



EAS CONGRESS 2018

THE EAST ASIAN SEAS CONGRESS

25 Years of Partnerships for Healthy Oceans, People and Economies

Moving as One with the Global Ocean Agenda

27-30 November 2018 • **Iloilo Convention Center, Philippines**



TRACK 3: BIODIVERSITY AND COASTAL MANAGEMENT

SESSION 3.1

Healthy Coasts and Healthy ASEAN: Saving the ASEAN Seas through Effective Collaboration

CONVENER:



ASEAN Center for
Biodiversity

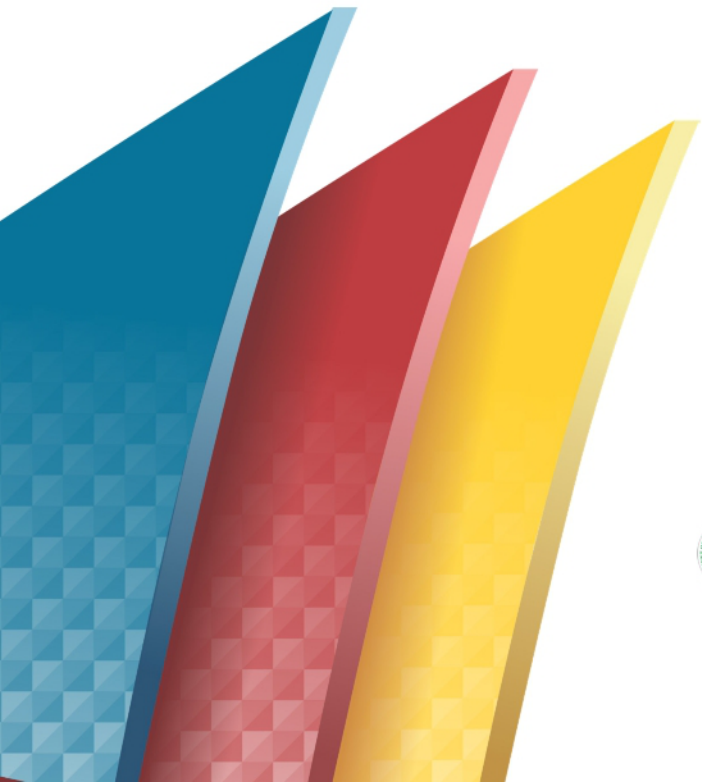
SPONSOR:



European Union



Empowering lives.
Accelerating nations.



EAS Congress 2018

25 Years of Partnerships for Healthy Oceans, People and Economies: Moving as One

**with the Global Ocean Agenda
Iloilo City, Philippines, 27-30 November 2018**

Track 3: Biodiversity and Coastal Management

Session 3.1: Healthy Coasts and Healthy ASEAN: Saving the ASEAN Seas through Effective Collaboration

27 November 2019

Co-convening Agencies:

ASEAN Centre for Biodiversity
European Union

1. Introduction

- 1.1. The Session 3.1 entitled, “Healthy Coasts and Healthy ASEAN Partnership Hub” shared the status of the coastal and marine resources in the ASEAN, and the conservation actions of the ASEAN Member States (AMS) as they relate to the goals of the Convention on Biological Diversity. Specifically, the Session discussed the relevant Aichi Biodiversity Targets, the UN Sustainable Development Goal (SDG) 14, and the implementation of the Sustainable Development Strategy for the Seas of the Southeast Asia (SDS-SEA).
- 1.2. Stemming from the progress of the AMS in achieving the Aichi Biodiversity Targets, the Session shared lessons and practices in the region towards achieving an effective Marine Protected Areas (MPAs) and MPA networks to mitigate biodiversity loss and maintain productive coastal and marine environment; discussed emerging issues affecting the coastal and marine environment in ASEAN; and identified gaps and opportunities towards creating an enabling policy environment.

