Session on Achieving Sustainability through Connectivity for Resilient ASEAN Seas

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Session Title: Achieving Sustainability through Connectivity for Resilient ASEAN Seas

Date: 06 November 2024

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Contents

INTRODUCTION

In the Association of Southeast Asian Nations (ASEAN) region, the conservation of marine areas is one of the major obstacles to achieving the previous global target for biodiversity. By the end of the implementation period of the Aichi Biodiversity Targets, only 4% (out of 10% target) of the region's coastal and marine areas had been protected. This would pose an even more difficult challenge under the more ambitious targets pledged under the Kunming-Montreal Global Biodiversity Framework (KM GBF), which was adopted at the 15th Conference of Parties to the UN Convention of Biological Diversity (CBD) in December 2022. A key target under the KM GBF, Target 3, is the conservation of at least 30% of the world's lands and waters by 2030 (30x30).

The 23 targets under the KM GBF are now seen as an effort to rectify the reasons for failing to meet the Aichi Biodiversity Targets and to catch up on the lost progress. Among the actions highlighted is the need for a whole-of-government and whole-of-society approach to meet the targets. More specifically, to meet the ambitious "30x30" of Target 3 and improve the health of coastal and marine ecosystems in the region, ASEAN Member States (AMS) should work together at establishing larger areas of conserved and protected waters.

The ACB has taken some steps to advance the efforts among AMS in building strong collaboration and cross-boundary partnerships to protect larger areas of coastal and marine biodiversity in the region. These include the development and implementation of projects designed to address coastal and marine ecosystem threats and challenges by facilitating transformative changes in the collaborative management of marine protected areas (MPAs), MPA networks, and associated marine corridors through integrated coastal management, marine spatial planning, and the ecosystem-based management of fisheries.

To amplify the commitment to the KM GBF and to showcase experiences in achieving sustained efforts in the ASEAN, the ACB hosted an interactive discussion on "**Achieving Sustainability through Connectivity for Resilient ASEAN Seas**" as part of the East Asian Seas (EAS) Congress 2024. Held on 06 November 2024, this parallel session served as a platform for sharing the experiences of the AMS in achieving sustainability and knowledge acquisition, sharing, and networking; highlighting ACB's contributions in scientific and data management, ongoing coastal and marine conservation projects, and youth engagement initiatives aimed at ensuring sustainable and resilient seas within ASEAN.

The discussions explored how ecological connectivity, transboundary collaboration, and inclusive governance can strengthen marine ecosystem resilience and advance the region's biodiversity conservation efforts. With this backdrop, the discussions centred on identifying innovative strategies and solutions to enhance marine conservation in ASEAN countries, and to create cross-sectoral partnerships that would enable the region to meet its ambitious marine protection goals.

Aligned with the EAS Congress 2024 theme of ***Blue Synergy for a Shared Future: One Sustainable and Resilient Ocean***, encompassing Ocean Science, Policy, and Practice, as well as addressing Global Challenges through Local Solutions, the event provided a platform for sharing knowledge, capacity building, and fostering collaboration among stakeholders from AMS, government officials, marine and fisheries experts, non-government organisations (NGOs), academicians from state universities and colleges (SUCs), and youth leaders. It highlighted ASEAN's contributions to the KM GBF and showcased successful marine conservation initiatives from the region, emphasising the importance of multi-stakeholder engagement. Additionally, it underscored the pivotal role of the youth in promoting sustainable practices and ocean conservation, showcasing their leadership in shaping future conservation efforts.

The objectives of the session were to:

- Highlight ASEAN's contributions to the KM GBF 30x30 target and showcase ongoing efforts and regional case studies.
- Facilitate the exchange of knowledge and best practices on marine biodiversity conservation strategies among AMS and East Asian counterparts.
- Engage the youth in advancing marine conservation efforts, emphasising their critical role in driving sustainability and innovation.

The program was divided into three core sessions featuring six thought-provoking presentations from distinguished experts and emerging youth leaders (Table 1).

Table 1. Sessions and presentation titles

Session	**Presentation/s**
1. Achieving Sustainability in the ASEAN Sea	1. Towards Successful MPA and MPA network management in the ASEAN region 2. Trans-boundary Ocean Program in Indonesia and Timor-Leste 3. MPA Network: Its evolution towards becoming a potent tool in managing fisheries in the Philippines
2. Connectivity for a Resilient ASEAN Seas	1. An Overview of the Effectively Managing Networks of Marine Protected Areas in Large Marine Ecosystems in the ASEAN Region (ASEAN ENMAPS) Project 2. The ENMAPS Project Approach: Understanding ecological connectivity in the ASEAN marine ecosystems
3. Youth for Sustainable ASEAN Seas	1. The role of youth organisations in coastal and marine conservation and fisheries management: Seaweed Development Project

These sessions were designed to help instil a deeper sense of regional collaboration and knowledge-sharing among the AMS, along with a stronger commitment to marine conservation. It also aimed to inspire increased involvement in marine protection efforts among ASEAN youth, with a focus on encouraging innovation and leadership in sustainability. Through the presentations and subsequent discussions, the ACB was able to encourage the adoption of best practices in ocean governance and connectivity, while motivating action to enhance the resilience of marine ecosystems and achieve biodiversity conservation targets.

These topics were also aligned with the broader Sustainable Development Goals (SDGs), specifically SDG 14 (Life Below Water), which emphasises the importance of conserving and sustainably using the oceans, seas, and marine resources. By focusing on the role of MPAs, transboundary marine conservation efforts, and inclusive governance, the session contributed to achieving both regional and global biodiversity goals.

Speakers and moderators of the session on Achieving Sustainability through Connectivity for Resilient ASEAN Seas

Highlights: Session 1

Achieving Sustainability in the ASEAN Seas

Photo: JohnTurnbull

Towards Successful MPA and MPA Network Management in The Asean Region

By Dr. Suchana Apple Chavanich

Chulalongkorn University, Bangkok, Thailand

Human activity such as tourism and overpopulation has impacted the ecosystem of Phi

Key Message:
There is an urgent need for sustainable tourism and effective marine conservation to protect the delicate ecosystems at risk from overpopulation and economic pressures. By fostering public engagement, improving regulatory frameworks, and leveraging science communication, society can work towards a future where ocean conservation is both a shared responsibility and legacy.

Significant Findings:

- Tourism and overfishing have drastically reduced fish populations, while economic priorities in tourism-dependent areas often overshadow long-term conservation goals.
- Increasing public awareness and building local capacity, particularly among youth, is essential to create a knowledgeable workforce for sustainable marine management.
- Effective communication, social media engagement, and strong partnerships are key to raising awareness and strengthening global conservation efforts.

Recommendations:

- Expand public engagement in conservation through effective science communication, storytelling, and social media.
- Strengthen local capacity for sustainable MPA management by building skills within communities.
- Enhance MPA effectiveness through collaborative efforts across international networks and local stakeholders, supported by improved regulatory enforcement.

Link to SDGs and Regional Targets:
This topic aligns with key SDGs and regional targets by supporting SDG 14 (Life Below Water) through its focus on overfishing, ecosystem preservation, and effective management of MPAs. It also ties into SDG 8 (Decent Work and Economic Growth) by promoting sustainable tourism and balancing conservation with economic priorities and SDG 17 (Partnerships for the Goals) by emphasising collaboration across nations and sectors. Regionally, the report aligns with ASEAN's Blueprint on sustainable tourism and climate action, the Coral Triangle Initiative's goals on fisheries and MPA management, and regional frameworks like Regional Fisheries Management Organization and youth engagement programs that prioritise marine conservation and sustainable resource use.

Phi Island in Thailand. While tourists enjoy the rich marine scenery, the environment

struggles to cope with the high demand, exacerbating pressures on local fish populations and disrupting the delicate marine balance.

Seventy years ago, local fishers could easily catch 20 kilograms of fish in a single trip, but by 2024, this figure has dwindled to less than one kilogram. This dramatic decrease underscores the toll that both overfishing and tourist activity have had on the ecosystem. Without intervention, this threatens the survival of countless marine species and disrupts broader ecological systems that humans depend on.

The case of Phi Phi Island illustrates the complex interplay between conservation needs and economic priorities. Conservation efforts often compete with economic agenda that prioritise short-term gains, particularly in heavily tourist-dependent regions. This makes the 30x30 initiative, which aims to protect 30% of the world's oceans by 2030 (Fig. 1), a critical yet challenging goal. Despite the establishment of several MPAs on paper, real-world enforcement and management lag behind. This disparity between policy and action highlights the challenges in truly safeguarding marine environments.

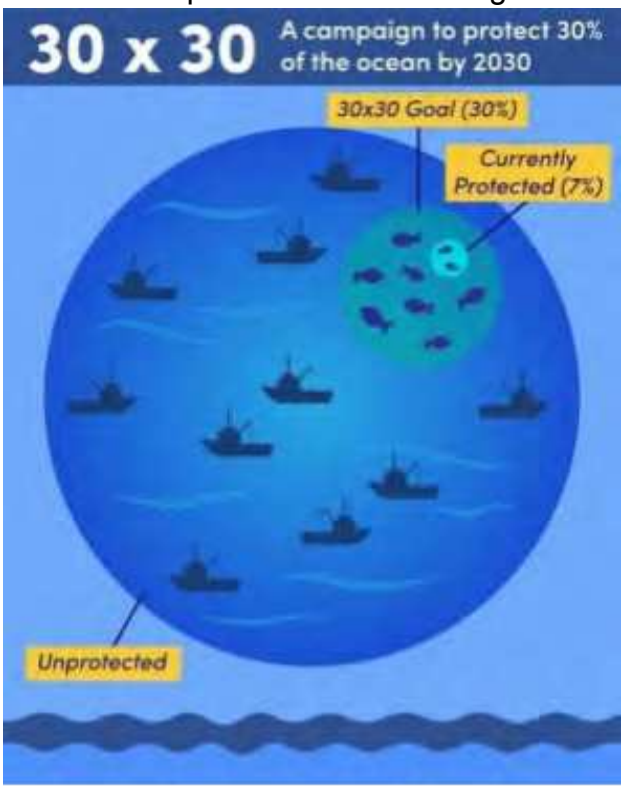


Figure SEQ Figure * ARABIC 1. The 30X30 Initiative
(Source cited: Plastic Tides)

There are regulatory measures in marine conservation that have improved over the years, however, conservation remains an endeavour taken up by a select few. Less than 1% of the global workforce is actively involved in marine conservation, leaving 99% as "normal people" who are largely disconnected from the cause. For conservation efforts to succeed, a far wider base of support and understanding is essential.

To overcome these challenges, capacity building plays a central role, particularly for government officers and young people. There is a pressing need to develop skills and knowledge within local and regional communities to support effective MPA management and other conservation initiatives. Strengthening local expertise and leadership is essential to fostering a workforce that can maintain sustainable practices and inspire community engagement.

Science communication is also essential in bridging the knowledge gap between conservationists and the general public. Effective communication must inspire, educate, and empower individuals to contribute to conservation efforts. This approach, combined with role models who demonstrate real-world applications, can transform conservation from a distant concept into a personal responsibility.

This means moving beyond theory-heavy explanations and instead, sharing relatable stories that resonate with people's everyday lives and using engaging narratives to create emotional connections. There is a need to collaborate with the media and science communicators to effectively disseminate the impact of conservation work, emphasising that stories should be designed to connect with the audience on multiple levels.

Social media, as the influential platform it is today, is also a valuable tool for raising awareness and encouraging action. Engaging people in conservation requires meeting them where they are—on the platforms they use every day. In this way, social media can facilitate dialogue, offer education, and showcase the impact of individual actions on a large scale. By connecting conservation messages to familiar, accessible platforms, the conservation community can foster a broader sense of involvement and responsibility.

Moreover, for marine advocacy to succeed, the call for collaboration needs to be heard. No single entity can protect the ocean alone and successful conservation requires partnerships at both national and international levels. By establishing networks and sharing resources, countries and communities can bolster their marine protection efforts. The general public are encouraged to consider themselves as part of a global

conservation community, with everyone contributing to a sustainable environment and a lasting legacy.

Fostering bottom-up connectivity is equally important. Local communities should be more directly involved in conversations about MPAs and sustainability, as their perspectives can significantly enrich the dialogue. This can be done by creating spaces, such as conferences or meetings, where local stakeholders from different countries can share experiences and lessons learned, fostering mutual understanding and collaboration.

Immediate action is necessary to foster collective responsibility for ocean conservation. There is a need start today to ensure the future health of marine ecosystems and encourage broader participation in protecting the oceans, which is not just an environmental necessity but a moral responsibility to ensure a vibrant, healthy planet for generations to come.

Dr. Chavanich discussing the role of capacity building in MPAs

Trans-Boundary Ocean Program in Indonesia and Timor-Leste

By Ketut Putra

Senior Advisor, Transboundary Ocean Program

Conservation International Asia Pacific Field Division, Indonesia

Key Message:
Transboundary collaboration is critical to sustainable ocean management, particularly within the shared ecosystems of Indonesia and Timor-Leste. By fostering cross-border partnerships, engaging local stakeholders and the youth, and investing in regional science, this initiative aims to ensure the resilience and health of the Lesser Sunda Seascape.

Significant Findings:

- Conservation of key marine species like whale sharks and green turtles require regional collaboration due to their transboundary life cycles, making cooperative management essential.
- By prioritising technical cooperation over politics, the project supports an MPA network that promotes conservation and sustainable blue economy opportunities in areas like the Indonesia-Timor-Leste border.
- Community-driven science, capacity building, and youth engagement efforts—such as the Transboundary Ocean Jamboree—are key to fostering local leadership and integrating traditional knowledge into conservation efforts.

Recommendations:

- Establish a transboundary science hub to support collaborative conservation decisions and build trust among local communities.
- Focus on science-driven, politically neutral collaboration to ensure project stability, and enhance youth engagement through initiatives like the Transboundary Ocean Jamboree to foster future conservation leaders.
- Use storytelling to align conservation with local economic interests, highlighting job creation and investment opportunities.

Link to SDGs and Regional Targets:
This topic aligns with SDGs 14 (marine biodiversity), 17 (partnerships), 8 (blue economy), and 13 (climate action), while supporting regional targets like the Coral Triangle Initiative and ASEAN conservation goals.

Is a borderless ocean manageable? In a world of globalised environmental efforts, it is essential to convert high-level strategies into impactful, ground-level actions that unite stakeholders across borders, fostering a synergy between nature advocates, politicians, and the private sector.

The Trans-boundary Ocean Program focused on the Lesser Sunda Seascape, which form part of the Coral Triangle (Fig. 2). For over 30 years, scientists and experts worldwide have collaborated to map, understand, and manage this unique ocean ecosystem, from its spawning aggregations and growing fisheries to the migrations of its iconic species, such as whale sharks, sunfish, and green turtles. These species' life cycles cross national borders, creating a fluid ecosystem that demands a regional approach.

Figure SEQ Figure * ARABIC 2. Transboundary Nature Park in the Lesser Sunda Seascape.

In response, Conservation International designed a transboundary network in the Lesser Sunda Seascape. Rather than tackling the vast seascape at once, it designated a "sub-seascape" that strategically encompasses key marine areas shared by Indonesia and Timor-Leste. This initiative integrates ocean management with watershed

management, executed with the support of both national governments and organisations like Conservancy Indonesia and Conservation National Timor-Leste.

The path to establishing this network has been both rewarding and complex. Historically, relations between Indonesia and Timor-Leste were tense; however, this project presents a rare opportunity to build collaboration and mutual benefit. Through long discussions and consultations, politics was minimised, choosing instead to focus on providing technical support and establishing an MPA network, which serves as the foundation for an emerging blue economy.

Recent video documentation highlights the ecological wealth of this area, with clusters of whale sightings near the Indonesia-Timor-Leste border and a pristine coral reef system sustained by the continuous flow between the Pacific and Indian Oceans. This vibrant ecosystem underscores the potential of the region as a resilient investment area for conservation and sustainable economic growth.

The project also had particular focus on advancing fisheries research. Efforts to engage local scientists and knowledge holders in Indonesia and Timor-Leste continue, aiming to build a collaborative transboundary fishery profile that respects traditional practices and addresses regulatory challenges. In this experience, the program has learned several lessons:

> *Conservation Stories.* In Indonesia, stories of transforming fishers into conservation advocates and turning government support into champions for MPAs helped create lasting change. The importance of framing conservation stories in terms of economic benefits, such as green job creation and attracting investment to resonate with local communities and stakeholders was observed during the on-ground field experience.
>
> *Managing Political Complexity.* With the recent elections in both countries, the project faced unique political challenges. The newly elected officials in each country, however, expressed support for environmental initiatives, which set a promising precedent for future collaboration.

Collective Leadership and Capacity Building. Local leaders are crucial to advocating for the environment. Investing in their capacity to lead this initiative strengthens community ownership and ensures continuity.

Establishing a Transboundary Science Hub. One consistent question from international partners has been, “What’s in it for us?” For each country involved, having trusted local scientists is essential to bridge the gap between science and community. Launching in April 2025, a Transboundary Science Hub will ensure representation from each country’s scientists, fostering local trust and supporting informed conservation decisions.

Mr. Putra during his presentation on the Transboundary Ocean Program

Youth Engagement. Recognizing the need for a new generation of conservation leaders, the Transboundary Ocean Jamboree for youth is being organised in both countries, launching in April or May next year. Framed as an adventure, the

jamboree will attract young participants with diving and educational activities, fostering a connection to the ocean and awareness of its economic value.

Embracing science across generations is critical for the successful governance and management of ocean resources. Towards this, incorporating scientific insights into policy design is necessary to fully realise the benefits for marine ecosystems. The Indonesia and Timor-Leste Transboundary Nature Initiative demonstrates that cross-border cooperation on ocean management is not only possible but essential. Efforts remain grounded in scientific rigour, collaborative governance, and the cultivation of local leadership, building a sustainable ocean future for the region and beyond.

MPA Network: Its Evolution Towards Becoming a Potent Tool in Managing Fisheries in the Philippines

By Nygiel Armada

Chief of Party, USAID Fish Right Program, Hamburg University, Germany

Key Message:
The evolution of MPAs in the Philippines emphasised the balance between scientific research and development work. It highlighted the importance of creating well-connected networks of MPAs, integrating ecological principles, scientific research, and local knowledge to improve fisheries management and enhance marine conservation efforts.

Significant Findings:

- Evidence has shown that MPAs can increase fish catch, attract larger species, and have spillover effects, proving their effectiveness.
- Successful MPA management in the Philippines relies on co-management between NGOs, communities, and the government, with hydrodynamic and ecological studies ensuring connectivity and resilience.
- Integrating scientific data with local knowledge has led to improved conservation outcomes, as seen in the Calamianes Island Group.

Recommendations:

- Encourage a balance between scientific research and development efforts for effective conservation.
- Prioritise designing connected MPA networks based on sound ecological principles and engage local communities for sustainable management.
- Begin with bilateral collaborations to address governance challenges before expanding to regional cooperation.

Link to SDGs and Regional Targets:
MPA networks support SDG 14 by conserving marine ecosystems, while also contributing to SDGs 1 and 2 through improved fisheries and food security for coastal communities. The collaborative co-management model aligns with SDG 17 by fostering partnerships among NGOs, communities, and governments. These strategies align with global SDGs and regional goals for sustainable fisheries and marine conservation in the Philippines.

While development efforts are crucial, they cannot progress effectively without support from scientific advancements. However, an overemphasis on science at the expense of

development can also hinder progress. Striking a balance between funding development work and investing in scientific research is necessary for sustainable success. This balance is necessarily particularly in advancing both conservation and development goals and in creating a comprehensive network of protected marine spaces.

There is already compelling evidence on the positive impact of MPAs. A study examining 51 designated MPAs across 25 countries in Asia reviewed findings from various research efforts. Of these, 39 studies reported increased fish catch, 13 noted larger body sizes of marine species, and 6 observed both higher catch rates and body sizes. Additionally, 8 studies documented the spillover effect, where both larvae and adult marine organisms migrate beyond the protected areas, further benefiting surrounding regions. Notably, no studies reported a decrease in catch. This substantial body of evidence strongly supports the value of MPAs, underscoring their effectiveness without room for significant dispute.

The initial approach to marine conservation in the Philippines focused on establishing single protected areas, starting with the traditional designation in places in the country. These early protected areas became essential starting points for involving local communities in fisheries management.

In the Philippines, collaboration between NGOs, communities, and the government—known as “co-management”—has proven critical to the success of these efforts. This cooperative model has fostered a strong foundation for conservation initiatives, with each group playing a vital role: NGOs often spearhead the efforts, the community actively participates, and the government provides essential support and resources. Many of the country’s successful conservation efforts have resulted from this three-way partnership, which has continued to be a model for effective marine management.

Scientific research is a crucial element in designing and expanding MPA networks, especially in understanding how different MPAs connect with one another. The Danajon Bank, which is home to the Philippines’ only double barrier reef, serves as an example

of how hydrodynamics, dispersal, and plankton scientific studies collectively played a significant role in the establishment of MPA networks. These studies have been instrumental in identifying areas for protection and expanding the MPAs to cover larger and more ecologically diverse marine systems, ensuring that the protected areas function as a connected network.

Several factors are essential in planning effective MPAs, such as:

Impacts of Threats. The importance of identifying threats, such as land-based runoff and destructive fishing, and finding where it could affect the protected area were discussed, giving highlight on how it could defeat the purpose of MPAs.

