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CHAPTER 6

Other Effective Area-based Conservation Measures (OECMs): A critical pathway to 30×30 for Malaysia

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Abstract: Malaysia is committed to the global 30×30 target under the Kunming-Montreal Global Biodiversity Framework, which calls for effective conservation of 30% of terrestrial, inland water, coastal and marine areas by 2030. However, at present 14.83% of terrestrial and 5.34% of marine areas are currently under formal protection, and it is unlikely to achieve this target alone through expanding protected areas within Malaysia. Other Effective Area -based Conservation Measures (OECMs) therefore provide an important complementary pathway of recognising areas outside of the already formal protected areas, a framework that can be identified, measured, and ascertained on other effective areas or landscapes contributing to *in situ* biodiversity conservation. This paper examines the emerging role of OECMs in Malaysia following the completion of the National Framework for OECMs in 2026, which provides a voluntary and rights-based mechanism for identifying and recognising such sites. The endorsement of six pioneer OECMs, including community-managed forests, private sector conservation set-asides, and university research forests, marks an important step towards expanding Malaysia's conservation estate. However, this effective implementation remains constrained attributing to low awareness, the absence of statutory or legal recognition, and limited financing support. To operationalise this framework, Malaysia needs stronger national awareness efforts, clearer regulatory pathways, and the provision of incentives (including financial, such as a potential expansion of the Ecological Fiscal Transfer (EFT), amongst other forms of incentives) for the increased uptake and implementation of the National Framework for OECMs amongst the States. Strengthening these enabling conditions is essential for OECMs to contribute meaningfully to Malaysia's commitment to the Convention on Biodiversity.

INTRODUCTION

Malaysia is a megadiverse nation, home to an extraordinary range of terrestrial, freshwater, and marine ecosystems and species. Yet, despite decades of conservation efforts, the country's official protected areas cover only 14.83% of its terrestrial including inland water areas, and only 5.34% of its coastal and marine areas (NRES 2026). This significant gap remains a challenge for a country that operates in a federal system where land and natural resources are under the sub-national jurisdiction according to the constitution. This makes Malaysia one of the few countries regionally with multiple protected area laws and authorities. Seventeen of Malaysia's 61 Key Biodiversity Areas (KBAs) have no protected area coverage at all, while the average protected coverage across all KBAs stands at only 37.5% (NRES and UTM 2026). In 2022, Malaysia joined other Parties to the Convention on Biological Diversity in adopting the Kunming-Montreal Global Biodiversity Framework (KMGBF). Under Target 3, widely known as the '30×30' target, countries are expected to ensure that at least 30% of terrestrial, inland water, coastal, and marine areas are effectively conserved and equitably managed by 2030 through systems of protected areas and OECMs (CBD 2022). The National Policy on Biological Diversity 2022–2030 (NPBD 2022–2030) has

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aligned with this KMGBF target under Goal 3, Target 8 which states that: "By 2030, at least 20% of terrestrial areas and inland waters, and 10% of coastal and marine areas are conserved through an effectively managed and ecologically representative system of protected areas and OECMs". This target ca nnot be achieved through the expansion of formal protected areas alone and already includes OECMs. This requires recognition of other areas that are already delivering long-term biodiversity conservation outside the formal protected area system. This chapter explains the concept of OECMs, their relevance to Malaysia, and the practical mechanism now available to recognise and support conservation efforts beyond formal protected areas in alignment with the NPBD 2022–2030 and KMGBF.

WHAT ARE OECMs?

The term 'Other Effective Area-Based Conservation Measure' (OECM) was formally introduced by the Convention on Biological Diversity (CBD) under Aichi Target 11 in 2010. The CBD later provided a formal definition through Decision 14/8, which defines an OECM as: "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).

In simpler terms, an OECM is an area outside the formal protected area system that is already contributing to the long-term conservation of biodiversity. It may not be gazetted as a national park, wildlife reserve, state park or other formal protected area, but it still delivers effective conservation outcomes through its existing governance and management arrangements.

