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A Critical Analysis of Carbon Trading Policy as an Action for Adaptation and Mitigation of Climate Change from the Perspective of Indigenous Peoples in Indonesia

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Abstract: The climate crisis, biodiversity loss and pollution are three planetary crisis facing humanity today. Studies show that the primary source of these crises is the massive emissions released by developed/industrial countries over the past decades through energy, agriculture, forest and land conversion, industrialization, and waste. In 2015, the world's nations committed to addressing the climate crisis, in accordance with the Paris Agreement. By passing Law Number 16 of 2016 about the Paris Agreement on the United Nations Framework Convention on Climate Change (UNFCCC), Indonesia, a party to the UNFCCC Conference of the Parties, ratified the Paris Agreement. Presidential Regulation Number 98 of 2021, which addressed the Implementation of Carbon Economic Values for Achieving Nationally Determined Contribution Targets and Control of Greenhouse Gas Emissions in National Development, was subsequently issued in response to this policy. The Indonesian government has disregarded the rights of Indigenous Peoples in favor of a carbon trading mechanism centered on forests and land, rather than reaffirming its commitment to combating climate change. This study critically examines carbon trading programs within the perspective of climate change adaptation and mitigation using a qualitative methodology grounded in literature analysis, particularly from the perspective of Indigenous Peoples. Findings indicate that carbon trading-based conservation models often contradict Indigenous Peoples' own conservation practices. In fact, in many regions, such projects trigger conflict, land grabbing, and the potential criminalization of Indigenous Peoples. Furthermore, carbon trading fails to address the root causes of the climate crisis. The offset scheme instead allows industrial actors to continue releasing emissions on a large scale. Therefore, this mechanism is inconsistent with the principles of climate justice, the fulfillment of Indigenous Peoples' rights, and the global obligation to curb global warming.

Keywords: Carbon Trading, Climate Changes, Adaptation and Mitigation, Indigeneous Peoples

INTRODUCTION

From the viewpoint of indigenous peoples, this essay seeks to critically examine the carbon trading strategy that the Indonesian government has put in place as a means of mitigating and adapting to climate change. One of the biggest problems the world is currently experiencing is climate change. Indeed, according to the United Nations (UN), the future of a happy and healthy existence on Earth is determined by three global crises: pollution, biodiversity loss, and climate change.

Through Law Number 16 of 2016 about the Ratification of the Paris Agreement to the United Nations Framework Convention on Climate Change, Indonesia, a participant in the Conference of the Parties (COP) on climate change, has ratified the Paris Agreement. This ratification resulted in a Nationally Determined Contribution (NDC) for participating countries, including Indonesia, with Indonesia's current target being an unconditional emission reduction of 31.89% as well as a conditional reduction goal of up to 43.2% from the business-as-usual scenario by 2030 with international help (Enhanced Nationally Determined Contribution Republic of Indonesia): 2022). (climatepromise.undp.org) This commitment is primarily related to the forestry and land sector, which produces 692 million tons (24.1%) of Carbon Dioxide Equivalent (CO_2e), followed by the energy sector at 446 million tons of CO_2e or 15.5% (Prihatiningtyas et al, 2023). To achieve this target, the Indonesian government issued The Implementation of Carbon Economic Values for the Achievement of Nationally Determined Contribution Targets and Control of Greenhouse Gas Emissions in National Development is the subject of Presidential Regulation Number 98 of 2021 (hereinafter abbreviated as Perpres NEK). As a policy instrument, the Presidential Regulation on Carbon Emissions (NEK) supports the realization of the 2021 National Development Planning (NDC) commitment by establishing a framework for accelerating greenhouse gas (GHG) emission control and ensuring that all stakeholders contribute collaboratively (Prihatiningtyas et al., 2023). This Presidential Regulation also regulates carbon trading. Carbon trading is a market-based method of lowering GHG emissions through the purchase and sale of carbon units, according to Article 1, Number 17 of the Presidential Regulation on Carbon Emissions (NEK). Carbon trading can be conducted through domestic and/or foreign trade, either through the carbon market through the Carbon Exchange/or direct trading.

The Presidential Regulation on Carbon Emissions (NEK) serves as an umbrella policy that serves as a reference for other sectoral ministries/agencies in formulating legal regulations related to carbon exchange. Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 7 of 2023 concerning Procedures for Carbon Trading in the Forestry Sector (Permen LHK No. 7/2023) and Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 21 of 2022 concerning Procedures for the Implementation of Carbon Economic Values (Permen LHK No. 21/2022) were issued by the government in the forestry sector. Through Regulation of the Financial Services Authority of the Republic of Indonesia Number 14 of 2023 about Carbon Trading Through the Carbon Exchange, the Financial Services Authority (OJK) was also designated as the organization and oversight body for the carbon exchange (Peraturan OJK No. 14/2023).

However, the Presidential Regulation (Perpres) NEK, which legitimizes the carbon trading mechanism, has drawn criticism from various parties, as it is considered a misguided approach to addressing the climate crisis (WALHI: 2023). In addition, this Presidential Decree causes legal uncertainty and has the potential to reduce the existence of indigenous communities and their traditional rights (Indigenous Peoples Defenders Association of the Archipelago (PPMAN): 2023). PPMAN (2023) explains that in the NEK Presidential Decree, indigenous communities are not clearly and firmly mentioned as organizers of carbon economic value, even though indigenous communities are subjects who have a direct

relationship or contribute directly to climate change mitigation actions. Another thing related to the regulation regarding carbon rights is that the control of carbon by the state in the NEK Presidential Decree is also considered to conflict with Paragraph 3 of Article 33 of the Constitution of 1945. According to Arizona (2022), while referring to the standards set by the Constitutional Court's interpretation of Article 33, Paragraph (3) of the 1945 NRI Constitution in Decisions Number 001/PUU-I/2003 and Number 3/PUU-VIII/2010, the NEK Presidential Decree is not in line with these provisions. This regulation explicitly positions the state as the sole holder of carbon rights, without ensuring its utilization by the wider community, including indigenous communities, equitable distribution of benefits from the carbon market, or public participation in carbon stock management.

