



# ACTIVITY REPORT FOR THE 4<sup>th</sup> INTERNATIONAL CONFERENCE ON INTEGRATED COASTAL MANAGEMENT AND MARINE BIOTECHNOLOGY

2023

This report was submitted for the Arafura and Timor Seas Ecosystem Action Phase II (ATSEA-2) Project.  
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Cover Image: The committee of the 4<sup>th</sup> International Conference on Integrated Coastal Management and Marine Biotechnology

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## EXECUTIVE SUMMARY

The 4<sup>th</sup> ICMMBT International Conference was conducted from 12-13 September 2023 at Grand Inna Kuta Hotel, Bali, Indonesia. The Conference was attended by more than 200 participants from 15 countries. As co-organizer, the ATSEA-2 Project in collaboration with PKSPL-IPB of Indonesia, Archipelagic and Island States Forum (AIS) Forum and German Academic Exchange Service (DAAD) facilitated the requirements and program flow of the Conference Opening Ceremony, Keynote presentations, Plenary Sessions, various parallel workshops, and Closing Ceremony.

The ATSEA-2 dedicated Plenary Session which was conducted on 12 September provided the participants with better understanding of the key initiatives of ATSEA-2 on linking science and policy by showcasing key initiatives in support of biodiversity and governance aspects. In particular, the session featured the completed scientific assessments, updated transboundary Diagnostic Analysis, the draft updated Strategic Action Programme (SAP), the ATS Regional Governance Mechanism and the development of supporting financing strategies under the ATSEA-2 Project.

On the same day, ATSEA-2 also conducted a parallel Workshop Session on Marine Pollution and Community Empowerment in the ATS Region which highlighted ATSEA-2's work on regional marine and land-based pollution assessment, the Artisanal Fishery Management Plan in South Fly of Papua New Guinea, and stories of alternative livelihood initiatives for women in Indonesia and Timor-Leste. The workshop also featured related initiatives from RC3S and Minderoo Foundation that are complementary to the ATSEA-2 initiatives.

Other presentations on the application of the MPA Management Effectiveness Tracking Tool in the Nino Konis Santana National Park in Timor-Leste, Identification of Potential Turtle Nesting Site and Threats to Support the Establishment of MPA in Manufahi Municipality and Understanding Fish Maw Harvest and Trade in Western Province of PNG were also delivered by ATSEA-2 representatives in other parallel sessions. Some members of the ATSEA-2 RPMU, including the Policy and Results-Based Management Specialist, M&E Specialist, and Regional Biodiversity Specialist and the NCU Coordinator for PNG also served as moderators in some parallel sessions. The presentations from ATSEA-2 provided more on-the-ground experience and examples which may serve as lessons and reference for other projects and communities.

Overall, the 2-day Conference featured 17 parallel sessions, 6 Keynote presentations, 1 Plenary Session, with over 150 paper presentations, which facilitated sharing of initiatives, lessons learned, innovations, and good practices in support of integrated coastal management and marine biotechnology.

On September 14, 2023, a field visit was conducted at the Turtle Conservation and Education Center. The field visit was limited to 35 participants from the 4<sup>th</sup> ICMMBT Conference. The participants also included the delegates of ATSEA-2 for the Regional Exchange on Sea Turtle Conservation. The Field Trip provided the participants with better understanding of the challenges faced by sea turtles as a result of changing climate, lack of awareness from local communities, increasing development in coastal areas, etc., as well as the means to protect and rehabilitate the sea turtle species.

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## BACKGROUND

The global consensus to have a stand-alone ocean goal in the UN SDGs and subsequent initiatives particularly the launch of the Decade of Ocean Science has paved the way to larger interest and focus on coastal and ocean environment and strategic efforts to enable a sustainable blue economy. Building on proven best approaches to managing coastal and ocean areas, particularly on Integrated Coastal Management (ICM), and increasing importance of science-based knowledge, technologies, and innovations, the CCMRS, GEF/UNDP/PEMSEA ATSEA-2, AIS Forum and German Academic Exchange Service (DAAD) joined hands to facilitate knowledge sharing through the organisation of the 4<sup>th</sup> International Conference on Integrated Coastal Management & Marine Biotechnology (ICMMBT).

Since 2016, the ICMMBT has grown into a recognized platform for promoting and sharing information, experiences and know-how with a special focus on ICM. ICM has been recognized as the most effective approach to managing coastal and ocean areas integrally and holistically. Implementing ICM practices in many regions of the world has provided valuable lessons for stakeholders in marine and fisheries management. The successes and failures of ICM practices in various regions can serve as valuable learning experiences for stakeholders and enable replications in other areas.

Within the overarching objective and framework of sustainable blue economy, ICM as an integrated approach, complements well with various sustainable approaches and practices and has been applied to facilitate various aspects of sustainable coastal development including the following:

- Conservation of coastal and marine biological resources
- Responsible development of coastal industries, such as fisheries, tourism, and renewable energy
- Development of infrastructure and technology to support the utilisation of coastal and marine resources.
- Establishment of policies and regulations that govern the sustainable use of coastal and marine resources.
- Involvement of local communities and the private sector in the management of coastal and marine resources
- Research and development to enhance understanding and innovation in coastal and marine management.

Under the blue economy framework, marine biotechnology (MBT) can also play a crucial role by utilising the coastal and marine biological resources for producing useful goods and services for humans. Biotechnology can enhance the production of raw materials, such as food and pharmaceuticals, and aid in marine environmental restoration efforts. Thus, marine biotechnology can help improve the well-being of society and preserve marine resources for future generations.



With many good practices and innovations in ICM and marine biotechnology, the 4th ICMMBT will be held to document their applications and contributions toward blue economy development. The ICMMBT is a biennial conference held since 2016, with the Center for Coastal and Marine Resources Studies (CCMRS), IPB University as the primary organiser.

With one year left prior to the conclusion of the project and development of an updated 10-year Strategic Action Program (SAP), ATSEA-2 sees the conference as a key regional gathering to present key progress and achievements in implementing the current SAP and share the updated SAP, in preparation for the ATS Ministerial Event in 2024 to adopt the new SAP and the regional governance mechanism to support its implementation. To the AIS Forum, this conference serves as a prelude to the High-Level Meeting in October 2023.

Coinciding with the global assessment and discussions on the mid-point of UN SDG implementation as well as the month of environmental awareness, the results of the conference are expected to provide scientific contributions and lessons learned to various stakeholders, including fishing communities, policymakers, practitioners, and researchers. The culmination of knowledge as well as regional support that will arise from the conference will also contribute towards achieving regional and international commitments and targets, including the United Nations Decade of Ocean Science for Sustainable Development and Sustainable Development Goal 14 on Life below Water.

## OBJECTIVES

The objectives of this activity are as follows:

1. To provide a forum for lecturers, students, researchers, policymakers, and practitioners in the field of Integrated Coastal Management (ICM) and Marine Biotechnology (MBT) to meet and discuss research findings and practices in ICM and MBT.
2. To present the latest scientific approaches, methodologies, tools, and technological advancements in the field of ICM and MBT in the face of global developments and particularly climate change.
3. To enhance participants' understanding of ICM and MBT issues, both locally, regionally, and globally, and how researchers and practitioners present various appropriate solutions to address these issues.
4. To establish regional and international cooperation/networks of lecturers, students, and researchers.
5. To publish lecturers, students, and researchers' works in reputable databases such as Scopus and 151 Web of Science (Thomson Reuters).
6. To enhance the reputation of Indonesian lecturers, students, and researchers and IPB University in international scientific forums.
7. To share, highlight and document research and management initiatives that contribute toward the implementation of the Arafura and Timor Seas (ATS) SAP and betterment of the ATS region, including sharing updated/new strategic and management plans that promote integrated and collaborative approaches for managing marine and coastal resources in the ATS region and gather feedback and support for their implementation from various stakeholders.

