# Global Climate Crisis: Challenge and Opportunity for Indonesia

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**Abstrak**

Naskah ini mengkaji posisi kompleks Indonesia dalam krisis iklim global, menyoroti kerentanannya sekaligus potensi transformatifnya dalam ekonomi hijau. Setelah keluarnya AS dari Perjanjian Paris dan diperkenalkannya NDC 3.0, Indonesia menghadapi tekanan besar untuk menyeimbangkan pertumbuhan ekonomi dengan komitmen iklim. Meskipun memiliki hutan penyerap karbon yang signifikan dan target net-zero yang ambisius, ketergantungan Indonesia pada batu bara serta lemahnya penegakan kebijakan lingkungan menjadi penghambat kemajuan. Pasar karbon Indonesia (IDXCarbon) dan kekayaan sumber daya alamnya—terutama nikel untuk baterai kendaraan listrik—menempatkannya sebagai calon pemimpin ekonomi hijau. Namun, berbagai tantangan masih mengemuka, termasuk harga kredit karbon yang rendah, pasar ASEAN yang terfragmentasi, dan kebijakan ekonomi yang lebih mengutamakan ekspor batu bara ketimbang pelestarian lingkungan. Naskah ini berargumen bahwa Indonesia dapat memanfaatkan kerja sama regional dalam kerangka karbon ASEAN, menyelaraskan pasar karbon dengan standar internasional, serta merundingkan pertukaran utang untuk alam (*debt-for-nature swaps*) guna memperkuat transisi hijau. Pada akhirnya, meski di forum internasional Indonesia menonjolkan diplomasi iklim yang proaktif, realitas domestik masih menunjukkan konflik mendalam antara kepentingan ekonomi jangka pendek dan keadilan lingkungan. Keberhasilan atau kegagalan Indonesia dalam mengelola paradoks ini akan berdampak luas, baik bagi rakyatnya maupun bagi sistem iklim global. Penulis menyimpulkan bahwa Indonesia harus mengejar pendekatan holistik dan inklusif yang memadukan kemauan politik, pendanaan yang adil, dan tata kelola yang tegas demi mewujudkan ambisi industri hijau dan memperkuat peran kepemimpinannya di *Global South*.

**Kata Kunci**: Indonesia, Krisis Iklim, Ekonomi Hijau, Pasar Karbon, Keadilan Lingkungan

**Abstract**

This manuscript explores Indonesia's complex position in the global climate crisis, with the central argument that Indonesia's success in climate leadership hinges on bridging persistent tensions between economic priorities and environmental justice. Indonesia faces mounting pressure to balance economic growth with climate commitments. . Following the US withdrawal from the Paris Agreement and the introduction of NDC 3.0, Indonesia faces immense pressure to balance economic growth with climate commitments. Despite its substantial forest carbon sinks and ambitious net-zero targets, Indonesia's reliance on coal and weak enforcement of environmental policies hinder progress. The country's carbon market (IDXCarbon) and natural resource endowment,especially nickel for EV batteriesposition it as a potential green economy leader. However, challenges persist, including low carbon credit prices, fragmented ASEAN markets, and elite-driven economic policies prioritizing coal exports over environmental stewardship. This paper argues that Indonesia can leverage regional cooperation under ASEAN's carbon frameworks, align carbon markets with international standards, and negotiate debt-for-nature swaps to strengthen its green transition. Ultimately, while international forums highlight Indonesia's proactive climate diplomacy, domestic realities reveal persistent tensions between economic priorities and environmental considerations. Indonesia's success or failure in managing this paradox will have far-reaching consequences for its people and the global climate system. The authors conclude that Indonesia must pursue a holistic, inclusive approach integrating political will, equitable financing, and rigorous governance to actualize its green industrial ambitions and establish itself as a leading actor in the Global South's climate transformation.

**Keywords**: Indonesia, Climate Crisis, Green Economy, Carbon Market, Environmental Justice

## 1. Introduction

Climate change stands as one of the most pressing and complex challenges of our time, threatening not only ecosystems but also the foundations of economic security, social equity, and political stability. For developing countries like Indonesia, the stakes are even higher. As both a top emitter in Southeast Asia and the steward of the world's third-largest tropical forest, Indonesia embodies the global climate paradox: how can a nation reliant on fossil-fueled growth also lead in sustainable development? . For many developing nations, the dilemma of balancing economic growth with environmental preservation is especially acute. Indonesia exemplifies this complex dynamic. The archipelago boasts the world's third-largest tropical forest area, making it a critical carbon sink and a custodian of rich biodiversity. These forests not only play a vital role in regulating the global climate but also sustain the livelihoods of millions of Indonesians. At the same time, Indonesia is one of the world's largest emitters of greenhouse gases in Southeast Asia, driven largely by deforestation, peatland degradation, and the continued reliance on coal for energy. This paradox positions Indonesia at a pivotal crossroads: how to fulfill its development aspirations while playing a responsible role in the global climate agenda.