In the context of the climate crisis, carbon trading represents a denial of state and corporate responsibility for historical emissions. Globally, CO_2 emissions across sectors have shown a sharp increase since 1850. This surge is primarily driven by fossil fuel consumption and industrial activity, while agriculture, Forestry, and Other Land Uses (FOLU) emerged as the second-largest contributors. In the 2010–2019 period, the fossil fuel and industrial sectors contributed approximately 58% of total global emissions. The latest data from the Statistical Review of World Energy published by the Energy Institute shows that these three sources still contribute approximately 82% of the total global energy mix (Kompas: 2024).

Meanwhile, agriculture and FOLU contribute 22% (IPCC, 2022). In Indonesia, the energy sector is not much different, with the FOLU sector emitting the highest emissions. Based on this data, the real effort to address climate change lies in drastically reducing emissions from these sectors. Carbon trading through the emissions trading mechanism and GHG emission "offsets" stipulated in the Presidential Decree on Climate Change (NEK) is considered far from a real effort to address the climate crisis. Broadly speaking, emissions trading is a system of buying and selling emission permit certificates, whereby parties requiring additional quotas can purchase them from others with surpluses (cap and trade). Besides, emission offsets are understood as a compensation mechanism for GHG emissions produced by an entity by implementing mitigation actions in different locations (Ministry of Finance, 2021). According to Espinosa-Flor et al. (2022, as cited in Syahroni, 2024), "cap-and-trade aims to make fossil fuels economically scarce by limiting emissions and granting tradable legal rights. Meanwhile, the carbon offset scheme refers to investment in mitigation projects in developing countries that provide carbon credits to investors to increase emissions" (Espinosa-Flor et al., 2022, as cited in Syahroni, 2024). This mechanism is also supported by national policies in Indonesia, which facilitate corporations in obtaining permits to exploit natural resources through mining, monoculture plantations, National Strategic Projects (PSN), and multi-business licensing policies in the forestry sector.

Carbon trading policies fall far short of real efforts to address climate change and achieve climate justice for all citizens of the earth, particularly Indigenous Peoples. This is reflected in the absence of recognition of Indigenous Peoples' position as subjects in the implementation of the Carbon Economic Value (NEK) and their carbon rights in the Presidential Regulation on the NEK. Yet, through forest management, Indigenous Peoples have made a significant contribution to mitigating the impacts of climate change, which impacts the quality of human life. Furthermore, carbon trading exacerbates the inequality in resource control and continues to provide ample opportunity for emitters to continue releasing emissions on a large and long-term scale. Paradigm deconstruction is crucial to understanding the root causes of climate change, in order to produce appropriate policy recommendations for addressing climate change that can achieve justice for Indigenous Peoples and environmental sustainability.

METHOD

This study examines current laws and regulations, jurisprudence, and doctrine using a normative legal research methodology. Legal principles, legal systematics, legal synchronization, legal history, and comparative law are all included in normative research (Soekanto, 2012).

To strengthen this research's argument, the choice of normative research method, based on laws and regulations, is structured using the following research approaches:

1. Socio-Legal. According to Sulistyowati Irianto, socio-legal studies are "the study of law using legal and social science approaches" (Irianto, 2012). The primary basis of socio-legal research remains normative legal research. However, to provide a societal context for a legal phenomenon, an interdisciplinary approach based on multiple theories and concepts is combined and utilized in its implementation.
2. The paradigm employed in this research is critical theory, employing Jacques Derrida's deconstructive thinking method. Deconstruction (dismantling) is conducted as an effort to open up a text to understand the boundaries of understanding and interpretation. This method typically involves confronting binary oppositions within the text, such as male/female, meaningful/meaningless, clear/vague, and so on.

This research critically examines the extent of the Indonesian government's efforts to address the climate crisis through carbon trading and its relevance to respecting, protecting, and fulfilling Indigenous Peoples' rights as holders of a set of rights to forests and other natural resources, areas that function to absorb carbon emissions. Furthermore, logic is needed through a trace examination, what is visible and what is hidden, supplements, and unmasking the text itself behind the Indonesian government's choice of a carbon trading scheme in mitigating and adapting to climate change. It is necessary in research to determine coherence and incoherence of the carbon trading scheme, its impact on Indigenous Peoples, and how the Indonesian government should undertake comprehensive efforts based on human rights and justice for indigenous peoples and environmental sustainability. The deconstruction technique in this paper is used with the intention of providing a method to criticize legal doctrines related to law, as well as showing that legal products have brought certain ideological thoughts and strengthening this research to interpret legal texts more critically (Arizona, 2010).

RESULT AND DISCUSSION

1. Principles and Values of Justice in the Climate

Binawan and Sebastian (2012) explain that there are various views on justice. First, justice can be interpreted as a virtue. The view emphasizes that justice arises from individual reflection on how to live a good life in harmony with ethics. Second, Slote (2010, as cited in Binawan & Sebastian, 2012) explains that justice as a virtue is not only personal but also present in communal life and forms the basis of social justice. In this sense, justice encompasses a broader scope and forms the basis for the birth of the idea of social justice. Walsh (2007, as cited in Binawan & Sebastian, 2012) emphasizes that justice is not only understood as a moral reflection but also as a principle governing the basic structure of society, particularly in the political, social, and economic spheres. Various schools of thought (of all kinds) regarding the meaning of justice can be traced from Ancient Greece to approximately the 20th century, from Aristotle to H.L.A. Hart, John Rawls, and Michael Walzer (Binawan and Sebastian, 2012).