2. Opening Messages

- 2.1. **Dr. Sheila G. Vergara, Director of the Biodiversity Information Management Unit of the ASEAN Centre for Biodiversity (ACB)**, gave the opening message on behalf of the ACB Executive Director, Dr. Theresa Mundita S. Lim. Dr. Vergara underlined the opportunity which the Session can cater to, especially in terms of exploring actions to address the pressing issues on coastal and marine biodiversity, and how they can be expedited and be made more meaningful on the ground through partnerships. She also mentioned that the ACB and the Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) continue to strengthen their ties through collaborative initiatives to enable the AMS put into effect the Aichi Biodiversity Targets. Areas for collaboration between the ACB and PEMSEA include building local and national capacities, information exchange and knowledge transfer, and development of joint projects for the conservation and management of key coastal and marine habitats and ecosystems.
- 2.2. **Ms. Aimee Gonzales, Executive Director of PEMSEA**, reiterated their organization's commitment to cover the target on MPA in the region consistent with the relevant Aichi Biodiversity Targets and SDGs. To express its support to regional actions towards marine biodiversity conservation and sustainable development, particularly in achieving the Aichi Biodiversity Targets, Ms. Gonzales mentioned that PEMSEA is continuing the partnership with the ACB. Aside from working on specific key areas, ACB and PEMSEA are also developing an initiative focused on the mechanisms and tools in large marine ecosystem. These mechanisms are anticipated to help develop innovative ways to have a better understanding in discovering and cultivating new opportunities for implementing effective marine protected areas.
- 2.3. **Forester Ricardo Calderon, Assistant Director for Staff Bureau of the Department of Environment and Natural Resources (DENR)**, shared the initiatives that were being done by the department as the lead agency in environmental protection and conservation. According to him, the DENR has invested so much in terms of coastal resource management programmes, such as the continuing Integrated Coastal Management (ICM) programme and the establishment of MPAs in partnership with the Bureau of Fisheries and Aquatic Resources. He added that he is looking forward to the good practices and experiences that will be shared and discussed in the sessions, which could be useful for DENR in developing an appropriate action.

- 2.4. **Mr. Giovanni Serritella, Attaché Manager for Environment and Climate Change Development Cooperation Section, Delegation of the European Union (EU) to the Philippines,** expressed concern on some of the pressing threats on marine biodiversity, such as climate change, population growth, and the worsening plastic pollution in the sea. Mr. Serritella stressed the ill effects on marine biodiversity of the misuse and overuse of plastics, which has gone to a massive scale, and thus needs urgent attention. He then elaborated on the EU's strategy to reduce 25 per cent of plastics on marine environment, to wit: (1) distilling lessons learned from other sectors on sustainable and reduced plastic consumption, (2) national strategy on improving waste management systems to reduce input of plastics in the marine environment, and (3) conservation programme in the Coral Triangle that aims to collaborate all efforts by the stakeholders.

3. Keynote Message

- 3.1. The keynote speaker, **Dr. Angel Alcala, National Scientist of the Philippines and ASEAN Biodiversity Hero from the Philippines,** shared his insights in terms of protecting the coastal and marine environment, specifically in the establishment of MPAs (**Annex 2**). He highlighted two main issues in ASEAN seas that must be addressed immediately. The first issue is plastic pollution and other solid and liquid materials that are dumped into the sea. He reiterated the grave consequence of plastic pollution in marine biodiversity, especially when it breaks down into microplastic form, and the problem is escalating as the world produces more plastic. To solve this problem, Dr. Alcala mentioned the importance of cooperation among governments to stop using single-use plastics, find local substitutes, and enforce laws that ban dumping of plastic materials into the sea. In this regard, he expressed appreciation to the efforts of DENR in cleaning up the island of Boracay, which he hoped that other tourist beach destinations in the country would follow suit.
- 3.2. The second issue which Dr. Alcala tackled refers to the degradation of coral reefs and their natural resources, especially fisheries. He cited the case of the Spratlys (in South China Sea), which has a coral reef ecosystem that could be considered nearly pristine, and thus rich in fishery resources. Much of the fishery resources are concentrated in atolls from where these resources spill over from time to time, and disperse to other reef systems in the area, thus contributing to enhanced fishery yields of the Philippine islands and even of some adjacent ASEAN countries. However, the reclamation in the atolls has led to siltation which endangered the ecosystem services being rendered by the area. On this note, Dr. Alcala pointed out the most appropriate response to the

degradation of the reef, which is by establishing more MPAs. As a pioneer of no-take marine reserves, he provided evidences that MPAs actually work.

