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Between Growth and Green: Rethinking the Politics of Decoupling in Emerging Economies

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ABSTRACT

With the rising environmental crisis, guided by growing economic interests, the notion of decoupling economic growth and environmental degradation has become a mainstream idea across the world. A sense of pressure is emerging in economies like Indonesia, which are compelled to grow by complying with sustainability goals, highlighting a profound need to re-evaluate whether decoupling is a viable and fair approach. This paper examines the political, structural, and institutional feasibility of absolute decoupling by conducting a comparison between policy frameworks in developed and emerging economies, such as Denmark, Sweden, China, and Indonesia. The study employs a qualitative comparative policy analysis and thematic review to discuss how green growth approaches, including the concepts of a circular economy and transitions to renewable energy, are converted into practice. The results indicate that while countries such as Denmark and Sweden has made notable progress, Indonesia continues to face structural barriers, policy incoherence, and budgetary constraints. The research indicates that the concept of decoupling, as it is presented, is possibly a type of ecological idealism that overlooks history, economics, and geopolitics in the Global South. It proposes a new understanding of prosperity, advocating an understanding of sustainability that has a justice orientation beyond GDP-oriented growth. Decoupling should move beyond a technical undertaking to a political initiative, one based on planetary boundaries, socio-economic fairness, and post-colonial political independence.

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1. INTRODUCTION

Global economic expansion and improved human well-being in recent decades have come at the expense of rapidly increasing carbon emissions and the use of natural resources, such as energy and materials, which has resulted in a convergence of pressures such as climate change, rising and more uncertain natural resource costs, and dwindling resource security (Schandl, 2016). Within the field of environmental economics, however, the term “decoupling” has gained a technical meaning that refers to an economy that grows without corresponding increase in environmental pressure or disaster (Kerschner, 2019). Decoupling, in climate change literature, refers to the breakage of the link between economic growth and carbon emissions (United Nations Environment Programme, 2011). Decoupling occurs when environmental pressure growth rate is lower than economic growth rate (J. Wang et al., 2024). The investigation into the relationship between the economy and natural resources has a rich intellectual history, with much of the ecological economics literature emphasising the fundamental dependence of economic activity on natural systems (Bithas and Kalimeris, 2018). Human activities have, though on one side, contributed to harnessing natural resources for human survival on this planet, on the other hand, also endangered the planet through resource depletion, destruction of biodiversity, environmental pollution, and overdependence on natural resources (United Nations Development Programme, 2020). The United Nations Development Programme (2020) recommends carbon pricing as an effective mechanism for carbon emissions reduction. Yet forests, wetlands, and grassland contribute reduction of 30% of global anthropogenic carbon dioxide emissions.

In recent decades, the idea of decoupling economic growth from environmental degradation has achieved prominence and fascination among policymakers, economists, and environmentalists. Decoupling refers to the authority of an economy to grow without increasing environmental torments such as resource consumption and emissions (Canton, H., 2021). This conception challenges the conventional view that economic development by force of circumstance leads to environmental damage, instead advocating that sustainable growth can be achieved and implemented through innovation, proficiency, and thoughtful policy design. The challenge of meeting the needs of a growing world population with a finite resource base on a planet that is already under stress comes down to an economy’s ability to grow while resource use is declining, “a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible” a concept widely referred to as the “Circular Economy.” A systemic approach to economic development, the Circular Economy has been increasingly gaining importance on the agendas of both business and government leaders, inspired by its potential to decouple economic growth from virgin resource inputs and impacts, as the operational tool for sustainable development (Bassi et al., 2021). Decoupling the economy from resource extraction and use and environmental degradation has therefore been increasingly regarded as an essential feature of a successful transition to a sustainable circular economy. However, robust institutional and financial structures are needed to turn this vision into tangible results. According to (Wang, Sun, and Iqbal (2022), green financing is essential to lowering reliance on fossil fuels and hastening the energy transition in E7 economies, including Indonesia. Decoupling, however, remains more aspirational than practical in the absence of institutional preparedness and alignment with financial policy. However, a narrow focus on emissions or efficiency often overlooks broader systemic risks. In order to provide an environment that is secure for humanity, (Rockstrom et al., 2009) propose a framework of "planetary boundaries," identifying nine ecological thresholds that must not be crossed. According to their research, a number of these boundaries, like biodiversity loss and climate change, have already been crossed, suggesting that sustainability must function within stringent environmental constraints rather than merely economic goals. According to Nicholas Stern (2008), the cost of inaction is far higher than the cost of mitigation,

