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

6-8 NOVEMBER 2024 • XIAMEN CITY, CHINA

SUBTHEME 2.10
GLOBAL CHALLENGES, LOCAL SOLUTIONS

Achieving Sustainability through Connectivity for Resilient ASEAN Seas

PROCEEDINGS

CONVENER:

ASEAN CENTRE FOR BIODIVERSITY

中华人民共和国自然资源部
Ministry of Natural Resources of the People's Republic of China

厦门市人民政府
Xiamen Municipal People's Government

PEMSEA

East Asian Seas (EAS) Congress 2024

Parallel Session:
Achieving Sustainability through Connectivity for Resilient ASEAN Seas

PROCEEDINGS

06 November 2024

Session Title: Achieving Sustainability through Connectivity for Resilient ASEAN Seas

Date and Time: 06 November 2024 | 14:30–17:30 (GMT+8)

Venue/Platform: 2E02 VIP Room, 2/F, Xiamen International Conference Center
Xiamen, Fujian, People's Republic of China

Convening Organization(s): ASEAN Centre for Biodiversity (ACB)

Partner Organizations: Partnerships in Environmental Management for the Seas of East Asia (PEMSEA)

Session Coordinator: Angelica De Castro, ardecastro@aseanbiodiversity.org

8th East Asian Seas Congress

Blue Synergy for a Shared Future:

One Sustainable and Resilient Ocean

Achieving Sustainability through Connectivity for Resilient ASEAN Seas

06 November 2024 | 14:30–17:30 (GMT+8)

2E02 VIP Room, 2/F, Xiamen International Conference Center

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1.0 INTRODUCTION

In the ASEAN region, marine conservation has historically lagged behind global biodiversity targets. By the end of the Aichi Biodiversity Targets period, only 4% of the region's coastal and marine areas were protected, far below the 10% goal. This gap poses significant challenges as ASEAN moves toward the more ambitious Kunming-Montreal Global Biodiversity Framework (KM GBF), adopted during the 15th Conference of Parties to the UN Convention on Biological Diversity in December 2022. Central to this framework is Target 3, the "30x30" goal, which seeks to conserve at least 30% of the world's lands and waters by 2030. For ASEAN, achieving this target demands intensified regional cooperation and innovative conservation strategies.

The KM GBF, with its 23 comprehensive targets, aims to address past shortcomings and accelerate progress through a whole-of-government and whole-of-society approach. To realize the "30x30" target, ASEAN Member States (AMS) must focus on expanding conserved and protected marine areas, strengthening transboundary partnerships, and enhancing the health of coastal ecosystems. The ASEAN Centre for Biodiversity (ACB) plays a vital role in these efforts, spearheading initiatives that promote collaborative management of marine protected areas (MPAs), MPA networks, and marine corridors using

ecosystem-based management, marine spatial planning, and integrated coastal management.

To amplify ASEAN's commitment to the KM GBF and foster dialogue on marine conservation, the ACB organized a session titled "Achieving Sustainability through Connectivity for Resilient ASEAN Seas" during the East Asian Seas (EAS) Congress 2024. Held on 6 November 2024, this event aligned with the Congress's theme, "Blue Synergy for a Shared Future: One Sustainable and Resilient Ocean." The session served as a platform to exchange knowledge, share best practices, and strengthen regional and cross-sectoral collaboration to advance ocean sustainability.

The session aimed to:

1. Showcase ASEAN's contributions to the KM GBF 30x30 target through regional case studies and ongoing conservation efforts.
2. Facilitate the exchange of strategies and best practices in marine biodiversity conservation among AMS and East Asian counterparts.
3. Highlight the pivotal role of youth in driving innovation and sustainability in marine conservation.

Target participants included government officials, marine and fisheries experts, NGOs, academicians, and youth leaders, fostering a multi-stakeholder approach to conservation. Presentations highlighted successful initiatives in MPAs and transboundary governance while emphasizing the importance of ecological connectivity and inclusive governance to enhance marine ecosystem resilience. The session also underscored the contributions of youth as agents of change, showcasing their leadership in sustainable practices and conservation advocacy.

Aligned with broader ocean sustainability goals, the event explored innovative strategies to meet ASEAN's marine protection targets and foster cross-sectoral partnerships. By facilitating knowledge sharing, capacity building, and collaboration, the session contributed to advancing ASEAN's marine

conservation efforts while addressing global challenges through localized solutions.

2.0 OPENING CEREMONY

The Opening Ceremony of the parallel session "Achieving Sustainability through Connectivity for Resilient ASEAN Seas" commenced with a warm welcome from the Master of Ceremonies, Ms. Angelica de Castro, the Programme Officer for Coastal and Marine at the ASEAN Centre for Biodiversity (ACB).

Ms. de Castro outlined the session's agenda, which featured a series of expert presentations aimed at deepening understanding and fostering collaborative approaches to marine biodiversity conservation. She highlighted the structure of the program, consisting of three focused sessions, each designed to provide valuable insights into achieving sustainability through enhanced connectivity. Participants were informed that questions would be addressed at the end of each session, ensuring an interactive and engaging environment for knowledge exchange.

Ms. de Castro emphasized the importance of the panel discussion scheduled for the end of the program, inviting participants to actively contribute their perspectives and queries to enrich the discourse.

3.0 SESSION HIGHLIGHTS

3.1 SESSION 1: ACHIEVING SUSTAINABILITY IN THE ASEAN SEA

3.1.1 Towards Successful MPA and MPA Network Management in The Asean Region

By Dr. Suchana “Apple” Chavanich
Professor, Chulalongkorn University, Bangkok, Thailand

Dr. Suchana Chavanich, Professor at Chulalongkorn University, Bangkok, Thailand, presented a compelling case for urgent action to

address the challenges facing marine protected areas (MPAs) and MPA networks in the ASEAN region. The discussion underscored the critical need for sustainable tourism practices and robust marine conservation efforts to safeguard the region's delicate marine ecosystems, which are increasingly at risk due to overpopulation, overfishing, and economic pressures. She emphasized that ocean conservation must be seen as both a shared responsibility and a lasting legacy for future generations.

Significant Findings

Dr. Chavanich highlighted the dual pressures of tourism and overfishing, which have led to significant declines in fish populations and ecosystem health. In many tourism-dependent areas, economic priorities often overshadow the long-term benefits of conservation, creating an imbalance that jeopardizes sustainable development. She noted that increasing public awareness and building the capacity of local communities, particularly the youth, are critical to fostering a knowledgeable workforce capable of driving sustainable marine management.

The presentation also pointed to the pivotal role of effective communication in achieving conservation goals. Leveraging storytelling, social media, and strong partnerships can help amplify awareness and galvanize support for marine conservation efforts across the globe.

Recommendations

Dr. Chavanich outlined actionable strategies to enhance MPA and MPA network management in the ASEAN region as follows:

- *Expand public engagement.* Employ science communication, storytelling, and social media to build widespread awareness and community involvement in conservation efforts.
- *Strengthen local capacity.* Develop the skills and knowledge of local communities to empower them in managing MPAs sustainably, with a focus on youth involvement.
- *Enhance MPA effectiveness.* Foster collaboration among international networks and local stakeholders to improve MPA management, supported by stronger regulatory frameworks and enforcement mechanisms.

Alignment with SDGs and Regional Targets

The presentation's themes align closely with the United Nations Sustainable Development Goals (SDGs) and regional conservation priorities. Specifically, it supports:

- *SDG 14 (Life Below Water):* By addressing overfishing, promoting ecosystem preservation, and advocating for effective MPA management.
- *SDG 8 (Decent Work and Economic Growth):* By advocating sustainable tourism practices that balance economic growth with conservation.
- *SDG 17 (Partnerships for the Goals):* Through its emphasis on collaboration across nations, sectors, and communities.

Regionally, the recommendations resonate with ASEAN's Blueprint on sustainable tourism and climate action, the Coral Triangle Initiative's fisheries and MPA goals, and frameworks such as Regional Fisheries Management Organizations and youth engagement programs. These connections underscore the importance of a united approach to marine conservation in the

ASEAN region, ensuring that environmental protection and sustainable development progress hand in hand.

Dr. Chavanich's presentation serves as a call to action for governments, communities, and stakeholders to work together in protecting the invaluable marine resources of the ASEAN region for generations to come.

3.1.2 Trans-Boundary Ocean Program in Indonesia and Timor-Leste

By Ketut Putra, Senior Advisor, Transboundary Ocean Program Conservation International Asia Pacific Field Division, Indonesia

Mr. Ketut Putra, Senior Advisor for the Transboundary Ocean Program at Conservation International Asia Pacific Field Division, Indonesia, presented an insightful discussion on the critical role of cross-border collaboration in managing shared marine ecosystems between Indonesia and Timor-Leste. This session emphasized the significance of fostering partnerships, engaging local stakeholders and youth, and investing in regional science to ensure the health and resilience of the Lesser Sunda Seascape.

Significant Findings

Mr. Putra underscored the transboundary nature of key marine species, such as whale sharks and green turtles, whose migratory patterns traverse national boundaries. Their conservation demands cooperative management approaches that transcend political borders. The project focuses on prioritizing technical collaboration over politics, fostering an MPA network that not only enhances conservation outcomes but also supports sustainable blue economy opportunities in the Indonesia-Timor-Leste border areas.

A standout aspect of the program is its emphasis on community-driven science and capacity building. Local leadership is cultivated

through initiatives like the Transboundary Ocean Jamboree, which integrates traditional knowledge and empowers youth to play a pivotal role in marine conservation. These efforts exemplify the project's commitment to fostering local ownership and resilience in conservation endeavors.

Recommendations

Mr. Putra proposed a series of strategies to enhance the program's impact:

- *Establish a transboundary science hub.* This hub would facilitate collaborative decision-making, build trust among communities, and serve as a repository for shared scientific knowledge.
- *Promote politically neutral, science-driven collaboration.* By focusing on technical solutions, the program can maintain stability and ensure effective conservation management. Youth engagement initiatives, like the Transboundary Ocean Jamboree, were recommended to nurture future conservation leaders.
- *Leverage storytelling for alignment with economic interests.* Highlighting the tangible benefits of conservation, such as job creation and sustainable investment opportunities, can align conservation goals with local economic priorities.

Alignment with SDGs and Regional Targets

The program's objectives align closely with multiple United Nations Sustainable Development Goals (SDGs), including:

- *SDG 14 (Life Below Water):* By addressing marine biodiversity conservation through transboundary efforts.
- *SDG 17 (Partnerships for the Goals):* Through its emphasis on cross-border collaboration and stakeholder engagement.

- *SDG 8 (Decent Work and Economic Growth):* By promoting sustainable blue economy initiatives.
- *SDG 13 (Climate Action):* By integrating climate resilience into ocean management strategies.

Regionally, the program supports initiatives such as the Coral Triangle Initiative and ASEAN conservation goals, both of which prioritize collaborative approaches to marine biodiversity conservation and sustainable resource management.

In conclusion, Mr. Putra's presentation highlighted the transformative potential of transboundary collaboration in marine conservation. By integrating science, community engagement, and regional partnerships, the Trans-Boundary Ocean Program sets a benchmark for cooperative management of shared marine resources, ensuring the long-term health and sustainability of the Lesser Sunda Seascape.

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

By Nygiel Armada, PhD
Chief of Party, USAID Fish Right Program
Hamburg University, Germany

Dr. Nygiel Armada, Chief of Party of the USAID Fish Right Program and affiliated with Hamburg University, Germany, presented an engaging discourse on the evolution of MPA networks in the Philippines. The presentation highlighted the strategic balance between scientific research and development work in creating well-connected MPA networks. These networks integrate ecological principles, rigorous scientific research, and local knowledge, serving as a robust tool for improving fisheries management and enhancing marine conservation efforts.

Significant Findings

Dr. Armada provided compelling evidence of the effectiveness of MPAs, citing increased fish catch, larger species, and spillover effects that benefit nearby fishing communities. The co-management approach—collaboratively implemented by non-governmental organizations (NGOs), local communities, and the government—was emphasized as the foundation of successful MPA management in the Philippines. Hydrodynamic and ecological studies have further ensured that MPA networks maintain connectivity and resilience.

The integration of scientific data with local knowledge has proven instrumental in achieving conservation goals. This approach was exemplified in the Calamianes Island Group, where locally tailored conservation strategies have yielded measurable improvements in marine biodiversity and fisheries management.

Recommendations

Mr. Armada outlined key recommendations to enhance MPA networks as tools for sustainable fisheries management:

- *Balance scientific research with development efforts.* Prioritize an integrated approach that leverages cutting-edge science alongside practical, community-driven development initiatives.
- *Design ecologically connected MPA networks.* Ground the design process in sound ecological principles while ensuring meaningful engagement with local communities to promote sustainable management practices.
- *Address governance challenges through collaboration.* Initiate bilateral collaborations to tackle governance issues, creating a solid foundation for expanding efforts to regional cooperation.

Alignment with SDGs and Regional Targets

The development and management of MPA networks align closely with multiple Sustainable Development Goals (SDGs):

- *SDG 14 (Life Below Water):* By conserving marine ecosystems and promoting sustainable fisheries.
- *SDG 1 (No Poverty) and SDG 2 (Zero Hunger):* By enhancing food security and livelihoods for coastal communities through improved fisheries.
- *SDG 17 (Partnerships for the Goals):* Through its collaborative co-management model, which fosters partnerships among NGOs, local communities, and government agencies.

Regionally, the approach supports the Philippines' commitments to sustainable fisheries and marine conservation while contributing to global efforts to address biodiversity loss and ecosystem degradation.

In conclusion, Dr. Armada's presentation underscored the transformative potential of MPA networks as a dynamic tool for fisheries management in the Philippines. By balancing science with community engagement, these networks not only safeguard marine biodiversity but also enhance the livelihoods and food security of coastal communities, offering a model of sustainable marine resource management for other nations to follow.

3.2 SESSION 2: CONNECTIVITY FOR RESILIENT ASEAN SEAS

3.2.1 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, PhD
ASEAN ENMAPS Project Manager and Chief Technical Adviser

Dr. Sheila G. Vergara, Project Manager and Chief Technical Adviser of the ASEAN ENMAPS Project at the ASEAN Centre for Biodiversity, delivered an in-depth presentation on the goals, progress, and future directions of the ASEAN ENMAPS Project. The project champions marine conservation through interconnected MPA networks, addressing ecological and socio-economic challenges with science-driven and inclusive strategies. It reflects ASEAN's unwavering commitment to the sustainable management of marine ecosystems, achieved through robust regional collaboration.

Significant Findings

Dr. Vergara detailed the critical challenges facing marine ecosystems in the ASEAN region, including habitat loss, overexploitation of marine resources, and gaps in governance frameworks. To address these issues, the project has made significant strides in establishing foundational governance structures, preparing pilot sites, and forming strategic partnerships with organizations such as PEMSEA (Partnerships in Environmental Management for the Seas of East Asia) and Global Fishing Watch.

The presentation highlighted the transformative potential of community engagement, with 1,750 community members actively participating in conservation efforts. The implementation of blue economy demonstration projects further strengthens the project’s impact by showcasing sustainable practices that balance environmental and economic goals. These initiatives aim to drive lasting change in the way marine resources are conserved and utilized across the ASEAN region.