In recent years, Indonesia has made notable strides in setting ambitious climate targets, including a commitment to achieve net-zero emissions by 2060 and plans to phase out coal-fired power plants by 2040 (Ember, 2024). The government has also introduced a range of policy instruments, such as the REDD+ (Reducing Emissions from Deforestation and Forest Degradation) program and the Indonesia Carbon Exchange (IDXCarbon), a voluntary market platform. These initiatives aim to monetize forest conservation and promote low-carbon industrialization (Chandra, 2024). However, the implementation of these initiatives faces serious obstacles. Coal mining remains a politically protected sector, and deforestation continues due to weak enforcement and land-use conflicts. Institutional inertia, competing bureaucratic interests, and elite political capture undermine effective climate governance. At the same time, debates over international climate finance reveal the difficulties Indonesia faces in securing sufficient support for a just energy transition.

FdeAdditionally, the ongoing debate over climate finance exposes the challenges Indonesia faces in securing international support that is commensurate with its needs and ambitions. Indonesia's carbon market development also highlights both opportunities and challenges. While IDXCarbon has gained initial traction since its launch in 2023, trading over one million carbon credits and attracting international buyers, the voluntary carbon market across ASEAN remains fragmented. Only a handful of countries have operational carbon

markets, leading to low credit prices and limited market liquidity. To overcome these barriers, Indonesia is exploring regional cooperation through frameworks like the ASEAN Common Carbon Framework (ACCF) and is considering policy tools such as ASEAN-wide carbon taxes to stimulate demand and reduce emissions (Reccessary, 2024).

In addition to carbon markets, Indonesia's green industrial strategy relies heavily on its vast nickel reserves, which account for 22% of global supply—critical for electric vehicle (EV) batteries. By integrating these resources with renewable energy infrastructure such as High-Pressure Acid Leaching (HPAL) smelters, Indonesia aims to position itself as a sustainable mineral processing hub. This strategy also seeks to attract long-term Environmental, Social, and Governance (ESG) investments while reducing reliance on raw commodity exports. Yet, Indonesia's pursuit of green industrialization also exposes the persistent contradictions in its climate policy. In the palm oil sector—long criticized for its role in deforestation—Indonesia must reinforce sustainability frameworks like the Indonesian Sustainable Palm Oil (ISPO) certification to align with global standards and avoid EU carbon border penalties. This tension between global market adaptation and domestic environmental degradation reflects the broader paradox of Indonesia's green ambitions: efforts to lead in the low-carbon economy are still entangled with extractive and high-emission practices.Despite these efforts, Indonesia's climate policy continues to be marked by contradictions. While the government presents itself as a proactive actor in international climate forums, domestic policies often reflect a prioritization of short-term economic interests over long-term environmental sustainability and social equity. This contradiction is rooted in deeper structural issues, including regulatory capture by political elites with vested interests in the coal and palm oil sectors, fragmented environmental enforcement, and a rent-seeking political economy that rewards extractive industries over green innovation. These conditions produce a climate governance gap, where official commitments are undermined by institutional inertia and elite-driven agendas., where economic expediency tends to overshadow urgent climate imperatives. The stakes are high. Indonesia's success or failure in managing this transition will have profound implications not only for its own population and ecosystems but also for the global climate system. As a leader in ASEAN and a significant player in the Global South, Indonesia is uniquely positioned to influence regional climate cooperation and advocate for more equitable climate finance mechanisms. However, this potential can only be realized if the country can navigate internal political complexities, align its policies with international frameworks, and mobilize inclusive, forward-looking strategies that integrate environmental, social, and economic objectives. In

light of these structural challenges and policy contradictions, this article seeks to answer a central question: How can Indonesia leverage its natural resources and carbon market mechanisms to lead an inclusive and equitable green transition amid global climate injustice?

