

An aerial photograph of a lush, dense tropical rainforest. A dark, winding river flows through the center of the forest, surrounded by thick green vegetation. The trees are tall and varied in color, ranging from deep greens to lighter, yellowish-green hues. The overall scene is vibrant and natural.

Background Paper

Engaging the private sector to support ecosystem conservation and restoration to increase biodiversity in Kalimantan, Indonesia

Dr Depi Susilawati

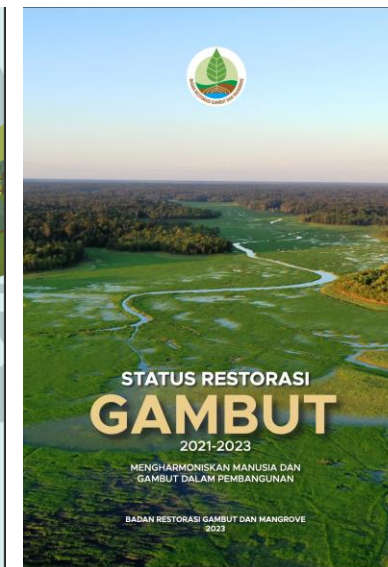
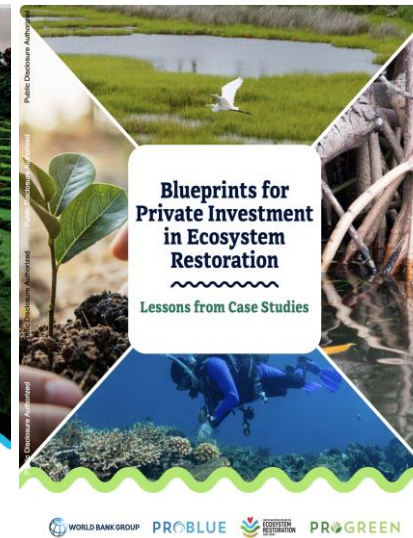
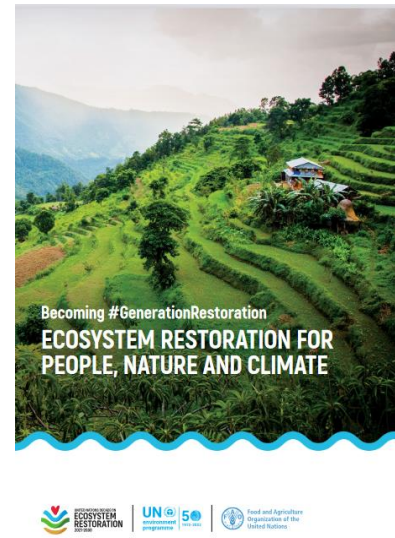
Australian National University

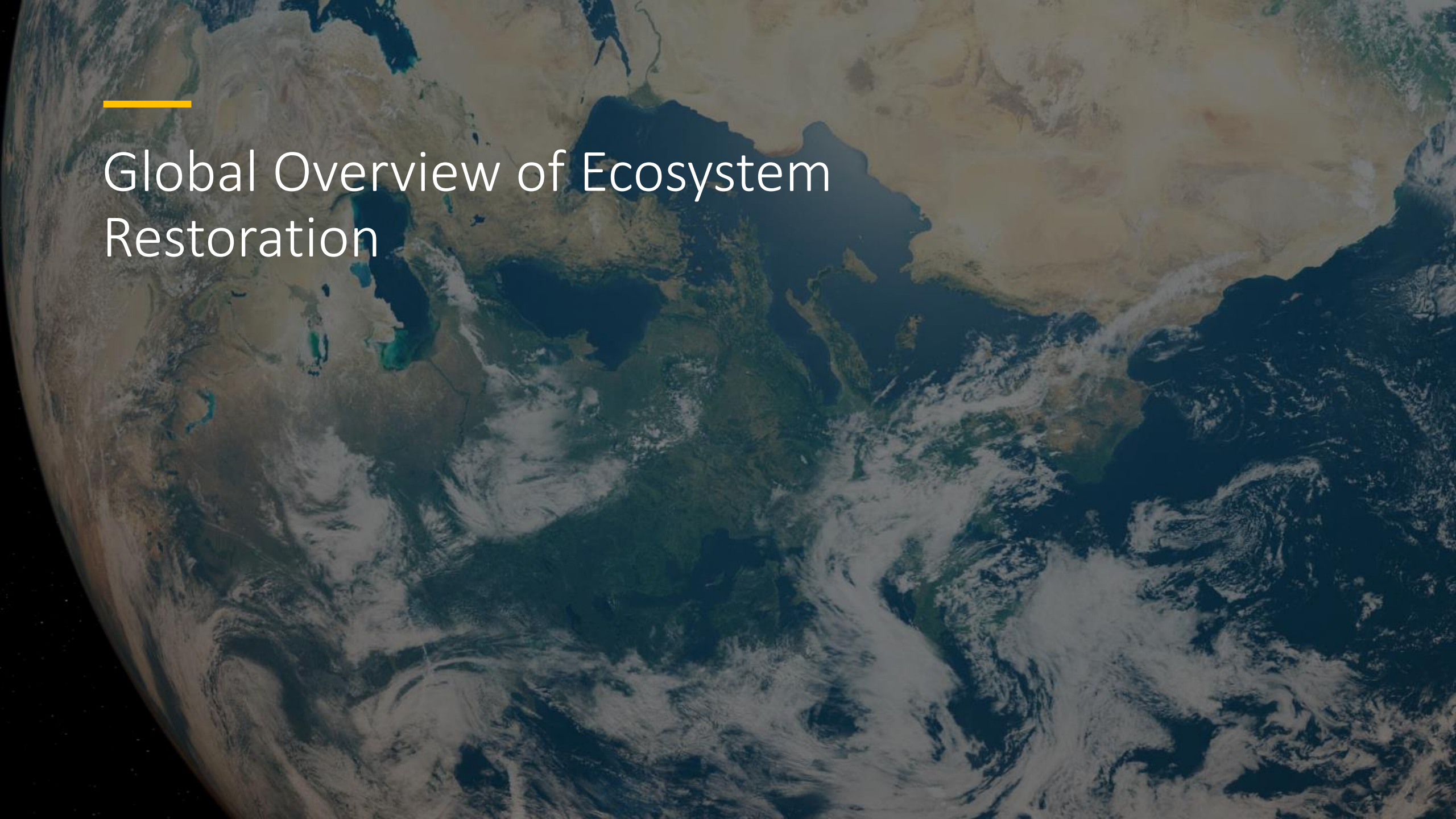
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About the Background Paper

- Developed with advice from Advisory Group members.
- Draws on a body of related work.
- Specific focus: private sector engagement in ecosystem restoration in Kalimantan, Indonesia.

