

Recognition of Forest Carbon Rights in Indonesia: A Constitutional Approach

Kenny Cetera*

Pontianak Official Certifier of Title Deeds, Indonesia

ABSTRACT: As a forest-rich nation, Indonesia has actively participated in carbon market governance like the REDD+ program. With the rapid expansion of REDD+ to address the effects of climate change, questions surrounding carbon rights have surfaced. This study aims to analyze the regulatory development of carbon rights in Indonesia and its impact on the community rights over forest resources by elaborating on the ideal carbon rights governance under a constitutional perspective. The study uses the normative method, which includes pertinent rules and supporting statements from climate change specialists. This study shows that carbon rights are defined broadly as the right to participate in forest carbon trading, although they require a government permit. There is no clear explanation of the relationship between land tenure and carbon ownership under the existing legislation, despite four permits to acquire carbon benefits: environmental service, social forestry, ecosystem restoration, and forest carbon administration permit. While the state can claim state control rights on certain commodities like carbon under Article 33 of the Indonesian Constitution, it also has to manage the distribution of carbon incentives based on the public interest. By facilitating the transfer of carbon rights under a carbon trading scheme while highlighting the government's role in sharing the benefits of carbon via a result-based payment scheme, Presidential Regulation 98/2021 contributes to more explicit control of carbon rights. All concerns related to carbon rights governance in Indonesia include complicated administrative and technical requirements for applying for a license, insecure land tenure due to overlapping claims, and unlawful encroachment in forest regions. Since land tenure issues remain unresolved, recognizing carbon rights as an alternative to recognizing marginal and community rights to forest resources could be viable.

KEYWORDS: Environmental Regulation, Forest Carbon Rights, REDD+.



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* Corresponding author's e-mail: ceterakenny@gmail.com

I. INTRODUCTION

The severe impact of climate change is unquestionable. Climate change amplifies extreme weather events, such as landslides, droughts, and high winds.¹ Consequently, many countries are already unified and committed to acting against this phenomenon. Mitigating the impact of forest and land-use-driven emissions has become a proposed alternative against climate change issues. The forest is a key resource to reduce the impact of climate change since trees and peatlands serve as natural carbon capture.² For forested countries like Indonesia, keeping the natural forest and planting trees is also the cheapest measure against climate change impact. However, 63% of Green House Gases (GHG) emissions in Indonesia came from land-use change and forest and peatland fires. Indonesia was also the second-largest emitter of GHG from the forest after Brazil.³

REDD+ is believed to become the global commitment to reduce the impact of forest and land-use emissions.⁴ Over the past decade, REDD+ was negotiated under the UN Framework Convention on Climate Change (UNFCCC) and endorsed under the 2015 Paris Agreement.⁵ Through REDD+, developed countries can provide financial incentives to developing countries for reducing forest-based emissions and enhancing the carbon capture and storage functions of the forest.⁶ In other words, developing countries can receive ex-post payments for verified emission reductions, which can be financed either from public funds or carbon

¹ Frances Seymour & Jonah Busch, *Why Forest Why Now? The Science, Economics, and Politics of Tropical Forests and Climate Change* (Washington DC: Center for Global Development, 2016) at 1.

² *Ibid* at 2.

³ Luca Tacconi & Muhammad Zahrul Muttaqin, “Reducing emissions from land use change in Indonesia: An Overview” (2019) 108:101979 *Forest Policy and Economics*.

⁴ The term REDD+ stands for Reducing Emissions from Deforestation and Forest Degradation plus Conservation, Sustainable Forest Management, and Enhancement of Forest Carbon Stocks.

⁵ Frances Seymour & Jonah Busch, *supra* note 1 at 11.

⁶ Interview, Climate Research Analyst at World Resources Institute Indonesia, 4 November 2021.

markets.⁷ According to Decision I/CP.16 UNFCCC, the benefits of the REDD+ program shall be enjoyed directly by the community group, especially those who belong to vulnerable groups.⁸

There is a debate on REDD+ implementation for the benefit-sharing mechanism on parties who shall receive the funding and non-monetary benefits of the project.⁹ While REDD+ incentives are delivered only to individuals with legal title or rights, it could threaten the livelihood of communities living in the forest though they contribute to keeping the forest. Therefore, the hypothesis is that those people should be given a right or title by the law to claim the incentives rightfully.

Scholars working on REDD+ define this right as carbon rights. Carbon rights have become prominent in forest emission reduction programs like REDD+. An adequately designed regulatory system in the land title is essential to incentivize the relevant actors or carbon owners.¹⁰ Many criticisms have to surface, especially from environmental defender groups, toward implementing REDD+ and carbon trading, which are presumed only to benefit individual landowners and enterprises and neglect the interest of local and *adat* communities.¹¹ To prevent the marginalization of these communities from REDD+ and forest carbon trading, a robust and crystal clear regulation governing carbon rights is essential.

Current Indonesian laws have not addressed detailed carbon rights formation, substance, and scope provisions. Notably, the regulations have not clarified the relationship between carbon rights with the ownership of lands and the possibility of conflicts between those two.¹² Indonesia is not alone since other Global South countries struggle to regulate carbon rights

⁷ Frances Seymour & Jonah Busch, *supra* note 1 at 5.

⁸ Eko Komara et al, “Kajian Mekanisme Benefit Sharing FCPF Carbon Fund untuk Pendanaan Desa Hijau di Kalimantan Timur” (2017) WWF Indonesia at i.

⁹ Pham Thu Tuy et al., *Approaches to Benefit Sharing: A preliminary comparative analysis of 13 REDD+ countries* (Bogor: CIFOR, 2013) at 5.

