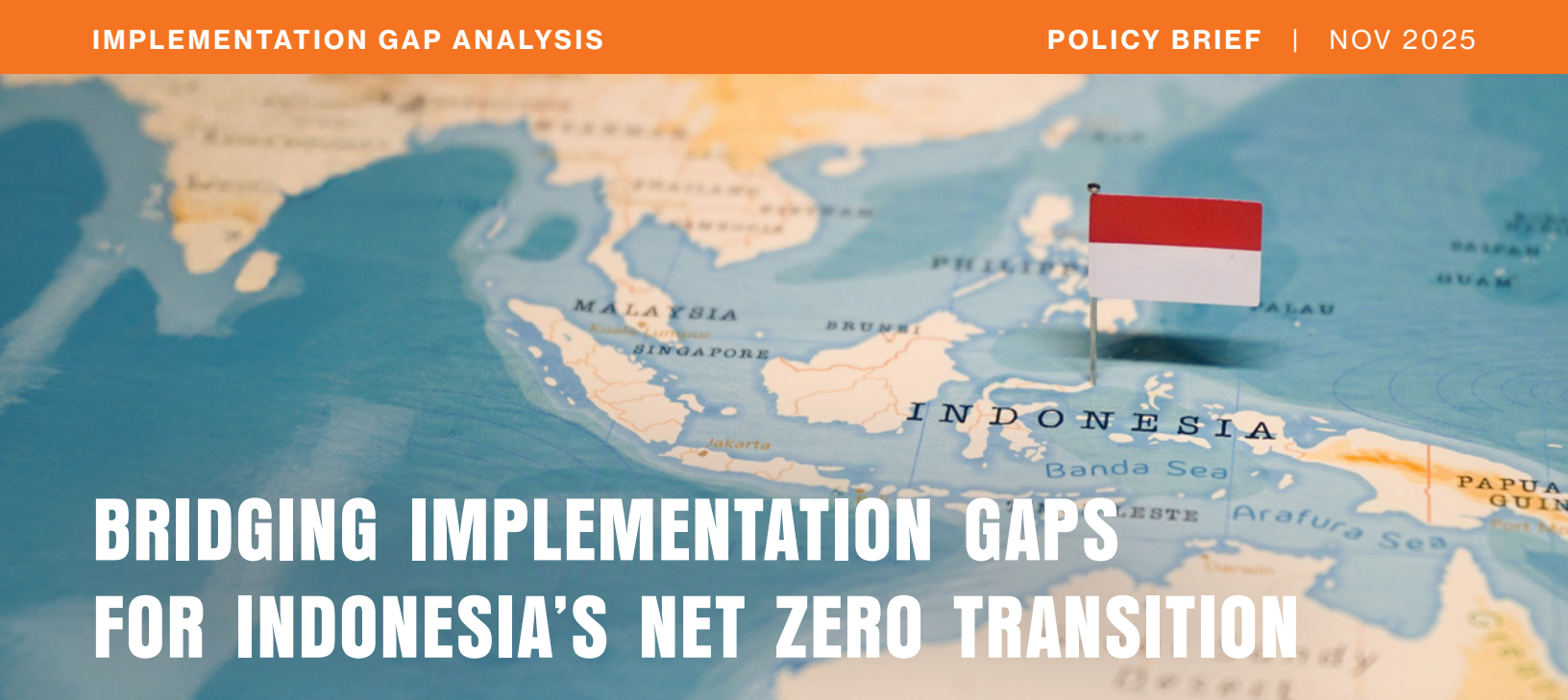


A map of Southeast Asia with an Indonesian flag pin placed on the Indonesian archipelago. The map shows various countries including Malaysia, Brunei, Philippines, and Papua New Guinea, as well as bodies of water like the Banda Sea and Arafura Sea. The title 'BRIDGING IMPLEMENTATION GAPS FOR INDONESIA'S NET ZERO TRANSITION' is overlaid in large white letters.