Protection of Critical Areas. Protecting essential habitats, such as breeding, nursery, and feeding areas, is crucial for the survival of marine species. Identifying whether critical habitats need protection depends on the focal species that will be protected.

Scale Analysis. Understanding the home range of focal species is crucial. MPAs should be designed to cover at least twice the home range of these species to ensure their protection while also benefiting the stakeholders.

Use of compact shapes. MPAs designed in compact shapes of squares or circles have been shown to be more effective in preserving MPAs. Time series studies indicate that these shapes promote resilience in ecosystems.

Similarly, ecological principles can be applied in designing MPA networks that are ecologically connected and effective, including:

Minimum distance between reserves. The distance between MPAs was emphasised to be significant in the effectiveness of MPA networks. A minimum distance of 15 kilometres between MPAs is recommended to maintain connectivity and ensure that the network functions as a cohesive system.

Habitat representation. Coral reefs, mangroves, and seagrass are habitats with connectivity safeguarded through the MPAs. In particular, a representation of these habitats, in terms of percent, is what is covered and protected.

Sources and Sinks. Recognizing these ecological dynamics helps ensure that the network supports marine populations across different regions.

Going beyond the establishment of MPAs and its network is the initiative of integrating MPAs into the broader scheme. This pertains to the synergistic effects in a network of

MPAs, wherein benefits are amplified by linking MPAs together. Connected MPAs lead to improved fisheries, faster recovery of ecosystems, and greater resilience in the face of environmental changes. In contrast, isolated MPAs are less effective and provide fewer benefits. This reinforces the importance of developing networks of MPAs that can work together to promote broader ecological and economic benefits.

There is a need for designing MPAs through the combination of scientific data and local knowledge of stakeholders, because relying on scientific or spatial data alone may be ineffective and insufficient in developing effective management strategies. Engaging in conversations with the stakeholders can help leverage local knowledge on their space and environment and encourage stakeholder participation towards protecting the area. Recognizing and participating in the already existing broader management plans of the local government and community is also important, as well as increasing awareness on the available tools such as decision-support software (e.g. Marxan). Overall, effective communication with stakeholders and combining this information with scientific data and theory aids in accomplishing a more effective conservation effort.

The Calamianes Island Group (CIG) has become a leading example of MPA success in the Philippines (fig. 3). Between 2018 and 2023, the protected area increased by 25%, the area under effective management grew by 38%, and management effectiveness improved by 16%. The area's design aims to expand the protected zones to over 30%, reinforcing its conservation objectives. As the local communities in the CIG witnessed firsthand the benefits of MPAs, there is now increased enthusiasm for expanding the protected areas. The community has set even higher targets, aiming to increase the protection of coral reefs by 52%, mangroves by 58%, and seagrass by 61%.

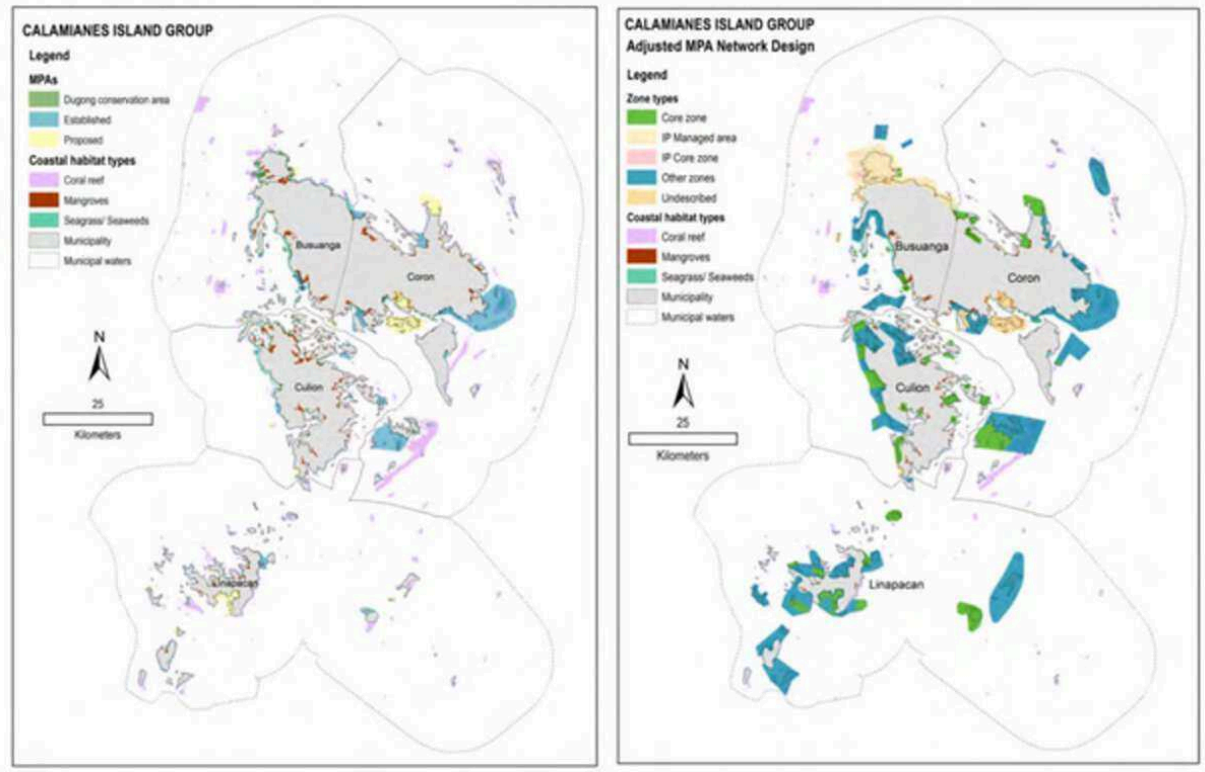


Figure 3. MPA Network design in CIG.

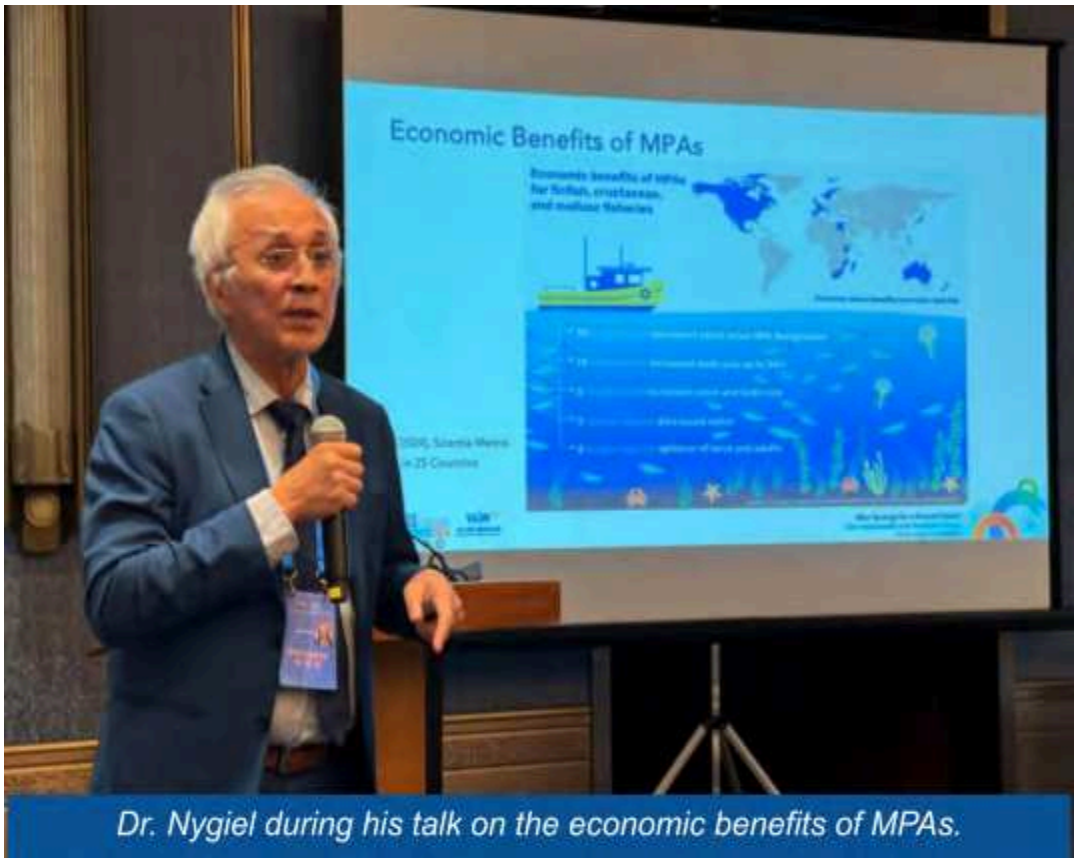
The integration of MPAs with harvest controls, such as seasonal fishing closures, is seemingly beneficial. Emerging science suggests that MPAs can significantly enhance the effectiveness of these controls by boosting fishery yields. Framing conservation efforts in terms of tangible benefits to fisheries will resonate more with local stakeholders. This approach shifts the narrative from merely protecting ecosystems to enhancing existing practices and their economic outcomes.

While regional cooperation is essential, initiating bilateral partnerships between two countries can often be a more effective starting point. This approach allows for gradual progress by addressing differences in governance, culture, and economic circumstances. Once bilateral agreements are established and successful, they can serve as a foundation for broader, multi-country collaboration.

Diversity in approaches and perspectives is valuable, but it should not impede efforts to achieve connectivity across the ASEAN region. Overcoming the challenges of diversity

is crucial to working toward the shared goal of promoting marine connectivity for a resilient and healthy sea.

Again, the key question is still "What's in it for me?" There is a need to focus on the potential benefits of MPAs and MPA networks, highlighting the need to better understand how these benefits influence different stakeholders. While answers to these questions remain vague, the overarching goal of MPAs continues to include improving the well-being of local communities, with hopes and expectations for positive outcomes in the years ahead.



Dr. Nygiel during his talk on the economic benefits of MPAs.

Highlights: Session 2

Connectivity for Resilient ASEAN Seas

An Overview of the Effectively Managing Networks of Marine Protected Areas in Large Marine Ecosystems in the Asean Region (ASEAN ENMAPS) Project

By Sheila G. Vergara

Project Manager and Chief Technical Adviser of the ASEAN ENMAPS Project,

ASEAN Centre for Biodiversity

Key Message:
The ASEAN ENMAPS project fosters marine conservation through interconnected MPA networks, addressing ecological and socio-economic challenges with science-based and inclusive approaches. It underscores ASEAN's commitment to sustainable marine ecosystem management through strong regional collaboration.

Significant Findings:

- The project has identified critical challenges to marine ecosystems, including habitat loss, overexploitation of resources, and ineffective governance.
- Significant progress has been made in establishing foundational governance, pilot site preparations, and partnerships like those with PEMSEA and Global Fishing Watch.
- The active participation of 1,750 community members and implementation of blue economy demonstration projects are expected to drive transformative change in marine conservation.

Recommendations:

- To achieve long-term success, the project should enhance financial sustainability, develop community-based livelihood opportunities, and invest in regional collaboration to address transboundary challenges.
- Strengthening institutional capacities for governance and expanding knowledge-sharing mechanisms will also be essential to replicate and scale conservation strategies.

Link to SDGs and Regional Targets:
This topic aligns with SDG 14 by promoting sustainable use of marine ecosystems through well-managed MPAs, while supporting SDG 13 by enhancing resilience against climate impacts. It also contributes to SDG 8 through sustainable tourism and livelihoods and SDG 17 by fostering partnerships at global, regional, and local levels. Regionally, the project aligns with ASEAN's goals for sustainable tourism, biodiversity protection, and community empowerment, as well as with initiatives like the Coral Triangle Initiative and Regional Fisheries Management Organizations.

The ASEAN ENMAPS project is an important initiative that aligns with the environmental and developmental priorities of the ASEAN region. This effort is rooted in the principle of integration of science, enabling environments, and communication to foster meaningful and impactful implementation. The project aims to bridge the gap between knowledge and action, addressing pressing challenges and harnessing the potential of shared marine ecosystems.

Dr. Vergara shares an overview of the ENMAPS projects

The *Effectively Managing Networks of Marine Protected Areas in Large Marine Ecosystems in the ASEAN Region (ASEAN ENMAPS)* project, funded by the Global Environment Facility (GEF), is set to run for five years, from March 2024 to February 2029. While originally envisioned for broader participation, three countries—Philippines, Indonesia, and Thailand—have committed to its implementation.

ACB leads the initiative as the implementing partner, supported by the United Nations Development Programme Bangkok Regional Hub (UNDP BRH) as the GEF implementing agency. With a total budget of $12.5 million, bolstered by nearly $60

million in co-financing, the project represents a significant commitment to enhancing marine ecosystem management in the region.

The project's funding sources are diverse, reflecting a strong collaborative foundation. Contributions come from organisations such as PEMSEA, Thailand's Ministry of Natural Resources and Environment (MonRE ONEP), the Philippines' Local Government Units (LGUs) and Department of Environment and Natural Resources (DENR), Indonesia's Ministry of Environment and Forestry, and UNDP Ocean Innovation Facility. These partnerships ensure financial and technical support for the project's ambitious goals and underscore the collective effort required to tackle large-scale environmental challenges, fostering collaboration at local, national, and regional levels.

The project has evolved over several years, beginning conceptually even prior to 2019. Initially introduced under a different title and presented to CBD, the project was restructured in collaboration with the UNDP after the original funding facility lapsed. This re-envisioning culminated in its approval in December 2023, marking a significant milestone in its development journey.

Since its foundation, the ASEAN ENMAPS project has aligned with global priorities, including the SDGs and the GBF. Specifically, it contributes to SDG 14 (Life Below Water) and GBF targets related to protected areas and ecosystem restoration. The project also builds synergies with other regional and international initiatives, ensuring that its strategies complement ongoing efforts led by organizations such as Southeast Asian Fisheries Development Center, Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security, and the World Bank.

However, despite these aligned efforts, the ASEAN region faces significant threats to its coastal and marine ecosystems—a challenge underscored by data from national reports. Key issues such as habitat degradation, overexploitation of resources, pollution, ineffective governance, and the pervasive impacts of climate change continue to undermine ecosystem health. To illustrate the interconnected nature of these threats and their on-ground impacts, these findings have been synthesized into a

comprehensive infographic (fig. 4). This data underscores the urgency of implementing sustainable management practices across the region.

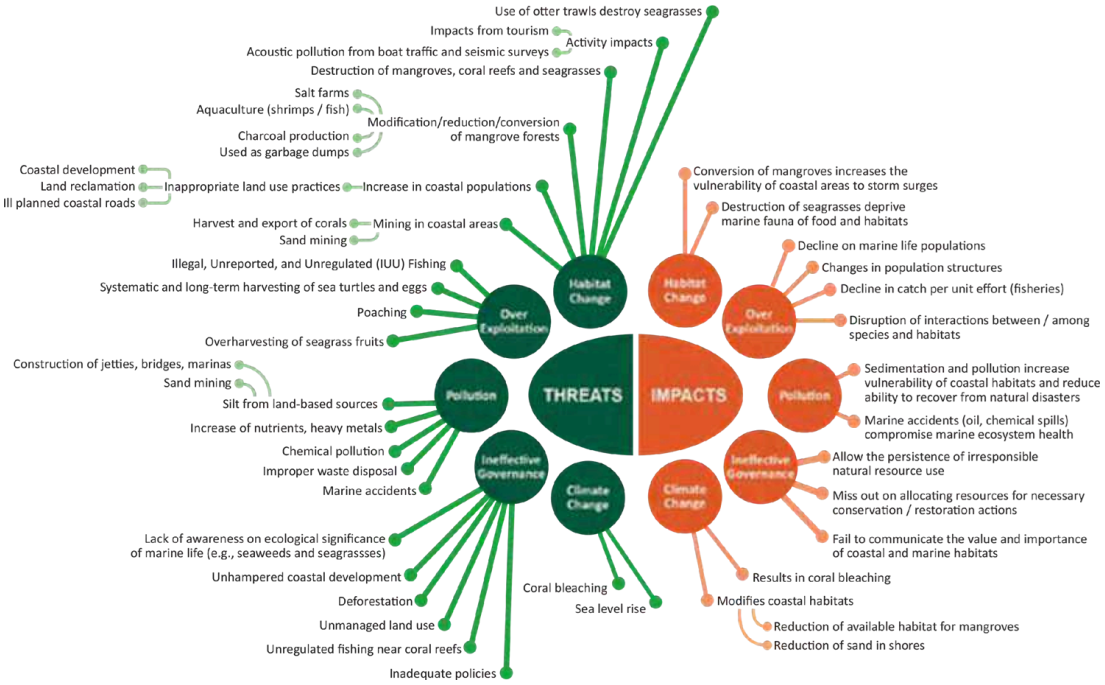
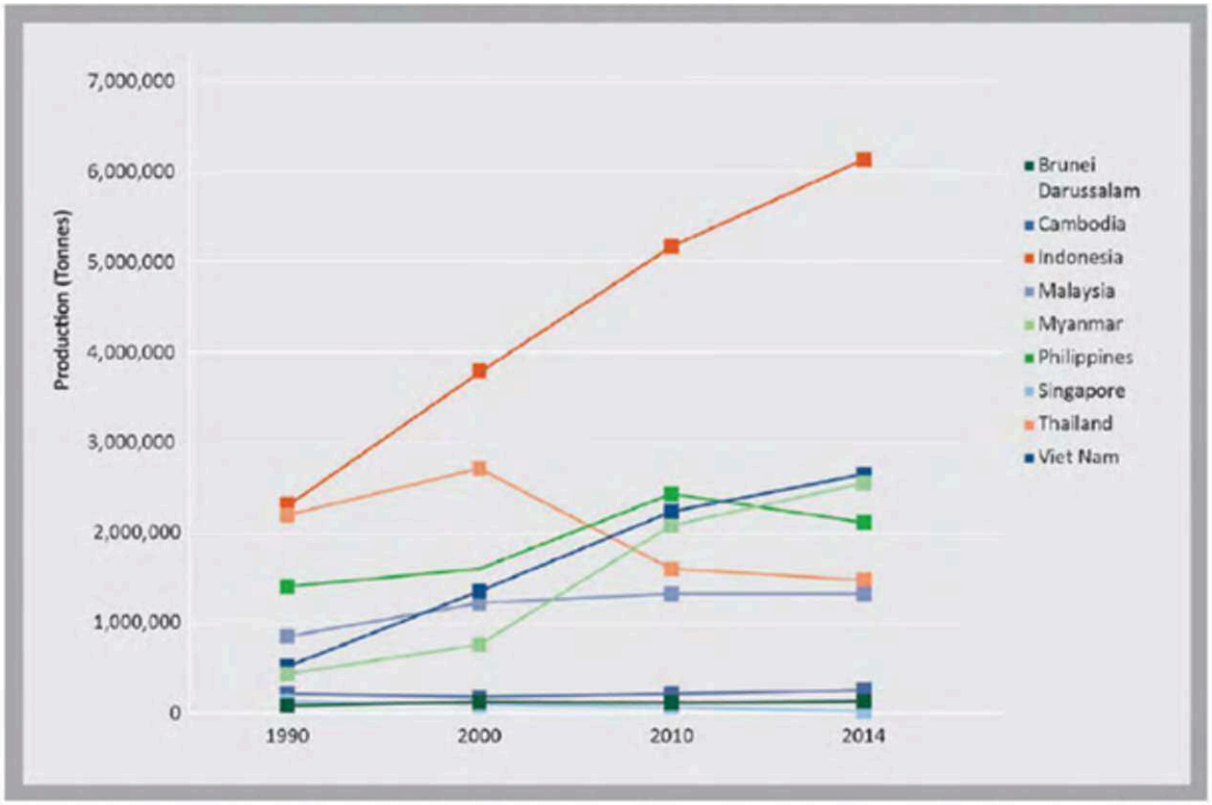


Figure 4. Infographic showing the threats and its impacts on coastal and marine ecosystems of the ASEAN region.

This also shows how the fisheries sector is critical to ASEAN's economy but faces mounting pressures. A particularly concerning aspect is the increasing demand and harvesting in the region's large marine ecosystems. For example, the South China Sea contributes 12% of the global fish catch, producing over 6 million tons in 2010, while the Bay of Bengal and Sulu-Celebes Sea Large Marine Ecosystems (LMEs) report increasing fish demand, primarily from industrial and artisanal fisheries.

Trends in marine capture fisheries production, shown in Figure 5, reveal declines in some AMS. These highlight barriers such as insufficient understanding of ecosystems, inadequate investments, and limited institutional capacity, and the urgent need for intervention to ensure the sustainable management of these resources.



Source: FAO Fisheries and Aquaculture Statistics, retrieved from http://www.fao.org/fishery/statistics/en on 2 December 2016.

Figure 5. Trends in marine capture fisheries production, ASEAN Member States, 1990-2014

To address these challenges, the ASEAN ENMAPS project employs transformative, science-based strategies in the management of MPA networks. These strategies aim to scale up from individual MPAs to interconnected networks, emphasising collaboration and inclusivity. To achieve this, key approaches include integrating national and local initiatives, supporting alternative livelihoods, and promoting cooperative arrangements among stakeholders. For example, ACB is partnering with the PEMSEA Resource Facility (PRF) to enhance capacity-building efforts and identify sustainable livelihood opportunities for affected communities.

