

Reformulating the Governance of Carbon Economic Value Based on Pancasila Ethics and Climate Justice to Address Inequality and Prevent Crimes in Indonesia's Carbon Trading

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ABSTRACT

This article critically examines the urgency of reformulating the governance framework of Carbon Economic Value (CEV) in Indonesia by integrating the ethical principles of Pancasila as Indonesia's national ideology and climate justice. The increasing risks of inequality, greenwashing, and transnational environmental crimes in voluntary and compliance carbon markets demand a just, adaptive, and integrity-based legal approach. By highlighting the current regulatory gaps and institutional weaknesses, this paper proposes a hybrid legal framework for carbon trading, anchored in Indonesia's national ideology, environmental law, and behavioral economic approaches. The article concludes with specific policy recommendations and outlines a roadmap for legislative reform to ensure Indonesia's carbon governance is both globally competitive and locally just.

Keywords: Carbon Economic Value, Pancasila Ethics, Climate Justice, Carbon Market Regulation, Environmental Governance, Legal Reform, Indonesia.

Introduction

Climate change has emerged as a defining issue of our time, with far-reaching consequences for ecosystems, human livelihoods, and global economic stability. According to the Intergovernmental Panel on Climate Change (IPCC, 2023), the window of opportunity to limit global warming to 1.5°C is rapidly closing, requiring urgent and unprecedented transitions across sectors. Carbon pricing and trading mechanisms have been identified as critical tools for reducing greenhouse gas (GHG) emissions, internalizing the cost of pollution, and mobilizing finance toward climate mitigation.

Climate change also represents an unprecedented global threat that has triggered a major shift in policy, economics, and environmental governance. With the accelerating impacts of global warming – rising sea levels, extreme weather events, biodiversity collapse – governments and corporations worldwide are under growing pressure to decarbonize their economies. In this context, carbon markets have emerged as a key strategy to reduce emissions by assigning economic value to carbon reductions and removals. According to the World Bank (2023), there are now 73 carbon pricing initiatives in operation worldwide, including emissions trading systems (ETS) and carbon taxes, covering over 23% of global emissions.

Globally, more than 70 jurisdictions – including the European Union, China, South Korea, and Canada – have adopted carbon pricing instruments such as emissions trading systems (ETS) and carbon taxes (World Bank, 2023). The voluntary carbon market (VCM), which allows companies and entities to offset emissions beyond regulatory requirements, has grown exponentially. In 2022, the VCM surpassed USD 2 billion in annual value, and forecasts suggest it could reach USD 50 billion by 2030, driven by corporate net-zero commitments (McKinsey & Company, 2022). However, this rapid growth has also raised concerns about the integrity, transparency, and justice of carbon offset projects, especially in the Global South.

Indonesia, one of the world's most biodiverse and forest-rich countries, holds enormous potential in the global carbon economy. Its forests, peatlands, and mangroves serve as vital carbon sinks, with estimates indicating over 25 gigatons of carbon stored across its terrestrial ecosystems (KLHK, 2022). Recognizing this, the Indonesian government issued Presidential Regulation No. 98 of 2021 on Carbon Economic Value (CEV), positioning the country to participate in both compliance and voluntary carbon markets. The regulation outlines mechanisms for carbon trading, result-based payments (RBP), carbon levies, and emissions offsets, while supporting the nation's Nationally Determined Contribution (NDC) targets under the Paris Agreement.

Indonesia, home to over 120 million hectares of tropical forests, peatlands, and mangroves, holds immense carbon storage potential. The Ministry of Environment and Forestry (KLHK) estimates that Indonesia could reduce over 1 gigaton of CO₂ annually through nature-based solutions. Recognizing this, the government introduced Presidential Regulation No. 98/2021 on Carbon Economic Value (CEV), aiming to create a national carbon pricing system that integrates both voluntary and compliance markets. However, the implementation faces numerous challenges: legal ambiguity regarding carbon ownership, overlapping sectoral authority, and weak protection of indigenous and local communities.

Indonesia has also experienced growing scrutiny. In 2023, the revocation of permits held by PT Rimba Raya Conservation, one of the country's largest REDD+ project developers, highlighted systemic flaws in licensing, benefit-sharing, and institutional coordination. The absence of a centralized carbon registry, combined with fragmented regulations across ministries (e.g., KLHK, Bappenas, Ministry of Finance), has led to conflicting project claims, legal uncertainty, and investor hesitation.

Despite this progress, Indonesia's carbon governance remains fragmented and institutionally weak. Multiple regulations overlap across ministries, carbon ownership is legally ambiguous, and there is insufficient protection for indigenous peoples and local communities (IPLCs) who manage carbon-rich areas. The revocation of licenses for forest-based carbon projects, such as that of PT Rimba Raya Conservation in 2023, reflects deep-rooted problems in the governance structure. These include unclear permitting procedures, non-transparent benefit-sharing mechanisms, and minimal community consultation, which have triggered not only legal disputes but also public distrust and international criticism.