- Disusun berdasarkan masukan-masukan dari para anggota Advisory Group.
- Mengacu kepada berbagai sumber.
- Fokus utama: pelibatan sektor swasta pada restorasi ekosistem di Kalimantan, Indonesia.





Global Overview of Ecosystem Restoration

Global priorities for restoration according to various criteria

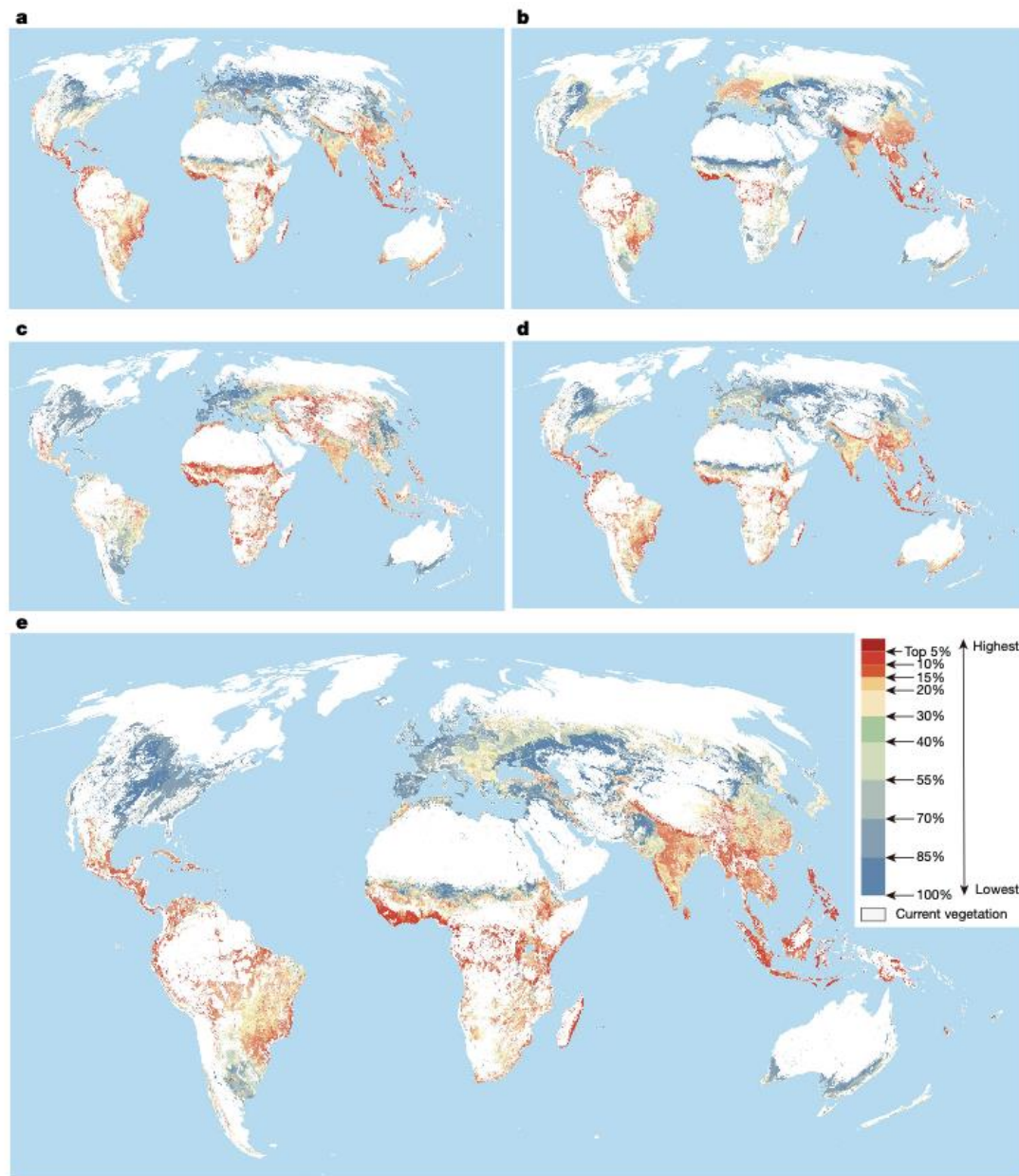


Fig. 1 | Global priorities for restoration according to various criteria.
a–e, Priority areas for restoration, focused on biodiversity (a), the mitigation of climate change (b), minimizing costs (c), biodiversity and the mitigation of climate change (d) and all three criteria (e). All converted lands are ranked from

highest priority (top 5%) (dark red) to lowest priority (85–100%) (blue). The spatial patterns for individual criteria (a–c) vary considerably, which highlights the role of joint optimizations (d, e) in capturing synergies.

Restoring 15% of converted lands in priority areas could avoid 60% of expected extinctions and sequester 299 gigatons of CO₂, which is 30% of the total CO₂ increase in the atmosphere, or equivalent to 14% of total emissions.

