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The Effectiveness of REDD+ in Forest Conservation Efforts is Linked to Sustainable Development Aspects

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ABSTRACT

The REDD+ scheme is a global incentive mechanism for countries that are able to protect their forests. Through this REDD+ mechanism, it is hoped that aspects of sustainable development can be realized for future generations. There are several obstacles in implementing REDD+, including the mechanism for returns from carbon sales that will be obtained by forest managers. Through this article, it is hoped that the public will understand, comprehend and apply the REDD+ program. The approach used in writing this article is a normative juridical approach. The implementation and effectiveness of this program cannot be said to have been carried out well, because the mechanism for providing incentives is not simple, and outreach to the community has not been optimal, so that the main target of this program as an instrument in protecting forest areas while increasing the welfare of forest area communities has not been achieved.

Keywords: REDD+; environmental sustainability; public welfare.

INTRODUCTION

In an effort to achieve societal welfare, the government carries out national development across various sectors. The progress made in each sector has yielded positive impacts that are tangibly felt by the community. However, alongside the rapid advancement of science and technology, the increasingly massive exploitation of natural resources – particularly forests – has generated its own set of consequences. The significant reduction in forest areas within a relatively short period, driven by land-use demands, has brought about considerable environmental implications. One of the most pressing outcomes of this condition is global warming, which contributes to the rise in Earth's surface temperature and consequently leads to climate change¹. This rise in the Earth's surface temperature subsequently causes the melting of ice and snow within a relatively short period, leading to a

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¹Maret Priyanta, et all. (2017). "Pengelolaan Hutan Berkelanjutan dalam kerangka pembaharuan system hukum lingkungan dan tata ruang berbasis perubahan iklim"

significant increase in sea levels². This issue warrants serious attention, particularly for Indonesia as an archipelagic country that is highly vulnerable to the impacts of climate change.

Since the pre-industrial era, carbon dioxide emissions have increased by up to 40%, a rise primarily attributed to the combustion of fossil fuels and deforestation, including forest degradation³. Deforestation and forest degradation contribute approximately 17% of global greenhouse gas emissions. In Indonesia specifically, forest and peatland degradation and deforestation account for up to 60% of the country's total greenhouse gas emissions⁴.

According to the Intergovernmental Panel on Climate Change (IPCC), global temperatures were originally projected to rise by 1.5°C by the year 2100. However, more recent studies conducted in 2021 estimate that this 1.5°C increase is likely to occur within the next two decade⁵, There will be significant consequences associated with climate change, which are primarily driven by global warming⁶, These consequences include increased intensity and frequency of extreme rainfall, droughts, heatwaves, and the accelerated melting of ice and snow⁷ These changes contribute to rising sea levels, ocean acidification, and the loss of various species of flora and fauna⁸, This condition is expected to worsen in parallel with the continuous increase in greenhouse gas (GHG) emissions⁹.

In 2005, Costa Rica and Papua New Guinea submitted a proposal during COP 11, advocating for the establishment of a mechanism to financially compensate countries that are willing and able to reduce emissions from deforestation and forest degradation. They argued that such countries should be rewarded through market-based mechanisms for their efforts in refraining from converting forests for economic growth¹⁰. Subsequently, in 2007, the term REDD (Reducing Emissions from Deforestation and Forest Degradation) was introduced during COP 13 in Bali. Since then, the development of REDD has continued to be a topic of discussion in subsequent

² Kirani Bararah, et al. (2024). "Tantangan Hukum Internasional dalam Perubahan Iklim: Kerangka Hukum atas Negara yang Tenggelam dan Migran Iklim Dalam Hukum Internasional", Proceeding of Airlangga Faculty of Law Colloquium. Vol 1 August 2024.

³ *Ibid.* p. 5.

⁴ Direktorat Jenderal Pengendalian Perubahan Iklim. (n.d.). FAQ. Kementerian Lingkungan Hidup dan Kehutanan Republik Indonesia. Retrieved from <http://www.ditjenppi.menlhk.go.id/berita-ppi/33-beranda/1804-faq.html>.

