including forest protection and rehabilitation. Environmental legislation complements this framework by requiring environmental impact assessments, imposing liability for environmental damage, and providing administrative, civil, and criminal sanctions. In addition, spatial planning instruments function as preventive tools by allocating land uses and restricting conversion in designated protection zones.

Institutionally, the central government plays a dominant role in determining forest status, issuing certain types of permits, and formulating national deforestation control policies. However, Indonesia's decentralization framework grants significant authority to provincial and local governments in spatial planning, licensing, and supervision of land-use activities. This multi-level governance structure has resulted in overlapping competencies and, in some cases, regulatory fragmentation (Suparto et al., 2025). While decentralization aims to enhance local responsiveness and efficiency, it has also generated inconsistencies in policy implementation and enforcement, particularly

where regional economic interests' conflict with national conservation objectives.

In recent years, Indonesia has adopted a range of policy instruments intended to strengthen deforestation control. These include moratoriums on new permits in primary forests and peatlands, the integration of climate mitigation objectives into forestry governance, and participation in international mechanisms such as REDD+. From a legal standpoint, these instruments reflect a shift toward preventive and incentive-based regulation. Nevertheless, their effectiveness remains contingent on consistent enforcement, inter-agency coordination, and the resolution of tenure conflicts. Empirical evidence suggests that deforestation continues in areas where regulatory oversight is weak or where exceptions and revisions to spatial plans allow forest conversion. This indicates that while Indonesia possesses a relatively comprehensive normative framework, enforcement capacity and institutional coherence remain critical challenges (Hariyadi, 2014).

B. Legal and Institutional Framework for Deforestation Control in Australia

Australia's legal framework for deforestation control reflects its federal constitutional structure, which allocates primary authority over land management and vegetation clearing to state and territory governments. At the federal level, environmental regulation focuses on matters of national environmental significance, such as threatened species and ecosystems, through overarching legislation. While this framework allows federal intervention in cases of significant environmental impact, it does not establish a uniform national regime for regulating land clearing. Consequently, the regulation of deforestation in Australia is largely determined by subnational legal frameworks (Hamman et al., 2021).

State and territory governments have enacted diverse vegetation management laws that regulate land clearing through classification systems, permit requirements, and conditional approvals. These laws often differentiate between vegetation types, land tenure categories, and intended land uses, creating a highly technical regulatory environment. In several jurisdictions, advanced satellite-based monitoring systems are employed to detect unauthorized clearing and support enforcement actions. This technological infrastructure enhances the capacity of regulatory authorities to identify violations and provides a basis for more systematic compliance monitoring.

Institutionally, environmental agencies at the state level possess significant discretion in administering vegetation management laws, including issuing permits,

conducting compliance inspections, and initiating enforcement proceedings. Enforcement mechanisms include administrative sanctions, civil penalties, and criminal prosecution, supplemented in some jurisdictions by specialized environmental courts or tribunals. The availability of specialized adjudicatory bodies enhances legal certainty and allows for more nuanced consideration of environmental values in dispute resolution. Judicial review also serves as an important accountability mechanism by subjecting administrative decisions to legal scrutiny (He & Qiu, 2025).

Nevertheless, Australia's deforestation control regime is marked by uneven enforcement outcomes across jurisdictions. Political and economic factors play a decisive role in shaping regulatory stringency, particularly in regions where agricultural and pastoral interests exert strong influence. Legislative amendments that relax land-clearing restrictions have, at times, reflected shifting political priorities rather than ecological considerations. This variability highlights a structural vulnerability inherent in federal systems, where environmental protection standards may fluctuate in response to local political dynamics (Thomas et al., 2025).

Moreover, Australia's reliance on sophisticated monitoring and data transparency does not automatically translate into effective deforestation control. While violations may be readily detected, enforcement responses remain contingent on political will and administrative capacity. In some cases, detected land clearing results in retrospective authorization or limited penalties, undermining the deterrent effect of the regulatory regime. This underscores that technological capacity, while essential, is insufficient in the absence of robust enforcement incentives and consistent legal commitment.

