

Examining Indonesian Government Policies in Tackling Deforestation: Balancing Economy and Environment



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Abstract

The Indonesian government has implemented specific measures that have negatively impacted the environmental sector to enhance economic growth. In response to worldwide pressure and growing internal awareness, the Indonesian government implemented "pro-environment" policies by endorsing many international and regional accords and revising legislation. This article examines the Indonesian government's policy orientation in addressing deforestation, specifically whether the strategy prioritises economic or environmental considerations. Through the utilisation of normative juridical research methodologies, a statutory approach and a case approach, it was determined that the policies issued by the Indonesian government conflict with one another. These policies encompass several issues. Firstly, granting Forest Concession Rights, which should ideally prioritise forest sustainability, unfortunately, leads to extensive forest destruction. Secondly, the haphazard granting of concession permits is another concern. Lastly, the MP3EI and MIFEE programmes conflict with Law Number 32 of 2009, resulting in a significant loss of 76% of peat land in Papua. Furthermore, the lack of robust law enforcement regarding deforestation also exacerbates the accelerated pace of deforestation. Thus, it is evident that the Indonesian government is giving more importance to the economic sector than the environmental sector.

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1. Introduction

Forests serve four distinct functions. Firstly, they have an ecological function vital in maintaining environmental governance as ecosystems. Secondly, forests have an economic function, providing direct value through various commodities that can be

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utilised for livelihoods.¹ Thirdly, forests have a social function, particularly for indigenous communities, where they hold significant importance in social life and are considered collectively owned and in need of protection, similar to customary forests. Lastly, forests have an aesthetic function, attracting tourists due to their visual appeal.²

Consequently, forests often become a preferred destination for some individuals. Indonesia's reputation as a biodiverse country is undermined by its alarming deforestation rate of 1.5 million hectares per year globally. Consequently, the country is losing its allure as a study destination for scientists worldwide.³ Deforestation, defined by Minister of Forestry Regulation Number P.30/Menhutl/2009, refers to the irreversible conversion of forested regions into non-forest areas due to human activity.

The causes of deforestation can be categorised into two main groups: direct causes, which refer to activities that directly affect the condition of forests, such as deforestation, expansion of agricultural areas, or forest fires; and underlying causes, which are the social processes that drive these direct causes, such as human population dynamics or agricultural policies.⁴ *Deforestation* is a significant issue that affects both regional and international levels. It is a major contributor to global climate change, as it increases the concentration of human-made greenhouse gases in the lower atmosphere.⁵ Forest fires contribute to the escalating deforestation rates.

As stated by BNPB, forest fires can arise from two factors: 1) natural factors, which are caused by global climate change leading to extended periods of drought, resulting in the ENSO (El-Nino Southern Oscillation) phenomenon in the Southeast Asia region, which is one of the triggers for forest fires; and 2) human factors, which can occur either intentionally or due to negligence, leading to forest fires. Notably, as reported by BNPB, human forces account for 99% of forest fires in Indonesia. Indonesia, known for its rich

¹ Imam Sefriyadi and others, 'Private Car Ownership in Indonesia: Affecting Factors and Policy Strategies', *Transportation Research Interdisciplinary Perspectives*, 19 (2023), 100796 <<https://doi.org/https://doi.org/10.1016/j.trip.2023.100796>>.

² Ida Aju Pradnja Resosudarmo, Luca Tacconi, and Efendi Agus Waluyo, 'Enforcement and Compliance with the No-Burning Policy on Villagers in Indonesia', *Forest Policy and Economics*, 151 (2023), 102968 <<https://doi.org/https://doi.org/10.1016/j.forpol.2023.102968>>.

³ Rini Astuti and others, 'Making Illegality Visible: The Governance Dilemmas Created by Visualising Illegal Palm Oil Plantations in Central Kalimantan, Indonesia', *Land Use Policy*, 114 (2022), 105942 <<https://doi.org/https://doi.org/10.1016/j.landusepol.2021.105942>>.

⁴ Wiwandari Handayani and others, 'Effects of COVID-19 Restriction Measures in Indonesia: A Comparative Spatial and Policy Analysis of Selected Urban Agglomerations', *International Journal of Disaster Risk Reduction*, 76 (2022), 103015 <<https://doi.org/https://doi.org/10.1016/j.ijdrr.2022.103015>>.

⁵ Hilary Oliva Faxon and others, 'Territorializing Spatial Data: Controlling Land through One Map Projects in Indonesia and Myanmar', *Political Geography*, 98 (2022), 102651 <<https://doi.org/https://doi.org/10.1016/j.polgeo.2022.102651>>.

biodiversity and plentiful growth of diverse flora, possesses positive and negative attributes.⁶ The negative value refers to the high concentration of peat soil in Indonesia, found in the Kalimantan and Sumatra islands. When peat soil becomes dry, it becomes susceptible to catching fire. Combustion of peat soil exacerbates global climate change and adversely affects the surrounding ecology.⁷

Peat land is frequently set on fire to clear it for agricultural purposes or to establish plantations, such as oil palm plantations. This is done to generate cash, generally by employing immigrants to sell the land in the region. Therefore, the government needs to be serious in dealing with this matter because this activity makes a significant contribution to the rate of deforestation. Indonesia frequently engages in regional environmental diplomacy to effectively combat deforestation.⁸