¹⁰ Alain Karsenty, Aurelie Vogel, & Frederic Castell, “Carbon Rights, REDD+ and payments for environmental services” (2014) 35 Environmental Science Policy at 20-29.

¹¹ Komara et al, *supra* note 8.

¹² Feby Ivalerina, *Konsep hak-hak atas Karbon* (Epistema Institute, 2010).

to ensure fair benefit-sharing for their citizens. For instance, Peru has issued a law on payment of ecosystem service (PES) that allows informal landholders the right to participate in carbon rights activities.¹³ However, it did not address how indigenous and small farmers meet the standard as the holder of carbon rights. Brazil is one step ahead in recognizing the indigenous people's property rights on carbon. However, it is still unclear how indigenous people have been prepared to participate in REDD+ projects and other carbon-related agreements.¹⁴ Meanwhile, Ecuador recognizes indigenous community rights on forest land under its constitution, yet it does not include carbon rights and environmental rights.¹⁵ The experiences of those global south countries pinpoint that legal recognition of carbon rights alone is not enough to ensure the individual landowner receives the incentives of forest carbon projects.

As one of the earliest studies in Indonesia, Ivalerina represents a discussion of the legal framework of carbon rights.¹⁶ This study elaborates relevant international legal instruments, especially traditional community rights over natural resources and property rights under the Indonesian Civil Code (KUHPerdota). Another study made by Thohari (2016) reviews carbon property rights from Islamic law.¹⁷ This study is increasingly important to academic debate by examining carbon rights under the constitutional framework as the supreme law in Indonesia's legal system. This study highlights relevant and latest regulations, such as several Ministry of Environment and Forestry (MoEF) regulations on carbon incentives and the Presidential Regulation on carbon economic value.

This study aims to discuss the concept of carbon rights under the existing legal framework in Indonesia, following the ideal carbon rights governance under the constitutional framework, especially on the state control rights

¹³ Lasse Loft et al., "Taking Stock of Carbon Rights in REDD+ Candidate Countries: Concept Meets Reality" (2015) 6:4 *Forests* 1031–1060 at 6.

¹⁴ *Ibid.*

¹⁵ Charlotte Streck, "Who Owns REDD+? Carbon Markets, Carbon Rights and Entitlements to REDD+ Finance" (2020) 11:9 *Forests* at 7.

¹⁶ Feby Ivalerina, *supra* note 12.

¹⁷ Ahmad Thohari, *Status Kepemilikan Karbon Hutan (Carbon Property Right) Perspektif Hukum Bisnis Islam* (Jogjakarta: UIN Sunan Kalijaga, 2016).

over natural resources. It is essential to comprehend the concept of carbon rights since various regulations instead of specific rules regulate it. The constitutional analysis sheds light on Indonesia's public-sector approach to carbon-rights management. The second part discusses the methodology of this research. The third part examines the legal basis for carbon rights based on available acts, government regulations, and ministry regulations. The Fourth Part delves deeper into "state ownership rights" as Article 33 of the 1945 Constitution and its relationship with carbon rights. The last, this paper is ended with a conclusion.

II. METHODS

The methodology used in this paper was the normative approach, starting from a literature review to collect and clarify the problems, analyze legal bases for carbon rights governance in Indonesia, find insights on the implementation through interviews and compare this with the carbon rights regime in other countries. The authors procure two types of data for the research. First, Primary data was obtained through interviews with two climate change experts who had longstanding experience working on climate research projects in Indonesia. Second, secondary data was obtained from relevant literature, acts and regulations. This research used the qualitative method by envisaging and interpreting the existing condition, growing opinion, current business process, and the developing tendencies of the research object.¹⁸ The research first described some legal frameworks in Indonesia and discussed the relevance of carbon rights with the constitutional norm, particularly outlined in the 1945 Constitution, then identified the governance model of carbon rights and its enabling conditions in Indonesia.

¹⁸ Sunarto, *Metode Penelitian Hukum* (Surabaya: Usaha Nasional, 1990) at 47.

III. LEGAL FRAMEWORK ON CARBON RIGHTS UNDER INDONESIAN LAW

Carbon rights refer to a justified claim that there is a benefit from reduced GHG emissions or sequestered carbon.¹⁹ The claim can refer to ownership or management right to land that enables forest preservation.²⁰ With abundant monetary benefits from the carbon market, issues about how these benefits will be distributed and shared among many actors have remained unanswered.

The scope of REDD+ goes beyond establishing market-based instruments for carbon commodities. A carbon market scheme akin to REDD+ often requires compliance with human rights obligations and inclusion of gender equality, which need to be inspected by third parties for credits to be certified and marketable. The size of forest estate in Indonesia is 125,9 million ha or 63.7% of the total size of Indonesian land.²¹ The Indonesian law does not allow land rights in forest estates. However, approximately 9,2 million families live in forest areas; 1,7 million were categorized as impoverished.²² It is essential to formulate property rights to the carbon sequestered in forests or the right to benefit from activities that contribute to carbon storage and sequestration in market-oriented programs like REDD+ to claim benefits rights in market-oriented initiatives.²³ A clear definition of carbon title is required on the carbon market to attract private sector capital to be bought and traded without ambiguity.²⁴

¹⁹ Alain Karsenty, Aurelie Vogel, & Frederic Castell, *supra* note 10 at 23.

²⁰ Streck, *supra* note 15 at 2.

²¹ PPID Kementerian Lingkungan Hidup dan Kehutanan (KLHK), “Komitmen KLHK untuk langkah-langkah korektif bidang kehutanan”, *KLHK* (April 2018), online: <http://ppid.menlhk.go.id/siaran_pers/browse/1158#:~:text=Jakarta%2C%20Kementerian%20Lingkungan%20Hidup%20dan,7%25%20dari%20luas%20daratan%20Indonesia>.