Choirunnisa et al. (2023) explain that for Aristotle, justice is closely related to the principle of equality. Numerical equality means that everyone is treated equally, for example, with equal standing before the law. Meanwhile, proportional equality emphasizes that each individual receives their rights fairly, in accordance with their abilities and achievements.

Rahardjo (2014) explains that Aristotle divided justice into two forms: distributive and corrective. Distributive justice relates to public law, specifically the distribution of wealth, honor, and resources among citizens. Meanwhile, corrective justice focuses on redressing past wrongs, including correcting policies or laws that create problems and exacerbate inequality.

Responding to the diversity of views on justice, John Rawls (1921–2002) offered a procedural approach to address the ambiguity of its substance. He developed two fundamental ideas about justice. According to the first principle, everyone is entitled to an equal and unalienable set of fundamental liberties, the application of which is the same for each and every person. The second principle, known as the difference principle, asserts that social and economic inequality can only be justified if it satisfies two requirements: first, opportunities and positions must be freely available through equitable equality of opportunity; and second, the least advantaged group in society must benefit the most from such inequality. Rawls developed his theory by adopting some concepts from three previous philosophers. From John Locke, he borrowed the idea of rights and natural law; from J.J. Rousseau, he took the theory of social contract; while from Immanuel Kant, Rawls adapted the principle of moral transformation in contracts and the idea of the categorical imperative. (Taufik, 2013). According to Rawls, the principle of justice serves to provide special protection for the weakest groups in society. Every individual has the right to obtain basic freedoms in equal portions, and these rights should not be compromised for economic gain. If there is inequality in income, social status, power, or privilege, then this inequality is only valid if the conditions of the most disadvantaged groups improve compared to before (Magnis-Suseno, 2005).

In discussions about social, ecological, and climate change, the discussion of justice is a crucial aspect that is never neglected. Binawan & Sebastian (2012) explain that social justice cannot be viewed as a matter of individual morality, but rather as a social issue related to impersonal structures. Thus, the implementation of social justice does not depend on an individual's good or bad intentions, but is determined by the power structure within society, including economic, political, and cultural dimensions. Social justice requires that the various benefits of communal life be allocated in such a way that they reach the weakest or most disadvantaged groups in society.

Nancy Fraser sees plurality as crucial to constructing the meaning of justice. Her concept of social justice expands upon traditional understandings of justice. Fraser (1998) emphasizes that justice concerns not only the distribution of economic resources but also the recognition of cultural identities and equal participation in social life. Employing the framework of redistribution, recognition, and participation, she demonstrates that economic and cultural injustice are interconnected and can only be comprehensively addressed if every individual can participate equally in the social structure. Unlike redistribution, the politics of recognition focuses on cultural injustice rooted in patterns of symbolic domination within society. This form of injustice can arise through stereotypes, discrimination, or marginalization that weaken the identity of certain groups. Therefore, the politics of recognition demands respect for the diversity of identities and equal recognition for all social groups. The goal is to eliminate forms of cultural discrimination and create conditions that enable all groups to participate in social life on an equal footing. In addition to redistribution and recognition, Fraser (1998) adds a dimension of participation, which she calls participatory parity. This dimension emphasizes that social justice can only be achieved if every individual has equal opportunities to participate in social life. It means that everyone must be in conditions that allow them to interact as equals, without being hindered by economic injustice or cultural domination. Thus, participatory parity becomes the meeting

point connecting demands for redistribution and recognition, as both are seen as prerequisites for equitable social participation.

While social justice still heavily emphasizes humans as the primary actors (anthropocentric), ecological justice emerges by placing nature and other terrestrial creatures as actors in life. Essentially, the concept of ecological justice is a new concept emerging in discussions about justice. Ecological justice emerged as a response to ecological damage caused by industrialization and the exploitation of natural resources. This damage has been experienced by vulnerable groups such as indigenous communities, women, children, and the poor throughout the region. The unequal distribution of access to livelihoods and security of tenure has given rise to a deepening inequality between capitalists and the community. Large-scale exploitation has resulted in environmental damage, pollution, and the loss of livelihoods. On the other hand, the impacts of environmental damage are now widespread, extending beyond specific regional boundaries. The scarcity of once-abundant natural resources, such as water, has prompted a more serious reflection on the importance of ecological justice. Siagian Uli (2025) views ecological justice as recognizing that all living creatures, both human and non-human, have the right to live, thrive, and thrive. Ecological justice, of course, not only deconstructs the relationship between humans and nature, which should be equal, but also deconstructs the relationship between humans, the wealthy, and the weak and consistently marginalized. It is this dichotomy of human-nature thinking that actually reinforces the capitalist economic system, along with its hegemony and its hold on policymakers.

The understanding of ecological justice has then expanded to include the concept of climate justice. It is certainly inevitable, as the climate is part of ecology. Climate change is caused by the release of fossil fuel emissions and the depletion of underground fossil fuels to support industrialization. In 2023, researchers for the first time successfully assessed nine key processes that underpin the stability and resilience of the Earth system. The updated results indicated that six of the nine planetary boundaries had been exceeded, namely climate change. Violation of these boundaries increases the potential for large-scale environmental change that is abrupt and irreversible (Stockholm Resilience Centre, 2023). The escalating climate change has caused a climate crisis that has triggered biodiversity loss and pollution, known as the triple planetary crisis. In this regard, the principles and values of climate justice are beginning to be formulated by various parties. Justice that links human rights and development to accomplish a rights-based strategy for combating climate change is referred to as climate justice. Social justice, which encompasses equitable interactions between communities that aim to distribute wealth, access resources, and opportunities in line with the values of justice and fairness, is also a component of climate justice (IPCC, 2002).