Indonesia has implemented various measures, such as ratifying the ASEAN Agreement on Transboundary Haze Pollution, to address the issue of forest fires and haze in the ASEAN region. Indonesia has taken the initiative to establish the Peat Restoration Agency (BRG) and become a member of the Global Peatland Initiatives (GPI).⁹ Internationally, various collaborations exist to address environmental concerns, including the Paris Agreement, the Stockholm Conference of 1972, the Rio Conference of 1992, the United Nations Environmental Programme (UNEP), the Kyoto Protocol, and the United Nations Framework Convention on Climate Change (UNFCCC). These initiatives have led to developing programmes such as Reducing Emissions from Deforestation and Forest Degradation Plus Conservation (REDD+).¹⁰

Addressing deforestation necessitates international collaboration because it

⁶ Hafidz Wibisono, Jon C Lovett, and Siti Suryani, 'Expectations and Perceptions of Rural Electrification: A Comparison of the Providers' and Beneficiaries' Cognitive Maps in Rural Sumba, Indonesia', *World Development Sustainability*, 3 (2023), 100102 <<https://doi.org/https://doi.org/10.1016/j.wds.2023.100102>>.

⁷ Nugroho Agung Pambudi and Desita Kamila Ulfa, 'The Geothermal Energy Landscape in Indonesia: A Comprehensive 2023 Update on Power Generation, Policies, Risks, Phase and the Role of Education', *Renewable and Sustainable Energy Reviews*, 189 (2024), 114008 <<https://doi.org/https://doi.org/10.1016/j.rser.2023.114008>>.

⁸ Haneen Khreis and others, 'Urban Policy Interventions to Reduce Traffic-Related Emissions and Air Pollution: A Systematic Evidence Map', *Environment International*, 172 (2023), 107805 <<https://doi.org/https://doi.org/10.1016/j.envint.2023.107805>>.

⁹ Agung Wibowo and Lukas Giessen, 'Absolute and Relative Power Gains among State Agencies in Forest-Related Land Use Politics: The Ministry of Forestry and Its Competitors in the REDD+ Programme and the One Map Policy in Indonesia', *Land Use Policy*, 49 (2015), 131–41 <<https://doi.org/https://doi.org/10.1016/j.landusepol.2015.07.018>>.

¹⁰ Serge Andréfouët, Mégane Paul, and A Riza Farhan, 'Indonesia's 13558 Islands: A New Census from Space and a First Step towards a One Map for Small Islands Policy', *Marine Policy*, 135 (2022), 104848 <<https://doi.org/https://doi.org/10.1016/j.marpol.2021.104848>>.

contributes to global climate change, which will have far-reaching consequences on multiple facets of human existence.¹¹ Despite the government's efforts at both regional and international levels, they cannot effectively address the alarming pace of deforestation. Hence, the author is intrigued by delving more into the government's challenges in effectively enforcing legislation to address deforestation and examining law enforcement's mechanisms in combating deforestation.

There are several previous studies that have similarities to the problems studied by the author, for example those studied by Aris Sarjito which discuss the evaluation of Indonesian government policies in overcoming climate change and natural disasters; Nurul Hikmah who discussed the literature review of the United Nations and the Government of Indonesia to manage deforestation cases in Kalimantan; and Andi Tenri Sompā who discussed environmental political models and deforestation in South Kalimantan. Even though there are similarities in the problems studied, in this research there is novelty.

The novelty of the research in this study is that it focuses on economic and environmental aspects that collide with each other because they are caused by overlapping policies. This novelty was not found in previous research which had similarities in the problems studied. Aris Sarjito in his research focuses on evaluating policies in dealing with climate change and natural disasters, such as recommendations to simplify processes due to complicated bureaucratic structures.¹² Nurul Hikmah in her research focuses on the REDD+ scheme initiated by the UN for various countries including Indonesia in order to slow the rate of deforestation.¹³ Meanwhile, Andi Tenri Sompā's research focuses on how political currents in government will influence the rate of deforestation.¹⁴

¹¹ Tries B Razak and others, 'A Review of the Legal Framework for Coral Reef Restoration in Indonesia', *Ocean & Coastal Management*, 248 (2024), 106944 <<https://doi.org/https://doi.org/10.1016/j.ocecoaman.2023.106944>>.

¹² Aris Sarjito, 'Evaluation of Indonesian Government Policies in Addressing Climate Change and Natural Disaster', *JISHUM: Jurnal Ilmu Sosial dan Humaniora*, 2.1 (2023), 103-124, <<https://doi.org/10.57248/jishum.v2i1.283>>.

¹³ Nurul Hikmah, 'Literature Review United Nations and Indonesian Government for Management Deforestation Cases In Kalimantan Island', *Jurnal PubBis*, 7.1 (2023), 105-112, <<https://doi.org/10.35722/jurnalpubbis.v7i1.728>>.

¹⁴ Andi Tenri Sompā and others, 'Environmental Political Model and Deforestation Analysis in South Kalimantan, Indonesia', *International Journal of Politic, Public Policy and Environment Issues*, 1.2 (2021), 158-165, <<https://doi.org/10.53622/ij3pei.v1i02.57>>.

2. Research Methods

This article employs normative legal research methods, namely utilising a legislative approach and a case approach.¹⁵ The utilisation of normative juridical research methodologies seeks to provide a description and analysis of the legal issues addressed in this study. Meanwhile, the statutory approach and case approach seek to scrutinise the issues encompassed in each government-issued policy and the instances that arise within deforestation.¹⁶ This text is additionally substantiated by facts acquired from regulations, publications, and journals on government measures to address deforestation.

