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CHAPTER 5

Aligning Malaysia's protected area targets with global biodiversity goals: Directions, challenges, and initiatives

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Abstract: Malaysia, as one of the 17 megadiverse countries, has made a global commitment to conserve its rich biodiversity for present and future generations. Area-based conservation, which includes all forms of protected areas and other effective area-based conservation measures (OECM), is a key strategy for protecting this precious biodiversity. The National Policy on Biological Diversity 2022-2030 (NPBD 2022-2030) has clearly outlined national protected area actions by aligning them with global commitments outlined in the Kunming -Montreal Global Biodiversity Framework, taking into account national circumstances. This paper presents the national directions pertaining to the management of protected areas, challenges, and strategic measures implemented by the Federal Government that are essential for Malaysia to meet its national targets and make a significant contribution toward global biodiversity goals by 2030.

INTRODUCTION

Malaysia became a Party to the Convention on Biological Diversity (CBD) in 1994 to strengthen its efforts in the conservation of biodiversity, sustainable use of its components, and equitable sharing of benefits arising from genetic resources. Area-based conservation, encompassing all forms of protected areas and other effective area-based conservation measures (OECM), continues to be the most effective approach to protect a wide range of species, their habitats and ecosystems (NRECC 2023a). Article 2 of the CBD defines protected areas as "geographically defined areas that are designated, regulated, and managed to achieve specific conservation objectives" (CBD 2010a), whereas OECM means "a geographically defined area other than a protected area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the *in situ* conservation of biodiversity, with associated ecosystem functions and services and, where applicable, cultural, spiritual, socio-economic, and other locally relevant values" (CBD 2018).

A protected area represents one of the most effective tools for conserving biodiversity and ensuring the long-term sustainability of ecosystem services (Gray *et al.* 2016). For protected areas to deliver their desired outcomes, they must be ecologically representative; large enough to support viable populations; optimally designed and managed; and provide benefits to Indigenous Peoples and Local Communities (IPLCs) (NRECC 2023a).

The CBD provides global frameworks on protected areas to complement national agendas. Article 8 of the CBD contains specific references to protected areas by encouraging Parties to establish a system of protected areas; develop guidelines for the selection, establishment, and management of protected areas; regulate or manage biological resources important for the conservation of biological diversity; promote environmentally sound and sustainable development in areas adjacent to protected areas; and cooperate in providing financial and other support for in-situ conservation (SCBD 2011).

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In general, the types of protected areas in Malaysia could be categorised based on the legal framework used in their establishment. The categories include protection forest reserves under the forestry laws; national parks, state parks, and nature reserves under the relevant park/forestry laws; wildlife reserves or sanctuaries under the wildlife laws; marine protected areas under the marine laws, and; areas reserved for a public purpose under the land laws (NRECC 2023b). These areas are managed under various Federal and State laws, and have long been established in Malaysia.

This paper acknowledges that multiple states have established state-level policies and action plans in line with the national directions aimed at the protection and conservation of natural resources. These include the Sarawak Biodiversity Masterplan 2023-2030, the Sabah Biodiversity Strategy 2024-2034, the Forestry Policy of Sabah, and the Forestry Policy of Sarawak. However, this paper focuses on the national policy that explicitly defines national objectives regarding protected areas and OECM, specifically the National Policy on Biological Diversity 2022-2030 (NPBD 2022-2030).

GLOBAL AND NATIONAL DIRECTIONS FOR PROTECTED AREAS

CBD Strategic Plan for Biodiversity 2011–2020 and achievements

The CBD Strategic Plan for Biodiversity 2011-2020 through Aichi Biodiversity Target 11 stated the need to achieve at least 17% of terrestrial and inland water, and 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes by 2020 (CBD 2010b). Globally, this target, however, was only partially met, with approximately 15% of terrestrial and inland water, and 7.5% of coastal and marine areas protected by the established deadline (SCBD 2020).