C. Comparative Analysis of Legal Design and Enforcement Effectiveness

A comparative examination of Indonesia and Australia reveals that differences in legal design and institutional arrangements significantly influence deforestation control outcomes. Indonesia's framework can be described as normatively centralized but operationally fragmented. National laws and policies articulate strong commitments to forest conservation and climate mitigation, yet implementation is mediated through multiple levels of government and intersecting sectoral regimes. This vertical complexity often results in coordination challenges, regulatory overlap, and enforcement gaps, particularly in regions where local economic interests favor land conversion.

Australia, by contrast, exhibits a horizontally fragmented regulatory structure

inherent in its federal system. Authority over land clearing is dispersed among states and territories, leading to substantial variation in legal standards and enforcement intensity. While this decentralization allows for regulatory adaptation to local conditions, it also creates the risk of regulatory competition and uneven protection of forest ecosystems. The federal government's limited capacity to impose uniform land-clearing controls constrains the development of a cohesive national deforestation strategy (Siagian & Rosari, 2023).

From an enforcement perspective, both countries rely heavily on command-and-control instruments, such as permitting requirements and sanctions for illegal clearing. However, Australia's systematic use of satellite monitoring and public reporting in some jurisdictions enhances detectability and transparency, potentially strengthening compliance incentives. Indonesia has made significant progress in forest monitoring through remote sensing and annual reporting, but enforcement responses to detected violations remain inconsistent. Differences in data transparency, follow-up enforcement, and sanction severity affect the deterrent effect of legal controls in both systems.

The comparison also highlights contrasting approaches to integrating economic incentives into deforestation governance. Indonesia has increasingly engaged with international climate finance mechanisms and developed domestic carbon market initiatives linked to forest conservation. These instruments aim to align economic incentives with environmental objectives, yet their effectiveness depends on clear tenure arrangements and equitable benefit-sharing. Australia has developed market-based mechanisms such as biodiversity offsets and carbon credit schemes, integrating them into land-use regulation. While these mechanisms can internalize environmental costs, critics argue that they may legitimize continued clearing if offset standards are insufficiently stringent.

Importantly, the comparative analysis underscores that legal effectiveness is not solely determined by the stringency of rules but by their institutional embedding. In Indonesia, strong normative commitments may be undermined by administrative capacity constraints and conflicting sectoral mandates. In Australia, advanced monitoring and legal infrastructure may be offset by political decisions that weaken substantive protections. These dynamics suggest that deforestation control requires not only robust legal norms but also institutional alignment, political will, and enforcement incentives that prioritize long-term environmental objectives over short-term economic

gains.

4. Conclusion

This study demonstrates that persistent deforestation in Indonesia and Australia is not primarily the result of an absence of legal regulation, but rather of structural and institutional weaknesses in the design and enforcement of deforestation control regimes. In Indonesia, a strong constitutional and statutory commitment to environmental protection coexists with vertical fragmentation caused by decentralization and sectoral overlap, which weakens implementation at the regional level. Deforestation frequently occurs through legally sanctioned land-use changes that reflect economic development priorities, revealing the limits of a normatively centralized but operationally fragmented legal system.

In Australia, deforestation control is shaped by a horizontally fragmented federal structure in which state and territory governments exercise primary authority over land clearing. Although this system is supported by advanced monitoring technologies and relatively transparent data, enforcement outcomes vary significantly across jurisdictions due to political and economic considerations at the subnational level. The absence of a comprehensive national land-clearing framework constrains federal oversight and allows regulatory stringency to fluctuate, demonstrating that technological capacity and formal legal infrastructure alone are insufficient to ensure effective deforestation control without consistent political commitment.

From a comparative legal perspective, the findings underscore that decentralization—whether vertical or horizontal—poses inherent challenges for environmental governance if not accompanied by effective coordination, accountability, and enforcement incentives. Transparency, monitoring, and market-based instruments can enhance deforestation governance, but they cannot substitute for credible enforcement and institutional coherence. By highlighting how differing legal and governance structures shape deforestation outcomes under similar economic pressures, this study contributes to comparative environmental law by emphasizing the need to align legal norms, institutional authority, and enforcement capacity to achieve meaningful and sustained reductions in deforestation.

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