Such challenges are not unique to Indonesia. In Brazil, several carbon credit initiatives in the Amazon have come under fire for excluding indigenous communities and violating their land rights. Similarly, in the Democratic Republic of Congo, the government suspended REDD+ carbon projects following allegations of illegal carbon contracts signed without community consent. Even within voluntary standards like Verra and Gold Standard, studies have found inconsistencies in project verification and inflated emission reduction claims (Carbon Market Watch, 2023). These cases underline a common global issue: when carbon markets prioritize commodification over justice and ethics, they risk reproducing environmental injustices, elite capture, and even ecological neocolonialism.

In Peru, carbon offset projects on indigenous lands have been accused of proceeding without free, prior, and informed consent (FPIC), violating both international human rights norms and the environmental integrity of the projects. Likewise, Democratic Republic of Congo imposed a moratorium in 2022 on forest carbon projects after reports of secret contracts between carbon developers and government officials—excluding local communities and failing to provide fair compensation.

These cases underscore a critical truth: carbon markets, while promising in theory, are vulnerable to abuse, manipulation, and injustice when not backed by strong ethical and legal foundations. Fraudulent offsets, greenwashing, and rent-seeking behavior have the potential

to derail global climate goals while disempowering the very communities that protect carbon-rich ecosystems.

In parallel, the voluntary carbon market (VCM) – where companies and individuals purchase offsets to meet self-imposed climate goals – has experienced explosive growth. From just under USD 300 million in 2019, the market value surged past USD 2 billion by 2022, with projections estimating it could reach USD 50–100 billion by 2030 (McKinsey & Company, 2022). However, this rapid expansion has also exposed deep flaws in governance, integrity, and equity.

The urgency for reform becomes clearer when viewed against a backdrop of controversial carbon offset projects and carbon fraud cases worldwide. In China, for instance, a 2021 investigation revealed that some developers of wind and hydropower projects under the Clean Development Mechanism (CDM) had falsified baseline emissions data to generate inflated carbon credits. These so-called "hot air" credits were then sold to foreign buyers without delivering actual emission reductions (Liu & Lo, 2021). Similarly, in Germany, authorities in 2010 uncovered a major VAT carousel fraud involving carbon allowances under the EU ETS, which caused the loss of over EUR 850 million in tax revenue. Criminal networks exploited loopholes in cross-border carbon trading to repeatedly claim tax refunds without any real transactions – a stark example of how financial crimes can infiltrate environmental markets.

As global watchdogs such as Carbon Market Watch and The Integrity Council for the Voluntary Carbon Market (ICVCM) have noted, many carbon credits currently in circulation are of low environmental integrity. A 2023 analysis by *The Guardian* and *Die Zeit* found that over 90% of rainforest offset credits issued by Verra, the world's leading standard, were likely to be "phantom credits" that did not represent real emission reductions. In some cases, the threat to forests had been exaggerated or fabricated to justify issuing more credits. These revelations severely damage public trust and illustrate the consequences of regulatory gaps and lack of oversight.

Given these global failures, Indonesia must learn from both its own experiences and international patterns. If carbon markets are to play a meaningful role in achieving national climate targets (NDCs), they must be embedded in a governance model that reflects justice, transparency, and accountability. The country's foundational ideology, Pancasila, offers a powerful ethical framework for such reform. With its emphasis on humanitarianism, unity, social justice, and environmental stewardship, Pancasila can guide a distinctively Indonesian approach to carbon governance that is not only technically sound but also morally grounded.

Simultaneously, the principles of climate justice – which demand fair treatment of vulnerable populations, historical accountability, and equitable distribution of climate benefits – must be operationalized in law. This requires recognizing carbon rights as a form of environmental justice, ensuring free, prior, and informed consent (FPIC), and building inclusive mechanisms that allow indigenous peoples and local communities (IPLCs) to participate meaningfully in carbon finance.

Moreover, there is growing evidence of greenwashing in both voluntary and compliance markets. A European Commission investigation in 2023 revealed that over 40% of companies' environmental claims were misleading, with many relying on low-quality carbon credits to mask actual emissions. In Southeast Asia, several carbon offsetting platforms have come under scrutiny for overstating their climate benefits while delivering minimal socio-economic gains to local communities. Such practices not only undermine the environmental integrity of carbon trading but also threaten public trust in market-based climate solutions.

In this context, the question is not whether carbon markets should exist, but how they should be governed – and for whom. It is increasingly clear that a market-centric model alone

is insufficient. A more holistic, just, and ethically grounded framework is needed—one that centers the values of equity, sustainability, transparency, and accountability. In the Indonesian context, this calls for a return to the foundational principles of Pancasila—the national ideology that upholds social justice, human dignity, and the unity of all people—as a normative anchor for environmental governance. Pancasila ethics offer a culturally rooted yet universally resonant lens to rethink how carbon rights, responsibilities, and benefits should be distributed.

