
Oceans are the 'lungs of the Earth'

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The United Nations calls oceans as the “lungs of the Earth” as they generate most of the oxygen we breathe. Oceans produce oxygen through marine plants, such as phytoplankton, kelp and algal planktons. These plants produce oxygen as a byproduct of photosynthesis.

Containing 97 percent of the world’s water, oceans are home to millions of marine species that provide humans with at least a sixth of the animal protein they eat, as well as ingredients for our medicines.

But benefits from oceans go beyond air, food and water. Oceans cover 70 percent of the world’s surface, and transport heat from the equator to the poles, regulating our climate and weather patterns. They absorb carbon dioxide from the atmosphere and reduce climate-change impacts.

Aside from these life-supporting products and services, oceans provide wondrous recreational areas and limitless inspiration to millions of people. Clearly, oceans play an essential role for life on earth.

Asean oceans: among the world’s richest marine ecosystems

The 10 Asean member-states—Brunei Darussalam, Cambodia, Lao PDR, Indonesia, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam—house a third of the world’s coral reefs, mangrove and seagrass areas.

According to Dr. Theresa Mundita S. Lim, executive director of Asean Centre for Biodiversity (ACB), nine out of 10 Asean countries are endowed with extensive coastlines, and all 10 Asean member-states have a total of 173,000 kilometers of shorelines.

Indonesia and the Philippines are recognized as among those having the most coral reef areas in the world. Indonesia, Malaysia and the Philippines are three of the six countries bordering the Coral Triangle, which is home to 75 percent of the world's reef-building corals.

Overall, the Asean region hosts a third of the world's coastal and marine habitats, which include coral reefs, mangroves, estuaries, sandy and rocky beaches, seagrass and seaweed beds, and other soft bottom communities.

These habitats and their resident species provide various forms of ecosystem services, such as breeding, nursing and feeding grounds for marine plants and animals, as well as resources important to livelihoods of coastal communities.

Lim enumerated the regulatory ecosystem services derived from marine and coastal ecosystems: carbon sequestration and storage in mangrove tree trunks and roots, seagrass, seaweeds, and other algae; climate regulation; sediment protection; and shoreline retention to buffer coastal areas from storm surges.

According to the *Asean Biodiversity Outlook 2*, a publication of the ACB, coastal habitats maintain nutrient cycles and provide media for the exchange of genetic materials. These habitats provide cultural services in the form of recreation and tourism, education, research and places of worship.

There are various estimates of the monetary value of coastal habitats in the region. Coral reefs generate and may constitute a significant percentage of national economies, where such habitats occur in large scale, and where industries—such as coral reef-related tourism, fisheries, live fish aquarium, and shell craft industries thrive.

Coral reef-related tourism relies on water and habitat quality, the type and quality of services offered, and accessibility factors. The *Asean Biodiversity Outlook 2* reported that potential annual economic value of coral reefs in the Asean region arising from fisheries, shoreline protection, tourism, recreation, and aesthetic values is estimated at \$12.7 billion.

Clearly, resources from the oceans of the Asean region not only provide life-sustaining and economic benefits for some 650 Asean residents but also contribute to global sustainable development.

Behind the richness are the threats

Behind the richness of Asean's oceans are the threats. The integrity of the world's oceans, including in the Asean region, is threatened by marine debris and other forms of pollution; overfishing and use of destructive fishing practices; and coral bleaching, as well as other impacts from climate change.

According to the Asean's Population Reference Bureau, close to 500 million people will be living in or near coastal and marine areas in the Asean region by 2050.

Indonesia and the Philippines were identified by the Reefs at Risk Revisited Report as two countries that have tens of millions of coastal people living within 30 kilometers of reefs.

Considering that the Asean is one of the fastest-growing economies in the world, its nearshore ecosystems have become more vulnerable to habitat change from overexploitation, sedimentation, pollution, coastal development, ineffective governance, and collateral damage from coastal tourism and climate change.

Plastic: Oceans' enemy No. 1

Human activities present the biggest threat to oceans as more than 80 percent of marine pollution comes from land-based activities and wastes, specifically plastics.

A surge in single-use plastics has led to a global environmental catastrophe. The UN has reported that 13 million tons of plastic leak into the oceans every year, killing 100,000 marine animals annually, among other damages.