making climate change the biggest market failure in history. He highlights that early intervention is both economically and environmentally sound. This emphasises how urgent it is to restructure approaches to development before the harm becomes irreparable and unaffordable.

In the absence of policies or interventions targeting decoupling directly, it is perhaps not surprising that we have so far failed to decouple economic growth from resource use, waste and carbon emissions, with any decoupling taking place "at a rate that is insufficient to meet the demands of an equitable and sustainable society" (UNEP, 2011). For every 1% increase in global GDP, carbon emissions have risen by approximately 0.5% and resource intensity by 0.4% (GeSI, 2015). Current business practices will contribute to a global gap of 8 billion tons between the supply of and demand for natural resources by 2030, translating to a potential $4.5 trillion loss of economic growth (Lacy and Rutqvist, 2016), if the demand is not met.

Whether economic growth can be decoupled from environmental degradation, empirical evidence is inconclusive, especially in the case of emerging economies, even as the rhetorical appeal of green growth and the growing institutional interest in concepts such as the circular economy continue to grow. This research critically interrogates two core questions. (1) To what extent have existing policy frameworks in advanced and emerging economies achieved absolute decoupling of GDP from environmental harm? And, (2) what structural, institutional, and political conditions enable or constrain the translation of these strategies into equitable outcomes within the Global South? The questions are not merely timely, but critical, because prevailing developments indicate that relative decoupling cannot be the sole means of achieving global climate and sustainability goals. Through a comparative and policy-based approach studying the ambitions and constraints of decoupling strategies, this research work aims to complement more realistic insights into what sustainable growth can, and cannot, accomplish in practice.

2. METHOD

This research design uses a qualitative research study, which involves a combination of comparative policy analysis and a thematic literature review designed to determine the viability and complexity of decoupling economic growth and environmental degradation. The analysis draws on peer-reviewed academic literature, global institutional reports (e.g., UNEP, OECD, IPCC), and national policy documents from a range of advanced and emerging economies, including Sweden, Japan, the United Kingdom, Germany, China, Denmark, Malta, and Indonesia. These countries were selected to reflect a diversity of environmental governance and development trajectories, with Indonesia being a Global South nation with its answers to the policy puzzle of ecological and developmental growth. Thematic synthesis of the literature is used to determine trends in policy success, technology interventions, and governing strategies. Where applicable, quantitative indicators (e.g., CO_2 emissions per GDP unit, energy intensity, resource productivity) are referenced from open-access datasets to support critical assessment. It has analyzed the consistency, or inconsistency, among policy intent, institutional practice, and environmental outcomes, particularly in a country such as Indonesia, where green development is politically affirmed but ecologically challenged.

3. RESULTS AND DISCUSSION

Economic growth and environmental impact are often considered inextricable by traditional economic models. Historically, industrialization and economic propagation have driven growth in resource expenditure and environmental degradation, which is called the Industrial Revolution, from the mid-18th to early 19th century, and which also spread through the restoration period. This pattern is unsustainable, given the limited nature of Earth's resources and the emergent need to alleviate climate change. Divorcing economic growth from environmental degradation is an important strategy

for sustainable development. De-linking economic growth and environmental degradation will make it easier to achieve long-term economic sustainability, health benefits, climate change mitigation, innovation and competitiveness, biodiversity conservation, resource efficiency and waste reduction, enhanced energy security, etc. However, in this case, certain regulations must be maintained, including resource efficiency, pollution reduction, emission reduction, technological advancement, ecosystem services, a circular economy, and renewable energy.