The CBD identifies four high-level criteria for recognising OECMs, supported by eight sub-criteria. These criteria provide a simple way to understand what qualifies as an OECM. Criterion A requires that the area is not already recognised as a protected area. In other words, an OECM is not a national park, wildlife reserve, wildlife sanctuary, state park, or any other area gazetted primarily for conservation. Criterion B requires that the area is governed and managed by a legitimate authority, such as a village committee, Indigenous community, private company, university, state agency, or other entity with effective control over the area. Criterion C requires that governance and management achieve sustained and effective in-situ conservation of biodiversity, which may be demonstrated through evidence of species protection, habitat maintenance, ecosystem integrity, or ecosystem service provision. Criterion D recognises that OECMs may also support associated ecosystem functions, services, and cultural, spiritual, socio-economic or other locally relevant values, provided these are maintained or enhanced , alongside biodiversity conservation (CBD 2018; IUCN 2024). Importantly, OECM recognition does not change land ownership, land tenure, or governance rights. It does not turn the site into a protected area. Rather, it acknowledges and supports conservation outcomes that are already being delivered outside the formal protected area system (IUCN 2024; Jonas *et al*. 2024).

A key distinction between OECMs and protected areas lies in their management objectives. A protected area must have biodiversity conservation as its primary objective. An OECM, however, may have biodiversity conservation as a primary, secondary or ancillary objective, as long as the area delivers effective and sustained conservation outcomes. For example, a water catchment forest managed primarily for clean water supply, a community -managed river under a *Tagal* system that also protects freshwater fish, or a private nature reserve whose owner does not wish to seek protected area status may all qualify as OECMs if they meet the CBD criteria (IUCN 2024). This flexibility makes OECMs especially important

because they recognise conservation contributions that often remain invisible within formal protected area statistics. However, it also means that OECMs must be carefully assessed, documented, and monitored to ensure that recognition is based on real biodiversity outcomes rather than broad claims of environmental benefit. Alves-Pinto *et al*. (2021) note that while OECMs represent an important recognition of biodiversity conservation beyond formal protected area networks, their future social and ecological impacts will depend on robust guidelines for identification and effective monitoring. Similarly, a global scoping review by Petza *et al.* (2026), covering 99 studies and 694 case studies, found that potential OECMs are widespread, particularly in Asia, but that many assessments still rely heavily on qualitative expert knowledge, highlighting the need for more standardised methodologies.

THE IMPORTANCE OF OECMs FOR MALAYSIA

OECMs are not a substitute for protected areas. Instead, they are an essential complement to the existing protected and conserved area system. For Malaysia, OECMs are particularly important for three main reasons: they can help close the protected and conserved areas target gap, recognise existing conservation efforts outside formal protected areas and support more inclusive conservation governance beyond the public sector involving civil society, the private sector, Indigenous peoples, and local communities.

First, OECMs can help contribute towards Malaysia's target in the NPBD 2022–2030. As shown earlier, Malaysia's current formally protected area coverage remains well below the 30% target, particularly in the marine environment. This means that the country is unlikely to reach NPBD Target 8 or GBF Target 3 by 2030 through the gazettement of new protected areas alone. Gazettement is often slow, costly, and politically complex, especially where land ownership, development priorities, and jurisdictional issues are involved. OECMs offer a more flexible pathway because they do not require changes in land status, ownership, or governance arrangements. Instead, well-managed areas that already deliver biodiversity conservation outcomes can be assessed and recognised through a voluntary mechanism. In this sense, Malaysia's current shortfall in achieving this target is not only a protected area gap, but also an OECM recognition gap (NRES and UTM 2026). This potential is already visible globally. Jonas *et al.* (2024), in the first global assessment of OECMs, reported that between 2019 and 2023, 820 sites across nine countries and territories were submitted to the World Database on OECMs, covering approximately 1.9 million km^2 of the Earth's surface and contributing more than 1% towards the global 30% terrestrial coverage target. Nearly 30% of these reported OECMs overlap with identified KBAs, showing that OECMs can play a meaningful role in recognising areas of high conservation importance (Jonas *et al*. 2024).

Second, many areas in Malaysia are already delivering effective biodiversity conservation without formal recognition. These include Indigenous and community conserved areas (ICCAs), such as the kawasan rayau or foraging areas of Orang Asli communities, *Tagal* river management systems in Sabah and Sarawak, and community -managed marine areas documented by organisations such as PACOS Trust and Forever Sabah (SEARRP 2022). Other potential OECMs include private sector conservation set-asides, such as riparian reserves within oil palm estates, and biodiversity conservation areas within tree plantations. Sacred natural sites, water catchment forests managed by state water departments, university research forests, and some military training areas that function as *de facto* wildlife refuges may also be relevant, provided they meet the CBD criteria. Recognising these areas as OECMs would bring currently under-recognised conservation assets into national and global conservation accounting systems. More importantly, it would make visible the contribution of actors beyond conventional conservation agencies, including communities, universities, private land managers, water

authorities, and customary institutions. However, such recognition must be guided by clear criteria and credible assessment processes. Mgumia *et al.* (2025), in their study of sacred natural sites as potential OECMs in South Africa, highlighted several implementation challenges, including the absence of standard criteria at local or national levels and the lack of clear policy frameworks specifically designed for OECMs.