## 2. Global Climate Governance: Opportunities and Challenges for Indonesia

In January of this year, the global climate crisis reached a critical point, marked by Earth's temperature soaring to 1.64 ± 0.11 °C and is expected to approach the 2°C threshold in the near future. (Berkeley Earth, 2025).

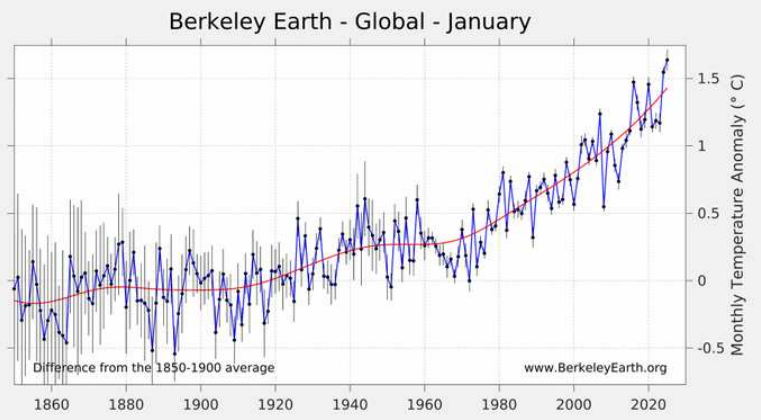



**Figure 1** Earth's Average Temperature 1860-2025 (Berkeley Earth, 2025)

Fueled by the prolonged impact of El Niño, the global average temperature exceeded the 1.5°C threshold for a full twelve months during the June 2023/2024 period (Copernicus EU, 2024). Officially, the world has failed to achieve the aspirations of the Paris Agreement. Although this is a once-in-twenty-year event, this breach underscores the urgent need to accelerate emissions reductions to avoid permanent damage, such as the collapse of ice sheets and the death of coral reefs (Cannon, 2025).

This situation is further complicated by the shifting landscape of global climate governance, the emergence of green economic market mechanisms, and the deepening climate finance gap. While the world grapples with the United States' (US) isolation from the Paris Agreement, developing countries like Indonesia are faced with risks and opportunities that will shape their role in the global order. Adding to this backdrop, the outcomes of the 29th Conference of the Parties (COP29) signal a new era of global climate governance with the establishment of Nationally Determined Contributions (NDC) 3.0, the Paris Agreement Crediting Mechanism (PACM), and the need for global climate financing of US$ 3.8 trillion per year through 2025.

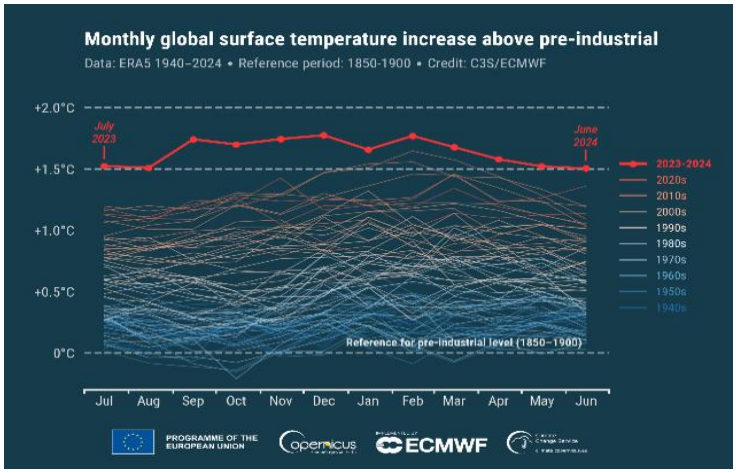



**Figure 2** Global Surface Temperature 1940-2024 (Rainews.it, 2024)

## 2.1. The Development of Global Climate Governance

As part of the "America First" doctrine under Donald Trump, the US withdrawal from the Paris Agreement in mid-January 2025 sent shockwaves through global climate diplomacy. Trump's decision was driven by the belief that the Paris Agreement did not reflect American cultural values and merely squandered taxpayer money on countries that neither needed nor deserved financial aid, as determined by the interests of the American people (White House, 2025). This unilateral action raised concerns about its potential negative impact on international agreements and global public perceptions regarding the future of climate governance, given that the US is the world's second-largest greenhouse gas (GHG) emitter after China (Ritchie et al., 2023). The step, formalized through Executive Order 14119 ("Prioritizing American Energy Dominance in International Agreements"), canceled US funding and the Biden administration's pledge of US$4 billion to the Green Climate Fund (GCF) (Mathiesen, 2025). This further exacerbated the climate finance situation, which was already at just 16% of the target needed to reach net-zero emissions. Based on these calculations, public and private sector entities worldwide will need approximately US$3.8 trillion in annual investment flows through 2025 (Rockefeller Foundation & BCG, 2022).