Building on these approaches, the project focuses on three main components: a science-based foundation, Integrated Coastal Management (ICM) implementation, and knowledge dissemination. These components are designed to overlap during

implementation, ensuring both efficiency and comprehensiveness in achieving the project's goals.

A critical objective of the project is restoring ecosystem health in pilot sites. Indicators such as the presence of sharks signify stable ecosystems, a benchmark to be achieved across project areas.

The project spans eleven pilot sites within four LMEs: Bay of Bengal (4), South China Sea (2), Sulu-Celebes Sea (3), and Indonesian Seas (2) (fig. 6). These sites include Kepulauan Togean and Wakatobi National Parks in Indonesia, Satun Marine and Ranong Marine and Coastal Corridors in Thailand, and Agoo - Damortis Protected Landscape and Seascape, BBBIDA MPA Network: Bani-Bolinao-Burgos-Infanta-Dasol-Agno, TBPPS-Sorsogon Bay -eTIMPAN - Bongsalay National Park Integrated Marine Areas, turtle islands in Tawi-Tawi Integrated Marine Areas, and Palawan Coastal and Marine Environmentally Critical Area Networks (ECANs) in the Philippines.

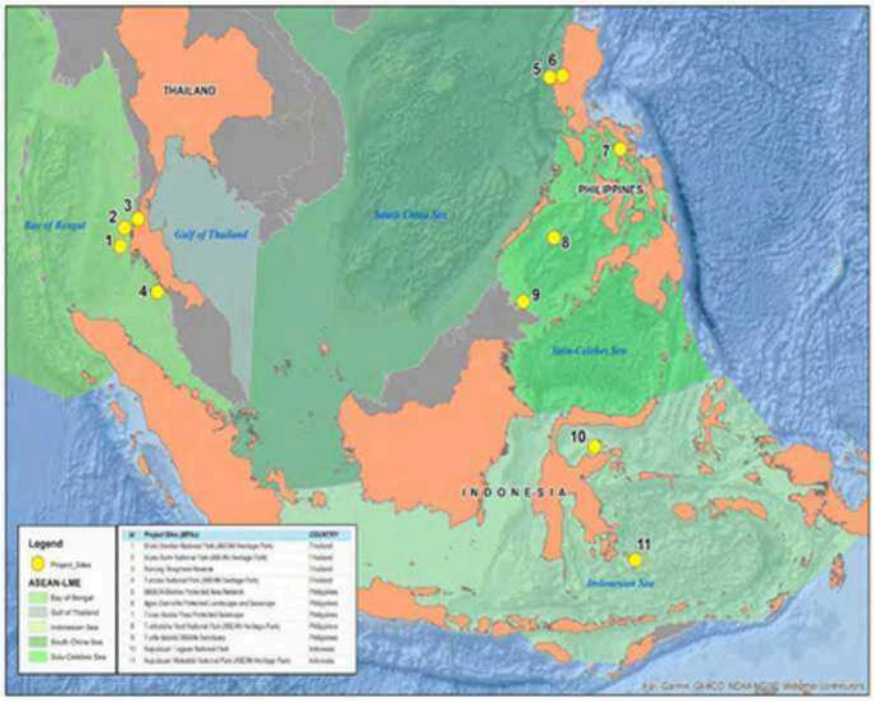


Figure 7 shows the governance structure of the project. It is led by ACB, which collaborates with national conservation and fisheries ministries. The project's steering committee includes representatives from UNDP BRH, ACB's governing board, and representatives from 3 beneficiary countries. At the national level, each participating country will establish its own governance mechanism, supported by national project managers and site officers for effective implementation.

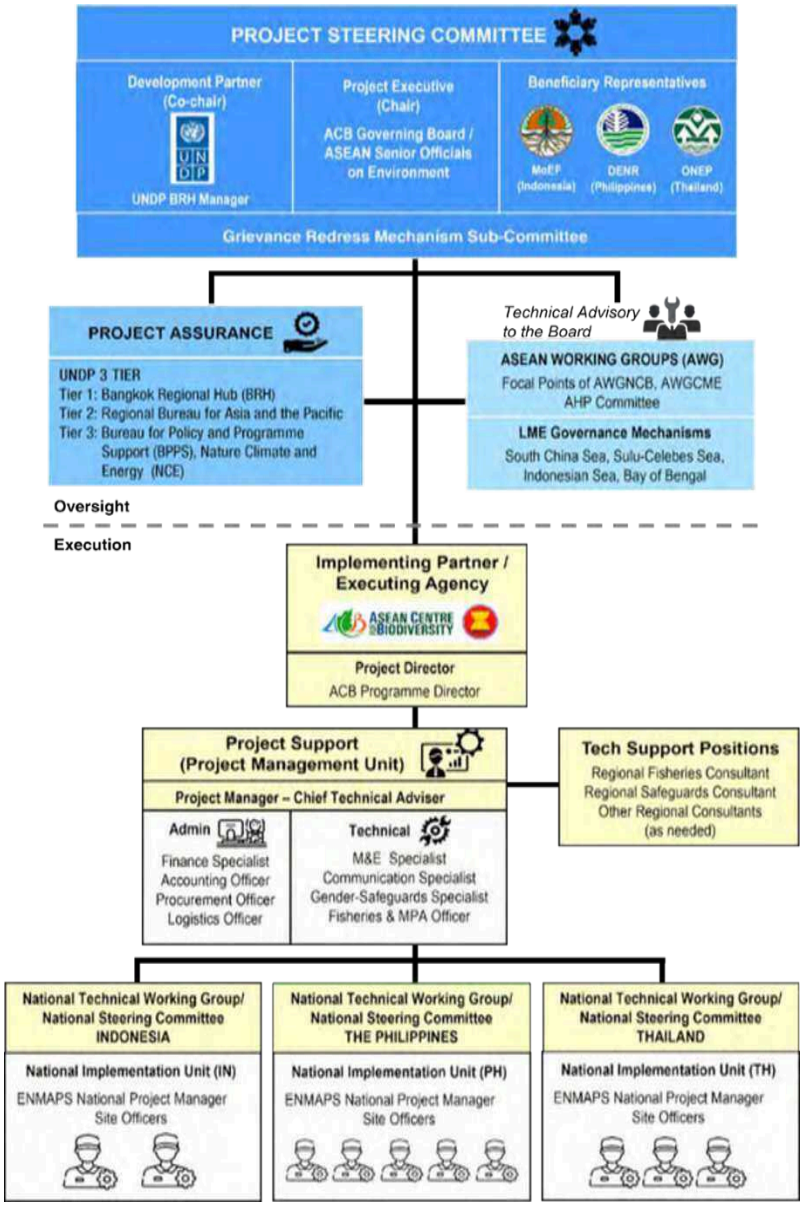


Figure 7. The governance structure of the ENMAPS project.

Because challenges related to governance differences are anticipated, the project is well-integrated into existing ASEAN governance frameworks, such as the ASEAN Working Group on Conservation and Biodiversity and the ASEAN Working Group on the Marine Environment, which facilitates alignment with regional structures.

Differences in leadership and collaboration mechanisms at various sites could pose additional challenges, particularly in countries like the Philippines, where national policies such as the Special Presidential Authority (SPA) add procedural delays. Nonetheless, pre-implementation activities, including stakeholder engagement and preparatory work, are underway to ensure a smoother transition once all formalities are resolved. Similarly, while Thailand has comparable procedural requirements, the project team remains focused on advancing groundwork to mitigate potential delays in full-scale implementation.

Aligned with these efforts, the project is committed to delivering key GEF core indicators. These include the creation and improved management of MPAs, the reduction of overexploited fisheries, and the active engagement of community members, with a particular focus on gender inclusivity.

Building on these targets, the ASEAN ENMAPS project aims to achieve significant outcomes in marine conservation and sustainable management across the region. Among the key expected results is the establishment of nine MPA networks and their associated marine corridors, complete with management plans that are both designed and endorsed. A critical component of this initiative is the active participation of 1,750 community members—half of whom will be women—in monitoring, control, and surveillance activities to combat Illegal, Unregulated, and Unreported (IUU) fishing and destructive fishing practices. Additionally, the project will implement three blue economy investment projects at a demonstration scale to showcase and promote sustainable marine practices. Another expected result includes the organisation of six dialogues with transboundary partners, focusing on potential collaborative management of MPA networks and marine corridors. The project will also work to strengthen institutional capacities for integrated management of coastal and marine ecosystems. Furthermore,

various knowledge products will be developed and disseminated to ensure shared learning and replication of successful practices.

Since its inception in May 2024, the ASEAN ENMAPS project has made significant strides toward its goals, even within the early stages of implementation. One of the primary focuses has been on establishing the foundational structures at the national level. This involves hiring personnel to ensure the project is adequately staffed, both at the regional Project Management Unit (PMU) and at the national level. Terms of reference for various roles have been developed, approved, and implemented. The project has also integrated a Grievance and Redress Mechanism (GRM) and has met the requirements for quarterly reporting on Funding Authorisation and Certificate of Expenditure (FACE).

Additionally, compliance with national-level regulations has been prioritised. For example, in the Philippines, the project has engaged with the National Commission on Indigenous Peoples (NCIP) to ensure that activities on the ground align with legal and ethical standards. Similarly, in Thailand, preparations are underway to begin implementation in early 2025, with critical updates expected following the Conference of the Parties (COP) in November 2024.

Building partnerships has also been a focal point for the project's initial efforts. Notable progress includes the signing of a Memorandum of Agreement (MoA) with PEMSEA. Further collaboration with Global Fishing Watch is underway to leverage technology in visualising fisheries data, which will be instrumental in engaging stakeholders and informing decision-making.

Activity mobilisation has been actively progressing. Several initiatives are already underway, including the PMU-RPCC Workshop, which seeks to align indicative versus actual Annual Work and Budget Plans (AWPB), and connectivity modelling studies for the four LMEs in the ASEAN region. Preparations for the EAS Congress and the development of a Strategic Social and Environmental Assessment (SESA) are also in motion.

Knowledge management remains a critical pillar of the ASEAN ENMAPS project. Central to this effort is the development of the ASEAN ENMAPS website, which is nearing completion. This platform will serve as the primary hub for project information and updates, hosting a range of resources, including fun fact features and project notes designed to keep stakeholders informed and engaged. The anticipated launch of the website marks a significant milestone, ensuring both transparency and accessibility for all audiences.

Complementing these efforts, the project is actively expanding its partnerships beyond government agencies. Collaboration with private sector entities, academic institutions, and other organizations is a key focus, as these partnerships will play an essential role in validating larval dispersal models and incorporating local knowledge into project activities. With over 50 collaborations expected, the project provides ample opportunities for engagement. Calls for consultancies and proposals are regularly posted on the ASEAN Biodiversity website, reflecting the project's open and inclusive approach.

By fostering these diverse partnerships, the ASEAN ENMAPS project underscores its commitment to inclusivity and to leveraging a wide range of expertise. These collaborative efforts will not only enhance the effectiveness of its initiatives but also strengthen regional biodiversity conservation and promote collective action across sectors.

One key driver behind the development of the ENMAPS project was the knowledge gap among policymakers regarding ecosystem dynamics. To address this, the project emphasizes conducting workshops aimed at translating complex scientific research into accessible policy briefs that policymakers can readily understand and implement. This strategy is essential for bridging the divide between research and policy development across ASEAN, ensuring that science underpins effective governance and adaptive management.

At the core of these efforts lies the recognition that a strong scientific foundation is critical for advancing conservation work. With a robust baseline of scientific data,

conservation initiatives can proceed confidently, avoiding the need for constant reassessment and ensuring effective, streamlined implementation.

The ASEAN ENMAPS project stands as a testament to the power of collaboration and science-driven action. By addressing key threats to marine ecosystems and fostering sustainable practices, the project sets a precedent for regional and global conservation efforts. As implementation progresses, further milestones and success stories will be shared, bringing ASEAN closer to achieving a resilient and thriving marine ecosystem that benefits the entire region.

The ENMAPS Project Approach: Understanding Ecological Connectivity in the ASEAN Marine Ecosystems

By Vincent V. Hilomen

Regional Fisheries Adviser, ASEAN Centre for Biodiversity

Key Message:
The ASEAN ENMAPS project highlights the importance of ecological connectivity in sustaining marine biodiversity, replenishing fish stocks, and ensuring ecosystem health. Managing MPA networks requires cross-border collaboration, as larval dispersal connects ecosystems across ASEAN. These efforts support food security, biodiversity conservation, and economic resilience, aligning with ASEAN priorities and global SDGs.

Significant Findings:

- Study reveals strong larval retention within national MPA networks, ensuring localised population replenishment, while significant larval exports between nations highlight ecological interdependence.
- Seasonal monsoons influence larval dispersal patterns, connecting the Philippines, Malaysia, Vietnam, and Indonesia through shared ecological processes.
- Habitat quality is critical, as degraded habitats fail to support larval settlement, emphasising the need for targeted restoration and protection initiatives.

Recommendations:

- The project recommends identifying and managing high-connectivity areas to safeguard spawning grounds and ensure sufficient spawning stock biomass.
- Restoration of settlement habitats is essential to attract juvenile populations and sustain seasonal replenishment.
- Enhanced regional cooperation is vital to strengthen MPA networks, address shared ecological challenges, and optimise biodiversity conservation across national boundaries.

Link to SDGs and Regional Targets:
This project aligns with SDG 14 (Life Below Water) by advancing sustainable management of marine resources and SDG 2 (Zero Hunger) through contributions to food security. It supports ASEAN regional targets for biodiversity conservation and climate resilience by promoting collaborative marine resource governance. By enhancing MPA networks connectivity, the initiative addresses both environmental and socio-economic priorities for sustainable development in the region.

The ASEAN ENMAPS project's approach towards understanding ecological connectivity in ASEAN marine ecosystems is a cornerstone of efforts to protect and sustain the region's vital marine resources. The ASEAN region hosts an extraordinary concentration of biodiversity, encompassing:

- Nearly 30% of the world's coral reefs, with over 75% of known coral species and 40% of reef fish species.
- 35% of global mangrove forests, featuring between 45 and 75 species of mangroves.
- 20% of the planet's seagrass beds, with over 29 species identified.

These ecosystems underpin the livelihoods of 650 million people, contributing to health, food security, and economic stability. Fisheries, aquaculture, tourism, navigation, and energy sectors all rely heavily on the services provided by these habitats.

Despite their significance, ASEAN's coastal and marine environments face severe threats. Overfishing, habitat destruction from coastal development, and pollution—ranging from plastics to agricultural runoff—are critical issues. Coupled with inadequate planning and climate change impacts, these pressures have turned the region into a biodiversity hotspot at risk. Reversing these trends requires targeted, science-based action to safeguard and restore these ecosystems.

The ENMAPS project addresses these challenges by fostering collaborative management of MPA networks. Covering eleven sites across Indonesia, the Philippines, and Thailand, the project spans four LMEs: Bay of Bengal, South China Sea, Sulu-Celebes Sea, and Indonesian Sea. These pilot sites collectively encompass 2.7 million hectares, representing a significant opportunity to optimise the governance and sustainability of MPA networks across the ASEAN region.

A central pillar of ENMAPS is understanding ecological connectivity—the natural process by which larvae, spawned by marine species, disperse across habitats. This connectivity is essential for ensuring population replenishment, sustaining biodiversity, and supporting healthy marine ecosystems.

The success of ecological connectivity hinges on two critical factors:

1. **Critical spawning stock biomass**—a healthy population of adults that can consistently produce larvae.
2. **High-quality habitats**—areas where larvae can settle and thrive, characterized by healthy coral reefs, mangroves, and seagrass beds.

Understanding how marine species utilize these habitats requires a closer look at their life cycles. Many marine species exhibit a bipartite life cycle, which includes:

- **Sedentary adult phase**: Adults remain in specific habitats, exhibiting strong fidelity to spawning areas.
- **Pelagic larval phase**: Larvae drift with water currents over great distances before settling in suitable habitats.

The extent of larval dispersal is influenced by key variables such as pelagic larval duration (PLD) and current speeds, which determine how far larvae travel. However, successful settlement depends heavily on habitat quality. Degraded areas often fail to attract larvae or support population recovery while thriving ecosystems enhance larval growth and survival.

To address these dynamics, ENMAPS employs advanced larval dispersal models integrated with local ecological knowledge. Specifically, the project aims to:

1. **Simulate larval movement** from spawning grounds to settlement areas.
2. **Validate these models** through field surveys to identify critical habitats.
3. **Assess marine corridors** to refine Marine Protected Area (MPA) network designs.

The insights gained through these efforts are not limited to ecological outcomes. By engaging stakeholders, the project ensures that findings directly inform improvements to MPA governance and management. This collaborative approach enhances both

ecological resilience and socioeconomic benefits. Additionally, fisheries management plans will incorporate species life-history data to promote sustainable exploitation, ensuring the longevity of marine resources.

Early results highlight the importance of larval retention and cross-border connectivity during alternating monsoon seasons:

- Northeast Monsoon:
    - Propagules flow from the southern Philippines to Sabah (Malaysia) and northeast Kalimantan (Indonesia).
    - Malaysia exports larvae to Palawan and Kalimantan.
    - Indonesia acts largely as a recipient during this season.
- Southwest Monsoon:
    - Propagules reverse direction, with Vietnam exporting larvae to the Philippines and Malaysia.
    - Malaysia sends a strong pulse to Palawan and reefs in the Sulu Sea.

These findings emphasise the seasonal interdependence of MPA networks within and between ASEAN states. One area may act as a donor during one season and a recipient in the next, highlighting the necessity for regional collaboration.

MPAs are interconnected through the dispersal of propagules via water currents, making them dependent on one another for replenishment. A single MPA cannot thrive in isolation, as degraded neighbouring habitats can disrupt this cycle. Cooperation between governments is essential to ensure that MPAs collectively sustain biodiversity. There is a need to highlight the importance of demonstrating scientific benefits to stakeholders to foster broader support for conservation initiatives.

The ecological connectivity revealed by ENMAPS highlights the critical need for coordinated management of marine resources. The transboundary movement of larvae underscores the importance of joint conservation strategies, ensuring that areas of high connectivity are effectively protected. ASEAN's long history of regional collaboration

provides a strong foundation for extending collective action to preserve marine biodiversity.

To achieve these goals, ENMAPS focuses on several key objectives:

1. **Optimising MPA Networks Connectivity**: The project will identify high-connectivity areas and enhance habitat conditions to support seasonal replenishment.

2. **Strengthening Collaboration**: Findings will guide cooperative conservation efforts across national boundaries, fostering a shared responsibility for protecting marine resources.

3. **Informing Fisheries Management**: Evidence-based interventions, such as adjusting catch quotas and fishing seasons, will help promote sustainability and ensure long-term resource availability.

4. **Broader Applications**: The lessons learned from ENMAPS can inform the management of other MPA networks within ASEAN, contributing to regional food security, biodiversity preservation, and economic resilience.

By addressing these interconnected priorities, the project takes a significant step toward securing the health and sustainability of ASEAN's marine ecosystems. This effort not only benefits individual nations by preserving their natural resources but also strengthens the region as a whole, enhancing its ecological and economic resilience.

Highlights: Session 3

Youth for Sustainable ASEAN Seas

The Role of Youth Organisations in Coastal and Marine Conservation and Fisheries Management: Seaweed Development Project

By Sapawan Ponlaboot

Project Manager and Policy Advocate,

Global Youth Biodiversity Network (GYBN) Thailand

Key Message:
The involvement of youth in coastal and marine conservation is crucial, with youth organisations like the GYBN playing a pivotal role in advocating for youth participation in policy discussions. GYBN focuses on increasing youth representation in international environmental negotiations and developing networks to amplify youth voices in biodiversity policy. Through initiatives such as the Thailand Local Youth Environmental Advocate Fellowship, youth organisations like GYBN can empower young people with tools for policy advocacy and fosters collaboration with key stakeholders.

Significant Findings:
- The Children and Youth Environmental Survey (CYES) revealed that 87% of Thai youth are concerned about environmental issues, with 74% believing biodiversity loss will affect future generations.
- The youth delegates of the 16th meeting of the Conference of Parties (COP16) recommendations emphasise the need for inclusive policy-making that involves marginalised youth, including indigenous and disabled groups.

Recommendations:
- It is recommended to strengthen mechanisms for meaningful youth participation in environmental policymaking, ensuring that youth voices are not only heard but actively contribute to decisions.
- Policy frameworks should be inclusive and promote green job opportunities.
- Supporting youth-led initiatives and integrating them into formal conservation efforts can help bridge the gap between policy and practice.

Link to SDGs and Regional Targets:
This work directly contributes to SDG 14 (Life Below Water), particularly target 14.2, which focuses on sustainably managing marine and coastal ecosystems. The emphasis on inclusive youth participation also aligns with SDG 10 (Reduced Inequality) by advocating for the inclusion of marginalised groups in environmental decision-making processes. They also align with ASEAN's regional targets on biodiversity and sustainable development.

The Worldview Climate Foundation (WCF) is actively involved in mangrove restoration and sustainable livelihood projects, working in collaboration with stakeholders such as the Department of Fisheries, the Department of Marine and Coastal Resources, and the Federation of Thai Industries. These efforts focus on integrating innovative approaches into conservation and fisheries management. A standout initiative, the Seaweed Development Project, highlights the important role of youth in driving sustainable practices.