8. The objective is to present and record research and management initiatives that support the implementation of the four collaborative areas of AIS Forum and enhance the AIS countries. This includes sharing new and updated strategic and management plans that encourage integrated and collaborative approaches for managing the blue economy in the AIS countries. The aim is to collect feedback and support from multiple stakeholders.
9. To serve as a platform for setting future action/strategy and developing a way forward for the ATS region and AIS countries.
10. This conference is part of efforts to address sustainable development challenges on the United Nations Decade of Ocean Science for Sustainable Development and SDGs 2030 agenda.

## PLACE AND TIME

The conference took place at Grand Kuta Inna Hotel, Bali, Indonesia on 12-13 September 2023.

## MECHANISM AND ACTIVITY DESIGN

The 4<sup>th</sup> ICMMBT with a theme: “Good Practices and Innovations Towards Blue Economy” took place for two days, featuring keynote speakers from national and international experts. It was followed by paper presentations by conference participants.

The general mechanism of the activities can be outlined as follows:

1. The conference activities consisted of two main events:
  - Delivery of papers by keynote speakers.
  - Oral presentations by conference participants.
2. Publication Activities:
  - Papers were published on the Bio Web of Conferences, indexed in Scopus.
  - Papers were also published in journals that are at least indexed by Sinta Kemenristek Dikti.

Regarding the oral presentation mechanism for participants, it is as follows:

- Participants, both oral and non-oral, registered through the website created by the committee.
- Participants registering for oral presentations had to submit an abstract before the specified date.
- The committee reviewed the submitted abstracts.
- Participants in oral presentations made payments via transfers to the designated account of the IPB Rector.
- Subsequently, participants received a registration number.
- After review and approval, participants had to submit the full paper.
- Full papers submitted by participants underwent a review process for publication in indexed proceedings.
- The committee then facilitated participants to have their papers published in the intended journal.

## OUTPUTS

No. of contracted article		No. of realisation		No. of speakers		No. of participants	
IPB-affiliated article	Total article	IPB-affiliated article	Total article	National	International	National	International
40	70	33	171	3	3	193	34

## PARTICIPANTS

This conference targeted 250 participants, with a minimum of 10% coming from outside Indonesia. Based on the implementation of the event, it has been fulfilled as the total number of attendees amounted to 227, including participants from both domestic and international origins. The international participants came from 15 countries - Australia, Argentina, China, Fiji, Germany, Indonesia, Japan, Madagascar, Malaysia, Papua New Guinea, Philippines, Republic of Korea, Thailand, Timor-Leste and Vietnam. The list of participants can be accessed [here](#).

## AGENDA

### Day 1 – 12 September 2023

Time (GMT +8)	Agenda	Notes
08.00 – 08.30	Registration and (CCMRS, ATSEA-2 and AIS Forum) video playing	
08.30 – 08.35	Opening by the MC	MC: Ms. Nana Viana
08.35 – 08.40	National Anthem “Indonesia Raya”	
08.40 – 08.50	Welcome Speech by CCMRS IPB Director	Prof. Dr. Yonvitner, S.Pi., M.Si
08.50 – 09.00	Welcome speech from UNDP Indonesia	Dr. Aretha Aprilia
09.00 – 09.10	Welcome speech from DAAD Jakarta Office	Ms. La Budza
09.10 – 09.20	Opening Remarks	IPB Rector Prof. Arif Satria (Hit the gong by organizer representatives)
09.20 – 09.45	Keynote Speech 1 from Ministry of BAPPENAS	Represented by Dr. Vivi Yulaswati, MSc (Deputy for Maritime



		Affairs and Natural Resources)
<b>09.45 – 10.00</b>	Photo session & Coffee Break	
<b>10.00 - 12.00</b>	Plenary Session 1 + Video Presentation: ATSEA-2 lessons learned on TDA and SAP updating	ATSEA PIC: Ms. Casandra Tania
<b>12.00 – 13.00</b>	Lunch Break	
<b>13.00 – 13.30</b>	Keynote Speech 2 “Marine Biotechnology in Aquaculture”	Dr. David Francis – Deakin University
<b>13.30 – 15.30</b>	Parallel Session	
<b>Room 1 BALANGAN</b>	Parallel Session 1	11 (Moderator: ATSEA)
<b>Room 2 BALE PASEBAN II</b>	Parallel Session 2	11 (Moderator: AIS)
<b>Room 3 BALE PASEBAN III</b>	Parallel Session 3	11 (Moderator: IPB)
<b>Room 4 BALE PASEBAN IV</b>	Parallel Session 4	11 (Moderator: DAAD)
<b>15.30-15.45</b>	Coffee Break	
<b>15.45 – 17.15</b>	ATSEA, AIS & DAAD Forum	
<b>Room 1 BALANGAN</b>	Room A: ATSEA’s session Facilitator: Dr. Handoko AS	PIC: Ms. Casandra Tania
<b>Room 2 BALE PASEBAN II</b>	Room B: AIS/ISISA Blue Economy Development Index Facilitator: Prof. Luky Adrianto	PIC: Ms. Livita Sumali
<b>Room 3 BALE PASEBAN III</b>	Room C: DAAD Alumni-Forum for Marine Resources Studies (DAMARS) Facilitator: Prof. Ario Damar	Prof. Iskandar Z. Siregar & DAAD Alumni Representatives Global Connectivity on ICM & MBT
<b>Room 4 BALE PASEBAN IV</b>	Parallel Session 5: ICM/BT	6 (Moderator: IPB)
<b>19.00 – 21.00</b>	Dinner for all participants	Breeze Resto, Grand Inna Hotel

## Day 2 – 13 September 2023

Time (GMT +8)	Agenda	PIC
08.00 – 08.30	Registration and CCMRS video view	Committee MC: Ms. Yulia Dewi (ATSEA)
08.30 – 09.00	Keynote Speech 3 “ICM implementation in the East Asian Seas Region: Roadmap to 2030”	Ms. Aimee T. Gonzales
09.00 – 09.30	Keynote Speech 4 “Lesson Learned from the Implementation of ICM & Marine Biotechnology for Future Blue Economy”	Prof. Rokhmin Dahuri
09.30 – 10.30	Parallel Session	
Room 1 BALANGAN	Parallel Session 6: ICM/BT	5 (Moderator: ATSEA)
Room 2 BALE PASEBAN II	Parallel Session 7: ICM/BT	5 (Moderator: AIS)
Room 3 BALE PASEBAN III	Parallel Session 8: ICM/BT	5 (Moderator: IPB)
Room 4 BALE PASEBAN IV	Parallel Session 9: ICM/BT	5 (Moderator: DAAD)
10.30 - 10.45	Coffee Break	
10.45 – 12.30	Parallel Session	
Room 1 BALANGAN	Special Session AIC: 10.45-11.45: Australia-Indonesia Center  11.45-12.30: Parallel Session 10 ICM/BT	4 (Facilitator: Dr. Hasnawati Saleh)  4 (Moderator: IPB)
Room 2 BALE PASEBAN II	Parallel Session 11: ICM/BT	10 (Moderator: DAAD)
Room 3 BALE PASEBAN III	Parallel Session 12: ICM/BT	10 (Moderator: AIS)
Room 4 BALE PASEBAN IV	Parallel Session 13: ICM/BT	10 (Moderator: ATSEA)
12.30 – 13.30	Break	
13.30 – 13.50	Plenary Session	1. Prof. Haruko Takeyama (AFOB)
13.50 – 14.10	Marine Biotechnology	2. Falasifah, SSi (PT Albitec)
14.10 – 16.50	Parallel Session	
Room 1 BALANGAN	Parallel Session 14: ICM/BT	16 (Moderator: ATSEA)
Room 2 BALE PASEBAN II	Parallel Session 15:	16 (Moderator: AIS)

<b>Room 3 BALE PASEBAN III</b>	Parallel Session 16: ICM/BT	16 (Moderator: IPB)
<b>Room 4 BALE PASEBAN IV</b>	Parallel Session 17: ICM/BT	16 (Moderator: DAAD)
<b>16.50 – 17.15</b>	Closing ceremony: Awarding best presenters, field trip announcement, etc.	Closing remarks Director of CCMRS MC: Ms. Yulia Dewi (ATSEA)