3. Results and Discussion

Dialectics of Policy Implementation in Law Enforcement Against Deforestation

Deforestation rates experienced a significant surge starting from the 1960s, with an annual rise of 550,000 hectares. By 1980, the rate had escalated to 1 million hectares per year and rose to 1.2 million hectares yearly in 1985. Subsequently, from 1985 to 1997, the rate peaked at 1.7 million hectares per year.¹⁷ This can be attributed to regulations that impact the environmental domain, specifically the enactment of Law Number 1 of 1967 about Capital Investment and Law Number 5 of 1967 addressing Fundamental Forestry Provisions (UUPK 1967). The motivation behind enacting this legislation was to prevent the economic turmoil experienced during the initial stages of the new regime.¹⁸

This law subsequently served as the foundation for local and foreign private enterprises to oversee the management of Indonesia's biodiversity resources.¹⁹ The enactment of this law coincided with the implementation of the policy package on May 6, 1986. This package aimed to facilitate the importation of commodities, promote capital assistance and allow the

¹⁵ M Zaid and others, 'Eradicating Public Official Corruption Indonesia: A Revolutionary Paradigm Focusing on State Financial Losses', *Wacana Hukum*, 29.2 (2023), 87–111 <<https://doi.org/10.33061/wh.v29i2.9564>>.

¹⁶ Muhamad Khalif Ardi and others, 'The Imperative Is to Restrict Customary Criminal Offenses after Implementing Indonesia's New Criminal Code', *Wacana Hukum*, 29.2 (2023), 130–45 <<https://doi.org/10.33061/wh.v29i2.9829>>.

¹⁷ Adrian Nugraha and others, 'Revisiting Indonesia's Governance and Conservation of Cetaceans', *IScience*, 27.1 (2024), 108585 <<https://doi.org/https://doi.org/10.1016/j.isci.2023.108585>>.

¹⁸ Muhammad Alif K Sahide and others, 'The Boom of Social Forestry Policy and the Bust of Social Forests in Indonesia: Developing and Applying an Access-Exclusion Framework to Assess Policy Outcomes', *Forest Policy and Economics*, 120 (2020), 102290 <<https://doi.org/https://doi.org/10.1016/j.forpol.2020.102290>>.

¹⁹ Bagus Setiabudi Wiwoho, Neil McIntyre, and Stuart Phinn, 'Assessing Future Land-Uses under Planning Scenarios: A Case Study of The Brantas River Basin, Indonesia', *Environmental Challenges*, 15 (2024), 100873 <<https://doi.org/https://doi.org/10.1016/j.envc.2024.100873>>.

utilisation of foreign workers. The objective was to create a more favourable environment for investors to engage in exporting or establishing firms. This policy package was subsequently reconfirmed in both the June 1987 Package and the December 1987 Package.²⁰

During the New Order era, a policy about Forest Concession Rights (HPH) concessions was implemented. HPH, as defined in Article 1, 9 of Government Regulation Number 6 of 1999, pertains to forest concessions and gathering forest products throughout production. Forest cultivation refers to the authorised practice of engaging in various operations inside production forest areas, including planting,²¹ maintaining, safeguarding, harvesting, processing, and marketing forest products. HPH in production forests can be categorised into two main types: 1) Natural Forest Concession Rights, which encompass activities such as logging, forest regeneration and maintenance, processing, and marketing of forest products, and 2) Plantation Forest Concession Rights, which involve activities such as planting, maintenance, harvesting, processing, and marketing of forest products.²²

As per Article 2 of Government Regulation 6 of 1999, HPH is fundamentally grounded in logic, optimality, and the sustainable management of forests while ensuring a balanced environment and considering fairness and community benefits. Upon examining this text, it becomes evident that adopting HPH (Harvesting and Production Forest) is founded on maintaining forest sustainability and preserving the equilibrium of ecosystem services.²³ However, the current policy of HPH concession ownership has resulted in a persistent rise in forest area degradation. During the 1970s, the extent of damage caused by HPH concessions amounted to 300,000 hectares per year. This figure rose to 600,000 hectares per year in the 1980s and expanded to 1.5 to 2 million hectares per year in the 1990s.²⁴

The extent of the damage is closely correlated with the increasing number of concession permits granted to enterprises, which allows them to operate in more significant regions. In

²⁰ Inggit Lolita Sari and others, 'Land Cover Modelling for Tropical Forest Vulnerability Prediction in Kalimantan, Indonesia', *Remote Sensing Applications: Society and Environment*, 32 (2023), 101003 <<https://doi.org/https://doi.org/10.1016/j.rsase.2023.101003>>.

²¹ Jannis Langer and others, 'Geospatial Analysis of Indonesia's Bankable Utility-Scale Solar PV Potential Using Elements of Project Finance', *Energy*, 283 (2023), 128555 <<https://doi.org/https://doi.org/10.1016/j.energy.2023.128555>>.

²² Tatag Muttaqin and others, 'Asymmetric Power Relations in Multistakeholder Initiatives: Insights from the Government-Instituted Indonesian National Forestry Council', *Trees, Forests and People*, 12 (2023), 100406 <<https://doi.org/https://doi.org/10.1016/j.tfp.2023.100406>>.