Memulihkan 15% lahan yang dikonversi di kawasan prioritas dapat menghindari 60% kepunahan yang diperkirakan terjadi dan menyerap 299 gigaton CO₂, yaitu 30% dari total peningkatan CO₂ di atmosfer, atau setara dengan 14% total emisi.

afr100

RESTORE 
OUR FUTURE
BONN CHALLENGE



ECCA30
30 million hectares by 2030

Initiative
20x20

Global and regional initiatives
on ecosystem restoration

TEN PRINCIPLES THAT UNDERPIN ECOSYSTEM RESTORATION



GLOBAL CONTRIBUTION



BROAD ENGAGEMENT



MANY TYPES OF ACTIVITIES



BENEFITS TO NATURE AND PEOPLE



ADDRESSES CAUSES OF DEGRADATION



KNOWLEDGE INTEGRATION



MEASURABLE GOALS



LOCAL AND LAND/ SEASCAPE CONTEXTS



MONITORING AND MANAGEMENT



POLICY INTEGRATION



Food and Agriculture Organization of the United Nations

#GenerationRestoration

<https://www.decadeonrestoration.org/publications/principles-ecosystem-restoration-guide-united-nations-decade-2021-2030>



Capacity, Knowledge and Learning Action Plan for the United Nations Decade on Ecosystem Restoration










Food and Agriculture Organization of the United Nations



<https://www.fao.org/documents/card/en/c/cc6592en>

Forest and Landscape Restoration

- potential linkages with Sustainable Wood Supply

Land use	Land subtype	General category of FLR option	Description
Forest land Land where forest is, or is planned to become, the dominant land use → Suitable for wide-scale restoration	If the land is without trees, there are two options:	 1. Planted forests and woodlots	Planting of trees on formerly forested land. Native or introduced species planted for various purposes, fuelwood, timber, building, poles, fruit production, etc.
		 2. Natural regeneration	Natural regeneration of formerly forested land. The site may be highly degraded and no longer able to fulfil its past function, e.g. agriculture. If the site is heavily degraded and no longer has native seeds, some planting will probably be required.
	If the land consists of degraded forests:	 3. Silviculture	Enhancement of existing forests and woodlands and stocking, e.g. by reducing fire and grazing and by liberation thinning, enrichment planting, etc.
Agricultural land Land that is managed to produce food → Suitable for mosaic restoration	If the land is under permanent management:	 4. Agroforestry	Establishment and management of trees on active agricultural land, either through planting or favouring natural regeneration, to improve crop productivity, provide dry season fodder, increase soil fertility, enhance water retention, etc.
	If the land is under intermittent management:	 5. Improved fallow	Establishment and management of trees on fallow agricultural lands to improve productivity, e.g. through fire control, extending the fallow period, etc., with the intention that eventually this land will revert back to active agriculture.
Protective land and buffers Land that is vulnerable to, or critical in safeguarding against, catastrophic events → Suitable for mangrove restoration, watershed protection and erosion control	If the land is degraded mangrove:	 6. Mangrove restoration	Establishment or restoration of mangroves along coastal areas in estuaries.
	If it is other protective land and buffer:	 7. Watershed protection and erosion control	Establishment and restoration of forests on very steep sloping land, along water courses, in areas that naturally flood and around critical water bodies.

Source: GPFLR (n.d.), adapted from IUCN (2014).



Summary

Demand for wood and wood products within the Asia-Pacific region, and exports of wood products from the region, are growing, particularly through rising interest in the forest-based bioeconomy. Wood supply to meet this demand needs to be sustainable, to address climate change, biodiversity loss, poverty, and economic development challenges. In the face of these developments, at the 36th Session of the FAO Regional Conference, Member States requested stronger work on the sustainable production and consumption of wood (FAO, 2022a).

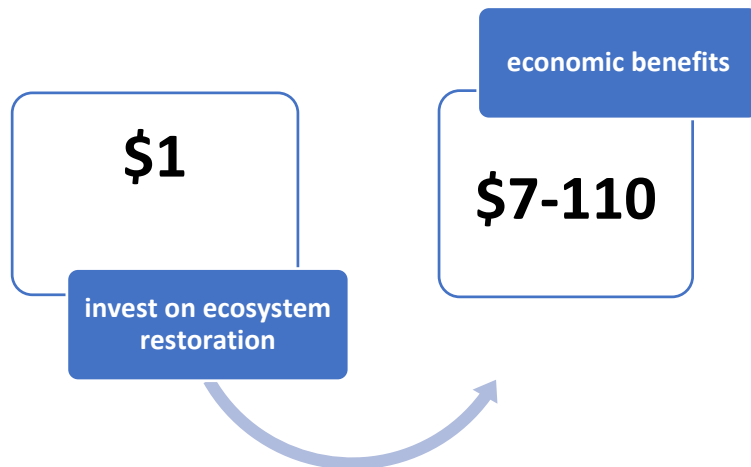
Forest and landscape restoration (FLR) is also a high priority for the region: some 500 million hectares of land in the Asia-Pacific region is considered degraded and current national goals aim to restore at least 185 million hectares. Sustainable wood supply (SWS) from part of this restored land can contribute to FLR goals by regenerating and better managing natural forests, through large-scale and small-scale plantations and woodlots on degraded land, and by integrating trees in farming in agroforestry systems.

This Issue Brief summarizes the deliberations of a Regional Dialogue on Integrating Sustainable Wood Supply and Forest and Landscape Restoration in Asia-Pacific, held on 2 October 2023 in conjunction with the 30th Session of the Asia-Pacific Forestry Commission (APFC) in Sydney, Australia.

The Dialogue found that enabling conditions for SWS and FLR are similar, providing opportunities to increase investment in FLR by producing wood in support of restoration goals. Realizing these opportunities will require actions in landscapes and along value chains resourced from public and private finance. Policymakers across the region can drive these actions through developing and implementing enabling policies, fostering collaborative learning, technical packages and capacity building, mobilizing finance to support all forms of SWS and FLR, and engaging small-scale actors in SWS and FLR. International organizations can play important facilitation roles in each of these action arenas.

- **USD 8.1 trillion** investment in nature are needed by 2050.
- The current investments in Nature-based solutions amount to **USD 133 billion** – most of which comes from public sources.