Over the past decades, Malaysia has undertaken various measures to expand and strengthen its protected area system in line with global frameworks and national priorities. However, Malaysia, like many countries globally, faced challenges in achieving Aichi Biodiversity Target 11, which has been translated into Target 8 of the National Policy on Biological Diversity (NPBD) 2016-2025 to achieve at least 20% terrestrial areas and inland waters, and 10% of coastal and marine areas, are conserved through a representative system of protected areas and OECM by 2025 (NRE 2016a). By 2020, the nation had only conserved 13.3% of terrestrial and inland water areas and 5.3% of coastal and marine areas (NRE 2016b).

Kunming Montreal Global Biodiversity Framework

The Parties to the CBD adopted the Kunming-Montreal Global Biodiversity Framework (KMGBF) in 2022, setting more ambitious targets through its 23 global targets by 2030, including those related to protected areas. The overarching vision is to live in harmony with nature by 2050. In this context, Target 3 of the KMGBF stated that:

> "Ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and OECM, recognising indigenous and

traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognising and respecting the rights of Indigenous Peoples and local communities, including over their traditional territories" (CBD 2022).

However, the KMGBF recognises that this target is global in nature, and each Party will contribute to attaining it in accordance with national circumstances, priorities, and capabilities.

National Policy on Biological Diversity 2022-2030

In response to the Kunming-Montreal Global Biodiversity Framework, Malaysia has strengthened its national framework through the National Policy on Biological Diversity 2022-2030, which outlines five overarching goals, 17 national targets, 61 actions, and 61 indicators. One of the targets is explicitly intended to promote the expansion and efficient management of protected areas, emphasising not only the area coverage, but also governance, management effectiveness, ecological representativeness, and connectivity. Target 8 explicitly stated that: "By 2030, at least 20 per cent of terrestrial areas and inland waters, and 10 per cent of coastal and marine areas are conserved through an effectively managed and ecologically representative system of protected areas and OECM". To achieve this target, NPBD 2022-2030 outlines five key actions: (1) strengthen and streamline the governance of protected areas; (2) enhance management effectiveness of protected areas; (3) expand the extent and ecological representativeness of the protected area network; (4) identify and recognise OECM; and (5) increase areas of global importance for biodiversity conservation (NRECC 2023a).

ISSUES AND CHALLENGES

Despite longstanding commitments, Malaysia faces several challenges in expanding and effectively managing its protected areas. The challenges include: fragmented management and legislation of protected areas; absence of national definitions and classifications of protected areas; inadequate resources for protected areas management; identifying and designating new sites; lengthy designation process, and; lack of stakeholder empowerment (NRECC 2023b).

Governance of protected areas

According to the Federal Constitution, land and natural resources are listed on the State List, whereas the wild animals and national parks are listed under the Concurrent List. This constitutional framework has resulted in fragmented management and legislation of protected areas, with over ten protected area authorities managing various categories of protected areas and about 19 pieces of legislation dealing with the gazettement of protected areas. Some of these are federal legislation enacted through the Parliament or state legislation enacted through the various State Legislative Assemblies to enable the designation and management of protected areas. Such fragmentation often leads to legal provisions varying from one to another, inconsistent standards, overlapping responsibilities, and challenges in coordinating conservation efforts at the national level.

Absence of national definitions and classifications for protected areas

Prior to 2022, Malaysia lacked a nationally agreed definition and classification for protected areas. This situation hinders the standardisation of action plans concerning protected areas and the associated reporting processes. As Malaysia is a signatory to the CBD and a member of the International Union for Conservation of Nature (IUCN), relevant protected area

authorities in Peninsular Malaysia, Sabah, and Sarawak have addressed this gap in 2022 by agreeing to adopt the CBD definition and IUCN Protected Areas Management Categories (IUCN 1994). The update of the PA Master List in 2022 reflects the adoption of national definitions and classifications for protected areas.

Inadequate resources for protected areas management
Protected area authorities are very dependent on either the Federal or State Government's operating and development funds to manage their areas. Insufficient financial allocations for protected areas have also resulted in inadequate human resources allocated to manage them. Based on a study commissioned in 2009, the findings showed that staffing for protected areas in Malaysia was far below the Southeast Asia regional standards and faced a major shortfall of more than 2,000 staff (EPU, 2009).