BRIDGING IMPLEMENTATION GAPS FOR INDONESIA'S NET ZERO TRANSITION

Authors: Soyoung Oh, Malvika Pradhan, Putri A. Agustina, and Michael Kurniawan



Key Insights

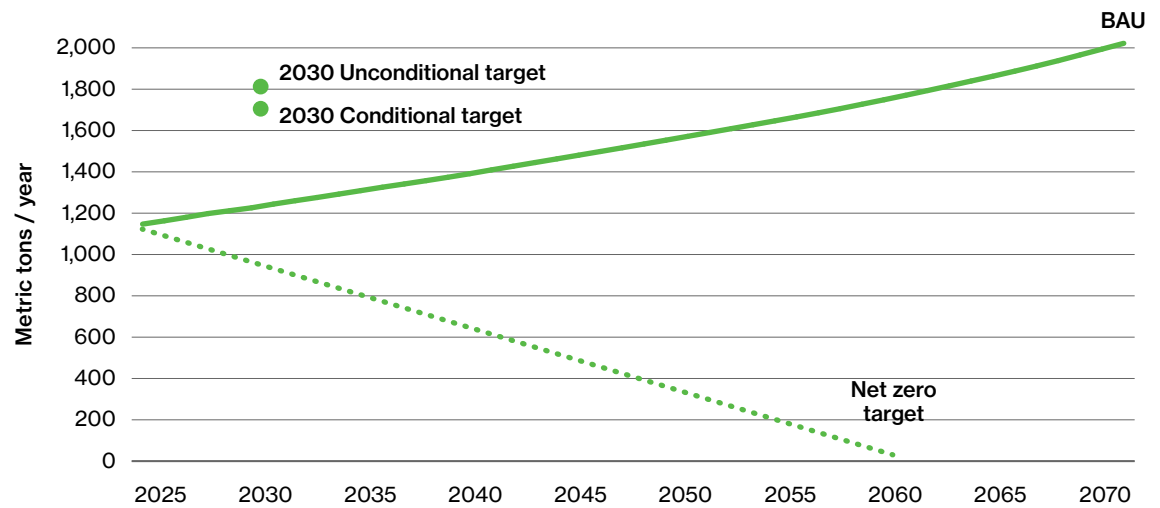
- Indonesia has adopted a wide range of climate policies across the energy, land use, transport, and industry sectors. Yet while ambition is high on paper, implementation remains uneven across 15 major policies we examined.
- This analysis identifies key barriers in implementing Indonesia's climate policies across different sectors and concludes with recommendations to bridge the implementation gap.
- Strengthening public finance, addressing competing goals through aligning incentives, and enhancing governance will be needed to translate climate ambition into credible action.

Background

Indonesia's climate policy portfolio is both diverse and expansive. It has included market-based mechanisms, such as the hybrid emissions trading scheme and carbon tax, as well as fiscal instruments like feed-in tariffs and biofuel subsidies. Additionally, it encompasses regulatory frameworks for green buildings and sector-specific strategies, including REDD+ (Reducing Emissions from Deforestation and Forest Degradation) and the deployment of electric vehicles. These policies are designed not only to reduce emissions but also to foster innovation and accelerate transformation towards a low-carbon economy (Figure 1). The President also aims to reach 100 percent renewables in 10-15 years.

This study reviews 15 key climate policies identified through Climate Policy Lab's Indonesia policy inventory and literature review, complemented by semi-structured interviews with Indonesian experts (Table 1).

Figure 1: Indonesia's emissions trajectory between 2025 and 2070



Source: Authors based on Energy Policy Simulator (new EPS Indonesia version here).