In its position paper, "The People's Alliance for Climate Justice (ARUKI)," titled "The Climate Justice Coalition Urges the State to Immediately Draft a Climate Justice Law" (2023), the People's Alliance for Climate Justice (ARUKI) defines climate justice as a set of principles that affirm the need for a fair distribution of the benefits and burdens of climate action, a differentiated division of responsibilities based on historical contributions and state capacity, and an orientation toward equitable welfare and poverty alleviation. Furthermore, climate justice demands the recognition and active involvement of vulnerable groups such as women, children, persons with disabilities, and indigenous communities, along with procedural guarantees in the form of equal access to information, participation, and legal justice. Furthermore, these principles encompass corrective obligations for those who suffer harm, intergenerational responsibility to ensure the sustainability of benefits for future generations, and gender mainstreaming in climate change mitigation and adaptation. Further, these values and principles stem from the concepts of justice formulated by philosophers such as Aristotle, John Rawls, and Nancy Fraser, as outlined above.

2. Climate Change Discourse at the Global Level

The discourse on emissions trading is inseparable from the global agreement outlined in the Kyoto Protocol. This document serves as the operational instrument of the United Nations Framework Convention on Climate Change (UNFCCC). One key aspect of the protocol is the development of a flexible market mechanism based on an emissions trading system. In short, the international approach to reducing greenhouse gas emissions is done through a market-based trading scheme. Emissions trading is a mechanism that allows for the transaction of permits to pollute and the trading of carbon. Within the UNFCCC framework, there are three primary schemes offered: Emissions trading, joint implementation, and the Clean Development Mechanism (CDM). The core of these three mechanisms is carbon offsetting, although their implementation varies. The CDM, for example, permits developed nations (Annex I) to buy carbon credits from mitigation programs carried out in developing nations in order to offset their emissions. These offset projects are generally implemented through forest conservation or reforestation activities, particularly in countries with large tropical forests like Indonesia.

REDD (Reducing Emissions from Deforestation and Forest Degradation) has strong historical roots dating back to the 2007 UN climate talks in Bali. Two years earlier, at the 2005 climate negotiations, the Coalition of Rainforest Nations had pushed for the inclusion of forest loss compensation schemes in the carbon trading mechanism under the Kyoto Protocol. In 2007, in conjunction with the Bali conference, the World Bank introduced the Forest Carbon Partnership Facility (FCPF) as a first step in establishing a forest-based carbon market. Subsequently, various other initiatives were developed, such as the BioCarbon Fund and the Program for Forest Investment (FIP). Additionally, Norway's International Climate and Forest Initiative (NICFI) and the German government launched the REDD Early Movers (REM) program, which has grown to be a vital tool in promoting the adoption of REDD+ in several countries in the global South. Carbon trading is also supported by a third mechanism, namely emissions trading. Simply put, the emissions trading mechanism can be defined as the buying and selling of "emission rights," which can be conducted both between companies and between countries (Siagian & Arman, 2023). One form of implementation of this scheme is known as "cap and trade." Under this mechanism, parties with excess emissions quotas can sell them to other parties whose emissions exceed the specified limits.

For nearly two decades, global efforts to reduce emissions were carried out within the framework of the Kyoto Protocol. However, in 2015, the Conference of the Parties (COP) established the Paris Agreement, which replaced the Kyoto Protocol and entered into force in 2020. Institutionally, the Conference of the Parties (COP) is the highest organ in the climate change regime, as mandated by Article 7 of the UNFCCC. Its primary role is to establish decisions that support the effectiveness of the convention's implementation, while simultaneously evaluating the implementation of the UNFCCC and its resulting legal instruments (Prihatiningtyas et al., 2023). A total of 156 countries have ratified this agreement, committing to limiting global temperature rise to no more than 1.5°C by the end of the 21st century. The Paris Agreement contains 29 articles, with Article 6 being one of the most debated and frequently implemented clauses by various parties. At COP26 in Glasgow in 2021, an independent monitoring body was established with a mandate to develop recommendations regarding carbon removal standards and methods for issuing, reporting, and monitoring carbon credits. However, the proposal failed to gain approval at the 2022 and 2023 COP meetings, as several countries considered the recommendations weak and lacking a strong scientific basis. However, at the COP 29 climate meeting in Baku, negotiators reached a significant consensus on the rules for international carbon credit trading, ending nearly ten years of debate over this often-controversial mechanism. This agreement allows for a system where countries and companies can purchase credits for reducing or eliminating

greenhouse gas emissions in other regions and then claim them as part of their own climate targets.

Article 6 of the Paris Agreement has been central to discussions and political lobbying among negotiators at every COP, leaving Article 7, on adaptation, a subordinate issue. However, Article 7, paragraph 5 of the Paris Agreement, which Indonesia has also ratified, requires equitable adaptation policies, requiring special attention for vulnerable groups who lack equal access to address the impacts of the climate crisis. Adaptation needs to be designed with a national, gender-sensitive, participatory, and transparent approach. Furthermore, adaptation must consider the needs of vulnerable groups, communities, and ecosystems, and be based on the best available science. Where relevant, this process should also utilize traditional knowledge, indigenous wisdom, and local knowledge systems, with the intention of incorporating adaptation strategies into pertinent environmental, social, and economic policies and initiatives.