²³ Rebecca Meckelburg and Agung Wardana, 'The Political Economy of Land Acquisition for Development in the Public Interest: The Case of Indonesia', *Land Use Policy*, 137 (2024), 107017 <<https://doi.org/https://doi.org/10.1016/j.landusepol.2023.107017>>.

²⁴ I Wayan Budi Sentana, Putu Indah Ciptayani, and Kadek Cahya Dewi, 'Measuring the Security of Indonesian Local Government Mobile Apps', *Procedia Computer Science*, 234 (2024), 1380–87 <<https://doi.org/https://doi.org/10.1016/j.procs.2024.03.136>>.

1968, the government issued 18 concession permits covering a land area of 2 million hectares. By 1972, the number of permits increased to 101, covering an area of 31 million hectares.²⁵ In 1988, the number of permits further rose to 538, covering an area of 55 million hectares. The peak was reached in 1990, with 657 concession permits covering an area of 69 million hectares. Upon witnessing the extensive destruction caused by HPH, the government took action by issuing Decree Number 35/Kpts/DD/I/1972 under the authority of the Director General of Forestry. This decree provides guidelines for Indonesian practices such as selective felling, precise cutting with planting, clear-cutting with natural regeneration, and guidelines for supervision. The government employs selective logging as a means to decrease the rate of deforestation.²⁶ The Ministry of Forestry has implemented a programme to decrease the pace of deforestation. Additionally, the Ministry of Agriculture has adopted a policy outlined in Minister of Agriculture Decree No. 76/Kpts/EKKU/3/1969, providing general forest exploitation guidelines. The government employs a selective logging technique in order to ensure the preservation of forest sustainability.

In response to international pressure for sustainable forest management, the government has implemented a wood certification policy through the Timber Legality Verification System (SVLK), Indonesian Selective Logging and Planting (TPTI), and Selective Logging and Planting Routes (TPTJ).²⁷ This policy aims to reforest and preserve forests while ensuring economic, social, and environmental sustainability. The execution of the selective logging policy aimed at mitigating deforestation proved unsuccessful due to its exclusive concentration on HPH. Companies frequently employ the clear-cutting technique in Industrial Plantation Forest (HTI) and Cultivation Rights (HGU) regions as a rapid means to conduct their business operations.²⁸

During the New Order era, another strategy aimed at safeguarding human life was implemented with Law Number 4 of 1982, which focused on establishing fundamental principles for environmental management (UULH 1982). UULH 1983 is the inaugural legal

²⁵ André A Vasconcelos and others, 'Prospects and Challenges for Policy Convergence between the EU and China to Address Imported Deforestation', *Forest Policy and Economics*, 162 (2024), 103183 <<https://doi.org/https://doi.org/10.1016/j.forpol.2024.103183>>.

²⁶ Claudia Parra-Paitan and others, 'Deforestation and Climate Risk Hotspots in the Global Cocoa Value Chain', *Environmental Science & Policy*, 158 (2024), 103796 <<https://doi.org/https://doi.org/10.1016/j.envsci.2024.103796>>.

²⁷ Jonathan Gonçalves da Silva, Roselaine Bonfim de Almeida, and Leandro Vinícios Carvalho, 'An Economic Analysis of a Zero-Deforestation Policy in the Brazilian Amazon', *Ecological Economics*, 203 (2023), 107613 <<https://doi.org/https://doi.org/10.1016/j.ecolecon.2022.107613>>.

²⁸ Paulo Eduardo dos Santos Massoca and Eduardo Sonnewend Brondizio, 'National Policies Encounter Municipal Realities: A Critical Analysis of the Outcomes of the List of Priority Municipalities in Curbing Deforestation in the Brazilian Amazon', *World Development*, 158 (2022), 106004 <<https://doi.org/https://doi.org/10.1016/j.worlddev.2022.106004>>.

instrument that offers definitive legal assurance in environmental protection. The 1982 UULH and the 1967 UUPK have several key differences. Firstly, the 1967 UUPK focuses on forestry, whereas the 1982 UULH covers a broader range of environmental aspects.²⁹ Secondly, the 1967 UUPK does not include provisions for sanctions, such as criminal charges or fines, whereas the 1982 UULH does. Lastly, the 1982 UULH is primarily aimed at environmental protection, while the 1967 UUPK has an economic focus, as evident in the division of forest functions and the absence of protection against misuse of these functions. The establishment of environmental protection measures in Indonesia began during the New Order era, whereas the government in power during the Old Order had yet to implement its legislation. However, before gaining independence, there were various regulations in the environmental sector. One notable example is the *Reglement op het beheer en de Exploitatie der Houtbossen op Java en Madoera 1865*, which later evolved into the *Reglement Bosordnantie voor Java en Madura 1927*. Another regulation of significance is the *Hinderordonnantie* (Stb. 1926 No. 266), which has been amended and added to over time, most recently by Stb 1940 No. 450. The Osamu S. Kanrei Regulation Number 6 of 1942 is also worth mentioning.³⁰

During the reform period, the government took steps to decrease the rate of deforestation by enacting Law Number 32 of 2009 on Environmental Protection and Management, which replaced Law Number 23 of 1997 on Environmental Management. The reform will bring about many modifications in the environmental sector, aiming to enhance the legal enforcement and protection framework in this field.³¹ Several modifications pertain to including principles and expanding the environmental protection and management scope. While Law 23 of 1997 only included state responsibility, sustainability, and benefits, Law 32 of 2009 introduced several additional principles. These include sustainability, harmony and balance, integration, prudence, justice, ecoregion, biodiversity, polluter pays, participatory, local wisdom, good governance, and regional autonomy.³²

Law 32 of 2009 is considered to have a favourable stance towards the well-being of individuals and the environment. This is evident in Article 2 of the law, which outlines the

²⁹ Luca Tacconi, Rafael J Rodrigues, and Ahmad Maryudi, 'Law Enforcement and Deforestation: Lessons for Indonesia from Brazil', *Forest Policy and Economics*, 108 (2019), 101943 <<https://doi.org/https://doi.org/10.1016/j.forpol.2019.05.029>>.