At the same time, the global discourse on climate justice must be localized and operationalized in Indonesia's legal and policy structures. Climate justice emphasizes the disproportionate burden borne by vulnerable communities, the historical responsibility of major emitters, and the necessity of procedural fairness in environmental decision-making. Integrating this concept into Indonesia's carbon policy would mean protecting IPLC rights, ensuring equitable access to carbon finance, and designing participatory mechanisms for benefit-sharing.

The urgency of reformulating Indonesia's carbon governance lies not only in its ecological significance but also in its geopolitical and economic implications. As the country seeks to become a regional hub for carbon trading, especially with the upcoming development of a carbon exchange under the Indonesia Stock Exchange (IDX), it must ensure that the legal and institutional architecture can withstand market pressures, prevent fraud, and promote justice. Without robust regulations and ethical foundations, Indonesia risks becoming a "carbon hotspot" where market actors exploit legal loopholes and vulnerable ecosystems for profit.

Moreover, as Indonesia moves forward with plans to launch a national carbon exchange through the Indonesia Stock Exchange (IDX), the need for strong legislation, independent oversight, and criminal law provisions becomes even more pressing. Without clear rules on carbon unit certification, ownership, taxation, and dispute resolution, the carbon market may become a breeding ground for greenwashing and elite capture.

Therefore, this article argues for a comprehensive reformulation of Indonesia's Carbon Economic Value governance framework. It explores how Pancasila ethics and climate justice can serve as foundational principles for an adaptive and inclusive carbon market regime. Through legal, philosophical, and behavioral economics lens, this study seeks to develop a roadmap for legislative reform that not only aligns with global carbon trading standards (e.g., Article 6 of the Paris Agreement) but also reflects the aspirations and values of the Indonesian people. By integrating Pancasila ethics, climate justice principles, and behavioral economic analysis, it aims to provide a comprehensive policy and legal framework to ensure that carbon trading mechanisms are not only environmentally effective, but also socially just, legally secure, and globally credible.

Problem Statement

Despite recent initiatives, Indonesia still lacks a comprehensive and enforceable regulatory framework for carbon trading that is adaptive to both voluntary and compliance markets. Specific problems include:

- Legal ambiguity on carbon ownership, benefit-sharing, and liability.
- Weak protection for indigenous communities and local stakeholders.
- Risks of elite capture, false claims, and greenwashing by corporate actors.
- Absence of criminal provisions targeting fraud and corruption in carbon projects.
- Incompatibility between national carbon regulations and global market standards (e.g., Verra, Gold Standard, Article 6 of the Paris Agreement).

These gaps hinder fair participation, transparency, and law enforcement in Indonesia's carbon economy.

Methods Research

This study employs a **qualitative normative legal research method** supported by a **philosophical and comparative approach**. The normative method focuses on analyzing laws, regulations, and policies governing the Carbon Economic Value (CEV) framework in Indonesia, with particular attention to their alignment with ethical principles derived from Pancasila and the concept of climate justice. Through doctrinal legal analysis, the research interprets statutory provisions, government regulations, and policy documents to identify normative gaps and inconsistencies in current carbon governance. The **philosophical approach** is used to integrate the ethical values of Pancasila—such as social justice, humanity, and environmental stewardship—into the design of a just and sustainable carbon market framework. By embedding these values into the legal reasoning process, the study aims to establish a moral foundation for reforming Indonesia's carbon market governance.

In addition, a **comparative legal analysis** examines international experiences from countries such as Germany, China, Australia, and the United States that have implemented emissions trading systems and voluntary carbon market mechanisms. These comparisons provide insights into best practices, institutional models, and enforcement strategies to prevent carbon fraud and ensure market integrity. The **data sources** used in this study consist of both **primary legal materials** (laws, regulations, international agreements such as the Paris Agreement and Presidential Regulation No. 98/2021 on Carbon Economic Value) and **secondary materials** (academic journals, policy reports, and expert analyses from the World Bank, UNFCCC, and Carbon Market Watch). Tertiary materials, including dictionaries and legal encyclopedias, are used to clarify terminologies related to carbon trading and environmental governance. Data were collected through **literature review and document analysis**, emphasizing the interpretation of regulatory texts and institutional practices. The results were analyzed using **qualitative content analysis** to derive patterns, principles, and conceptual relationships between law, ethics, and climate justice. The synthesis of findings is presented through a **hybrid regulatory framework model**, proposing the integration of Pancasila-based ethics and climate justice principles into Indonesia's carbon market governance.