Identifying and designating new sites
As a developing nation, Malaysia continues to experience rapid land use change driven by infrastructure development, agriculture, and economic growth. With the socioeconomic development pressure, Malaysia has a challenging task in identifying and designating an additional 3.8 million hectares as protected areas, which includes 1.7 million hectares of terrestrial and 2.1 million hectares of coastal and marine, to achieve Target 8 of the NPBD by 2030 (NRECC 2023c). Furthermore, State Governments heavily rely on natural resource utilisation for revenue generation, thereby complicating the establishment of new protected areas.

Lengthy designation process
The current protected area designation in Malaysia under specific legislation is lengthy, from identification to gazettement. Among the reasons for this lengthy process are: survey and mapping to demarcate the protected area boundaries; conflicting land use by different interest groups; differences in priorities between the Federal and State authorities; concern over loss of revenue, funding constraints,and; lack of capacity (NRECC 2023b).

Lack of stakeholder empowerment
Besides the protected area authorities, there are also other important stakeholders, such as Indigenous Peoples and Local Communities (IPLC), academia, non-governmental organisations (NGO), civil society groups, and the private sector, who need to be engaged and empowered through legislative and administrative means to complement and enhance the Federal and State Governments' efforts to conserve and manage protected areas.

STRATEGIC MEASURES

Recognising various challenges in expanding and effectively managing its protected areas, the Federal Government has undertaken several strategic measures to strengthen protected areas' governance and effective management of protected areas. These include: the updating of the Protected Areas Master List of Malaysia (PA Master List); the development and operationalisation of the National Framework for Protected Areas (NFPA); the provision of the Ecological Fiscal Transfer for Biodiversity Conservation (EFT) incentive; the development of the OECM Framework, and; the implementation of marine conservation initiatives.

Update Protected Area Master List
The PA Master List was updated in 2022 using the standard dataset and spatial analysis for effective national planning and reporting processes of protected areas. This document is crucial for the preparation of reports at the national level, such as the Sustainable Development Goals Report, the Mid-Term Review of the Malaysia Plan, and reports by the Department

of Statistics Malaysia, as well as reports at the international level, such as the National Report to the CBD and the World Database on Protected Areas produced by the United Nations Environment Programme World Conservation Monitoring Centre. The PA Master List 2022 also provides data as a basis for allocating the EFT incentive to state governments. This document uses the CBD definition, and the IUCN Protected Areas Management Categories has identified, reviewed, and listed all protected areas gazetted in Malaysia between 1903 and 31 October 2022. The PA Master List 2022 reported that there are 723 protected areas for Malaysia, including protection forest reserves, national parks and state parks, wildlife reserves/sanctuaries, marine parks, turtle sanctuaries and fisheries prohibited areas, and areas reserved for a public purpose. These encompass 4,902,738.53 ha of terrestrial and 2,530,768.84 ha of coastal and marine areas. Based on these findings, the percentage of terrestrial and marine protected areas coverage for Malaysia is 14.83% and 5.34%, respectively (NRECC 2023c).

Develop and operationalise a National Framework for Protected Areas (NFPA)
The NFPA provides a strategic and coordinated framework designed to improve the governance, planning, and management of protected areas. It contains 20 strategies and 113 actions aimed at enhancing coordination among authorities, strengthening management effectiveness, and promoting sustainable financing (NRECC 2023b). The framework was approved by the National Steering Committee Meeting on 14 February 2019, and the National Biodiversity Council Meeting on 29 July 2024 agreed to operationalise the National and Regional Protected Area Working Group under the NFPA to strengthen and streamline governance and management of the country's protected areas.

Provide Ecological Fiscal Transfer (EFT) for biodiversity conservation
Recognising the need for alternative strategies and actions to ensure the existing protected areas and new protected areas have sufficient resources for their effective management, the Federal Government introduced the EFT in 2019 to incentivise state governments to conserve existing protected areas and gazette new ones. Until 2026, the Federal Government has allocated RM1.05 billion to states under the EFT incentive. As a result, more than 350,000 hectares of additional protected areas have been designated.