²² Warta Ekonomi, “Miris, 1,7 juta Keluarga di Kawasan Hutan Masih Miskin” (2019) online: <<https://www.wartaekonomi.co.id/read218735/miris-17-juta-keluarga-di-kawasan-hutan-masih-miskin>>.

²³ Darryl Vhugen et al., *REDD+ and Carbon Rights: Lessons from the Field* (Seattle: USAID, 2012) at 33.

²⁴ *Ibid* at 23.

According to Article 5 of Forestry Law 41/1999, in conjunction with Constitutional Court Decision No. 35/2012, the forest can comprise three types according to its status: state, private, and *adat* forests. The act envisages recognizing communal and individual rights over forest resources, though "carbon rights" are not articulated under the Forestry Act. Although Indonesia has no particular carbon rights laws, similarities can be derived from existing resource laws. Carbon rights can be linked to land and carbon-storing trees and goods and services produced on the land, such as timber, non-timber forest products, and ecosystem services.²⁵ Though it did not mention carbon specifically, Indonesian Basic Agrarian Law (BAL) applies the principle of *horizontal scheiding*. This principle asserts a separation of ownership between land and goods above and below the surface.²⁶ Rooted from indigenous (*adat*) law, *horizontal scheiding* is manifested in several types of land rights, such as the right to build or *hak guna bangunan* (HGB), the right to cultivate or *hak guna usaha* (HGU), and the right to use or *hak pakai* (HP).²⁷ These rights allow the owner to use other people's land with extensive authority, such as building, cultivating, using, and planting.²⁸ Even when the rights have expired, the HGB, HGU, and HP holders are still entitled to compensation for their buildings, plants, or other things attached to the land. This principle can also be extrapolated to forest resources. It also implies that the ownership of land or trees does not necessarily give the owner the legal right to benefit from carbon emission reduction on his land.

In addition, Indonesian law acknowledges the rights of forest communities and indigenous rights for timber, non-timber forest products (NTFP), and payment for ecosystem services. According to Article 67 of Forestry Law, indigenous communities have the right to collect forest products, manage the forest, and obtain a capacity-building as long as their existence exists

²⁵ Anne M Larson et al., "Land Tenure and REDD+: The good, the bad and the ugly" (2013) 23:3 *Global Environmental Change* 678–689.

²⁶ F Husni Hasbullah, "Azas Pemisahan Horizontal (Horizontal Scheiding) Dalam Hukum Tanah di Indonesia dan Permasalahannya" (1992) 22 *Jurnal Hukum Pembangunan* 77–87.

²⁷ *Ibid.*

²⁸ *Ibid.*

and is acknowledged. However, indigenous communities shall be stipulated under the regional regulations or *peraturan daerah* (perda). Carbon, which is stored in trees, should be considered an ecosystem service product among the three types of forest products (timber, NTFP, and ecosystem services). Unlike timber and NTFP, it requires no physical extraction from the trees and land. Forest Ecosystem services are included as environmental services under the existing legal framework and were previously regulated under Government Regulation (GR) on Forest Planning 6/2007 (as then amended by GR 3/2008). After enacting Job Creation Law 11/2020, GR 6/2007 and GR 3/2008 are replaced and annulled by the GR on Forestry Management 23/2021. The environmental services license suggests that carbon tenure in state forests does not entail the right of ownership. However, it is limited to the right of enterprise by selling sequestered carbon to third parties.²⁹ GR No. 23/ 2021 did not stipulate any provision on the ownership of the carbon, and access to carbon requires a government permit, a similar scheme to GR 7/2007 and GR 3/2008. According to Article 13(1) of GR 23/2021, carbon sequestration and storage are among the incorporated eligible environmental services that the Central Government shall authorize through permit issuance. Carbon sequestration and storage activities can be conducted in protected and production forests.³⁰ In protected forests, licenses are awarded 35 years, whereas they are granted up to 90 years in productive forests.³¹

As the implementing regulation of GR 23/2021, the environmental services are available in Ministry of Environment Regulation 8/2021. It deals with forest governance and creating a forest management plan and forest utilization in protected and production forests. Subsequently, the holder of environmental service licenses should pass technical procedures, such as inventorying the potential of environmental services and reporting

²⁹ Lasse Loft et al., *supra* note 13 at 6.

³⁰ Dimas Bagus Triatmojo, Warah Atikah & Nurul Laili Fadhilah, "Revisiting the Land Conversion of the Protected Forest for the Mining Industry in Tumpang Pitu, Banyuwangi" (2020) 1:1 Indonesian Journal of Law and Society 37–56 at 40.

³¹ Articles 133, 135, and 150 of the Government Regulation No. 23 of 2021 on Forestry Management.

the production report to the government.³² It asserts that they must first calculate the carbon stored in the permit area before conducting a carbon trading scheme. The government also imposes a non-state revenue levy called the Provision of Forest Resources for carbon storage and sequestration activities. According to GR 12/2014 on types and tariffs on non-tax government revenue in the Ministry of Forestry, the tariff of carbon storage and sequestration commodities is 10% of the sales or transaction value.³³

Beside Ecosystem service permits, forest communities could also obtain social forestry licenses in forest estates to claim the REDD+ benefits. In 2014, President Jokowi announced the allocation of 12,7 million ha for social forestry licenses.³⁴ According to Article 1(64) of GR 23/2021 on forest management, social forestry is a sustainable forest management system, both in forest estate and private forest/*adat* forest. Local communities implement it, and *the adat* law community is the leading actor in improving their welfare, ecological balance, and social culture dynamics in the form of *adat* forest (*hutan adat*), village forest (*hutan desa*), community plantation forest (*hutan tanaman rakyat*), community plantation (*hutan kemasyarakatan*), and partnership.³⁵ The procedural details for social forestry application are further regulated under MoEF Regulation 9/2021 on the management of social forestry. Akin to the environmental services license, the communities have to provide several technical documents. Even for the *adat* forest scheme, the communities should apply first to recognize the *adat* law community through regional regulations.