Third, OECMs can support more inclusive conservation governance by recognising the role of Indigenous Peoples and local communities (IPLCs). Malaysia's National Framework for OECMs is built on the principle of Free, Prior and Informed Consent (FPIC). This means that no community-governed site should be assessed or recognised as an OECM without the full consent of the community concerned. This is important because OECMs should not be used as a top-down conservation tool or as a way to impose external conservation labels on community lands and waters. Instead, they should provide a voluntary and rights-based mechanism for recognising conservation practices that communities have sustained over time. This makes OECMs especially relevant in contexts where biodiversity conservation is closely connected to customary governance, cultural values, traditional ecological knowledge, and local stewardship. Jonas *et al.* (2024) found that collaborative governance is the most common governance subtype among reported OECMs globally, accounting for 40.9% of reported sites, compared to only 2.5% for protected areas. This suggests that OECMs can create space for more diverse and inclusive conservation governance models. Fitzsimons *et al.* (2025) further clarify that OECMs are not simply "protected areas by another name" and do not automatically require changes in governance or land tenure. For Malaysia, this distinction is crucial. OECMs can help recognise conservation beyond the formal protected area system while respecting existing rights, responsibilities, and governance arrangements.

CUSTOMARY LANDSCAPES AND LOCALLY-EMBEDDED CONSERVATION

Some of Malaysia's less visible opportunities for OECM recognition may lie within landscapes where conservation outcomes coexist with long-established livelihood and resource-use practices. In Sarawak, customary farming has historically involved more than the cultivation of individual plots. Land may pass through different periods of use and regeneration, while forest resources, permanent crops and other livelihood activities remain part of the wider system. Studies of Iban and Kenyah communities have documented this complexity and the capacity of such systems to respond to changing environmental and socio-economic circumstances (Chin 1977, 1985; Padoch 1982; Cramb 1993). Their ecological significance is therefore difficult to judge from a cultivated site at a single point in time.

This becomes clearer when the wider landscape is considered. Padoch and Pinedo -Vasquez (2010) argue that some rotational farming systems retain substantial biodiversity because cultivated areas occur alongside fallows, agroforests and regenerating vegetation at different stages. Evidence from northern Borneo also shows that landscapes associated with forest-based rotational agriculture can provide greater tree diversity and multiple ecosystem services than simplified plantation systems, although natural and logged forests remain particularly important within these mosaics (Labrière *et al*. 2015). The implication is not that customary agriculture is inherently conservation-friendly. Management intensity, the length of regenerative periods and subsequent land-use change all affect the ecological outcome. Cramb's (1993) longitudinal study in Sarawak similarly shows why these systems need to be understood as part of a broader farming system and not solely through the temporary clearing of land.

Other productive landscapes may carry conservation value in less obvious ways. Traditional fruit gardens in Pahang, for example, supported higher mammal diversity and substantially greater mammal biomass than nearby comparison sites, including several species of conservation concern (Moore *et al*. 2016). Agroforestry orchards in Peninsular Malaysia have likewise been found to support richer and more abundant bird communities than oil palm and rubber monocultures (Yahya *et al*. 2022). Such findings are relevant to OECMs because biodiversity conservation does not have to be the primary purpose of management. A landscape used for food production or household livelihoods may still contribute to conservation if those outcomes are positive, sustained and demonstrable.

How these areas are governed matters just as much. Customary landscapes are rarely maintained by ecological processes alone. Shared responsibility, reciprocal labour and locally organised management can influence how resources are accessed, maintained and passed between generations. Experience from Sabah has shown that Indigenous and community-conserved areas can contribute to habitat connectivity and ecological services while operating through forms of governance that differ from conventional state-managed protected areas (Vaz and Agama 2013). For OECM purposes, however, the existence of a customary practice or strong community institution would not in itself be sufficient. The relevant question is what that governance achieves over time. Evidence of sustained biodiversity outcomes, a geographically defined area and a legitimate governing authority would still be required.

The ecological boundaries of these landscapes may also extend beyond what is immediately visible on land. Rivers, floodplains, wetlands and seasonally saturated areas are connected through movements of water, nutrients and organisms. Periodic changes in hydrological connectivity can alter habitat conditions and biological productivity across the land–water interface (Junk *et al.* 1989). Water levels and soil saturation also change oxygen conditions, affecting decomposition and nutrient transformations. At particular places and times, these interactions can produce disproportionately high rates of biogeochemical activity (McClain *et al*. 2003). For potential OECMs that encompass catchments, wetlands or connected terrestrial and freshwater environments, conservation effectiveness may therefore depend partly on retaining these functional connections, not only particular habitat patches or species.

