

ESG: Biodiversity

Nature Is Emerging As The Next ESG Frontier

Highlights

- We hosted institutional investors on a biodiversity-focused site visit to Telaga Simpul, Terengganu. Key takeaway: Biodiversity is considerably more interconnected with economic activity than the term “conservation” might suggest. Our visit involved an overview of seagrass studies done by Prof Dr Muta (UPM) and seagrass mapping by Yayasan Petronas.
- Yayasan Petronas is funding a nationwide seagrass mapping and community-based conservation programme under its broader Planting Tomorrow Climate Resilience initiative. The programme has mapped 2,100ha of seagrass across Peninsular Malaysia and Sabah to date, representing Malaysia’s first coast-to-coast mapping effort.
- Malaysia’s biodiversity challenge is not simply that the ecosystems are declining but that baseline information remains fragmented. A credible national database could eventually provide a better reference point for conservation planning, as Yayasan Petronas aims to map out 8,000ha of seagrass meadow by the end of this programme.

Analysis

- **Seagrass meadow site visit: Biodiversity through an investor’s lens.** We recently hosted institutional investors on a biodiversity-focused site visit to Telaga Simpul, Terengganu, together with Yayasan PETRONAS and Universiti Putra Malaysia (UPM). The visit included a briefing by Yayasan PETRONAS and Professor Dr Muta Harah Zakaria from UPM, followed by a visit to the seagrass meadow.
- **Key takeaway: Biodiversity is considerably more interconnected** with economic activity than the term “conservation” might suggest. Healthy seagrass coastal ecosystems support fisheries and community livelihoods, provide habitats for marine life, store carbon and may provide a degree of natural coastal protection. Conversely, land development, reclamation, sedimentation and other disturbances can affect these ecosystems. The programme therefore focuses not only on mapping seagrass, but also species diversity, habitat characteristics, carbon stocks and community stewardship.
- **Seagrass: The carbon super sink.** Seagrass is a flowering plant that lives in shallow, salty waters and it provides food and shelter for sea turtles and a variety of fish. Importantly, depending on the species, seagrass can absorb up to 35x more carbon per acre than tropical rainforests. Despite covering only 0.2% of global ocean floor, the plant absorbs a notable 10% of ocean’s carbon annually.
- **Promoting biodiversity of Peninsular Malaysia’s marine life.** Professor Muta described seagrass meadows as a “hotel” for marine life, supporting species ranging from fish and invertebrates to seahorses, turtles and dugongs. Importantly for coastal communities, these ecosystems also function as nursery and feeding grounds that support fisheries. From an investment perspective, we think the more interesting point is the ecosystem services provided. Seagrass meadows are recognised as blue-carbon ecosystems and can trap sediment, stabilise the seabed and reduce wave energy in suitable coastal areas. This links biodiversity preservation with climate adaptation and potentially the physical resilience of coastal communities.

Analyst(s)

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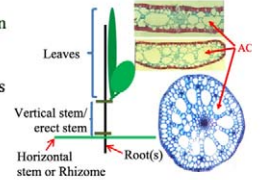
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What Is Seagrass?

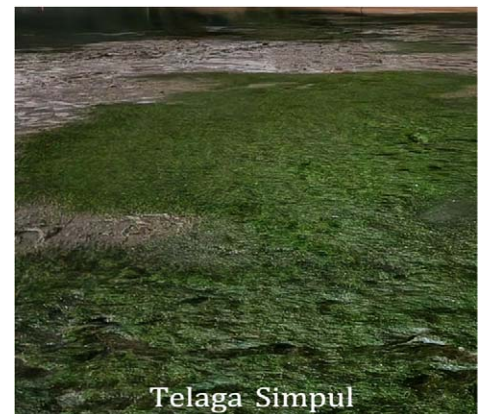


- Angiosperms (flowering plants).
- Produce flowers, fruits, and seeds.
- It has a vascular system inter-connecting all organs (stem, leaves, and roots) and a well-developed air channel (AC) system.
- Leaves generally green
- Adapted to shallow-water and subtidal marine environments in tropical and temperate regions.