⁵ *Ibid.* p. 1303.

⁶ *Ibid.* p. 1303.

⁷ *Ibid.* p. 1303.

⁸ *Ibid.* p. 1303.

⁹ *Ibid.* p. 1303.

¹⁰ Muazzin, M. (2015). Perlindungan Hak Masyarakat Hukum Adat dalam Kegiatan REDD+. *Kanun Jurnal Ilmu Hukum*, 17(2), 277-302.

meetings held by the United Nations Framework Convention on Climate Change (UNFCCC)¹¹.

At COP 16, held in Cancun, Mexico in December 2010, the concept of REDD evolved into REDD+, with the "+" signifying the inclusion of forest conservation activities, sustainable forest management, and the enhancement of forest carbon stocks as components eligible for global incentives. During this meeting, it was agreed that each participating country must develop effective safeguards tailored to its national circumstances.

The REDD+ mechanism is structured into three main phases. The first is the readiness phase, in which countries develop strategies, policies, institutional frameworks, and capacity. This is followed by the preparation or transition phase, where participating countries begin moving toward actual implementation. Finally, the full implementation phase involves performance-based payments, contingent upon results that are measurable, reportable, and verifiable (MRV)¹². REDD+ continued to be refined through subsequent UNFCCC meetings, including those held in South Africa (2011), COP 18 in Doha, and COP 19 in Warsaw. These discussions emphasized that the benefits of REDD+ must be directed toward poverty alleviation among forest-dependent communities, biodiversity conservation, and the establishment of a carbon credit monitoring system. This monitoring system would serve as the basis for calculating performance-based incentives under the REDD+ mechanism¹³.

On December 11, 1990, the United Nations General Assembly adopted a resolution approving the establishment of the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change (INC/FCCC). The INC held five sessions between February 1991 and May 1992. The United Nations Framework Convention on Climate Change (UNFCCC) was subsequently adopted on May 9, 1992, and was opened for signature during the Earth Summit (United Nations Conference on Environment and Development). The UNFCCC officially entered into force on March 21, 1994, 90 days after the fiftieth country ratified the convention. From March 28 to April 7, 1995, the first Conference of the Parties (COP 1) to the UNFCCC was held in Berlin, Germany¹⁴. Indonesia ratified the United Nations Framework Convention on Climate Change (UNFCCC) through the enactment of Law No. 6 of 1994 concerning the ratification of the Convention.

¹¹ Leony Aurora. (2015). *"Sistem Informasi Safeguards REDD+ di Indonesia menuju Operasionalisasi SIS-REDD+"* Direktorat Jenderal Pengendalian Perubahan Iklim, Kementerian Lingkungan Hidup dan Kehutanan.

¹² *Ibid.*

¹³ *Ibid.*

¹⁴ Pramudianto, A. (2017). *"Hukum lingkungan Internasional."* Jakarta: Rajawali Pers. P. 102-103.

As a form of Indonesia's active role in addressing environmental issues and promoting sustainable development in response to climate change, the country ratified the Kyoto Protocol through the enactment of Law No. 17 of 2004 concerning the Ratification of the Kyoto Protocol to the United Nations Framework Convention on Climate Change.

Based on the Kyoto Protocol, Indonesia is classified as a non-Annex state, which means it is not legally obligated under international law to reduce greenhouse gas emissions. However, Indonesia's commitment and adherence to international legal frameworks are demonstrated through the statement delivered by the 6th President of the Republic of Indonesia, Susilo Bambang Yudhoyono, during the G-20 Leaders' Summit in Pittsburgh on September 25, 2009. In his address, he pledged that Indonesia would reduce its greenhouse gas emissions by 26% by the year 2020 through unilateral efforts, and by up to 41% with international support¹⁵.