Customary landscapes consequently present both an opportunity and a challenge for OECM recognition. Their conservation value may arise from combinations of livelihood use, ecological regeneration and locally embedded governance that do not fit neatly within conventional categories of protected land. At the same time, such landscapes should not be recognised simply because they are traditional or community-managed. OECM status depends on what is being conserved, how those outcomes are maintained and whether they can reasonably be expected to persist. This distinction is important if recognition is to make existing conservation contributions more visible without weakening the ecological standard on which OECMs depend.

MALAYSIA'S NATIONAL FRAMEWORK FOR OECMs

Recognising these varied forms of conservation requires an assessment process that can accommodate different management and governance arrangements while retaining a clear requirement for sustained biodiversity outcomes. Malaysia's National Framework provides the mechanism through which such areas can be considered for formal OECM recognition. In early 2026, Malaysia completed its National Framework for Other Effective Area-Based Conservation Measures (NF-OECMs). The framework was developed by the Ministry of Natural Resources and Environmental Sustainability (NRES), with technical support from

Universiti Teknologi Malaysia (UTM) and input from a wide range of stakeholders, including government, national and international organisations, Indigenous representatives, and civil society organisations spanning Peninsular Malaysia, Sabah and Sarawak. It provides Malaysia with an operational system for identifying, assessing, recognising, monitoring, and reporting OECMs across the country (NRES and UTM 2026). A significant milestone under the framework is the endorsement of six pioneer OECM sites. These sites were assessed using the CBD criteria and demonstrate that OECMs are no longer only a policy concept in Malaysia, but are already being operationalised through different governance and management contexts.

Table 1. Six pioneer OECM sites in Malaysia.

No.	Sites	Location
1.	Genting Tea Estate	Pahang
2.	Sungai Pin Conservation Area	Sabah
3.	Habitat Penang Hill	Penang
4.	Sekar Imej Wilmar	Sabah
5.	UiTM Kuala Pilah Campus	Negeri Sembilan
6.	Berungus Marine Management Area	Sabah

Source: NRES and UTM (2026).

To bring more sites into formal recognition, the framework establishes a four-stage recognition process that is voluntary, transparent, and low-cost. Stage 1 involves initial screening, where the site owner or manager submits a simple form confirming that the site is not a protected area and has reasonable biodiversity value. Stage 2 involves consent for full assessment. At this stage, relevant stakeholders receive a detailed briefing on OECMs and provide formal consent to proceed. For sites governed by IPLCs, this process must include FPIC. Stage 3 is the full assessment, conducted by a trained OECM Expert Assessment Group (EAG) using the eight CBD sub-criteria. Stage 4 is final approval and recognition, where the site receives formal recognition, is issued a certificate by the national authority and is added to the National OECM Registry before being reported to the global database (NRES and UTM 2026).

The governance structure supporting this process is also clearly defined. The National OECM Steering Committee (NSC OECM), chaired by NRES and involving representatives from Sabah, Sarawak, and relevant federal ministries, provides high-level policy direction. The National OECM Working Group (NWG OECM) oversees technical implementation, while the OECM Secretariat, based at NRES, manages day-to-day operations, applications, and reporting. Site assessments are carried out by the OECM Expert Assessment Group, which consists of trained independent assessors. Implementing partners, including NGOs such as the Malaysian Nature Society (MNS), WWF-Malaysia, SEARRP, PACOS Trust and Forever Sabah, support site identification, capacity building, and public outreach.

Recognition does not end with approval. Once a site is recognised as an OECM, it must continue to demonstrate that biodiversity conservation outcomes are being sustained. The framework therefore requires recognised sites to collect baseline data and carry out regular monitoring. However, it does not prescribe a single monitoring method. Instead, it allows different forms of evidence, including scientific surveys, citizen science, photo documentation, species checklists and, for sites governed by Indigenous peoples and local communities, traditional ecological knowledge systems. Where appropriate, the IUCN Green List of Protected and Conserved Areas may also provide a more rigorous framework for monitoring and strengthening site performance.

Reporting is coordinated through the OECM Secretariat. Recognised sites are first listed in the National OECM Registry and are then reported to the World Database on Protected and Conserved Areas via NRES, as Malaysia's national focal point to the Convention on Biological Diversity. This enables Malaysia's recognised OECMs to contribute to global reporting under Target 3 of the Kunming-Montreal Global Biodiversity Framework, as well as the relevant indicators for Sustainable Development Goals 14 and 15 (NRES and UTM 2026).