Results and Discussion

The Ethical Basis: Pancasila Ideology and Climate Justice

Pancasila, as the philosophical foundation of Indonesia, promotes the values of justice, humanity, sustainability, and democratic participation. A governance model based on Pancasila ethics must ensure: Equitable benefit-sharing for forest-dependent communities, State responsibility to prevent environmental crimes, Just transitions for vulnerable groups affected by carbon policies. Climate justice, on the other hand, emphasizes the differentiated responsibilities of nations, corporations, and communities in addressing climate change. It calls for governance that: Recognizes historical emissions and ecological debt, Prevents climate colonialism, Promotes intergenerational equity. Combining these two frameworks provides a unique normative approach to CEV governance.

Hybrid Regulatory Framework: Voluntary + Mandatory Market Governance

Indonesia must adopt a hybrid regulatory model that accommodates both mandatory (compliance) and voluntary carbon markets. This includes: Legal recognition of carbon units (tCO₂e) as intangible environmental assets, Certification standards aligned with international

schemes (e.g., Verra, ART-TREES), A centralized MRV (Monitoring, Reporting, Verification) body with independent oversight, A carbon registry system integrated with the national climate data platform, Sanctions for fraud, misrepresentation, or corruption in carbon transactions.

Risk Mitigation Through Behavioral and Economic Legal Instruments

Building upon Behavioral Economic Analysis of Law (BEAL), this reform proposes the use of: Incentives and penalties to nudge compliance, Public disclosure mandates to enhance transparency, Community-based monitoring to strengthen social accountability, Legal empowerment programs to educate stakeholders on carbon rights.

Closing and Policy Recommendations

To realize a just, effective, and ethical governance of Carbon Economic Value, the following policy recommendations are proposed. Policy recommendations are below:

1. Enact a Specific Carbon Law (UU Perdagangan Karbon) that integrates Pancasila ethics, climate justice, and criminal provisions.
2. Establish a National Carbon Regulatory Authority independent from sectoral ministries.
3. Recognize Carbon Ownership Rights of indigenous peoples and local communities through adat law and constitutional protection.
4. Mandate Transparency Mechanisms including public registries, third-party auditing, and grievance redress systems.
5. Strengthen Criminal Law Instruments to prosecute greenwashing, corruption, and trade-based environmental crimes.
6. Align with Global Standards, such as Article 6 of the Paris Agreement, CORSIA, and certification systems like Verra and Gold Standard.

Legal Reform Roadmap:

Phase	Action
2025	Draft and submit the Carbon Economic Value Bill (RUU NEK) to DPR.
2026	Establish National Carbon Council and MRV body.
2027	Implement hybrid carbon trading system with voluntary and mandatory schemes.
2028	Integrate CEV governance into National Development Planning (RPJMN).

Problem Statement

Despite the growing urgency of climate change mitigation, the governance of carbon markets—particularly those involving carbon offset trading—remains deeply fragmented, ethically questionable, and legally vulnerable. Indonesia, as a carbon-rich country with vast forest ecosystems, is poised to benefit significantly from carbon trading. However, the current regulatory frameworks lack alignment with ethical foundations (such as Pancasila values), climate justice principles, and international best practices. Furthermore, the absence of robust legal safeguards has enabled manipulations, greenwashing, and even transnational fraud in carbon markets, as demonstrated in various global cases. The fundamental problems addressed in this study are as follows:

1. **Lack of a unified ethical-legal framework** rooted in Pancasila values to govern carbon market mechanisms in Indonesia.
2. **Increasing inequality and injustice** in the implementation of carbon offset schemes, especially affecting Indigenous Peoples and forest-dependent communities.

3. **Weak legal infrastructure** that fails to prevent carbon-related crimes such as fraudulent carbon credits, market manipulation, and double counting.
4. **Global proliferation of carbon fraud cases**, showing how even developed nations struggle with integrity in carbon transactions.
5. **Lack of adaptive legislation** to accommodate the dynamic nature of voluntary and compliance-based carbon markets.

These issues demand a **legal reformulation** of carbon market regulation that is **ethically grounded, justice-oriented, and legally responsive** to domestic and international challenges.

International Cases of Carbon Offset Fraud

Below is a non-exhaustive list of notable international cases that demonstrate how loopholes in regulation can lead to environmental, financial, and reputational damage:

Country	Year	Case Description	Impact
China	2014	CDM (Clean Development Mechanism) projects overstated emissions reductions	Issuance of millions of inflated CERs
Germany	2010	Carbon traders arrested in €180M tax fraud related to EU ETS	Tax evasion, multiple arrests across Europe
India	2022	Allegations of HFC-23 destruction projects exaggerating emission reduction claims	Loss of credibility, potential credit revocation
Australia	2023	Human rights concerns in offset projects excluding Indigenous landholders	Raised ethical questions in ACCUs (carbon units)
United States	2020	California cap-and-trade project found non-additional and repetitive	Undermined environmental integrity of credits

These cases illustrate that **carbon offset fraud is not limited to developing nations** and can occur in both compliance and voluntary markets. They reveal the need for **transparent MRV (Monitoring, Reporting, Verification)** systems and stronger **cross-border legal cooperation**.

