

Save our ASEAN Seas: Healthy Coasts and Healthy ASEAN

Photo by Eric Madeja

The ASEAN region has 54 percent more marine area compared to its total land area. Thus, marine and coastal ecosystems should be considered as one of its most valuable natural assets. However, these assets and the ecosystem services that they provide are at risk from land-based sources of pollution and sedimentation, and activities that are related to coastal industries such as tourism, agriculture, fisheries, ports and shipping, and infrastructure. If these threats are not abated at the soonest, seagrasses, coral reefs, mangrove forests, beaches and other coastal habitats will lose their ability to provide food, nurture marine plants and animals, regulate climate and provide areas for worship, education, leisure, and research. ASEAN Member States (AMS) have responded to such threats through various projects and programs but more aggressive, targeted and highly complementary actions are necessary to address these threats to ensure that these natural assets will persist.

How valuable are coastal and marine habitats?

ASEAN hosts a third of the area covered by the world's coastal and marine habitats that include coral reefs, mangroves, estuaries, sandy and rocky beaches, seagrass and seaweed beds, and other soft bottom communities (ABO 1, 2010). These habitats and their resident species provide various forms of ecosystem services including breeding, nursing, and feeding grounds for marine plants and



Target 6 (sustainable management of marine living resources), Target 7 (sustainable agriculture, aquaculture and forestry), Target 10 (pressures on vulnerable ecosystems reduced), Target 11 (protected areas increased and improved), and Target 12 (extinction prevented) present applicable guidance to promote the recognition of the values, current, and potential benefits of coastal and marine areas and the urgency of their conservation and sustainable use.

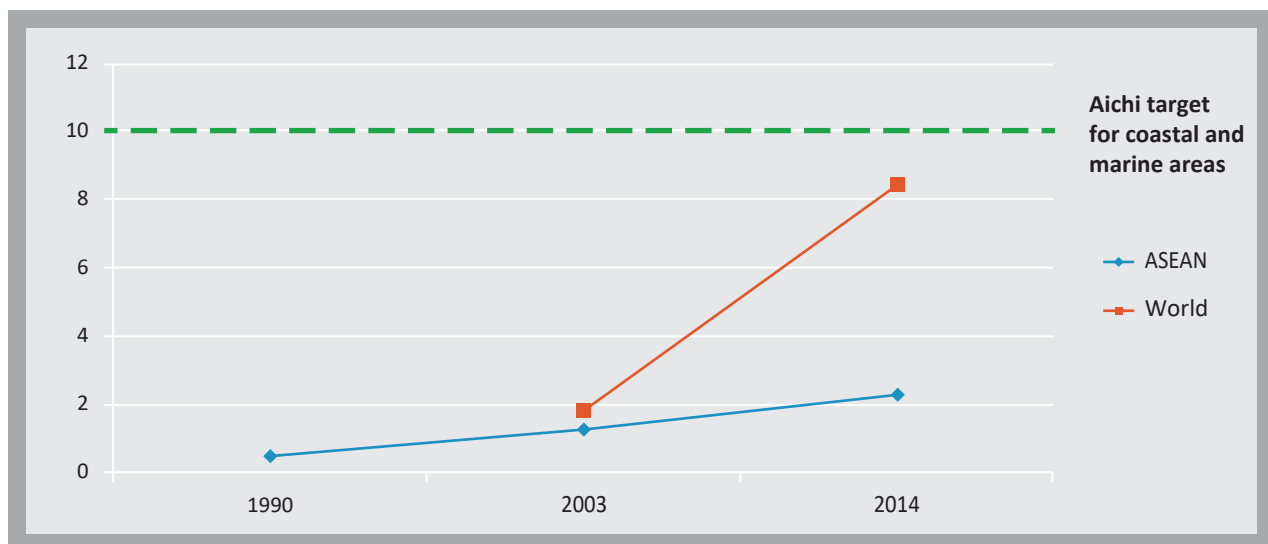
animals and resources important to livelihoods of coastal communities. Their regulatory services include carbon sequestration and storage, climate regulation, sediment protection, and shoreline retention to buffer coastal areas from storm surges. Coastal habitats provide cultural services in the form of recreation and tourism, education, research, and places of worship. It is estimated that the total potential sustainable annual economic net benefits per square kilometer of healthy coral reefs in ASEAN ranges from USD 23,100 to USD 270,000 arising from fisheries, shoreline protection, tourism, recreation, and aesthetic values (Burke et al., 2002).