3. Constitutional Rights of Indigenous Peoples in Indonesia

The existence of indigenous peoples and their traditional rights has been recognized in the Indonesian constitution. As indicated in the accompanying table, this acknowledgment is specifically mentioned in a number of articles of the Republic of Indonesia's 1945 Constitution:

Table 1. Recognition of Indigenous Peoples in the 1945 Constitution Post-Amendment

Article 18 B paragraph (2)	As long as customary law communities continue to exist and are in line with societal advancements and the legal principles of the Unitary State of the Republic of Indonesia, the state acknowledges and upholds their traditional rights.
Article 28 I paragraph (3)	Traditional communities' rights and cultural identity are upheld in accordance with contemporary trends.
Article 32 paragraphs (1) and (2)	Article 1: By ensuring that communities have the freedom to preserve and grow their cultural values, the state promotes national culture in the context of global civilization. Article 2: Regional languages are valued and protected by the state as national cultural treasures.

The declaration of the existence of indigenous communities, as noted above, serves as a categorical statement that indigenous communities existed before the founding of the Republic of Indonesia, including affirming their traditional or ancestral rights, which have been held for generations. Thus, indigenous communities collectively formally have the constitutional right to participate fully and effectively in development processes, including the formation of laws and policies that directly impact them. Furthermore, this constitutional recognition implies that the state is obligated to ensure the protection, respect, and fulfillment of the collective rights of indigenous communities in the implementation of national development.

In addition to the constitution, recognition of the existence of indigenous communities and their traditional rights is also guaranteed in various sectoral laws with varying legal and political orientations (Jamin, Muhammad, 2012). The legal and political regulations related to indigenous communities include the following:

Table 2. Legal Policy on Recognizing Indigenous Community Unity as a Policy Basis and/or Policy Objective in Law

LAWS	DESCRIPTION
Law No. 5 of 1960 pertaining to the Fundamentals of Agriculture	Based on the idea that Indigenous Peoples are a part of a larger social entity, specifically the state, the legal policy of conditional recognition of Indigenous Peoples.
Last modified by Law No. 6 of 2023 concerning the Stipulation of Government Regulation in lieu of Law No. 2 of 2022 concerning Job Creation, Law No. 22 of 2001 concerning Oil and Gas became law.	The legal policy of recognizing, respecting, and protecting Indigenous Peoples holding customary rights, so that they are not harmed by oil and gas business activities in their customary legal territories.
Law No. 7 of 2004 concerning Water Resources	As long as they are still living and in line with societal advancement and the ideals of the Unitary State of the Republic of Indonesia, the legal policy of acknowledging and upholding Indigenous Peoples and their traditional rights, including the customary rights of local Indigenous Peoples and comparable rights.
Law No. 39 of 2014	As long as Indigenous Peoples are still alive and do not contravene national interests or higher laws, the legal policy of protecting them.
Last modified by Law No. 6 of 2023 concerning the Stipulation of Government Regulation in lieu of Law No. 2 of 2022 concerning Job Creation, Law No. 41 of 1999 concerning Forestry became law.	The legal policy of recognizing Indigenous Peoples, in the sense that Indigenous Peoples, as members of an Indigenous Peoples unit, are recognized for their rights to conduct forest management activities and collect forest products.
In lieu of Law No. 2 of 2022 about Job Creation as Law, Law No. 6 of 2023 concerning the Stipulation of Government Regulation most recently updated Law No. 26 of 2007 concerning Spatial Planning	In this instance, the legal policy of honoring Indigenous Peoples when implementing spatial planning upholds their rights within the framework of achieving social justice and general welfare for Indigenous Peoples.
In lieu of Law No. 2 of 2022 concerning Job Creation as Law, Law No. 6 of 2023 concerning the Stipulation of Government Regulation most recently revised Law No. 27 of 2007 concerning Management of Coastal Areas and Small Islands, as amended by Law No. 1 of 2014.	The legal policy of recognizing Indigenous Peoples' unity, in the sense of respecting, protecting, and fulfilling the rights of Indigenous Peoples as members of Indigenous Peoples' unity, within the framework of utilizing Coastal Areas and Small Islands for the greatest prosperity of the people.
In lieu of Law No. 2 of 2022 about Job Creation as Law, Law No. 6 of 2023 concerning the Stipulation of Government Regulation most recently updated Law No. 32 of 2009 concerning Environmental Protection and Management	The legal policy that acknowledges the unity of Indigenous Peoples in environmental protection and management consists of the following: (1) ensuring that the human right to the environment is fulfilled and protected; (2) ensuring that information, participation, and justice are all accessible; and (3) bolstering rights in environmental protection and management.
The Regional Government Law No. 23 of 2014	Recognizing the unity of Indigenous Peoples as a form of special and distinctive characteristics of a region within the Unitary State of the Republic of Indonesia is a legal policy that instructs regional governments to respect and preserve this unity in order to expedite the realization of community welfare.

Most recently, Law No. 2 of 2021 concerning the Second Amendment to Law No. 21 of 2001 concerning Special Autonomy for Papua Province revised Law No. 21 of 2001 concerning Special Autonomy for Papua.	The legal policy that acknowledges the unity of Indigenous Peoples, specifically the recognition and respect of Indigenous Communities' and Communities' (Indigenous Papuans') fundamental rights and their empowerment through the implementation of development aimed at meeting their basic needs as much as possible, especially to raise their standard of living.
Law No. 11 of 2006 pertaining to Aceh Governance	The legal policy that acknowledges the oneness of Indigenous Peoples, which includes the legitimacy of their customary laws, the recognition and respect of their customary governments incorporated into the state government structure, and the customary rights within the mukim.

As "special legal entities," indigenous communities possess several characteristics, including: a). Indigenous communities are non-state organizations capable of carrying out public legal acts that other civil society organizations cannot; b). The rights and authorities of Indigenous Communities as legal entities derive from inherent rights, which inseparably separate the private and public dimensions of customary-based legal order; and c). Members of Indigenous Communities merge into a shared identity, making their legal personality more natural than artificial (Simarmata and Steni, 2017).