Table 1: Selected Policies for Implementation Gap Analysis – Indonesia

Sector	Policies
Energy	Hybrid emissions trading scheme (ETS) and carbon tax in the power sector
	Feed-in tariffs (solar PV, biomass, hydropower, solid waste)
	Biofuel development policies (e.g., biodiesel mandate, subsidies)
	A coal-fired power plant retirement initiative
	Carbon Capture and Storage (CCS) initiative
	Waste to Energy strategy and policy
Forestry	Reducing emissions from deforestation and forest degradation (REDD+)
	A permanent moratorium on new forest clearance
	Indonesian Sustainable Palm Oil Certification System (ISPO)
	Long-term National Forestry Plan (RKTN) 2011-2030
	A multi-business forestry policy
	Agroforestry & Social Forestry
Ecosystems / Blue economy	Mangrove restoration policy
	Blue bonds initiative
Transport	EV Deployment and Infrastructure Program
	Transit Oriented Development (TOD) concept in urban area
Industry	Improving industrial energy efficiency
Building	Regulations on the implementation of green buildings

Note: 15 policies were selected through literature review and stakeholder engagement with Landscape Indonesia to identify significant climate policies in Indonesia based on Climate Policy Lab's Indonesia policy inventory. The inventory was compiled using official government publications, supported by international databases such as the IEA databases, and prior academic and policy research on Indonesia. Policies were considered 'significant' if they cover a large share of sectoral emissions, target sectors with high decarbonization potential, involve substantial fiscal or regulatory levers, and/or send strong ambition signals in national or international frameworks. As these are policies with significance, they may already receive more political attention, financing, or institutional support than other, smaller-scale measures. Thus, we acknowledge that the implementation gaps we observe are likely a lower-bound estimate relative to the broader universe of climate-related policies.

By assessing both the intended goals and actual implementation status of these policies, the analysis highlights why progress has been uneven. The findings highlight persistent implementation gaps (see Appendix Table 1 for categorization) arising from competing policy priorities, limited institutional capacity, and a lack of political will and public finance.

Key Findings

FINANCIAL CONSTRAINTS

Public finance emerges as the most binding constraint across nearly all sectors. High-impact initiatives, such as early coal-fired power plant retirement, mangrove restoration, and REDD+, require grant-based or concessional financing to be viable. Yet funding flows remain limited and heavily reliant on donor finance or state-owned enterprises with limited fiscal space.

Following the U.S. withdrawal from the Just Energy Transition Partnership (JETP), questions arose about Indonesia's ability to retire coal assets at scale, with only one major project (Cirebon-1) currently on track for early retirement. Similarly, efforts to scale carbon capture and storage (CCS) or waste-to-energy (WtE) plants face bankability issues due to unclear revenue models and regulatory uncertainty.

POLITICAL ECONOMY AND INTERESTS

The energy and forestry sectors face barriers of political economy and interests – namely, insufficient political will, competing goals, and industry lobbying or resistance. For instance, coal remains politically and economically entrenched, protected by subsidies and energy security narratives.

The persistence of fossil fuel subsidies distorts market signals, undermining efforts to attract private investment in renewables and energy efficiency. For instance, feed-in tariffs on solar PV, hydropower, and biomass have been cancelled and replaced by a ceiling price auction as they failed to create a bankable environment

due to uncompetitive rates and opaque revisions. In the meantime, the Emissions Trading Scheme (ETS) price has been low (below \$1/ton in 2023¹) with low trading volume, and the carbon tax has been delayed, limiting the effectiveness of Indonesia's pricing instruments in the power sector. PLN's² reliance on subsidized coal further deters renewable power purchase agreements. The resulting incoherent policy mix sends contradictory signals to the market on the country's climate ambition.

Land-use policies face similar contradictions. The impact of permanent moratorium on new forest clearance and the mangrove restoration program has been weakened by competing priorities such as food security and regional development. For instance, the government's decision to allow development activities in conservation zones undercuts its own environmental goals. These examples reveal how competing goals, industry resistance, and fragmented incentives erode the feasibility of climate policies.

GOVERNANCE AND INSTITUTIONAL CAPACITY

Fragmented governance remains a core structural barrier. Vertical coordination failures between national policies and subnational planning frameworks undermine consistency, as subnational governments often lack the capacity to integrate climate targets into their development plans. Horizontal misalignment across agencies further leads to regulatory overlap and policy incoherence. For instance, the mangrove restoration program was hindered by conflicting spatial planning priorities between local and national authorities. Similarly, REDD+, the transit-oriented development concept, and early coal-fired power plant retirement policies have struggled to move forward due to coordination gaps and fragmentation across ministries.