Impacts of a fast-growing economy

The ASEAN is one of the fastest-growing economies and populations in the world, and these multipliers have made the region more vulnerable to habitat change from overexploitation, sedimentation, pollution, coastal development, and collateral damage from coastal tourism and climate change. The pressure to provide for a growing population has resulted in the degradation of coastal and marine habitats. Contributing threats include gaps in education and awareness, lack of commitment, funds and actions to enforce laws, gaps in adherence to responsible practices in tourism, fishing, agriculture, aquaculture, infrastructure development and mariculture. The predominantly ineffective governance systems covering coastal and marine ecosystems and fisheries in the region keep the AMS from adapting to the growing complexity of issues. The Reefs at Risk Revisited in the Coral Triangle report (R@R, 2012), indicates that warming waters and increasing acidity from rising levels of carbon dioxide and the dependence of a growing population on coral reefs for food and other services compound local threats and contribute to the high vulnerability of coral reefs in the region. The low coverage of coral reefs within marine protected areas (MPAs), as reported in the Coral Triangle (White et al. 2014), and the low management effectiveness of MPAs (compared to the global average) reflect gaps in coastal and marine governance. Please see figure below.

The ASEAN has responded but there is need for more aggressive action.

Responses from the AMS include the collaborative implementation of issue-based projects, increased coverage of protected areas, improved policies on gear and seasonal catch controls, conservation partnerships, and integrated land and sea use plans. In several cases, mainstreaming of coastal and marine ecosystem management in national, subregional, regional, and intergovernmental initiatives have been reported. Despite reports from AMS on reduced illegal fishing incidences, the AMS' Fifth National Reports (5NRs) account that illegal, unreported, and unregulated (IUU) fishing is still prevalent in the region. Increased areas allocated to MPAs and other initiatives, sustainability of resources use and reduction of threats, and fulfilment of global conservation targets as applied in the ASEAN region, have barely registered the necessary upward trend showing the targets have been hit at the suggested timelines. The figure below demonstrates the milder trend that growth in MPA are experiencing in the ASEAN compared to the world, indicating that current collective efforts in the region have established protection for only 2 percent of coastal and marine areas under AMS jurisdictions.



Comparison of trends in growth in MPAs

Sources:

1. Territorial waters derived from the MDG
2. Juffe-Bignoli, D., Burgess, N.D., Bingham, H., Belle, E.M.S., de Lima, M.G., Deguignet, M., Bertzky, B., Milam, A.N., Martinez-Lopez, J., Lewis, E., Eassom, A., Wicander, S., Geldmann, J., van Soesbergen, A., Arnell, A.P., O'Connor, B., Park, S., Shi, Y.N., Danks, F.S., MacSharry, B., Kingston, N. (2014). Protected Planet Report 2014. UNEP-WCMC: Cambridge, UK
3. Global facts about MPAs and marine reserves. Retrieved from <http://www.protectplanetoccean.org/collections/introduction/introbox/globalmpas/introduction-item.html> on 28 September 2016.
4. IUCN and UNEP-WCMC (2016), The World Database on Protected Areas. Cambridge, UK: UNEP-WCMC, April 2016 Retrieved from www.protectedplanet.net.

Call for Action: How can policy makers develop ideas and plans for integrated coastal management?

1. Adopt an inclusive and integrated approach

- a. Recognize a “ridge to reef” approach that defines the interaction of landward ecosystems with coastal habitats and other seaward ecosystems.
 - i. This linkage is important in understanding the need to manage agricultural inputs, urban planning, and related infrastructure development in the context of managing recipient coastal and marine habitats.
 - ii. This approach will emphasize the relevance of coastal forests and seagrass meadows in coastal protection and disaster risk management.
- b. Ensure the sustainable use and conservation of living marine resources - allow seagrasses, coral reefs, mangrove forests and other coastal ecosystems to persist.
- c. In planning and implementation, consider
 - i. both spatial and temporal scales of ecosystem dynamics and management
 - ii. the relevance and role of biodiversity in the “functioning and resilience of marine systems.”
 - iii. Investments in research
- d. Involve a wide range of stakeholders

2. Improve management effectiveness of coastal areas subject to threats from water pollution by

- a. integrating costs of maintaining coastal and marine ecosystems in resource management
- b. establishing proper incentives and penalty systems
- c. reducing land-based sources of pollution and sedimentation
- d. developing solutions for sustainability challenges
- e. redirecting operations towards carbon-efficiency

3. Increase the coverage and effectiveness of marine protected areas (MPAs).

- a. Be more aggressive in establishing MPAs, conserving at least 10 percent of coastal and marine areas of particular importance for biodiversity and ecosystem services.
- b. Protect connected pairs, groups and networks of MPAs to ensure that a) fish and invertebrate larvae have places to settle, b) migratory shorebirds have dependable stopovers, and c) habitats conserved in these networks maintain their resilience to climate changes and human-derived impacts

4. Improve fisheries-related policies and their implementation that

- a. consider guidance from The Code of Conduct for Responsible Fisheries (CCRF) developed by FAO to guide and support the sustainable utilization of fisheries and aquaculture
- b. consider the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (2015) to complement the CCRF in the development and updating of national policies, local plans and programs on sustainable fisheries management.

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Coastal and Marine Biodiversity

Healthy coasts, healthy ASEAN

Fishing Down the Food Web

Source: Pauly et al, Science, 1998