Source: UPM, UOB Kay Hian

Telaga Simpul Seagrass



Source: UPM, UOB Kay Hian

Kemaman Seagrass



Source: UPM, UOB Kay Hian

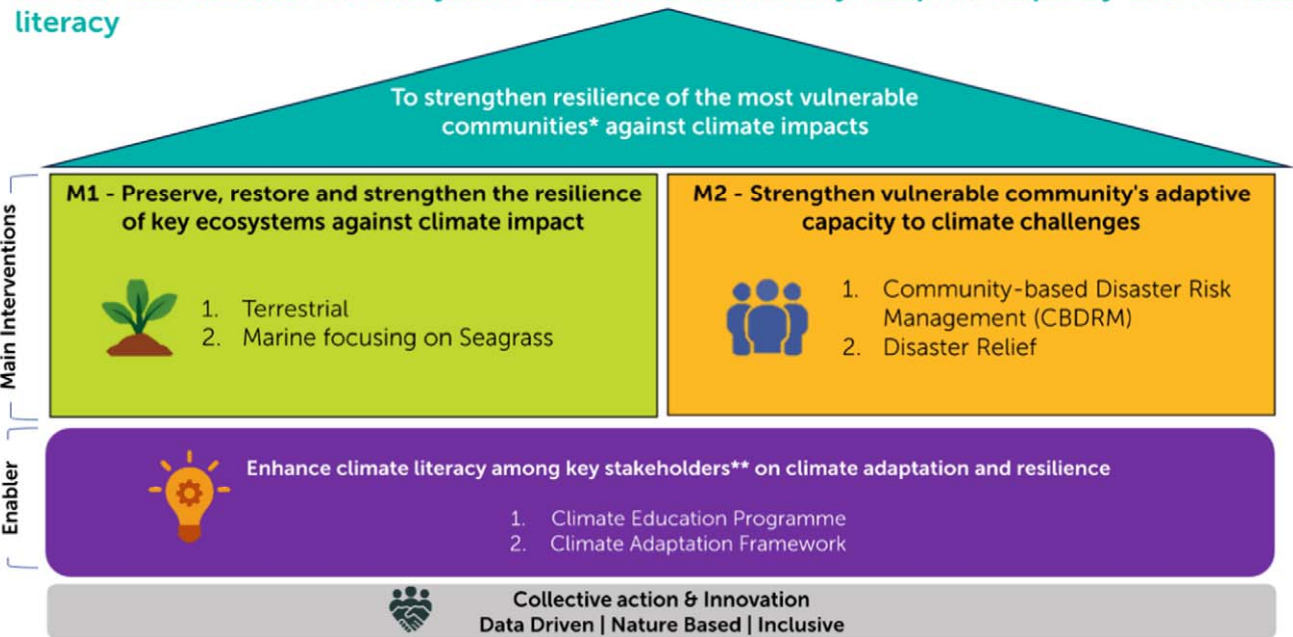
- **Yayasan Petronas: Planting Tomorrow Climate Resilience.** We see Yayasan PETRONAS' (YP) approach as an interesting example of how corporates can move from broad ESG commitments towards measurable nature-related initiatives. YP's environment pillar is anchored under Planting Tomorrow Climate Resilience (PTCR), which combines ecosystem resilience, community adaptive capacity and climate literacy. Its seagrass programme sits within the marine ecosystem intervention. The immediate objective is not to monetise seagrass or create carbon credits. Rather, it is to establish the underlying dataset. To date, 2,100ha of seagrass meadows have been mapped across Peninsular Malaysia and Sabah, with work covering distribution, species diversity, coverage, carbon stocks and biodiversity. The programme works with the Department of Fisheries Malaysia and Sabah Biodiversity Centre, with UM covering Johor, UPM the rest of Peninsular Malaysia and UMS Sabah. Before biodiversity can meaningfully enter corporate decision-making, companies first need to know what natural assets exist, where they are located and how their activities interact with them. In our view, baseline mapping is therefore a prerequisite for more sophisticated nature-risk assessment.
- **Community buy-in is not a soft issue.** One of the strongest takeaways from the site visit was that conservation cannot be sustained purely through mapping or corporate funding. Local communities ultimately become the custodians of these ecosystems.
- **YP's model thus combines scientific mapping with Communication, Education and Public Awareness (CEPA).** Five CEPA sessions in 2026 reached 807 participants across Johor, Terengganu, Negeri Sembilan and Sabah. The programme deliberately brings communities, students, volunteers and other stakeholders into conservation while connecting ecosystem protection with sustainable livelihoods. Communities can participate in nurseries supplying seedlings for restoration, nature-based tourism and other supplementary income activities. The economic logic is straightforward: Conservation becomes considerably more durable when communities can see that protecting the ecosystem also protects or enhances their livelihoods.
- **This was visible in the Telaga Simpul discussion.** Local knowledge complements scientific monitoring, while healthier seagrass meadows potentially support the fish, shellfish and other marine resources on which coastal communities depend. YP also stressed that local buy-in is often the critical factor determining whether environmental interventions survive beyond the initial project period.
- **What we would watch next:**
 - **From mapping to policy.** The current programme is primarily about establishing a credible baseline. The next question is how this information is incorporated into national conservation planning, environmental impact assessments and development decisions. A more complete spatial database could make nature-related risks easier to identify earlier in a project cycle.
 - **Whether biodiversity becomes more measurable for investors.** Unlike carbon, biodiversity has no single universal unit. We would therefore watch for greater standardisation in corporate nature-related disclosures, particularly around location-specific dependencies, impacts, mitigation measures and restoration outcomes.
 - **Whether corporates move beyond philanthropy.** PETRONAS is an early example of a corporate-backed programme funding baseline research and community stewardship. The longer-term investment question is whether biodiversity considerations become embedded in capex decisions, project design, supply chains and risk management rather than remaining primarily within CSR or foundation-led programmes.