Recommendations

To ensure the long-term success of the ASEAN ENMAPS Project, Dr. Vergara proposed several key strategies:

- *Enhance financial sustainability.* Develop mechanisms that ensure consistent funding for conservation efforts, including public-private partnerships and sustainable financing models.
- *Invest in community-based livelihoods.* Promote livelihood opportunities that align with conservation objectives, empowering local communities while reducing resource exploitation pressures.
- *Strengthen regional collaboration.* Address transboundary challenges through coordinated efforts among ASEAN member states, leveraging shared resources and expertise.
- *Expand institutional capacities.* Build governance capabilities and enhance knowledge-sharing platforms to replicate and scale successful conservation models.

Alignment with SDGs and Regional Targets

The ASEAN ENMAPS Project aligns with multiple Sustainable Development Goals (SDGs):

- *SDG 14 (Life Below Water):* By promoting the sustainable use of marine ecosystems through well-managed and connected MPAs.
- *SDG 13 (Climate Action):* By enhancing the resilience of marine ecosystems and communities against climate change impacts.
- *SDG 8 (Decent Work and Economic Growth):* Through the promotion of sustainable tourism and livelihood opportunities.
- *SDG 17 (Partnerships for the Goals):* By fostering collaboration at global, regional, and local levels to achieve conservation goals.

Regionally, the project supports ASEAN's priorities for sustainable tourism, biodiversity conservation, and community empowerment. It complements initiatives such as the Coral Triangle Initiative and Regional Fisheries Management Organizations (RFMOs), reinforcing efforts to safeguard marine biodiversity and ensure the sustainable use of marine resources.

Dr. Vergara's presentation showcased the ASEAN ENMAPS Project as a vital mechanism for addressing marine conservation challenges in the ASEAN region. By combining science, governance, and community engagement, the project not only fosters sustainable development but also exemplifies a model of inclusive and collaborative marine resource management.

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

By Vincent V. Hilomen, PhD
Regional Fisheries Adviser, ASEAN ENMAPS Project,
ASEAN Centre for Biodiversity

Dr. Vincent V. Hilomen, Regional Fisheries Adviser for the ASEAN ENMAPS Project at the ASEAN Centre for Biodiversity, presented an insightful overview of the project's ecological connectivity approach. The discussion underscored the vital role of connectivity in sustaining marine biodiversity, replenishing fish stocks, and ensuring ecosystem health. By managing MPA networks across borders, the ASEAN ENMAPS initiative emphasizes the interconnectedness of marine ecosystems, supporting regional food security, biodiversity conservation, and economic resilience.

Significant Findings

Dr. Hilomen shared groundbreaking findings from the project's research on larval dispersal and ecological processes. The study

revealed strong larval retention within national MPA networks, which ensures localized population replenishment. However, it also highlighted significant larval exports between nations, demonstrating the ecological interdependence of marine ecosystems across ASEAN. Seasonal monsoons further influence larval dispersal patterns, connecting the marine ecosystems of the Philippines, Malaysia, Vietnam, and Indonesia through shared natural processes.

A critical takeaway was the importance of habitat quality in maintaining ecological connectivity. Degraded habitats fail to support larval settlement, threatening the success of marine conservation efforts. This finding underscores the urgency of targeted restoration and protection initiatives to sustain the benefits of connectivity in MPA networks.

Recommendations

Dr. Hilomen outlined strategic recommendations to enhance the effectiveness of MPA networks in the ASEAN region:

- *Identify and manage high-connectivity areas:* Prioritize safeguarding key spawning grounds and ensuring sufficient spawning stock biomass to support ecological connectivity.
- *Restore degraded habitats:* Focus on restoring settlement habitats to attract juvenile populations and sustain seasonal replenishment cycles.
- *Strengthen regional cooperation:* Foster collaborative efforts among ASEAN nations to address shared ecological challenges, optimise biodiversity conservation, and enhance the resilience of MPA networks across national boundaries.

Alignment with SDGs and Regional Targets

The ecological connectivity approach aligns with multiple Sustainable Development Goals (SDGs) and regional priorities:

- *SDG 14 (Life Below Water):* By promoting the sustainable management of marine resources and protecting biodiversity through connected MPA networks.
- *SDG 2 (Zero Hunger):* By contributing to food security through replenished fish stocks and healthy ecosystems.
- *ASEAN Regional Targets:* The project supports ASEAN's goals for biodiversity conservation, sustainable marine resource governance, and climate resilience, strengthening the ecological and socio-economic foundations of the region.

In conclusion, Dr. Hilomen's presentation highlighted the pivotal role of ecological connectivity in achieving sustainable marine conservation in the ASEAN region. Through science-based strategies, targeted restoration, and strengthened regional collaboration, the ASEAN ENMAPS Project exemplifies a holistic approach to addressing environmental and socio-economic challenges. This integrated framework ensures the long-term health and resilience of marine ecosystems, contributing to both regional and global sustainable development goals.

3.3 SESSION 3: YOUTH FOR SUSTAINABLE ASEAN SEAS

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

By Ms. Sapawan Ponlaboot, Project Manager and Policy Advocate
Global Youth Biodiversity Network (GYBN) Thailand

Ms. Sapawan Ponlaboot, Project Manager and Policy Advocate for the Global Youth Biodiversity Network (GYBN) Thailand, delivered a compelling presentation on the critical role of youth organizations in coastal and marine conservation and fisheries management. Her discussion highlighted the importance of empowering young people to actively participate in biodiversity policy and environmental conservation initiatives, focusing on fostering collaboration and creating opportunities for meaningful engagement.

Key Message

Ms. Ponlaboot emphasized that youth organizations like GYBN are instrumental in advocating for youth representation in international environmental negotiations. By amplifying youth voices through initiatives such as the Thailand Local Youth Environmental Advocate Fellowship, GYBN equips young individuals with tools for policy advocacy and fosters partnerships with key stakeholders, enabling them to influence decisions and take action in biodiversity conservation and sustainable fisheries management.

Significant Findings

Findings from the **Children and Youth Environmental Survey (CYES)** revealed that environmental issues resonate deeply with Thai youth, with 87% expressing concern about environmental degradation and 74% recognizing the long-term impacts of biodiversity loss on future generations. Additionally, the recommendations from COP16 emphasized the importance of inclusive policymaking, particularly the need to involve marginalized youth groups, including indigenous peoples and disabled individuals, in environmental decision-making processes.

These insights underscore the readiness and willingness of young people to engage in conservation efforts while highlighting the gaps in

current systems that limit their participation. Youth-led initiatives such as the Seaweed Development Project demonstrate the potential for young individuals to drive impactful change when given the necessary tools and support.

Recommendations

Ms. Ponlaboot outlined several strategies to enhance youth participation in coastal and marine conservation and fisheries management:

- *Strengthen mechanisms for meaningful participation.* Develop frameworks that ensure youth voices are integrated into environmental policy-making processes, enabling their active contribution to decisions.
- *Promote inclusivity in policy frameworks.* Advocate for the inclusion of marginalised youth, such as indigenous and disabled groups, and create opportunities for green jobs to support youth-driven conservation initiatives.
- *Support youth-led initiatives.* Integrate youth projects like the Seaweed Development Project into formal conservation efforts to bridge the gap between policy and practice and scale successful approaches.

Alignment with SDGs and Regional Targets

Ms. Ponlaboot's presentation directly aligns with **SDG 14 (Life Below Water)** by promoting the sustainable management of marine and coastal ecosystems, particularly through youth-led initiatives like the Seaweed Development Project. It also supports **SDG 10 (Reduced Inequalities)** by advocating for the inclusion of marginalised groups in conservation efforts and decision-making processes.

At the regional level, the initiatives championed by GYBN contribute to ASEAN's targets for biodiversity protection, sustainable development, and fostering youth engagement in environmental governance.

In conclusion, Ms. Ponlaboot's presentation underscored the untapped potential of youth organizations in driving transformative change in coastal and marine conservation. By prioritizing inclusivity, empowering youth with advocacy tools, and integrating their initiatives into broader conservation strategies, the role of youth in environmental stewardship can be significantly amplified, ensuring a sustainable future for both marine ecosystems and the communities that depend on them.

3.4 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

Highlights:

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.

4.0 KEY OUTCOMES

4.1 MAIN CONCLUSIONS

The session underscored the urgent need for sustainable action to address the growing challenges faced by ASEAN's marine ecosystems. Balancing

economic development with marine conservation, particularly in tourism-dependent regions, emerged as a pressing priority. Overfishing and overpopulation continue to deplete biodiversity at alarming rates, highlighting the necessity for collective responsibility and immediate intervention to safeguard marine resources for future generations.

MPAs were recognized as a cornerstone of marine conservation, with their success hinging on fostering community involvement, leveraging scientific research, and ensuring effective governance. Establishing well-connected MPA networks not only enhances biodiversity and fishery benefits but also promotes regional collaboration by linking ecological systems across national boundaries.

The session emphasized the critical role of cross-border collaboration, as demonstrated in the transboundary efforts between Indonesia and Timor-Leste. Managing shared ecosystems effectively requires political neutrality, robust capacity-building, and regional science-driven partnerships to ensure project stability and long-term sustainability.

Strong scientific foundations and innovative communication strategies were identified as vital tools for bridging knowledge gaps, influencing policy decisions, and fostering public and youth engagement. By integrating science and effective storytelling, conservation efforts can be amplified to reach diverse audiences, creating widespread awareness and support for marine conservation.

Youth participation emerged as a transformative force for biodiversity preservation. By empowering young people through education, skills training, and inclusion in policymaking processes, they can become active leaders and advocates for long-term environmental sustainability. Initiatives like the Seaweed Development Project demonstrate the potential for youth-led efforts to contribute meaningfully to marine conservation.

Finally, the session highlighted the importance of inclusive and holistic approaches in conservation strategies. Integrating local knowledge, scientific expertise, and diverse perspectives—while ensuring equitable participation across genders and community groups—is essential for achieving sustainable and impactful outcomes. These inclusive strategies are not only aligned with global and regional targets but also reflect the shared commitment of ASEAN nations to building resilient and connected seas for generations to come.

4.2 ACTION POINTS

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.

4.3 PARTNERSHIPS AND COLLABORATIONS

The session highlighted the critical role of partnerships and collaborations in advancing marine conservation and fostering sustainability across the ASEAN region. Key regional and transboundary initiatives were discussed, emphasizing the importance of collective action in managing shared marine ecosystems.

One notable example is the **Transboundary Ocean Program** between Indonesia and Timor-Leste, which focuses on technical cooperation and the establishment of a transboundary MPA network. This collaborative effort aims to enhance conservation while promoting blue economy opportunities in the shared marine ecosystems of these countries. Through this initiative, both nations are working together to build resilient marine systems that benefit local communities and regional biodiversity.

The **ASEAN ENMAPS Project** stands as another exemplary model of regional cooperation. A collaboration between the ASEAN Centre for Biodiversity (ACB), the UNDP Bangkok Regional Hub, and national governments from the Philippines, Indonesia, and Thailand, the project integrates conservation initiatives across ASEAN. With support from the Global Environment Facility (GEF), PEMSEA, and Global Fishing Watch, the project is making significant strides in marine conservation. Looking ahead, ASEAN ENMAPS is open to expanding its network of collaborators, including the private sector, academic institutions, and other organizations, to further its impact.

International and organizational partnerships play a pivotal role in supporting these efforts. **Conservation International** contributes significantly to the Transboundary Ocean Program, working alongside local scientists and communities to ensure the sustainable management of

shared marine ecosystems. **UNDP**'s involvement in the ASEAN ENMAPS project ensures that the initiatives align with global biodiversity frameworks and contribute to the achievement of the SDGs. In addition, partnerships with national agencies, including Thailand's Ministry of Natural Resources, the Philippines' DENR, and Indonesia's Ministry of Environment and Forestry, provide vital financial and technical support for the projects.

Community and stakeholder engagement are central to these partnerships. Programs like the **Transboundary Ocean Jamboree** and **Local Youth Environmental Advocate Fellowship** play a key role in engaging youth across ASEAN, empowering them to take leadership roles in conservation and policy advocacy. Furthermore, integrating **local knowledge** into conservation strategies is vital, with collaborations involving local communities, fishers, and indigenous groups ensuring that traditional knowledge informs and enhances scientific efforts.

The session also underscored the importance of **cross-sector collaborations**. Partnerships with the **private sector** and **academia** are driving innovative research, technology development, and stakeholder engagement. Notable collaborations include the development of larval dispersal modelling, which helps in understanding ecological connectivity and informs MPA network design. These cross-sector efforts are instrumental in advancing the sustainability and resilience of ASEAN's marine ecosystems.

4.4 COMMITMENTS AND FOLLOW-UP ACTIVITIES

Throughout the session, the participants made strong commitments to collective responsibility and urgent action to protect the region's marine ecosystems. The speakers emphasized the critical need to expand and strengthen MPAs through interconnected networks, guided by both scientific research and local knowledge. There was a clear consensus on the necessity of cross-border collaboration to ensure the sustainability of marine resources, with concrete commitments to initiatives like the

Transboundary Science Hub, which will support collaborative decision-making and foster trust among regional stakeholders.

A key commitment highlighted during the session was the launch of **youth engagement programs**, such as the **Transboundary Ocean Jamboree**, designed to inspire and involve youth in hands-on conservation activities, including diving and educational outreach. These initiatives aim to empower young people and foster long-term leadership in marine conservation. Additionally, the **Local Youth Environmental Advocate Fellowship** was emphasized as a critical platform for training youth in policy advocacy and project implementation, ensuring their active involvement in shaping conservation policies and actions.

Community engagement and inclusivity were central to the commitments made during the session. Participants underscored the importance of active involvement from local stakeholders, including marginalized groups and youth, in policymaking and conservation efforts. By integrating diverse voices, the goal is to ensure that conservation strategies are inclusive, equitable, and effective in addressing both ecological and socio-economic challenges.

The **ASEAN ENMAPS project** participants made significant commitments to scale up the establishment of MPAs, promote the Blue Economy, and create platforms for knowledge sharing. The project will prioritize building networks of MPAs and marine corridors, ensuring that management plans are in place for effective conservation. As part of these efforts, community members will be actively involved in key conservation activities such as monitoring and controlling illegal, unreported, and unregulated (IUU) fishing. To support these activities, six dialogues will be held with transboundary partners to strengthen collaborative management.

Furthermore, the development of an **ASEAN ENMAPS website** was committed to, which will serve as a central hub for project updates, educational resources, and stakeholder engagement. Workshops will also

be organized to bridge the gap between scientific research and policymaking, ensuring that evidence-based decision-making guides the region's conservation efforts.

Collectively, these commitments reflect a shared vision for long-term regional sustainability, grounded in robust scientific research, capacity building, and diverse expertise, all while prioritizing inclusive participation across all sectors. The ASEAN region’s commitment to these initiatives underscores the urgency of coordinated action for resilient, sustainable marine ecosystems.

5.0 RECOMMENDATIONS AND WAYS FORWARD

5.1 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.

5.2 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.

5.3 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.

5.4 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.

5.5 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.

5.6 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.