1 ICAP (2025) Indonesian Economic Value of Carbon Trading Scheme. <https://icapcarbonaction.com/en/ets/indonesian-economic-value-carbon-nilai-ekonomi-karbon-trading-scheme>

2 PLN refers to Perusahaan Listrik Negara, the fully state-owned electricity company of Indonesia.

TECHNOLOGICAL AND LEGAL CONSTRAINTS

Climate policies have faced challenges around technological and legal constraints, which represent systemic bottlenecks due to the high costs of imported technologies, weak local R&D, and limited infrastructure. For instance, electric vehicles (EV) deployment suffers from insufficient charging stations and inadequate grid capacity. The CCS initiative also lacks CO₂ transport and storage infrastructure, while green building standards face the high costs of materials.

Legal barriers stem from ambiguous and overlapping mandates, slow permitting, and limited enforcement power. Forest moratorium and green building standards lack binding penalties for non-compliance. The ISPO (Indonesian Sustainable Palm Oil) certification system remains hindered by unclear land tenure and weak auditing.

Recommendations

Indonesia has set ambitious targets and designed comprehensive policies, but delivery remains inconsistent. Coal retirement remains limited, and the full-scale implementation of both the carbon tax and the national ETS has been repeatedly delayed. Despite the ambitious goals outlined in the FOLU Net Sink 2030 strategy³, forest protection outcomes remain limited due to weak and inconsistent enforcement and verification across provinces. Finance continues to be the choke point across nearly all sectors, while fossil fuel subsidies and the entrenched interests of fossil fuel industries weaken price signals and slow the pace of transition.

The next five-year time frame is a critical policy window to close the gap between ambition and delivery. The political transition offers a chance for the new administration to set a durable energy and climate agenda, particularly by

integrating climate goals with national priorities such as the upcoming Second NDC. These priorities will be closely linked to Indonesia Emas 2045 (Golden Indonesia 2045 Vision),⁴ which can shape the RPJMN 2025-2029 (national development plan). This alignment can ensure that climate ambition is institutionalized within long-term development planning, helping to raise energy targets, strengthen domestic pressure for implementation, and bridge delivery gaps.

On the finance side, the restructuring of the JETP, the expansion of Article 5 and 6 mechanisms, and access to Green Climate Fund resources create avenues to address financial constraints for fully executing early coal retirement and scaling up renewables. Importantly, Indonesia's fossil fuel subsidy represents a major source of potential financing that could be reallocated toward renewable investments, grid infrastructure, and just transition measures.

On the international stage, while Indonesia's G20 presidency ended in 2022, the country remains active in G20 Troika discussions as a former chair and is positioning itself as a regional energy hub. These platforms provide strategic opportunities to secure external financing and technical partnerships to address financial and technological implementation gaps.

If coupled with stronger domestic coherence, phasing down fossil subsidies, realigning incentives, and building institutional capacity, Indonesia can translate international partnerships into credible domestic delivery. In short, the convergence of political, financial, and international windows provides an important moment to move from ambition to action.

By seizing these windows, Indonesia could strengthen its trajectory toward meeting its 2030 NDC and 2060 net-zero goals, given that ambition is raised and implementation gaps are effectively addressed. ●

3 Ministry of Environment and Forestry (2023) FOLU Net Sink: Indonesia's Climate Actions Towards 2030 https://www.menlhk.go.id/cadmin/uploads/PHOTO_BOOK_FOLU_NET_SINK_Indonesia_s_Climate_Actions_Towards_2030_a3d4f1fa43.pdf

4 The Golden Indonesia 2045 Vision sets goals for the country to be a sovereign, advanced, fair and prosperous by its centennial in 2045.