³⁰ Silvio Hermawan, Moch Faisal Karim, and Lena Rethel, 'Institutional Layering in Climate Policy: Insights from REDD+ Governance in Indonesia', *Forest Policy and Economics*, 154 (2023), 103037 <<https://doi.org/https://doi.org/10.1016/j.forpol.2023.103037>>.

³¹ Wirastuti Widyatmanti and others, 'Codification to Secure Indonesian Peatlands: From Policy to Practices as Revealed by Remote Sensing Analysis', *Soil Security*, 9 (2022), 100080 <<https://doi.org/https://doi.org/10.1016/j.soisec.2022.100080>>.

³² Daniel Blum and others, 'Subnational Institutions and Power of Landholders Drive Illegal Deforestation in a Major Commodity Production Frontier', *Global Environmental Change*, 74 (2022), 102511 <<https://doi.org/https://doi.org/10.1016/j.gloenvcha.2022.102511>>.

principles related to environmental conservation and management.³³ For instance, the principle of ecoregions emphasises the need to consider the specific characteristics of natural resources, ecosystems, geographical conditions, local community culture, and local wisdom when protecting and managing the environment. Meanwhile, the principle of preservation and sustainability dictates that every individual has a duty to future generations and their peers in the same generation. This duty involves taking action to maintain the ecosystem's ability to support life and enhance the overall quality of the environment.³⁴

The concept of ecoregions in environmental protection and management highlights the significance of human-nature interactions that demonstrate the integrity of natural systems and the environment. This includes the role of communities in empowering and participating in preserving and protecting their surrounding environment.³⁵ Indonesia's past focus on economic growth at the expense of environmental protection has led to negative consequences such as the degradation of natural resources and severe environmental pollution. Sustainability and environmental management principles are now being emphasised to address these issues.³⁶

Law 32 of 2009 expands the range of environmental protection and management activities, encompassing planning, utilisation, control, maintenance, supervision, and law enforcement. This is a novel development, as Law 23 of 1997 still needs to address this issue. By incorporating scope, the government establishes distinct limits and ensures legal assurance in enforcing and safeguarding the environmental sector.³⁷ Despite being considered a groundbreaking policy that supports the interests of both the people and the environment, Law 32 of 2009 encounters issues in its implementation, particularly concerning conflicts with legislation specific to certain sectors. The prioritisation of economic growth renders Law

³³ Romain Pirard, Pablo Pacheco, and Claudia Romero, 'The Role of Hybrid Governance in Supporting Deforestation-Free Trade', *Ecological Economics*, 210 (2023), 107867 <<https://doi.org/https://doi.org/10.1016/j.ecolecon.2023.107867>>.

³⁴ Janina Grabs and others, 'Designing Effective and Equitable Zero-Deforestation Supply Chain Policies', *Global Environmental Change*, 70 (2021), 102357 <<https://doi.org/https://doi.org/10.1016/j.gloenvcha.2021.102357>>.

³⁵ Hariati Sinaga, 'Intersectional Perspectives on Land Relations of Oil Palm Plantations: A Decolonial Feminist Approach on Indonesia's Bioeconomy', *Forest Policy and Economics*, 159 (2024), 103124 <<https://doi.org/https://doi.org/10.1016/j.forpol.2023.103124>>.

³⁶ Tim Cadman and others, 'The Role of Fiscal Instruments in Encouraging the Private Sector and Smallholders to Reduce Emissions from Deforestation and Forest Degradation: Evidence from Indonesia', *Forest Policy and Economics*, 108 (2019), 101913 <<https://doi.org/https://doi.org/10.1016/j.forpol.2019.04.017>>.

³⁷ Truly Santika and others, 'Community Forest Management in Indonesia: Avoided Deforestation in the Context of Anthropogenic and Climate Complexities', *Global Environmental Change*, 46 (2017), 60–71 <<https://doi.org/https://doi.org/10.1016/j.gloenvcha.2017.08.002>>.