ANNEXES

ANNEX 1. SESSION AGENDA

Achieving Sustainability through Connectivity for Resilient ASEAN Seas
ACB EAS Congress 2024 Parallel Session
06 November 2024 | 14:30 – 17:30
2E02 VIP Room, 2nd Floor, XICC

Programme of Activities

Time	Item
14:30 – 15:00	Registration and AVP Presentations
15:05 – 15:05	Introduction
15:05 – 15:45	**SESSION 1: ACHIEVING SUSTAINABILITY IN THE ASEAN SEAS** 1. Towards Successful MPA and MPA Network Management in the ASEAN Region *By Dr. Suchana Apple Chavanich* *Professor, Chulalongkorn University, Bangkok, Thailand* 2. Is Borderless Nature Manageable? Transboundary Nature Peace Park between Indonesia and Timor-Leste in the Lesser Sunda Seascape *By Ketut Putra, Senior Advisor, Transboundary Ocean Program Conservation International Asia Pacific Field Division, Indonesia*

Time	Item
	3. MPA Network: Its Evolution Towards Becoming a Potent Tool in Managing Fisheries in the Philippines *By Nygiel Armada, PhD* *Chief of Party, USAID Fish Right Program* *Hamburg University, Germany*
15:45 – 15:55	OPEN FORUM
15:55 – 16:00	Wrap-up and introduction to Second Speaker
16:00 – 16:30	**SESSION 2: CONNECTIVITY FOR RESILIENT ASEAN SEAS** 1. An Overview of the ASEAN ENMAPS Project *By Sheila G. Vergara, PhD* *Project Manager and Chief Technical Adviser* *ASEAN ENMAPS Project, ASEAN Centre for Biodiversity* 2. The ENMAPS Approach: Understanding "Connectivity" in the ASEAN Marine Ecosystem *By Vincent V. Hilomen, PhD* *Regional Fisheries Adviser, ASEAN ENMAPS Project* *ASEAN Centre for Biodiversity*
16:30 – 16:40	OPEN FORUM
16:40 – 16:45	Wrap-up and introduction to Third Session
16:45 – 17:00	**SESSION 3: YOUTH FOR SUSTAINABLE ASEAN SEAS** The Role of Youth Organizations in Coastal and Marine Conservation and Fisheries Management *By Ms. Sapawan Ponlaboot, Project Manager and Policy Advocate, Global Youth Biodiversity Network (GYBN) Thailand*

Time	Item
17:05 – 17:10	OPEN FORUM
17:10 – 17:25	Panel Discussion Final Statements
17:25 – 17:30	Closing Announcements

ANNEX 2. PARTICIPANT INFORMATION

No	Name	Organization	Gender	Country
1	Ms. Claudia B. Binondo	ASEAN Centre for Biodiversity	F	Philippines
2	Ms. Angelica R. de Castro	ASEAN Centre for Biodiversity	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 Philippines	M	Indonesia
8	----	Institut Pertanian Bogor (IPB) University	M	Indonesia
9	Elnor Roa	Mindanao State University	F	Philippines
10	----	Mindanao State University	F	Philippines
11	Ruby C. Gonzales	Mindanao State University	F	Philippines
12	Wilson John Barbon	Conservation International Philippines	M	Philippines
13	Kristine Ramirez	Rare Philippines	F	Philippines
14	Aya Silva	Rare Philippines	F	Philippines
15	Margarita Caballa	United Nations Environment Programme - Coordinating Body on the Seas of East Asia	F	Thailand
16	Dennis Trinidad	De la Salle University	M	Philippines
17	Daniel Pejic	University of Melbourne	M	Australia
18	Delio Da Costa	Sustainable Ocean Alliance Timor-Leste	M	Timor-Leste

ANNEX 3. PRESENTATION MATERIALS

EAS CONGRESS2024 XIAMEN, CHINA 6-8 NOVEMBER

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

ASEAN CENTRE FOR BIODIVERSITY

ACHIEVING SUSTAINABILITY THROUGH CONNECTIVITY FOR RESILIENT ASEAN SEAS

ACB EAS Congress 2024 Parallel Session

06 NOVEMBER 2024 | 14:00 – 17:00

DR. SUCHANA CHAVANICH

2022 ASEAN Biodiversity Hero Thailand

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Towards Successful MPA and MPA network management in the ASEAN region

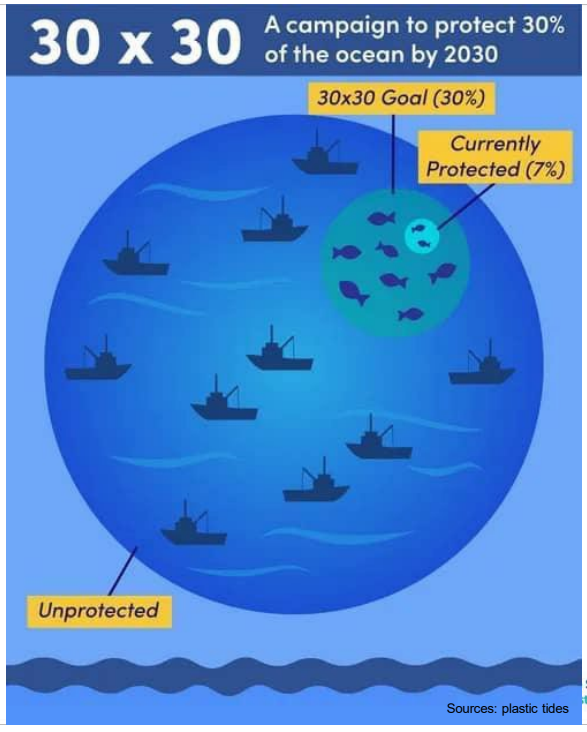
Suchana Apple Chavanich

Chulalongkorn University

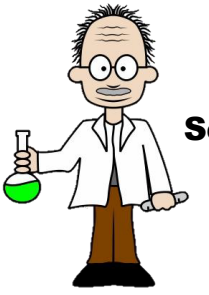
1958 -- 20 kg

1980 -- 9 kg

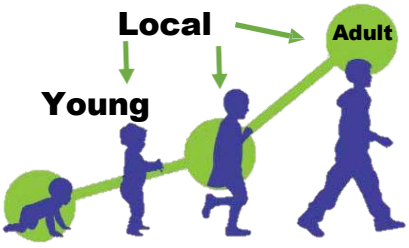
2007 -- 2 kg



Who need capacity building ???



Scientists



Private Sectors

NGO

Governmental Officers

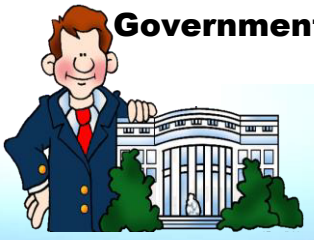


Photo credit: www.clipartpanda.com
www.how-to-draw-funny-cartoons.com

Being “Science Communicators”

Science

Science Communicators

Public

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

Photo credit: www.cdnsciencepub.com

Role Model

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

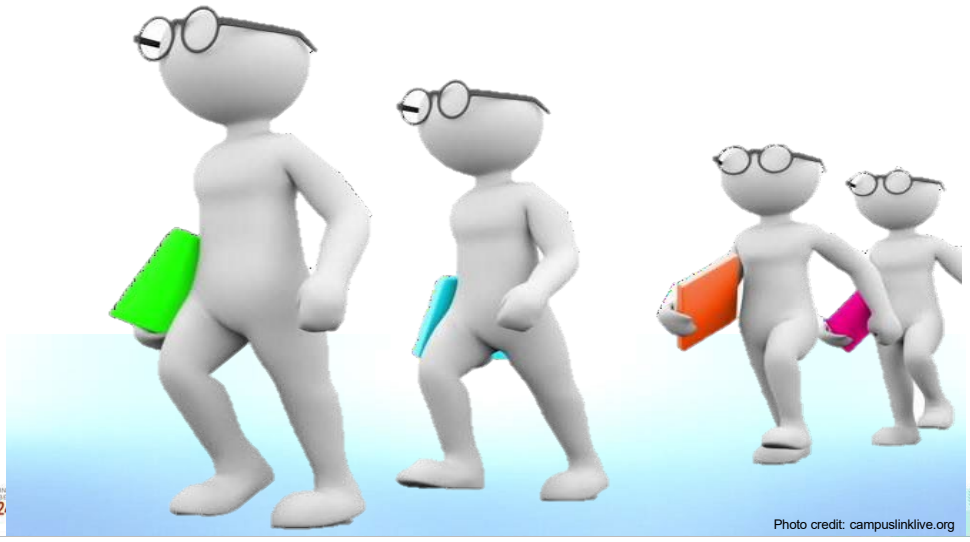


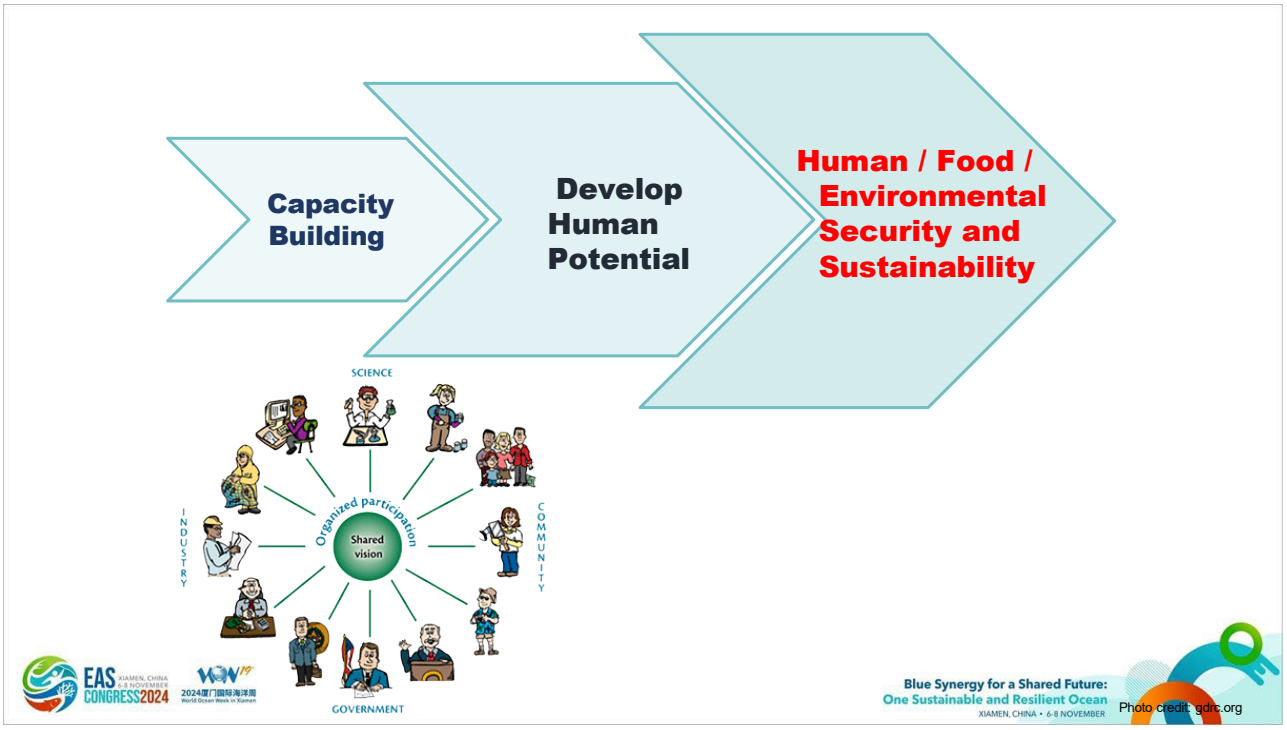
Photo credit: campuslinklive.org

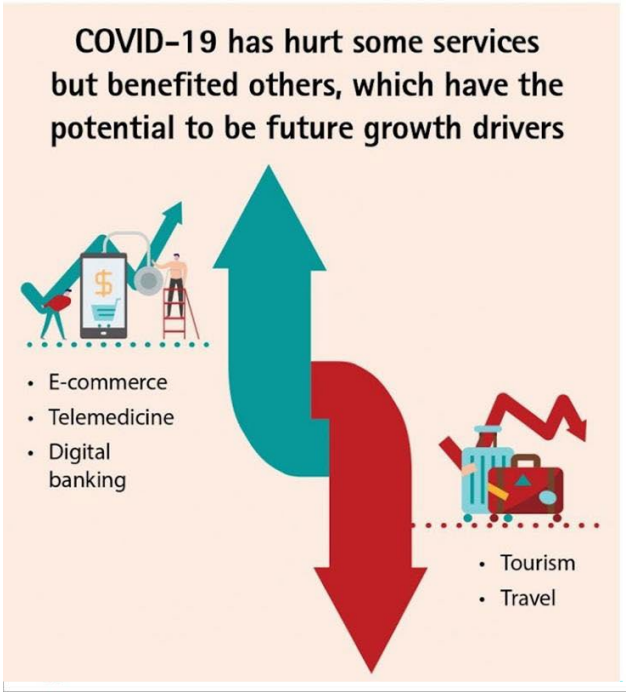
A new era of MPA management

Citizen Cyberscience

- Volunteer computing
- Volunteer thinking
- Passive Sensing

Source: Muki Haklay


Capacity Building
Develop Human Potential
Human / Food / Environmental Security and Sustainability
SCIENCE
INDUSTRY
COMMUNITY
GOVERNMENT
Organized participation
Shared vision
EAS CONGRESS2024
Blue Synergy for a Shared Future:
One Sustainable and Resilient Ocean
XIAMEN, CHINA • 6-8 NOVEMBER
Photo credit: gdrc.org


COVID-19 has hurt some services but benefited others, which have the potential to be future growth drivers
E-commerce
Telemedicine
Digital banking
Tourism
Travel


To secure long-term growth, the region must focus on five key areas
Resilient healthcare systems
Continuous training and upgrading
Constant innovation
Competitive business environments
Sustainable fiscal positions
Sources: AMRO

"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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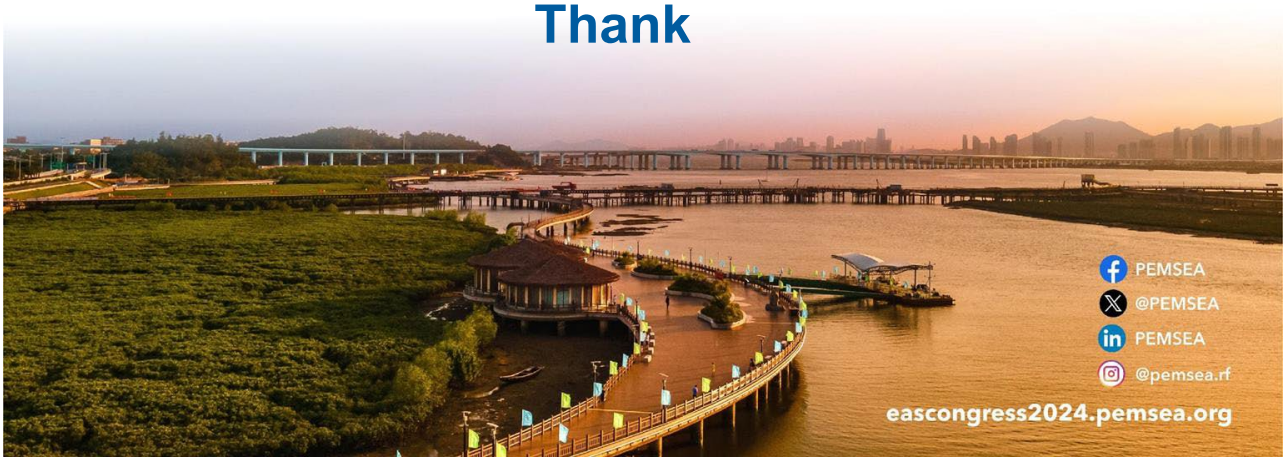
Thank