In Apo Island. Dr. Alcala noted that there was an increase in fish biomass after 20 years of MPA establishment. Protected areas can produce up to 100 tons of fish after one to two decades of protection and results in the spillover of adults and larvae to areas open to fishing outside of protected reserves, thus promoting sustainable fishery. To date, there are 1,600 MPAs in the Philippines, but only one-third of which are working. While it may take time, he explained that MPAs is key for sustainable development in the fisheries sector, and for healthy seas. He encouraged the DENR, the ACB, and other units to update the study on MPAs in Southeast Asia conducted by the ASEAN Regional Centre for Biodiversity Conservation (ARCBC) in 2002 to show the extent of protection and management of the coral reef system, as well as the management of mangroves and seagrass beds. The book could also present the contribution of coastal ecosystems to the fishery production of each ASEAN country. To cap his keynote presentation, Dr. Alcala highlighted the need to publish more in terms of information gathered, experiences, successful practices, and outcomes of establishing and managing MPAs.

Open Forum on the Keynote Topic

- 3.3. Mr. Ricardo Calderon of DENR commented that the programmes on the protection of the coastal and marine, and the establishment of MPAs have not only become an advocacy of the department but of the local government units as well, which already started investing on these projects. He shared his insight on the importance of the MPA, not only for fishery purposes, but also as a driver in promoting ecotourism. Mr. Calderon also stressed the need to address the solid waste problem in coastal areas, which are major threats to MPAs. He asked for the opinion of Dr. Alcala on how this issue should be addressed. Dr. Alcala said that he advocates using native materials, such as *buri* mats or baskets, in place of the plastics. He pointed out the need to change people's attitudes and recommended a strong advocacy regarding the effects of plastic and importance of biodiversity and environment be imposed especially to the young generation.
- 3.4. Ms. Ruby Gonzales of Mindanao State University shared that they are already started their initiatives to network the MPA in their area in collaboration with the National Government Agencies. Dr. Alcala recognized those initiatives which arise from a positive attitude towards the environment and biodiversity.

- 3.5. Concerning the issue between environment protection and the need of human for food, Ms. Claudia Binondo of the ACB asked for advice on how to sustain fisheries production without compromising the environment. Dr. Alcala answered that environment and resources should come together, educate the community and also the fisherfolk on the importance of coral reefs for sustainable fish production and discipline in gathering resources which are just enough for consumption.
- 3.6. Mr. Abilio da Fonseca from East Timor raised his concern regarding the crocodile as threat to human lives. East Timorese people revere crocodiles, but recently they have started encroaching in communities Dr. Alcala replied that these species live in a certain habitat, and they now face the problem of habitat destruction. Their natural habitat should be preserved and protected so that they would not invade other areas, and not to become a threat to human.

4. Announcement of the Winners of the “Zooming In On Biodiversity”

- 4.1. The session also served as a venue to announce the winners and unveil their winning pieces of the “Zooming In On Biodiversity”, a photography contest organized by the ACB. The three winners of the contest are from Indonesia, Myanmar, and the Philippines.

Presentations

- 4.2. **Dr. Sheila G. Vergara, ACB**, discussed the convergence of SDG 14 on Aichi Biodiversity Targets 5, 6, 11, 14, and 12 (**Annex 3**). These include achieving healthy and productive oceans through sustainable management and protection of coastal and marine ecosystems. She then presented the progress of the ASEAN in terms of achieving the Aichi Biodiversity Target 11, which pertains to the establishment of 10 per cent of the coastal and marine areas as protected areas, by 2020. Dr. Vergara mentioned that to date, the ASEAN has only reached two per cent of the target, and on a country level status, none of the AMS has so far achieved the 10 per cent. Dr. Vergara also shared the experience of Canada wherein from 0.9 per cent, they have increased the coverage to 7.9 per cent since the inception of the Aichi Biodiversity Targets in 2011. She therefore underlined the need to expedite all actions in the ASEAN region towards achieving its target coverage of 454,963 square kilometres of effectively-managed MPAs. Some of the recommended actions are: (1) to adopt an inclusive and integrated approach to understanding the social, ecological, legal, and economic dynamics of marine conservation, specifically fishing; (2) increase the coverage and effectiveness

of MPAs including the consideration of other effective area based conservation measures (OECMs); (3) support connectivity, such as protect pairs, groups, and networks of MPAs to ensure the survival of fish and invertebrate larvae, and adoption of the Ridge-to-Reef Approach; and (4) communicate the relevance of marine species and habitats, and the impacts of natural and anthropogenic events on these habitats including that of climate change.