³² Article 1(73) of Ministry of Environment and Forestry Regulation No. 8 of 2021 on Forest Governance and the Creation of Forest Management Plan and Forest Utilization in Protection Forest and Production Forest.

³³ Annex of The Government Regulation No. 12 of 2014 on Types and Tariffs on Non-tax Government Revenue in the Ministry of Forestry at 11.

³⁴ Kementerian Komunikasi dan Informatika, “Perhutanan Sosial, Kini Masyarakat legal Mengelola Hutan”, *Kementerian Komunikasi dan Informatika* (2017), online: <https://www.kominfo.go.id/content/detail/10564/perhutanan-sosial-kini-masyarakat-legal-mengelola-hutan/0/artikel_gpr>.

³⁵ Article 1 (1) of Ministry of Environment and Forestry Regulation No. P.83/MENLHK/SETJEN/KUM.1/10/2016 on Social Forestry.

Private sectors could also access the incentives of carbon mitigation projects by applying for concession permits in forest estates called Ecosystem Restoration Permit or *Izin Usaha Pemanfaatan Hasil Hutan Kayu Restorasi Ekosistem* (IUPHHK-RE). This license is issued to develop on production forest, which entails a vital ecosystem. Thus, its function can be maintained to restore biodiversity and non-biodiversity elements in the forest.³⁶ Unlike the traditional concessions, the focus of IUPHHK-RE is not to extract timber but to restore the forest area through activities like planting/reforestation and wildlife conservation. However, the applicants of IUPHHK-RE should establish a registered business entity, such as cooperatives, firms, and limited liability companies.³⁷ Two world's most significant forest-carbon mitigation projects, PT Rimba Raya Utama and PT Rimba Makmur Utama, utilize IUPHHK-RE as the legal permit for managing the forest concession in Central Kalimantan.³⁸ The main target of these companies is to sell their certified carbon market on the global voluntary carbon market.

Two MoEF regulations intersect with carbon rights, namely MoEF Regulations P.30/Menhut-II/2009 on the REDD procedures and P.20/Menhut-II/2012 on the administration of forest carbon. Article 14(1) of MoEF Regulation P.30/2009 stipulates that the right of REDD participants includes obtaining payment from an international entity for the emission reduction and selling the carbon credit (REDD) certificate post-2012 which is pertinent to the implementation of emission reduction commitment from developed nations. Hence, Article 9 of MoEF Regulation P.20/2012 mentioned that the right of forest carbon organizer includes managing the activities pertinent to the administration of forest

³⁶ Article 1(11) of Ministry of Environment and Forestry Regulation No. P.28/MENLHK/SETJEN/KUM.1/7/2018 on the Procedures of Permit Issuance, Working Area Expansion and Extension of Natural Forest Concession, Restoration Ecosystem Concession or Plantation Forest Concession on Production Forest.

³⁷ Article 7 of Ministry of Environment and Forestry Regulation No. P.28/MENLHK/SETJEN/KUM.1/7/2018 on the Procedures of Permit Issuance, Working Area Expansion and Extension of Natural Forest Concession, Restoration Ecosystem Concession or Plantation Forest Concession on Production Forest.

³⁸ Dinas Kehutanan Kalimantan Tengah, "Tata Batas Kawasan Hutan", (2013), online: <<https://dishut.kalteng.go.id/?mode=datainformasi&id=8&parent=1>>.

carbon within the permitted time and trading and/or not trading his forest carbon. However, these regulations did not address the detailed scope of carbon rights and their relationship with land ownership.

MoEF Regulation P.20/2012 defines five-carbon storage activities and/or sequestration. They are (a) nursery, planting, and maintenance of forest and lands and sustainable forest management; (b) the extension of harvesting cycle on and/or enrichment planting of timber harvesting permit; (c) protecting, securing the area of timber harvesting permit; (d) Protection of biodiversity; and (e) Sustainable management of the protected forest. It also stipulates groups of license holders that can perform the carbon storage and sequestration. They include natural forest concession, plantation forest concession, ecosystem restoration, community plantation forest concession, community forest concession, village forest concession, village forest concession, non-timber forest product permit, natural tourism service permit, and environmental service permit.³⁹

To participate in the carbon market scheme, one should own a forest carbon administration permit. Article 7(1) of P.20/2012 mentioned that the permit is integrated and attached to the business permits mentioned above, thus inferring that the license holders do not need to apply for a different permit. However, according to Article 8(2) of MoEF Regulation P.36/Menhut-II/2009 on the licensing of carbon sequestration and storage on the production and protected forests and its amendment, the business holders must obtain MoEF approval to execute carbon storage and sequestration activities.

According to Article 7(5) of MoEF Regulation P.20/2012, the private forest owner or manager still needs to apply for the forest carbon administration permit to the MoEF on his land.⁴⁰ This clause is unusual because the private forest is beyond the forest estate, where the MoEF has no jurisdiction. Indonesia's land status can be classified into forest estate

³⁹ The other license types include concessions on protected forest, conservation forest manager, production forest management unit manager, protected forest management unit manager, *adat* forest manager, and private forest owner/manager.