Sapawan Ponlaboot shares her experience and insight on the role of youth organisations in coastal and marine conservation and fisheries management

Inspired by a successful seaweed cultivation initiative in Myanmar, similar efforts were undertaken in Thailand, a country with one of the highest global rates of seaweed consumption but limited domestic production. Opportunities in biofuels were explored, expert seminars were hosted, and a documentary was produced to raise awareness. Pilot projects were launched in Phetchaburi, Chanthaburi, and Krabi, each exploring unique cultivation methods. Offshore projects, particularly in Krabi, demonstrated sustainability potential due to their low-energy requirements and minimal resource

consumption. Collaboration with communities like Laem Sak introduced integrated multi-trophic aquaculture (IMTA) systems, emphasising holistic and sustainable resource management.

Evidently, youth engagement emerged as a cornerstone of these efforts and by partnering with ENVIRONMAN, a game that advocates for the environment, young people were trained to create content highlighting environmental challenges and community stories. However, beyond content creation, the importance of involving youth in policy making was recognized.

The GYBN is a global platform that unites over 65 national youth chapters where the inclusion of youth voices in biodiversity policy and decision-making is advocated, particularly under the CBD. GYBN's initiatives focus on policy advocacy, capacity-building, and raising awareness, offering training in skills like policy writing, systems thinking, and inclusivity. In Thailand, GYBN has been instrumental in empowering youth through projects such as the Local Youth Environmental Advocate Fellowship, where young participants are trained in policy advocacy, engage with policymakers, and work on local projects. Through these efforts, GYBN ensures that youth, including indigenous and disabled young people, have a meaningful role in biodiversity conservation discussions at both national and international levels, such as at COP16.

During COP16, findings and recommendations were presented to highlight the critical role of youth in marine and coastal biodiversity initiatives. The submissions emphasised the importance of inclusivity, focusing on indigenous and disabled youth who often face barriers to participation, as well as women and local communities. Through the CYES, which gathered input from 720 youth—including those from indigenous and differently-abled communities—their perspectives on environmental and biodiversity issues were identified. Findings revealed that 74% of respondents believed biodiversity decline would significantly impact their lives, while over 87% expressed deep concern about Thailand's environmental challenges. These insights were integrated into the Thai Youth Priorities for CBD COP16, a framework advocating for youth-inclusive

approaches to biodiversity management and the establishment of youth participation mechanisms within decision-making processes (fig. 8).

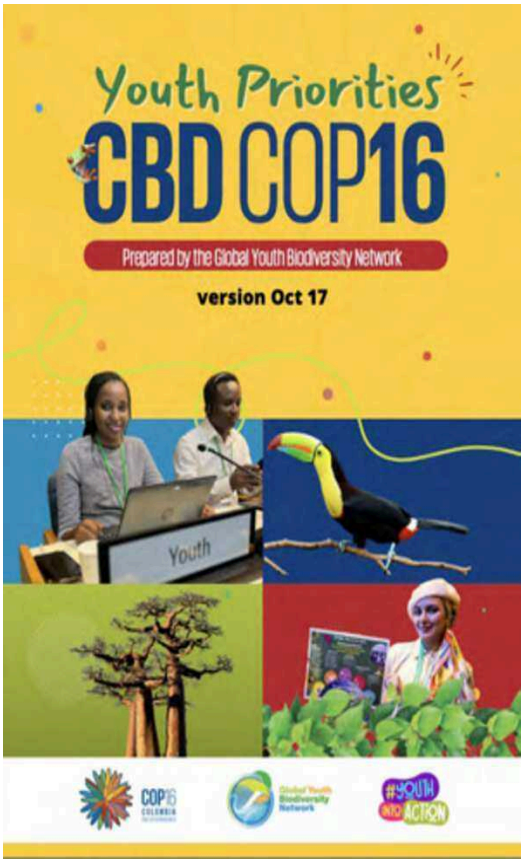


Figure 8. Youth Priorities submitted by the GYBN Thailand at COP16.

Moreover, the vision for youth engagement at COP16 focused on creating practical tools to measure youth participation, ensuring inclusivity and empowering young people through education and capacity-building initiatives. These recommendations underscored the importance of the youth as partners in decision-making, rather than merely stakeholders, emphasising their role in shaping policies and conservation strategies.

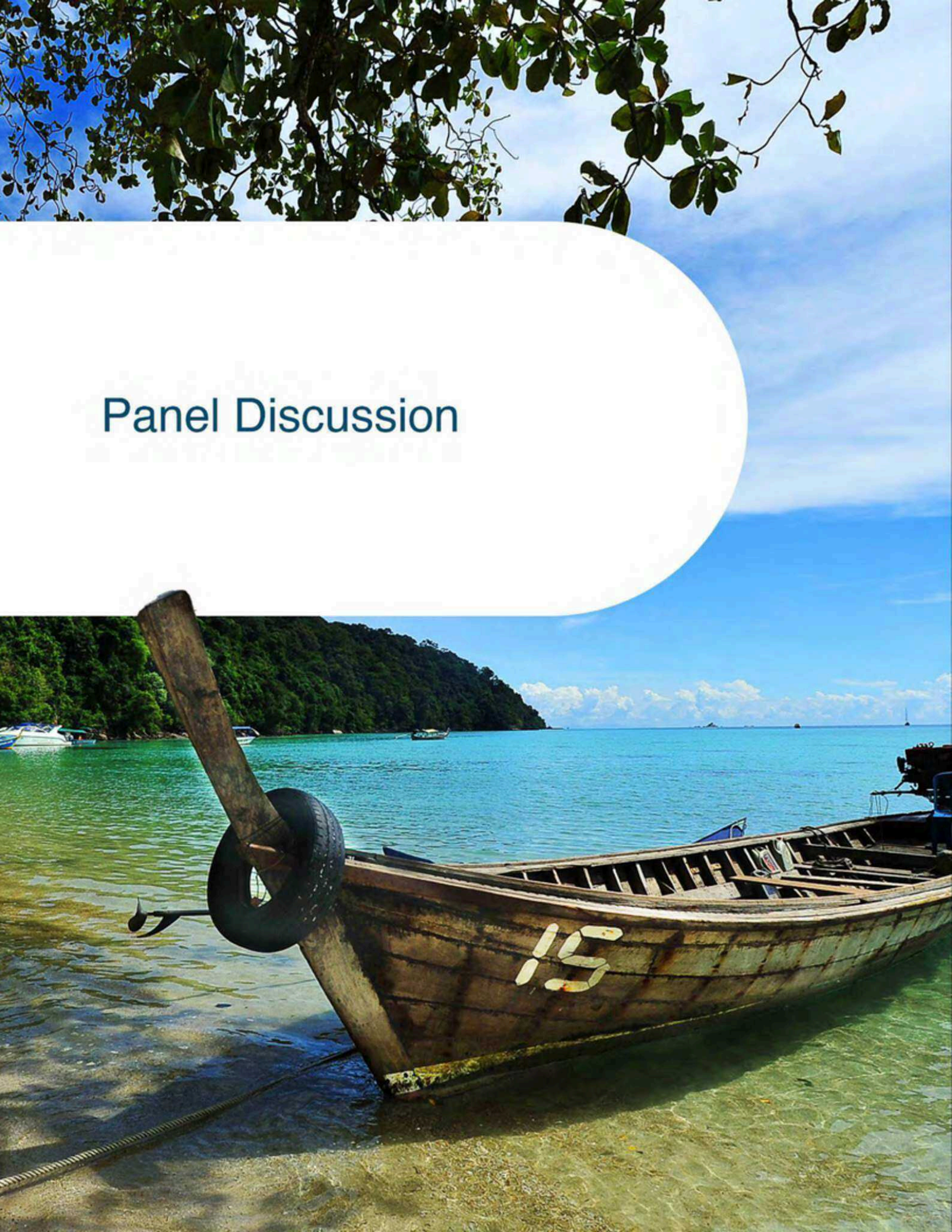
In line with the holistic approach, the Thailand Local Youth Environmental Advocate Fellowship trained 20 youth from across the country in policy advocacy and connected them with policymakers and NGOs. This program aimed to equip young people with

tools and networks to implement their own projects, bridging the gap between youth and decision-makers. Additionally, the Children and Youth Environmental Survey revealed widespread concern about environmental issues among Thai youth, reinforcing the need for meaningful engagement.

Moreover, diversity should be embraced not only in terms of indigenous peoples, women, and youth but also by including a broad range of expertise, such as science, art, social sciences, and policymaking. Effective change will result from collaboration across these varied disciplines and perspectives.

Thailand’s youth are indeed diverse and passionate, from environmentalists to creative artists, all eager to contribute to environmental sustainability. Youth projects, largely voluntary, demonstrate the untapped potential of young people to drive change. By supporting these efforts through resources, green jobs, and education, the youth can be empowered as active partners in addressing biodiversity and climate challenges.

Panel Discussion



PANEL DISCUSSION

Moderator: Ms. Claudia B. Binondo

Panel members: Dr. Suchana Apple Chavanich
Mr. Ketut Putra
Dr. Nygiel Armada
Dr. Sheila G. Vergara
Ms. Sapawan Ponlaboot

Discussion Theme: Achieving Sustainability through Connectivity for Resilient ASEAN Seas: The next steps to achieve connectivity for resilient and healthy seas in the ASEAN region

Key Points Raised:

Dr. Suchana Apple Chavanich: There is an urgent need to start to foster a collective responsibility for caring for our oceans. Immediate action is necessary to ensure the future health of marine ecosystems and to encourage wider participation in ocean conservation.

Dr. Nygiel Armada: While diversity in approaches and perspectives is valuable, it should not impede efforts to achieve connectivity across the ASEAN region. Overcoming the challenges of diversity is crucial to working toward the shared goal of promoting marine connectivity for a resilient and healthy sea.

Dr. Sheila G. Vergara: A strong scientific foundation is essential for advancing conservation work. With a robust baseline of scientific data, conservation initiatives can move forward confidently without constantly reassessing progress, ensuring effective implementation.

*Mr. Ketut Putra***:** Embracing science across generations is critical for successful governance and management of ocean resources. Incorporating scientific insights into policy design is necessary to fully realize the benefits for marine ecosystems.

Ms. Sapawan Ponlaboot. Diversity for Biodiversity. Diversity should be embraced not only in terms of indigenous peoples, women, and youth but also by including a broad range of expertise, such as science, art, social sciences, and policymaking. Effective change will result from collaboration across these varied disciplines and perspectives.

Panel Discussion Photos

KEY OUTCOMES

Main Conclusions

Urgency for Sustainable Action. There is an immediate need to balance economic development with marine ecosystem conservation, especially in tourism. Overfishing and overpopulation are drastically reducing biodiversity, necessitating collective responsibility and immediate intervention

Importance of MPAs. The success of MPAs lies in fostering community involvement, scientific research, and effective governance. Establishing connected networks of MPAs enhances biodiversity and fishery benefits while promoting regional collaboration.

*Cross-Border Collaboration***.** Transboundary cooperation, as seen in Indonesia and Timor-Leste, is essential to manage shared ecosystems effectively. Political neutrality and capacity-building are pivotal for project stability and sustainability.

*Role of Science and Communication***.** Strong scientific foundations and innovative communication strategies are critical for bridging knowledge gaps, influencing policies, and engaging the public and youth in conservation efforts.

*Youth Participation***.** Empowering youth through education, training, and inclusion in policymaking can transform them into active conservation leaders, contributing to long-term biodiversity preservation.

Inclusive and Holistic Approaches. The integration of local knowledge, diverse expertise, and equitable participation across gender and community groups is fundamental for achieving sustainable and impactful outcomes.

Action Points Agreed Upon

The agreed actions from the sessions emphasize a multi-faceted approach to marine conservation in the ASEAN region. Speakers agreed to expanding and strengthening MPAs by increasing coverage, ensuring ecological connectivity, and incorporating local knowledge into their design and management. Regional collaboration is a key priority, with a focus on fostering transboundary partnerships, establishing a Transboundary Science Hub, and implementing interconnected conservation initiatives across ASEAN.

Capacity building was also highlighted, particularly through training programs for local leaders, youth, and stakeholders to empower communities with sustainable practices.

To align conservation efforts with economic development, the importance of promoting blue economy opportunities and alternative livelihoods was highlighted, thereby reducing dependence on marine resources. Science-driven decision-making will guide these efforts, supported by effective communication strategies such as storytelling and media campaigns to raise public awareness and engagement. Additionally, the restoration of critical habitats and the integration of climate resilience into conservation initiatives were recognized as vital for long-term ecological health.

Finally, the need to strengthen institutional frameworks and secure sustainable financing was emphasized to ensure the effectiveness and longevity of conservation efforts. Collectively, these actions aim to protect biodiversity, enhance ecosystem resilience, and balance environmental conservation with socio-economic priorities across the region.

Partnerships and Collaborations Formed

Regional and Transboundary Collaborations

> *Transboundary Ocean Program (Indonesia and Timor-Leste)*: Focuses on shared ecosystem management, technical cooperation, and the establishment of a transboundary MPA network to foster conservation and blue economy opportunities.
>
> *ASEAN ENMAPS Project*: A collaboration between ACB, UNDP Bangkok Regional Hub, and national governments (Philippines, Indonesia, and Thailand). It integrates conservation initiatives across ASEAN with support from various funding and technical partners like the GEF, PEMSEA, and Global Fishing Watch. Moreover, the project is also open to future collaborations with the private sector, academic institutions, and other organization.

International and Organizational Partnerships

> *Conservation International:* Supports the Transboundary Ocean Program in Indonesia and Timor-Leste, engaging local scientists and communities to manage shared marine ecosystems.

UNDP: Implements the ASEAN ENMAPS project, ensuring alignment with SDGs and global biodiversity frameworks.

Partnerships in Funding: Collaborations with Thailand's Ministry of Natural Resources, the Philippines' DENR, Indonesia's Ministry of Environment and Forestry, and other stakeholders for financial and technical support.

Community and Stakeholder Engagement

- *Youth Collaborations*: Initiatives like the Transboundary Ocean Jamboree and Local Youth Environmental Advocate Fellowship engage youth from across ASEAN in conservation leadership and policy advocacy.
- *Local Knowledge Integration*: Partnerships with local communities, including fishers and indigenous groups, to integrate traditional knowledge into conservation strategies.

Cross-Sector Collaborations

- *Private Sector and Academia:* Partnerships with private companies and universities for research, technology development (e.g., larval dispersal modelling), and stakeholder engagement.

Commitments Made

During the sessions, participants committed to fostering collective responsibility for ocean conservation and taking urgent action to protect marine ecosystems. The speakers emphasized expanding and strengthening MPAs through interconnected networks guided by science and local knowledge. Cross-border collaboration was prioritized, with commitments such as establishing a Transboundary Science Hub and launching youth engagement initiatives like the Transboundary Ocean Jamboree. Community involvement and inclusivity were highlighted, ensuring active participation from local stakeholders, youth, and marginalized groups in policymaking and conservation efforts. The ASEAN ENMAPS project participants committed to scaling up MPAs, promoting the blue economy, and creating platforms for knowledge sharing. Additionally, they stressed grounding conservation in robust scientific research, embracing diversity in expertise, and building capacity to ensure the long-term success of regional sustainability efforts.

Implementation of the ASEAN ENMAPS Project

- Establishing MPA networks and associated marine corridors with management plans.
- Involving community members in activities like monitoring and controlling IUU fishing.
- Conducting six dialogues with transboundary partners for collaborative management.
- Development of an ASEAN ENMAPS website to serve as a hub for project updates, educational content, and stakeholder engagement.
- Conducting workshops to bridge the gap between scientific research and policymaking in the ASEAN ENMAPS.

Youth Engagement Programs

- The Transboundary Ocean Jamboree to involve youth in diving and educational activities, fostering a connection to marine conservation.
- Policy advocacy programs like the Local Youth Environmental Advocate Fellowship, which trains youth in policy engagement and project implementation.

Recommendations and Ways Forward

Recommendations and Ways Forward

Policy Development

Policy development recommendations emphasize the need for inclusive and adaptive frameworks. As seen evidently on the Trans-Boundary Ocean Program in Indonesia and Timor-Leste, working hand in hand with the political administrations lead to more efficient and productive results. Moreover, mechanisms should ensure meaningful youth participation as practiced in the Seaweed Development Project, especially for marginalised groups such as indigenous and disabled youth, fostering inclusivity in environmental decision-making. National and local policies should align with ecological connectivity principles, enabling transboundary collaboration for marine conservation. A strong focus on science-driven, politically neutral collaboration is recommended to ensure the stability and success of conservation projects. Policies should also promote green job opportunities and sustainable livelihoods, encouraging participation in conservation activities. Additionally, translating complex scientific research into accessible policy briefs is essential for informed and effective policymaking.

Research Priorities

Research efforts should prioritize understanding larval dispersal to identify critical spawning and settlement areas, thereby optimizing MPA network designs. Ecological connectivity models need to be validated through field surveys to ensure accuracy and practical applicability. Habitat quality studies are crucial for assessing areas' suitability to support larval settlement and population recovery. Socio-economic impacts of MPAs and blue economy initiatives should also be investigated to integrate these findings into comprehensive management plans. Furthermore, fisheries research should focus on sustainable practices and the incorporation of traditional knowledge to create regionally relevant conservation strategies.

Capacity Building

Capacity-building efforts should aim to train a diverse range of stakeholders, including youth, government officials, and local communities, in sustainable marine management and conservation practices. Initiatives like the Local Youth Environmental Advocate Fellowship provide opportunities for training in policy advocacy, systems thinking, and inclusivity, empowering participants to engage in environmental governance. Local capacities for MPA management should be strengthened by combining scientific data with traditional knowledge, enabling more holistic approaches. Programs such as the Transboundary Ocean Jamboree should be encouraged to foster youth engagement, leadership, and awareness about ocean conservation challenges and solutions.

Needs

The conservation efforts outlined in the document underscore the need to restore critical habitats such as coral reefs, mangroves, and seagrass beds to maintain biodiversity and ecological connectivity. Investment in alternative livelihoods is essential to reduce the pressure on marine resources and promote economic resilience among coastal communities. Decision-support tools like Marxan should be adopted to improve conservation planning and implementation. Additionally, stakeholder engagement must be enhanced to integrate local knowledge with scientific findings, ensuring that management strategies are both context-specific and effective.

Partnership Opportunities

Building partnerships across sectors and borders is vital for achieving conservation goals. Transboundary collaborations among ASEAN Member States are necessary for effective MPA governance, particularly in regions sharing ecological connectivity. Establishing a Transboundary Science Hub would provide a platform for scientific exchanges and trust-building between nations, enabling informed decision-making. Collaborations with organisations like PEMSEA, Global Fishing Watch, and academic institutions could further strengthen these efforts. Additionally, partnerships between

governments, NGOs, and private sectors should be encouraged to validate research and support the implementation of sustainable practices across the region.

Resource Mobilization

Resource mobilization strategies should focus on securing international funding from entities like the GEF to support large-scale initiatives such as ASEAN ENMAPS. Co-financing from national governments, NGOs, and private stakeholders is crucial to ensure the sustainability of conservation efforts. Demonstration projects in the blue economy sector can serve as a means to attract sustainable investments and showcase economic benefits. Moreover, private sector involvement in biodiversity conservation should be encouraged through innovative financing models and incentives, creating a robust framework for long-term resource availability.

Timeline for proposed actions under the ASEAN ENMAPS project

1. **ASEAN ENMAPS Project Implementation**
    - The project is set to run from March 2024 to February 2029, with its initial phases already in progress.
    - Specific milestones include:
        - Establishing foundational governance and hiring personnel at both regional and national levels starting in May 2024.
        - Launching the Transboundary Science Hub by April 2025.
        - Completing the development of the ASEAN ENMAPS website in late 2024, with its launch marking a critical milestone for knowledge sharing.
        - Organising the Transboundary Ocean Jamboree in April or May 2025 to engage youth in conservation activities.
        - Conducting pre-implementation activities and stakeholder engagement ahead of large-scale actions in pilot sites, with initial groundwork expected to conclude by early 2025.

2. **Preparatory Activities**
    - Stakeholder engagement and preparatory work, including compliance with national regulations, have been prioritized for 2024 to ensure a smoother transition to full implementation.
    - Development of SESA and connectivity modelling studies for the four LMEs of ASEAN are currently underway.
3. **Demonstration Projects**
    - Three blue economy demonstration projects are planned, although specific completion dates are not yet outlined.
4. **Knowledge Sharing and Capacity Building**
    - Workshops to translate scientific findings into policy briefs for policymakers are planned to continue throughout the project's duration (2024–2029).
5. **Collaboration Dialogues**
    - Six dialogues with transboundary partners are scheduled during the project period to enhance cross-border management of MPAs and marine corridors.