- 4.3. **Dr. Filiberto A. Pollisco, Jr., Programme Specialist of ACB**, introduced the ASEAN Heritage Parks (AHP) Programme, a flagship programme of the ASEAN (**Annex 4**). The AHP Programme, in which the ACB serves as the Secretariat, is a regional network of representative protected areas created to generate greater collaboration between the AMS in preserving their shared natural heritage. He explained that the AHP Programme is one mechanism to promote an effective management of the protected areas, as well as a platform to showcase the distinct natural ecosystems in the ASEAN region. He further explained that for a protected area to be declared an AHP, it has to be nominated by the country and has to undergo an evaluation process based on a set of criteria. The important characteristics of the AHPs are ecological completeness, uniqueness, representativeness, conservation importance, approved management plan, naturalness, legally gazetted, transboundary, ethno-biological significance, and importance for species. Dr. Pollisco also elaborated on the benefits of being an AHP, such as a priority for funding opportunities, capacity building and technical support; increased visibility; an opportunity for collaboration with other AHPs; possibility of leveraging resources at the national and sub-national levels; and an opportunity to participate in a regional platform for information sharing.
- 4.4. **Dr. Karenne Tun, Director of the Coastal and Marine Branch, National Biodiversity Centre, National Parks Board Singapore**, discussed the role of agent-based modelling to understand habitat connectivity and consequently inform decision-making (**Annex 5**). Dr. Tun shared that the agent-based modelling can be utilized to address challenges on multiple users and stakeholders, space competition, changing baselines, increasing populations, and land use development. She shared her work in Singapore wherein numerical agent-based modelling was used and incorporating molecular techniques to elucidate ecological patterns of connectivity among ecosystem processes. Dr. Tun cited the example of using the agent-based modelling in determining the connectivity of coral reefs through coral larvae dispersal and settlement. Her work led to understanding of ecological processes and patterns that helped in the management and conservation of the marine ecosystem in Singapore. The models were translated to management practices suited to the conditions of the

- environment, and life cycles of species. She concluded that agent-based modelling can be used to scale up spatial planning and optimize coastal development. Regionally, the method can be used to determine habitat connectivity for appropriate management decisions and actions (e.g. development of Same Risk Area in the management of ship's ballast water and sediments).
- 4.5. **Dr. Porfirio Aliño, Research Professor, Academician of the National Academy of Science and Technology, UP Marine Science Institute**, discussed the development and identification of higher-level outcomes to address large-scale MPA management and development (**Annex 6**). He shared his work in the Coral Triangle Initiative (CTI) in Sulu-Celebes Seas Large Marine Ecosystem using the Drivers, Pressures, State, Impact and Response (DPSIR) mode of intervention. Dr. Aliño explained that the model is used to assess responses on the social and ecological environment of the CTI. He explained that the assessment considered the importance of the Coral Triangle for the connectivity of coral larvae, as spawning ground of yellowfin tuna, and pathways for migratory species, such as the sea turtles. Gaps and synergies for cooperation and collaboration identified in the DPSIR served as important inputs into the national action plans of the six countries in the CTI and to the regional plan for the management of the Coral Triangle. He also underlined the importance of large-scale MPAs as they have the greater capability to bounce back from disruptive processes, such as the El Niño-Southern Oscillation, which may be responsible for coral bleaching in some areas. He concluded that establishing large-scale MPAs also accelerates synergistic effects of regional cooperation to achieve higher level outcomes such as stabilized coral reef ecosystems and sustainable fisheries.
- 4.6. On behalf the EU, **Dr. Filiberto A. Pollisco Jr. of ACB**, presented the project entitled, *Biodiversity Conservation and Management of Protected Areas in ASEAN (BCAMP)* (**Annex 7**). The project is being implemented by the ACB in partnership with the EU. The project generally aims to enhance biodiversity conservation and protected area management in the ASEAN. More specifically, the project contributes to the Aichi Biodiversity Targets through site-level interventions; support at the national level; and regional level interventions through capacity building, biodiversity information and management, and mainstreaming biodiversity conservation and protected area management in development plans and education systems in the ASEAN region. Dr. Pollisco further shared that the project is a viable example for sustainably financing conservation efforts in Southeast Asia.