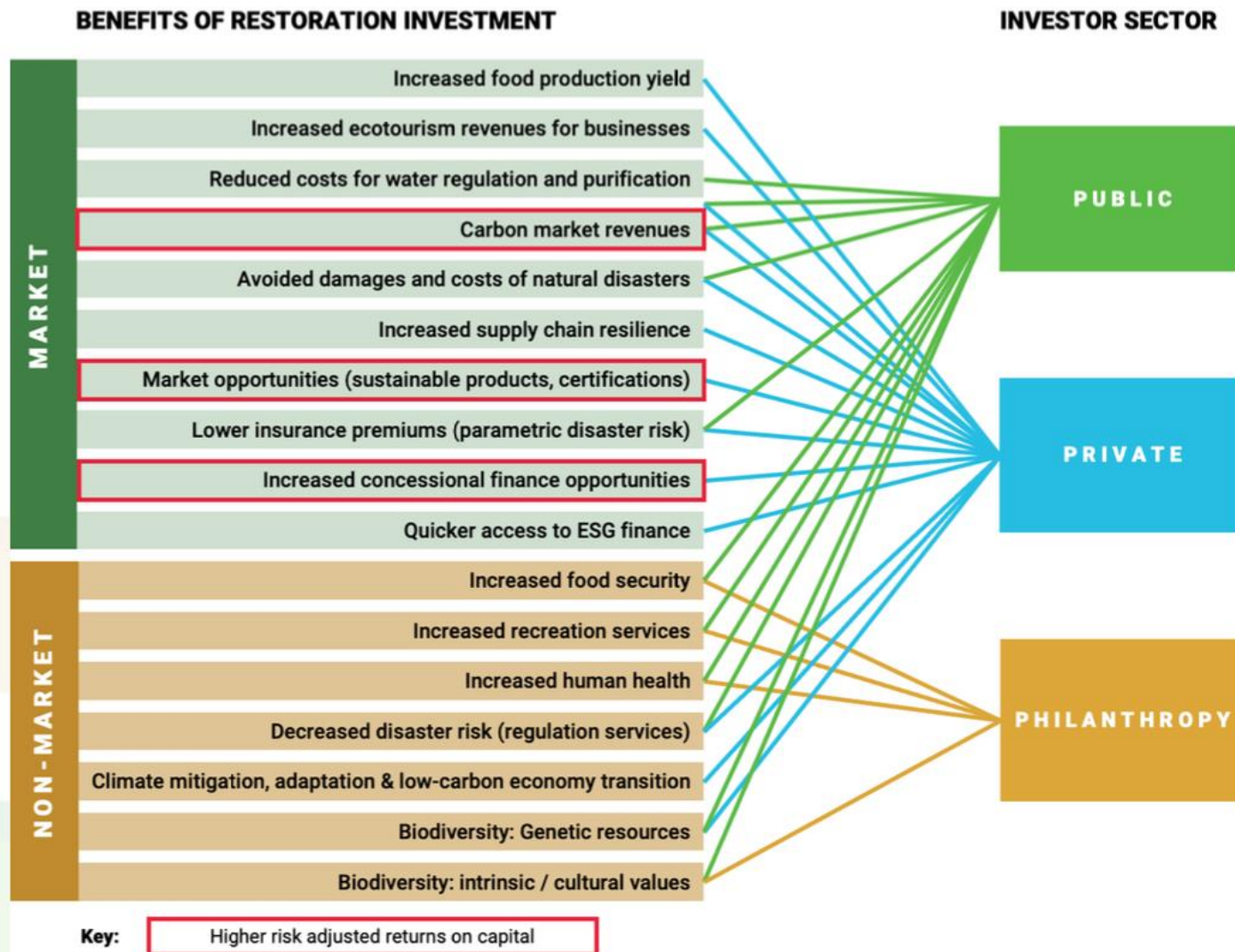
- Investasi sebesar **USD 8.1 triliun** untuk restorasi ekosistem harus dipenuhi tahun 2050.
- Investasi sampai saat ini mencapai **USD 133 miliar** – sebagian besar berasal dari dana pemerintah.



State of Finance for Nature

Tripling investments in nature-based solutions by 2030

Potential benefits for private sector engagement in ecosystem restoration



- **Forest private sector**, including but not limited to forest concessions, forest-based industries, individuals and family forests, small and medium forest-based enterprises as well as community forest-based enterprises.
- **Non-forest private sector**, including but not limited to mining, oil and gas, technology, and finance.

- **Sektor kehutanan swasta**, termasuk namun tidak terbatas pada ijin konsensi, industri kehutanan (kecil / menengah / besar), hutan rakyat dan industri pengolah kayu rakyat.
- **Sektor non-kehutanan swasta**, termasuk namun tidak terbatas pada pertambangan, minyak dan gas, teknologi, dan keuangan.



