

ATSEA

NEWSLETTER

**Wave of
Collaborations:
Joint Actions in
Enhancing Coastal
Communities Livelihoods**



Arafura and Timor Seas Ecosystem Action





ATSEA-2 Annual Report 2021
Together, Better, Stronger

ATSEA-2 Annual Report 2021
Together, Better, Stronger

Implementing CCA strategies in Oeseli Village, Rote Ndao

Located at the southwestern point of Indonesia's East Nusa Tenggara (NTT) Province, Oeseli Village was once a military base, but is now better known for its initiatives to protect vulnerable species and habitats. Home to around 2,000 residents, the village was the subject of two research methodologies implemented by the ATSEA-2 project in 2021: community immersion and focus group discussions (FGDs).

The project set out to build rapport with, observe and listen to the community and share emerging findings with them. The project also involved underwater observation of coral reefs, fishing and participatory mapping to identify the location of the fish and their habitats.

“The weather at sea is growing more unpredictable and the seaweed gets damaged, turning mushy, like porridge. It didn't used to be like this, but now the weather is more temperamental.”

- Met
a seaweed farmer from Oeseli Village

The FGDs provided more detail on the main challenges experienced in Oeseli Village. For example, the quantity of fish is in decline, especially for sea bass, lobster and white mullet. Many families rely on income generated from seaweed production, but quality and quantity are also declining. Discussions with local stakeholders also confirmed that the fish are being destroyed, that fish buying of turtles continues, and that seaweed and other people remain prevalent in fishing. Mangroves and shallow reefs are not viewed as alternative sources of income, although seaweed is harvested from there.

In the same FGDs, community members identified local adaptive actions and measures based on a series of criteria, including how successful effectiveness and community acceptance, along with cost and feasibility. The group members then voted on the identified actions would result in the most positive impacts for the community. An action plan for climate change adaptation in Oeseli Community was developed and submitted to the local government for consideration in the local action plan for District of NTT Province.

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WELCOME

Welcome to the first edition of the ATSEA newsletter in 2023.

It is our pleasure to share with you a comprehensive account of initiatives undertaken by the program in the first quarter of 2023.

In this issue of our newsletter, we will take you on a journey from Indonesia to Papua New Guinea and Timor-Leste; into the communities where engagement is taking place and meaningful impacts are being made, where cross-sectoral collaboration is facilitating sustainable development for the ATS region.

Our feature article highlights the International Women's Day to celebrate women's role in marine and fisheries industries. At the regional level, ATSEA has been building momentum and catalysing initiatives with country partners on updating the Transboundary Diagnostic Analysis (TDA) and Strategic Action Program (SAP). We hope you enjoy reading this very first issue of the 2023 newsletter, and continue to join us on our journey in 2023.

Take care and stay well,
The ATSEA-2 team

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Celebrating the Vital Role Played by Women in the Marine and Fisheries Sectors

By Stella Yovita Arya Puteri

In commemoration of International Women's Day 2023 (8 March), the ATSEA-2 Project recognises and celebrates the crucial role played by women in the marine and fisheries sectors, especially in the Arafura and Timor Seas (ATS) region. Despite their active involvement in downstream activities, women face challenges in accessing resources, information, and markets and receive less official support. To address these issues, the project is providing training for women-led home-based small businesses and capacity building for gender empowerment and community welfare through seaweed, promoting sustainable development in the ATS region. Let us delve into the stories of these remarkable women and examine the strategies that the ATSEA-2 Project has implemented to promote gender equality and empower women in the marine and fisheries sectors in the region.



Women Improving Family Economies by Processing Fish Products in Papua, Indonesia

In the bustling city of Merauke, in the South Papua Province of Indonesia, one woman is making a name for herself in the male-dominated fishing industry. Hasnah, a respected member of her community, is a fish processor who specialises in snapper and mackerel. After her husband's fishing boat sank, he had to switch to transportation, but Hasnah remained in the fishing industry, determined to make a name for herself.

With support from the Merauke District Marine and Fisheries Department, Hasnah formed a joint business group (*Kelompok Usaha Bersama-KUB*) Eltimo, a business group that makes various fishery products that are popular in local markets. She serves as an information hub for the surrounding households and helps disseminate information to mobilise women in outreach activities, which helps fisherfolk run their operations more effectively. Through the ATSEA-2 Project, KUB Eltimo is now able to provide additional support in managing fisheries and other coastal and marine resources in Merauke.

Hasnah established a business group, focusing on local fish production such as crackers, fish balls, fish cake, nuggets, shredded fish and shrimp paste.