32 of 200 ineffective, as any concerns regarding environmental sustainability and economic factors are overshadowed by the priority given to economic aspects. Consequently, these circumstances give rise to societal conflicts, such as issues related to environmental pollution, mining, forestry, fisheries, and plantations.³⁸

The emphasis on economic growth is evident in implementing the Master Plan Percepatan dan Perluasan Pembangunan Ekonomi Indonesia (MP3EI) and the Merauke Integrated Food and Energy Estate (MIFEE) initiatives. This programme aims to achieve a per capita income range of USD 14,250-15,500 and a total gross domestic product of USD 4-4.5 million. This can be accomplished by transforming natural forests into diverse economic ventures to create profits and tax revenues.³⁹ The execution of the MP3EI and MIFEE programmes contradicts the environmentally conscious principles established by Law 32 of 2009, which aims to decrease deforestation rates. The MP3EI policy is focused on achieving economic growth through three strategies: increasing economic potential via economic corridors, enhancing national connectivity, and strengthening national human resources and science and technology skills. This is achieved by fostering economic activity that leverages each location's unique strengths and advantages.⁴⁰

MIFEE is a large-scale project in the agriculture and fuel industries that seeks to enhance the country's food and biofuel security by utilising land in Papua Province that currently needs to be fully utilised, unused, or in poor condition. The transformation of unproductive land into productive land through MIFEE is commendable. However, issues arise due to the vague definition of unproductive land in the Papua Province Development Plan, which allows for subjective interpretation.⁴¹ This has led to a significant reduction of 76% (4.4 million hectares) in the peatlands area of Papua. Policies that promote economic growth by encouraging forest exploitation undeniably lead to a rise in state revenue. This is evident in the natural resources sector, which contributes 73.9% of the state's non-tax income. In addition, the natural resources sector accounts for 30% of the overall gross domestic

³⁸ Moira Moeliono and others, 'REDD+ in Indonesia: A New Mode of Governance or Just Another Project?', *Forest Policy and Economics*, 121 (2020), 102316 <<https://doi.org/https://doi.org/10.1016/j.forpol.2020.102316>>.

³⁹ Edi Iswanto Wiloso and others, 'Indonesia's Contribution to Global Carbon Flows: Which Sectors Are Most Responsible for the Emissions Embodied in Trade?', *Sustainable Production and Consumption*, 48 (2024), 157–68 <<https://doi.org/https://doi.org/10.1016/j.spc.2024.05.005>>.

⁴⁰ Pedro H S Brancalion and others, 'Emerging Threats Linking Tropical Deforestation and the COVID-19 Pandemic', *Perspectives in Ecology and Conservation*, 18.4 (2020), 243–46 <<https://doi.org/https://doi.org/10.1016/j.pecon.2020.09.006>>.

⁴¹ Wildi Kusumasari and others, 'Assessing the Safety Effect through Google Maps Usage: FMEA Approach (Case Study: Indonesia)', *Case Studies on Transport Policy*, 10.3 (2022), 1917–29 <<https://doi.org/https://doi.org/10.1016/j.cstp.2022.08.006>>.

product.⁴²

The rise in income can be attributed to measures that fostered investment and established a secure investment environment in the natural resources industry. Several other policies that promote the exploitation of forests include Government Regulation Number 1 of 2007 (providing tax incentives), Government Regulation Number 2 of 2008 (allowing mining permits in protected forest areas), Government Regulation Number 18 of 2010 (encouraging the conversion of land for food and energy production), Presidential Instruction Number 1 of 2006 (promoting the development of biofuels), Minister of Agriculture Regulation No. 26/Permentan/OT.140/2/2007 (granting permits for oil palm plantations in Papua covering an area of 100,000 hectares), and Minister of Forestry Regulation No. P22/Menhut-II/2009 (granting legal status to palm oil companies in Papua with a land area of 100,000 - 200,000 hectares).

Problems with Law Enforcement Policies in Combating Deforestation

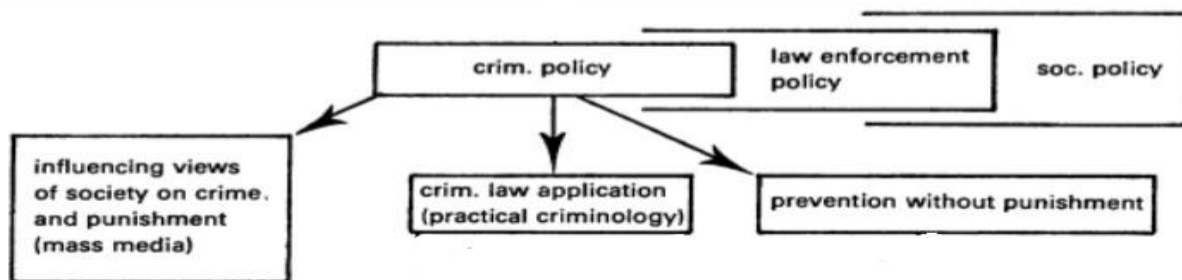
Law enforcement is establishing a connection between the legal system and society, aiming to address and prevent criminal activities that occur inside society. Law enforcement manifests the principle "*ubi societas ibi ius*", meaning that law enforcement plays a crucial role in governing society as law serves as a means of social regulation.⁴³ To effectively address issues in the environmental sector, including deforestation, it is crucial to establish a well-structured law enforcement programme and ensure its focused implementation. This approach is essential for achieving the intended goals of the legislation.⁴⁴ The quality of law enforcement in a country indicates the country's overall implementation of effective law enforcement. It determines whether citizens may experience the benefits of living in a country that upholds the rule of law.⁴⁵

⁴² Wibowo and Giessen.

⁴³ Carmen Gonzalez, 'Bridging the North-South Divide: International Environmental Law in the Anthropocene', *Pace International Law Review*, 32.2 (2015), 407 <<https://digitalcommons.pace.edu/pelr/vol32/iss2/3>>.