Advances in clean energy, waste reduction technologies, and efficient manufacturing processes can significantly decrease the environmental footprint of economic activity. For example, fossil fuels can be replaced by renewable energy sources such as wind, solar, and hydropower, thereby diminishing greenhouse gas emissions and pollution. Decoupling flourishes proficient use of natural resources by ensuring their utility for future generations. Efficient resource use decreases costs and reliance on limited resources, presenting a more stable and zestful economy. Increasing asset efficiency can provide substantial economic benefits and reduce asset price volatility (IRP). Nonetheless, the preservation of the entire natural capital stock at or above its current level is a prerequisite for environmental sustainability. Theoretically, a smaller stock could promote sustainability, but there is no ethical space for a further decrease given the ambiguity of ecological thresholds and the disastrous consequences of crossing them (Costanza, R., & Daly, H. E., 1992). By decreasing environmental degradation, decoupling can reduce air and water pollution, evoking vital public health improvements. As a result, it minimizes healthcare costs and enhances overall productivity (W.H.O, 2022). It is necessary to mitigate climate change as it entangles minimizing greenhouse gas emissions through sustainable practices and energy efficiency. It underscores the critical need for transitioning to low-carbon technologies to mitigate global heating and its injurious effects (IPCC, 2022). The accomplishment of decoupling fosters technological innovation, handling the progress of new, sustainable technologies which can build new markets and job opportunities, and thriving economic competitiveness (OECD, 2017). For instance, Japan has instituted different measures to promote energy efficiency and decrease environmental degradation while keeping in existence economic growth. The country's regulations include flourishing renewable energy, enhancing energy-saving technologies, and achieving sustainable city upliftment. Another example can also be given that the UK has effectively minimized its greenhouse gas emissions whilst maintaining to raise its economy, notably through a pledge to phase out coal and invest in renewable energy sources (BEIS 2023).

Decoupling also civilizes economic elasticity. Economies can be turned to more static and adaptable changes in resource suitability and market situation by minimizing dependence on measurable resources. Diversifying the economy away from resource-intensive industries to more sustainable segments that can build new facilities for growth and employment. Environmental degradation directly and indirectly influences public health. Pollution can cause respiratory diseases, water pollution can cause different health problems, and loss of biodiversity can shatter ecosystems that come up with significant services like clean air and water. De-linking economic growth from environmental harm can lead to important public health advantages, decreasing healthcare costs, and enhancing total quality of life. By minimizing environmental degradation, de-linking protects biodiversity, which is significant for the ecosystem act as a support that supports human life and economic activity. It plays an important role in biodiversity for ecosystem stability, food security, and resilience against climate change. It emboldens the adoption of wheel-shaped economy regulations, enhancing the right usage of resources and reducing waste, which leads to worthwhile savings and reduces the environmental impact of economic activities (Webster, K., 2015).

Decoupling through developed energy proficiency and the adoption of renewable energy sources fosters energy safety by decreasing dependence on fossil fuels and diversifying energy needs

(Pendic et al., 2019). For example, Germany has made embodied development in decreasing its carbon emissions while balancing economic growth through its "Energiewende" (Energy Transition) policy. This policy centers on enhancing renewable energy sources, improving energy efficiency, and eradicating greenhouse gas emissions. According to the German Environment Agency, the country has gained an operative retrenchment in CO2 emissions since the early 1990s while maintaining to develop its economy (Schneider et al., 2024). The same thing we can observe among the Swedes. As Sweden is an all-embracing leader in sustainability, it has effectively decoupled economic growth from environmental influence. The country has implemented widespread policies to raise renewable energy, develop waste management, and promote energy efficiency. As a consequence of this, Sweden has driven to decrease its greenhouse gas emissions while achieving firm economic growth (SEPA, 2023).