⁴⁰ Article 7(5) of MoEF Regulation P.20/Menhut-II/2012 on the Administration of Forest Carbon.

and other-use regions. MoEF holds the authority to manage the forest estate, including issuing a license or permit.

Simultaneously, Other-use areas can be distributed to individual owners by granting ownership and the right to build as regulated under BAL. Ministry of Agrarian and Spatial Planning/Head of Land National Agency is the authorized institution for issuing the certificates. Thus, forest estate and other-use areas categorized imply legal consequences and separate authorities between state agencies. The REDD+ designated areas were determined based on the biophysical nature of the forest, such as whether the area is a primary or secondary forest and not concerned with the legal status of the land.⁴¹

Regulation	Access to carbon benefits	Targeted Holder
GR 23/2021 and MoEF Regulation 8/2021	Environmental Service licenses	Private sectors and forest communities
GR 23/2021 and MoEF Regulation 9/2021	Social forestry license	Forest communities
MoEF Regulation P.28/2018	Ecosystem Restoration Concession	Private sectors
MoEF Regulation P.20/2012	Forest carbon administration permit (integrated and attached to concession license)	Private sectors, forest communities, forest management unit (regional government institution)

Table 1. *Summary of Legal Framework on Carbon Rights Recognition in Indonesia*

Under the MoEF Regulation P.70/2017 on implementing REDD+, the REDD+ designated area as *Wilayah Pengukuran Kerja (WPK)*. It is the area for implementing the climate change action under the REDD+ scheme

⁴¹ MoEF, Regulation P.70/MENLHK/SETJEN/KUM.1/12/2017 on the Procedures of Implementing REDD+, Annex IIA.

and a unit for measurement, reporting, and verification.⁴² P.70/2017 stipulated around 96 million ha of Indonesian forest, regardless of its legal status as REDD+'s WPK. This regulation does not define carbon rights, but Article 19 of P.70/2017 stipulates that the recipient of REDD+ consists of (i) government institutions at the national and subnational level, (ii) Civil Society Organizations, (iii) businesses, (iv) research/ education institution, and (v) community group. Administratively, the community groups can obtain the benefits of REDD+ if they are registered as "proponents" under the national registration system.⁴³

Accordingly, the access to carbon was managed under the permit or license (*izin*) instead of the rights (*hak*) regime. It applies to forest estate and other-use areas since the individual landowners should obtain a license to trade the carbon. One of the distinct features between license and rights is that rights are transferable and can be collateral.⁴⁴ The next chapter will assess whether the existing legal framework on carbon rights has been in conjunction with the constitution as Indonesia's supreme law. The discussion will emphasize Article 33 of the 1945 Constitution as the constitutional basis of underlying the state authority to control natural resources in Indonesia.

IV. THE IDEAL CARBON RIGHTS GOVERNANCE UNDER THE CONSTITUTIONAL FRAMEWORK

State control over natural resources in Indonesia derives from Article 33.⁴⁵ This Article has some legal issues. First is the state control of the vital

⁴² *Ibid*, Article 1(24).

⁴³ *Ibid*, Article 3.

⁴⁴ Constitutional Court, Decision No. 3/ PUU-VIII/ 2010 at 38.

⁴⁵ Article 33 of the 1945 Constitution consists of five sub-articles, which outline as follows:

- 1) The economy shall be organized as a shared endeavor based upon the principles of the family system.
- 2) Sectors of production which are essential for the country and affect the life of the people shall be under the powers of the state.
- 3) The land, the waters, and the natural resources within shall be under the powers of the state and shall be used for the greatest benefit of the people.
- 4) The organization of the national economy shall be conducted based on economic democracy, upholding the principles of togetherness, efficiency with justice, continuity,

production sector. The second is the use of natural resources for the public interest. A threshold to determine whether the Indonesian government could exercise its right to control particular natural resources should be whether such resources are vital production sectors for the country, affecting the people's lives."⁴⁶ In practice, most natural resources activities, such as forest, mining, oil, and gas, are defined as the act of the state control rights.⁴⁷ The state control rights are not similar to property rights since the state does not literally own the commodities. However, the state has the authority to handle (*bestuursdaad*), regulate (*regelendaad*), manage (*beheersdaad*), and supervise (*toezichthoudensdaad*).⁴⁸ At the same time, Indonesia adopts the welfare state doctrine in which the state holds a significant role in economic activity to benefit people.⁴⁹ Finally, by using Article 33 as its basis, several acts on natural resources governance, such as Management of Water Resources Law 7/2004, Oil and Gas Law 22/2001, and Electricity Law 20/2002, have been challenged in the Constitutional Court by various community groups. As a commodity stored in trees and forests, the legal interaction between carbon rights and Article 33 of the 1945 Constitution is inevitable.

One of the objectives of creating a constitution is to provide due security for the individual citizen's rights as respect a person, property, and opinion so that he shall have nothing to fear from the executive or the tyranny of an exciting majority.⁵⁰ Article 33 of the 1945 Constitution governs the

environmental perspective, self-sufficiency, and keeping a balance in the progress and unity of the national economy.

5) Further provisions relating to the implementation of this Article shall be regulated by law.

⁴⁶ *Ibid.*

⁴⁷ Ardianto Budi Rahmawan & Kenny Cetera, "Kajian Teori Public Trust Doctrine pada Kasus Lingkungan: Studi Kasus UU Minerba Baru" (2020) 7:1 Jurnal Hukum Lingkungan Indonesia at 28–47.

⁴⁸ Constitutional Court, *supra* note 44 at 27.