Annexes

Photo: Sheila Dee

Annexes

Session Agenda

Time	Activity	In-charge
30 mins	Registration and AVP Presentations	
5 mins	Introduction	Ms. Angelica de Castro
20 mins each talk	Session 1: Achieving Sustainability in the ASEAN Sea	
	Towards Successful MPA and MPA network management in the ASEAN region	Dr. Suchana Apple Chavanich
	Trans-boundary Ocean Program in Indonesia and Timor-Leste	Mr. Ketut Putra
	MPA Network: Its evolution towards becoming a potent tool in managing fisheries in the Philippines	Dr. Nygiel Armada
15 mins	Session 1 Q&A Segment	Ms. Angelica de Castro
5 mins	Wrap-up and introduction to the Second Session	Ms. Claudia Binondo
20 mins each talk	Session 2: Connectivity for a Resilient ASEAN Seas	
	An Overview of the Effectively Managing Networks of Marine Protected Areas in Large Marine Ecosystems in the ASEAN Region (ASEAN ENMAPS) Project	Dr. Sheila G. Vergara
	The ENMAPS Project Approach: Understanding ecological connectivity in the ASEAN marine ecosystems	Dr. Vincent V. Hilomen
15 mins	Session 2 Q&A Segment	Ms. Angelica de Castro
5 mins	Wrap-up and introduction to the Third Session	Ms. Claudia Binondo
	Session 3: Youth for Sustainable ASEAN Seas	

20 mins	The role of youth organisations in coastal and marine conservation and fisheries management: Seaweed Development Project	Ms. Sapawan Ponlaboot
15 mins	Session 3 Q&A Segment	Ms. Angelica de Castro
15 mins	Panel Discussion	Ms. Claudia Binondo
5 mins	Closing Remarks	Ms. Angelica de Castro

PARTICIPANTS

	Name	Organisation	Gender	Country
1	Ms. Claudia B. Binondo	ASEAN Centre for Biodiversity (ACB)	F	Philippines
2	Ms. Angelica R. de Castro	ASEAN Centre for Biodiversity (ACB)	F	Philippines
3	Dr. Sheila G. Vergara	ASEAN ENMAPS	F	Philippines
4	Dr. Nygiel B. Armada	USAID Fish Right Project	M	Philippines
5	Dr. Suchana Apple Chavanich	Chulalongkorn University	F	Thailand
6	Ms. Sapawan Ponlaboot	Worldview Climate Foundation	F	Thailand
7	Mr. Ketut Putra	Conservation International (CI)-Philippines	M	Indonesia
8	----	Institut Pertanian Bogor (IPB) University	M	Indonesia
9	Elnor Roa	Mindanao State University (MSU)	F	Philippines
10	----	Mindanao State University (MSU)	F	Philippines
11	Ruby C. Gonzales	Mindanao State University (MSU)	F	Philippines

12	Wilson John Barbon	Conservation International (CI)-Philippines	M	Philippines
13	Kristine Ramirez	Rare Philippines	F	Philippines
14	Aya Silva	Rare Philippines	F	Philippines
15	Margarita Caballa	United Nations Environment Programme (UNEP) - Coordinating Body on the Seas of East Asia (COBSEA)	F	Thailand
16	Dennis Trinidad	De la Salle University	M	Philippines
17	----	----	M	
18	Daniel Pejic	University of Melbourne	M	Australia
19	Delio Da Costa	Sustainable Ocean Alliance Timor-Leste	M	Timor-Leste

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CLAUDIA B. BINONDO

Project Development Division Director

MODERATOR

EMCEE

ANGELICA R. DE CASTRO

Programme Officer
(Coastal and Marine)
ASEAN Centre for Biodiversity

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DR. SUCHANA CHAVANICH

2022 ASEAN Biodiversity Hero
Thailand

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Towards Successful MPA and MPA network management in the ASEAN region

Suchana Apple Chavanich

Chulalongkorn University
Bangkok, Thailand

1958 -- 20 kg

1980 -- 9 kg

2007 -- 2 kg

2024 -- <1 kg

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Blue Synergy for a Shared Future:
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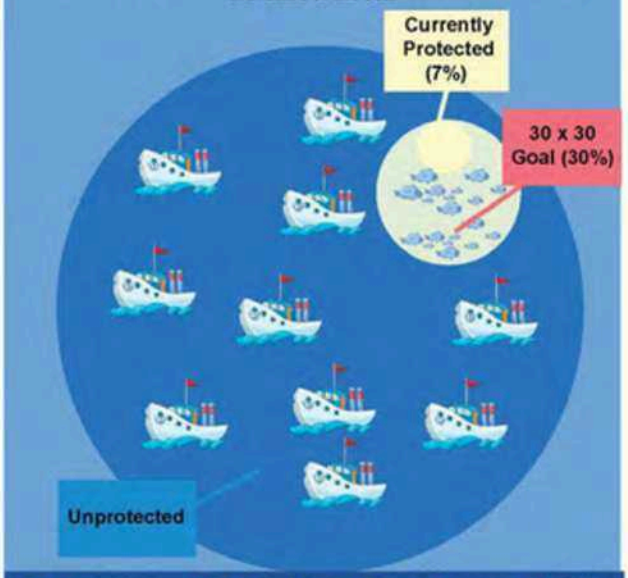
eaie.org

Scientist Support for 30% by 2023

We are at a crucial time for ocean conservation. Key decisions in the near future will set the course for a decade of action which will define the future of the sea.

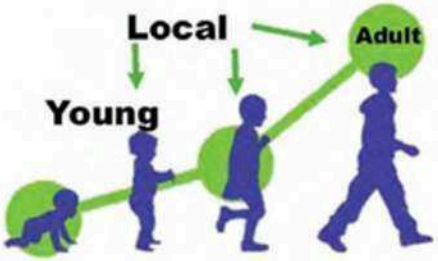


30 x 30 A campaign to protect 30% of the ocean by 2030

Synergy for a Shared Future: ainable and Resilient Ocean

Who need capacity building ???

Scientists



Private Sectors

NGO

Governmental Officers

Photo credit: www.clipartpanda.com
www.how-to-draw-funny-cartoons.com

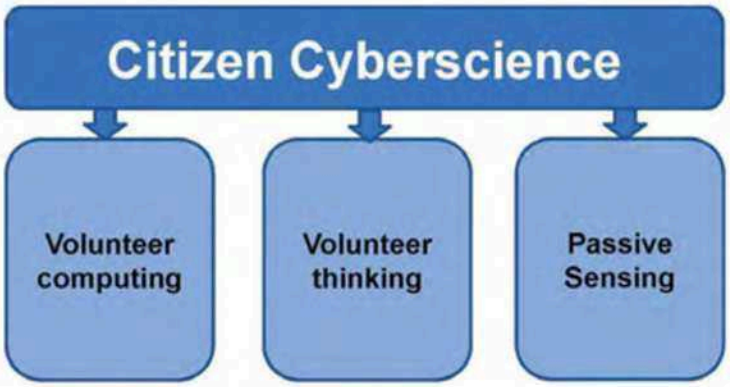
Being "Science Communicators"

Role Model

We want someone to show us, not tell us !!!

Photo credit: campuslinklive.org

A new era of MPA management

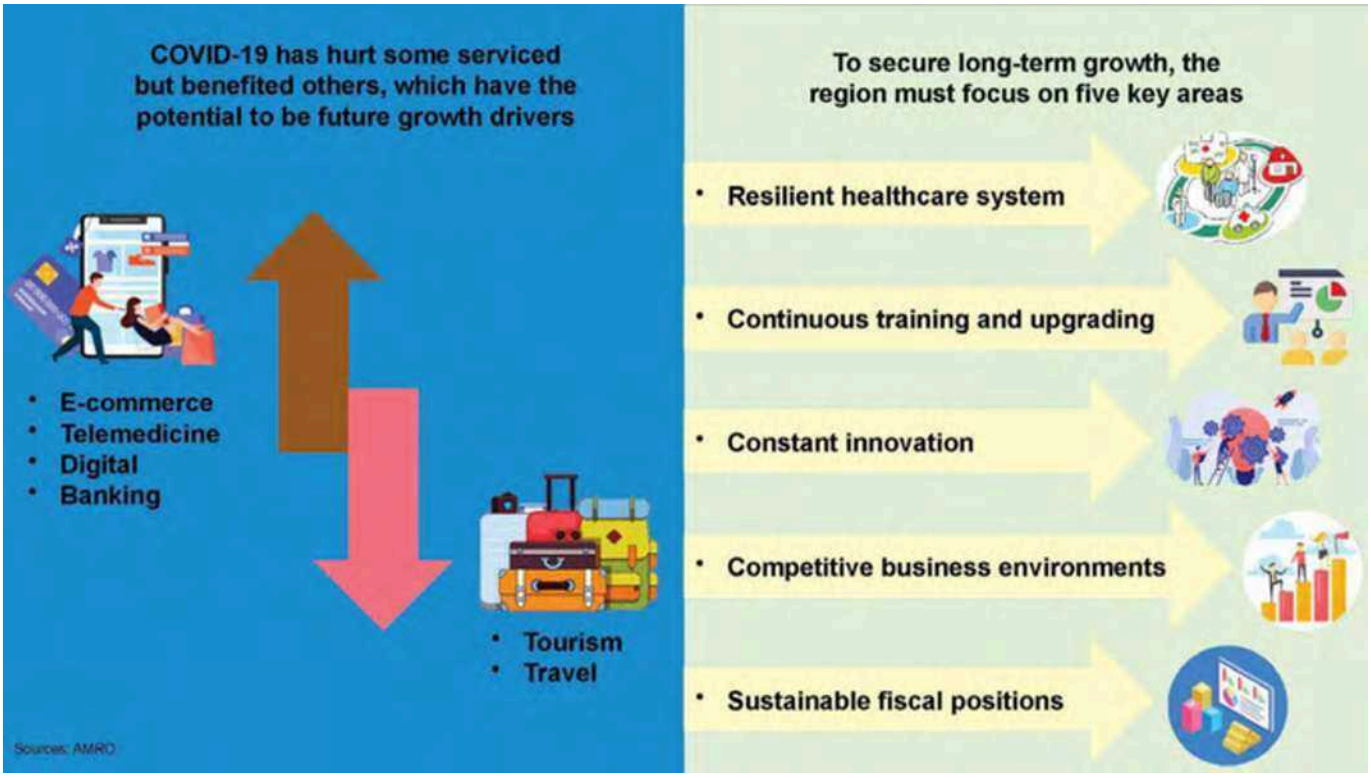


Blue Synergy for a Shared Future:
One Sustainable and Resilient Ocean

Source: Muki Haklay

Blue Synergy for a Shared Future:
One Sustainable and Resilient Ocean

Photo credit: gesc.org


COVID-19 has hurt some serviced but benefited others, which have the potential to be future growth drivers
E-commerce
Telemedicine
Digital
Banking
Tourism
Travel
Sources: AMRO
To secure long-term growth, the region must focus on five key areas
Resilient healthcare system
Continuous training and upgrading
Constant innovation
Competitive business environments
Sustainable fiscal positions

"If we start right now, today, changing our behavior, **we can leave a better planet** for all future generations."

SUCHANA APPLE CHAVANICH
MARINE ECOLOGIST AND NATIONAL GEOGRAPHIC EXPLORER

@INSIDENATGEO

Facebook: Suchana Apple Chavanich
IG: apple_chavanich

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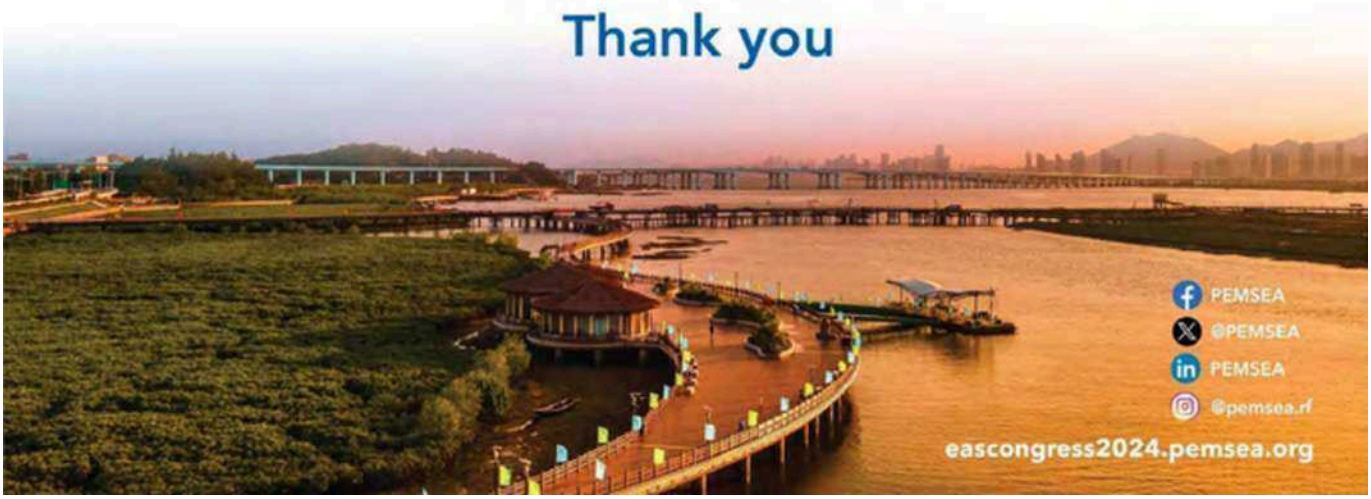

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MR. KETUT PUTRA

Senior Advisor
Transboundary Ocean Program

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Is Borderless Nature Manageable?

Transboundary Nature Park between Indonesia and Timor-Leste in the Lesser Sunda Seascape

Ketut Putra
Senior Advisor
Conservation International/Konservasi Indonesia

Lesser Sunda Seascape of the World's Coral Triangle

Ecological connectivity and characteristics

22

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Transboundary Nature Park

Collaborative Management of shared ecosystems

Transboundary Nature Park

Collaborative Management of shared ecosystems

Progress to Date and Lessons

PROGRESS TO DATE

Focus on MPA Network, Fisheries and Tourism as the foundation for Blue Economy

LESSONS

Managing Complexity i.e. Different Political System
Collective leadership Needed
Capacity

MOVING FORWARD

Transboundary Science Hub
Youth leadership – Transboundary Ocean Jambore

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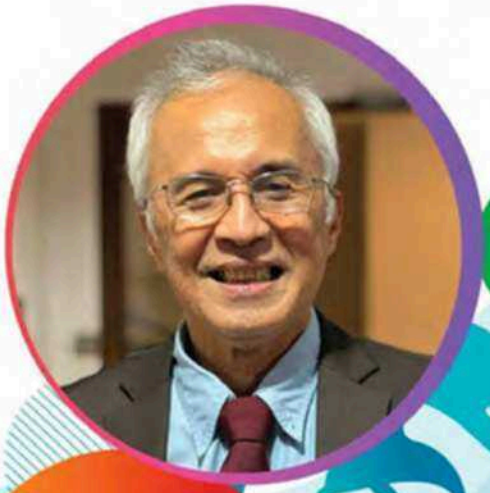
PROF. NYGIEL ARMADA

Chief of Party
USAID Fish Right Program



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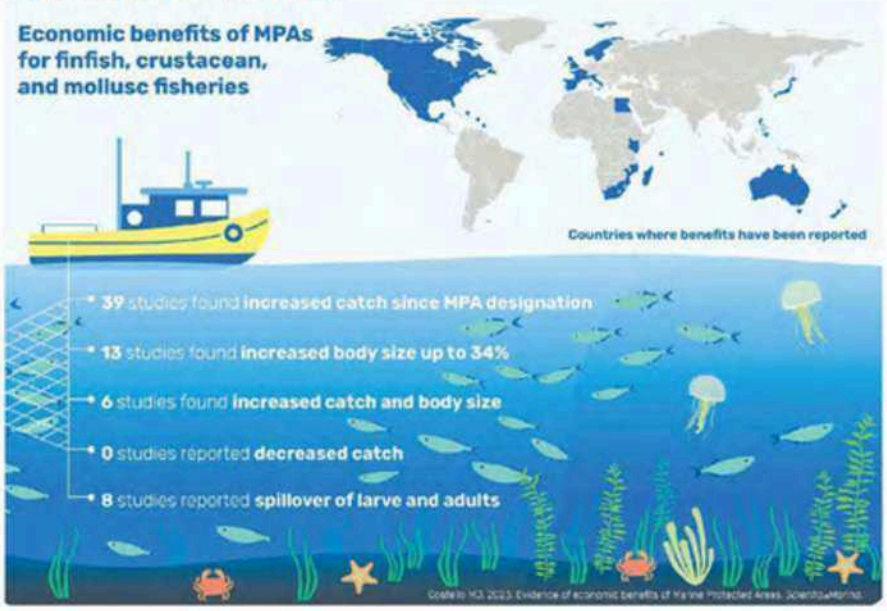
MPA Network:

Its evolution towards becoming a potent tool in managing fisheries in the Philippines

Nygiel Armada
Chief of Party
USAID Fish Right Program

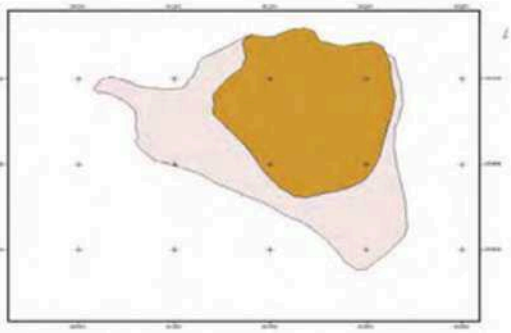
Economic Benefits of MPAs

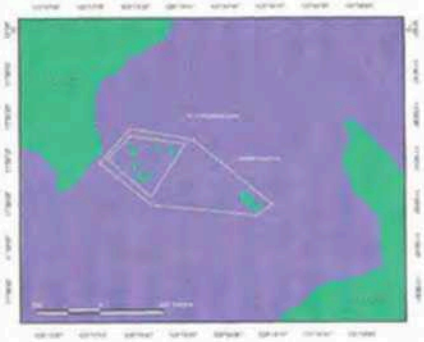


Costelo (2024), Scientia Marina
51 MPAs in 25 Countries

How did this start?

Establishment of MPAs

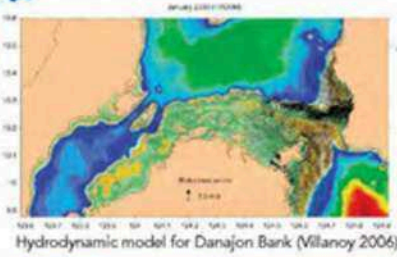




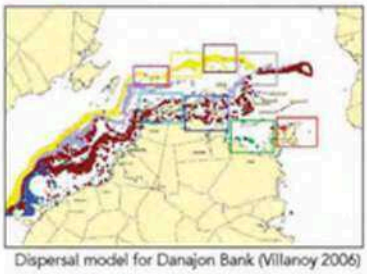
- Serve as the entry point for community participation in fisheries management
- Serve as laboratory for community's learning and appreciation of the principles of fisheries management
- Serve as common ground for co-management between community, NGOs, and government

Getting to understand connectivity with the help of science

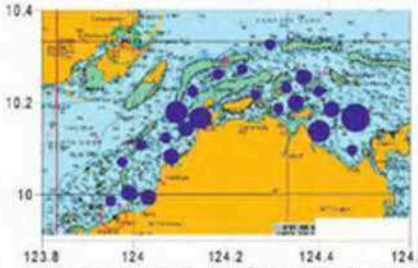
Establis s



Hydrodynamic model for Danajon Bank (Villanoy 2006)



Dispersal model for Danajon Bank (Villanoy 2006)



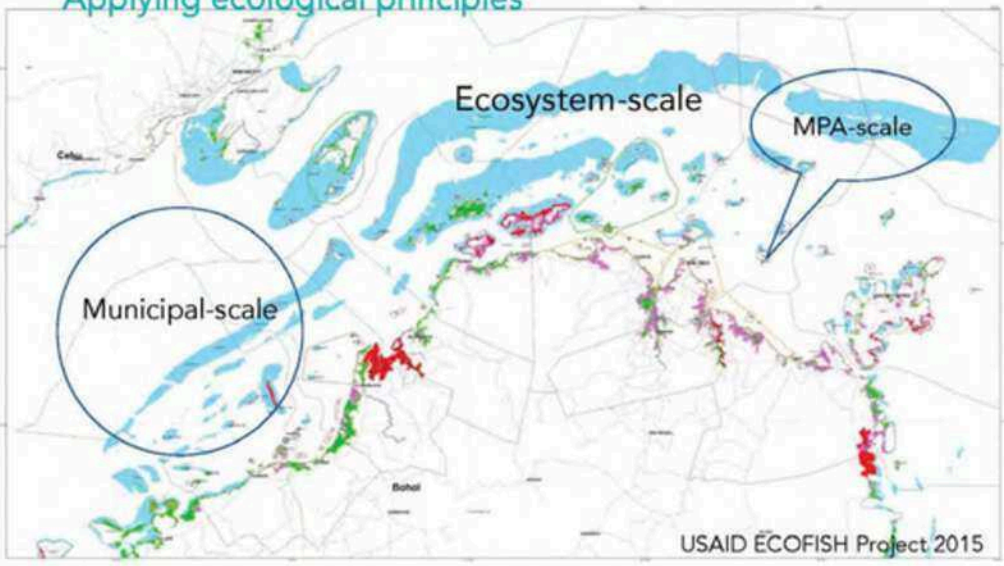
Abundance and distribution of larvae in the Danajon Bank (Campos et al., 2006)

Recommended network of MPAs in Danajon Bank (FISH Project 2010)

Hydrodynamic, dispersal, and plankton studies (USAID FISH Project 2010)

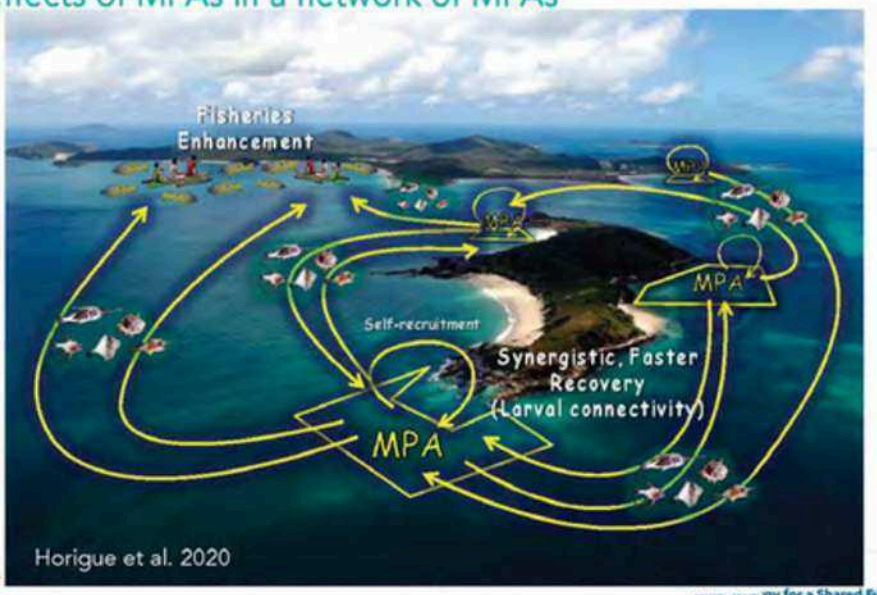
Putting in more science

Applying ecological principles



Pushing the envelope

Synergistic effects of MPAs in a network of MPAs



Combining science and local knowledge

Stakeholders leading the way

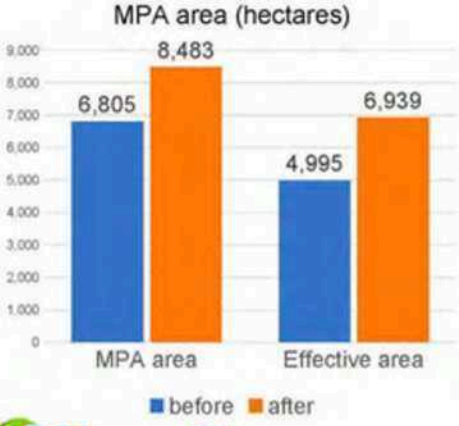
- Uses available data (spatial and non-spatial)
- Adapts to stakeholder inputs, validation, changes
- Can work with broader management plans
- Uses decision support tool (ex. Marxan)

Have this moved the dial?