With the publication of multiple rulings by the Constitutional Court (MK) of the Republic of Indonesia, the paradigm around Indigenous Communities and their traditional rights has also undergone major change. Several MK decisions even strengthen the position of Indigenous Communities as holders of traditional rights that should be protected and guaranteed by the state (Dyah Ayu Widowati, 2014). Various MK decisions regarding indigenous communities can be seen in the following table:

Table 3. Constitutional Court Decision on the Judicial Review of the Forestry Law

Case Number	Before the Constitutional Court Decision	After the Constitutional Court's Decision
No. 45/PUU-IX/2011	According to Article 1 Number 3 of the Forestry Law, Forest Areas are specific locations that the government has identified and/or decided to preserve as permanent forests.	According to Article 1 Number 3 of the Forestry Law, "forest areas" are specific locations that the government has identified and decided to preserve as permanent forests..
No.34/PUU-IX/2011	According to the Forestry Law's Article 4, paragraph 3, governmental management of forests must protect Indigenous Peoples' rights, provided those rights are acknowledged and exist and do not clash with national interests.	As long as Indigenous communities are still in existence and their existence is acknowledged, state control over forests must continue to protect, respect, and uphold their rights under Article 4 Paragraph 3 of the Forestry Law. These rights are granted in accordance with laws and regulations and do not conflict with national interests.
No. 35/PUU-X/2012	Customary woods are state forests situated on Indigenous communities' land, according to Article 1 Number 6 of the Forestry Law.	Customary woods are state forests situated on Indigenous communities' land, according to Article 1 Number 6 of the Forestry Law.

	According to Article 4 paragraph 3 of the Forestry Law, as long as Indigenous Peoples' rights are respected and their existence does not clash with national interests, the state must continue to include them when managing forests.	According to Article 4, paragraph 3 of the Forestry Law, as long as Indigenous Peoples are still living and in line with societal development and the legal principles of the Unitary State of the Republic of Indonesia, state management of forests must continue to take their rights into consideration.
	According to the Forestry Law's Article 5, paragraph 1, forests are divided into two categories based on their status: state forests and private forests.	According to the Forestry Law's Article 5, paragraph 1, customary forests are not included in the state forests mentioned in paragraph (1) letter a. Justification: The Forestry Law's Article 5, paragraph 1 is not legally binding. The Forestry Law's Article 5, Paragraph 2 is not legally binding.
	According to the Forestry Law's Article 5, paragraph (3), the Government decides the status of the forests mentioned in paragraphs (1) and (2), and customary forests are decided as long as the relevant Indigenous Peoples are still alive and acknowledged.	According to the Forestry Law's Article 5, paragraph (3), the government decides the status of the forests mentioned in paragraph (1), and customary forests are decided based on the fact that the Indigenous Community in issue is still alive and that its presence is acknowledged.

Based on the various legal regulations outlined above, the Indonesian government has both a legal and moral obligation to respect, fulfill, and protect the rights of Indigenous Peoples, particularly by providing policies that support Indigenous Peoples, including in efforts to address the current climate crisis.

4. Carbon Trading Regulations in Indonesia

Carbon trading has officially become a policy since President Joko Widodo issued Presidential Regulation (Perpres) NEK. Previously, the basis for implementing carbon trading in Indonesia relied on voluntary carbon trading conducted by northern countries and global private companies through The Forest Carbon Partnership Facility (FCPF), the BioCarbon Fund, the Forest Investment Program (FIP), the REDD Early Movers (REM) program, which was started by the German government and Norway's International Climate and Forest Initiative (NICFI), REDD (Reducing Emissions from Deforestation and Forest Degradation) projects, REDD+ with additional incentives or performance-based payments. Simply put, the carbon trading policy is divided into two phases: before and after Presidential Regulation No. 98 of 2021 (Perpres NEK).

Substantively, the nine regulations above govern carbon trading procedures as an emission reduction effort to be implemented by private companies and Annex 1 countries as compensation or offsets for their carbon emissions. One source of problems with these carbon trading procedures is the territorialization of forest areas by companies through Ecosystem Restoration permits or other forms of conservation project work areas. This has resulted in the exclusion of indigenous communities from their customary territories because the basic idea of carbon trading concessions is that no activity is permitted within the concessions, as this reduces carbon emission absorption. However, for indigenous communities, customary forest areas are an integral part of their living space and livelihoods.

Following the issuance of the Presidential Regulation (Perpres) on Climate Change Conservation (NEK), carbon trading in Indonesia became mandatory. Carbon trading in this Presidential Regulation is essentially only one part of the regulatory framework for achieving

the National Development Planning (NDC) targets through climate change mitigation and adaptation. Unfortunately, the Indonesian government has focused more on the detailed implementation and regulation of carbon trading, rather than on other measures such as carbon taxes, the establishment of emission caps for each sector, and other measures that could significantly reduce emissions. The Presidential Regulation (Perpres) on Climate Change Conservation (NEK) is the first legal instrument in Indonesia to explicitly regulate carbon rights. Based on Article 1, point 22 of the Presidential Regulation (Perpres), carbon rights are defined as a form of carbon control by the state, affirming the state's position as the primary authority in the management and utilization of carbon resources within Indonesia's jurisdiction.

The regulation of carbon rights is a fundamental issue within the Presidential Regulation (Perpres). The Presidential Decree on the Environment and Forestry System explicitly states that the state, as the sole holder of carbon rights, has diminished the existence of indigenous communities who have played an active role in maintaining carbon ecosystems through the customary forests they have owned and controlled for generations.