While Sweden's overall GDP per capita increased by 23.4% between 2000 and 2015, the country's total CO2 emissions per capita fell by 34.4%. Furthermore, in 2025, nuclear and renewable energy made up 73% of its energy mix, while fossil fuels made up only 27%, which is extremely low when compared to most OECD nations. Sweden's success is mostly due to its innovative environmental policies and clean, eco-friendly technology.

The primary tool for lowering the use of fossil fuels during the past 30 years has been carbon pricing, which imposes CO2 emissions. With an estimated 2016 carbon tax of $126 per tCO2, Sweden has one of the highest carbon taxes in the world. Furthermore, CO2 emissions per GDP unit have dropped by more than 30% since 2000 as a result of the energy mix's low proportion of fossil fuels. As a result, Sweden has one of the lowest CO2 emissions per GDP levels in the OECD (Berahab, R., 2017).

The green economy is the key to the government's policies to promote inclusive and sustainable economic development. According to Wang, Sun, and Iqbal (2022), green financing tools like green bonds, subsidies, and sustainable investment plans are crucial for assisting the E7 economies in their shift to renewable energy. They contend that integrating finance with energy transition objectives speeds up sustainable development and lessens reliance on fossil fuels. Such funding channels must be incorporated into Indonesia's policy framework in order to bridge the gap between aspirations for climate change and practical implementation.

Implementing the carbon pricing policy and carbon tax scheme in 2024 represents a significant step towards advancing Indonesia's green economy (Dian Parluhutan Satya Arinanto and Velentina Napitupulu, 2022). Challenges and prospects related to realizing a sustainable green economy in Indonesia, aimed at achieving long-term economic and environmental stability, are a critical topic for discussion, especially given the increasingly evident impacts of climate change on the environment. The country's heavy dependence on fossil fuel and the environmental damage caused by energy companies are central issue that must be addressed (Shuguang Wang, Luang Sun, and Sajid Iqbal, 2022). The Food Estate program's failure in Indonesia serves as a reminder of the disconnect between the rhetoric of green policies and the actual state of the environment. Despite major investments, failed crops and abandoned fields resulted from inadequate planning and a lack of consideration for local knowledge. This case calls into question the notion that sustainability is guaranteed by state-led green growth. It emphasises the necessity of context-driven, justice-based decoupling strategies (Jong, H. N., 2023).

Indonesia's Green Economy Ambitions and Structural Constraints

Applying green economy principles is essential to balance economic growth with environmental protection and social welfare, apart from Indonesia's potential for sustainable and environmentally friendly economic development. There is a need to increase the utilization of renewable energy

sources, improve policy coherence, and address economic challenges such as a negative trade balance and heavy reliance on extractive sectors that harm the environment.

To overcome these challenges and realize a sustainable green economy in the Indonesian energy sector, it is essential to be consistent in its planning and execution and maximize government stimulus on green economy activities. It is difficult to have the same consistency in the longer term on the policy front. Regular or unstable changes in policy may scuttle long-term investment and dent both domestic and international investor confidence. Conversely, financing is the key to renewable energy projects. Indonesia needs more public budgets to support investment in infrastructure and other sustainable projects (David Ray and Lili Yan Ing, 2016). Budgetary allocation to sustainable efforts can be minimal with priorities beyond this sector and other domestic needs. Indonesia frequently uses external debt as a way to finance green economic growth and sustainable initiatives. There is a need to invest in research and development on renewable energy technologies suited to the geographical and environmental needs of Indonesia, environmental issues like deforestation, air and water pollution control and reducing environmental degradation aspects involved in mining and burning fossil fuel.