⁴⁴ Sismawati and Kurnia Dewi Anggraeny, 'Law Enforcement of Forest and Land Fires in Rokan Hilir Regency of Riau Province', in *AIP Conference Proceedings*, 2023, MMDCCVI <<https://doi.org/10.1063/5.0120357>>.

⁴⁵ Rian Saputra, Josef Purwadi Setiodjati, and Jaco Barkhuizen, 'Under-Legislation in Electronic Trials and Renewing Criminal Law Enforcement in Indonesia (Comparison with United States)', *JOURNAL of INDONESIAN LEGAL STUDIES*, 8.1 (2023), 243–88 <<https://doi.org/10.15294/jils.v8i1.67632>>.



Source: G. Peter Hoefnagels (1987)

Law enforcement policy is a significant component of social policy. Social policy refers to a collection of principles and rules that serve as a foundation for enhancing the well-being and overall living standards within a community or society. Law enforcement refers to the systematic efforts undertaken to combat crime and maintain public order, also called criminal policy.⁴⁶ To address this issue, it can be tackled through a) the enforcement of criminal laws, b) implementing preventive measures that do not involve punishment, and c) shaping societal perspectives on crime and punishment. Therefore, logical endeavours to address crime can be pursued using punitive or non-punitive methods. Law 32 of 2009 states that when implementing environmental criminal law, we must consider the principle of *ultimum remedium*.⁴⁷ This principle applies specifically to formal criminal offences related to violations of wastewater quality regulations, emissions, and disturbances. Under this approach, the enforcement of environmental criminal law prioritises the application of administrative law. If these measures prove ineffective, criminal law is then employed.⁴⁸

The effectiveness of law enforcement can serve as a measure to determine whether a country has successfully adopted vigorous law enforcement or not.⁴⁹ The text provides an overview of various legal regulations, beginning at the sectoral level with Decree Number 35/Kpts/DD/I/1972, Minister of Agriculture Regulation No. 26/Permentan/OT.140/2/2007, and Minister of Forestry No. P22/Menhut-II/2009, and extending to regulations at the central level with Law 1 of 1967, Law 5 of 1967, and Law 32 of 2009. Soerjono Soekanto identifies

⁴⁶ Deise Tatiane Bueno Miola and others, 'Silent Loss: Misapplication of an Environmental Law Compromises Conservation in a Brazilian Biodiversity Hotspot', *Perspectives in Ecology and Conservation*, 17.2 (2019), 84–89 <<https://doi.org/10.1016/j.pecon.2019.04.001>>.

⁴⁷ Anya Eber, 'Guardians in the Antiquities Market: The Role of Specialised Law Enforcement Units in Disrupting the Illicit Antiquities Trade', *Studies in Art, Heritage, Law and the Market*, 1 (2021), 207 – 224 <https://doi.org/10.1007/978-3-030-84856-9_13>.

⁴⁸ Thomas Marquenie, 'The Police and Criminal Justice Authorities Directive: Data Protection Standards and Impact on the Legal Framework', *Computer Law & Security Review*, 33.3 (2017), 324–40 <<https://doi.org/https://doi.org/10.1016/j.clsr.2017.03.009>>.

⁴⁹ Andres Guadamuz, 'All Watched over by Machines of Loving Grace: A Critical Look at Smart Contracts', *Computer Law and Security Review*, 35.6 (2019), 105338 <<https://doi.org/10.1016/j.clsr.2019.105338>>.

several factors that can disrupt the application of legal rules in law enforcement. These factors include non-compliance with the principles of the law's application, absence of necessary implementing regulations, and ambiguous language, leading to unclear interpretation during its application.⁵⁰

In law enforcement within the environmental sector, particularly in efforts to mitigate deforestation, the challenges arise from non-compliance with legal principles and the ambiguity of specific terms in the legislation, leading to a lack of clarity in its implementation.⁵¹ The non-compliance with principles is evident in the execution of Law 32 of 2009. Law 32 of 2000 encompasses 14 concepts: state responsibility, conservation and sustainability, harmony and balance, integration, benefits, prudence, justice, ecoregion, biodiversity, polluters pay, participatory, local wisdom, good governance, and regional autonomy. Upon examining the elucidation of Article 2, Letter C, which delineates the principles of harmony and balance, a crucial point emerges: utilising the environment necessitates careful consideration of multiple facets, including safeguarding and conserving the ecosystem. Nevertheless, when examining the MP3EI and MIFEE initiatives, it becomes evident that they cause environmental destruction and prioritise the economic sector, leading to a blatant inconsistency.⁵²

However, the issue of obfuscating the definition of terms is evident in the implementation of MIFE. The categorisation of land as "underutilised", "idle", and "degraded" has led to a decrease of 76% (4.4 million hectares) in the peatland area in Papua. The MIFEE programme employs peatlands that are transformed into oil palm plantations or other crops for commercial purposes.⁵³ Furthermore, this poses a significant risk to indigenous communities in peatland regions, such as the Kamoro and Asmat tribes, who rely on these areas to meet their fundamental livelihood requirements. The MIFEE programme, which involves the conversion of peat land into palm oil plantations or other commodity crops, can also lead to

⁵⁰ Timothy C G Fisher, Jocelyn Martel, and Ilanit Gavious, 'Tax Claims, Government Priority, Absolute Priority and the Resolution of Financial Distress', *International Review of Law and Economics*, 48 (2016), 50–58 <<https://doi.org/https://doi.org/10.1016/j.irle.2016.08.003>>.