- 4.7. **Mr. Jerker Tamelander, Head of the Coral Reef Unit, UN Environment Asia and the Pacific Office and Coordinator for the UN-Coordinating Body on the Seas of East Asia (COBSEA)**, presented the ongoing global and regional efforts and policy direction in terms of addressing the issue on marine debris in the ASEAN (**Annex 8**). Mr. Tamelander showed the worsening problem of plastic pollution globally and in the ASEAN region, driven by increased production of the material, which is further aggravated by low recycling rate. Moreover, he shared that policy frameworks have not caught up with the growing concern on plastics. In a way, this issue is being addressed by SDG 14.1 (prevent and reduce marine pollution), but he stressed that there is no global policy framework that is directly affecting control of marine litter pollution. Thus, an expert group on marine litter and microplastic is currently tasked to examine the barriers to and options of combating marine plastic litter and microplastic from all sources, especially land-based sources through the COBSEA. Mr. Tamelander elaborated on the strategic direction for 2018-2022 of COBSEA that focuses on strengthening biodiversity conservation in line with Aichi Biodiversity Targets, increasing resilience to climate change, and the adoption of a global policy development on marine litter. The UN Environment Programme (UN Environment), through COBSEA, provided an avenue to stem the flow of plastics to the sea through policy interventions. He enumerated the initiatives of the UN Environment and COBSEA through: (1) cost benefit analysis to identify concrete actions, (2) regional action plan on marine litter, and (3) network collaboration and coordination. He also mentioned that COBSEA is involved on the marine debris issue in the ASEAN through participation in conferences, workshops, and statements, among others. He concluded that evidence-based interventions are indeed important in shaping the grounds for policy development.

Open Forum on the Presentations

- 4.8. On the inquiry about the software for the Agent Based Modeling, Dr. Tun responded that she would be willing to share it, and added that there are a number of software packages available that could run the model.
- 4.9. Dr. Vergara asked for Dr. Alcala to reiterate his point regarding the effectiveness of area-based conservation measures. Dr. Alcala answered that in order to determine the effectiveness of established MPAs, an annual monitoring is needed specifically in terms of biomass and fish species diversity. On this note, Dr. Alcala also added that while the ultimate goal of MPAs is to improve the status of fisheries, it is also important to focus on the benefits of MPAs in terms of maintaining and enhancing

ecological functions. Hence, Dr. Alcala again reiterated the importance of regular monitoring of MPAs.

- 4.10. In line with the need to monitor the MPAs at regular intervals, Mr. Tamelander raised the importance of revisiting the development targets, such as determining the manageable size for MPAs in relation to local capacities, as there are many aspects in MPA management.
- 4.11. Dr. Benjamin Gonzales of the Western Philippines University inquired on the requirements for reporting the MPAs developed or established. Dr. Pollisco answered that an MPA does not have a limit on its area or size, however for it be recognised nationally, it should be legislated and an updated management plan should be available as basis for reporting to the national agencies, which for the Philippines, is DENR.
- 4.12. Forester Mercedita Banbarma of the DENR Region 10 raised concern on how the efforts of the local government units and agencies be recognized at the national level. Dr. Vergara responded there is an OECM that is intended for the local government initiatives and to be reported to the Biodiversity Management Bureau (BMB) of DENR. In line with this, Dr. Aliño added that it is also important to document whether benefits were achieved, such as in terms of improvement in fisheries, increase in fish biomass, improvement in governance and other social benefits of MPAs. Dr. Pollisco suggested that in order for the local MPAs to be included in the national list, the **National Integrated Protected Areas System** Act should be amended, or draft an executive order. Ms. Jhowilyn Zaldivar of PEMSEA recommended that they could approach the area campaign manager for their efforts and initiatives on marine protected areas to be listed and recognised by PEMSEA .
- 4.13. Mr. Datu Tungko Saikol from DENR Region 12 raised the issue on marine litter in Mindanao which is also further exacerbated by the navigation sector. On this note, Mr. Tamelander commented that while land-based source constitutes to 80 per cent of plastic litter in the seas, the fisheries also add to the problem, particularly in terms of discarded fishing materials made of plastic. Dr. Alcala, therefore, suggested to also consider and study the ocean current in the establishment of MPAs. In this case, Ms. Tun added that local knowledge and understanding can be useful and can even be more effective than models.