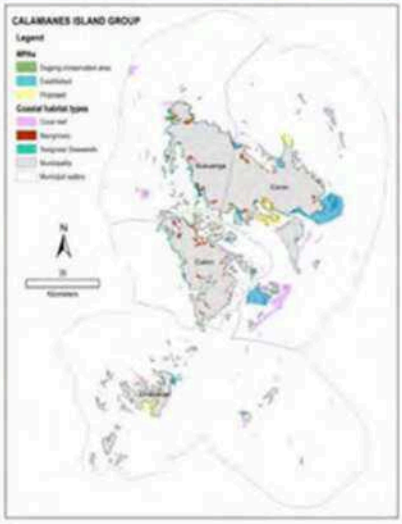
MPA Network Design in the Calamianes Island Group (CIG), Philippines

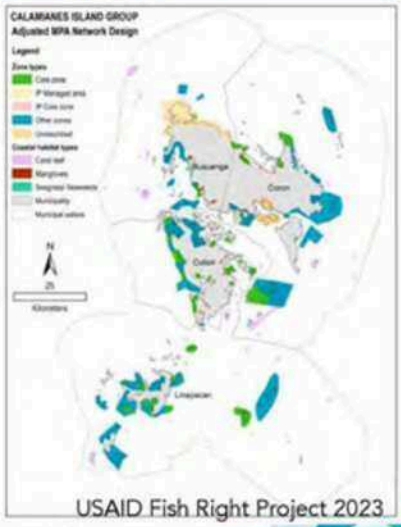
- Systematic MPAN planning to 30+%
- Management effectiveness increased from 56% to 65% on average

Habitat	Area (km²)	Target (%)
Coral reefs	358	52
Mangroves	82	58
Seagrass beds	151	61



DEVELOPING MPAN DESIGN





USAID Fish Right Project 2023

Remaining Questions

- Are we optimizing our profits from MPAs and MPA Networks?
- Do our fishers get their fair share of the benefit?
- Will these perceive benefits be able to influence us in hitting our target of 30 by 30?

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QUESTION & ANSWER SEGMENT

Session 1:
Achieving Sustainability in the ASEAN Seas

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DR. SHEILA G. VERGARA

Project Manager - Chief Technical Adviser
ASEAN ENMAPS

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Project Overview

Effectively Managing Networks of Marine Protected Areas in Large Marine Ecosystems in the ASEAN Region (ASEAN ENMAPS)

Sheila G. Vergara, PhD
Project Manager and Chief Technical Adviser
ASEAN ENMAPS Project
ASEAN Centre for Biodiversity

Project Overview

Countries:
Republic of Indonesia
Republic of the Philippines
Kingdom of Thailand

Implementing Partner (GEF Executing Entity):
ASEAN Centre for Biodiversity

Execution Modality:
Intergovernmental Organisation (IGO) Implementation

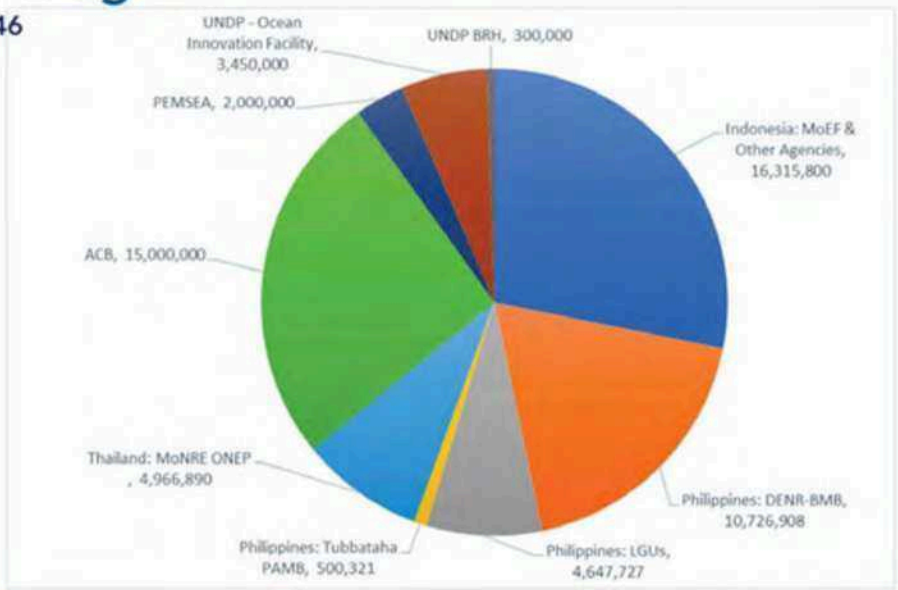
Planned Duration:
01 March 2024 – Feb 28, 2029

Total Budget:
GEF Investment: USD 12,548,861
Co-financing: USD 57,907,646

GEF Implementing Agency:
UNDP Bangkok Region

Co-financing

USD 57,907646



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Project Development History

2019 — Concept: "Supporting an Ecological Network of Marine Protected Areas in the Large Marine Ecosystems in the ASEAN Region"

7 ASEAN Member States

2020 — Effectively Managing Networks of Marine Protected Areas in Large Marine Ecosystems in the ASEAN Region (ASEAN ENMAPS)

Series of Negotiations with AMS

4 AMS Endorsed: Indonesia, Philippines, Myanmar, Thailand

2021

15 Sep 2021: PIF Received by GEF

21 Dec 2021: Concept Approved

2022 — PPG: Project Document Preparation (ProDoc)

National Inception Meetings

Regional Inception Meeting

2023-2024 — ProDoc Revision and Finalisation; ASEAN endorsement

12 Dec 2023
PROJECT APPROVED

2024 2029 — Project Implementation 01 March 2024-28 Feb, 2029

CO-FINANCING NEGOTIATION

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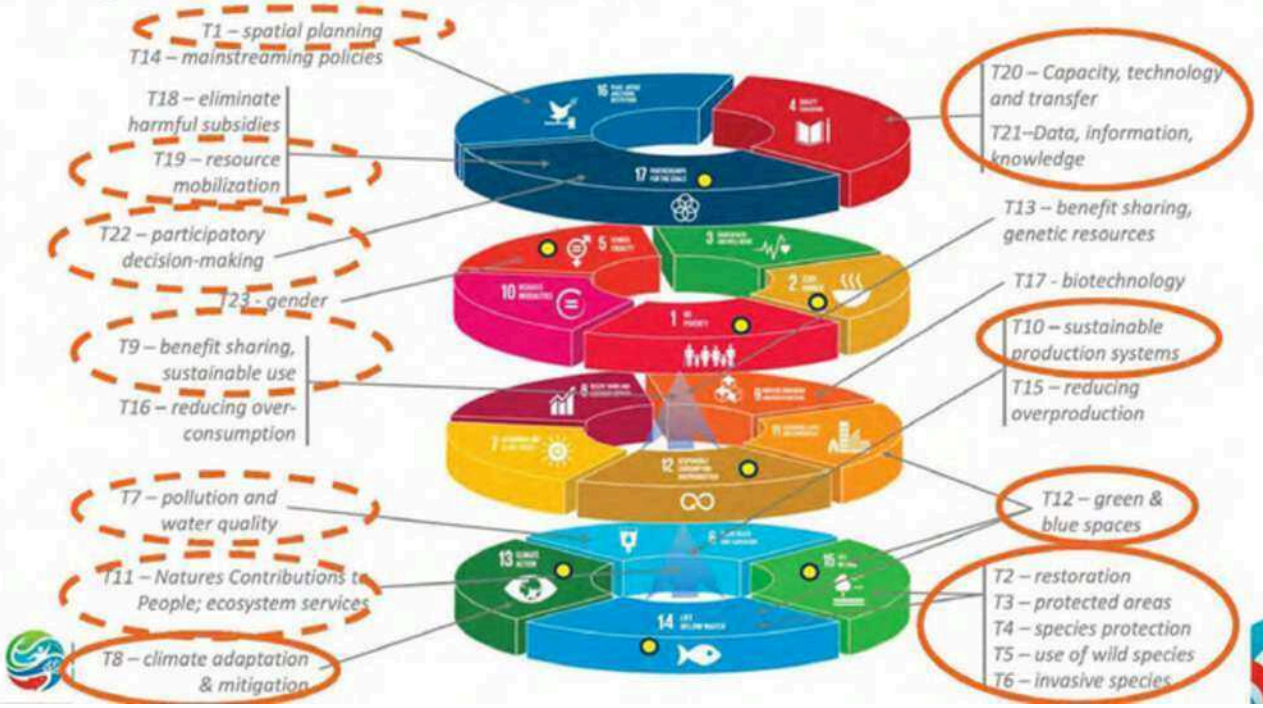
Alignments with SDGs and GBF



Alignments with Other Projects

GEF Biodiversity and International Waters Focal Area Strategies

- Biodiversity Mainstreaming in Priority Sectors
- Engaging Indigenous people and local communities
- Ecosystem-based management of fisheries
- Protect habitats, species, financial sustainability
- International Waters, Strengthening Blue Economy Opportunities
- Sustaining healthy coastal and marine ecosystems
- Sustainable fisheries management

Improved governance of LMEs

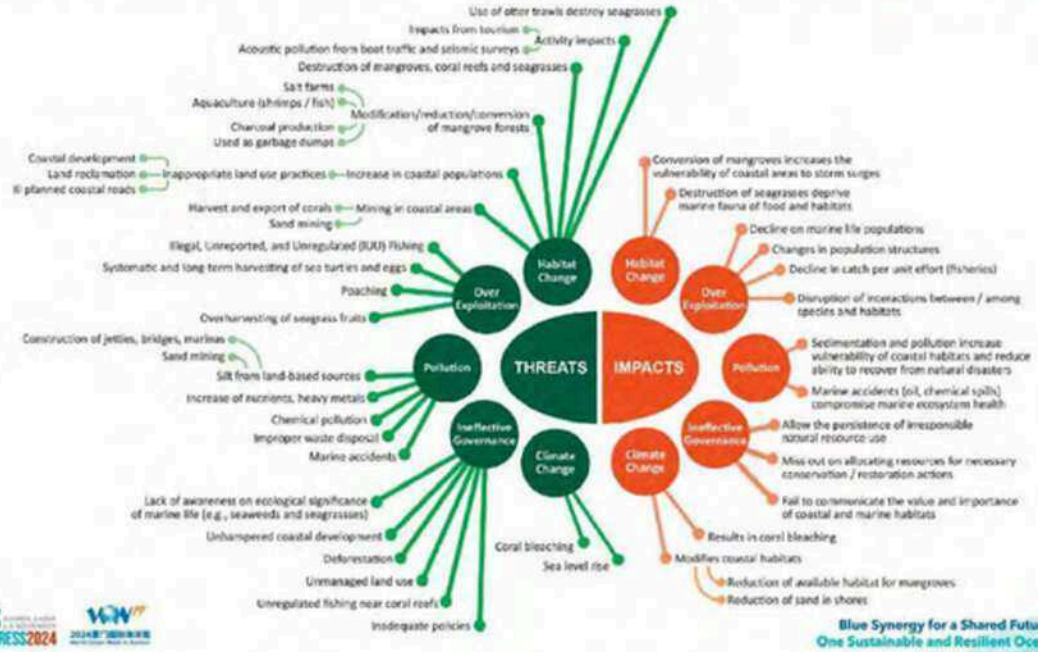
- Strategic Action Plans (SAPs);
- Transboundary Diagnostic Analysis (TDA)
- National Action Plans & other national priorities

Regional Projects and Programs: WB, Birdlife, SEAFDEC, ASEAN, CTI-CFF, etc.

Provincial and Municipal Plans and Programmes

Community, MPA network, and MPA-level activities

Threats to Coastal & Marine Ecosystems in the ASEAN



Status of Fisheries in LMEs under ENMAPS

SOUTH CHINA SEA LME

12% of the **global fish catch** (2015)

490,000 tons in 1950 to over **6 million tons** in 2010

transboundary arrangements are present for fisheries.

SULU-CELEBES SEA LME

fish catch increased from 2001 – 2010, recording an **average of one million tons** in the recent decade

BAY OF BENGAL LME

annual fish catch increased from 1950 – 2010, with the latest recorded data at approximately **four million tons per year.**

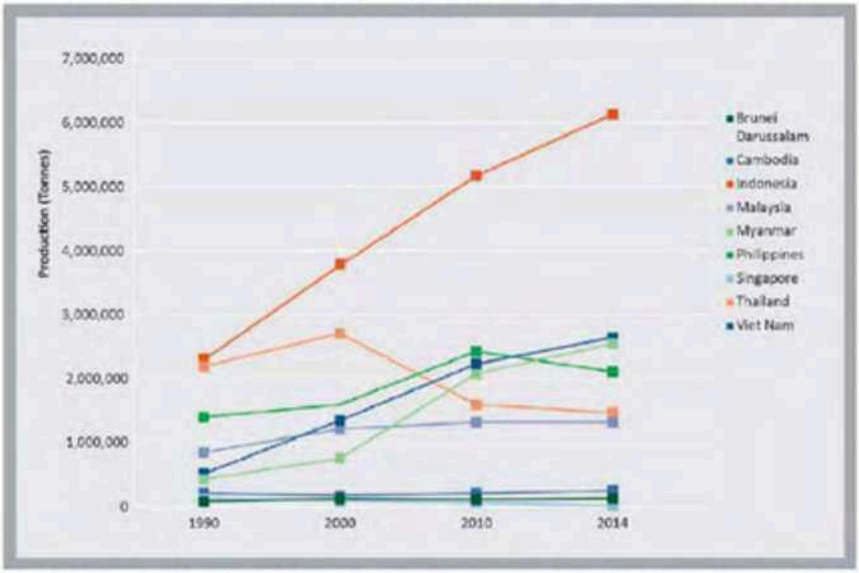
INDONESIAN SEAS LME

Increased demand for fish from the industrial and artisanal fisheries

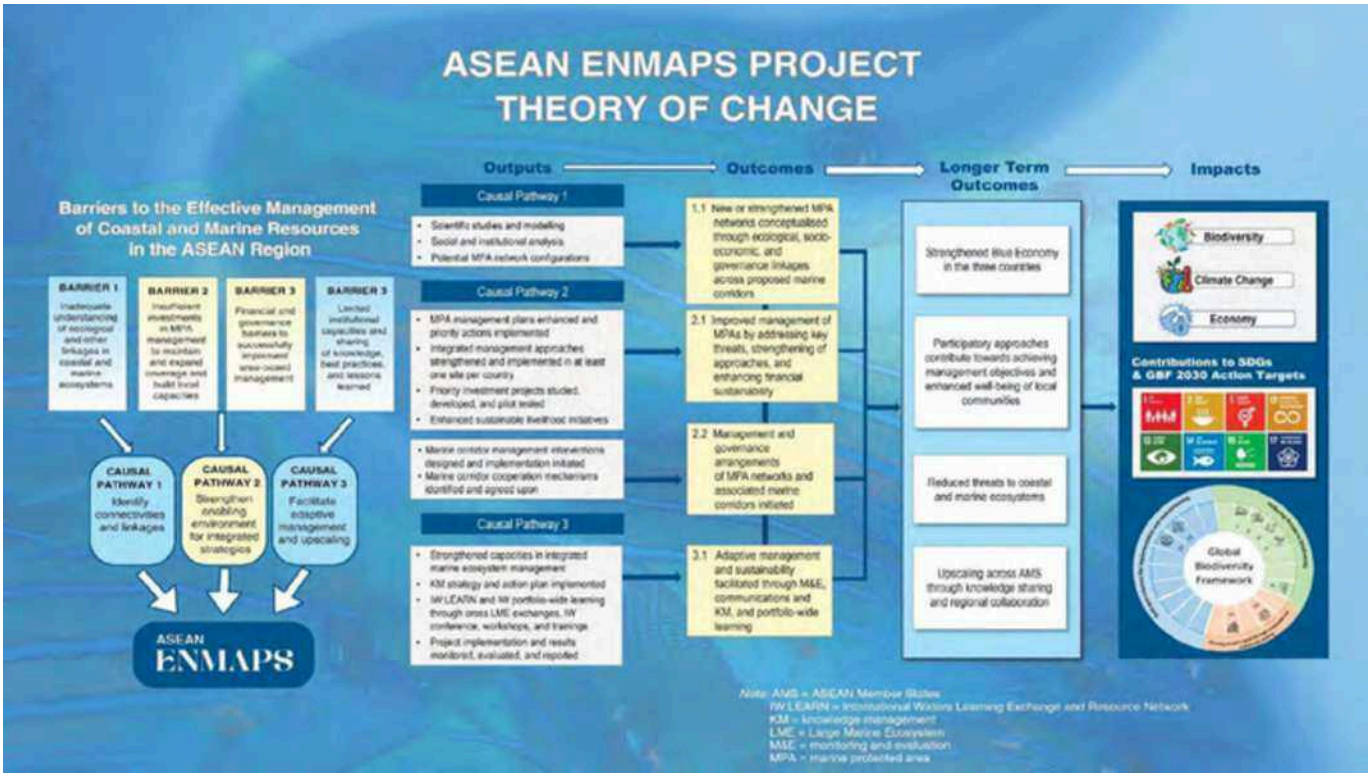
transboundary arrangements for fisheries catering to tuna and tuna-like fisheries

Status of Fisheries in LMEs under ENMAPS

Figure 4. Trends in marine capture fisheries production, ASEAN Member States, 1990–2014



Source: FAO Fisheries and Aquaculture Statistics, retrieved from http://www.fao.org/fishery/statistics/en on 2 December 2016.