### Day 3 – 14 September 2023

<b>Time (GMT +7)</b>	<b>Agenda</b>	<b>PIC</b>
<b>08.00 – 08.30</b>	Preparation for Field Trip	Committee
<b>08.30 – 13.00</b>	One-day field trip on sea turtle conservation and ecotourism in Serangan, Bali, Indonesia	Limited participants

## SUMMARY OF PLENARY EVENTS

### A. Opening Ceremony of the 4<sup>th</sup> ICMMBT International Conference

The Opening Ceremony of the 4th International Conference on Integrated Coastal Management & Marine Biotechnology (ICMMBT) was held at Balangan Room of Grand Inna Hotel from 9-10:30AM. The Conference was jointly organised by the Center for Coastal and Marine Resources Studies (CCMRS) IPB University, the GEF/UNDP/PEMSEA Arafura and Timor Seas Ecosystem Action Phase 2 (ATSEA-2) Project and Archipelagic & Island States (AIS) Forum. The German Academic Exchange Service (Deutscher Akademischer Austauschdienst, DAAD) also supported the ICMMBT4 as a key sponsor. The Conference commenced with a warm welcome and a unifying theme of "Good Practices and Innovations Toward Blue Economy." The Opening Ceremony was attended by more than 200 delegates from 15 countries (Australia, Argentina, China, Fiji, Germany, Indonesia, Japan, Madagascar, Malaysia, Papua New Guinea, Philippines, Republic of Korea, Thailand, Timor-Leste and Vietnam).

On behalf of PKSPL-IPB, Prof. Dr. Yonvitner, S. Pi., M. Si., Director of CCMRS IPB, delivered the first Welcome Remarks. Dr. Yonvitner expressed his appreciation to all the delegates who hailed from different universities and agencies, as well as to the key organisers and sponsors which made the event possible. Dr. Yonvitner encouraged the university participants to maximise their participation to build something for their future and network. He highlighted the importance of sharing knowledge and best practices among the participants, who come from various countries. In closing, he also extended appreciation to the organising committees led by Dr. Kustiariyah Tarman, for their dedication and hard work.

On behalf of UNDP Indonesia, Dr. Aretha Aprilia, Head of Environment Unit, delivered the second Welcome Remarks. Dr. Aprilia underscored the importance of the event by offering a global platform for the exchange of groundbreaking solutions and research in coastal and marine management and marine biotechnology in support of Blue Economy. While majority of the presentations will be technical or scientific in nature, Dr. Aprilia noted the aspiration of the Conference to go beyond scientific discussions, drawing from practical experiences, innovative practices, and future opportunities to drive meaningful change. She highlighted the growing

potential of Blue Economy while also recognizing the key challenges on climate change, pollution and overfishing, among others. UNDP Indonesia, being a key partner of the Conference organisers (ATSEA-2 and AIS Forum) play a crucial role in ensuring linkages to sustainable development targets. In particular, she noted UNDP's support to a number of joint research grants to support the innovation from the academic communities on ocean issues, as well as the development of the Blue Economy Development Index (BEDI). She considered the 4th ICMMBT timely and pivotal as the United Nations is also gearing up for the SDG Summit 2023, which was scheduled to take place a week after the ICMMBT. Dr. Aprilia also highlighted two major events that are expected to contribute to transformative change: the ATSEA-2 2nd ATS Ministerial Forum in 2024, and the First High Level Meeting of AIS Forum in October 2023. The gathering of experts, researchers, and leaders at the 4th ICMMBT was envisioned to help contribute in illuminating paths for sustainable growth, foster international partnerships, and promote shared responsibility and collective commitment for ocean and coastal area preservation.

On behalf of DAAD, Ms. La Budza, Director of DAAD Regional Office in Jakarta, extended a warm welcome to all the participants. She underscored the Conference's significance in addressing critical issues related to the blue economy, coastal and ocean management, and marine biodiversity conservation. Highlighting Indonesia's status as an archipelagic nation, she emphasised the timeliness of the event in the face of global threats to marine biodiversity, and commended the conference's approach of bringing together German alumni, researchers from diverse backgrounds, and industry experts to tackle topics aligned with SDGs. Ms. Budza further provided a brief background on DAAD as a non-profit organisation funded by the German government which aims to foster academic collaborations between Germany and international universities. She further highlighted DAAD's flagship scholarship program for PhD studies in Germany, encouraging young talented researchers from the Conference to apply. She expressed hope for more future collaboration between the attendees, IPB, and German researchers and alumni worldwide.

On behalf of the newly transformed Marine and Fisheries Human Resources Counselling and Development Agency (BPPSDM) of the Ministry of Maritime Affairs and Fisheries (MMAF/KKP) of Indonesia, Mr. I Nyoman Rudiarta as Head of BPPSDM, expressed appreciation to the Conference which also showcases Indonesia's dedication to sustainable marine and coastal resource management. He underlined that Indonesia's commitment extends regionally to encourage collaboration particularly within the Arafura-Timor Seas (ATS) region, contributing to broader global sustainable development goals. In support of Indonesia's National Ocean Agenda and Blue Economy Roadmap the BPPSDM is pursuing further enhancement of Indonesia's maritime and fisheries workforce. In terms of ATS regional collaboration, the agency also serves as the focal agency under MMAF for ATS region's Strategic Action Programme (SAP) implementation through the ATSEA-2 project. He shared a brief history of the ATSEA partnership which began in 2003 through ATSEF and later on through two project phases with GEF and UNDP support. Under the current ATSEA-2 project, he highlighted recent achievements including the endorsement of the updated Transboundary Diagnostic Analysis (TDA) and the preferred structure for ATS regional governance mechanism, as well as the ongoing finalisation of the updated ATS Strategic Action Program (SAP) for 2024-2033. He expressed hope that the 4th ICMMBT can bring about substantive exchange of ideas and experiences. He believes that the Conference has the

potential to contribute in Indonesia's and other participating countries efforts in creating change, and in ensuring resilient marine and coastal resources for future generations.

On behalf of IPB University, Prof. Dr. Arif Satria, Rector, delivered the Opening Remarks. Dr. Satria underscored the significance of the 4<sup>th</sup> ICMMBT in contributing to the realisation of Indonesia's Archipelago 2045 vision by bolstering knowledge exchange and inter-island connectivity via a maritime network. He highlighted the Agro-Maritime concept as pivotal for Indonesia's progress, fortifying Indonesia's standing in the food sector, and fostering a competitive economy to achieve the Golden Indonesia 2045 goal. The vast agricultural and sea areas of Indonesia which totals 70 million hectares and 325 million hectares, respectively, can position the country as the world's food hub. Recognising the rapid development on technology and other innovations, IPB University, can serve as a key supporting institution to promote innovation in agriculture, marine fisheries, marine biotechnology, and other related fields. Dr. Satria believes that for Indonesia to become a great nation, the quality and quantity of marine resources must be enhanced, focusing on industrialisation and downstream processes.

All the Opening Ceremony speakers were invited to the stage together with other VIPs to officially declare the 4<sup>th</sup> ICMMBT open through a ceremonial hitting of the gong.

## B. Keynote Presentation

Following the Opening speeches, the Deputy of the Ministry of Maritime Affairs and Natural Resources (BAPPENAS) of Indonesia, Dr. Vivi Yulaswati, M.Sc. delivered the opening Keynote presentation of the Conference. Dr. Yulaswati tackled the key challenges and opportunities in the Blue Economy sector. She highlighted a number of megatrends by 2045 in the various coastal and marine sectors. These trends are accompanied by increased competition in the natural resources including climate change, pollution, loss of biodiversity, increasing vulnerable coastlines, and continuing decline in the ocean's carrying capacity. Recognising the potential of the oceans and Blue Economy as a new source of economic growth, Dr. Yulaswati urged the Conference participants to make use of the rich information and knowledge available and turn it into a motivator for meaningful change.

