

Reminder on the vital role of mangroves

IN Malaysia, *hutan paya laut* or blue carbon ecosystems, which include mangroves, salt marshes, seagrass meadows, algae and coastal sediments, are often overlooked and therefore undervalued.

However, these ecosystems play a critical role in our fight against climate change as they capture carbon three to five times more effectively than tropical rainforests, and store significant amounts of carbon in their sediments and roots besides the plants above ground.

Alarmingly, we are losing blue carbon ecosystems at a rate of 2% to 7% globally every year, faster than the loss of any other ecosystem.

According to the World Economic Forum, the world's total area of mangroves almost halved between 1990 and 2000!

If they continue to be degraded or destroyed, the vast amounts of carbon they have stored over thousands of years could be released into the atmosphere, accelerating global warming.

Experts estimate that as much as 1.02 billion tonnes of carbon dioxide are being discharged yearly from degraded blue ecosystems, says the Blue Carbon Initiative. This is equal to 19% of



emissions from tropical deforestation worldwide.

Mangroves, which can take over 70 years to mature and host nearly 100 unique species, are irreplaceable. The negative return on investment from mangrove destruction reflects not only an ecological crisis but also a significant socio-economic setback.

The importance of blue carbon ecosystems cannot be overstated. They act as natural barriers against flooding and storms, which are becoming more frequent and severe due to climate change.

The catastrophic Indian Ocean tsunami of 2004, which claimed at least 225,000 lives across a dozen

countries, would have had an even more devastating impact if not for the presence of mangroves, which slowed down the waves with their dense roots and branches.

In the context of animal protection, blue carbon ecosystems exhibit a unique adaptive capacity in the transitional regions between terrestrial and marine environments.

These ecosystems provide essential shelter and robust defence mechanisms for a myriad of marine species, protecting them from today's increasingly severe storms, strong currents and predators.

Furthermore, blue carbon eco-

systems support terrestrial fauna such as macaques, birds and otters, offering crucial refuge and sustenance during extreme weather events.

The preservation and restoration of blue carbon ecosystems are vital for enhancing the resilience of both marine and terrestrial species, mitigating the adverse effects of climate change, and maintaining biodiversity.

In conjunction with International Day for the Conservation of the Mangrove Ecosystem, observed annually on July 26 since 2016, we must raise awareness about mangroves and their importance as self-sustaining ecosystems.

As we face the increasingly severe impacts of climate change, it is imperative to reconsider our relationship with the natural allies that have protected us for generations but are often neglected.

Protecting blue carbon ecosystems is not just an environmental necessity but also a critical component of our climate change adaptation strategies.

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