On May 26, 2010, a Letter of Intent (LoI) was signed between the Government of Indonesia and the Government of Norway. Under this agreement, Norway committed to providing financial contributions to Indonesia based on verified emission reductions in line with the REDD+ (Reducing Emissions from Deforestation and Forest Degradation) scheme. To ensure the effective implementation of REDD+, the Indonesian government established the REDD+ Task Force through Presidential Decree No. 19 of 2010. This task force was formed with the expectation of creating an integrated and harmonized coordination body capable of overseeing the consistent and unified implementation of REDD+ programs¹⁶.

Through the REDD+ mechanism, supported by a legal framework aligned with the ratification of relevant international laws, Indonesia has been able to conserve its forests by rehabilitating and restoring degraded forest areas, while also receiving compensation from developed countries. This approach not only supports environmental sustainability but also contributes to the welfare of local communities by maintaining the ecological functions of forests in a sustainable manner.

Forest conservation efforts under REDD+ help restore ecosystems and biodiversity, while also revitalizing scientific research related to genetic resources – an important pathway for the sustainable utilization of natural resources to enhance the well-being of the Indonesian people. As the country with the third-largest tropical forest area in the world, Indonesia has, from the outset, played a leading role in the

¹⁵ Leony Aurora, *Op. Cit.*, note 5.

¹⁶ Wicaksono, D. A., & Yurista, A. P. (2013). Konservasi Hutan Partisipatif Melalui REDD+ (Studi Kasus Kalimantan Tengah Sebagai Provinsi Percontohan REDD+). *Jurnal Wilayah dan Lingkungan*, 1(2), 189-200. <https://doi.org/10.14710/jvsar.v%vi%i.134>, p. 189-200.

development and piloting of REDD+, attracting significant attention at the global level¹⁷. This article will focus its discussion on the implementation of the REDD+ mechanism in forest conservation efforts.

RESEARCH METHOD

The method employed in this article is a normative juridical approach, in which the research focuses on document analysis by examining and analyzing secondary data related to the REDD+ program. The research specification used is descriptive-analytical, aiming to provide an overview of the applicable laws and regulations, in relation to international agreements and the practice of positive law implementation¹⁸.

DISCUSSION

Implementation of the REDD+ Mechanism in Forest Conservation Activities

Prior to the development of REDD+, the concept of RED (Reducing Emissions from Deforestation) was first proposed at COP 11 in Montreal in 2005. This initiative, led by Papua New Guinea and Costa Rica, aimed to reduce greenhouse gas emissions by preventing deforestation. At COP 13 in Bali, the idea of providing incentives to countries that preserve their forest areas was introduced, leading to the evolution of RED into REDD+.

The REDD+ mechanism was further discussed and refined during COP 15 in Copenhagen, Denmark, and COP 16 in Cancun, Mexico. REDD+ was then defined to include not only emission reductions from deforestation and forest degradation, but also forest conservation, sustainable forest management (SFM), and enhancement of forest carbon stocks¹⁹.

There are four main elements of REDD+ as formulated in COP 16: (i) a national REDD+ strategy, (ii) Forest Reference Emission Level (FREL), (iii) a National Forest Monitoring System (NFMS), and (iv) a Safeguard Information System (SIS). In addition, an agreement was reached for developing countries to implement Nationally Appropriate Mitigation Actions (NAMAs). NAMAs refer to mitigation actions undertaken by developing countries aimed at reducing greenhouse gas (GHG) emissions relative to the *business-as-usual* scenario by the year 2020.

¹⁷ Leony Aurora. *Op. Cit.*, note 5.

¹⁸ Ronny Hanitijo Soemitro. (1990). "*Metodologi Penelitian Hukum dan Jurimetri*", Cet ke 4, 4th ed. Jakarta: Ghalia Indonesia, pp. 97-98.

¹⁹ *Op. Cit.*, pp. 5-6

Over time, the concept of NAMAs has been gradually replaced by the implementation of Nationally Determined Contributions (NDCs), as stipulated under the Paris Agreement²⁰.