In line with Indonesia's 2045 Vision, she highlighted the key elements of BAPPENAS' long-term Development Plan 2025-2045 which is targeted for enactment by October 2023. The plan is part of Indonesia's goal to transform into Green and Blue Economy. Blue Economy is considered as a new economic paradigm for marine-based economy (i.e., marine tourism, fisheries, biotech, bioprospecting, renewable energy, ocean waste management, etc.). Several emerging sectors to boost economic transformation were also noted, including: renewable energy, bioeconomy and biotechnology. But to realise the potential of these new sectors, Dr. Yulaswati underscored the need for human capital funding, expansion of bioprospecting to supply bioresources, development of bioeconomy supply chain, provision of incentives to nurture new bioeconomy, promote capacity building, increase government policies as enablers, etc. It is also crucial to increase coastal resilience through better regional planning, adoption of nature-based solutions and integrated approaches guided by disaster-risk planning.

Another opportunity or source is the blue carbon ecosystems to support low carbon development in Indonesia. As part of Indonesia's and BAPPENAS Roadmap, the following strategic actions are being pursued and are expected to be completed and implemented in the coming months and years: Blue Economy Development Framework, Blue Financing Strategy, Blue Finance Policy Note, Blue Finance Instruments Development Guidelines, and Indonesia Blue Economy Action Plan, among others.

### C. ATSEA-2 Plenary Session

Theme: “Translating Science into Policies: Good Practices from ATSEA-2”

As implementing agency of the ATSEA-2 Regional and PNG component, the Executive Director of the PEMSEA Resource Facility (PRF), Ms. Aimee Gonzales, opened the ATSEA-2 Plenary Session. Ms. Gonzales welcomed all the participants and expressed her appreciation to the organisers of the conference. Setting the tone of the plenary, Ms. Gonzales highlighted the importance of the ATSEA-2 Project which is funded by GEF and executed by UNDP. She highlighted the common interests of PEMSEA and ATSEA in fostering collaboration among countries, communities, and stakeholders to achieve environmental protection and sustainable development. She noted that the ATSEA-2 Project is at a pivotal juncture, with one year remaining before its conclusion.

Ms. Gonzales also highlighted the significance of the event and the achievements of the project, including the implementation of the current Strategic Action Program (SAP), the updating of the Transboundary Diagnostic Analysis (TDA), the drafting of the second SAP for the next decade, and the ongoing establishment of a regional governance mechanism. All these aspects are interrelated and crucial elements of a common aspiration to establish a long-term, country-owned mechanism for ATS collaboration guided by a common framework of action. She concluded by emphasising the power of collaborative action in shaping a future where the ATS region's rich marine heritage remains a source of life, livelihoods, and inspiration for generations to come. She hoped that the process undertaken by the ATSEA-2 Project will provide important lessons for scientists and policymakers alike when developing science-driven policies and actions.

Before diving into the presentations, ATSEA-2 Regional Project Management Unit (RPMU) led by the Regional Project Manager, Dr. Handoko Adi Susanto, handed the recently published ATS ATLAS and updated Transboundary Diagnostic Analysis to Ms. Gonzales, as well as key project partners, including UNDP Indonesia represented by Mr. Iwan Kurniawan, the National Project Director from Indonesia, Ms. Yayan Hikmayani, the Special Advisor to the Managing Director of National Fisheries Authority (NFA) of PNG, Mr. Noan Pakop, and the National Project Coordinator for Timor-Leste as representative of the Ministry of Agriculture and Fisheries (MAF), Mr. Expedito Belo.

As an introduction to the presentations, an ATSEA-2 video was shown which encapsulated the history of the ATSEA program and the focus of the ATSEA regional collaboration from ATSEA-1 to ATSEA-2. It also provided a brief introduction on the key targets of the ATSEA-2 project which will culminate in 2024.



The first presentation focusing on the Biodiversity Aspect of Strengthening ATS Ecosystem Carrying Capacity through Science-Governance Interface was delivered by Ms. Casandra Tania, Regional Biodiversity Specialist of ATSEA-2 RPMU. She opened her presentation by providing a short background on ATSEA program's history building from the World Summit on Sustainable Development in 2002 and UNCLOS Article 123 which calls for collaboration among states surrounding enclosed or semi-enclosed areas like the Arafura-Timor Seas. Based on the guidance on key transboundary issues identified in the first ATS TDA and SAP, Ms. Tania proceeded to share the results of the different thematic assessments and corresponding initiatives undertaken by ATSEA-2 to address the five key transboundary issues of the ATS region.

On 'Unsustainable fisheries and decline in coastal and marine resources', Ms. Tania highlighted Red Snapper fisheries as key focus of ATSEA-2 intervention as well as the baseline on illegal, unregulated and unreported (IUU) fishing in the region which is considered to be underestimated due to prevailing lack of monitoring and data sharing system in the region. In support of promoting sustainable fisheries, ATSEA-2 completed baseline assessments on fisheries as well as developed supporting Ecosystem Approach to Fisheries Management (EAFM) Plans and Rights Based Fisheries Management.

On 'Modification, Degradation and Loss of Critical Marine Habitats', she highlighted the ecosystem valuation completed for ATS which showed annual value of approx. US\$7.3 billion, as well as the MPA Network Design and Roadmap developed by ATSEA-2. The MPA Network Design showed that total Areas of Interests and existing and proposed MPAs may reach 300,973 km<sup>2</sup>. On 'Marine and Land-based Pollution', Ms. Tania highlighted oil spill and marine debris as key transboundary issues and the corresponding recommendations identified from the regional pollution hotspot assessment of ATSEA-2.

On 'Decline and Loss of Threatened Migratory Species', she shared the key threats on sea turtles in the region and the corresponding Regional Action Plan developed by ATSEA-2 to provide further guidance to country efforts on sea turtle protection and conservation. Lastly, on 'Impacts of Climate Change', Ms. Tania highlighted the results of the Regional Climate Change Vulnerability Assessment done by ATSEA-2 focusing on the key vulnerable species and ecosystems in the ATS should adaptive and mitigation efforts be not put in place. Recognising the coastal communities as the frontliners to climate change impacts, Ms. Tania also briefly explained the Guide developed for Facilitators and Policymakers to enable communities develop their own community adaptation action plans. All these assessments were taken into consideration in the updating of the ATS TDA as well as in designing the next SAP. Based on all these assessments and key interventions, Ms. Tania underscored that recognising both persisting and emerging challenges in the region, it is crucial that established plans and ongoing interventions be sustained and scaled up.

The second presentation focusing on the Governance Aspect was delivered by Ms. Cristine Ingrid Narcise, Policy and Results Based Management Specialist of ATSEA-2 RPMU. Building on the results of various technical assessments, Ms. Narcise then showed how the recognised values of the ATS ecosystem was linked to the governance initiatives of ATSEA-2. The governance aspect focusing on the establishment of a regional collaboration for the ATS was built over the years and was explicitly supported when the 1<sup>st</sup> ATS Ministerial Declaration was signed in 2014 which adopted the 1<sup>st</sup> ATS SAP and NAPs and committed ATS countries to pursue the establishment of

an ATS regional governance mechanism. Building on this mandate, ATSEA-2 conducted governance assessment and developed models for an ATS governance mechanism. After three years of careful review and deliberations among the ATS countries, the ATSEA-2 Regional Steering Committee endorsed in June 2023 their preferred RGM model which has regional and national components and Strategic Development Partners. Several key considerations were also highlighted which guided the final decision-making and endorsement of the RGM model. This includes the need to ensure a mechanism that is fit for purpose, voluntary, cost-efficient, complementary with other programs, would facilitate donor engagement/support, and promote regional collaboration beyond ATSEA-2. Key supporting initiatives were also undertaken including the conduct of Cost-Benefit Analysis on the value of operationalising an RGM, and the ongoing consultations on possible financing arrangements and sources in support of future RGM operationalisation.