Theoretical Framework and Legal Reform Model

The reformulation of carbon governance in Indonesia must be grounded in several theoretical pillars:

- a. **Pancasila Ethics (Normative Philosophy)**
Ensures that economic mechanisms such as carbon markets are rooted in **human dignity (sila 2)**, **social justice (sila 5)**, and **harmonious living (sila 3)**.
- b. **Climate Justice (Environmental Legal Philosophy)**
Emphasizes equity between the Global North and South, intergenerational fairness, and the protection of vulnerable communities.
- c. **Behavioural Law and Economics**
Provides insight into how legal design affects market behavior and risk-taking, especially under uncertainty and asymmetrical information.
- d. **Rule of Law and Good Environmental Governance**
Calls for **clear, enforceable, and accountable** legal instruments to govern carbon trading.

Conceptual Map of Legal Reform (Descriptive Visualization)

Here's a textual representation of the **legal reform conceptual map**, which can be later illustrated as a diagram:

[Ethical Foundation: Pancasila]



[Legal Principles: Climate Justice, Human Rights, Indigenous Protection]



[Legal Instruments: National Carbon Law (UU Perdagangan Karbon), Presidential Regulation, Sectoral Permen]



[Institutional Framework: KLHK, Bappenas, Independent Carbon Authority]



[Technical Systems: MRV, Registry, Blockchain for Transparency]



[Outcomes: Reduced Carbon Crime, Increased Equity, Global Credibility]

Legal Scheme Diagram (Simplified Flow)

[Pancasila & Climate Justice]



[Legal Reform]



→ Regulation of Compliance Carbon Market (Domestic)

→ Regulation of Voluntary Carbon Market (International + Domestic)



[Monitoring & Enforcement System] ↔ [Sanction Mechanism & Legal Liability]



[Safeguards: Indigenous Rights, Community Consent, Biodiversity]

Problem Statement and Legal Framework Analysis

Problem Formulation

Despite the increasing urgency to implement carbon trading mechanisms as a climate change mitigation strategy, many countries — including Indonesia — face structural and normative weaknesses in the governance of the Carbon Economic Value (CEV). The formulation of laws and policies surrounding carbon trading lacks philosophical grounding in local ethical values, such as *Pancasila*, and fails to integrate the principle of **climate justice**, which is essential to protect vulnerable communities.

In practice, **carbon markets** often benefit large corporations and intermediaries, while indigenous communities and ecosystems remain marginalized. Additionally, **regulatory gaps**, **fraudulent practices**, and **weak supervision** have tainted the credibility of carbon offset mechanisms globally. These problems necessitate a **legal reformulation** that is ethical, just, and responsive to emerging environmental crimes.

Mapping the Problems of Carbon Market Governance

Issue Area	Problem Description	Implication
Legal Framework Gaps	Lack of <i>lex specialis</i> law regulating carbon trading	Legal uncertainty, risk of corruption, enforcement failure
Ethical Disconnection	Disregard for <i>Pancasila</i> and local wisdom in policy-making	Loss of moral legitimacy, lack of local ownership
Market Manipulation & Fraud	Abuse in carbon offset claims, double-counting, and virtual credits	Environmental injustice, reputational damage

Issue Area	Problem Description	Implication
Inequity and Asymmetry	Dominance by global corporations over indigenous and developing-country actors	Increased inequality and ecological exploitation
Weak Monitoring & Verification	Inadequate MRV (Monitoring, Reporting, Verification) standards	Data unreliability and non-compliance
Regulatory Fragmentation	Disjointed national and international regulations	Difficulty in integration and mutual recognition

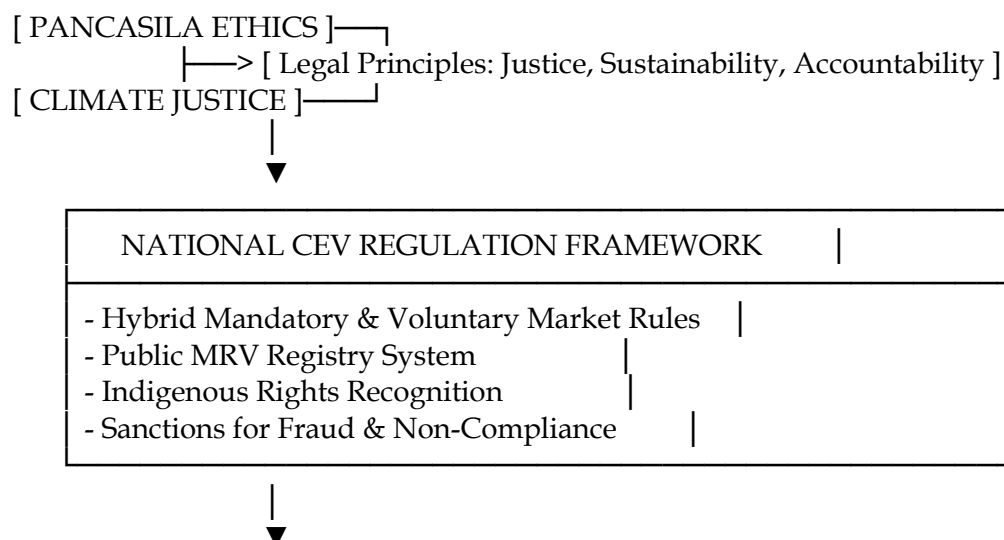
International Carbon Fraud Cases: Lessons for Reform