Subsequently, at COP 19 in Warsaw, the components of REDD+ were elaborated in greater detail, including the following aspects:

- a. Financing mechanisms
- b. Institutional coordination and governance
- c. Forest Reference Emission Levels / Forest Reference Levels (FREL/FRL)
- d. Measurement, Reporting, and Verification (MRV)
- e. National Forest Monitoring System (NFMS)
- f. Addressing the drivers of deforestation and forest degradation
- g. Safeguards and the Safeguard Information System (SIS)

From COP 13 in Bali to COP 21 in Paris, the UNFCCC Secretariat compiled a document titled “Key Decisions Relevant for REDD+”, which provides comprehensive guidance for the implementation of REDD+ at the national level²¹. Ultimately, Indonesia ratified the Paris Agreement to the United Nations Framework Convention on Climate Change in order to fully implement the REDD+ program, through the enactment of Law No. 16 of 2016 concerning the Ratification of the Paris Agreement to the United Nations Framework Convention on Climate Change²².

Through the REDD+ mechanism, many developing countries have actively participated in efforts to reduce deforestation and forest degradation as part of their commitment to lowering greenhouse gas emissions resulting from forest clearing and logging activities. The incentive-based system provided by developed countries establishes a mutually beneficial relationship. On the one hand, developing countries require land expansion to generate economic value; on the other hand, such activities pose a serious threat to the global climate. REDD+ offers a balanced solution by promoting forest conservation while also enabling economic support for developing nations²³. The REDD+ mechanism enables developed countries to participate in preserving global forest integrity by providing incentives as a form of appreciation. This approach benefits all parties involved, as the incentives granted can serve as financial capital for development in developing countries. Indonesia holds a strategic opportunity to contribute through the implementation of the REDD+ program, particularly in

²⁰ *Op. Cit.*, p. 7.

²¹ *Op. Cit.*, p. 8-9.

²² *Op. Cit.*, p. 8-9.

²³ Ikhtiarin, A. D. et al. (2023). Dinamika Kerja Sama Indonesia – Norwegia di Bidang Lingkungan Hidup Melalui Program Reducing Emissions From Deforestation and Forest Degradation (Redd+) Tahun 2017-2021. *Jurnal Ilmiah Dinamika Sosial*, 7(1), 56-65. <https://doi.org/10.38043/jids.v7i1.3610>, 56-65.

reducing carbon emissions from the forestry sector, given its vast biodiversity and extensive forest resources. Through the REDD+ mechanism, Indonesia can advance a low-carbon economy while simultaneously demonstrating its commitment to addressing the impacts of global climate change²⁴.

The establishment of the Directorate General of Climate Change Control (Dirjen PPI) reflects Indonesia's strong commitment to addressing global climate change as part of its international responsibilities. This commitment was formalized through the ratification of the United Nations Framework Convention on Climate Change (UNFCCC) on June 14, 1992, in Rio de Janeiro, which was subsequently enacted through Law No. 6 of 1994 concerning the Ratification of the United Nations Framework Convention on Climate Change.

In addition to implementing the REDD+ program, the Directorate General of Climate Change Control has initiated several climate-focused programs, one of which is the *Kampung Iklim Program* (Climate Village Program or PROKLIM). This initiative encourages participation from all levels of society in efforts to mitigate and adapt to climate change, thereby reinforcing Indonesia's contribution to **global climate action**.

The Effectiveness of the REDD+ Program in Promoting the Welfare of the Indonesian People, Particularly Indigenous Communities Living Near Forest Areas

The REDD+ program has proven to be highly effective in addressing climate change within the forestry sector, as it fosters a mutualistic relationship between carbon-producing countries and forest-rich nations. Most forest-rich countries are developing nations, where large-scale development often leads to forest clearing, resulting in significant carbon emissions that contribute to global climate change.

The provision of financial incentives by carbon-producing countries to forest-rich nations that are able to preserve their forest areas and prevent carbon release into the atmosphere serves as a powerful incentive. This is particularly beneficial for indigenous communities living near forest areas, as the incentives can contribute directly to their socioeconomic well-being. At the same time, these forest areas are better protected and sustainably managed.