⁵¹ Bert Niemeijer and Machteld Pel, 'Court-Based Mediation in the Netherlands: Research, Evaluation and Future Expectations.', *Dickinson Law Review*, 110.2 (2005), 345–79.

⁵² Rini Astuti, 'Governing the Ungovernable: The Politics of Disciplining Pulpwood and Palm Oil Plantations in Indonesia's Tropical Peatland', *Geoforum*, 124.May 2019 (2021), 381–91 <<https://doi.org/10.1016/j.geoforum.2021.03.004>>.

⁵³ Marleen Buizer, David Humphreys, and Wil de Jong, 'Climate Change and Deforestation: The Evolution of an Intersecting Policy Domain', *Environmental Science & Policy*, 35 (2014), 1–11 <<https://doi.org/https://doi.org/10.1016/j.envsci.2013.06.001>>.

the infringement of the human rights of indigenous peoples.⁵⁴ Aarts states that extensive land acquisitions can lead to infringements of various human rights, including the right to food, the right to self-determination, the right to sufficient housing, the principle of free, prior and informed consent, the right to development, the right to property, and water rights.⁵⁵

In addition, the inadequate legal enforcement in addressing deforestation is also attributed to a corrupt political and economic system and ineffective land and forest management.⁵⁶ The escalating deforestation issue in political governance can be attributed to several factors. Firstly, there needs to be more effective coordination between the Ministry of Environment and Forestry and the National Land Agency (BPN) responsible for land management. This leads to ambiguity in delineating duties, functions, and obligations. Secondly, the absence of clear boundaries between forest and non-forest areas, caused by Constitutional Court Decision Number 45/PUU-IX/2011, has resulted in unregulated land conversion. Lastly, there is a lack of transparency and public accountability, which allows for exploiting this issue for personal gain.⁵⁷

Implementing legal regulations at both the central and regional levels encounters inconsistencies. For instance, Article 108 of Law 32 of 2009 explicitly forbids the act of burning land, while the regional regulations in West Kalimantan permit farmers to utilise fire to clear two hectares of land per individual. In addition, Greenpeace reports that between 2015 and 2018, eleven palm oil businesses were identified as having the most significant amounts of intentionally burned land. Surprisingly, despite this evidence, the government did not cancel a single palm oil concession permit in response to these land fires. Walhi asserts that the insufficient enforcement of laws about forest deforestation, particularly for corporations, which are the primary culprits, results from hidden agendas associated with the cases. Consequently, the government needs more courage to adopt a resolute position despite a Presidential Instruction allowing for the suspension and reevaluation of concession

⁵⁴ Emily J Massingham and others, 'Public Opinion on Protecting Iconic Species Depends on Individual Wellbeing: Perceptions about Orangutan Conservation in Indonesia and Malaysia', *Environmental Science & Policy*, 150 (2023), 103588 <<https://doi.org/https://doi.org/10.1016/j.envsci.2023.103588>>.

⁵⁵ Badrul Azhar and others, 'Mitigating the Risks of Indirect Land Use Change (ILUC) Related Deforestation from Industrial Palm Oil Expansion by Sharing Land Access with Displaced Crop and Cattle Farmers', *Land Use Policy*, 107 (2021), 105498 <<https://doi.org/https://doi.org/10.1016/j.landusepol.2021.105498>>.

⁵⁶ Rini Astuti and Yuti A Fatimah, 'Science in the Court: Expert Knowledge and Forest Fires on Indonesia's Plantations', *Environmental Science & Policy*, 151 (2024), 103631 <<https://doi.org/https://doi.org/10.1016/j.envsci.2023.103631>>.

⁵⁷ Fumi Harahap, Semida Silveira, and Dilip Khatiwada, 'Land Allocation to Meet Sectoral Goals in Indonesia—An Analysis of Policy Coherence', *Land Use Policy*, 61 (2017), 451–65 <<https://doi.org/https://doi.org/10.1016/j.landusepol.2016.11.033>>.

permits. Companies committed to forest and land conservation still need to fulfil them.⁵⁸

4. Conclusion

When addressing the issue of deforestation, the government frequently implements pro-environment laws. It establishes environmental development and protection institutions, such as the Peat Restoration Agency and Global Peatland Initiatives (GPI). Nevertheless, while attempting to address these challenges, the government frequently introduces measures that conflict with one another, leading to confusion and ineffective enforcement of laws about deforestation. Policies that exhibit favouritism towards economic expansion inevitably lead to the detriment of the environment. This phenomenon is seen in the MP3EI (Master Plan for the Acceleration and Expansion of Indonesia's Economic Development) and MIFEE (Merauke Integrated Food and Energy Estate) initiatives, which aim to stimulate economic growth and ensure food security for the state. However, these initiatives have resulted in a significant loss of forest area, particularly in Papua, where the peat forest area has been reduced by 76%. Inadequate law enforcement is also attributed to political causes and ineffective forest governance. The government needs to have the courage to implement decisive measures to penalise corporations engaged in forest burning.

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⁵⁸ Charles Palmer, 'Property Rights and Liability for Deforestation under REDD+: Implications for "Permanence" in Policy Design', *Ecological Economics*, 70.4 (2011), 571–76 <<https://doi.org/https://doi.org/10.1016/j.ecolecon.2010.10.011>>.

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