Country	Case	Year	Modus Operandi	Lessons Learned
China	HFC-23 Industrial Gas Projects	2010	Inflated emissions baseline to generate more CERs	Need for baseline integrity and third-party audits
Germany	VAT Carbon Fraud (EU ETS Emissions Scandal)	2008–09	Carousel fraud to avoid VAT taxes on carbon certificates	Importance of financial tracking and tax regulation
India	CDM Renewable Energy Projects	2012	Fake renewable generation data and over-issuance of CERs	Necessity of transparent MRV systems
Brazil	Amazon REDD+ Leakage Cases	2018	Selling carbon credits from non-protected forest areas	Need to address land tenure and local verification
USA	Carbon Offset "Greenwashing" by major airlines	2021	Offsets based on low-quality forestry projects	Stronger verification standards and consumer disclosure

Legal Reform: Conceptual Framework

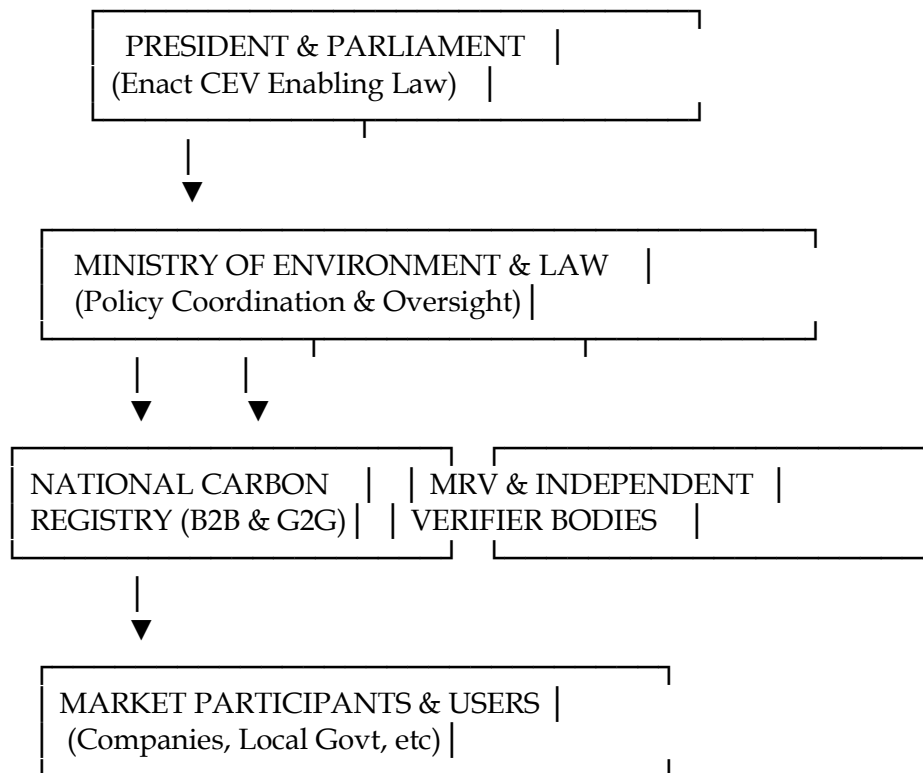
The proposed reformulation of CEV governance integrates *Pancasila-based ethics*, *climate justice*, and *preventive legal design* to tackle the systemic risks of carbon trading. The framework seeks to bridge normative ideals with technical governance mechanisms.

Figure 1: Concept Map - Legal Reform of Carbon Market Governance



[INTERNATIONAL ALIGNMENT WITH ARTICLE 6.2 & 6.4 UNFCCC]

Flowchart of Proposed Legal Governance Model for Carbon Market



Problem Justification

Carbon trading, if not regulated within a just and ethical framework, risks reproducing inequalities and enabling sophisticated environmental crime. The use of Pancasila ethics offers an ideological compass for regulation, ensuring that governance mechanisms reflect Indonesian values while aligning with global climate norms. This also positions Indonesia as a potential global leader in climate justice-based carbon market governance.