As part of the overall governance framework for the future of ATS collaboration, Ms. Narcise highlighted the RGM process with the ongoing updating or development of the next SAP, corresponding financing plans, and SAP and NAP monitoring system. The target is to have the RGM supporting documents (TORs, transition plan, financing plan) completed and endorsed by the RSC before the end of 2023 and pursue high-level adoption through the 2nd ATS Ministerial Forum and Declaration in 2024 prior to the scheduled completion of the ATSEA-2 project. As a way forward, Ms. Narcise underscored the importance of the RGM in setting the stage for future ATS collaboration. With ATSEA-2's support, the target is to initiate the transition from a project-based arrangement into a long-term country-owned regional collaborative mechanism before ATSEA-2's closure and secure the 2nd ATS Ministerial Declaration which will give the ATS countries a stronger basis moving forward.

The last presentation was delivered by Dr. Susanto which showed the link of key ATSEA-2 initiatives from science to policies through the TDA-SAP updating process. Guided by the GEF International Waters TDA-SAP methodology, Dr. Susanto shared the step-wise, consultative and participatory process undertaken by the ATSEA-2 in collaboration with various key stakeholders from all four ATS countries from 2022 to present. Building on the three priority transboundary issues (pollution, ecosystem, habitat and biodiversity decline, and unsustainable capture fisheries) and 11 fundamental concerns identified in the updated TDA, the updated draft SAP focused on four key transboundary issues with proposed priority actions and targets to facilitate better coordination while complementing with existing national and regional efforts.

The priority transboundary issues and objectives of the draft updated SAP focused on the following: (1) marine plastic pollution including ALDFG; (2) oil spill; (3) small-scale IUU fishing; and (4) ETP species and critical habitats. With the endorsement and publication of the updated TDA, and completion of the SAP Strategic Thinking and Planning Phase, the ATSEA-2 RPMU and NCUs in collaboration with National and Regional Working Groups are focusing on refining the draft SAP, particularly its proposed targets and indicators, parallel with the NAP updating/development process in the three ATS countries. The target is to have the completed updated SAP and NAPs, with corresponding financing plans, endorsed before the end of 2023. Mainstreaming workshops to align and ensure congruence/support for SAP and NAP implementation is scheduled in early 2024, leading to high-level adoption as part of the 2nd ATS Ministerial Declaration. The TDA-SAP process combined with RGM as undertaken by ATSEA-2

provides an example of how science interfaces with governance to ensure a more holistic approach in setting clear and targeted collaborations and interventions.

Following the presentations, government representatives from the ATS countries were invited to deliver their insights on the work undertaken by ATSEA-2 and the prospects of the ATSEA program and ATS regional collaboration. On behalf of the Ministry of Marine Affairs and Fisheries (MMAF) of Indonesia, Ms. Yayan Hikmayani shared her insights. Ms. Hikmayani underscored that the ATSEA Program is built on a foundation of scientific studies and assessments that highlight the value of the region's marine and coastal resources, the threats to these values, and the need for collective action to ensure sustainability. She emphasised the importance of the science-policy interface in the ATSEA Program, as demonstrated by the development and updating of the TDA and SAP. Sound science combined with multi-stakeholder perspectives and priorities have guided the development and implementation of various initiatives (e.g., EAFM Plans, Fisheries Improvement Projects, ICM Plans, MPA plans, etc.) in local sites in Indonesia, as well as the prioritisation of issues and updating of the regional SAP and the supporting National Action Programme (NAP) for Indonesia.

Ms. Hikmayani further highlighted the importance of the regional governance mechanism to coordinate SAP and NAP implementation. She informed the plenary that Indonesia's NAP is currently being updated, considering the priorities in Indonesia's National Medium Term Development Plans, the Indonesian Ocean Policy, the Blue Agenda, relevant legislations and policies on fish resources conservation, maritime environment protection, marine spatial planning, protected area management, climate change, etc., and Indonesia's commitments to the 2030 Agenda for Sustainable Development, the UN Convention on Biological Diversity and Kunming-Montreal Global Biodiversity Framework, and the UNFCCC and Paris Agreement. Ms. Hikmayani expressed Indonesia's commitment to working with fellow ATS countries to finalize and adopt the updated SAP and NAPs as well as the regional governance mechanism and their financing plans. In closing, she wished the success of the envisioned long-term ATSEA Program.

On behalf of Papua New Guinea, the former ATSEA-2 Project National Project Director and current Special Advisor to the Managing Director of NFA PNG, delivered PNG's insights. Mr. Pakop highlighted the importance of regional cooperation in addressing the challenges facing coastal communities and economies in the ATS region. As the newest country member of ATSEA, he expressed appreciation for the step-wise and participatory approach undertaken by the ATSEA-2 Project which enabled relevant stakeholders to contribute in the design and review of various project initiatives. In particular, he noted the development of a robust science-driven regional strategic program and the establishment of a regional governance mechanism for the ATS region.

ATSEA-2's work in PNG was also considered as trailblazing, this include the development of the first community-based artisanal fishery management plan for South Fly in the Western Province and the development of PNG's inaugural National Action Programme to support the updated SAP. He affirmed that ATSEA program's objectives and targets are well aligned with PNG's national priorities. Mr. Pakop concluded by urging fellow entities and donors to join PNG in this endeavour. The speaker believes that the ATS NAPs and SAP offer numerous opportunities for collaboration and means to propel the ATS region as a model for a thriving blue economy and a significant contributor to sustainable global targets.

In view of the recent reorganisation in Timor-Leste government (following the elections), a video message from the National Project Director, Mr. Celestino da Cunha Barreto, Director General of MAF, was shared. Mr. Barreto expressed his appreciation to the ATSEA program for the opportunity to gain knowledge, skills, and other resources to support the sustainable utilisation and development of Timor-Leste's marine and coastal resources and fisheries. Recognising the transboundary nature of marine plastic pollution, abandoned, lost and discarded fishing gears, oil spills, small-scale IUU fishing, and decline in endangered, threatened and protected species, Mr. Barreto underscored the need for concerted actions among neighbouring countries in the ATS to effectively address the issues, while considering climate change impacts and the need for inclusive and equitable interventions.

Mr. Barreto expressed hope that the updated ATS SAP and regional governance mechanism will guide and demonstrate how countries in the ATS region can all work together toward common objectives and shared benefits, beyond the ATSEA-2 Project. He informed the Plenary that Timor-Leste, led by MAF, is currently updating its NAP to support the implementation of the SAP, in line with its national priorities and international commitments. In line with Blue Economy, Mr. Barreto further stated that the 9th Constitutional Government of Timor-Leste has adopted the Blue Economy as an approach for promoting sustainable development, balancing economic activity and ocean ecosystems protection and conservation. In closing, Mr. Barreto looked forward to formalising a long-term partnership with its closest neighbours and strategic partners in support of sustainable development in the ATS region at the ATS Ministerial Forum which will be hosted by Timor-Leste in 2024.

Following the presentations, the floor was opened for questions from the Conference participants. One question was raised pertaining to Australia's participation in the ATSEA-2 initiatives. Dr. Susanto explained that under GEF policies, the key beneficiaries are Indonesia, PNG, and Timor-Leste. He, however, emphasised the while there are no on-the-ground activities in Australia, they have actively and intensively participated in various ATSEA-2 activities as a member of the ATSEA-2 Project Regional Steering Committee, as well as participant to the different workshops and consultations undertaken in line with the development or updating of the TDA, SAP, RGM and other thematic assessments under the project. As for the plenary messages from countries, ATSEA-2's representative or National Focal Point in Australia opted not to send a message at this time, considering the ongoing work on finalisation of the SAP and supporting elements of the RGM. No further questions were raised during the plenary.

To formally close the ATSEA-2 Plenary Session, Dr. Aprilia of UNDP Indonesia, delivered a Closing Remarks. Building on the presentations, Dr. Aprilia highlighted the essential interconnections among the three fundamental approaches of the ATSEA-2 project:

- Current and robust scientific data and understanding of the region's coastal and marine status, challenges, and opportunities
- Transformation of TDA information into a strategic action program (SAP) that will guide the region in pursuing effective and adaptable actions

- Putting in place a governance mechanism with support from various partners as a key enabling factor to coordinate SAP and NAP implementation and actions.