⁴⁹ Kuntana Magnar, Inna Junaenah, & Giri Ahmad Taufik, *Tafsir MK atas Pasal 33 UUD 1945: (Studi atas Putusan MK Mengenai Judicial Review UU No. 7/ 2004, UU No. 22/ 2001 dan UU No. 20/2002)* (2010)" at 111-180.

⁵⁰ Fenty Puluhwala & Amanda Adelina Harun, "Implementation Article 33 Paragraph (3) of UUD NRI 1945 in Law of Coastal Areas and Small Areas Management" (2017) 62 Journal of Law, Policy and Globalization 62 at 33-38.

economic rights of individual citizens over the natural resources in Indonesia, though it denotes the state control of natural resources. Individual land rights outside forest estate are recognized under BAL. However, as discussed in the previous chapter, individual citizens could only access the carbon benefits using government permits, such as environmental services and social forestry licenses.

One might debate whether it is right to put the state as the controller of carbon benefits and alienate individual property rights. The Constitutional Court perceives that it is not always wrong to not grant individual property rights against a particular commodity despite recognizing fundamental rights under the constitution. In Decision No. 3/PUU-VII/2010, Constitutional Court decided the legal issues on the notion of Coastal Water Concession Rights or *Hak Pengusahaan Perairan Pesisir* (HP-3) as formed by Management of Coastal Areas and Small Islands Law 27/2007. HP-3, a right rather than a permit, could have potentially transferred to private domination and deprived the state of control rights. Also, it was deemed more favorable to the private sector without a proper safeguard and could have diminished small fishers and local coastal communities. A similar perception emerged with the Water Concession Rights or *Hak Guna Usaha Air* (HGU Air) regulated in Water Resources Law 7/2004. The Constitutional Court declared in Decision No. 85/PUU-XI/2013 that the state must fulfill the people's water rights and delegate the business to state-owned enterprises and region-owned companies before granting concession rights to private sectors.

State control of forest resources is not prevalent around the world. The government reportedly controls about a third of forest estate in Latin America, about two-thirds in Asia, and almost the entire area in Africa.⁵¹ In Indonesia, the state control right is limited to the public interest, as mentioned in Article 33 (3) of the 1945 Constitution. The Constitutional Court elaborates its meaning, which should consist of four main elements, among others, the benefits of natural resources for the people, even

⁵¹ William D Sunderlin et al., "How Are REDD+ Proponents Addressing Tenure Problems? Evidence from Brazil, Cameroon, Tanzania, Indonesia, and Vietnam" (2014) 55 World Development 37–52.

distribution for the people, the participation of people to determine the benefit of people, and the tribute to the people hereditarily in using the natural resources.⁵² Thus, implementing state control rights shall adhere to these four elements about carbon commodities.

As discussed earlier, existing laws in Indonesia allow the people and forest communities to enjoy the benefit of carbons through licensing procedures, such as environmental services and social forestry licenses. However, it is noteworthy to consider the compliance abilities of the forest communities since these licenses require them to pass various administrative and technical procedures, such as creating a working map, making resources inventory, and making production reports. In practice, the communities could not comply with these procedures without the help of a third party, such as civil society organizations (CSOs).⁵³ After the forest communities have obtained and passed the forest carbon licensing procedures, the state needs to protect its rights from overlapping concession claims and forest encroachment. For example, there are estimated to be 3,4 million oil palm plantations in forest areas, particularly in Riau and Kalimantan.⁵⁴ Forest communities' efforts to maintain their forests and store carbon are endangered by extractive concessions and encroachments due to overlapping land claims and licenses on forest regions. The Indonesian government has actively initiated one map policy to integrate overlapping maps in all Indonesian regions.⁵⁵ These conditions are essential to fulfill the public interest.

⁵² Constitutional Court, *supra* note at 44 at 157.

⁵³ Dean Yulindra Affandi, "Perjalanan Panjang dan Melelahkan Menuju Pengakuan Hak Tanah Adat", *World Resources Institute* (2018), online: <<https://wri-indonesia.org/id/blog/perjalanan-panjang-dan-melelahkan-menuju-pengakuan-hak-tanah-adat>>.

⁵⁴ Jeany Hatriani & Fitria Nurhayati, "Tumpang Tindih Lahan Sawit di Kawasan Hutan sebesar 3,4 juta Hektar", *Katadata* (2019), online: <<https://databoks.katadata.co.id/datapublish/2019/12/21/tumpang-tindih-lahan-sawit-di-kawasan-hutan-sebesar-34-juta-hektar>>.

⁵⁵ Nirarta Samadhi, "Satu Peta Meniadakan Tumpang Tindih", *World Resources Institute*, online: <<https://wri-indonesia.org/id/blog/satu-peta-meniadakan-tumpang-tindih>>.

Further, the second element is even distribution for the people. In theory, at least four parties must receive the incentives from REDD+, including the parties who own legal title, keep the forest and prevent the emission release, spend the budget for the REDD+ implementation, and effectively implement the REDD+ program.⁵⁶ The communities can be included in the first and second criteria since, in practice, the government actively spends money. It takes an active role in implementing REDD+ as the provider, regulator, and facilitator, often with the help of CSOs.

The third is the participation of people to determine the benefit of people in justifying the public interest. It is essential to ensure that forest communities are well-informed about the benefits and requirements of carbon sequestration and storage activities. In addition, the state must present to increase its capacities and knowledge to perform technical requirements, such as carbon monitoring. For instance, an NGO called AMBIO worked together with farmers and provided them with training on standard forest inventory methodology to manage a tree-planting project and preserve natural woodlands in Chiapas.⁵⁷ The voluntary carbon market financed this project. Thus, AMBIO received benefits from acting as the broker to sell the carbon stocks. In result-based payment such as REDD+ in which the state has more interest and stakes, the Indonesian government should emulate the same approach to involve the communities as a skilled workforce.