Ecosystem Restoration in Indonesia

Ecosystem restoration policies and regulatory framework

MAIN GOAL














Forest Rehabilitation and Restoration

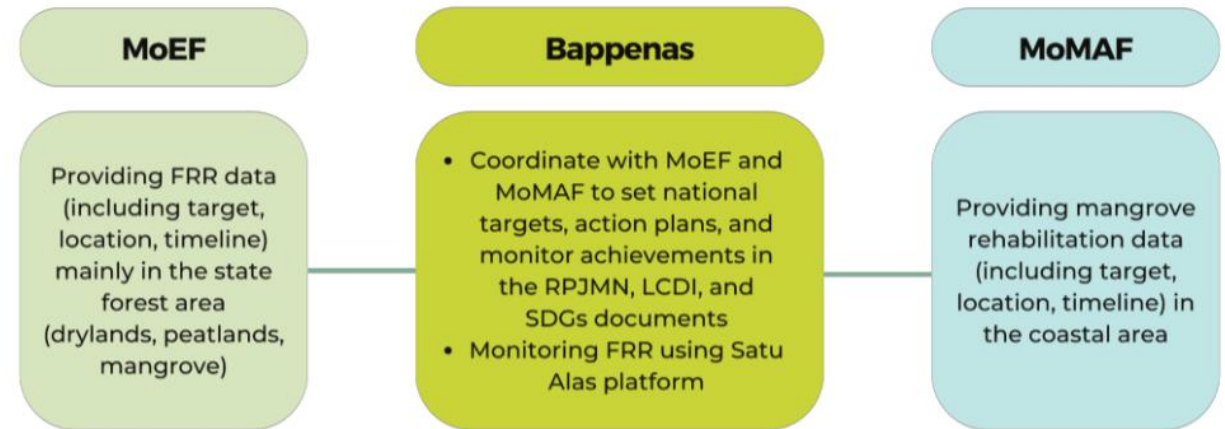
	REHABILITATION	RECLAMATION	RESTORATION
Purpose	Restore, maintain, and improve the function of forests and lands in order to increase their carrying capacity, productivity, and their role in maintaining life support systems	Repair or restore damaged Forest Areas so that they function optimally according to their designation	Restore biotic elements (flora and fauna) and abiotic elements (soil, climate, topography) so that biological balance is achieved <small>*Post-JCL becomes Business Licensing for Utilization of Forest Environmental Services</small>
Kind of Tree Species	Native / Exotic	Native / Exotic	Native
Area Status	State Forest Zones (Production Forest, Protected Forest, Conservation Forest) + Non Forest Area <small>Note: dry land forest, peat, mangrove</small>	State Forest Zones (Production Forest, Protected Forest) + Non Forest Area	State Forest Zones (Production Forest, Protected Forest, Conservation Forest) + Non Forest Area
Land Surface	Open land, Critical land, Fire Burnt Area	Land that has changed its surface and land cover due to the use of: Forest Area, Disaster	Choice of Activities: Ecosystems that need to be restored RE: Production forest (canopy cover < 60%) and important areas of ecosystem protection Peat: burned areas and fire prone areas
Activity Forms	Choice of Activities: State Forest Zones (Reboisasi), Non-Forest Zones (Penhijauan), Soil and water conservation	Activity Stage: Land Planning → Revegetation	State Forest Zones (RE in Production Forest, Restoration in Conservation Forest), Non-Forest Zones (Peat Restoration)
Executor	MoEF, Regent/Mayor, Governor, Rights Holder, IPPKH holders	Utilization of Stated Forest Zones, Disaster Area (Caused by Negligence: Management Rights Holder, Management Permit Holder; Caused by Disaster: IPPKH holders, Central government/local government)	RE license holder, MoEF, BRGM

Law and regulations

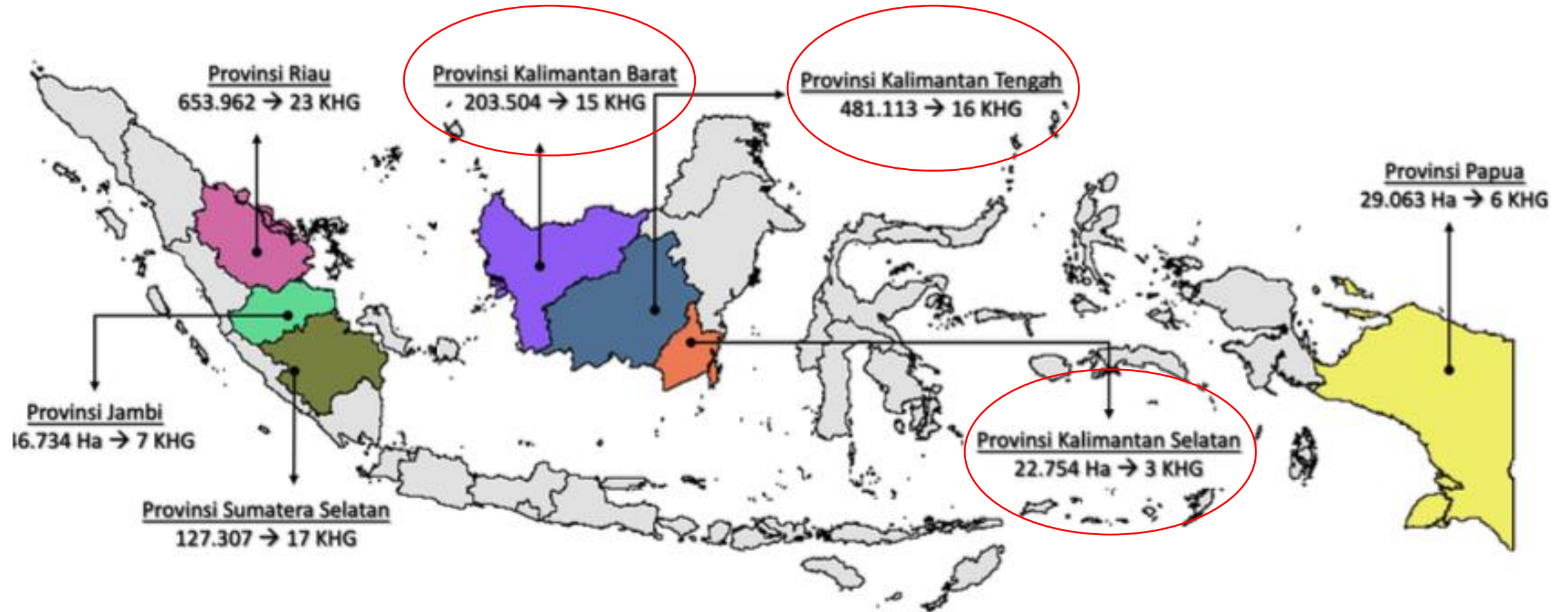
- Forestry Law 41/1999
- MoF Regulation 70/2008 Land Rehabilitation
- PP 71/2014 jo. PP 57/2016 (BRG)
- National Peatland Ecosystem Map 2017
- One Map Mangrove Indonesia 2013-2019
- Job Creation Law 11/2020 – PP 23/2021
- Presidential Regulation 120/2020 (BRGM)
- MoEF Decree 246/2020 (Peatland Ecosystem)
- Bappenas Decree 89/2020 (Wetland Management Coordination Team)