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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 | 14:00 – 17:00

EAS CONGRESS2024 XIAMEN, CHINA 6-8 NOVEMBER

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ACHIEVING SUSTAINABILITY THROUGH CONNECTIVITY FOR RESILIENT ASEAN SEAS

ACB EAS Congress 2024 Parallel Session

06 NOVEMBER 2024 | 14:00 – 17:00

MR. KETUT PUTRA

Senior Advisor
Transboundary Ocean Program

EAS CONGRESS2024 XIAMEN, CHINA 6-8 NOVEMBER

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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

23

Transboundary Nature Park

Collaborative Management of shared ecosystems

Video of the Transboundary Nature Park

Transboundary Nature Park

Collaborative Management of shared ecosystems

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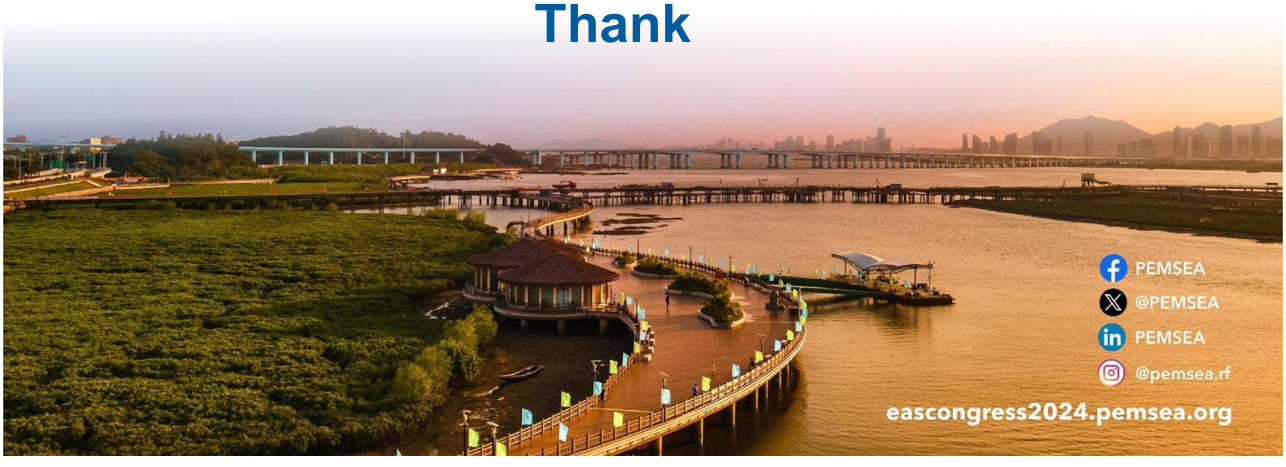
Thank



Progress to Date and Lessons

PROGRESS TO DATE

Focus on MPA Network, Fisheries and Tourism as the foundation for Blue Economy
Transboundary Science Hub
Youth leadership – Transboundary Ocean Jambore

LESSONS

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

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PROF. NYGIEL ARMADA

Chief of Party
USAID Fish Right Program

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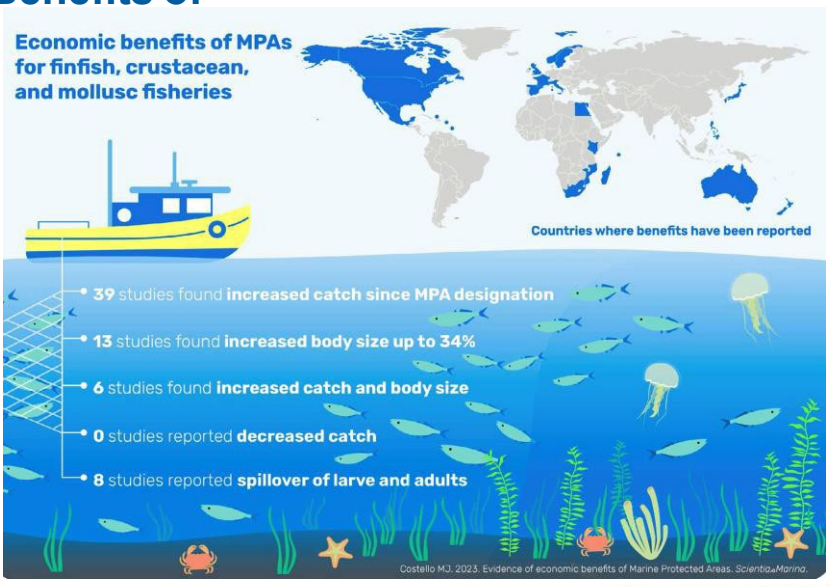
MPA Network:

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

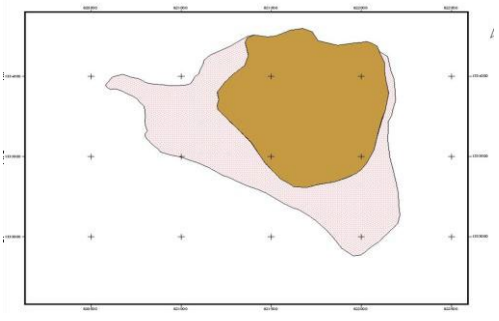
Nygiel Armada
Chief of Party
USAID Fish Right Program

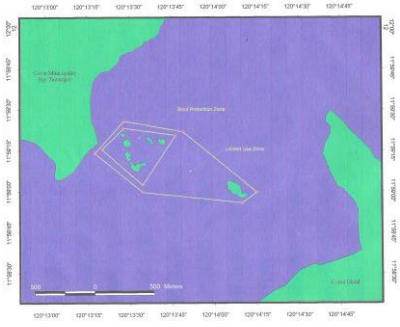
Economic Benefits of



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

How did this start?

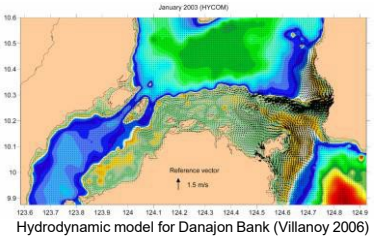




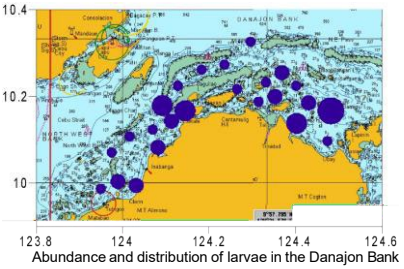
- Serve as the entry point for community participation in fisheries management
- Serve as laboratory for community's learning and appreciation of the principles of fisheries management
- Serve as common ground for co-management between community, NGOs, and government

Getting to understand connectivity with the help of

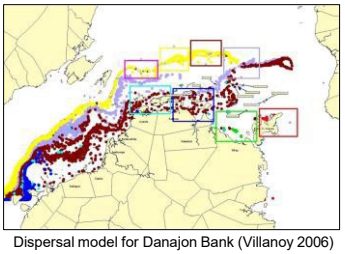
Establis s



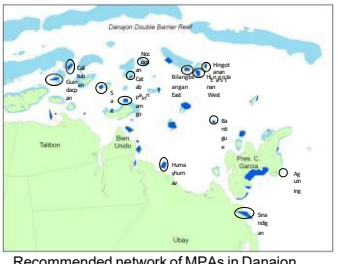
Hydrodynamic model for Danajon Bank (Villanoy 2006)



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



Dispersal model for Danajon Bank (Villanoy 2006)

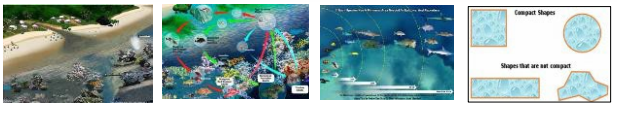


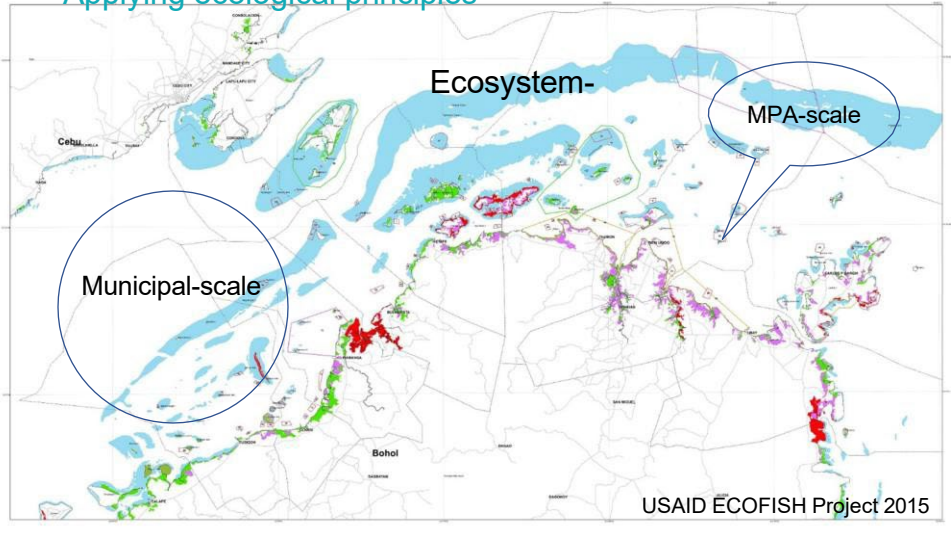
Recommended network of MPAs in Danajon Bank (FISH Project 2010)

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

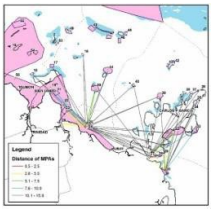
Putting in more science

Applying ecological principles



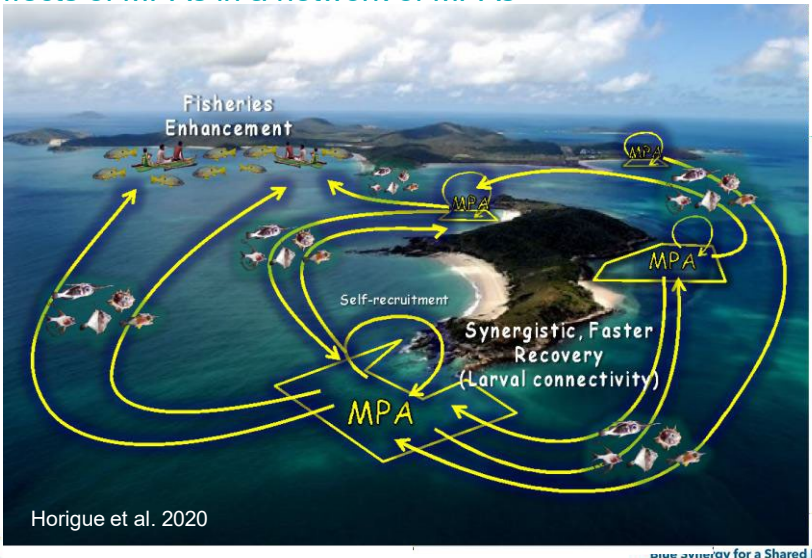


USAID ECOFISH Project 2015



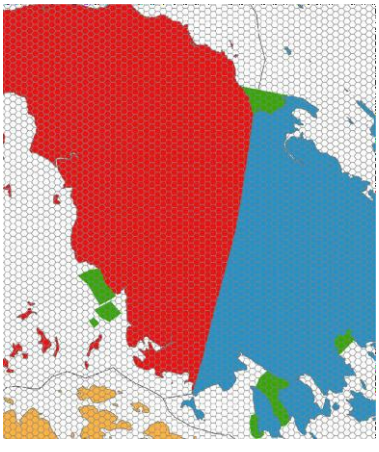
Pushing the envelope

Synergistic effects of MPAs in a network of MPAs



Horigue et al. 2020

Combining science and local knowledge



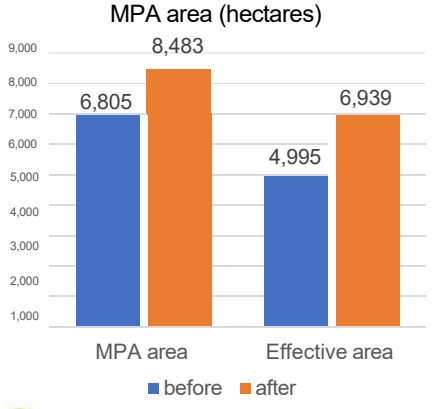
- Uses available data (spatial and non-spatial)
- Adapts to stakeholder inputs, validation, changes
- Can work with broader management plans
- Uses decision support tool (ex. Marxan)

Have this moved the dial?

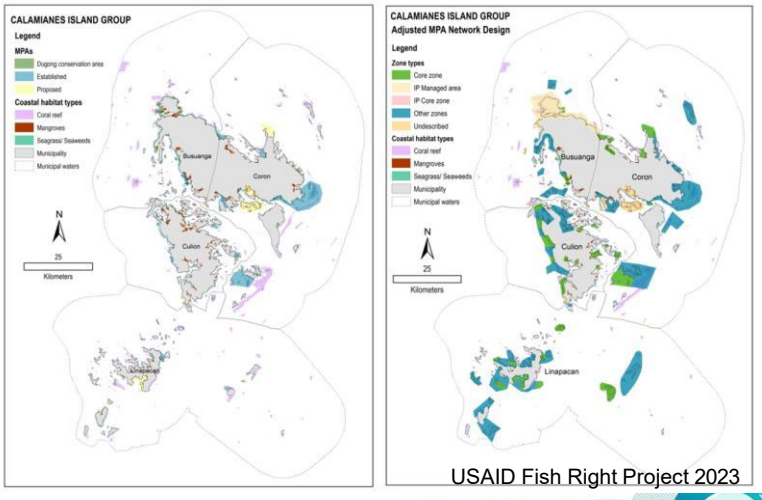
MPA Network Design in the Calamianes Island Group (CIG), Philippines

Habitat	Area (km^2)	Target (%)
Coral reefs	358	52
Mangroves	82	58
Seagrass beds	151	61

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



DEVELOPING MPAN DESIGN

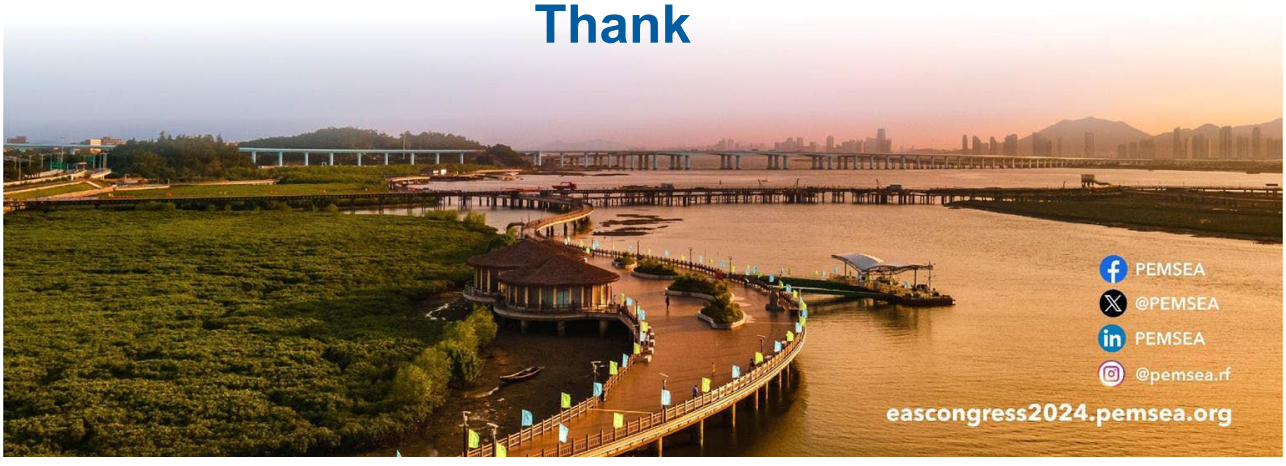


USAID Fish Right Project 2023

Remaining

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

Thank



QUESTION & ANSWER SEGMENT

Session 1:
Achieving Sustainability in the ASEAN Seas

EAS CONGRESS2024 XIAMEN, CHINA 6-8 NOVEMBER

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

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ACB EAS Congress 2024 Parallel Session