Theoretical Basis: Interlinking Legal Reform, Ethics, and Environmental Justice

The governance of carbon trading systems, particularly in developing countries like Indonesia, must be situated not only within legal positivism but also within a normative ethical framework. In the Indonesian context, **Pancasila**—the foundational philosophical theory of the state—provides a moral compass for equitable, inclusive, and environmentally responsible governance. Each of its five principles, especially *social justice* and *humanitarianism*, aligns with modern principles of **climate justice** and the **right to a healthy environment**.

Carbon markets, especially voluntary carbon offsets, are increasingly criticized for being unjust, opaque, and susceptible to fraudulent practices. This necessitates a governance model that balances economic instruments with **environmental integrity** and **human rights protections**.

Identified Gaps in Global and National Carbon Market Governance

a. Weak Regulatory Structures

Many carbon markets operate under fragmented legal systems, or in voluntary frameworks (e.g., Verra, Gold Standard), which lack enforcement and transparency. The result: **non-additional, double-counted, or non-verifiable carbon credits** flood the market.

b. Carbon Crime and Market Distortion

Numerous cases reveal how carbon markets are susceptible to **white-collar crimes** such as:

- Overstatement of forest preservation claims** (Indonesia, Brazil)
- Selling credits for already protected land** (Papua New Guinea, Kenya)
- Fake reforestation data and paper certificates** (Germany, China)
- Shell companies and laundering credits** (Ukraine, Romania)

Table 3.1 – International Carbon Credit Fraud Cases

No	Country	Year	Modus Operandi	Legal Response
1	China	2015	Falsified industrial emissions reductions (CER)	UN removed 73 projects
2	Germany	2009	VAT fraud via carbon trading scheme (€180 million)	180+ arrests; EU VAT reform
3	Kenya	2021	Issued credits for non-existent forest protection	UN and EU probe investigations
4	Romania	2010	Laundered carbon credits through shell companies	Legal sanctions; INTERPOL Ops
5	India	2022	Sold offset credits without proper MRV process	Trading partners blacklisted

Legal Conceptual Map of Reform: Toward a Hybrid Regulatory Model

To protect the integrity of carbon trading and economic justice, Indonesia must move toward a **hybrid carbon governance model** that integrates:

- Mandatory regulation** (hard law, e.g., carbon tax, compliance markets)
- Voluntary schemes** (soft law with strict oversight)
- Community-based mechanisms** (customary rights, benefit sharing)
- Ethical review frameworks** (based on Pancasila principles)

Figure 3.1 – Conceptual Map of Legal Reform for Carbon Market Governance

[Pancasila Ethics]



[Legal Justice System]



[Hybrid Regulatory Model]



[Mandatory] [Voluntary] [Community-Based]



[Criminal Law][Certification][Customary Law]



[Enforcement][Verification] [Social Equity]

Implementing ESG and MRV-based Oversight to Prevent Carbon Crimes

Indonesia can take a leadership role in Asia-Pacific by implementing a **national carbon registry** with:

- Real-time blockchain-based **Monitoring-Reporting-Verification (MRV)** tools

- b. Legal obligations for **third-party audit and certification**
- c. **ESG-based impact assessment** aligned with Sustainable Development Goals (SDGs)
- d. Whistleblower and public access mechanisms for fraud detection

Embedding Climate Justice in Domestic Law: Not Just Environmentalism

While the Indonesian legal system has recognized environmental protections under **UU No. 32/2009**, it does not yet provide **specific legal protections for carbon assets**, nor does it criminalize **carbon fraud**, a significant oversight in the legal architecture.

To reflect **climate justice**, the following elements must be embedded in law:

- a. **Recognition of affected communities and Indigenous peoples** as carbon rights holders
- b. Legal remedy mechanisms for harm or loss due to misreported offset projects
- c. Equal participation in benefit sharing, especially from forest and peatland carbon

Toward a Just Carbon Market: Comparative Lessons and Strategic Directions

Indonesia can learn from jurisdictions such as:

- a. **European Union:** Emission Trading System (ETS) includes fraud prevention, registry, and cross-border enforcement mechanisms.
- b. **California (USA):** Includes environmental justice safeguards and requires offset projects to directly benefit disadvantaged communities.
- c. **Australia:** Integrated “Safeguard Mechanism” with sectoral baseline caps and registry for Australian Carbon Credit Units (ACCUs).