She emphasised that these three approaches are fundamental and will shape the future collaborations for the ATS region. The speaker also emphasises the importance of community engagement and social inclusion, as well as the commitment expressed by the ATS countries to pursue a long-term collaboration. Dr. Aprilia called for collaboration, innovation, and shared determination in achieving a more sustainable, prosperous, and harmonious future for the ATS region. Before closing the plenary, Dr. Aprilia expressed appreciation to all the participants, organisers, and contributors to the conference for their commitment to the sustainable stewardship of the region's oceans and coastal areas.

#### D. ATSEA-2 Parallel Workshop Session

Part 1 Theme: “Marine and Land-based Pollution in the ATS Region”

The ATSEA-2 Parallel Session is divided into two: (1) Marine and Land-Based Pollution, and (2) Community Empowerment in the ATS region. The session was moderated by Ms. Casandra Tania, Regional Biodiversity Specialist of ATSEA-2 RPMU.

The session on Marine Pollution in the ATS Region featured two presentations. The first presentation was delivered by Dr. Won-Tae Shin, Manager, Ministry of Oceans and Fisheries (MOF)/PEMSEA ODA Project on Reducing Marine Plastics. Dr. Shin who also previously served as ATSEA-2 consultant shared the process and results of the Regional Assessment he undertook for ATSEA-2 focusing on land and marine-based pollution. Through DPSIR Analysis, Dr. Shin highlighted the key drivers to pollution, pressure, state, impact and possible response in the ATS region. From the assessment two major regional pollution concerns emerged: (1) oil spill, and (2) marine debris which includes plastics and derelict fishing gears. While localised concerns were from nutrients, sedimentation mainly from mining, and toxic substances from agricultural practices.

The hotspot analysis on oil spill showed the increasing pressure and potential occurrence of oil spill from the growing oil industries and production in the region, particularly in the Timor Sea area. Using GNOME oil spill modelling, the assessment showed that Rote islands of Indonesia and Southern coasts of Timor-Leste are particularly vulnerable. He noted that the previous Montara Oil Spill incident has shown the extent of negative impacts of oil spill both to the coastal and marine ecosystems and affected communities which lingers even to this day.

To strengthen oil spill preparedness and response in the ATS region, Dr. Shin recommended the following: ratification of OPRC 1990, development and establishment of an ATS Regional Platform for Oil Spill Response, develop an ATS Oil Spill Contingency Plan and ESI Atlas. These efforts if successfully established will facilitate better coordination, sharing of information and resources, and early deployment of support or response. As for marine debris, Dr. Shin highlighted two types that are crucial in the ATS region: (1) floating debris mainly plastics, and (2) deposited debris mainly from derelict fishing gears. To address the issue of transboundary marine debris, Dr. Shin recommended the establishment of marine litter survey stations in each country for regular monitoring activities by NGOs, and conduct of joint survey guidelines, harmonised data card, trainings on marine litter survey, and more public awareness activities. Before concluding his presentation, Dr. Shin also shared a brief information on the recently



initiated (MOF)/PEMSEA ODA Project on Reducing Marine Plastics which covers ten sites in the Philippines and Timor-Leste. The project aims to enhance local governance on marine plastics management, demonstrate best practices and innovative solutions, facilitate conduct of beach monitoring and trend setting, and strengthen capacities, awareness and engagement in marine plastic management.

The second presentation was delivered by Mr. Krisna Laharjana, Specialist from the Regional Capacity Center for Clean Seas (RC3S) of Indonesia. The RC3S was established building on Indonesia's commitment in the Bali Declaration on the Protection of the Marine Environment from Land-based Activities adopted at the fourth session of the Intergovernmental Review Meeting (IGR-4). Since 2019 various initiatives have been undertaken by the RC3S which includes knowledge management, capacity building, and development and application of clean seas solution model. RC3S, in collaboration with a team from the Directorate of Coastal and Marine Pollution and Degradation Control (PPKPL) and universities in Indonesia, has carried out marine litter monitoring twice a year in 23 provinces and 24 cities/regencies, as well as technical guidance for marine debris monitoring in 34 local governments in Indonesia. In the ATS area, the monitoring has been undertaken in East Nusa Tenggara Province, Maluku Province and West Papua Province. In general, the monitoring trend data showed plastics as the dominant waste based on quantity or weight. From 2019 to 2022, RC3S has conducted a number of expert discussions, local community activities, dialogues with private sector, regional workshops, trainings, etc. In October 2022, through the proposal of the Government of Indonesia to the COBSEA Secretariat, RC3S was recognized and established as a COBSEA Regional Activity Center (RAC) during the 25th Intergovernmental Meeting of COBSEA. For 2023, RC3S took part in several relevant ASEAN working group discussions on marine litter management, and is scheduled to host COBSEA in the conduct of its Consultation Workshop on COBSEA's Strategic Directions for 2023-2027, and PEMSEA for the conduct of the Training of Trainers Workshop on Marine Plastic/Litter Beach Monitoring in Bali. In 2023, RC3S will also start to collect data on microplastics, while the ongoing monitoring by different local governments will continue for meso and macro plastics monitoring.

Following the presentations, the floor was opened for questions. A question was raised on whether RC3S also plans to conduct monitoring in other ATS areas like Merauke, Aru etc. in the future. Mr. Laharjana indicated that for this year 38 locations were identified and it is possible that starting next year monitoring will be undertaken in the additional 38 sites.

## Part 2 Theme: "Community Empowerment in the ATS Region"

The second part of the session was still moderated by Ms. Tania. The session featured two presentations based on ATSEA-2 initiatives, and one initiative from Minderoo Foundation.

The first presentation focusing on the "South Fly Forecoast Artisanal Management Plan (SFAFMP)- A Pilot for Community-Based Fisheries Management in PNG" was delivered by Mr. Noan Pakop, Special Advisor to the Managing Director of NFA, PNG. The development of the SFAFMP as considered as a pioneering initiative in PNG that demonstrated bottom-up management approach for enabling community to manage their marine and coastal resources. This initiative as part of ATSEA-2 targets will cover 14 villages in South Fly, Western Province of PNG wherein a total of 1,486 households (or 8,890 villagers) engaged in artisanal fisheries are expected to benefit. The initiative includes three key elements: the adoption of an EAFM Plan which will be formalised through a by-law in 2023 and supported by a Stakeholder Management Committee; the inclusion of Rights-Based fisheries management principles and considerations particularly complementarities with existing customary plans (i.e., Sabi/ no take areas or period); and the capacity building and conduct of Monitoring, Control and Surveillance (MCS). As the villages of South Fly are quite remote, the initiative is seen as beneficial as it will help build local



capacities and responsibilities in promoting sustainable fishing practices, monitoring and reporting which will then link to national fisheries plans and policies. It is expected that once the SFAFMP is enacted, roll out of the plan including more socialisation exercises will be carried out starting in 2024.

The second presentation focusing on “Women in Action: Managing Natural Resources and Generating Incomes” was delivered by Dr. Aretha Aprilia, Head of Environment Unit, UNDP Indonesia. Dr. Aprilia shared the inspiring stories from alternative livelihood initiatives being undertaken in Rote Ndao, East Nusa Tenggara, Indonesia and Manatuto Municipality, Timor-Leste with support from the ATSEA-2 project. The initiatives were in line with ATSEA-2 project’s commitment to promote and mainstream Gender Equity and Social Inclusion (GESI) and provide opportunities for women to be recognized, be empowered, and serve as agents of change in their respective communities and families.

In Rote Ndao, alternative livelihoods or support to strengthen existing small enterprises are being undertaken with four community groups wherein majority of members are women: Ita Esa Women Group in Oeseli Village, Tasi Bo’a in Bo’a Village, Dale Esa Women Group in Daiama Village, and Ina Landu Group in Landu Tii Village. The Ita Esa focusing on Minano Soap production from seaweed and Tasi Bo’a group focusing on massage oil production from virgin coconut oil are considered to be more advanced compared to the other two groups which are still at initial stage of implementation. These more advanced groups have undergone several capacity building exercises and are now marketing their products locally, mainly to tourists in their areas. Income generation has started to be noted and it is hoped that permits to enable these groups to export their products will be achieved in the coming years to further boost their income and scale up the livelihoods. Dr. Aprilia also highlighted the good partnership established by the Provincial Government of Rote Ndao and Bank NTT through an MOU which was signed in February 2023. The two-year agreement will facilitate provision of loan facilities, help expand the market, promote better production and packaging, and facilitate more trainings.