06 NOVEMBER 2024 | 14:00 – 17:00

DR. SHEILA G. VERGARA

Project Manager - Chief Technical Adviser
ASEAN ENMAPS

EAS CONGRESS2024 XIAMEN, CHINA 6-8 NOVEMBER

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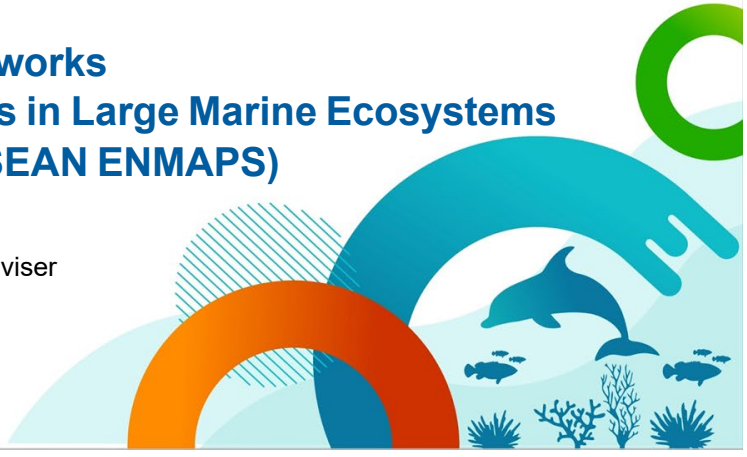
Project Overview

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

gef UNDP ASEAN CENTRE FOR BIODIVERSITY

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

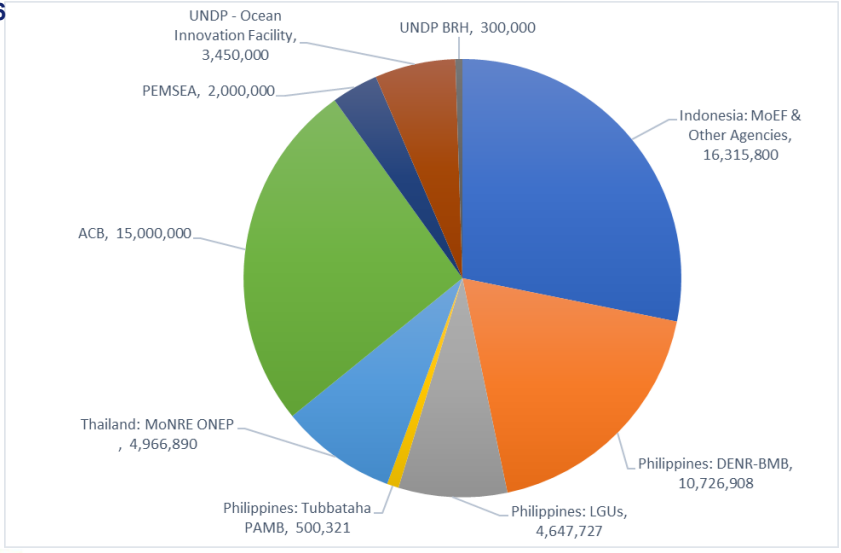
Total Budget:

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

GEF Implementing Agency:
UNDP Bangkok Region

Co-financing

USD 57,907646



Project Development

2019

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

7 ASEAN Member

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,

2021

15 Sep 2021: PIF Received by GEF

21 Dec 2021:

2022

PPG: Project Document

National Inception Meetings Regional

2023-2024

ProDoc Revision and Finalisation;

ASEAN

12 Dec 2023

PROJECT

2024 2029

Project Implementatio

01 March

28 Feb, 2029

CO-FINANCING NEGOTIATION

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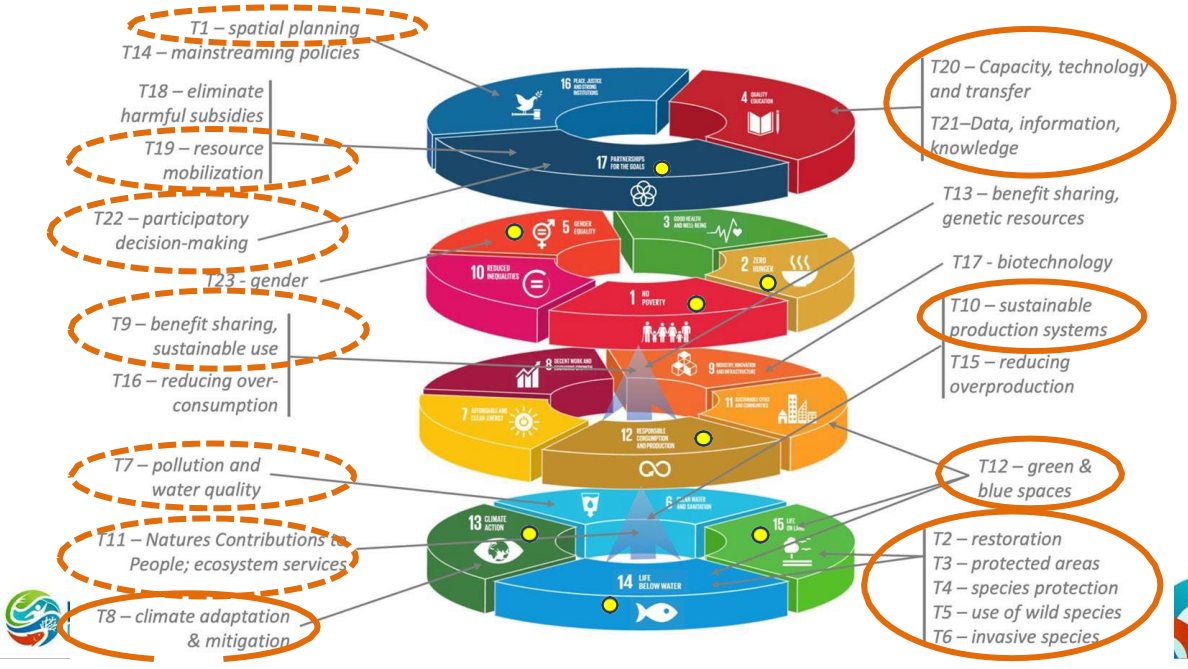
XIAMEN, CHINA • 6-8 NOVEMBER

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

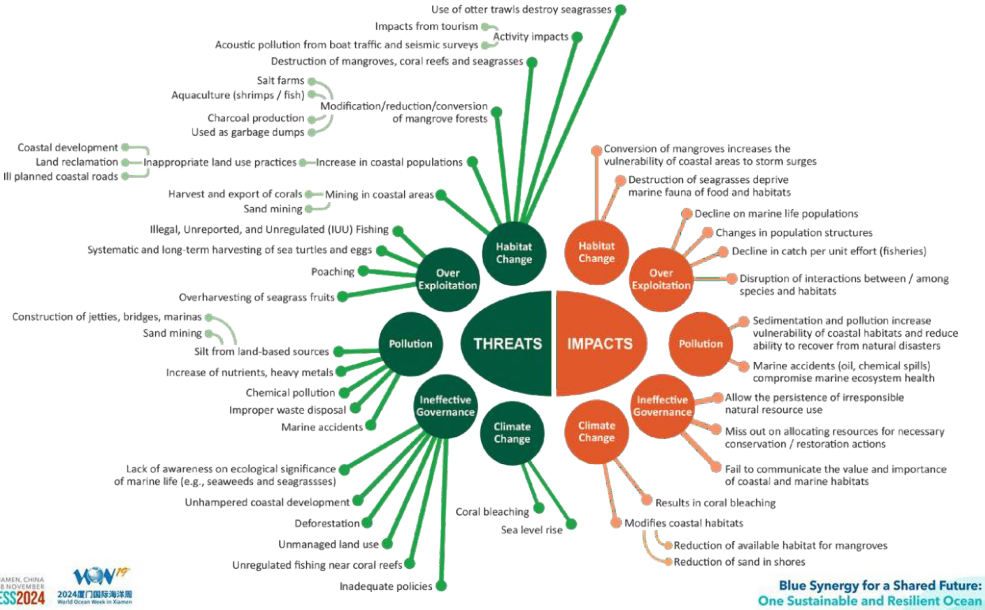
- Strategic Action Plans (SAPs);
- Transboundary Diagnostic Analysis (TDA)
- National Action Plans & other national priorities

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



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

BAY OF BENGAL LME

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

SULU-CELEBES SEA LME

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

INDONESIAN SEAS LME

Increased demand for fish from the industrial and artisanal fisheries

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

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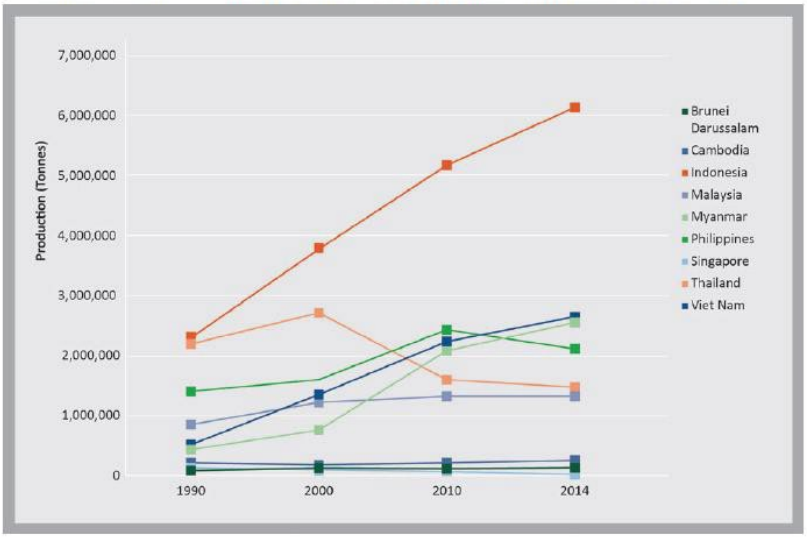
One Sustainable and Resilient Ocean
XIAMEN, CHINA • 6-8 NOVEMBER

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

Barriers to the Effective Management of Coastal and Marine Resources in the ASEAN Region

- **BARRIER 1**: Inadequate understancing of ecological and other linkages in coastal and marine ecosystems
- **BARRIER 2**: Insufficient investments in MPA management to maintain and expand coverage and build local capacities
- **BARRIER 3**: Financial and governance barriers to successfully implement area-based management
- **BARRIER 3**: Limited institutional capacities and sharing of knowledge, best practices, and lessons learned

- **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

Outputs → **Outcomes** → **Longer Term Outcomes** → **Impacts**

Causal Pathway 1
- Scientific studies and modelling
- Social and institutional analysis
- Potential MPA network configurations

Causal Pathway 2
- MPA management plans enhanced and priority actions implemented
- Integrated management approaches strengthened and implemented in at least one site per country
- Priority investment projects studied, developed, and pilot tested
- Enhanced sustainable livelihood initiatives

- Marine corridor management interventions designed and implementation initiated
- Marine corridor cooperation mechanisms identified and agreed upon

Causal Pathway 3
- Strengthened capacities in integrated marine ecosystem management
- KM strategy and action plan implemented
- IW:LEARN and IW portfolio-wide learning through cross LME exchanges, IW conference, workshops, and trainings
- Project implementation and results monitored, evaluated, and reported

Outcomes
- 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

Longer Term Outcomes
- 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

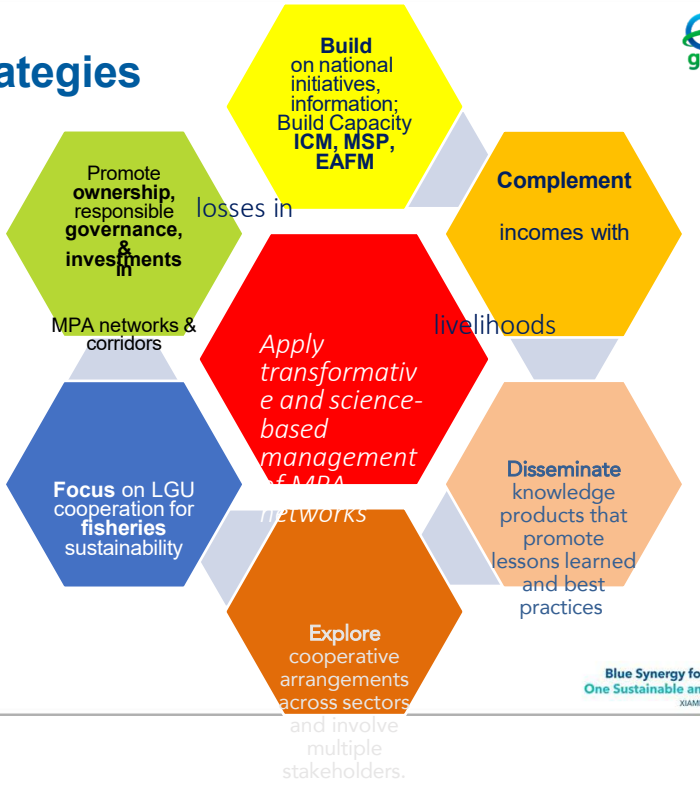
Impacts
- Biodiversity
- Climate Change
- Economy

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



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

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

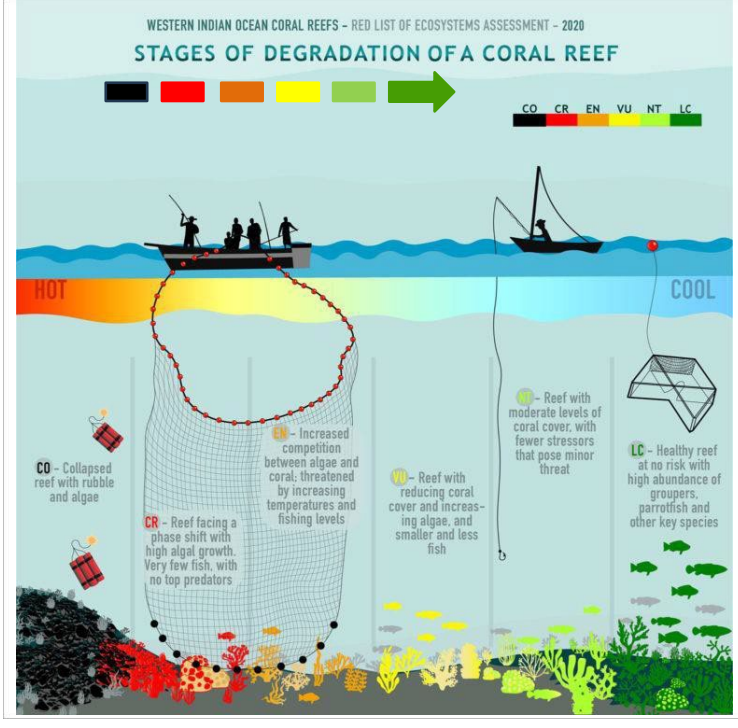
Component 1 aims to synthesise the marine, fisheries, and connectivity science behind the identified MPAs and determine the appropriate configurations of MPA networks in the four target LMEs.