Table 3.2 – Comparative Carbon Market Regulatory Models

Country / Region	Regulatory Type	Community Inclusion	Fraud Mechanisms Addressed
EU ETS	Cap-and-trade	Minimal	VAT fraud, registry control
California, USA	Cap-and-trade	Strong (AB 32 law)	Environmental justice, audit
Australia	Hybrid	Moderate	Verification, registry laws
Indonesia (Current)	Voluntary/Tax	Weak	No carbon crime recognition

Conclusion

The global carbon market has emerged as a central pillar of international climate policy, yet it remains fraught with challenges, including regulatory inconsistencies, ethical dilemmas, and fraud. The proliferation of carbon trading schemes, while aimed at incentivizing decarbonization, has inadvertently created new avenues for inequality and illicit activities such as carbon offset fraud. Notably, high-profile cases in China, Germany, and even within voluntary carbon standards like Verra have exposed weaknesses in monitoring, verification, and ethical oversight.

Indonesia, as a carbon-rich country with vast tropical forests and peatlands, holds immense potential in leading a just and sustainable carbon economy. However, the current legal and institutional frameworks are insufficient to ensure transparency, equity, and compliance. Governance of carbon economic value (NEK) must not only address environmental concerns but also uphold constitutional values, such as those embedded in **Pancasila**, and reflect the principles of **climate justice**.

The integration of **Pancasila ethics** – which emphasizes social justice, environmental stewardship, and communal well-being – offers a unique normative foundation that is distinct from profit-oriented global mechanisms. When combined with the concept of **climate justice**, which demands fair treatment for vulnerable populations and accountability for

historic emissions, it can lead to a legal framework that is both morally grounded and internationally adaptive.

Policy Recommendations

To realize an inclusive, transparent, and justice-based carbon governance system, we propose the following comprehensive policy recommendations:

A. Legal Reform and Legislative Development

1. **Enactment of a Carbon Market Act (Lex Specialis)**
 - Establish a dedicated **Carbon Market Law** to regulate all carbon-related transactions, ensuring legal clarity, enforceability, and synergy with environmental and trade laws.
 - Include specific chapters on **criminal offenses**, including carbon credit fraud, manipulation, and greenwashing.
2. **Integration of Pancasila Ethics and Climate Justice into Environmental Laws**
 - Revise Law No. 32/2009 on Environmental Protection and Management to include explicit ethical provisions and principles of **intergenerational equity** and **global responsibility**.
 - Insert a “Pancasila Test” into Environmental Impact Assessments (EIA/AMDAL).
3. **Establishment of a Hybrid Governance Model**
 - Combine **mandatory regulatory frameworks** (for compliance markets) and **voluntary schemes** under international verification (e.g., Gold Standard, Verra) to ensure flexibility and inclusiveness.

B. Institutional Strengthening and Oversight

1. **Create a National Carbon Exchange Supervisory Body (BPN-Karbon)**
 - A cross-sectoral body to oversee pricing, trade, verification, and dispute resolution in carbon markets.
 - Involve stakeholders including indigenous communities, NGOs, academia, and financial regulators.
2. **Develop a Carbon Crime Monitoring Task Force**
 - In collaboration with law enforcement and financial intelligence units to monitor fraud, illicit trade, and money laundering linked to carbon credits.
3. **Improve MRV (Monitoring, Reporting, Verification) Systems**
 - Implement blockchain or AI-based verification for offset projects to prevent over-crediting and double counting.

C. International Collaboration and Market Integration

1. **Adopt Mutual Recognition Agreements (MRAs)**
 - With the EU ETS, Japan’s JCM, and Article 6.2 bilateral agreements under the Paris Agreement to ensure cross-border credit validity.
2. **Participate in the Voluntary Carbon Market Integrity Initiative (VCMI)**
 - Commit to integrity principles and transparent reporting mechanisms to build trust in Indonesia’s carbon assets.
3. **Enhance South-South Carbon Cooperation**
 - Collaborate with countries in the Global South on equitable carbon standards and knowledge sharing to avoid neo-colonial market dynamics.

D. Socioeconomic Justice and Local Participation

1. **Guarantee Revenue Sharing with Local and Indigenous Communities**
 - Ensure that at least **30% of carbon revenue** is directly allocated to forest-dependent communities and adat institutions.
2. **Establish a National Just Transition Fund**

- To support workers and communities affected by decarbonization, funded by a share of carbon trade revenue and donor grants.
- 3. **Mandate Free, Prior, and Informed Consent (FPIC)**
 - For all carbon projects, in accordance with international human rights and indigenous rights law.

Final Remarks

Indonesia stands at a crossroads. The country's rich natural capital, democratic values, and unique cultural-philosophical foundations offer an opportunity to lead a **new model of carbon governance** – one that does not replicate the failures of the Global North but innovates through justice, ethics, and ecological integrity. Adopting a **Pancasila-based legal framework** combined with a **climate justice paradigm** is not merely an ideological choice – it is a strategic imperative. This vision must be translated into **adaptive, inclusive, and enforceable regulations** that address the realities of the carbon market while safeguarding the rights of people and nature.

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