REDD+ funding recipients include a broad range of stakeholders, such as national and sub-national government agencies, civil society organizations, the private sector, research and educational institutions, and community groups²⁵. It serves as an incentive

²⁴ Daliayu Sekar Siamti, "Indonesia dalam skema REDD+", Chapter I, p. 5.

²⁵ Peraturan Menteri Lingkungan Hidup dan Kehutanan No P.70/MENLHK/SETJEN/KUM.1/12/2017 Tentang Tata Cara Pelaksanaan *Reducing From Deforestation and Forest Degradation, Role of Conservation, Sustainable Management of Forest and Enhancement of Forest Carbon Stock*. Article 19.

that can be received by forest stewards and caretakers – those who protect standing forests, peatlands, and other critical ecosystems. Through the REDD+ mechanism, communities and individuals who have long devoted themselves to monitoring and preserving forest areas, driven by a deep affection for nature, can finally receive compensation for their longstanding environmental contributions.

Such incentives also encourage business actors whose enterprises focus on forest conservation to take part in the REDD+ program. This alignment between environmental stewardship and economic opportunity fosters broader participation in sustainable forest management and climate change mitigation. One example from the private sector is PT Rimba Makmur Utama (RMU), which is undertaking the Katingan Peatland Forest Restoration Project (Katingan Project) through a Business License for the Utilization of Forest Timber Products in Ecosystem Restoration (IUPHHK-RE), as stipulated in the Decree of the Minister of Forestry No. 734/Menhut-II/2013.

In line with its vision and mission, PT RMU is committed to contributing to the reduction of global greenhouse gas emissions. The company manages a peatland area of approximately 149,800 hectares sustainably by protecting and restoring the ecosystem. The project area encompasses zones designated as Production Forest Areas, Permanent Production Forests, Convertible Production Forests, Plantation Areas, and Water Catchment Areas, all of which fall under the broader category of forest spatial planning²⁶. The project area is predominantly composed of peatland ecosystems (*see Figure 1*), and is managed based on the principle of community-based forest management, which is expected to generate positive impacts for surrounding communities as integral components of the ecosystem itself²⁷.

The principle of community-based forest management refers to a forest management scheme that grants local village communities – particularly those living near forest areas – a central role in safeguarding forest ecosystems, which serve as vital life-support systems for the surrounding population²⁸. In regulatory terms, the concept of community-based forest management is formally defined as Social Forestry (*Perhutanan Sosial*)²⁹.

²⁶ Peraturan Daerah Kabupaten katingan Nomor 4 tahun 2019 tentang Rencana Tata Ruagn Wilayah Kabupaten Katingan Tahun 2019-2023. Retrieved from <https://gistaru.atrbpn.go.id/rtronline>.

²⁷ PT.Rimba Makmur Utama “Proyek Restorasi dan Konservasi Hutan Lahan Gambut Katingan”. Retrieved from <https://katinganrestoration.org/who-we-are>.

²⁸ Ridwan F “Pengelolaan Hutan Berbasis Masyarakat (PHBM) Instrumen Pembangunan Masyarakat Desa Sekitar Hutan. Retrieved from <https://kanalkomunikasi.pskl.menlhk.go.id/phbm-instrumen-pembangunan-masyarakat-desa-sekitar-hutan/>.

²⁹ Peraturan Pemerintah No 23 Tahun 2021 tentang Penyelenggaraan Kehutanan, *General Elucidation*, Point 64.