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

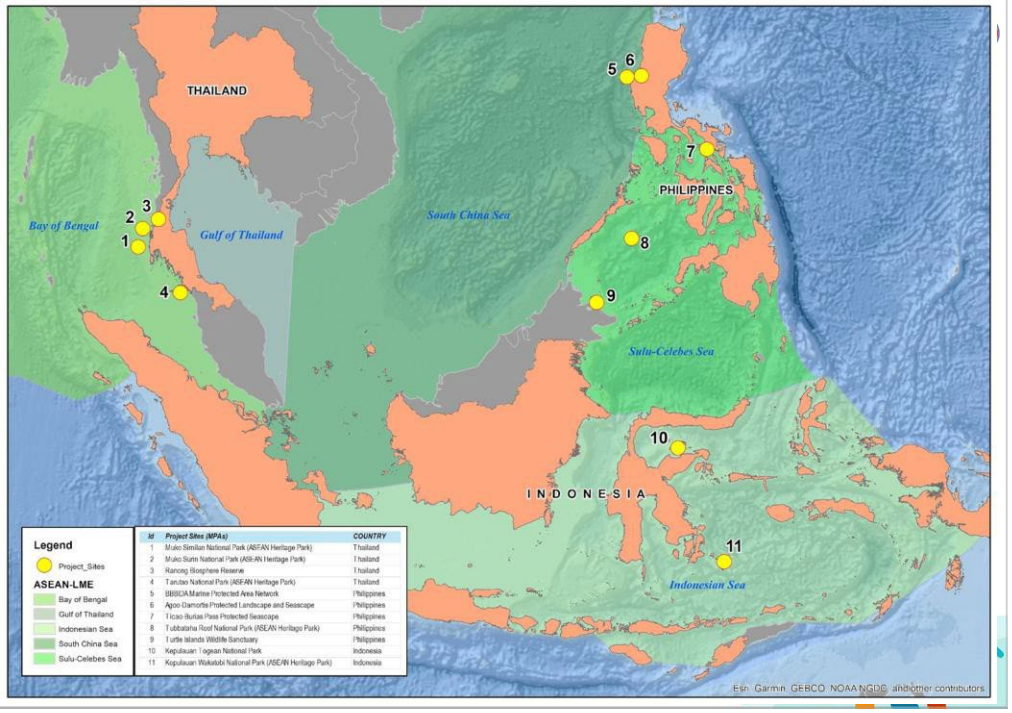
COMPONENT 3: Learning, knowledge management, and networking

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



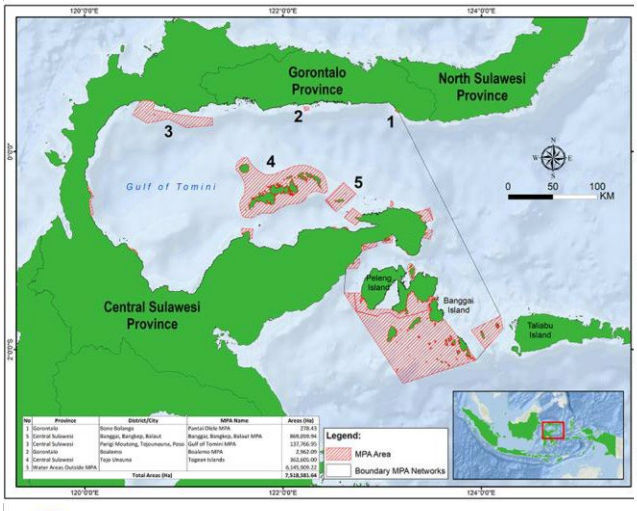
Pilot Site s


THAILAND
PHILIPPINES
INDONESIA
Bay of Bengal
Gulf of Thailand
South China Sea
Sulu-Celebes Sea
Indonesian Sea
Legend
Project_Sites
ASEAN-LME
Bay of Bengal
Gulf of Thailand
Indonesian Sea
South China Sea
Sulu-Celebes Sea
Id | Project Sites (MPAs) | COUNTRY
1 | Mu Ko Similan National Park (ASEAN Heritage Park) | Thailand
2 | Mu Ko Surin National Park (ASEAN Heritage Park) | Thailand
3 | Ranong Biosphere Reserve | Thailand
4 | Tarutao National Park (ASEAN Heritage Park) | Thailand
5 | BBBIDA Marine Protected Area Network | Philippines
6 | Agoo-Damortis Protected Landscape and Seascape | Philippines
7 | Ticao-Burias Pass Protected Seascape | Philippines
8 | Tubbataha Reef National Park (ASEAN Heritage Park) | Philippines
9 | Turtle Islands Wildlife Sanctuary | Philippines
10 | Kepulauan Togean National Park | Indonesia
11 | Kepulauan Wakatobi National Park (ASEAN Heritage Park) | Indonesia
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

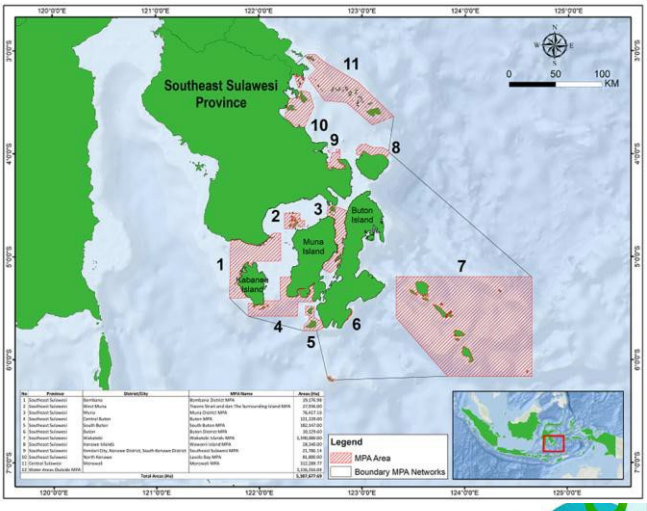

PILOT SITES
THAILAND
Bay of Bengal
Threats & Challenges
• Annual fish catch and fishing effort are increasing, reaching 4 million tons per year
• High risks of pollution, ecosystem degradation, and vulnerability
• Transboundary integration needs to be addressed
1 Mu Ko Similan National Park (AHP)
2 Mu Ko Surin National Park (AHP)
3 Ranong Biosphere Reserve
4 Tarutao National Park (AHP)
South China Sea
Threats & Challenges
• Annual fish catch surged from 90,000 tons in 1950s to over 6 million tons in the 2010s
• Excessive nitrogen load
• Overfishing, destructive fishing, and pollution
• Reefs and coral cover face very high and high threats, respectively.
• Regional instability impedes collaborative fisheries management and conservation efforts.
• Threats to fish stock sustainability due to artificial island construction and extensive fishing
• Geopolitical strife undermines regional cooperation
6 Agoo-Damortis Protected Landscape and Seascape
5 BBBIDA Marine Protected Area Network
7 Ticao-Burias Pass Protected Seascape
PHILIPPINES
8 Tubbataha Reef National Park (AHP)
9 Turtle Island Wildlife Sanctuary
Sulu-Celebes Sea
10 Kepulauan Togean National Park
INDONESIA
11 Wakatobi National Park
Indonesian Sea
Threats & Challenges
• Increasing fishing effort annually
• Climate change impacts marine biodiversity
• Political challenges hinder sustainable fisheries management.
• Weak enforcement and governance
• Conflicting maritime claims exacerbate illegal activities and lack of coordinated policy
• Illegal, unreported and unregulated (IUU) fishing persist
• Inadequate infrastructure for monitoring and enforcement hampers conservation efforts
• Environmental degradation
• High levels of nutrient loading
Threats & Challenges
• Human activities put the LME at very high risk.
• Rising demand for fish from industrial and artisanal fisheries
• Coral reefs face very high threat.
• Increasing thermal stress could critically threaten coral reefs by 2030.
• Lacks measures for transboundary fisheries integration or coordination
Note: The terms/names used for the LMEs are nomenclatures adopted from GEF and does not reflect the position of the UNDP or ACB

MPA Site, MPA Network, & Marine Corridors:

Kepulauan Togean National Park

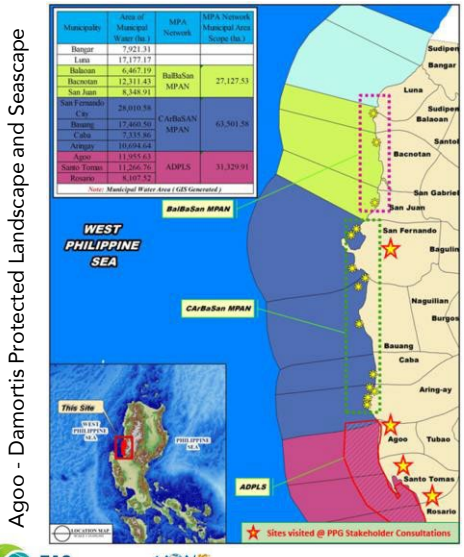


Wakatobi National Park (ASEAN Heritage Park)

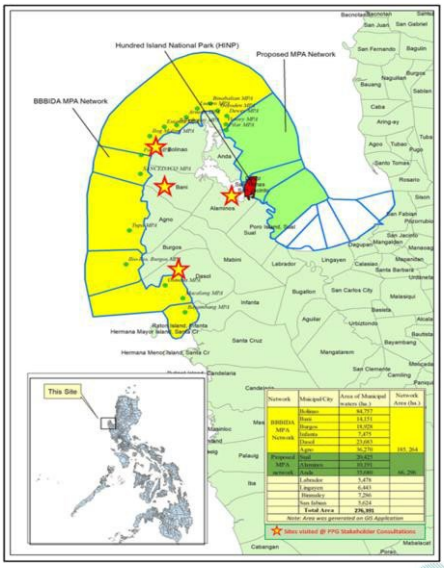


MPA Site, MPA Network, & Marine Corridors: PHILIPPINES

Agoo - Damortis Protected Landscape and Seascape

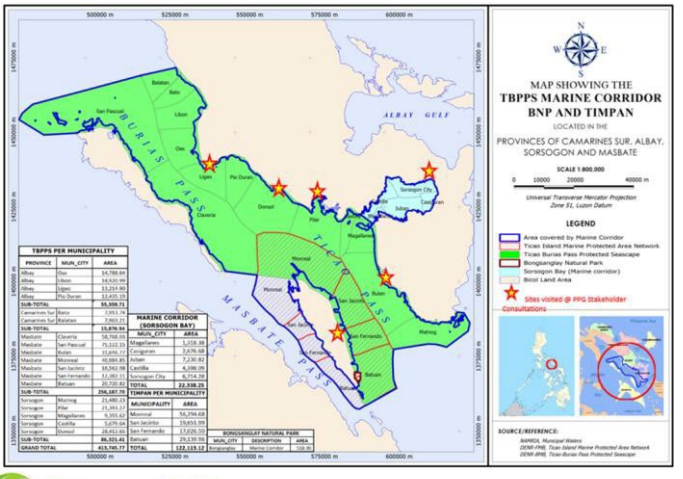


BBBIDA Marine Protected Area Network:Bani-Bolinao-Burgos-Infanta-Dasol-Agno

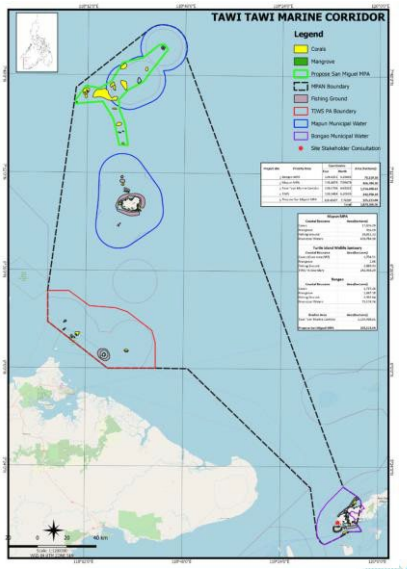


MPA Site, MPA Network, & Marine Corridors: PHILIPPINES

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

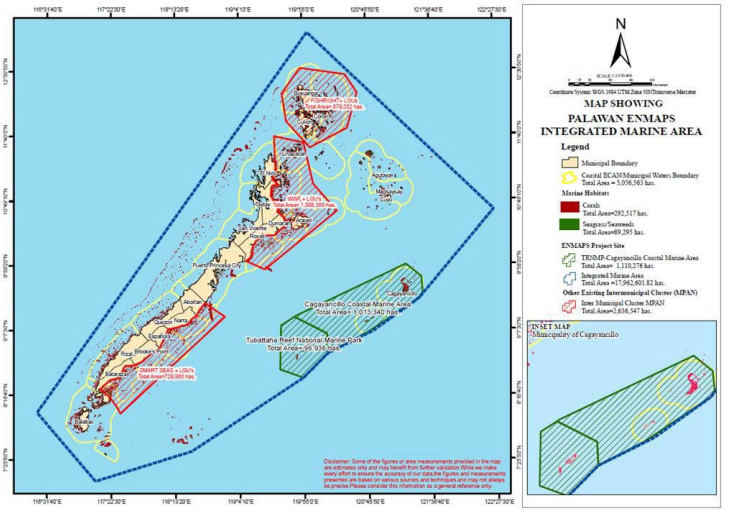


Tawi-tawi Integrated Marine Areas



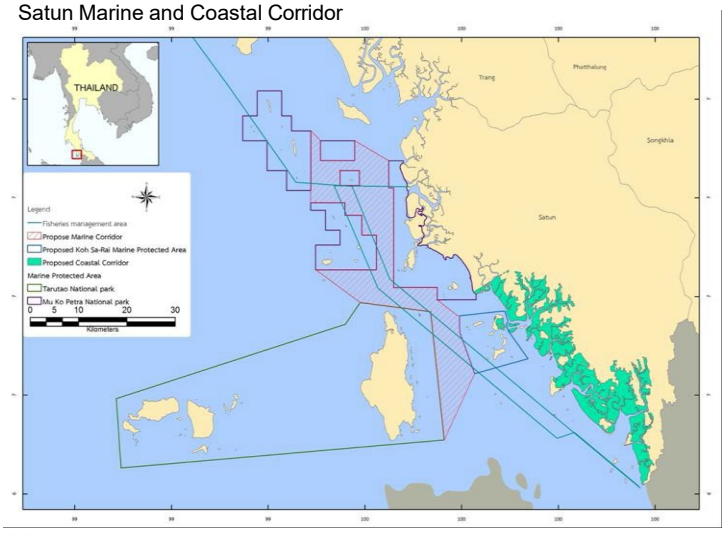
MPA Site, MPA Network, & Marine Corridors: PHILIPPINES