Fourth, under Article 18B of the 1945 Constitution, the people have a hereditary right to use natural resources. It outlines the state's recognition and respect for traditional communities and their customary rights with a condition of its existence and regulated by law. Also, these should be under the societal development and Indonesia's unitary state principle. Since the forest carbon storage and sequestration activities are considered new instruments under international law, the state shall respect the

⁵⁶ Dicky Edwin Hindarto, Andi Samyanugraha, & Debi Nathalia, *Pengantar Pasar Karbon untuk Perubahan Iklim* (Jakarta: PMR Indonesia, 2018) at 6.

⁵⁷ Arun Agrawal & Arild Angelsen, "Using Community Forest management to achieve REDD+ goals" in *Realizing REDD+: National strategy and policy options* (Bogor: CIFOR, 2009) at 206.

longstanding customary livelihood of forest communities, such as swidden agriculture and small-scale logging. These practices are not in line with the notion of REDD+, which requires forests and natural woodlands to be preserved. The principle of Free, Prior, Informed, Consent (FPIC) is the conditions that allow people to exercise their fundamental rights and negotiate the terms of externally imposed policies, programs, and activities that could affect their livelihoods and to give or withhold their consent to them.⁵⁸ Without the consent from forest communities, the REDD+ project could not sustain and may lead to conflict or inequitable outcomes.⁵⁹ At the highest probability, the communities can reject carbon projects in their area if they affect their livelihood practices and deny access to extractive forest resources.⁶⁰

Recently, Presidential Regulation 98/2021 on the management of carbon economic value instrument for nationally determined contribution and the control of carbon emission in national development has been issued. Presidential Regulation 98/2021 touches on carbon rights and defines them as the control of carbon by the state.⁶¹ According to Article 47 of Presidential Regulation 98/2021, there are three main mechanisms to implement carbon economic value management. They are carbon trading, result-based payment, and carbon levies. Presidential Regulation 98/2021 allows carbon rights to be transferred as long as the transaction is recorded in the national registry system. The implementation of result-based payment does not cause the transfer of carbon rights.⁶² In result-based payment, the national and provincial governments distribute international funds to the municipal government, businesses, and communities.⁶³ The

⁵⁸ Patrick Anderson, *Free, Prior and Informed Consent in REDD+: Principles and Approaches for Policy and Project Development* (Asia: RECOFTC & GIZ, 2011) at 11.

⁵⁹ *Ibid.*

⁶⁰ *Ibid* at 19.

⁶¹ Presidential Regulation, Number 98 of 2021 on The Management of Carbon Economic Value Instrument for the Achievement of Nationally Determined Contribution and the Control of Carbon Emission in National Development, Article 1 (22).

⁶² *Ibid*, Article 48(2) and 55(4).

⁶³ *Ibid*, Article 55(3).

share of benefit-sharing will be decided by each party's participation and contribution to achieving climate mitigation and adaptation goals.⁶⁴

Based on Presidential Regulation 98/2021, the state has tendencies to open the possibility of transferring the carbon rights on the carbon market mechanism. The voluntary carbon market allows the owner to trade carbon credits for prospective buyers willing to pay to lower their emissions.⁶⁵ Indonesia has two most significant carbon crediting projects from the forestry sector in Central Kalimantan, for the carbon credits issuance of 3.527.171-ton CO₂ by PT Rimba Raya Utama and 7.451.846-ton CO₂ by PT Rimba Makmur Utama (Katingan project).⁶⁶ Depending on the market, the carbon credit price could reach USD 19 per ton.⁶⁷ However, the national carbon market itself has not been well-created, and the legal framework for carbon sales and purchases is still lacking in Indonesia.⁶⁸ Some green private entities have focused more on non-carbon forest projects, such as renewable energies, ecotourism, and biodiversity.⁶⁹ Therefore, there are three options to regulate carbon rights in Indonesia.⁷⁰ First, carbon rights are defined as property rights, and their management is governed by appropriate natural resource laws, such as forestry, mining, and peatland management. Second, carbon rights are considered private property rights governed independently of other natural resource regulations. Third, carbon rights are recognized as "open access" resources, similar to air that individuals cannot own.

This study opted to use the second option, by governing carbon rights separately with related natural resources law, since it will be inefficient to harmonize various natural resources act and amend it one by one. Sumarjono et al. (2018) have inventoried at least 26 Acts on Natural

⁶⁴ *Ibid*, Article 57 (4).

⁶⁵ Dicky Edwin Hindarto, Andi Samyanugraha, & Debi Nathalia, *supra* note 56 at 3.

⁶⁶ *Ibid* at 105.

⁶⁷ *Ibid* at 49.

⁶⁸ Interview, Program Officer at Lestari Capital, 15 November 2021.

⁶⁹ *Ibid*.

⁷⁰ Feby Ivalerina, *supra* note 12 at 15.