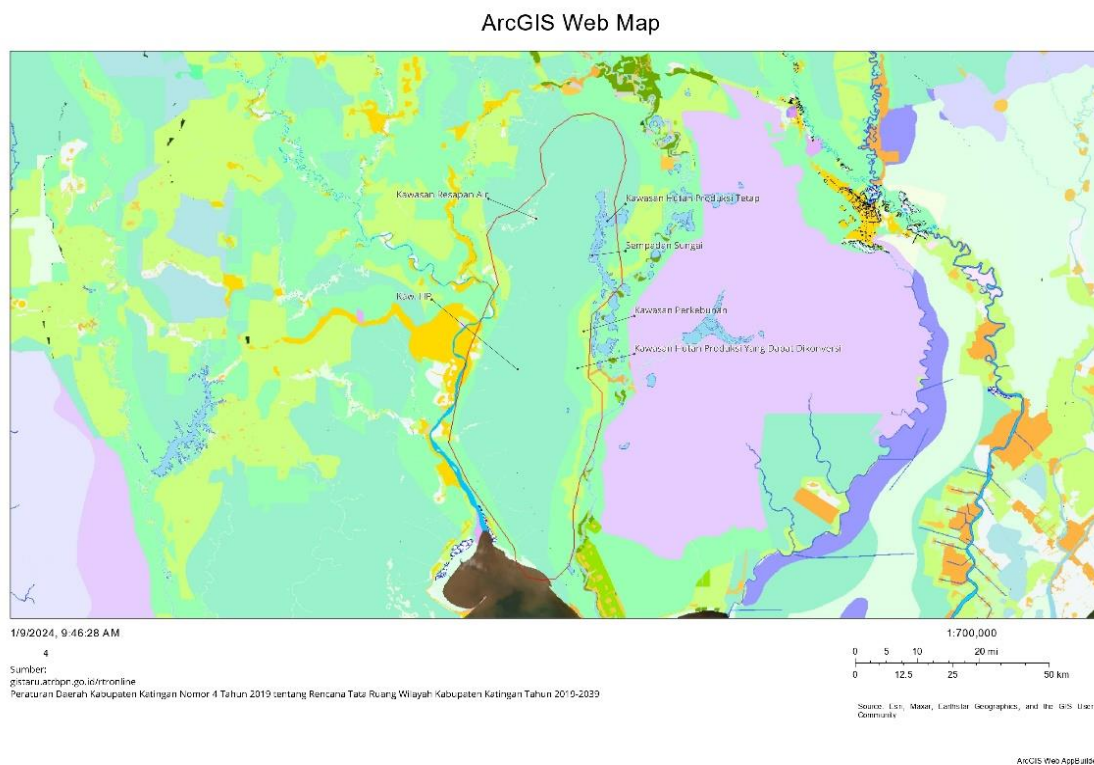


Figure 1. Map of the Katingan Peatland Forest Restoration Area dominated by Peatland Ecosystems.

PT Rimba Makmur Utama serves as a pilot project that demonstrates the active involvement of local stakeholders – in this case, the private sector – in forest restoration activities while implementing the principles of REDD+. As of the writing of this article, the project has established a positive relationship with surrounding communities, who have also experienced tangible benefits from its implementation.

On the government side, pilot initiatives have also been launched in 11 provinces across Indonesia to implement REDD+, further supporting the national commitment to climate change mitigation through forest-based strategies³⁰. Unfortunately, the Indonesian government's attempt to implement a REDD+ pilot project in Central Kalimantan – specifically in Henda Village, funded by Norway – encountered horizontal conflict within the community. This conflict arose due to the lack of transparency and the perceived discriminatory management of REDD+ funds at the village level³¹. At the time this regulation was issued, there were no implementing regulations concerning the management of incentive funds, resulting in a legal vacuum.

³⁰ *Op. Cit.*, p. 11.

³¹ Emilianus Yakob Sese Tolo, (2014). *"Ironi REDD+ di Indonesia: Cerita dari Kalimantan Tengah"*, <https://indoprogress.com/2014/02/ironi-redd-di-indonesia-cerita-dari-kalimantan-tengah/>.