Palawan coastal and marine Environmentally Critical Area Networks (ECANs)

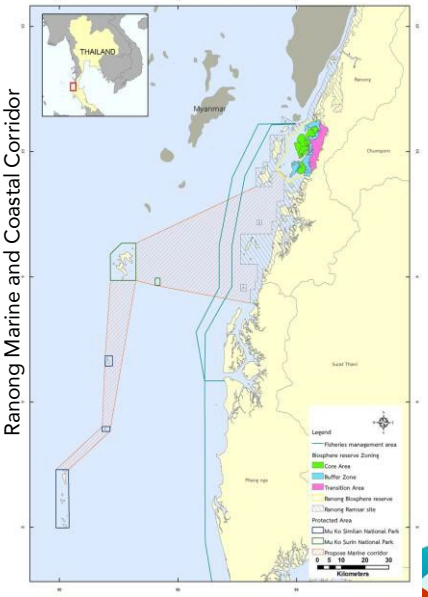


MPA Site, MPA Network, & Marine Corridors: THAILAND

Satun Marine and Coastal Corridor



Ranong Marine and Coastal Corridor



Project

Implementing Partner: ASEAN Centre for Biodiversity

- 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

- 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

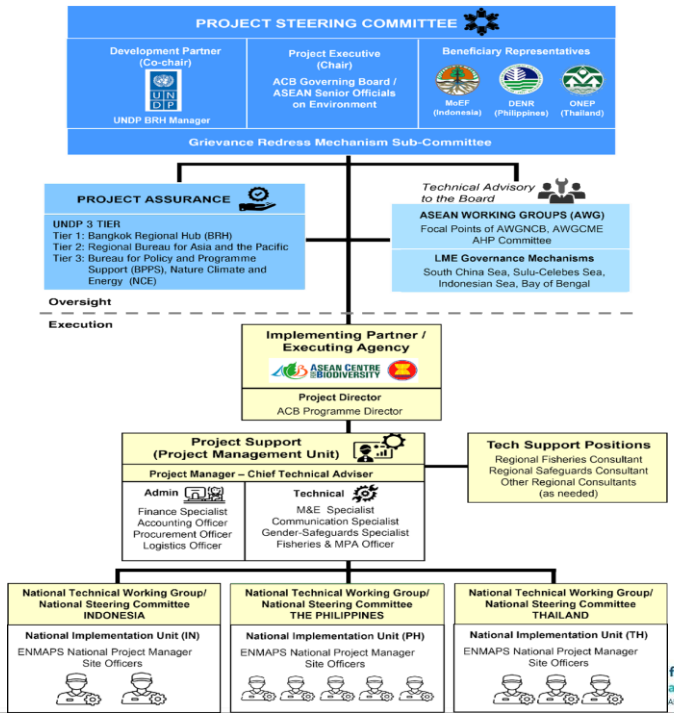
Project Governance

- 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

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

Project Governance Structure



Monitoring and Evaluation (M&E)

Minimum Project Monitoring and Reporting Requirements

MOBILISATION
- Creation of Project Management Team
- **PROJECT INCEPTION WORKSHOP**

ANNUAL

MIDTERM EVALUATION
- Updating/revisiting M&E Plan
- Creation of Catch-up Plan, if needed/Management response

2029 (11 months before project closure)

PROJECT CLOSURE
- Preparation of Project Final Report
- End of Project Meeting with PSC
- Preparation of Lessons Learned/Sustainability Plan (for scaling-up)

2024 — 2026 or 2027 — 2030

PLANNING, ASSESSMENT, and REPORTING
- Quarterly and Annual Reporting, periodic bottlenecks/incident reporting
- Annual Assessment and Planning (filing of MoVs)
- Project Steering Committee (PSC) Meetings

TERMINAL EVALUATION
- Management response to TE evaluation
- Consultative Meetings with Partners, preparation of Sustainability Plan

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

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

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

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

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

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

Complianc

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

Complianc

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

Complianc

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)

Partnership

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

EAS CONGRESS2024 XIAMEN, CHINA 4-8 NOVEMBER
WOW19 2024厦门国际海洋周 World Ocean Week in Xiamen
Blue Synergy for a Shared Future: One Sustainable and Resilient Ocean
XIAMEN, CHINA • 6-8 NOVEMBER

ASEAN ENMAPS Website

www.enmaps.aseanbiodviersity.org

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

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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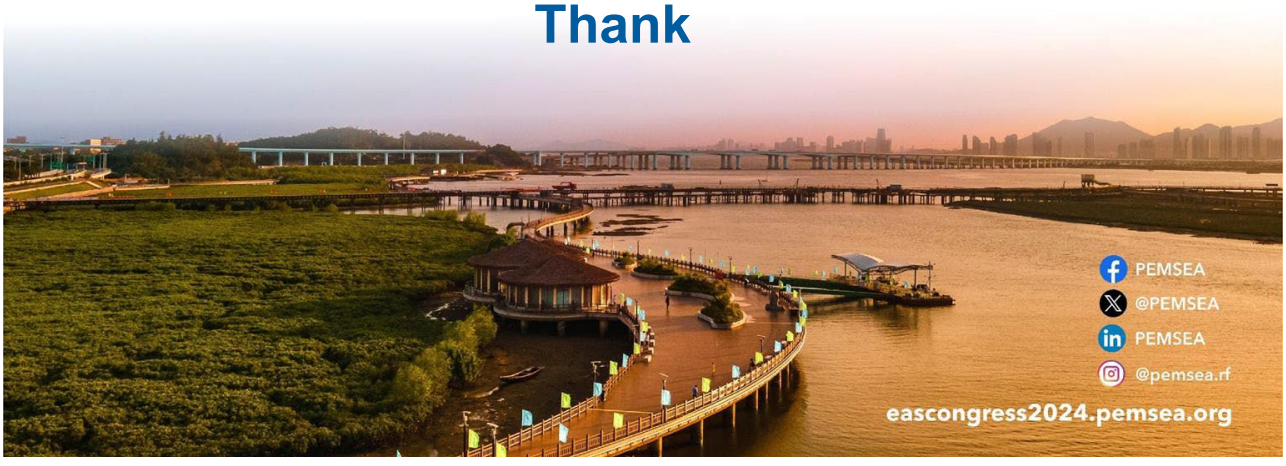
Thank



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ACHIEVING SUSTAINABILITY THROUGH CONNECTIVITY FOR RESILIENT ASEAN SEAS

ACB EAS Congress 2024
Parallel Session

06 NOVEMBER 2024 | 14:00 – 17:00

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06 NOVEMBER 2024 | 14:00 – 17:00

DR. VINCENT V. HILOMEN

Consultant to fisheries and biodiversity projects

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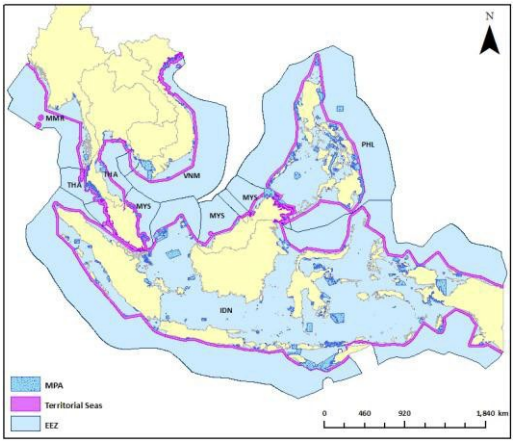
The ENMAPS Project Approach:
Understanding ecological connectivity in the ASEAN marine ecosystems

Vincent V Hilomen
Regional Fisheries Adviser
ASEAN Center for Biodiversity

Significance of the coastal and marine biodiversity and resources in the ASEAN Region

- Accounts for a third of the world's coastal and marine habitats
- Home to the highest marine biodiversity on the planet
  - 28% to 32% of the world's coral reefs
    - More than 75% of species of corals
    - About 40% of fish species
  - 35% of the worlds' mangrove forests
    - 45 of 75 true species of mangroves
  - ~20% of the world's seagrass beds
    - 29% of seagrass species
- These marine ecosystems contribute to the health, food security, livelihood to 650 M people and help drive economies of the AMS
  - Fisheries and aquaculture, tourism, navigation, energy, petroleum, and natural gas



ASEAN coastal and marine biodiversity and resources are at serious risks

- The ASEAN coastal and marine environment are biodiversity hotspots and among the most threatened in the world…
  - Overexploitation (very high fishing pressure)
  - Habitat loss (coastal development, habitat conversion)
  - Pollution (domestic, industrial and agricultural wastes e.g. plastics, wastewater, sedimentation, insecticides, pesticides, nutrient runoff, etc.)
  - Poor coastal and marine development planning
- All these factors increases the vulnerability of these coastal and marine resources to the effects of climate of change
- Challenge is how we arrest these threats; reverse the declining conditions and enhance ability of coastal and marine environment to sustain benefits

The ASEAN ENMAPS study sites

BOB LME (Thailand)
1. Muko Similan NP
2. Muko Surin NP
3. Ranong Biosphere Reserve
4. Tarutao NP

Total of 208,132 has.

SoS LME (Philippines)
5. BBBIDA MPAN
6. ADPLS MPAN

SuS LME (Philippines)
7. TBPPS
8. TRNP
9. TIWS

Total of 765,099 has.

IS LME (Indonesia)
10. K Togean NP
11. K Wakatobi NP

Total of 1,755,241 has.

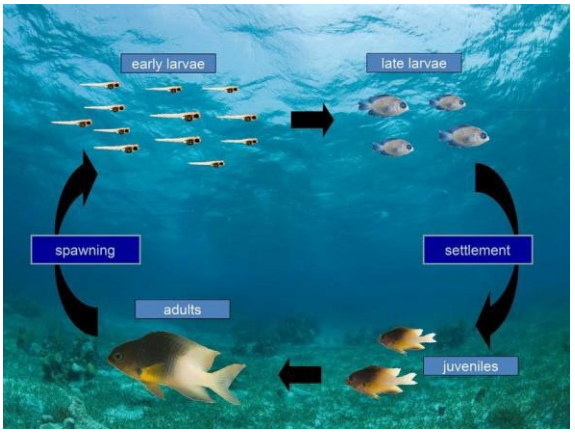
No	Country	MPAs	No	Country	MPAs
1	Thailand	Muko Similan National Park (ASEAN Heritage Park)	7	Philippines	Ticao-Burias Pass Protected Seascape
2	Thailand	Muko Surin National Park (ASEAN Heritage Park)	8	Philippines	Tubbataha Reef Natural Park (ASEAN Heritage Park)
3	Thailand	Ranong Biosphere Reserve Thailand	9	Philippines	Turtle Islands Wildlife Sanctuary
4	Thailand	Tarutao National Park (ASEAN Heritage Park)	10	Indonesia	Kepulauan Togean National Park
5	Philippines	BBBIDA Marine Protected Area Network: Bani–Bolinao-Burgos-Infanta-Dasol-Agno	11	Indonesia	Kepulauan Wakatobi National Park (ASEAN Heritage Park)
6	Philippines	Agoo - Damortis Protected Landscape and Seascape			

The project is on track to improve governance and socioeconomic conditions of about 2,728,472 hectares in the ASEAN region

The ASEAN ENMAPS Project

- Addresses challenges and facilitate transformative changes in the collaborative management of ecological networks of MPAs in a total of 11 project sites from 4 LMEs of Indonesia, Philippines and Thailand
- Project will examine and improve the governance, socioeconomic and sustainability conditions of MPA networks at these pilot sites
- A key approach of the project is understanding the ecological connectivity within and between the 11 study sites
  - Ecological connectivity is key to the natural process of replenishment of marine metapopulations with bipartite life cycles
  - Majority of species with high habitat fidelity exhibit bipartite life cycles (e.g. fishes on coral reefs, seagrass beds, mangroves, and many invertebrates including marine plants and algae)
  - Two components needed are (a) critical spawning stock biomasses and (b) good quality of habitats

The bipartite life cycle- sedentary adult phase and pelagic larval phase



Hixon and Randall 2019

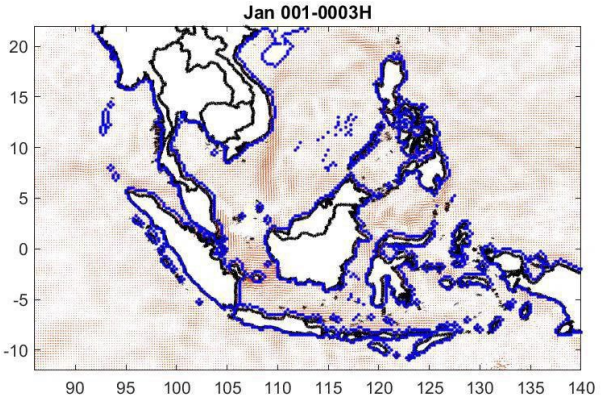
1. Adults spawn (all year round for tropical species with 2 peaks; major peak Oct-Dec and a minor peak May-June)
2. Early larvae dispersed via water currents
3. The distances larvae are dispersed before settlement depend on the length of their pelagic larval duration (PLD). Longer PLDs greater distances and shorter PLDs shorter distances
4. On settlement, juveniles actively choose good quality of habitats (higher live cover; lower dead and abiotic cover).