Develop an Other Effective Area-based Conservation Measure (OECM) framework
In addition to protected areas, Malaysia has taken efforts to develop a national framework for OECM since 2019. While the main objectives of these areas may not be biodiversity conservation, they are governed and managed in ways that achieve positive and sustained long-term outcomes for the in-situ conservation of biodiversity. OECM can therefore serve a complementary role to protected areas, contributing to the coherence and connectivity of protected area networks. This framework will recognise conservation initiatives outside protected areas, including conservation contributions from community-managed forests, indigenous territories, and other non-traditional conservation areas. The framework is expected to be launched by the end of 2026.

Implement marine conservation initiatives
During the Sixteenth Meeting of the Conference of the Parties to the CBD in 2024, Parties adopted new modalities for the modification of existing Ecologically or Biologically Significant Marine Areas (EBSA) descriptions and the identification of new areas. This evolution in the EBSA process paves the way for a more comprehensive, connected, and representative network of conserved areas, guided by science, enriched by traditional and local knowledge, and supported by strong institutions and governance mechanisms (CBD 2024). Subsequently, the Department of Fisheries has initiated the identification of EBSA in Malaysia to guide the establishment of marine protected areas and OECM. These efforts are crucial for expanding marine conservation coverage.

Implement science-based mapping and assessment

Malaysia has also established a robust and science-based foundation such as forest inventory, ecosystem mapping, biodiversity assessment and vulnerability analyses for supporting and monitoring its national targets. These include the implementation of the National Forest Inventory (NFI) in Peninsular Malaysia, ongoing since 1970, providing a vital information base for forest management decisions, national reporting, and long-term planning within the Permanent Reserved Forests (PRFs); the nationwide mapping of terrestrial and transitional ecosystems under the Red List of Ecosystems (RLE) assessment establishes a critical baseline for identifying threatened ecosystems; the implementation of the Continuous Monitoring and Surveillance (COMOS) initiative in Sarawak utilises satellite imagery, Geographic Information System (GIS) technology, aerial surveillance, hyperspectral remote sensing, and mobile platforms to enable early detection of forest changes; the systematic updates to the National Red Data List; and the implementation of the national seagrass mapping programme.

CONCLUSION

Area-based conservation, including protected areas, remains central to Malaysia's commitment to biodiversity conservation and recent initiatives by the Federal Government such as the PA Master List, NFPA, EFT, OECM, and EBSA demonstrate Malaysia's commitment to aligning national actions with global biodiversity goals. However, there is still much scope for protected area expansion across landscapes and seascapes, with room for improvement in management practices. For these reasons, future initiatives should prioritise several crucial areas, including: strengthening the governance of protected areas; facilitating collaboration between Federal and State authorities; streamlining gazettement procedures; increasing sustainable financial resources; enhancing the management effectiveness of protected areas; expanding the extent and ecological representativeness of the protected areas; identifying and recognising OECM, and; greater empowerment of stakeholders. Regarding resource mobilisation, several states have implemented sustainability-related levies associated with biodiversity conservation, including conservation and sustainability fees as well as heritage charges. However, there is a need for increased efforts to capitalise on the value of ecosystem services through mechanisms such as cesses, royalties, and carbon-related fees to expand the revenue base for conservation initiatives. Additionally, it is necessary especially for megadiverse countries to enhance the recognition and support for community conserved areas, increase reporting on privately protected areas, and systematically collect information on OECM (Bacon *et al.* 2019). Transformative changes are needed to meet Target 8 of the NPBD by 2030, which requires Malaysia to designate approximately 3.8 million additional hectares as protected areas. While this goal presents certain challenges, it is nonetheless attainable. Malaysia's existing forest cover, with approximately 54.4% under state government jurisdiction, presents significant opportunities for conservation activities. With coordinated efforts among Federal and State authorities, NGO, civil society, private sector, and IPLC, Malaysia is well positioned to strengthen its protected area network, thereby contributing significantly to global biodiversity goals.

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