ASEAN ENMAPS PROJECT
THEORY OF CHANGE
Outputs
Outcomes
Longer Term Outcomes
Impacts
Barriers to the Effective Management of Coastal and Marine Resources in the ASEAN Region
BARRIER 1
BARRIER 2
BARRIER 3
BARRIER 3
CAUSAL PATHWAY 1
Identify connectivities and linkages
CAUSAL PATHWAY 2
Strengthen enabling environment for integrated strategies
CAUSAL PATHWAY 3
Facilitate adaptive management and upscaling
ASEAN ENMAPS
Causal Pathway 1
Causal Pathway 2
Causal Pathway 3
1.1 New or strengthened MPA networks conceptualised through ecological, socio-economic, and governance linkages across proposed marine corridors
2.1 Improved management of MPAs by addressing key threats, strengthening of approaches, and enhancing financial sustainability
2.2 Management and governance arrangements of MPA networks and associated marine corridors initiated
3.1 Adaptive management and sustainability facilitated through M&E, communications and KM, and portfolio-wide learning
Strengthened Blue Economy in the three countries
Participatory approaches contribute towards achieving management objectives and enhanced well-being of local communities
Reduced threats to coastal and marine ecosystems
Upscaling across AMS through knowledge sharing and regional collaboration
Biodiversity
Climate Change
Economy
Contributions to SDGs & GBF 2030 Action Targets
Global Biodiversity Framework
Note: AMS = ASEAN Member States
IW LEARN = International Waters Learning Exchange and Resource Network
KM = knowledge management
LME = Large Marine Ecosystem
M&E = monitoring and evaluation
MPA = marine protected area


Project Strategies
gef
ASEAN CENTRE for BIODIVERSITY
Build on national initiatives, information; Build Capacity ICM, MSP, EAFM
Promote ownership, responsible governance, & investments in MPA networks & corridors
Complement losses in incomes with livelihoods
Apply transformative and science-based management of MPA networks
Focus on LGU cooperation for fisheries sustainability
Disseminate knowledge products that promote lessons learned and best practices
Explore cooperative arrangements across sectors and involve multiple stakeholders.
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Strategy

TRANSFORMATIVE APPROACH

Component 1

Science Basis

Establish connectivity patterns to inform the identification of MPA components of MPANs networks, their boundaries, best scale & configuration

Socio-economic character

Governance & necessary partnerships, policies

Levels of community engagement

Component 2

ICM Implementation

Implement appropriately designed interventions and investments that contribute to improving coastal and marine health and fisheries in four LMEs

Improve MPA & MPAN management by refining Management plans

Develop projects with appropriate level of stakeholders in collaboration with partners

Component 3

Knowledge Management

Document, package and disseminate knowledge products developed in the course of implementing components 1 and 2 to ensure that these learnings and best practices are shared with and communicated to relevant stakeholders.

Appropriate platforms

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PROJECT STRATEGY

OBJECTIVE

To develop and improve the management of MPA networks and marine corridors within selected large marine ecosystems in the ASEAN region for the conservation of globally significant biodiversity and support for sustainable fisheries and other ecosystem goods and services

PROJECT COMPONENTS

COMPONENT 1: Multi-faceted approach to supporting and expanding MPA networks

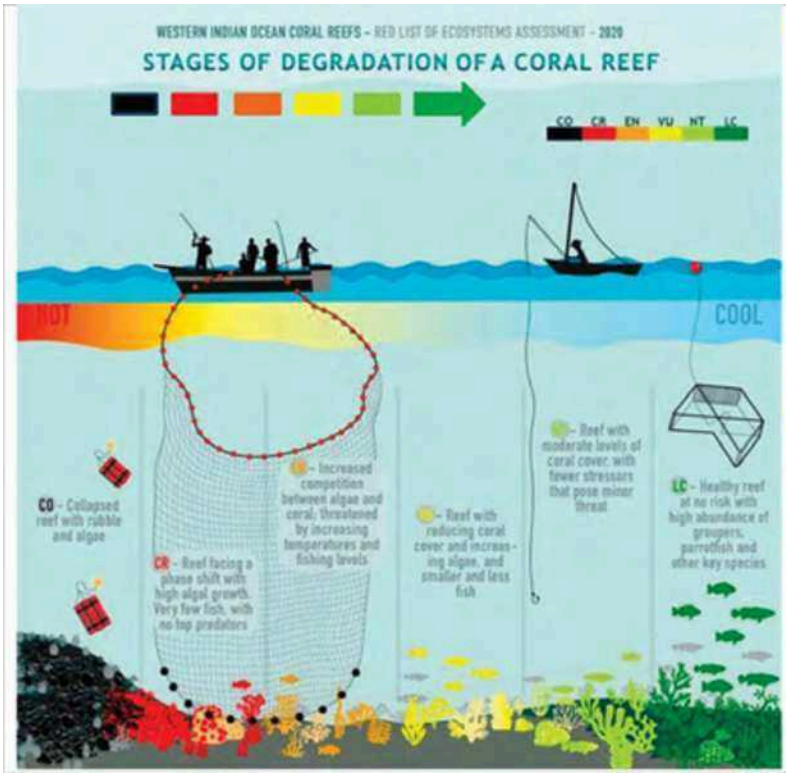
Component 1 aims to synthesise the marine, fisheries, and connectivity science behind the identified MPAs and determine the appropriate configurations of MPA networks in the four target LMEs.

Indicative Activities		Results
Regional	**National**	
• Transboundary diagnostic analysis, analysis of strategic action programmes and national action programmes for the target LMEs in cooperation with LME governance mechanisms • Support national teams in assessing viable governance and management arrangements and financing options for the proposed MPA networks • Regional knowledge sharing and scientific workshops	• Strategic Environmental and Social Assessment (SESA) • Fish resources and ecological connectivity modelling with hydrodynamic studies • Review potential governance mechanisms and financial sustainability for MPAs • Prepare conceptual designs for the proposed MPA networks and disseminate through stakeholder workshops	• Confirmed ecological, socio-economic, and institutional connectivity in four sub-regions within the target LMEs • Nine MPA networks designed and endorsed

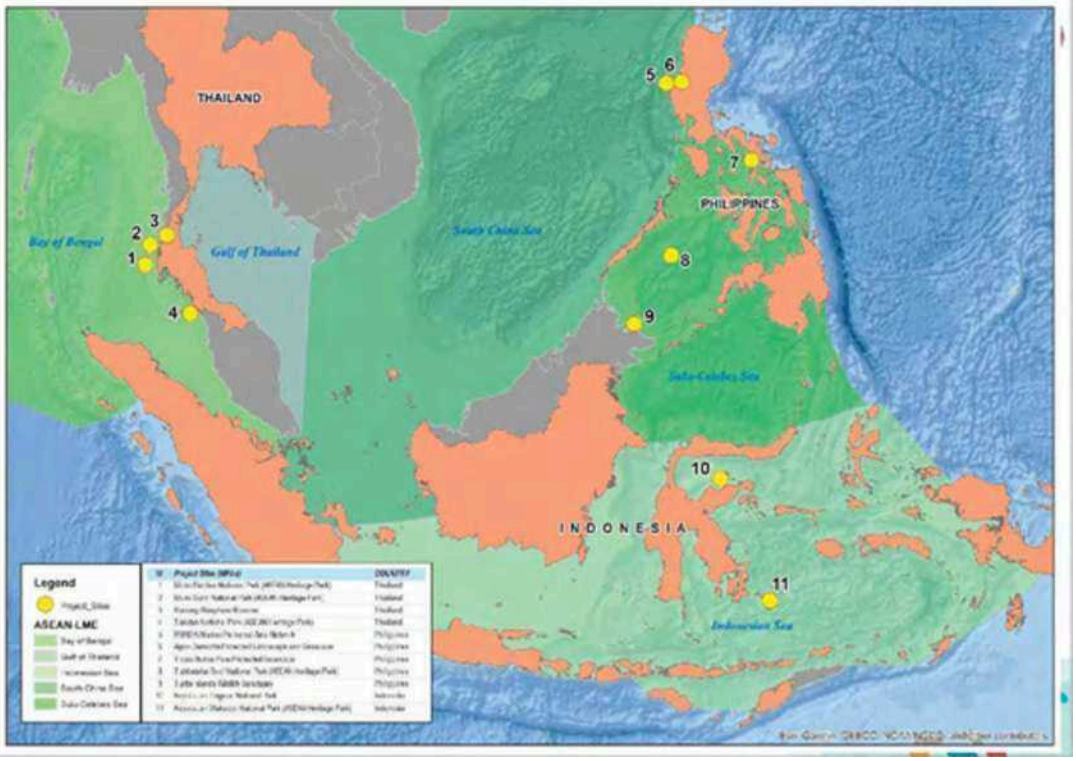
COMPONENT 3: Learning, knowledge management, and networking

Component 3 documents, packages, and disseminates the knowledge products developed in the course of project implementation to ensure that the best practices are shared with the relevant stakeholders.

Indicative Activities		Results
Regional	**National**	
• Implement project-level communication and knowledge management strategy and action plan • Develop project website and linking it to relevant knowledge-sharing platforms • Produce and disseminate knowledge products and communication materials • Convene traditional knowledge workshops • Arrange learning exchanges among the participating countries • Develop and initiate the implementation of a project sustainability plan.	• Contribute to the implementation of the project communications and knowledge management strategy, with local- and national-focused activities • Participate in GEF IW conferences, IW:LEARN Twinning with other GEF projects • Participate in GEF Communities of Practice • Contribute to IW:LEARN with *Experience Notes* and other relevant content (e.g. multimedia, data visualisation, etc.).	• Improved institutional capacities in ICM • Knowledge products and *Experience Notes* disseminated • 1,000 visits to knowledge-sharing spaces • Participation in GEF IW: Conference



Pilot Sites



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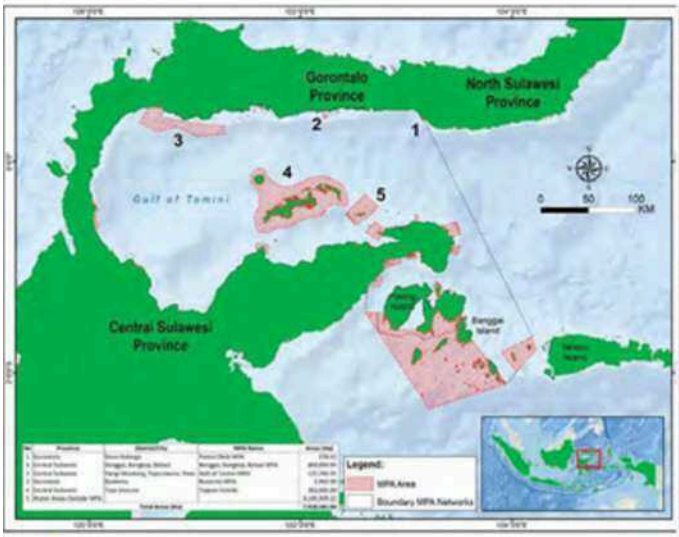
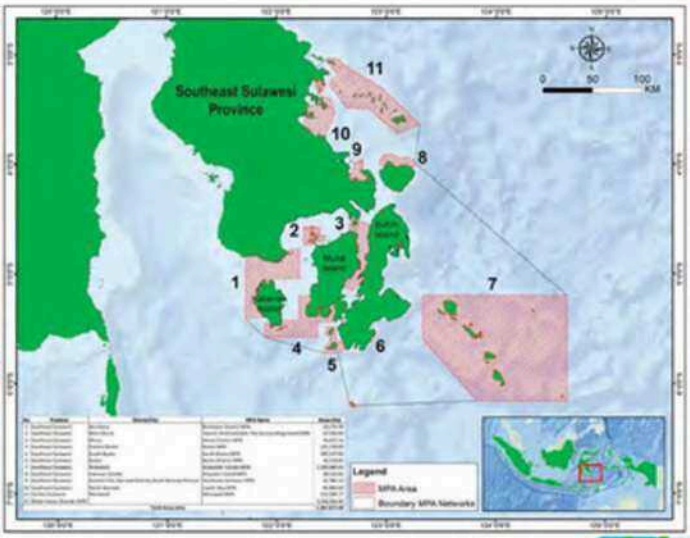
MPA Site, MPA Network, & Marine Corridors: INDONESIA

Kepulauan Togean National Park



Wakatobi National Park (ASEAN Heritage Park)



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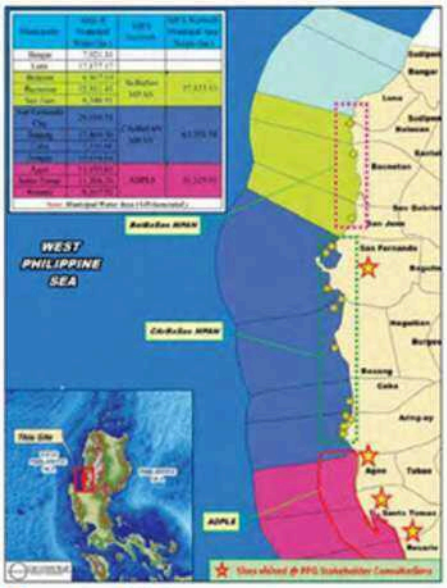
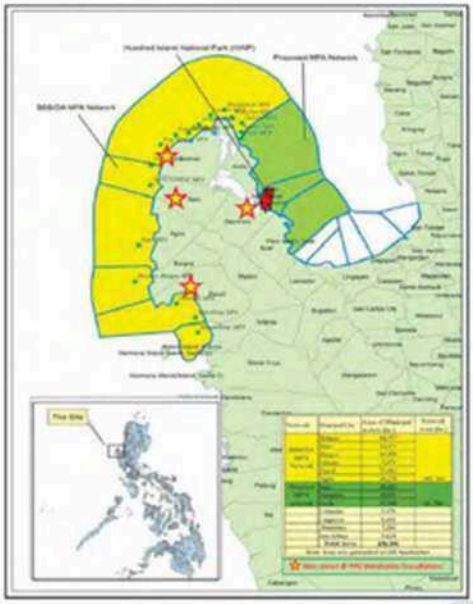
MPA Site, MPA Network, & Marine Corridors: PHILIPPINES

Agoo - Damortis Protected Landscape and Seascape

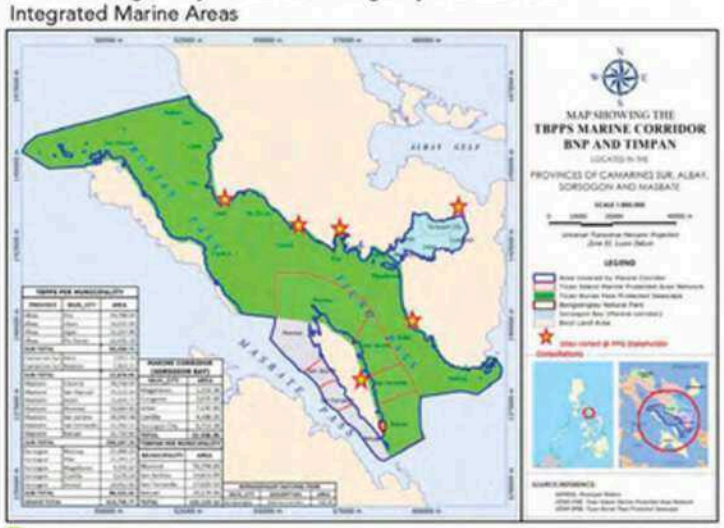


BBBiDA Marine Protected Area Network:Bani-Bolinao-Burgos-Infanta-Dasol-Agno



MPA Site, MPA Network, & Marine Corridors: PHILIPPINES

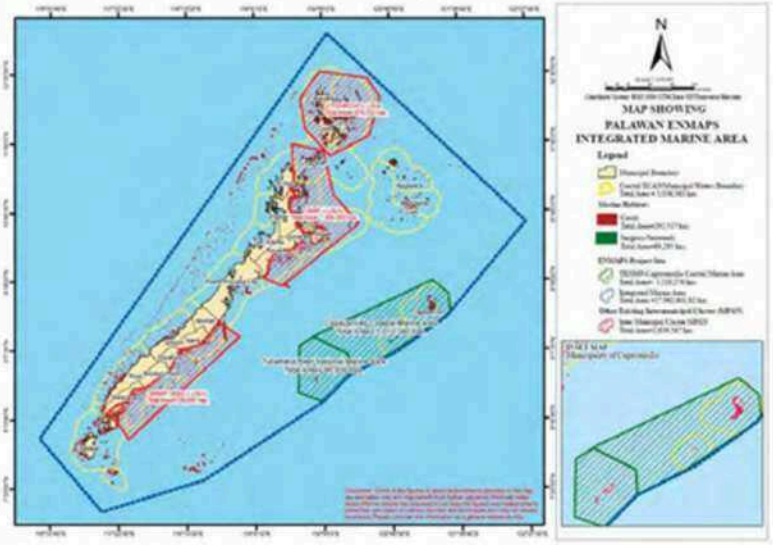
TBPPS-Sorsogon Bay -eTIMPAN – Bongsalay National Park
Integrated Marine Areas



Tawi-tawi Integrated Marine Areas

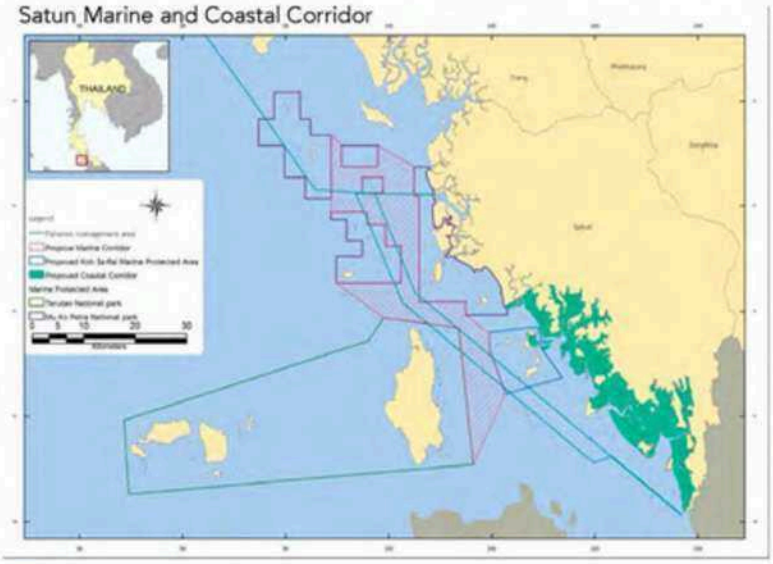
MPA Site, MPA Network, & Marine Corridors: PHILIPPINES

Palawan coastal and marine Environmentally Critical Area Networks (ECANs)

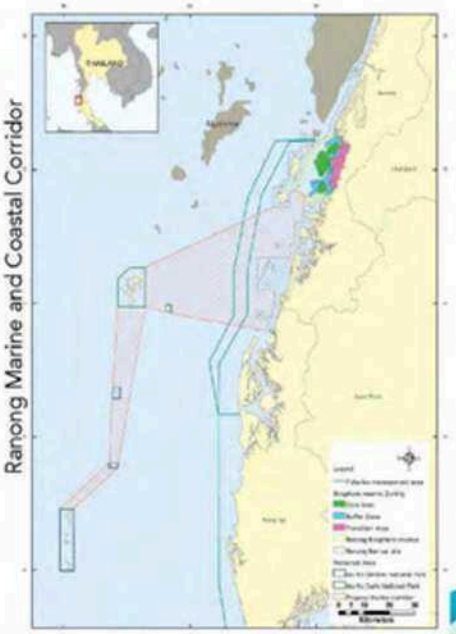


MPA Site, MPA Network, & Marine Corridors: THAILAND

Satun Marine and Coastal Corridor



Ranong Marine and Coastal Corridor



Project Governance

Implementing Partner: ASEAN Centre for Biodiversity (ACB)

- Entity to which the UNDP has entrusted the implementation of this UNDP assistance
- Assumes full responsibility and accountability for the effective use of GEF resources and the delivery of outputs
- Responsible for executing the project thru the **Project Management Unit**

Project Stakeholders and Target Groups:

- National and subnational conservation and fisheries ministries and departments in the three AMS
- Management entities of the 11 target MPAs and the local government units where the MPAs are situated
- Civil society organisations, private sector enterprises, and academic-research institutes
- Indigenous Peoples and local communities (IPLCs) and other vulnerable groups residing in and near the target MPAs, particularly those involved in the fishing and tourism sectors

Project Governance

UNDP:

- Accountable to the GEF for the implementation of the project
- Oversees the project execution undertaken by ACB as outlined in the Delegation of Authority (DOA)
- Responsible for the Project Board Assurance function in the project governance structure and presents to the Project Board
- Regional Hub Manager (or designate) attends Project Board meetings as a voting member

Project Board (aka Project Steering Committee):

- High-level oversight of the execution of the project by the ACB
- Approval of strategic project execution decisions of the ACB

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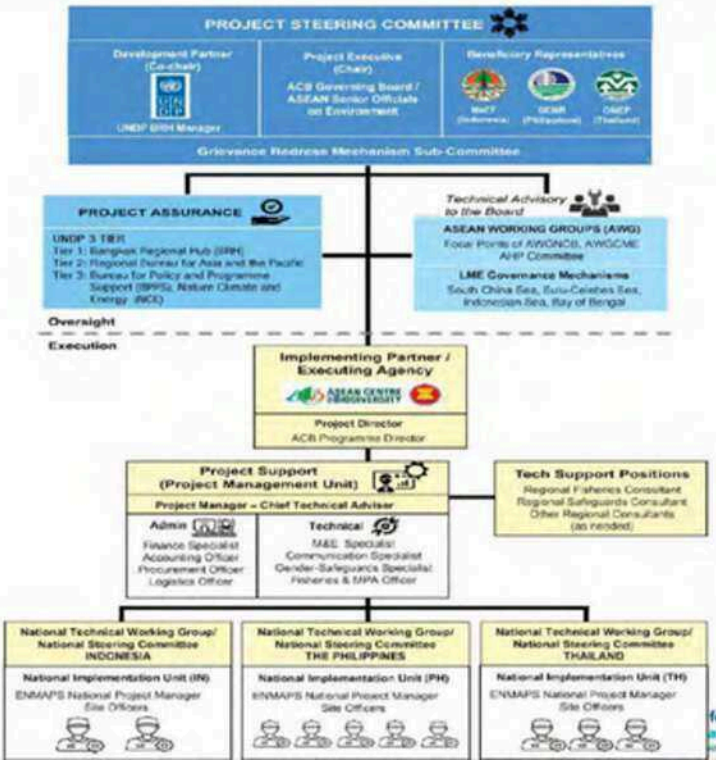
Project Governance Structure



Monitoring and Evaluation (M&E)

Minimum Project Monitoring and Reporting Requirements

GEF Core Indicators

Objective: To **develop and improve the management of networks of marine protected areas and marine corridors within selected Large Marine Ecosystems (LMEs) in the ASEAN region** for the conservation of globally significant biodiversity and support for sustainable fisheries and other ecosystem goods and services.