Resources, excluding its hundreds of lower regulations.⁷¹ Second, recognizing carbon rights could be an alternative solution to the longstanding and unsettled land conflict between state and community, especially within the forest estate. Current legal frameworks require formal procedures for recognizing community or *adat* lands rights, such as recognition through regional regulations, mapping, physical or written proof, and many else. It is also well-recorded that the recognition will take relevantly much time before the community obtains its rights.⁷²

The new regulation on carbon rights should separate the rights and entitlement between land and carbon. Thus, the community could still benefit from carbon rights while waiting for land rights administration. Some countries like Australia and New Zealand have defined carbon rights as recognized property rights in their national laws. Under the Carbon Rights Legislation Amendment Act 1998, implemented in New South Wales, the legal title to the carbon sequestered by a forest on a piece of land is vested as special forestry right. It can be registered separately from land ownership and even existing trees on the land.⁷³ The strong recognition of private forests entitles the owner to participate and sell carbon credits from the registered land to the existing carbon market.⁷⁴ Discussing the registration of carbon rights in Indonesia might be too premature, especially when the carbon market mechanism is not yet well-established. However, establishing the carbon rights registration system outside forest areas and REDD+ designated areas could draw individual landowners' interest in participating in carbon storage activities and contribute to the emission reduction target under Indonesia's Nationally Determined Contribution (NDC).

⁷¹ Maria SW Sumardjono, *Kajian Harmonisasi Undang-Undang di bidang Sumber Daya Alam dan Lingkungan Hidup (SDA-LH)* (Jakarta: KPK, 2018) at 1-11.

⁷² See Andiko, *Studi Perbandingan Proses Pengakuan Hak dan Perizinan Pengelolaan dan Pemanfaatan Hutan serta Kawasan Hutan untuk Masyarakat dan Perusahaan* (Batam: ASM Law Office, 2017). It took 15 years to obtain the Decree for Adat Forest recognition while it only took 1-2 years for plantation concessions.

⁷³ Arjuna Dibley & Martin Wilder A M, "Forest Carbon Rights: Lessons Learned from Australia and New Zealand" (2016) 3 *Climate Change Law Review* 202–214.

⁷⁴ Interview, Climate Research Analyst at World Resources Institute Indonesia, 4 November 2021.

Based on the available practices worldwide, there are at least four models for recognizing carbon rights.⁷⁵

Model	Carbon Rights system	Countries
Full ownership of forest land by the state ("First Model")	Carbon rights are similar to land rights in that the government owns them, but they can be transferred to third parties.	Congo, Mozambique, Vietnam
Diverse ownership of forest land with weak private land titles ("Second Model")	Carbon rights are centralized and managed by the government, while private projects are not permitted	Ecuador, Madagascar
Diverse ownership of forest land with the community and private titles ("Third Model")	Special regulations govern carbon rights, and private companies are free to participate in voluntary carbon market schemes with some restrictions	Costa Rica, Guatemala, Peru
Diverse ownership of forest land with strong community and private titles ("Fourth Model")	Carbon rights are not subject to specific regulations, and landowners own them. Projects involving carbon markets could include private entities.	Chile, Mexico

Table 2. *Four Types of Carbon Rights Recognition (Streck, 2020)*

According to the table above, theoretically, Indonesia shall be included in the "third model" since the existing laws recognize community and private titles on forest resources. However, this paper denotes that Indonesia adopted "the first model" despite recognizing community rights through private and *adat* forests. The current regulations put the state as the principal owner of carbon commodities in Indonesia, issuing licenses to third parties, including communities. Though Presidential Regulation No. 98/2021 allows the transfer of carbon rights on carbon trading mechanisms, the national carbon market has not been well established and

⁷⁵ Streck, *supra* note 15 at 9.

heavily regulated, causing business uncertainty. With this model, the government will benefit the most from the development of carbon trading. However, it will also leave behind the poor community who does not own legal title in forest areas. Without national legislation regulating carbon rights, the assumption is that payment with emission reductions will be allocated based on existing land and forest tenure governance.⁷⁶ Indonesia still possesses challenges in solving land conflicts within forest estates with the slow process of forest estate confirmation (*pengukuhan kawasan hutan*), minimum distribution of social forestry land, and many else. Even with the licenses, forest communities are still prone to overlapping forest concession claims and encroachments. The state must accelerate the One map policy to resolve the conflicting claims in the forest estate and improve forest law enforcement to protect forest communities. Another follow-up action is to review existing concession licenses and take legal measures against disobedient companies. The provincial government of West Papua, for instance, has revoked 14 licenses of oil palm plantations and reduced the working area of 2 companies.⁷⁷ The West Papua government could save 346,8 thousand hectares of land from this action, redistributed to the *adat* communities in West Papua.

V. CONCLUSION

Under Indonesia's present legal framework, carbon rights are described as the ability to participate in voluntary and mandatory carbon trading systems through storage and carbon sequestration activities with government authorization. This paper identified critical challenges that must be addressed immediately, such as overlapping forest land claims and a lack of carbon sequestration and storage capacity. By permitting the transfer of carbon rights under a carbon trading scheme while stressing the government's role in sharing the benefits of carbon under a result-based

⁷⁶ Pham Thu Tuy et al., *supra* note 9 at 35.

⁷⁷ Fitria Nurhayati, "Review Izin Sawit Lindungi Hutan tanah Papua", *Katadata* (21 October 2021), online: <<https://katadata.co.id/jeany/infografik/6170e3784228c/review-izin-sawit-lindungi-hutan-tanah-papua>>.

payment scheme, the most recent regulation, Presidential Regulation 98/2021, has contributed to more explicit governance of carbon rights.

It is worth formulating new legislation that comprehensively governs carbon as commodities and its relationship with the land tenure. The current model of carbon rights governance requires an administrative and procedural burden to the community and individual landowners to obtain the permit. Despite recognizing *horizontale schelding* under BAL, Indonesian law seems to trump formal title over the undocumented substantive rights owned by the community. Since land tenure conflict is still unresolved, recognizing carbon rights could be the alternative for recognizing the marginal and community rights on forest resources.

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The author declared that he has no competing interests.

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