While most plastics are expected to remain intact for decades or centuries after use, those that do erode end up as microplastics, consumed by fish and other marine wildlife, quickly making their way into the global food chain.

In a presentation during the celebration of the International Day for Biodiversity held in Bangkok, Thailand, on May 2, Dr. Suchana Chavanich, a faculty member of the Department of Marine Science, Faculty of Science, Chulalongkorn University, Thailand, said that 39 percent of plastic wastes go to open ocean waters; 33.7 percent settle in coastline and sea floor; 26.8 percent remain in coastal ocean waters; and 0.5 percent float on the waters.

Chavanich reported that a study conducted by the Chulalongkorn University found microplastics in 93 percent of bottled water.

Another threat to marine life is illegal, unreported and unregulated (IUU) fishing.

According to a European Union report, the estimated global value of IUU fishing is around \$11 billion to \$22 billion per year. Between 11 million tons and 26 million tons of fish are caught illegally a year, accounting for at least 15 percent of the world's catches. IUU unsustainably affects the world's fish stocks.

Asean nations unite to protect the oceans

The 10 Asean member-states, supported by the Asean Centre for Biodiversity, recognize that protecting the Asean region's oceans has a global significance, as benefits go beyond the borders of Southeast Asia.

Thus, they are working together to ensure that the region's marine and coastal biodiversity and ecosystems are conserved, protected and sustainably used.

During the Special Asean Ministerial Meeting on Marine Debris held on March 5 in Bangkok, Thailand, the ministers responsible for natural resources, environment and marine affairs affirmed the Asean's commitment to conserve the region's marine environment and strengthen regional cooperation in addressing marine debris issues.

The ministers expressed their full support to advance partnerships for sustainability, as well as to promote synergy within the framework of Asean partnership, in particular to combat marine debris in the region.

During the 34th Asean Summit held in Bangkok, Thailand, on June 22, the heads of the 10 Asean member-states adopted the Bangkok Declaration on Combating Marine Debris, reiterating the commitment of the 10 Asean member-states in protecting and conserving the region's rich marine resources.

The Bangkok Declaration called for collaborative actions to prevent and significantly reduce marine debris, particularly from land-based activities; recommended an integrated land-to-sea approach to prevent and reduce marine debris; and called for the strengthening of national laws and regulations, as well as enhancing regional and international cooperation, including on relevant policy dialogue and information sharing.

The declaration also promoted mainstreaming of biodiversity and ecosystem conservation as it called for coordination among Asean sectoral bodies to effectively address the multidimensional and far-reaching negative effects, as well as sources of marine debris pollution; and encouraged private-sector engagement and investment in preventing and reducing marine debris, including partnerships between public and private sector through various mechanisms and incentives.

The Bangkok Declaration called for the strengthening of research capacity and application of scientific knowledge to combat marine debris; accelerating advocacy and actions to increase public awareness and participation; and enhancing education for behavioral change toward preventing and reducing marine debris.

Marine debris is a transboundary issue that requires integrated regional cooperation. Without immediate action, marine debris pollution would negatively impact marine biodiversity, environment, health, society and economy. Marine debris threatens the health and cleanliness of oceans and their resources which are key to the sustenance and livelihood of hundreds of millions of people, including Asean residents.

Protecting and conserving oceans: a shared responsibility

Lim said saving our oceans is not the sole turf of governments, marine scientists, conservationists and environmentalists. She recommends the following actions that individuals can take to protect and conserve the world's rich marine heritage:

- Learn about the wealth of diverse and beautiful ocean creatures and habitats, how our daily actions affect them, and how we are all interconnected.
- Mind our carbon footprint and reduce energy use.
- Buy sustainably sourced seafoods.
- Properly dispose wastes, especially hazardous materials.
- Use fewer plastics or reusable ones and dispose them properly.
- Join coastal cleanup activities.
- Plant native species of mangrove trees.
- Report illegal activities that are harmful to marine life.

- Support organizations working to protect our oceans.
- Influence change in our homes, schools and communities.

“Conservation is a shared responsibility. By working together, we can protect our shared oceans. Let us keep in mind that oceans are our life,” Lim said.