- 4.14. On the concern of educating the public on biodiversity as a common heritage, Dr. Alcala again underlined the importance of MPA monitoring to know whether there has been an improvement in the protection efforts. The ACB suggested that a strategic solution is to come up with a communication, education, and public awareness plan on biodiversity conservation which would include the participation of different sectors, such as universities, and in a language that could be understood by the public.

5. Synthesis

- 5.1. **Ms. Claudia Binondo, Programme Officer of ACB**, provided the synthesis of the session (**Annex 8**).

6. Conclusions and Recommendations

- 6.1. MPAs have been proven to be an effective strategy to conserve marine biodiversity and increase the fish stocks. However, the ASEAN region has yet to expedite actions to achieve its commitment to SDG 14 and the Aichi Biodiversity Targets in terms of protecting its marine environment. On the other hand, there are many ways and opportunities for the governments and other sectors in the ASEAN region to collaborate in order to expand effectively-managed MPAs.
- 6.2. Evidence-based data are important bases in the establishment of MPAs and in other decision-making processes for a healthy and productive marine environment.
- 6.3. Establishing a strong partnership among different sectors and across levels, such as the national governments, civil society organizations, and other stakeholders has shown to improve management of MPAs, especially in terms of synchronizing resources and complementing technical know-how.
- 6.4. Regional cooperation, paired with robust data, creates opportunities to address cross-cutting issues in fisheries, MPA management, and marine debris.
- 6.5. Apart from advanced technologies, sharing of local knowledge is key to determine connectivity of water bodies for proper management decisions.
- 6.6. In developing and expanding MPAs, the functionality of marine ecosystems must be taken into consideration to ensure sustainability of fisheries resources.

- 6.7. Integrating biodiversity conservation in the education systems could increase awareness and appreciation towards our natural heritage, hence, a greater commitment in its conservation and protection.

7. Potential Areas for Collaboration among the Relevant Sectors in the ASEAN

- 7.1. From the presentations, the ACB has identified areas in which the governments, development organizations, academe, and other relevant sectors in the ASEAN region can collaborate. The potential areas are: (1) establishment and management of protected areas; and (2) development of policies and improvement of practice.
- 7.2. Possible collaborative areas in terms of protected area establishment and management:
- Expansion and increase of MPA coverage to 20 to 30 per cent
 - Conduct of and/or update studies and publish their results
 - Provision of support on efforts to increase MPA connectivity
 - Recognition and establishment of OECMs
- 7.3. Possible collaborative areas in terms of developing policies and improving practice:
- Adoption of an inclusive and integrated approach in coastal and marine environment management and governance
 - Finding appropriate actions to address competing resource use
 - Development of tools and strategies to aid decision-making (e.g. reef connectivity, DPSIR)
 - Improving public education and advocacy work through publications
 - Development of substitutes/alternatives to plastics

ANNEX 1

List of Resource Persons

Dr. Sheila G. Vergara
Director, Biodiversity Information Management
ASEAN Centre for Biodiversity

Dr. Filiberto A. Pollisco, Jr.
Programme Specialist for Conservation Policy and Research
ASEAN Centre for Biodiversity

Dr. Karenne Tun
Director of the Coastal and Marine Branch
National Biodiversity Centre
National Parks Board of Singapore

Dr. Porfirio Aliño
Research Professor
Academician of the National Academy of Science and Technology
Marine Science Institute, University of the Philippines

Mr. Xavier Canton-Lamouse
Project Manager
European Union Delegation to the Philippines

Dr. Jerker Tamelander
Head of the Coral Reef Unit
UN Environment Asia and the Pacific Office
Coordinator, UN-Coordinating Body on the Seas of East Asia (COBSEA)