Key stakeholders in government

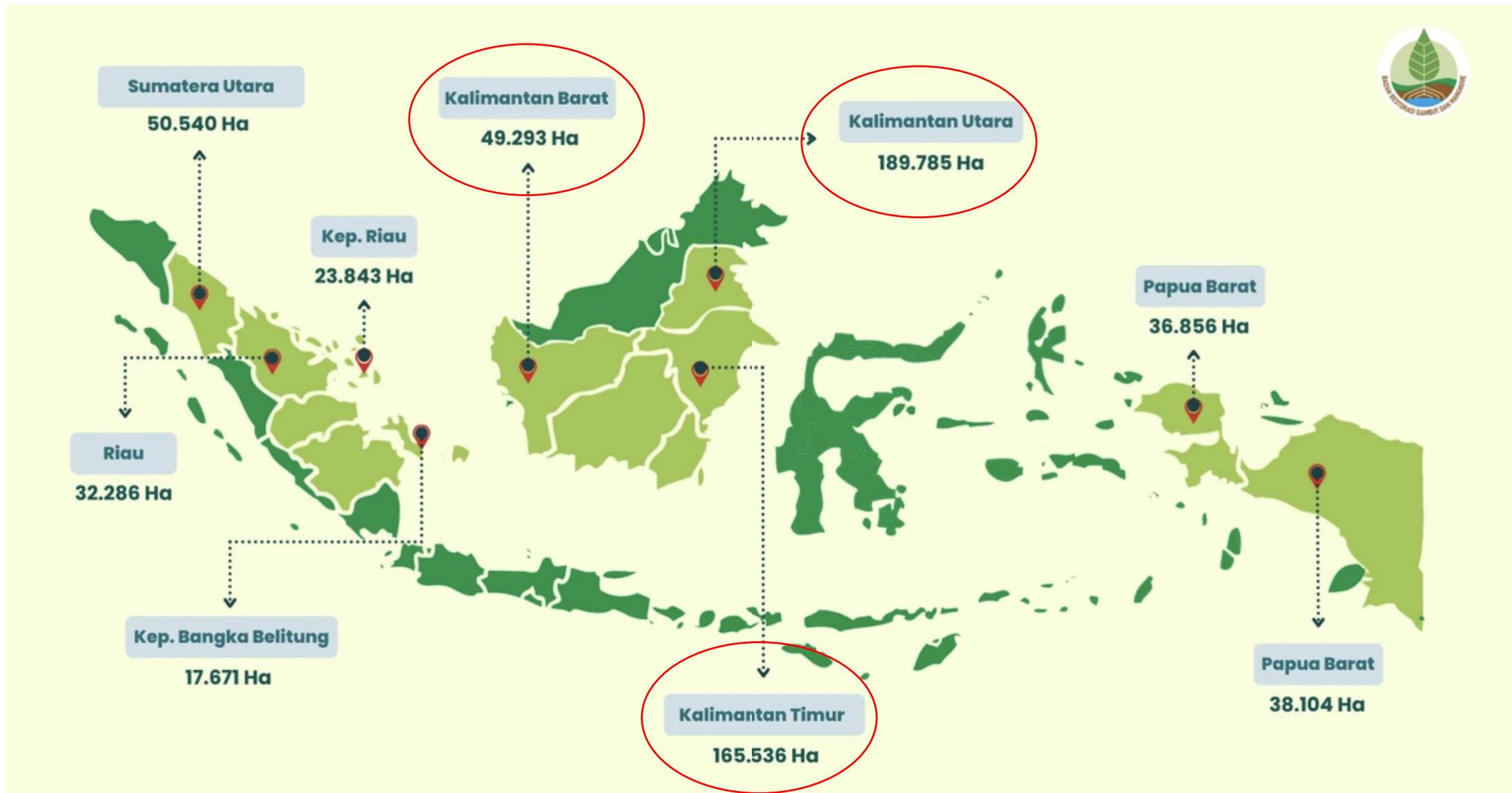
Stakeholder		
Coordination Function	Executing Function	Supporting Function
 Bappenas  Kemenko marves	 MoEF <small>DG PDAS-RH</small>  Mov  MoEF <small>DG KSDAE</small>  BRGM  MoEF <small>DG PHL</small>  Regional Government  MoEF <small>DG PPKL</small>  Forestry Management Unit  MoMAF	 MoEF <small>DG PPI</small>  MoEF <small>DG PSKL</small>