CHALLENGES AND THE WAY FORWARD

Despite the completion of a national framework, several challenges remain in operationalising OECMs in Malaysia. First, awareness of OECMs is still low among state governments, district offices, private landowners, and local communities. This is a significant gap because OECM recognition depends on voluntary participation by site owners, managers, and governing authorities. Without sufficient understanding of what OECMs are, how they differ from protected areas and what benefits recognition may bring, many potential sites may remain unidentified or unwilling to participate.

Second, legal recognition remains largely administrative rather than statutory. At present, OECMs do not have clear standing under Malaysia's land, forestry, wildlife, or marine governance systems. This does not prevent recognition from taking place, but it may limit the long-term security of recognised sites, especially where land-use pressure, development proposals, or changes in management priorities arise. A careful legal review is therefore needed to identify pathways for OECMs across Malaysia to be better supported without altering ownership, tenure, or existing governance rights.

Third, sustainable financing is not yet guaranteed. While the framework proposes expanding the Ecological Fiscal Transfer (EFT), which currently allocates RM250 million in 2026 for protected areas, to include OECMs, this has yet to be fully operationalised. Without dedicated financing, recognised sites may struggle to maintain monitoring, reporting, management, and community engagement activities over time. Other financing mechanisms, including conservation trust funds, ecotourism revenue, payment for ecosystem services, and corporate biodiversity contributions, may also be needed to support long-term implementation.

Fourth, Malaysia's federal structure requires careful state-level engagement. Conservation governance differs across Peninsular Malaysia, Sabah, and Sarawak, particularly in relation to land, forestry, water, wildlife, and Indigenous or customary governance systems. The national framework therefore needs to be applied flexibly, with room for state-level adaptation where necessary. This is especially important for community-governed sites and areas where biodiversity conservation is linked to customary practices, local livelihoods, and traditional ecological knowledge.

These challenges are consistent with wider global concerns about OECM implementation. Garcia *et al.* (2022), in their study of OECMs in marine capture fisheries, highlighted governance issues such as enabling frameworks, legitimate authorities, and cross-sectoral coordination as among the most critical challenges facing OECM recognition and implementation. For Malaysia, this means that the success of OECMs will depend not only on identifying suitable sites, but also on building the institutional capacity, legal and regulatory clarity, and financial support needed to sustain them.

Addressing these challenges requires a coordinated set of actions. The NF-OECM identifies five key strategies for strengthening implementation. The first is capacity building for government agencies, legal professionals, NGOs, private sector actors, and site managers

through training and awareness programmes. The second is strengthening governance quality using tools developed by the IUCN World Commission on Protected Areas. The third is improving management and monitoring through site-based teams and external technical support. The fourth is enhancing long-term recognition through a review of existing laws, policies, and other instruments for long-term security of the sites. The fifth is increasing financial support through mechanisms such as the EFT, conservation trust funds, ecotourism revenue, payment for ecosystem services, and corporate biodiversity offsets (NRES and UTM 2026).

The immediate way forward is therefore practical and achievable. A National OECM Roadshow should be carried out in every state to raise awareness, clarify misconceptions, and identify potential sites. The EFT guidelines should be amended to explicitly include recognised OECMs. A national legal review should identify minimal legislative or policy changes that can strengthen the recognition and long-term security of OECMs without changing or undermining existing rights and governance arrangements. At the same time, Malaysia should train and certify a pool of at least 20 to 30 OECM assessors to support the expected increase in applications. These steps would help move OECMs from framework development to active implementation.

CONCLUSION

Achieving Malaysia's commitment towards GBF Target 3 and NPBD Goal 3 will require more than the expansion of formal protected areas and should include OECMs by definition of the target. OECMs offer a pragmatic and inclusive pathway for recognising conservation efforts that are already taking place across different landscapes and seascapes, from community-managed fisheries and customary forests to corporate conservation set-asides and research forests. Their value lies not only in increasing Malaysia's conservation coverage, but also in making visible the contributions of communities, private land managers, public institutions, and other local stewards. Malaysia now has a National Framework for OECMS, but its real significance will depend on implementation. Success will require turning awareness into applications, administrative recognition into stronger legal and policy support, and short-term funding into sustainable financing. If these enabling conditions are strengthened, OECMs can contribute meaningfully to Malaysia's protected and conserved areas target while also supporting more inclusive governance, responsible land and seascape management, and the protection of the country's natural heritage for future generations.

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