Arizona (2022) determined that the Presidential Decree on the Environment and Forestry System does not comply with the interpretation of Article 33 Paragraph (3) of the 1945 Constitution provided by Constitutional Court Decisions Number 001/PUU-I/2003 and Number 3/PUU-VIII/2010. As stated in Article 33 Paragraph (3) of the Republic of Indonesia's 1945 Constitution, governmental authority over natural resources has been gradually construed in Constitutional Court Decisions Number 001/PUU-I/2003 and Number 3/PUU-VIII/2010. The Constitutional Court stressed in both rulings that governmental control cannot be narrowly understood as total ownership, but rather encompasses regulatory (*regelendaad*), management (*beheersdaad*), administration (*bestuursdaad*), wealth management (*beheersdaad*), and oversight (*toezichthoudensdaad*). Thus, the state acts as a trustee (mandate holder) obligated to ensure that natural resource management provides the greatest possible benefit to the people.

Furthermore, the regulation of carbon rights through the Presidential Decree (Perpres NEK) is also deemed inconsistent with Article 33 paragraph (5) of the 1945 Constitution, as these rights should first be regulated in law. It is based on the principle that the regulation of rights, including carbon rights, is a substance that both grants authority and creates obligations, and therefore must be regulated through a legal instrument at the level of a statute. Therefore, regulating carbon rights through regulations under the law, The principles of constructing statutory regulations, as outlined in Article 5, letter c of Law No. 12 of 2011 concerning the Establishment of Legislation, including the principle of consistency between type, hierarchy, and content, are in conflict with presidential or ministerial rules (Arizona: 2022).

Additionally, disregarding indigenous peoples' rights in the context of carbon management may likewise go against the state's duty to uphold human rights. The state should not only control resources but also ensure that policies adopted do not create inequality or violate the rights of vulnerable groups. Therefore, to ensure compliance with constitutional principles and social justice, the regulation of carbon rights should be enshrined in legislation that establishes mechanisms for protection, participation, and equitable benefit sharing for indigenous peoples.

The derivative regulation of the Presidential Regulation on the technical mechanisms of carbon trading is Carbon Exchange Operators must be limited liability companies with legal standing in Indonesia, according to Article 11 of the Financial Services Authority of the Republic of Indonesia's Regulation No. 14 of 2023 concerning Carbon Trading Through Carbon Exchanges (OJK Regulation No. 14/2023). Additionally, as stated in paragraphs (1) and (2) of Article 13, such business entities are required to have a minimum capital of 100

billion rupiah, sourced from their own funds and not obtained through loans. The minimum capital requirement of 100 billion rupiah in the operation of carbon exchanges has the potential to strengthen the dominance of large business actors and limit the participation of local actors. It aligns with the findings of Rahmawati, Syafruddin, and Suryanto (2023), who emphasized that carbon trading mechanisms in Indonesia tend to reproduce structural inequalities between large-capital entities and local communities with minimal access to financial and legal resources. This condition shows that Indonesia's carbon rules still fall well short of the UNFCCC and Paris Agreement's requirements for inclusive involvement and environmental justice. Two regulations issued by the Environment and Forestry Minister also govern carbon trading in the land and forestry sectors. First, Regulation Number 7 of 2023 of the Republic of Indonesia's Environment and Forestry Minister pertaining to the Forestry Sector's Carbon Trading Procedures. Second, Regulation Number 21 of 2022 of the Republic of Indonesia's Environment and Forestry Minister pertaining to the Processes for Applying the Economic Value of Carbon (Permen LHK No. 21/2023).

In addition to the Presidential Regulation (Perpres) NEK or its derivatives, regulations regarding carbon trading are also contained in Article 13 paragraph (5) of Law No. 7 of 2021 concerning Tax Harmonization, which states that the subject of the carbon tax is consumers, not emitters. This provision further provides tax exemption to companies that have already emitted, while also accommodating corporations to continue emitting on a large scale. Meanwhile, consumers or the general public are forced to take responsibility for corporate emissions through the imposition of a carbon tax on every Indonesian citizen.

The idea of carbon trading was further pursued during the administration of President Prabowo and Vice President Gibran. The government is targeting state revenue from the carbon trading sector of 1,000 trillion Rupiahs. In this situation, the Indonesian government has effectively positioned itself as one of the countries that accepts the mainstream paradigm adopted by negotiators at various global climate talks, namely by denying the fact that emissions from large-scale industries and changes in forest function through mining concession permits and monoculture plantations are the primary causes of the current climate crisis.

5. The Impact of Carbon Trading on Society from a Theory of Justice

As a strategy for mitigating and adapting to climate change, the carbon trading mechanism is strongly tied to social and ecological factors. The main driver of climate change is the rise in atmospheric concentrations of greenhouse gases (GHGs), which are mostly produced by human activity and include carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fossil fuel combustion for energy, transportation, and industry is a major contributor to this increase in emissions. Furthermore, land-use changes and massive deforestation reduce the Earth's ability to absorb carbon, thus exacerbating global warming. Intensive agricultural and livestock activities also play a significant role through methane release and the use of chemical fertilizers that produce N_2O emissions. Meanwhile, the industrial sector, urbanization, and unsustainable waste management contribute to the global carbon footprint. Overall, the combination of these activities has altered the balance of the Earth's climate system and accelerated the rate of global warming, which now poses a serious threat to the sustainability of life on this planet (IPCC, 2021). It means that to address global temperature increases, drastically reducing greenhouse gas concentrations in the atmosphere from fossil fuel combustion, large-scale forest conversion for agribusiness, and large-scale livestock farming is an urgent need. Carbon trading will not be the answer to climate change. Moreover, offsetting schemes in carbon trading will only continue to allow emitters to continue releasing emissions on a large scale.