The US's exit for the second time not only symbolizes a policy setback but also creates division and a leadership vacuum within the architecture of global climate governance. The

global climate crisis has now become a broader crisis of multilateralism. As United Nations Secretary-General António Guterres (2024) stated: "*We are here to bring multilateralism back from the brink… The climate crisis is destroying lives, devastating communities and ravaging economies… We all know the solution—a just phase-out of fossil fuels—and yet, emissions are still rising*." Indirectly, the US has delegitimized the principle of common but differentiated responsibilities (CBDR) embedded in climate action, causing countries dependent on fossil fuels to become increasingly reluctant to reduce CO2 emissions.

In response to US unilateralism, Indonesia is also considering withdrawing from the Paris Agreement. The Minister of Energy and Mineral Resources (ESDM), Bahlil Lahadalia, along with the brother of President Prabowo Subianto and Special Envoy for Energy and Environment, Hashim Djojohadikusumo, argued that the Paris Agreement is unfair and no longer relevant for developing countries. Even though Indonesia's per capita emissions (2.8 metric tons) are still far below those of the US (13 metric tons), the country is pressured to deactivate coal-fired power plants and shoulder the costs of energy transition (Idris, 2025). This dynamic reflects climate colonialism, where historical emitters evade responsibility while shifting the burden of decarbonization onto the Global South.

On the other hand, the absence of the US has contributed to intensifying market competition between the European Union (EU) and China in the green technology sector, from electric vehicles (EVs) to new and renewable energy (NRE) infrastructure (Keßler, 2024). According to Stojanović & Zakić (2024), China's "ecological civilization," supported by US$546 billion in new and renewable energy investments, has positioned Beijing as the dominant player in 80% of the global solar panel market and 75% of global EV battery production capacity (Buelow et al., 2023; International Energy Agency, 2022). Meanwhile, the EU's Carbon Border Adjustment Mechanism (CBAM) will begin operating in 2026 with the aim of imposing import tariffs based on carbon emission values, effectively "weaponizing" trade policies to protect the European Green Deal (Simões, 2023).

Speaking of the green economy market amid the global climate crisis, the COP29 Summit, through the NDC 3.0 framework, seeks to tighten greenhouse gas (GHG) emissions so that the world can realign with the 1.5 °C target of the 2015 Paris Agreement (Essop, 2024). At the meeting in Baku, Azerbaijan, in November 2024, member states agreed to finalize international carbon market standards, known as the Paris Agreement Capital Mobilization (PACM). Mandated under Article 6 (4) of the Paris Agreement, PACM promotes several mitigation strategies, including: 1) Dynamic baselines, which require emissions reduction projects to exceed evolving NDC targets; 2) Buffer pools, which hold 20% of carbon credit

revenues as insurance against setbacks (e.g., forest fires); and 3) Socio-environmental safeguards, which require consultation with indigenous communities for forestry projects (Johnstone, 2024).

With the establishment of the PACM, the concept of carbon taxation—or directly levying charges on CO2 emissions—has evolved under the broader notion of 'carbon pricing' to encompass market and trading systems. The formalization of the PACM to replace the Clean Development Mechanism (CDM) of the Kyoto Protocol marks a new foundation for climate action, enabling member states and multinational companies to trade carbon credits and prevent 'NDC-washing' (Bezerra et al., 2024). The term 'NDC-washing' is used in the context of international climate agreements to refer to the practice in which countries claim they have met their greenhouse gas (GHG) emissions reduction targets set in their NDCs, while in reality, they have not made meaningful emissions cuts.

Member countries of the Group of Twenty (G20), which are responsible for 80% of greenhouse gas (GHG) emissions, are also predicted to fall short of meeting their NDCs, with global average temperature projected to reach as high as 2.6 °C by 2100 (Brophy & Kooroshy, 2025). To limit global warming to 1.5 °C, the international community must reduce 2022-level GHG emissions by 56% by 2035 and by 90% by 2050 (European Commission JRC, 2025). Broadly speaking, the success of the PACM depends on whether countries can set aside geopolitical rivalries and ensure equitable access to carbon credit trading for marginalized developing countries, particularly those in the Global South. Without more concrete cooperation than in previous periods, the ambition for global climate goals will be lost.