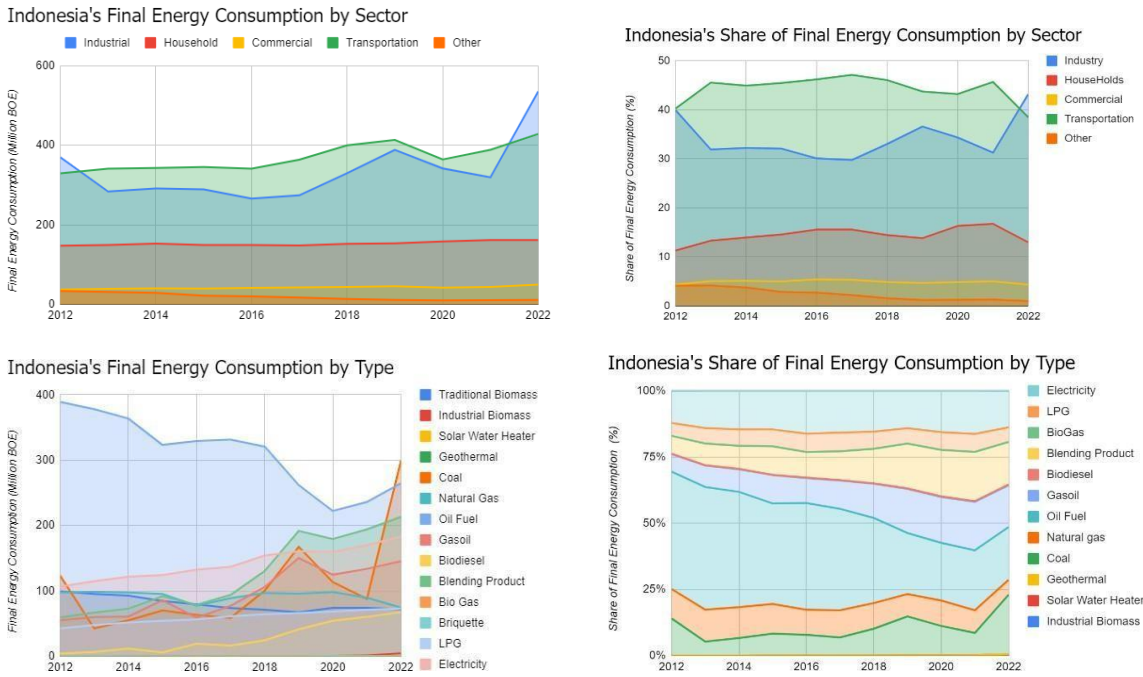

Figure 1: Energy Consumption in Indonesia

(Source: Handbook of Energy & Economic Statistics of Indonesia, 2023)

Comparative Reflections: Global Lessons in Decoupling

Indonesia's journey toward a sustainable green economy remains challenging. The country still largely depends on fossil-based sources of energy, and processes on green finance and reusable sources are not sufficient. Meanwhile, the transition is further complicated by problems such as deforestation, pollution, and ineffective regulation enforcement. But instead, there is hope since there is the possibility of growth in clean energy instead, better waste systems, and a policy framework that aligns genuinely with international climate targets (Arinanto, D. P. S., & Napitupulu, V. (2022).

Malta is at the forefront of decoupling economic growth and environmental degradation because they have transitioned and experimented, and continues to do so. Malta has gained comparative decoupling in different environmental indicators, exhibiting improvement in minimizing environmental impact correlated to economic output. Nevertheless, utmost decoupling has been

inappropriate across segments. The necessity of comprehensive, localized analyses over single-indicator studies and advocates for methods to figure out Malta's integration into universal trade networks for a more appropriate environmental impact assessment (Conrad, E., & Cassar, L. F., 2014).