However, following the enactment of Presidential Regulation No. 98 of 2021 on the Implementation of Carbon Economic Value for the Achievement of Nationally Determined Contributions (NDCs) and Control of Greenhouse Gas Emissions in National Development, derivative regulations were subsequently established. One such regulation is the Regulation of the Minister of Environment and Forestry No. 7 of 2023 concerning Procedures for Carbon Trading in the Forestry Sector, which is expected to provide a legal framework for carbon trading transactions. This regulatory development aims to ensure that forest-dependent communities can benefit from such mechanisms. However, the implementation of the REDD+ program cannot be immediately carried out by communities without adequate preparation, one of the main obstacles being the lack of access to information about the program itself. The right to information is essential, as communities must be informed about the procedures for participating in environmental decision-making processes. They must have unrestricted access to such information, understand how to utilize it, and become increasingly aware of the importance of their roles – as individual citizens, non-governmental organizations, and private sector actors – in environmental protection efforts³². This principle is firmly established in international law through the Aarhus Convention, officially titled the Convention on Access to Information, Public Participation in Decision-Making, and Access to Justice in Environmental Matters. The Convention was adopted in Aarhus, Denmark, on 25 June 1998. Its primary objective is to safeguard the rights of present and future generations to live in an environment that is adequate for their health and well-being³³. Accordingly, all State Parties to the Convention are obligated to ensure: the right of access to environmental information, opportunities for effective public participation in environmental decision-making, and access to justice in environmental matters. The right to access environmental information is realized, for example, through the provision of adequate information, including in the process of drafting national legislation³⁴.

With the adoption of the Aarhus Convention, the Indonesian government bears the obligation to provide the public with information regarding the REDD+ program, including the mechanisms for its implementation. This transparency is essential to ensuring the realization of social, environmental, and economic welfare – three key pillars of sustainable development, in line with the ideals enshrined in Article 33(3) of the 1945 Constitution of the Republic of Indonesia, which emphasizes the equitable use

³² Preamble of the Aarhus Convention. “*Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters*”. Adopted in Aarhus, Denmark, on 25 June 1998, p. 1.

³³ *Ibid.*, Article 1.

³⁴ *Ibid.*, Article 4.

of natural resources for the benefit of the people while safeguarding environmental sustainability for future generations.

In addition to the lack of information accessible to the public, the mechanisms for REDD+ implementation remain complex and difficult for communities to adopt independently. For instance, PT Rimba Makmur Utama, a private entity aiming to implement REDD+ through forest conservation involving local communities, faced bureaucratic delays in obtaining permits—taking up to five years—despite the program’s environmentally beneficial objectives³⁵. On the other hand, when REDD+ is implemented by the government, poor governance often results in minimal or ineffective outcomes for surrounding communities. Ideally, the REDD+ mechanism should not only ensure forest conservation but also contribute to the realization of community welfare. However, inadequate administrative management undermines these dual objectives and limits the potential benefits that REDD+ is intended to deliver.

CONCLUSION

The implementation and effectiveness of REDD+ in Indonesia have not yet reached their full potential. This is primarily due to the complexity of the incentive mechanisms and the insufficient dissemination of information by relevant institutions—particularly the Directorate General of Climate Change (Ditjen PPI)—to communities living in and around forest areas. A broad and inclusive outreach strategy is urgently needed to raise awareness across all levels of society regarding the REDD+ program. This would allow greater public participation and accelerate the realization of forest conservation in Indonesia's forest zones.

Good governance is also essential to ensure that REDD+ programs initiated by the government can be effectively implemented. Ultimately, the success of REDD+ is crucial for achieving sustainable development, in line with the principles set forth in the Aarhus Convention, which guarantees public rights to access information, participate in environmental decision-making, and seek justice in environmental matters. Accordingly, the government is obliged to establish a clear and comprehensive information system, enabling REDD+ to be properly understood, adopted, and implemented by the Indonesian public—thereby contributing to the realization of sustainable development goals.

³⁵ Dharsono Hartono, (2020). *“My Wife’s Support Is the Key to My Success,”* Interview with SWA Magazine, May 15, 2015. Available at: <https://swa.co.id/swa/ceo-interview/dharsono-hartono-dukungan-istri-kunci-kesuksesan-saya>. Accessed on Sunday, November 9, 2020.

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