The adoption of NDC 3.0 represents a significant breakthrough in global climate governance. Unfortunately, this commitment is seen as not substantially different from previous pledges and risks becoming mere rhetoric without real solutions. This concern is reinforced by the harsh reality that the Fund for Responding to Loss and Damage (FRLD), operationalized during COP28, has yet to meet the expected target. Out of the US$768.4 million promised by governments, the FRLD has only collected US$321 million—far below the annually needed target of US$400 billion (CVF-V20, 2025; Schalatek, 2024).

From the COP28 experience, the idealism of the PACM is overshadowed by structural injustices such as countries with low gross domestic product (GDP) lacking the technical capacity to implement Article 6 (4), which leaves the carbon market still dominated by Europe (Casado-Asensio et al., 2022). Moreover, major corporations such as Shell and Total Energies often make hollow promises through greenwashing. For instance, Shell's Net Zero Liquefied

Natural Gas (LNG) scheme promises net-zero emissions by 2050 using bio-LNG and synthetic LNG. However, in early 2025, Shell plans to ramp up LNG sales while reneging on its pledge to develop carbon offset projects (Marsh et al., 2023; Segal, 2025). Total Energies is also planning to build an LNG facility in Mozambique and explore oil and gas offshore in South Africa, activities that will continue to pollute the environment and harm local communities in Africa (Esau, 2024; Hernandez, 2025).. The polarization between the Global North and Global South in global climate action raises concerns that the urgent needs of countries most vulnerable to climate change will be overlooked. However, this polarization also presents an opportunity for emerging powers like Indonesia to participate in the green economy market. In this sense, it is noteworthy that Indonesia has not accessed the Fund for Responding to Loss and Damage (FRLD). However, the country has established a parallel mechanism designed to address disaster management needs. Specifically, the pooling fund, as confirmed by Indonesian Finance Minister Sri Mulyani, has successfully raised US$ 450 million to serve as an insurance policy that operates independently of the state budget.

### 2.2. Indonesia's Green Economy Potential

For Indonesia—a country situated at the intersection of ecological vulnerability and green economic potential—the post-U.S. withdrawal moment is an opportune time to fill the leadership vacuum and capitalize on global political gains in optima forma. According to a report from Arup & Oxford Economics (2023), demand for the green economy—including renewable energy, sustainable practices, and carbon credit trading—is expected to reach US$10.3 trillion, with the carbon credit market valued at between US$7 billion and US$35 billion by 2030 (Turner et al., 2025). Outlined in the Country Climate and Development Report (CCDR), Indonesia has committed to reducing unconditional emissions by 31.89% compared to business-as-usual (BAU) and up to 43.20% conditional on international support, through the Forestry and Other Land Uses (FOLU) Net Sink 2030 (World Bank Group, 2023). As the green market grows, Indonesia can promote nature-based solutions (NbS) for global decarbonization efforts. McKinsey Nature Analytics estimates that Indonesia could generate US$100 million to US$150 million from NbS market opportunities. This potential is supported by Indonesia's rich natural resources—forests, wetlands, mangroves, and coral reefs—which together account for 15% of the world's NbS potential (Lath et al., 2023).

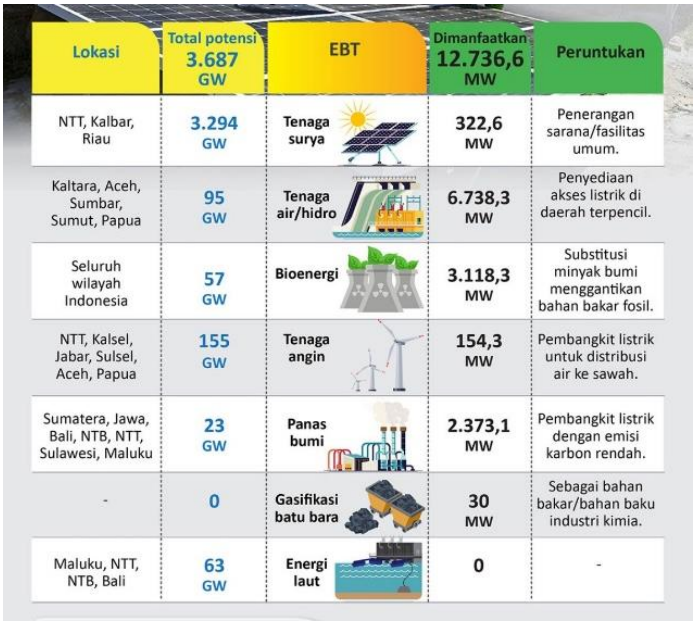
For Indonesia, home to the world's third-largest tropical forest—spanning over 90 million hectares—these mechanisms present a twofold opportunity: 1) Monetizing forest conservation efforts through the Reducing Emissions from Deforestation and Forest Degradation (REDD+) program. The Prabowo administration could draw inspiration from

