



## PROTECTING INDONESIA'S PEATLANDS

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### Abstract

*Indonesia has the world's largest tropical peatland area, covering around 25 million hectares. However, these ecosystems are under increasing pressure from land conversion, drainage for plantations, forest fires, and flooding. This article discusses the importance of continuing sustainable peatland protection efforts against various threats to preserve their vital ecological functions and benefits. It also provides alternative strategies to strengthen existing peatland conservation programs through institutional reinforcement, funding certainty, improved monitoring, public involvement through education, and stronger sanctions to ensure deterrent effects. Commission IV of the DPR RI needs to encourage the government to continue peatland restoration policies to ensure sustainable peatland governance. In exercising its budgetary function, Commission IV must ensure adequate funding for relevant government partners. With a holistic approach and multi-stakeholder collaboration, Indonesia's peatland ecosystems can continue to provide benefits for present and future generations.*

### Introduction

Indonesia is home to the world's largest tropical peatland ecosystem, with approximately 25 million hectares spread across major islands such as Sumatra, Kalimantan, and Papua (Mustika, 2025). Peatlands play a crucial role in maintaining ecological balance and offer economic and social functions. One of their ecological roles is the ability to store vast amounts of carbon.

Over time, Indonesia's peatlands have faced various threats that endanger their sustainability, including land conversion, drainage for plantations, and forest fires. Additionally, floods pose a risk to the ecosystem's carrying capacity and threaten surrounding residential areas (Mustika, 2025).

This article emphasizes the need to sustain peatland protection by strengthening peatland conservation policies. The analysis aims to inform Commission IV of the DPR RI in urging the government, especially relevant ministries and agencies, to ensure the realization of a healthy and sustainable peatland ecosystem in Indonesia.

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## Indonesia's Peatland Ecosystem

Indonesia holds the largest tropical peatland in the world (Maulana et al., 2025). Peatlands serve as the world's largest carbon sink, storing an estimated 57 gigatons of carbon, making them crucial for climate change mitigation (Pantau Gambut, n.d.). Peatlands also function as natural sponges, absorbing and storing vast amounts of water, helping to prevent flooding in the rainy season and mitigate drought in the dry season. They are important for biodiversity conservation, serving as habitats for numerous rare and endangered species, including mammals, birds (avifauna), and reptiles and amphibians (herpetofauna) (Pantau Gambut, n.d.; Pramudianto, 2018).

In addition to their ecological roles, peatlands also have economic importance. They are a source of livelihood and an integral part of sustainable agricultural practices. With appropriate techniques such as agroforestry and eco-friendly farming, peatlands can be utilized productively (Pantau Gambut, n.d.). Many Indigenous communities in Indonesia depend on peatlands for their daily needs, including farming, timber, fish protein, and traditional medicinal plants (Natanel et al., 2023).

Currently, peatland sustainability is threatened, especially by large-scale land conversion. Land clearing for agriculture and plantations is often carried out through burning, damaging peat ecosystems. Moreover, peat drainage via canal construction dries the soil, making it highly flammable and reducing its capacity to store water and carbon (Zamaya, 2024). Around 6 million hectares of peatlands in Sumatra, Kalimantan, and Papua have been degraded due to mismanagement and inappropriate land-use allocation (Mustika, 2025). This level of degradation demands urgent attention from all stakeholders.

Peatland management in Indonesia is regulated under Government Regulation (PP) No. 71 of 2014, amended by PP No. 57 of 2016 on Peatland Ecosystem Protection and Management, as well as PP No. 13 of 2017 in conjunction with PP No. 26 of 2008 on National Spatial Planning. Peatland restoration has been managed by the Peatland and Mangrove Restoration Agency (BRGM), as mandated by Presidential Regulation (Perpres) No. 120 of 2020. Despite these efforts, peatland management still faces challenges, especially weak law enforcement and regulatory oversight, which enable continued illegal exploitation.

Additional issues include overlapping land ownership and permit conflicts, which further complicate peatland governance (Kaoem Telapak, 2025). The institutional future of peatland management is uncertain, as BRGM's mandate ends in 2024. Therefore, it is essential to strengthen peatland protection policies to ensure program continuity, institutional clarity, and better monitoring systems.

## Strengthening Peatland Protection Policies

Presidential Regulation No. 120 of 2020 assigned BRGM to restore damaged peat ecosystems using the 3R approach: rewetting, revegetation, and revitalization. This mandate was valid for four years, ending on December 31, 2024. During its tenure, BRGM restored 1.3 million hectares of peatland across seven provinces (Antara, 2024). However, there is still no clarity on which agency will take over BRGM's role after 2024, leaving a potential governance gap in peatland and mangrove restoration. Successful restoration requires continuous programming, substantial funding, and long-term commitment.

To ensure the sustainability of peatland ecosystems, ongoing policies must be continued and strengthened. Several strategic aspects can support this. First, institutional strengthening. The expiration of BRGM's term should be followed by a delegation of responsibilities to a successor agency. Despite exceeding its restoration targets, BRGM's work should not mark the end of peatland protection efforts. Given the vast spread of peatlands across islands and provinces, centralized governance is crucial for policy direction and funding assurance. A national-level institution would also reinforce political commitment to peatland protection.

Second, sustainable funding. Peatland protection must have secure and sustainable funding. Challenges like climate change will persist, bringing continued risks of fires and floods. Innovative funding sources beyond the state budget (APBN) are needed, such as private sector contributions, industry partnerships, or international donors.

Third, enhanced monitoring. An integrated monitoring system is essential, involving collaboration among ministries/agencies and between central and regional governments. Such a system will allow rapid and precise mitigation of future peatland damage.

Fourth, public education. Environmental campaigns and community participation in conservation programs can significantly support peatland preservation. Local communities, particularly those living near peatlands, must be engaged and empowered.

Fifth, law enforcement. The government must strengthen oversight and enforce sanctions for activities that damage peatlands. Sanctions may include administrative penalties or fines and even business closures for companies responsible for destruction.

## Conclusion

Peatlands offer enormous ecological, economic, and social benefits to Indonesia. Their role in carbon storage, biodiversity conservation, hydrological regulation, and sustaining local livelihoods makes them invaluable natural assets. Howev-

er, managing peatlands requires strong institutions, sustainable policies, adequate funding, public awareness, and stricter law enforcement.

Commission IV of the DPR RI plays a crucial role in ensuring that peatland protection policies continue. Through its oversight function, Commission IV can push the government to either extend BRGM's mandate or designate another agency to carry out restoration duties. It should also emphasize the importance of strengthening monitoring systems, encouraging community involvement, and enforcing environmental laws. Through its budgeting role, Commission IV can ensure sufficient allocation of resources for sustainable peatland management. With a holistic and collaborative approach, Indonesia's peatland ecosystems can continue to provide long-term benefits for current and future generations.

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