Target of peatland restoration 2021-2024: 1.2 million hectares

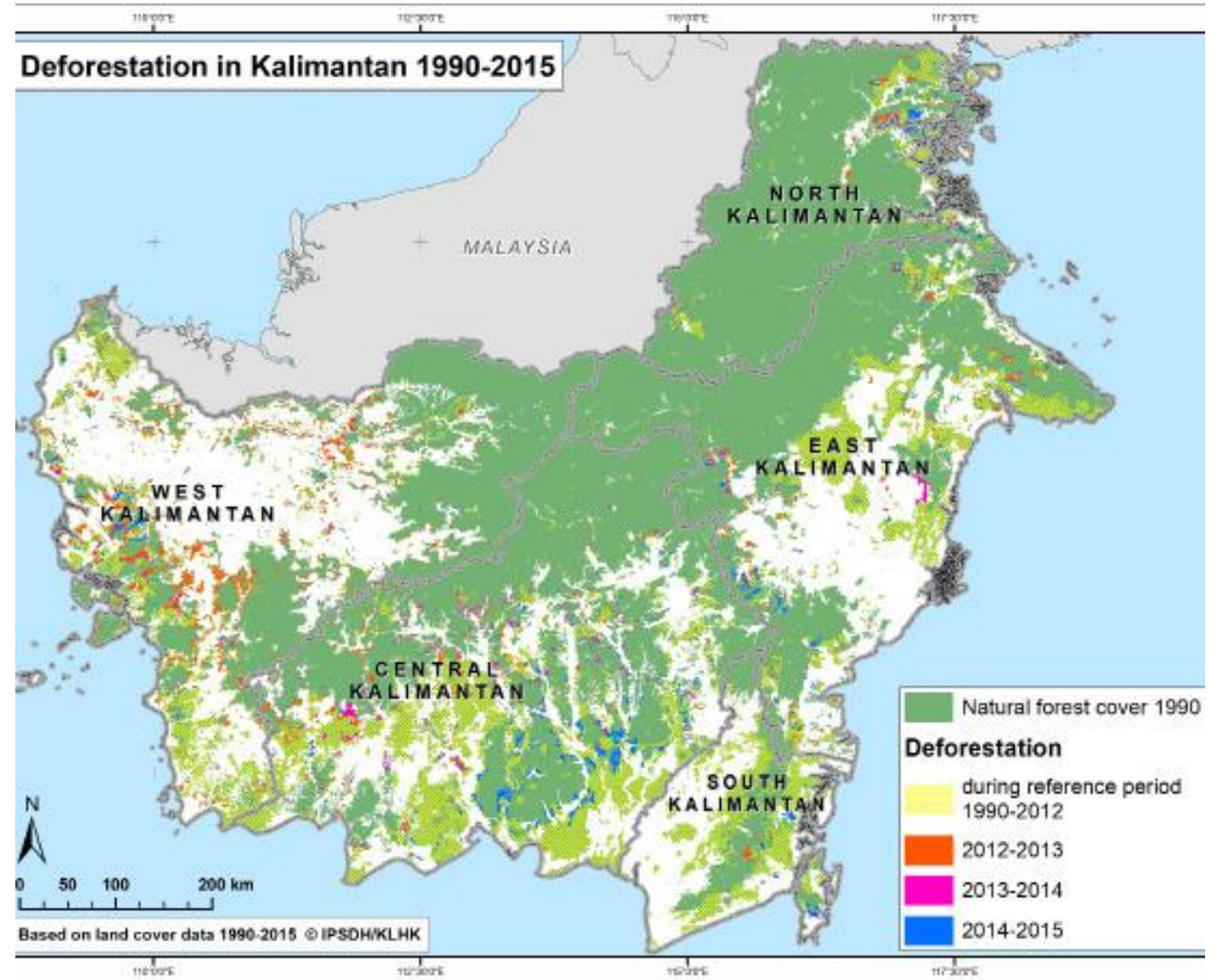


Target of mangrove rehabilitation 2021-2024: 600,000 hectares



Current achievements to reduce deforestation in Kalimantan, Indonesia

- By 2015, **South, East and West Kalimantan** had deforestation rates below their reference levels, whereas **Central and North Kalimantan** recorded values surpassing the reference level.
 - Over the 2013-2015, **South and East Kalimantan** consistently maintained performance in reducing deforestation.
-
- Pada tahun 2015, **Kalimantan Selatan, Timur dan Barat** mencapai laju deforestasi di bawah tingkat referensi, sedangkan laju deforestasi di **Kalimantan Tengah dan Utara** melampaui tingkat referensi yang telah ditetapkan.
 - Selama periode 2013-2015, **Kalimantan Selatan dan Timur** secara konsisten mempertahankan kinerjanya dalam mengurangi laju deforestasi.





Policy context for private sector engagement in ecosystem restoration in Kalimantan, Indonesia

- The Regional Peat and Mangrove Restoration Agency (*Tim Restorasi Gambut dan Mangrove Daerah/TRGMD*).
- Each priority province in Kalimantan has developed this regional agency, which comprises of Provincial Government (Environmental Provincial Services), academic institution, local NGOs, private sectors and communities to strengthen the efforts of peat and/or mangrove restoration in the region.
- BRGM also facilitated community participation at the village level by creating community-based peatland conservation and restoration (*Desa Mandiri Peduli Gambut/DMPG*) program.

Specific policy initiatives that support private sector engagement in restoration

- Ecosystem restoration licenses – a 60-year license to restore degraded land issued by the Government of Indonesia to private companies. These licenses provide a legal framework and long-term tenure to enable private sector investment in restoration
- Ecological fiscal transfers – the Government of Indonesia has implemented ecological fiscal transfers, which use domestic fiscal policy to reward local governments for protecting forests and other ecosystems. This provides an economic incentive for private sector engagement in restoration.
- REDD+ initiatives that provide results-based payments to the Government of Indonesia for reducing deforestation and forest degradation also create incentives for private sector involvement in restoration.

East Kalimantan is an excellent model for ecosystem restoration investment

Emission Reduction Payment Agreement

The Green Growth Compact



Emission Reduction Payment Agreement

- The World Bank's Forest Carbon Partnership Facility (FCPF) is providing a REDD+ Readiness Grant to the Indonesian Ministry of Environment and Forestry.
- Indonesia received an advance payment of US\$20.9 million (IDR320 billion) under the Emissions Reduction Payment Agreement (ERPA) between the Government of Indonesia and the World Bank's FCPF REDD+ in East Kalimantan province.
- East Kalimantan is the first jurisdiction in Southeast Asia and the Pacific region to receive advance payments under the FCPF scheme.
- The advance payment will facilitate the start of the East Kalimantan program's Benefit Sharing Plan .

The Green Growth Compact

- A sustainable, forest-friendly model – involving 25 companies, government, NGOs, communities.
- Established in 2017 – led by the Provincial Government of East Kalimantan, in collaboration with The Nature Conservancy (TNC) and Yayasan Konservasi Alam Nusantara (YKAN).
- Indonesia’s first public-private-community partnership in SFM and orangutan habitat protection (i.e., the Wehea-Kelay landscape).
- Targets: cut 80% deforestation by 2025 while restoring forests & increase 8% economic growth by 2030 while reducing carbon emissions.
- Scaling up local initiatives: the Berau Forest Carbon Program; Communities Inspiring Action for Change (SIGAP); advance SFM certifications and expand Reduced Impact Logging – Carbon (RIL-C); East Kalimantan’s Provincial Climate Change Council.