Indonesia's REDD+ emissions reduction efforts during 2014–2016, which successfully amassed US$103.8 million in results-based payments (RBPs) (Ministry of Finance, 2020). 2) Selling carbon credits from Carbon Capture and Storage (CCS) initiatives. According to Luhut Binsar Panjaitan, Head of the National Energy Council (DEN), Indonesia's CCS potential is estimated at 630 Gt, with the government currently implementing two projects valued at US$1.2 billion and preparing 15 additional CCS projects for 2026–2030. These two mechanisms form the foundation for Indonesia's carbon market, as forest conservation through REDD+ is directly linked to the availability of CCS. This storage capacity, in turn, forms the basis of carbon credits.

In line with Presidential Regulation No. 98 of 2021 regarding the implementation of Carbon Economic Value (NEK), the Indonesia Stock Exchange (IDX) has launched the Indonesian Carbon Exchange ("IDXCarbon"), which is supervised by the Financial Services Authority (OJK), as a significant step toward achieving net zero emissions by 2060 through a voluntary carbon market (Swadana et al., 2023). According to the Indonesia Carbon Market White Paper, Indonesia's carbon market is expected to generate between 908 and 951 million units of carbon credits ready for sale by 2030. With conservative sales price assumptions of Rp30,000 per ton for non-corresponding adjustment (NCA) credits and US$7.5 per ton for corresponding adjustment (CA) credits, and optimistic sales price assumptions of Rp69,600 and US$16, respectively, the most likely average selling prices are estimated at Rp49,500 for NCA and US$11.75 per ton of $CO_2$ equivalent ($CO_2e$) for CA (PwC Indonesia & IDCTA, 2024). Based on an estimated volume of 929.5 million $CO_2e$ units in 2030, the author calculates Indonesia's potential revenue to be approximately US$2.8 billion for NCA and US$11 billion for CA. The latest global data sets the average offering price for Voluntary Carbon Market (VCM) credits, including IDXCarbon, at US$5 to US$7 per ton of $CO_2e$ (Ecosystem Marketplace, 2024; Statista, 2024). If Indonesia can offer carbon credits below the market price (i.e., through "dumping"), the potential for green economic growth would be substantial and highly profitable for the country.

Alongside carbon credits, Indonesia's green industrialization strategy relies heavily on its 22% share of the world's nickel reserves, a crucial mineral for electric vehicle (EV) batteries (Muliawati, 2024). By integrating nickel resources with renewable energy infrastructure—such as High-Pressure Acid Leaching (HPAL) smelters—Indonesia can position itself as a hub for sustainable mineral processing and attract steady Environmental, Social, and Governance (ESG) investments (Nangoy & Schmollinger, 2024). This is similar to how the palm oil sector

faces increasing opposition due to deforestation concerns. To ensure truly green practices, Indonesia must reinforce the implementation of the Indonesian Sustainable Palm Oil (ISPO) certification to avoid potential EU CBAM penalties. As Indonesia gradually phases out fossil fuels, its potential for transitioning to renewable energy is immense—particularly given its geography, geology, and natural resource base (Rahadian, 2023).



| Lokasi | Total potensi 3.687 GW | EBT | Dimanfaatkan 12.736,6 MW | Peruntukan |
|---|---|---|---|---|
| NTT, Kalbar, Riau | 3.294 GW | Tenaga surya | 322,6 MW | Penerangan sarana/fasilitas umum. |
| Kaltara, Aceh, Sumbar, Sumut, Papua | 95 GW | Tenaga air/hidro | 6.738,3 MW | Penyediaan akses listrik di daerah terpencil. |
| Seluruh wilayah Indonesia | 57 GW | Bioenergi | 3.118,3 MW | Substitusi minyak bumi menggantikan bahan bakar fosil. |
| NTT, Kalsel, Jabar, Sulsel, Aceh, Papua | 155 GW | Tenaga angin | 154,3 MW | Pembangkit listrik untuk distribusi air ke sawah. |
| Sumatera, Jawa, Bali, NTB, NTT, Sulawesi, Maluku | 23 GW | Panas bumi | 2.373,1 MW | Pembangkit listrik dengan emisi karbon rendah. |
| - | 0 | Gasifikasi batu bara | 30 MW | Sebagai bahan bakar/bahan baku industri kimia. |
| Maluku, NTT, NTB, Bali | 63 GW | Energi laut | 0 | - |