Understanding ecological connectivity in the ASEAN

- Simulate larval dispersal models and with the aid of local knowledge (e.g. local fishers)
  - Back track to determine locations of spawning grounds
  - Forward tracking to determine settlement areas
- Validation survey to determine locations of spawning grounds and settlement areas
- Assess nature of these important areas including marine corridors in improving designs of existing MPA networks
- Consult with stakeholders and gain consensus on improvement of MPANs
- Review existing fisheries management plans and incorporate management interventions based on life history characteristics of target species and move exploitation to sustainable levels

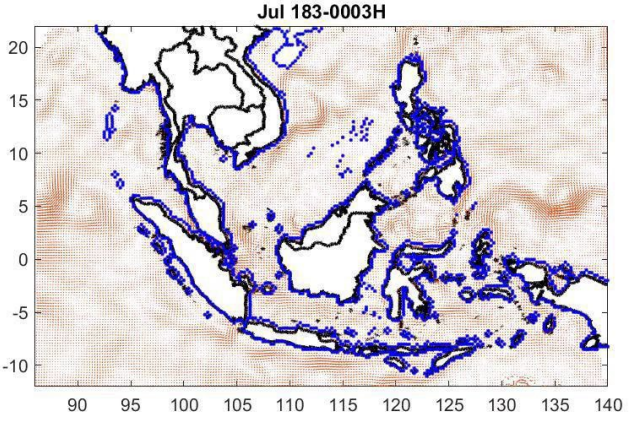
Understanding ecological connectivity in the ASEAN

- Model NE monsoon
- Based on an earlier study, broad results showing areas of high ecological marine connectivity within and between ASEAN member states
- Present project will refine larval dispersal modelling at site levels



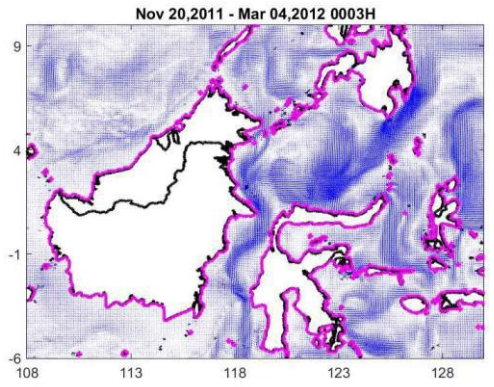
Understanding ecological connectivity in the ASEAN

- Model SE Monsoon
- Based on an earlier study, broad results showing areas of high ecological marine connectivity within and between ASEAN member states
- Present project will refine larval dispersal modelling at site levels

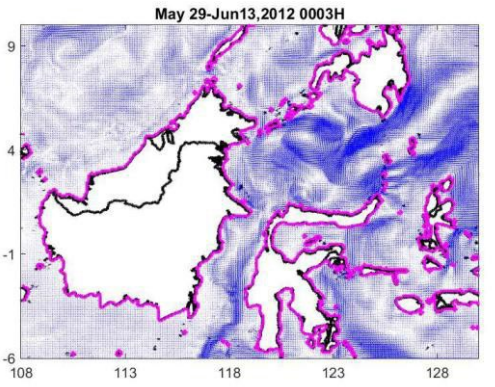


Understanding ecological connectivity in the southern PH, Malaysia and Indonesia

NE Monsoon



SW Monsoon

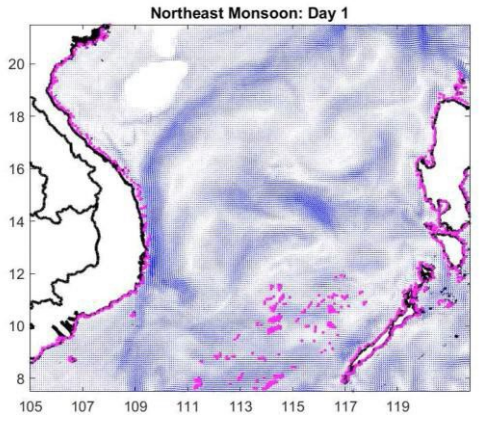


Understanding ecological connectivity in the southern PH, Malaysia and Indonesia

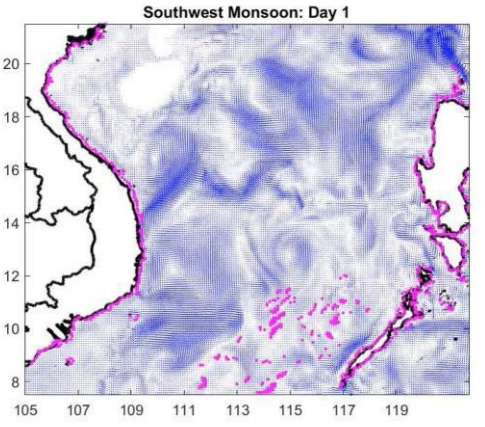
- While larval retention within each of the AMS is strong for both seasons, significant export of propagules from the southern Philippines to Sabah, Malaysia and northeast Kalimantan and northern Celebes Island, Indonesia were observed from this model during the NE monsoon.
- Similarly, Malaysia exports propagules to southern Palawan and southwestern Mindanao and Kalimantan, Indonesia
- During SW Monsoon, Malaysia exports a strong pulse of propagules to southern Palawan and reefs in the Sulu Sea
- The Philippines and Indonesia show positive but weak larval exports to any ASEAN member state.

Understanding ecological connectivity in the northwestern PH, Vietnam and Malaysia

NE Monsoon



SW Monsoon



Understanding ecological connectivity in the northwestern PH, Vietnam and Malaysia

- Again, retention of larval propagules was strong within each of the states, but some exports appear significant.
- During the NE monsoon, PH exports larvae to the eastern coasts of Vietnam and the Kalayaan Group of Islands (KIG), while Malaysia sends propagules to western Palawan.
- The SW Monsoon, brings reversal with Vietnam sending strong pulse of propagules to northwestern PH and Malaysia.

Understanding ecological connectivity in the ASEAN region

- The strong retention of larval propagules shows that component MPAs within MPANs within each state can support each other in the maintenance of the sizes of metapopulations via alternating seasonal juvenile settling replenishments
- In the same manner, the significant exports of propagules that reverse during alternating seasons across national boundaries indicate the need for cooperation and partnerships between two or more states with respect to the conservation of marine biodiversity particularly in areas of high marine ecological connectivity.
- Cooperation and partnerships is not new within ASEAN and this project supports this collective action.

Take away messages...

- The ASEAN ENMAPS Project will examine strengths of connectivity in MPANs and develop management plans to enhance how replenishment of marine metapopulations within and between LMEs in Indonesia, PH and Thailand can be optimized
- Identify and locate areas of high ecological connectivity to properly manage spawning areas and ensure that a critical spawning stock biomass is maintained.
- Enhance habitat conditions of settlement areas to attract more juveniles to ensure populations are replenished every season
- Make MPAN managers appreciate that the survival and sustainability of metapopulations on MPANs are dependent on other MPANs and vice versa. Donor during one season and recipient during the next.
- Lessons from this project can be applied to other MPANs in the ASEAN region.
- Fisheries management interventions using key life history characteristics (e.g. size at sexual maturity, catch quotas), and use of spatio-temporal exploitation patterns
- This conservation effort contributes significantly to food security, maintenance of marine biodiversity and drive economies in the ASEAN region.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QUESTION & ANSWER SEGMENT

Session 2:
Connectivity for Resilient ASEAN Seas

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ACB EAS Congress 2024 Parallel Session

06 NOVEMBER 2024 | 14:00 – 17:00

SAPAWAN PONLABOOT (PLOY)

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

2023 ASEAN Youth Biodiversity Programme

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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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About us

MOU 3 parties:
WCF, WIF and Department of Fisheries

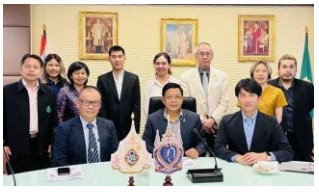
MOU:
WCF and Department of Marine and Coastal Resources

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

Laem Sak fishing community livelihoods

Fishing by boat and capturing seafood by the shore

Alternative

Floating raft: Many species are raised in the same area.
Similar to the IMTA farming system

Content Creator Training

WCF together with the ENVIRONMAN x Prateeptham Islamic Foundation School

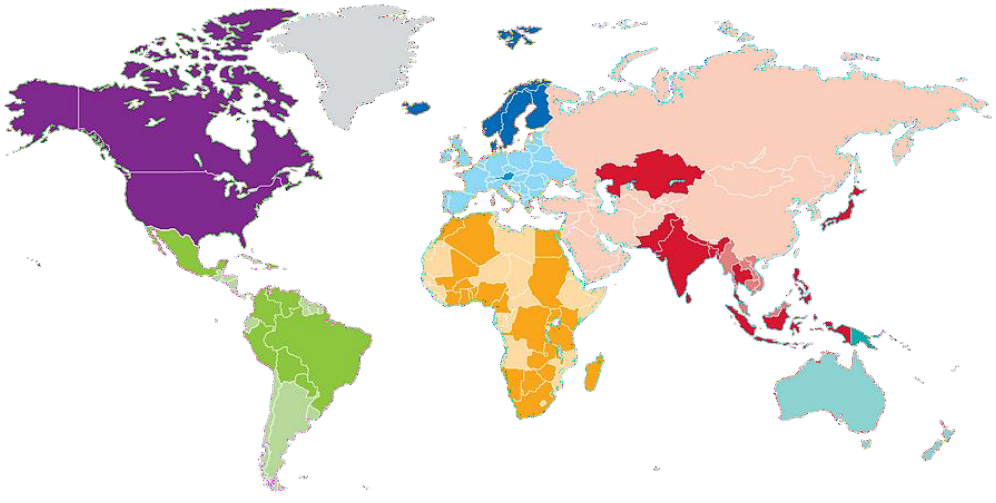
Encourage students with interest in creating media.

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

Global Youth Biodiversity Network

Represents the voice of global youth in the negotiations under the Convention on Biological Diversity (CBD), raises awareness among young people of the values of biodiversity, and connects individuals and youth organizations in order to build a global coalition to halt the loss of biodiversity.(Convention on Biological Diversity)

Global Youth Biodiversity Network



65+ National chapters
4 Regional chapter

50+ Ground projects
210+ Scholarships for youth delegation

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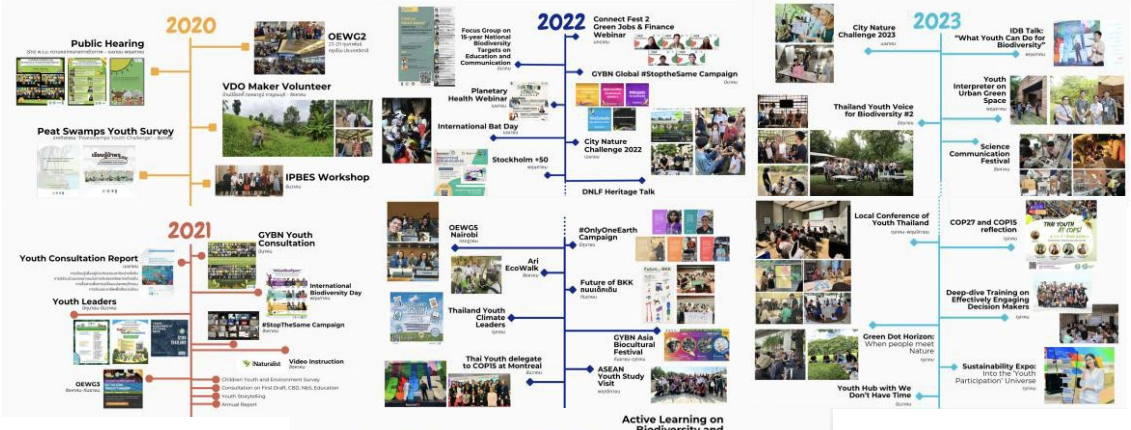
WHAT WE DO

In Thailand

Policy Advocacy

Capacity Building

Build Network



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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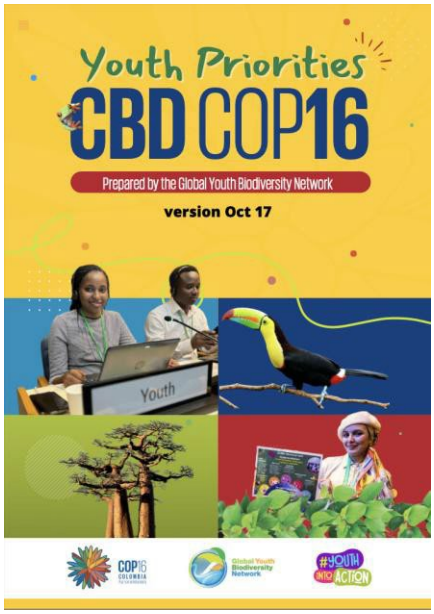

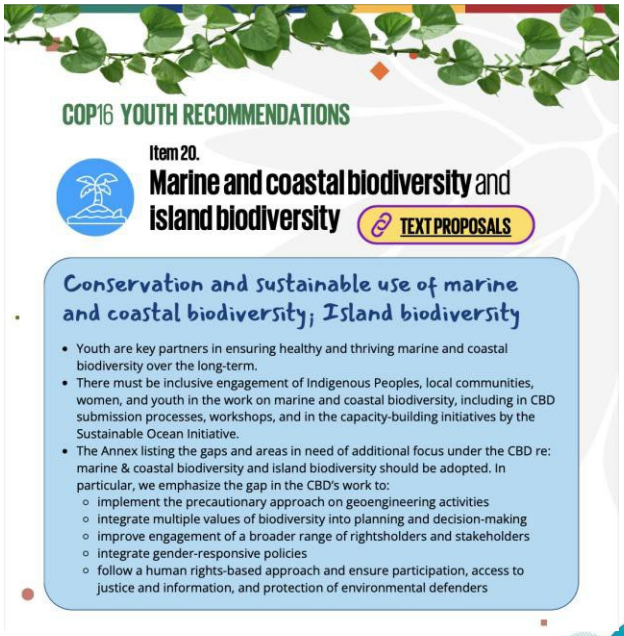

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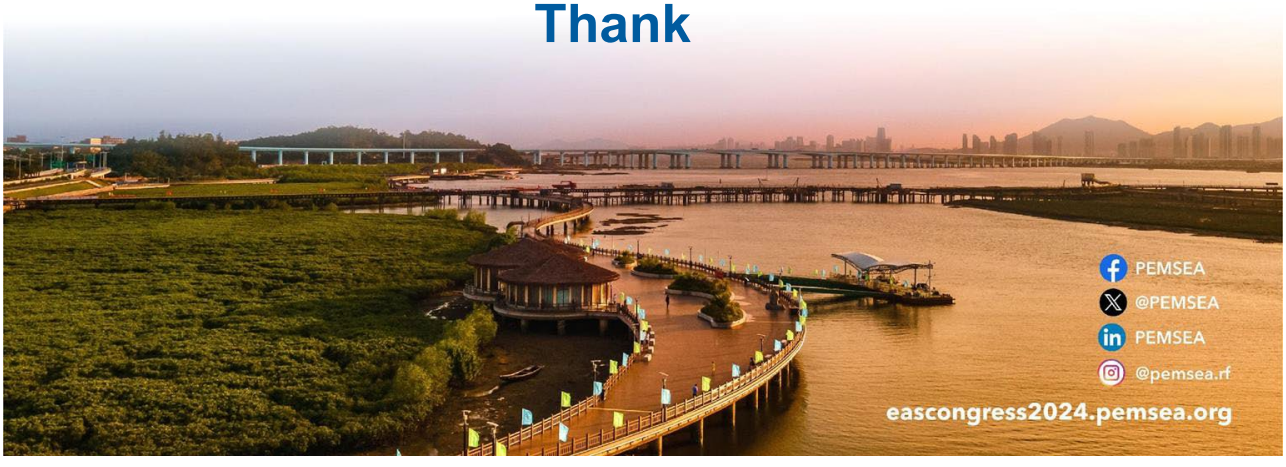
Thank



QUESTION & ANSWER SEGMENT

Session 3:
Youth for Sustainable ASEAN Seas

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PANEL DISCUSSION

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中华人民共和国自然资源部 Ministry of Natural Resources of the People's Republic of China

厦门市人民政府 Xiamen Municipal People's Government

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ANNEX 4. DOCUMENTATION

Session Photos

Speakers and moderators of the session on Achieving Sustainability through Connectivity for Resilient ASEAN Seas (L-R) Ms. Claudia Binondo, Project Development Division Director, ACB; Dr. Nygel Armada, Chief of Party, USAID Fish Right Program; Dr. Sheila Vergara, ASEAN ENMAPS Project Manager & Chief Technical Adviser, ACB; Dr. Suchana Chavanich, ASEAN Biodiversity Hero, Professor at Chulalongkorn University, Reef Biology Research Group, Department of Marine Science, Faculty of Science; Ms. Sapawan Ponlaboot, Manager, Worldview Climate Foundation; Mr. Ketut Putra, Vice President, Conservation International - Indonesia; Ms. Angelica de Castro, Programme Officer for Coastal and Marine, ACB

SESSION 1

Dr. Suchana Chavanich discussing the role of capacity building in MPAs

Mr. Ketut Putra during his presentation on the Transboundary Ocean Program

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

SESSION 2

Dr. Sheila Vergara shares an overview of the ENMAPS projects

Dr. Vincent Hilomen presenting online about the ASEAN ENMAPS Project Approach

SESSION 3

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

PANEL DISCUSSION