In Posto Administrativo Barique, Manatuto, Timor-Leste, Dr. Aprilia highlighted the Tok Derek Women Cooperative which was launched in 2022 with 40 members from four villages (Uma Boko, Aubeon, Sikone-Dilole and Abat Oan). The Cooperative has benefited from a number of capacity building initiatives through the ATSEA-2 project including sustainable fisheries, fish feed training, cooperative management, accounting and audit. Within the Women Cooperative Center a fish shop and six fish ponds have been constructed. This facility started to record a savings of US\$350 from their services. Interviews conducted with some women stakeholders showed appreciation to the initiatives and to the benefits they have gained. These GESI-related efforts from ATSEA-2 have started to showcase how empowered women groups can contribute to managing nature and generate new sources of income for their households. The efforts have also leveraged interest and support from other groups (e.g., private sector) to provide more support for investment as well as capacity building.

The last presentation focusing on “Ikan ba Futura: Securing Timor-Leste’s Fisheries for Sustainability and Ecological Resilience” was delivered by Mr. Keith Twyford, Lead of Indo-Pacific Programs, Fisheries and Conservation, Minderoo Foundation. Mr. Twyford provided a short background on the Minderoo Foundation. Minderoo is a private philanthropic organization founded in 2001 and is now one of the largest philanthropies in Australia. Its sustainable fisheries global portfolio includes almost 20 projects worldwide, including in Timor-Leste. In particular, the Ikan ba Futura program in Timor-Leste which will be implemented from 2023-2028 is aimed to support the long-term sustainable fisheries objectives of the country through provision of technical support related to policies and plans, MPA network design, and community-based fishery management. The project’s lead implementing partner is WorldFish, with support from Blue Ventures & Barefoot Oceans. While the main beneficiaries are the Government of TL in

general, MAF, and the fishers and communities in the Southern Coast. At the national level, the project will support the government in strengthening National Fisheries Strategy and laws on licensing and management of commercial fishing, as well as planning tools for MPA design and expansion of Peskaas or data collection systems for small-scale fisheries. In South Coast, key support will focus on stock assessment and monitoring, establishment or strengthening of community-based fisheries management programs, support to monitoring, control and surveillance, and establishment of more partnerships with other entities with initiatives in South Coast including PEMSEA and ATSEA-2.

Following the presentation, Ms. Tania sought further information and insights from the three presenters on the importance of the community-based management approaches and how they benefit the communities. On the SFAFMP initiative in PNG, Mr. Pakop further explained that top-down implementation of national plans and laws are often not properly implemented particularly in remote areas like the villages of South Fly. By initiating a community-based fisheries management which complements with national plans and laws, awareness trickles down to the local communities. This facilitates better understanding of the different restrictions, regulations and even new practices which subsequently will help bring about respect to existing laws and plans. Thus, by having a community counterpart plan, relevant measures are mainstreamed and better aligned with community-based arrangements.

As for alternative livelihood initiatives in remote areas. Dr. Aprilia highlighted the UN's guiding principle on "Leaving No One Behind". She noted that communities in remote areas often do not receive the same level of support and attention compared to urban and sub-urban communities while it is also important for these communities to be self-reliant. The ATSEA-2 initiatives on the ground, through GEF and UNDP support, therefore capitalises on this opportunity to bring the capacity and support to these remote coastal communities and women groups.

Mr. Twyford, on the other hand, emphasised that engagement with local communities is crucial as the local people know the situation, needs and challenges better than outsiders. Given the high dependence on fisheries for nutrition, livelihood, etc. it is crucial to work with local communities if project interventions are to succeed.

In response to additional question on the floor on specific intervention in Timor-Leste by Minderoo Foundation, Mr. Twyford indicated that currently in South Coast fishing activities are all small-scale and not at commercial fishing level, although this situation may also change in years to come. Thus, their approach is to work with community groups on monitoring and surveillance, as well as enforcement of fishing laws. There is also currently no area-based management approach in South Coast and the project by Minderoo will help by starting from conduct of stock assessment.

In concluding the discussions, Ms. Tania highlighted two key messages: (1) on Pollution Management, building regional capacity and collaboration is important; and (2) Empowering communities, particularly in remote areas, through capacity building, awareness and alternative livelihoods will enable them to become more resilient and self-sustaining.

September 13, 2023

### E. Keynote Presentation from Ms. Aimee Gonzales (PEMSEA) and Prof. Dr. Rokhmin Dahuri

Day 2 of the 4<sup>th</sup> ICMMBT opened with two keynote presentations. Both Ms. Narcise and Ms. Aguilung listened in the keynotes delivered at Balangan Room of Grand Inna Kuta Hotel. The first keynote was delivered by Ms. Aimee Gonzales, Executive Director of PEMSEA Resource Facility. The presentation entitled “ICM Implementation in the East Asian Seas Region: Roadmap to 2030” which focuses on the continuing adaptability and relevance of the ICM or Integrated Coastal Management in support of sustainable coastal and oceans governance and management. In the East Asian Seas region, PEMSEA has been a key advocate of ICM since 1993. The ICM approach is applied at the sub-national level. PEMSEA has developed and implemented an ICM system that draws upon a variety of coastal and marine management tools and applies them into a common governance framework. Ms. Gonzales explained how the ICM system is designed and applied to address a multitude of sustainable development challenges, including climate change, habitat and biodiversity loss, and marine pollution. It has been tested in over 114 sites in 12 countries in the East Asian Seas region, which is characterised by diverse cultural, social, economic, ecological, and political systems. Overall, the ICM system espouses a dynamic management approach that continues to remain relevant in the local implementation of the global agenda, including the UN Sustainable Development Goals to 2030, Post 2020 Kunming-Montreal Global Biodiversity Framework, Paris Agreement, and other related international conventions and regional agreements.

The second keynote presentation was delivered by Prof. Dr. Rokhmin Dahuri focusing on “Lessons Learned from the Implementation of ICM and Marine Biotechnology for Future Blue Economy”. Dr. Dahuri highlighted that the existential challenge for human civilization in the 21<sup>st</sup> century is how to meet the ever-increasing demand for food, clothing, housing, health services, education services, transportation services, recreation and tourism, living space, and other human needs in a sustainable manner while addressing the continuing degradation of ecosystems. As coasts and oceans cover about 80 percent of the total Earth surface, Dr. Dahuri highlighted its potential to provide for the varying needs of various communities and countries. However, environmental degradations have continued and have been further aggravated by the repercussions of Global Climate Change including extreme weather, sea level rise, coastal inundation, and ocean acidification.

Dr. Dahuri underscored the increasing opportunity that can be tapped from the application of marine biotechnology, particularly genetic engineering, in boosting the productivity, efficiency, competitiveness, and sustainability of coastal and marine aquaculture. Bioprospecting and extraction of bioactive compounds from marine biota has also created various industries including functional food and beverages, pharmacy, cosmetics, bioplastics, and bioenergy. Bioremediation, another marine biotechnology application, has also been very effective and efficient in cleaning up coastal and marine pollution. He believes that by combining marine biotechnology with Industry 4.0 technologies such as IoT, Artificial Intelligence, Cloud Computing, Blockchain, Drone, Robotic, and nanotechnology, the varying human challenges can be overcome. At the same time, he echoed Ms. Gonzales’s presentation and emphasised that the implementation of ICM has been able to alleviate pollution, biodiversity loss, and other environmental degradation; and at the same time has increased the productivity and production of natural resources and environmental services on a sustainable basis. He further underscored

that ICM remains relevant and if properly understood and applied, particularly by people in the governments, it can help provide a comprehensive holistic framework to support well-planned and coordinated actions and interventions.