GEF Core Indicators:

Core Indicator 2: Marine protected areas created or under improved management for conservation and sustainable use (hectares) -Improving/METT scores

Core Indicator 5: Area of marine habitat under improved practices to benefit biodiversity - MPA networks and associated integrated marine areas

Core Indicator 7: Number of shared water ecosystems (fresh or marine) under new or improved cooperative management - 4 LMEs under improved cooperative management

Core Indicator 7.4: Level of engagement in IW:LEARN through participation and delivery of key products - website in-line with IW:LEARN/data and information sharing

Core Indicator 8: Globally over-exploited fisheries moved to more sustainable levels - (for IDN sites only, Maximum sustainable yield (MSY), other countries data compilation and analyses

Core Indicator 11: Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment - number of women beneficiaries, benefiting from GEF-financed investments

*gender indicators

Results Framework

Objective: To develop and improve the management of networks of marine protected areas and marine corridors within selected Large Marine Ecosystems (LMEs) in the ASEAN region for the conservation of globally significant biodiversity and support for sustainable fisheries and other ecosystem goods and services.

Component 1: Multifaceted approach to supporting and expanding networks of marine protected areas (MPAs)	**Outcome 1.1:** Established science informs the ecological configuration and socio-economic and governance needs of MPA networks in selected areas within the 4 LMES	**Output 1.1.1.** Scientific studies and modeling, social and environmental assessments, and institutional analyses completed to inform functional connectivity within the target LMEs

Results:

- Four (4) sub-regions within the target LMEs, where ecological, socioeconomic and institutional connectivity confirmed.
- Nine (9) MPA networks and associated marine corridors designed and endorsed.

Results Framework

Component 2: Strengthening the enabling environment for management and governance of MPA networks	**Outcome 2.1:** Improved management of target MPAs through addressing key threats, strengthening integrated approaches and enhancing financial sustainability	**Output 2.1.1.** MPA management plans enhanced, and priority actions implemented, recognizing ecological, socioeconomic and institutional linkages and addressing threats that disrupt connectivity and marine ecosystem functionalities **Output 2.1.2.** Integrated management approaches strengthened and implemented in at least one site per country **Output 2.1.3.** Priority investment projects studied, developed and pilot tested, contributing towards achievement of financial sustainability of MPAs and inclusion of local communities **Output 2.1.4.** Entrepreneurial skills and sustainable livelihood initiatives enhanced, helping local communities and partners be more meaningfully engaged in MPA management, with an emphasis on inclusion of women, Indigenous peoples and other vulnerable groups

Results:

- 1,750 people (of whom 50% are women) actively involved in community monitoring, control and surveillance (MCS), reducing the threat of IUU and destructive fishing.
- Three (3) Blue Economy investment projects under implementation at demonstration scale.

Results Framework

Component 2: Strengthening the enabling environment for management and governance of MPA networks	**Outcome 2.2:** Management and governance arrangements of MPA networks and associated marine corridors initiated	**Output 2.2.1.** Marine corridor cooperation mechanisms collaboratively identified and agreed upon by stakeholders at appropriate governance levels **Output 2.2.2.** Marine corridor management interventions designed, and implementation initiated

Results:

- Management plans for nine (9) MPA networks and associated marine corridors agreed through memoranda of understanding (MoUs) among key partners in the three countries.
- Six (6) dialogues convened with transboundary partners on potential collaborative management of MPA networks and marine corridors.

Results Framework

Component 3: Learning, knowledge management and networking	**Outcome 3.1:** Adaptive management and sustainability facilitated through monitoring & evaluation, communications and knowledge management, and portfolio-wide learning	**Output 3.1.1.** Capacities in integrated marine ecosystem management strengthened through trainings on the application of tools and methodologies such as ICM, MSP, nature-based solutions, investment planning and biodiversity-sensitive fisheries management **Output 3.1.2.** Communications and knowledge management strategy and action plan developed and implemented **Output 3.1.3.** IW:LEARN and IW portfolio-wide learning through cross LME exchanges, IW conference, workshops, and trainings **Output 3.1.4.** Project implementation and results monitored, evaluated and reported

Results:

- Improved institutional capacities on integrated management of coastal and marine ecosystems, as measured by the project-specific capacity development scorecard.
- 30 knowledge products produced and disseminated (10 showcasing gender mainstreaming results); 1,000 visits to knowledge sharing space(s); two GEF IW Conference participated in; ten (10) Experience Notes produced and disseminated through IW:LEARN channels (two focused on gender mainstreaming and Indigenous Peoples issues).

Project Updates

- Establishing National-Level Organisational Structure
- Compliance
- Partnerships
- Activities Mobilisation
- Knowledge Management

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Establishing National-Level Organisational Structure

Recipient AMS	Staff Selection & Onboarding	Establishing the NTWG	SESA
Regional	PMU complete	• PSC established • Report approved and signed	• Comprehensive tool developed
Indonesia	Shortlisting scheduled on October 14	• NTWG agreed on • First meeting convened • Interest among NGAs still low	• Mechanism relayed • Roster of interviewees being organised • Translators engaged
Philippines	Review & validation with regional offices	• SO discussion ongoing • NSC preferred, NTWG, SLTWG to be organised	• Mechanism relayed
Thailand	Terms of Reference approved for posting	• NSC preferred	

Note: NGAs = national government agencies
NSC = National Steering Committee
NTWG = National Technical Working Group
PSC = Project Steering Committee
SESA = Strategic Environmental and Social Assessment
SLTWG = Site-level Technical Working Group
SO = Special Order

Compliance

Geography	Updates	Remarks	Next Steps
Regional	Draft GRM	• Drafted • With UNDP for comments	• Approved for consultation/validation
	Submitted Q3 Report and FACE form to UNDP	• Detailed review of both amounts and codes should be implemented	• Need to expedite spending (travel-related expenses and releases to consultants)
Indonesia	Draft of MoA to be sent to PMU		

Note: GRM = Grievance and Redress Mechanism
FACE = Funding authorization and certificate of expenditure

Compliance

Geography	Updates	Remarks	Next Steps
Philippines	1st Meeting with NCIP convened	• NCIP requirements not processed at PPG stage • No documents available • All sites to undergo field-based investigation	• Regional Offices informed • Completing document requirements • Work & financial plan
	Special Presidential Authority with DoF	• Presentation to MIMAROPA done • Endorsement provided	• FASPS following up the status • BMB and FASPS approved preparation of SO • Review of ToRs and posting • Introduction of Project to sites • Confirmation of actions (letter) to DENR Usec. A. Teh

Compliance

Geography	Updates	Remarks	Next Steps
BARMM	1st meeting convened with MIPA	• Appreciated being reached out to explain the project • Expects no adverse response from community	• Work and financial plan • Plan for an IP assembly (Summer 2025) • Recommended to update the project presentation to highlight the outcomes, benefits of the project and local representation in discussions and planning
Thailand	Preferred movement after hiring of field staff and after COP16		

Note: BARMM = Bangsamoro Autonomous Region in Muslim Mindanao
MIPA = Ministry of Indigenous Peoples' Affairs – BARMM)

Partnerships

Partner	LoC	MoA	First Tranche Release
PRF	✔	✔	• Pending 80% of Q3 utilisation
Global Fishing Watch	✔	• Drafted • Comments received	

Note: LoC = Letter of Cooperation
MoA = Memorandum of Agreement
PRF = PEMSEA Resource Facility

Activities Mobilisation

Activity/ Event	Status	Next Steps
PMU-RPCC Workshop: Aligning indicative vs actual AWPB	2024: 3rd work and budget plans (WBP) revised/approved, 4th WBP revised, Multi-year financial monitoring sheet drafted, Per country indicative WBP drafted	2025 WBP subject for further alignment based on updated financial monitoring sheet, Per country indicative WBP subject for further review of IDN, PH, and TH.
Connectivity Modelling Studies in 4 LMEs in the ASEAN Region	Consultants' contract for signing	• First tranche release
ASEAN ENMAPS Website Development	Inception meeting convened and layout presentation conducted	• First tranche released • First draft of website for uploading; PMU and RPCC to comment

Activities Mobilisation

Activity/ Event	Status	Next Steps
EAS Congress Preparation	In progress	Participation in November
Strategic Social and Environmental Assessment (SESA)	In progress for IDN	Key Informant Interviews schedule and respondents to finalize with IDN counterparts Pending procurement of local translation services Hiring of local FPIC-Gender-Safeguards Consultants

ASEAN ENMAPS Website

www.enmaps.aseanbiodviersity.org

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Knowledge Management

Knowledge Products	Status	Next Steps
ASEAN ENMAPS Fun Facts	• Continuous development and publication in social media every Friday • Good feedback from readers with good reader engagement	• For translation to Thai and Bahasa languages • For compilation and packaging into children's book • For compilation and packaging as a deck of cards • For video reel development and presented during EAS Congress
ASEAN ENMAPS Project Executive Summary	• Design and layout completed • For proofreading, styling, and branding	• Printing • Dissemination through EAS Congress, ACB LRC, and other ACB events

Knowledge Management

Knowledge Products	Status	Next Steps
ASEAN ENMAPS Project Notes	• Technical review completed • Design and layout in progress	• Proofreading, styling, and branding • Printing • Dissemination of printed copies through EAS Congress, ACB LRC, and other ACB events • Uploading on ACB website • Promotion through social media and ACB mailer

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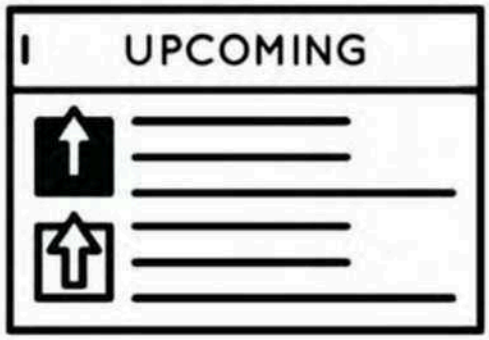
Upcoming Activities

- Convening of Indonesia National Inception Meeting
- Conduct of SESA in Indonesia
- On-site Coordination Meeting with ASEAN ENMAPS Thailand
- Preparation for and participation in EAS Congress 2024
- Participation in 10th Asian Wetland Symposium
- Participation in 2024 United Nations Biodiversity Conference of the Parties to the UN Convention on Biological Diversity
- ASEAN ENMAPS Component 2 mobilisation
- Connectivity study regional implementation



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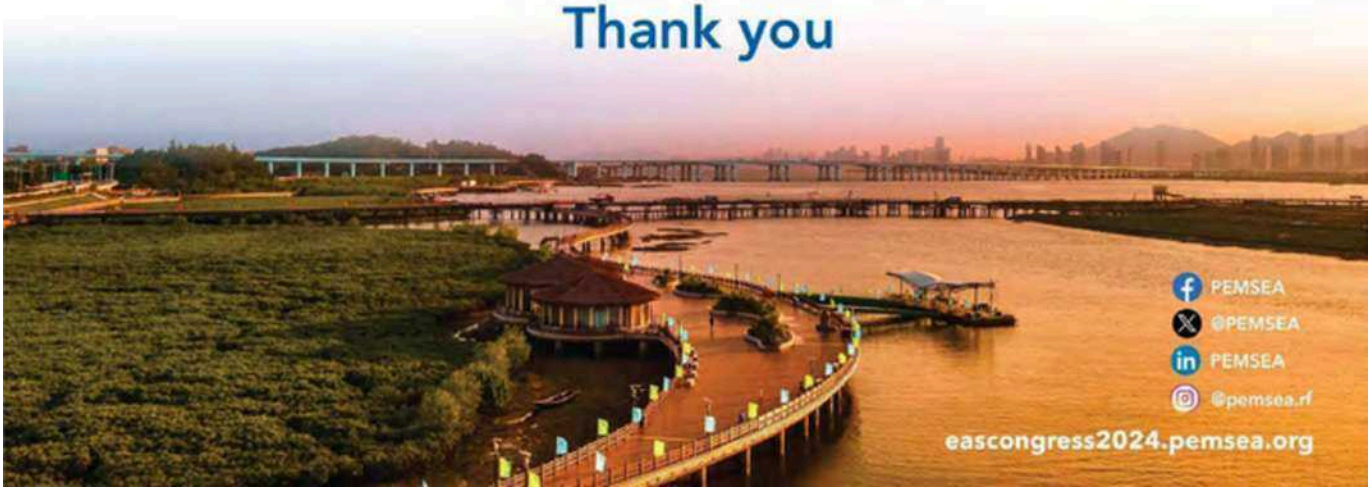
Thank you



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ASEAN CENTRE FOR BIODIVERSITY

ACHIEVING SUSTAINABILITY THROUGH CONNECTIVITY FOR RESILIENT ASEAN SEAS

ACB EAS Congress 2024 Parallel Session

06 November 2024 | 14:30 – 17:30

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ASEAN CENTRE FOR BIODIVERSITY

ACHIEVING SUSTAINABILITY THROUGH CONNECTIVITY FOR RESILIENT ASEAN SEAS

ACB EAS Congress 2024 Parallel Session

06 November 2024 | 14:30 – 17:30

DR. VINCENT V. HILOMEN

Consultant to fisheries and biodiversity projects

QUESTION & ANSWER SEGMENT

Session 2:
Connectivity for Resilient ASEAN Seas

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ACB EAS Congress 2024 Parallel Session

06 November 2024 | 14:30 – 17:30

SAPAWAN PONLABOOT (PLOY)

Project manager and Policy advocate
Global Youth Biodiversity Network (GYBN) Thailand,

2023 ASEAN Youth Biodiversity Programme

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WOW 2024厦门国际海洋周 World Ocean Week in Xiamen

The role of youth organizations in coastal and marine conservation and fisheries management

Seaweed Development Projects

Sapawan Ponlaboot
Policy Advocate
Global Youth Biodiversity Network Thailand (GYBN Thailand)

WORLDVIEW
CLIMATE FOUNDATION

"To Reduce Carbon Emissions in support of the Paris Climate Agreement, UN Sustainable Development Goals and combating climate change using most cost-effective climate solution."

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MOU 3 parties:
WCF, WIF and Department of Fisheries

MOU:
WCF and Department of Marine and Coastal Resources

MOU:
WCF and The Federation of Thai Industries in October 2023

OUR PROJECT'S GOAL

To support fishing communities in generating income from sustainable seaweed farming, including promoting responsible environmental restoration, conservation, and actions.

WORLDVIEW
CLIMATE FOUNDATION

Partnership on Biofuel

Algae Seminars with Department of Fisheries

Exchanging knowledge, experiences and resources in pushing/driving the development of seaweed in Thailand.

Thailand's Algae Researches Meetings

Khung Kraben Bay Royal Development Study Center
Film a documentary about seaweed in Thailand

KICK OFF Seaweed Cultivation Pilot Project
with the Department of Fisheries in 3 provinces Phetchaburi, Chanthaburi, and Krabi

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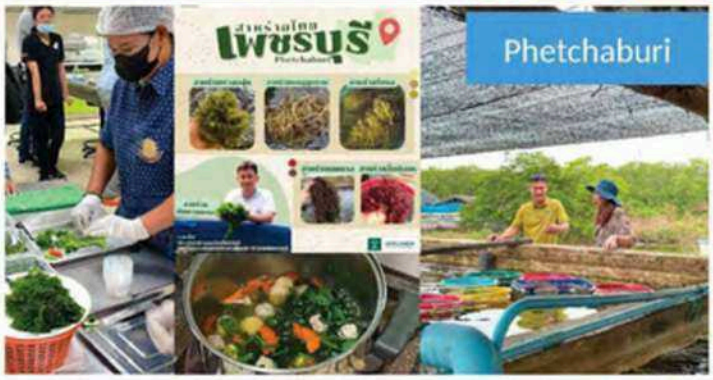
WORLDVIEW FOUNDATION

Chanthaburi

Farmer site in Krabi



Phetchaburi


Laem Sak fishing community livelihoods
Alternative
Floating raft: Many species are raised in the same area. Similar to the IMTA farming system
Fish
Shrimp
Shells
Oyster
Seaweed
Lobster
Fishes

Content Creator Training

WCF together with the ENVIRONMAN x Prateeptham Islamic Foundation School

TIKTOK

Encourage students with interest in creating media.

- PLAGIARISM & MEDIA LITERACY
- PRE-POST PRODUCTION
- SHORT VIDEO

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65+ National chapters
4 Regional chapter

50+ Ground projects
210+ Scholarships for youth delegation

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WHAT WE DO

In Thailand

Policy Advocacy | **Capacity** | **Build Network**

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ue Synergy for a Shared Future:
ustainable and Resilient Ocean

and still

going!

The Children and Youth Environmental Survey (CYES) found that,

- 74% believed that the decline in biodiversity had a significant impact on the lives of children and youth
- 87% were concerned about environmental issues in Thailand.

OUR VISION FOR YOUTH INDICATOR AND MEANINGFUL YOUTH ENGAGEMENT

Youth participation mechanisms

Identifying ways to ensure youth participation

Empowering youth

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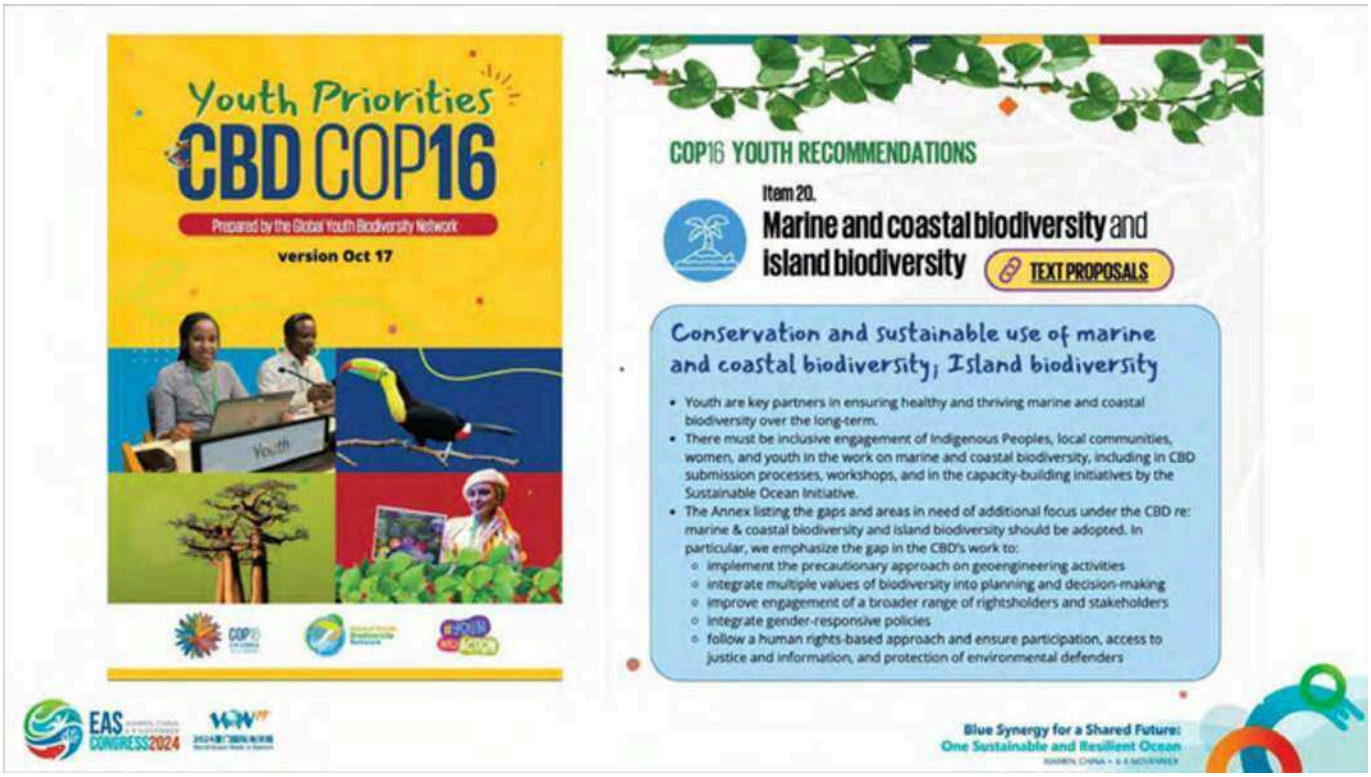

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QUESTION & ANSWER SEGMENT

Session 3:
Youth for Sustainable ASEAN Seas

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ASEAN CENTRE FOR BIODIVERSITY

ACHIEVING SUSTAINABILITY THROUGH CONNECTIVITY FOR RESILIENT ASEAN SEAS

PANEL DISCUSSION

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ACHIEVING SUSTAINABILITY THROUGH CONNECTIVITY FOR RESILIENT ASEAN SEAS

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