Indonesia's carbon trading policy will continue to perpetuate injustices against indigenous communities. This is because the right to carbon, as a state's right to control, results in violations of indigenous peoples' rights. The state, as the sole authority over carbon, can delegate authority to companies to conduct carbon trading through the territorialization of forests and land. This situation undoubtedly further restricts the space for participation and recognition of community rights, particularly indigenous communities, who have played an active role in maintaining carbon ecosystems through their customary forests. According to WALHI (2025), there are already 33 land-based carbon trading projects managed by private companies in Indonesia. These projects will undoubtedly grow, as the Indonesian government will soon open Indonesia's forest and land carbon trade to international markets.

Various problems related to territorial grabbing and the marginalization of indigenous communities can be seen in existing carbon projects in Indonesia. According to records from the Indonesian Forum for the Environment (WALHI, 2023), carbon trading practices in Indonesia have led to numerous cases of human rights violations and community displacement. One example occurred in the Aru Islands, where approximately 591,957 hectares of forest were allocated for a carbon project by the Melchor Group, called the Cendrawasih Aru Project, without any communication process or consent from the local indigenous community.

Another example is the REDD+ project by PT Restorasi Ekosistem Indonesia (PT REKI) in Jambi, known as "Hutan Harapan." Through Decree of the Minister of Forestry No. 327/Menhut-II/2010 dated May 25, 2010, the company obtained an Ecosystem Restoration permit covering an area of 46,385 hectares. However, instead of halting deforestation and forest degradation, the project caused environmental damage through the construction of a 26-kilometer-long, approximately 60-meter-wide coal mining road. The impacts of this activity threaten the survival of 1,300 plant species and 620 wildlife species living in the area, and have resulted in the loss of secondary forest timber with an estimated economic value of over IDR 400 billion. Furthermore, the project's implementation was also marred by the criminalization of the surrounding community. On November 5, 2010, PT REKI security forces arrested four residents of Dusun Tiga, Bungku Village, Bajubang District, Batanghari. A similar incident occurred on July 23, 2012, when two members of the Indonesian Farmers Union (SPI) were detained in the courtyard of the Batanghari Regency Forestry Office while attending an official invitation to discuss the inventory of community land in the Bukit Sinyal area, which was in conflict with PT REKI. Another arrest was made on October 18, 2012, of 13 SPI members by a joint team consisting of SPORC, Brimob, and company security personnel.

In Maerauke, the Melchol Group's carbon project, in collaboration with the Medco Group, which holds the Forest Utilization Business Permit (PBPH), for a 170,000-hectare industrial timber plantation, has encroached on the customary land of indigenous communities (WALHI, 2023). In Central Kalimantan, the Katingan project is underway, a collaboration between PT Rimba Makmur Utama and several partner organizations, including Wetlands International, the Puter Foundation, and Permian Global. This project began issuing carbon credits in May 2017. The project area is home to approximately 40,000 residents spread across 34 villages. Although billed as a climate mitigation initiative, the project is not free from social and ecological issues, such as alleged land grabbing and the emergence of forest and land fires within its concession area (WALHI, 2023). The findings above demonstrate that carbon trading will only further exacerbate the imbalance in control and access between indigenous communities and companies.

Furthermore, the offset scheme in carbon trading allows emitting companies to engage in greenwashing while simultaneously profiting and continuing to emit. Shell is reported to have purchased carbon credits from the Katingan Project as part of its emissions

compensation program. In a statement, Shell announced it would allocate US$300 million to support nature-based climate solutions to offset emissions from gasoline and diesel fuel use by its customers in the Netherlands. Meanwhile, in September 2019, Volkswagen also announced the purchase of carbon credits from the same project. This scheme allows both companies to continue their emissions activities while claiming their contribution to global carbon reduction—even though in practice, the emissions released continue to accumulate in the atmosphere over the long term (WALHI: 2023). Another greenwashing project is the Sumatra Merang Peatland project in North Sumatra. This project is a flagship initiative resulting from a collaboration between Forest Carbon and PT. Saratoga Investama Sedaya Tbk. The collaboration between the two parties is even planned to be expanded to Kalimantan, Papua, and other Southeast Asian regions. Through this carbon project, Saratoga has the potential to gain various benefits, not only financially through the sale of carbon credits, but also from the opportunity to extend emissions activities originating from extractive sectors such as mining and large-scale monoculture oil palm plantations through offset mechanisms.

CONCLUSION

In light of the facts outlined above, carbon trading policies, as a means of mitigating and adapting to climate change, remain far from the values and principles of justice regarding the recognition and protection of the constitutional rights of indigenous peoples. Climate justice demands a fair distribution of the benefits and burdens of climate action, a differentiated division of responsibilities based on historical contributions and state capacity, and a focus on equitable welfare and poverty alleviation. Furthermore, climate justice demands the recognition and active involvement of vulnerable groups such as women, children, persons with disabilities, and indigenous peoples, along with procedural guarantees in the form of equal access to information, participation, and legal justice. Furthermore, this principle encompasses corrective obligations for those who suffer losses, intergenerational responsibility to ensure the sustainability of benefits for future generations, and gender mainstreaming in climate mitigation and adaptation.

The fulfillment and respect of indigenous peoples' rights, along with the recognition of indigenous knowledge and traditional practices in climate change mitigation and adaptation, must be a primary foundation. One immediate step is to enact the draft Indigenous Peoples Law into law. Efforts to drastically reduce or even eliminate emissions from fossil fuels as energy sources, as well as forest and land use changes, are the most fundamental steps to address climate change. Therefore, policy corrections, even to the growth-based extractive economic system, are an absolute necessity and must be implemented immediately.

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