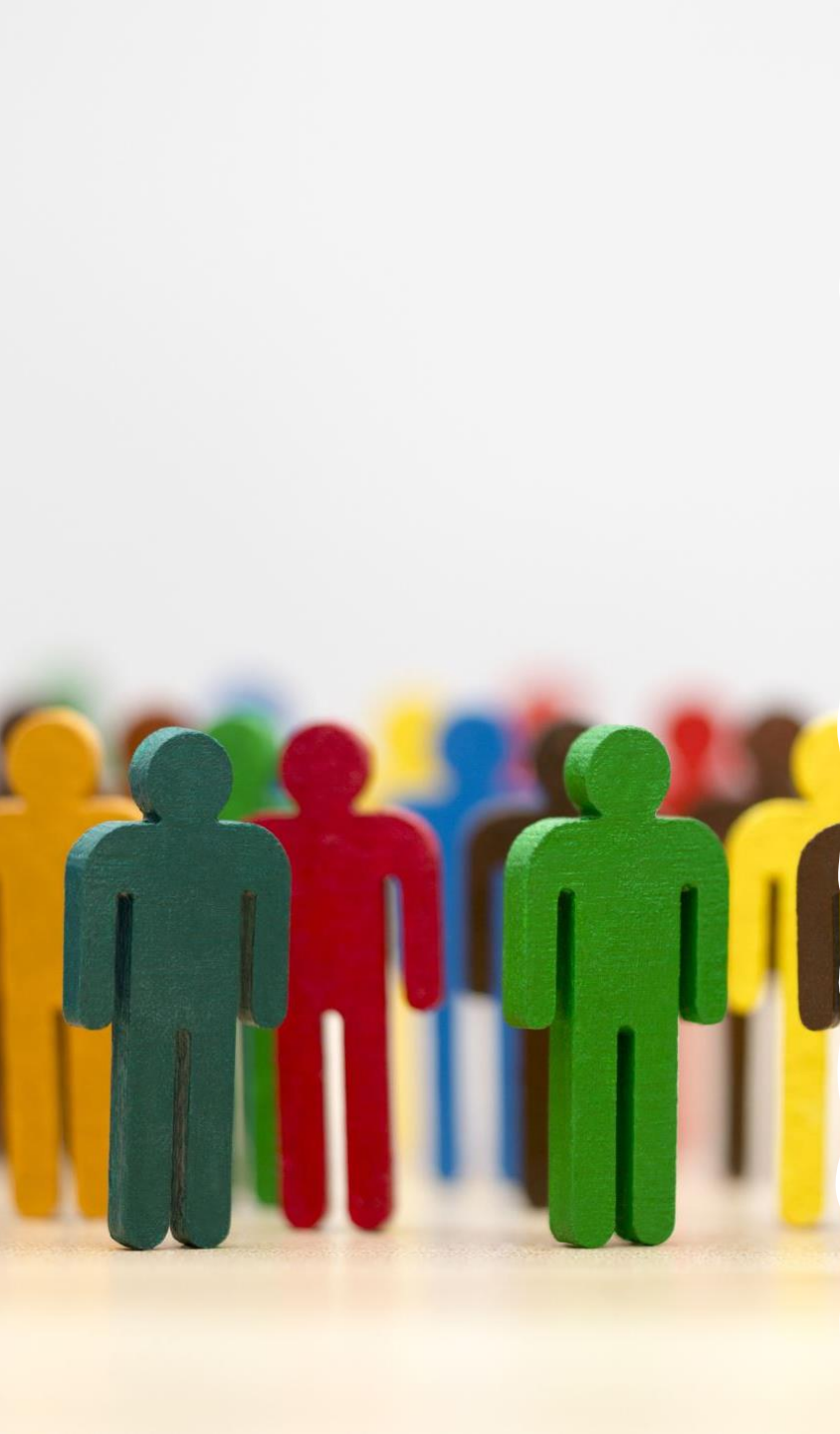
Opportunities of private sector engagement in ecosystem restoration in Kalimantan, Indonesia

- The Indonesian government is offering **significant tax deductions to companies** that invest in rehabilitating degraded lands in the new capital city of Nusantara in East Kalimantan. This provides financial incentives for the private sector to participate in restoration efforts.
- There are opportunities for companies with existing legal obligations to **rehabilitate mining concessions** to count that work towards the reforestation of the new capital region. This allows them to fulfill their obligations while contributing to a larger restoration initiative.
- **Private sector participation** is seen as crucial to accelerating the pace of restoration in the new capital region, which the government estimates would take 88 years to fully rehabilitate at the current government-only pace. Private investment and labor can help speed up this process.
- Successful private sector-led restoration projects like **the Katingan Mentaya project** in Central Kalimantan demonstrate the potential for the private sector to contribute to peatland protection, rewetting, and reforestation. These models can be replicated.
- **The East Kalimantan Green Growth Compact** has brought together the provincial government, NGOs, experts, and companies to collaborate on sustainable, forest-friendly development. This type of multi-stakeholder partnership can facilitate private sector engagement.

A small green seedling with several leaves is growing out of a crack in a dark, textured surface, possibly asphalt or concrete. The background is a soft, out-of-focus light color.

Constraints of private sector engagement in ecosystem restoration in Kalimantan, Indonesia

- **The rapid expansion of coal mining** in East Kalimantan has driven significant forest degradation and deforestation, creating large areas in need of restoration. Addressing this legacy of environmental damage will require substantial investment.
- Ensuring that private sector **restoration efforts are "right on target"** and properly monitored will be important to maximize the impact, according to experts. Lack of oversight could undermine restoration goals.
- **Securing the participation of all relevant stakeholders**, including local communities, will be crucial for the success of restoration projects, as highlighted by the Katingan Mentaya project. Coordinating these diverse interests can be challenging.
- While carbon revenues can help finance restoration, **the timescale for realizing these benefits may be longer** than the scope of some private sector investment horizons.



Concluding statement

This is not the time for siloed thinking, but for **collaborative problem solving**. It is crucial for the private sector to collaborate to promote social good and seek systemic change, and for the public sector to facilitate market incentives. The private sector needs to speak the language of **social change**, and the public sector needs to create **economic incentives** to harness the private sector's innovation and expertise to address society's challenges. With **shared goals**, targeted action and monitored impact, it is time to **move beyond dialogue** and aspiration to the co-creation of a more inclusive, prosperous, and sustainable future.

Terima kasih
Thank you