**Figure 3** Indonesia EBT's Implementation and Realization (ANTARA News, 2023)

Based on the latest statistical data, Indonesia has the potential to generate 3,687 GW (32.3 million GWh/year) of energy from various sources, with solar power as the main contributor due to Indonesia's vast land area and equatorial position (Ministry of Energy and Mineral Resources of Indonesia, 2023). However, as of September 2023, Indonesia has only realized 12,736 MW or 0.35% of this total potential because of inadequate technology and financing. The Ministry of Energy and Mineral Resources of Indonesia (2025) reported that Indonesia's electricity consumption in 2024 was 1,411 kWh per capita. Assuming a population of 285 million, this translates to a total electricity consumption of 402,285 GWh/year. Referring to Figure 4.2 above, the full realization of renewable energy potential could supply 80 times Indonesia's total annual electricity consumption.

### 2.3. Challenges of Indonesia's Green Economy

Even though the updated NDC and participation in the PACM signal global ambition, Indonesia's climate blueprint remains fraught with controversy. While air pollution causes 123,000 deaths annually in Indonesia (Dewi & Santoso, 2023), the extractive industries

continue to marginalize indigenous communities and exploit ecosystems. Rooted in elite power structures, Indonesia's inconsistency regarding the Paris Agreement reflects the conflict of interest between state policies and personal gain. With so many public officials, such as Erick Thohir, Luhut Binsar Pandjaitan, and even the president himself involved in the mining and mineral extraction sectors, coal remains a popular commodity in Indonesia's political and business circles. As a result, the Indonesian Mining Association (IMA) recorded that coal exports reached 421.44 million tons in 2024 (Wahyuddin, 2025). After all, Indonesia is the world's largest producer of thermal coal. Therefore, despite President Prabowo's aspirations to fully phase out coal-fired power plants (PLTU) by 2040, the author believes that the export volume will not drastically decline in the near future. Indonesia's green capacity is also further weakened by ongoing deforestation, with 261,575 hectares of forest loss recorded in 2024 (Auriga Nusantara, 2025).

Indonesia's situation reflects the paradox of a developing country, where the desire to become a pioneer in "green climate" development clashes with its economic dependence on coal. Basri & Riefky (2023), in their Working Paper #180.5 "*Ensuring Inclusive, Affordable, and Smooth Climate Transition in Indonesia*", argue that Indonesia's heavy dependence on coal puts it in a disadvantaged and dangerous position regarding the Enhanced NDC targets. To address this green transition dilemma, the Indonesian government recently secured a US$15.3 million investment from France and the EU, following Indonesia's objections over the lack of international climate finance support. This grant will be channeled to the Indonesia Energy Transition Facility (IETF), a technical assistance program established with the Agence Française de Développement (AFD), to facilitate the Just Energy Transition Partnership (JETP) toward renewable green energy (EEAS EU, 2025).

The author team believes that even though the Indonesian government has succeeded in externalizing the financial burden of the energy transition, it has failed to account for the moral burden of lost lives, both human and environmental, including flora and fauna. This paper also serves as a critique of the climate nihilism practiced by the government, where there is an understanding at the executive level that climate damage is inevitable and, therefore, it is no longer worthwhile to attempt to save the environment. In a recent speech, Energy Minister Bahlil Lahadalia compared Indonesia's development path to that of developing countries between the 1940s and 1960s. He noted that these countries developed due to their abundant forests and mines, crediting their successes to the exploitation of nature and the environment. Lahadalia then pointed out that these countries are no better than Indonesia to this extent,

rhetorically questioning who protested their actions back then (Anggraeni, 2025). This way of thinking ultimately prioritizes short-term economic gains over the long-term security of human life and the environment. Instead of mitigating the climate crisis threatening the Indonesian people, the government is prioritizing coal lobbying. Climate issues in Indonesia have become an institutionalized indifference. While Indonesian diplomats project an optimistic stance on the international stage, debating net-zero emissions and sustainability, policymakers at home are instead giving the green light to mining, deforestation, and industrialization.