Appendix

TYPOLOGY OF IMPLEMENTATION GAPS

CATEGORIES	DEFINITION	EXAMPLES
Group 1: Governance and Institutional Capacity		
Vertical coordination (multilevel governance)	Alignment across national, regional, and local levels of government in climate policy objectives and implementation.	Misalignment in climate policy implementation, timeline, or targets between federal and state levels.
Horizontal coordination	Alignment among ministries and agencies at the same level of government in climate policy objectives and implementation.	Fragmented efforts and conflicting actions (e.g., competitions between ministries for resources).
International pressures/factors	International and external legal and financial/political dynamics that act as barriers.	Donor-driven conditionality (e.g., IMF or WB's conditions on aids that might restrict policy implementation); WTO rules on export subsidies.
Institutional capacity	Organizational structures, norms, rules, and human resources that enable policy delivery.	Limited expertise, bureaucratic inefficiencies, poor coordination, poor communications.
Group 2: Political Economy and Interests		
Political will	Commitment by political actors to support climate policy decisions and their outcomes.	Delay of policies due to vested interests in fossil fuels, partisan divides, changes in electoral cycles, lack of (or incoherent) incentives.
Competing goals	Tensions between climate objectives or other economic, political, or development objectives.	Trade-offs between emissions reduction and industrial expansion.
Stakeholder engagement/coordination	A systematic process of identifying and interacting with individuals, groups, or organizations that have a stake in a policy or project.	Public consultation held but stakeholder inputs are not integrated; local groups being excluded from decision-making.
Consumer behavior	Behavioral resistance or unintended reactions to climate policies.	Rebound effects from fuel-efficient cars leading to increased vehicle use.
Industry lobbying / resistance	Strategic actions by industries to delay, weaken, or reshape climate policies that challenge their interests.	Coal industry lobbying against early retirement of coal plants or carbon taxes.
Incentive misalignment	Conflicting incentives across climate and non-climate policies that undermine intended outcomes.	Subsidies for fossil fuels, or market-based incentives that contradict carbon pricing mechanisms.
Group 3: Financial Constraints		
Public investment/finance	Provision of public finance during each stage of policy implementation.	Unavailability of funds required for a project scheduled for implementation from 2015 to 2020 during the 2019–20 financial year due to a shock to the source of revenue that paid for the implementation of the policy.
Private investment/finance	Availability of and access to private finance that is required for the implementation of a policy.	Unavailability of sufficient private capital due to a poor estimation by the government of the level of risk that banks were willing to take on.

(continued on the next page)

TYPOLGY OF IMPLEMENTATION GAPS

Group 4: Technical and Legal Constraints		
Technology	Availability and maturity of low-carbon technologies needed.	Mismatch between policy's technological needs and the existing technological infrastructure.
Data, communications, and information	Availability of flow of data and information, availability of information technology and monitoring systems, and the effectiveness of communication between actors.	Emissions data not being collected; lack of reporting to policymakers after the implementation of policies; lack of MRV systems.
Policy design	The initial phase of the policy process which includes identification of actors, instruments, setting of targets, allocation of responsibilities, and establishment of implementation frameworks.	Exclusion of relevant actors; ambiguous targets; unclear division of responsibilities among implementing agencies.
Legal mechanisms	Legal mechanisms available to address issues related to policy non-compliance, enforcement, or disputes.	Insufficient legal tools or mechanisms to enforce policy decisions or when the existing laws are not equipped to address compliance issues.
Human talent	Skilled personnel and institutional leadership to drive innovation and implementation.	Limitations in knowledge, skills, innovation or entrepreneurship in the general population.

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ABOUT THE AUTHORS:

Soyoung Oh is a Predoctoral Research Fellow at the Climate Policy Lab and PhD candidate at The Fletcher School, Tufts University.

Malvika Pradhan is a Research Assistant with the Climate Policy Lab and a MALD degree candidate at The Fletcher School, Tufts University.

Putri A. Agustina is a GIS Specialist and Associate at Landscape Indonesia.

Michael Kurniawan is Associate Manager at Landscape Indonesia.

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Climate Policy Lab is based in the Center for International Environment and Resource Policy (CIERP) at The Fletcher School, Tufts University

visit: climatepolicylab.org email: cpl@tufts.edu