Moreover, Denmark has exhibited that it is feasible to gain economic development alongside environmental protection. The country has invested laboriously in wind energy and other renewable sources, significantly decreasing its dependence on fossil fuels. Denmark's commitment to energy proficiency and green technologies has enabled it to decouple economic growth from CO2 emissions (Danish Energy Agency, 2024). Developing resource competency is another critical aspect of de-linking. By constructing more appropriate use of resources by recycling, reusing materials, or using less, businesses can decrease their environmental impact, fostering or even growing their output. This accession both supports the environment and can also result in cost savings and increased competitiveness for the stipend.

We generally know that China is not only beautiful, magical, and peaceful in terms of nature, but also, it occupies the second place in the world as an economically capable country, whose current GDP in 2025 is USD 19.23 trillion. Even China generally tries to figure out how to become economically sustainable by reducing environmental pollution and damage. Numerous studies emphasise how crucial it is to incorporate environmental responsibilities into economic development. Many Chinese provinces have seen strong GDP growth, but carbon emissions have increased more quickly, leading to negative green growth. This emphasises how difficult it is to strike a balance between environmental sustainability and economic growth (Mai, S., 2024). China has progressively based on sustainable development through elementary programs like the Circular Economy Promotion Law and the 14th Five-Year Plan, which strengthens green and low-carbon improvement. This country has invested heavily in renewable energy, being the world's largest generator of solar and wind power. China’s commitment to gaining carbon neutrality by 2060 also underscores its endeavours to decouple economic growth from environmental pressure (Adebayo et al., 2021).

Ethical Imperatives and Socioeconomic Inclusion in Decoupling

There is also an ethical degree to decoupling. Immediate patterns of expense and occurrence are unsustainable and unwarranted for upcoming generations. Ensuring that economic growth does not give and take away the capability of upcoming generations to meet their exigencies is a matter of intergenerational justice. Decoupling can help create a legitimate, more reasonable world where economic progress does not come at the expense of environmental health. Decoupling economic outgrowth from environmental degradation is both a theoretical ideal and a practical requirement. It includes an underwear of technological originality, proficient resource management, economic multiplication, and dynamic regulatory frameworks. While the challenges are important, the capabilities are advantages for the economy, public health, and the planet, which make it a compelling motive. By mutually hugging sustainable progress principles and spending in green technologies, we can create an optimistic future where economic enrichment and environmental stewardship go hand in hand.

Policy Innovations and Legal Frameworks for Sustainable Transition

Although the disadvantages have been mentioned earlier, these disadvantages can be easily overcome through some methods. Starting wide job transfer programs is vital. These programs should involve retraining institutions, job allocation services, and financial backing for affected workers. (International Labour Office, 2018). Governments can take steps in financial enthusiasm, such as subsidies, tax breaks, or grant-in-aid, to offset the primary costs of implementing environmentally friendly technologies. Bringing up dialogue and collaboration among stakeholders to call for

counteraction. Involving industries and stakeholders in the decision-making process can support identifying the basic ground and improve reciprocal adjuvant solutions. Stakeholder engagement is really important in defeating counteractions to sustainability efforts. Policymakers should be focused on inventing and implementing efficient policy frameworks. Adjustable evaluation and adjustment of policies are essential to ensure that they achieve their intended aims (Green Growth Indicators, 2017). Legitimate distribution of advantages and burdens among different socioeconomic groups must be prioritized by policies. Dimensions such as fixed on assistance programs and extensive policy development processes can support addressing inequalities. Through accomplishing these strategies acquainted by Isagacity from academic articles and reports, stakeholders can operate towards decoupling economic growth from environmental degradation in a socially extensive and sustainable manner.

International economic law (IEL) plays a critical role in supporting the Sustainable Development Goals (SDGs) by promoting transparency, accountability, and sustainable investment. Depending on their design, trade agreements and international finance may facilitate or constrain sustainable policy work. SDG-focused projects require multilateral development banks, but unregulated investments can impinge on human rights and cause environmental damage. To be effective, IEL must address power imbalances and ensure that its frameworks align with sustainability principles (Zuhra, A., & Sabirin, A., 2024).