- **Potential read-through for nature-dependent sectors.** Property, infrastructure, plantations, utilities and energy are among the sectors where land, water and ecosystem interactions can be material. We would not infer stock-specific earnings impacts from this visit alone, but we think biodiversity is becoming another lens through which investors can assess project risk and long-duration asset resilience.
- **Our site visit reinforced our view that biodiversity is not simply a conservation theme.** It sits at the intersection of climate resilience, natural capital, community livelihoods and, increasingly, corporate risk management. Malaysia is still at an early stage of building the data needed to quantify these linkages. That is precisely why the seagrass mapping exercise matters: The first step towards managing nature-related risk is establishing what exists and where it is.

The Mission Of Yayasan Petronas



YP's environment initiatives is anchored under Planting Tomorrow Climate Resilience (PTCR) that focuses on ecosystem resilience, community adaptive capacity and climate literacy



Notes: *coastal, low-lying, urban, and forest-dependent communities
**including local communities, students, youth, local authorities, and institutions

Yayasan Petronas’ Seagrass Programme

Background	This programme falls under Yayasan PETRONAS’s Environment pillar, aiming to promote and advance environmental preservation and conservation efforts in Malaysia. It also supports related studies and research with the goal of increasing the resilience of vulnerable communities, particularly focusing on the marine ecosystem, specifically seagrass.	
Strategic Priorities	Effective conservation efforts through research for the biodiversity to thrive and part of climate action	Local communities’ benefit from the conservation activities
Objective	• To map intertidal seagrass distribution within the shallow water seagrass areas in Malaysia • To assess seagrass species diversity, seagrass cover, and evaluate the habitat characteristics of seagrass ecosystems • To determine and map the carbon stock status of identified seagrass habitats. • To establish Community Engagement and Public Awareness (CEPA) in seagrass conservation and restoration by elucidating the significance of seagrass ecosystems and their benefits to local communities, fostering sustainable stewardship through education and active involvement.	
Partners	Strategic Partners: Department of Fisheries Malaysia State Sabah Biodiversity Centre (SaBC) Implementation Partners: Universiti Putra Malaysia (UPM) Universiti Malaysia Sabah (UMS) Universiti Malaya (UM)	



Source: Yayasan Petronas

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