### 2.4. Recommendations for Indonesia's Green Strategy

To move forward from this climate crossroads, Indonesia must reassess its strategic grand design. As the largest economy in ASEAN, Indonesia can take a leading role in the ASEAN Common Carbon Framework (ACCF), a carbon standard accreditation system that unifies certification, assessment, and trading processes while reducing the costs of emissions reductions (Rosa et al., 2024). In this regard, Indonesia should work with Malaysia, Thailand, and Singapore to finalize the ACCF mechanism under Article 6 (2) of the Paris Agreement regarding cross-border credit transfers. Additionally, Indonesia could propose the establishment of an ASEAN Carbon Validation Agency to accelerate project approvals and adopt a unified ratio (e.g., 1 IDX-C = 100 Verra) to streamline the system.

Since starting operations in 2023, IDXCarbon has traded 1.13 million carbon credit units and attracted over 100 international buyers (Nurjani & Rezy, 2025). Indonesia can leverage this momentum to expand its regional influence by broadening IDXCarbon's coverage to market the ASEAN carbon credit listings, including Malaysia's BCX, Singapore's SCMA, and Thailand's T-VER. While there is no clear confirmation whether these frameworks are compatible to one another, they are all part of ASEAN Common Carbon Framework (ACCF) cooperative efforts to promote carbon trading, reduce greenhouse gas emissions and achieve net-zero goals, which suggests that these carbon exchanges are working towards interoperability. Following this plan, the Indonesian government can integrate blockchain technology for carbon tracking to prevent double counting and ensure compliance with Article 6 of the Paris Agreement. To facilitate smooth carbon credit transactions, Indonesia could offer incentives (e.g., reduced transaction fees) for ASEAN-based projects registered on IDXCarbon, thereby increasing regional liquidity.

However, the lack of interest in carbon credits within ASEAN (only 4 out of 10 countries have carbon markets) has resulted in voluntary credits being priced as low as US$4.8 per ton of CO2e (Turner et al., 2025). Indonesia can stimulate market demand by advocating for an ASEAN carbon tax (following Singapore's example; US$25 per ton of CO2e) to reduce

emissions through the purchase of carbon credits. It is also important for Indonesia to partner with Japan and the EU to align IDXCarbon's credit standards with CBAM regulations and the Joint Crediting Mechanism (JCM). This moment also presents an opportunity for Indonesia to reduce foreign debt by proposing debt-for-nature swaps (DFNS) to creditor countries. For example, part of Indonesia's US$56 billion debt to Singapore could be converted into carbon offsets aligned with Singapore's net-zero goals. This strategy is not without precedent, Belize in 2021 successfully negotiated a US$553 million DFNS to protect marine ecosystems, and Seychelles in 2016 completed a similar deal focused on ocean conservation (International Monetary Fund, 2021). These cases demonstrate how DFNS mechanisms can translate debt relief into long-term environmental protection and international goodwill. With a global mangrove coverage of 25.79% (Sadeer et al., 2019), Indonesia can issue blue bonds for marine protected areas (MPAs) conservation projects.

## 3. Conclusion

The world now stands on the brink of a climate catastrophe that threatens not only ecosystems but also the very foundations of global justice. The international community's failure to meet the Paris Agreement targets, coupled with rising geopolitical selfishness and funding inequalities, underscores that the climate crisis is a result of political dysfunction, not merely a technical issue. For Indonesia, the green economy momentum is a test of policy integrity: whether to remain trapped in the paradox of green development or to lead an inclusive transition that bridges economic, ecological, and social justice interests. The greatest obstacle to meaningful climate action is not technological capability or financial availability, but rather the lack of political will to dismantle enduring structures of climate colonialism. These structures are often perpetuated by developed countries that, while advancing sustainability agendas and positioning themselves as major climate donors, continue to exert disproportionate influence over the priorities, financing mechanisms, and governance frameworks imposed on the Global South. (Okereke, C. 2021). Amid the uncertainty of multilateralism, Indonesia has a unique opportunity to prove that the green transition agenda is not a zero-sum game but a roadmap to a more balanced global order—where forests, oceans, and vulnerable communities are no longer victims but equal partners in building a resilient green infrastructure. Regardless, time continues to shrink; every second lost to political debates, ineffective policies, and elite greed is a step backward to a point of no return.

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