4. CONCLUSION

This study makes us question not only the way we approach green growth but also the very reason behind the belief that this premise is universally applicable. Decoupling economic growth and environmental degradation has become the mantra in global climate rhetoric. This idealized trajectory, however, and as the Indonesian case highlights, is itself subject to fundamental assumptions that, in addition to being built around a circular economy, renewable transitions, and the market-based approach to environmentalism, systematically disregard the reality of development in the Global South.

Indonesia is not merely failing to decouple; it is exposing the limits of decoupling as a universal policy. What seems like stalling policy or inadequate investment is twofold: the very notion that the poor can grow, industrialize, and take millions out of poverty is a paradox, as is the expectation of doing so within the context of diminishing planetary constraints. This tension is not one of mere policy imbalance. It is the dissonance of epistemic: Tell nations to continue on a treadmill it did not build, in a race it never designed, with a finish line that keeps getting changed. Even as policymakers discuss green economy transitions, the more fundamental engines of growth continue to be those of fossil capital, capital-intensive resource extraction, and export-led modes of development. Deforestation, informal pollution, and poor regulatory enforcement are not policy failures; they are precipitates of a system that remains organised externally around demand, past state debt penalties, and state-market relations that reward short-term growth at the expense of long-term resiliency. There is no denying that developing less developed countries is crucial. However, there is growing evidence in developed economies that rising consumption does not contribute to human happiness and may even work against it. More urgently, it is now evident that the effects of growing consumption are causing the ecosystems that support our economies to collapse. We will need to find a way to achieve prosperity without relying on further growth unless we can drastically reduce the environmental impact of economic activity, which is not supported by any evidence.

Simultaneously, the comparison of Indonesia to Denmark or Malta, where decoupling has not been achieved in full but saw at least some gains, demonstrates the tri-test that in all realities, the green transition is highly dependent on circumstance. They originate not only in technological innovation or

policy adherence but in institutional depth, cultural values, governance patterns, and historical advantage. An attempt to replicate decoupling mechanically across geographies runs the risk of making decoupling into dogma, a tempting but inappropriate blueprint that conceals as much as it reveals. Yet this paper does not argue for resignation. Instead, it suggests that a decoupling of another kind is deeply overdue-not merely between growth and emissions, but between sustainability and economic orthodoxy to which it is now tied. We need to separate sustainable development and the imperative of growth. It is not an attempt to bring development to a halt, but rather an objective to reframe prosperity beyond extraction, beyond infinite accumulation, and the narrow measurement of GDP. By showing that delaying action on climate change results in disproportionately high future costs, particularly for vulnerable populations, Stern's economic framing supports this claim. Proactive low-carbon investments protect future livelihoods and economic resilience, which has advantages beyond emissions. Therefore, equity and climate economics must be incorporated into the decoupling agenda from the outset. In the Indonesian context, that takes the form of investments in place-based transitions, low-tech resilience, ecological democracy, as well as legal tools that enshrine planetary rights, rather than just incentivizing green markets.

Critically, decoupling can no longer be thought of as just an environmental policy. It needs to be reclaimed as a post-colonial necessity: the right of Global South countries to establish methods of development that are ecologically consistent, socially equitable, and historically aware. This also implies challenging the asymmetries in international finance, trade law, and institutional domination that lock nations such as Indonesia into extractive traps, as they score marginal emissions success at the same time being paraded as heroes. Above all, this work provides a challenge to scholars, politicians, and organizations to regard decoupling as an issue of size or velocity, rather than of form and fairness. The current model offers green growth with brown foundations. Such an approach does not constitute a genuine transition; it is, instead, a mirage. What is lacking is not better sustainability metrics, but a better politics of sustainability. One that is forthright with its trade-offs, creative in its substitutions, and bold enough to relinquish the notion that everything advancing needs to resemble more. If decoupling is to mean anything in the coming decades, it must mean a rupture from the logic that caused the crisis to begin with.

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