## F. Closing Ceremony of the 4<sup>th</sup> ICMMBT

The two-day Conference concluded in the late afternoon of September 13, 2023. All the participants from various parallel sessions converged in the Plenary Room for the Closing Ceremony. The closing activities included awarding of early birds, favourite presenters, etc. which was led by the Head of the Organizing Committee, Dr. Kustiariyah Tarman who also expressed her sincere appreciation to all the participants, and the members of the Organizing Committees for making the event possible and successful.

On behalf of PKSPL-IPB, Prof. Dr. Yonvitner, S. Pi., M. Si., Director of CCMRS IPB, expressed his appreciation to all the participants, speakers, presenters, moderators and the organising team and sponsors. Dr. Yonvitner believes that the Conference was able to achieve its objectives and urged all the participants to participate once again the 5<sup>th</sup> ICMMBT which will be conducted in 2025.

On behalf of the organisers, Dr. Susanto, RPM of ATSEA-2 Project delivered the Closing Remarks. Dr. Susanto highlighted four key messages that emerged from the conference:

- **Vision:** Guiding the shared aspirations of all the participants as outlined in the UN Sustainable Development Goals, which is also well aligned with Indonesia's and other countries' aspirations for a thriving blue economy.
- **Integration:** Integration must occur on multiple fronts, from approaches and implementation methods to harmonising scientific insights with governance, finance, social aspects, ecological considerations, economic factors, and institutional coordination.
- **Partnership, collaboration, and engagement:** These are the cornerstones upon which progress rests. Without the active involvement of stakeholders at various levels, from local to global, goals and efforts will remain elusive.
- **Adaptation and innovation:** As the world continues to evolve, it is crucial to remain adaptable, ensuring that various efforts remain relevant and in sync with the changing needs and priorities of the ocean environment and communities. This also means finding ways to harmonise traditional practices of coastal communities with new approaches, including keeping a keen eye on the promising advancements in marine biotechnology and other beneficial technological innovations.

Dr. Susanto concluded by thanking the partners, organisers, speakers, presenters, moderators, and participants for making the conference a success. He urged everyone to carry with them the inspiration that collective efforts, whether large or small, hold the power to make a profound difference.

## ATSEA-2 IN PARALLEL SESSIONS

On the afternoon of 13 September 2023, Ms. Katherine Aguilung, Ms. Narcisse, Ms. Tania and Mr. Kenneth Yhuanje also facilitated assigned parallel workshops.

Ms. Aguilung, in particular, moderated Parallel Session #7 which featured papers on coastal and marine pollution management, and assessments related to biodiversity and ecosystem management. The session featured the following paper presentations:

- Development of an IoT-based Oil Spill Incident Early Warning System by Mr. Ganjar Adi Pradana.
- Evaluation of Wooden Jetty Structure in Coastal Areas by Ms. Lina Karlinasari.
- Assessing The Management Effectiveness in Nino Konis Santana National Park by Ms. Deti Triani.

Ms. Triani's presentation is based on the assessment conducted by the ATSEA-2 project on the management effectiveness of the Nino-Konis Santana National Park of Timor-Leste. The Park which was established in 2007 covers a total area of 130,500ha, and was considered as IUCN Protected Area V which houses sea turtles, deers, yellow-crested cockatoo, Timor green pigeon, among others. The assessment used the IUCN WCPA framework for protected area management effectiveness (or PAME), METT 4 which was developed by World Bank and WWF Alliance and published in 2020. The assessment conducted in June 2023 included desktop study, Focus Group Discussions, collection of various evidence and validation. The final assessment showed an increase in METT score from 24 in 2014 to 46 in 2023. The improvement is mainly due to availability of baseline information, having a draft management plan, compilation of new documents, availability of zoning plans, and boundary markers. It was also found that the community in and surrounding the area is actively providing services in the Park and tourism has seen substantial growth. Overall, some parts of the National Park are well maintained with good habitat and biodiversity conditions. However, there is still a need to enhance the capacity of the park management team and the community, improve the facilities, and formalise the adoption of the draft management plan. Ms. Triani emphasised that the METT score is not a fail or pass scoring system, but more of a guide to help in the continuing improvement in management of the protected area and ensure that it will continue to bring ecosystem benefits.

Ms. Narcise moderated Parallel Session #11B which focused on marine biomaterials and marine bioprospecting. The following papers were presented:

- Novel Bioactive Wound Dressing Based on NaCMC (Sodium Carboxymethylcellulose), Chitosan, and Mackerel Scad (*Decapterus macarellus*) Skin Collagen by Mr. Annas Tanzilal Hamid.
- Green Algae (*Spirogyra majuscula*) for Bioethanol by Mr. Atmanto Heru Wibowo.
- Protein Characterization of Maltodextrin Edible Coated on Snack Bar Enriched with Spirulina by Ms. Erika Wahyu Dewanti.
- Phytochemical and GC-MS Analysis of Spirulina Platensis Biomass and the Potential of its Bioactive Compounds by Mr. Himawan Prasetyo.



- Diversity and Distribution of Soft Coral Communities in Coastal Water at South of Bangka Island and its Antibacterial Activity by Mr. Chaidir.
- The Anti UV, the Sun Protector Factor (SPF) and Irritation Tests of Coastal Vegetation *Ricinus communis* by Mr. Robert A. Bara.

Ms. Tania moderated Parallel Session #18B which focused on Marine Protected Areas (MPAs):

- Understanding Data Comparative on Fish Conservation Management System in Indonesia, Timor – Leste and Papua New Guinea by Ms. Cristiana Ximenes Belo.
- Reinforcing Ecological Connectivity of Migratory Fish Species and Fishers’ Resiliency: Case of Marine Protected Area Networks in Fisheries Management Area 714 & 715 by Dr. Budy Wiryanan.
- Evaluation Assessment of the Management Effectiveness for the Marine Protected Areas: Case Study of Bontang City by Mr. Fakhrie Wahyudin.

In addition to Ms. Triani, other ATSEA-2 staff also presented their work in the parallel sessions as follows:

- Harmonising The Evaluation Result of Marine Protected Area Management Effectiveness Using EVIKA and Scorecard-METT: Southeast Aru Aquatic Nature Reserve (*Suaka Alam Perairan Aru Tenggara*) Case Study and Integrating Gender Mainstreaming to Eliminate Gender-Related Barriers in Fisheries and Coastal Resource Management: Lesson from Aru Archipelago’s Gender Action Plan by Ms. Sila Kartika Sari.
- Understanding Fish Maw Harvest and Trade in Western Province, Papua New Guinea by Mr. Kenneth Yhuanje.
- Identification of Potential Turtle Nesting Site and Threats to Support the Establishment of Marine Protected Area in Manufahi Municipality by Ms. Dominica Gutterres.

## **FIELD VISIT TO THE TURTLE CONSERVATION AND EDUCATION CENTER**

On the day 3 of the 4<sup>th</sup> ICMMBT on 14 September 2023, some registered participants joined the sea turtle field trip. The Turtle Conservation and Education Center (TCEC) team provided an overview of the facility and the work that they undertake in the Center. The Center was established with the support from WWF and after which it has sustained its operations through donations and support from volunteer workers. The field visit participants were divided into groups and were given the opportunity to learn more about the sea turtle species, their challenges, and tips to protect and conserve them through a video presentation and guided tour of the Center’s facilities.



## DOCUMENTATION



VIPs and Participants of the 4<sup>th</sup> ICMMBT



Mr. Noan Pakop During ATSEA-2 Plenary Session





ATSEA-2 Parallel Session



Ms. Aimee Gonzales after Delivering Her Keynote Presentation





Ms. Triani's Presentation in a Parallel Session Moderated by Ms. Aguilung



4<sup>th</sup> ICMMBT Committee

More documentation on 4<sup>th</sup> ICMMBT:

[https://drive.google.com/drive/folders/1aHKR8hPL\\_5yWYIFBvKPkheyWuWJc3lac?usp=drive\\_link](https://drive.google.com/drive/folders/1aHKR8hPL_5yWYIFBvKPkheyWuWJc3lac?usp=drive_link)



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