In Kumbe, another town in the South Papua Province, Mama Elizabeth Limai is a small-scale fisher who has been fishing for *ikan kaca* (glassfish), *gulama* (white croaker), *kakap* (snapper), *kurau* (threadfin) and *udang* (shrimp) since she was 17 years old. She wakes up early every morning to fish with her husband, Chris, and sells around 10 kilos of fresh fish locally. However, over the past five years, Elizabeth has observed changes, including a polluted and dirty beach, which makes it harder to catch fish. She explains, "It's getting more difficult to catch fish nowadays because the beach here has become dirty and polluted." Elizabeth noticed a decline in her catch due to coastal pollution, and she believes that cleaning up the beaches will bring the fish back.

Despite facing challenges such as environmental degradation and limited access to resources, these women are determined to make a difference in their communities. They are leading the way in the marine and fisheries sectors, breaking down gender barriers and playing a vital role in promoting sustainable development in the Arafura and Timor Seas region.



Elizabeth shows her dwindling catches from the sea, as pollution continues to take its toll on marine life in Merauke.



Minano Group in Rote Ndao utilises mangrove and seaweed to produce soap, message oil, syrup and coffee.

Women Fishers in Rote Ndao Adapt to Climate Change while Leveraging Alternative Livelihoods

Heading west from Papua, the ATSEA-2 Project team met with some women fishers that could be the agents of change in Rote Ndao District, East Nusa Tenggara; another key working area for the project in Indonesia. The area faces challenges such as overfishing, declining fish stocks, destructive fishing practices, and climate change, which disproportionately affect women who face inequalities in coping with these challenges and escaping poverty. The project is working with the Indonesian Ministry of Marine Affairs and Fisheries to develop alternative livelihood activities for women, including producing value-added products from local resources like coconut, seaweed, and mangroves.

Sofice Littik, a seaweed farmer and small-scale fisher in the area, is one of the women who has taken on multiple roles to support her family, facing challenges in accessing aid and being included in decision-making processes. Her village was hit by tropical cyclone Seroja, damaging many houses, and her seaweed production has decreased due to pollution and an oil spill. Although the government promotes seaweed farming, aid is usually given to men, and women are often marginalised in decision-making processes.



Sofice Littik, 49-year-old, is one of several seaweed farmers and small-scale women fishers in Oeselli Village, Rote Ndao.

“I usually paddle the canoe and my husband takes the net, because he has lost one of his arms and is not so strong anymore,” says Mama Ice. In the past, fishers in Rote Ndao used explosives for fishing, which caused many fatalities and disabilities. Mama Ice's husband was one of them, so she took on physically demanding tasks that are typically done by men to support their family.

To support Rote Ndao coastal communities, the ATSEA-2 Project is helping coastal communities in Rote Ndao cope with the impacts of climate change and poverty by identifying the challenges faced by women in the area. The project is developing alternative livelihoods for these communities, aiming to increase their market potential and reduce dependence on marine resources through ecosystem-based adaptation and Integrated Coastal Management (ICM). By supporting these communities with training and capacity building, the project hopes to mitigate the impacts of climate change on these vulnerable communities.



Women fishers in Aru work alongside their husbands, assisting with the cleaning of their daily catch. The fish are then salted or sold fresh in the market.

Overcoming Gender Disparities in the Fishing Industry: Lessons from Aru Archipelago

Just like the communities living in coastal areas in South Papua and East Nusa Tenggara, women in the Aru Archipelago District of Maluku also play an important role in the marine and fisheries sector – an essential source of livelihoods for many communities. Women play a crucial role in pre- and post-harvesting processes but are often overlooked and undervalued, particularly in decision-making processes.

In 2022, the ATSEA-2 Project team, together with a group of journalists, set out to document the crucial role played by women in Aru. They collect shellfish to sell, while also sewing and fixing fishing nets, and taking care of many issues related to procurement. The women here also help determine how much money the husband earns from selling the fish he catches, as they also play a key role in marketing the products to get the best price possible.

Lenny Nurhayanti Rosalin, who was the Deputy for Gender Equality at the Ministry of Women's Empowerment and Child Protection (*Kementrian Pemberdayaan Perempuan dan Perlindungan Anak-KPPPA*) acknowledges that women fishers are involved in various economic empowerment activities in coastal areas and entrepreneurship in

the cultivation of marine products. The KPPPA continues to encourage women fishers to access resources and benefits from women's economic empowerment activities through entrepreneurship. "Women's contribution to the family economy will become a women's strength in the decision-making process in their household, including sharing roles in educating and raising children with their husbands more fairly," said Rosalin.

The ATSEA-2 Project conducted a study into gender disparities in Aru, revealing that women face segregation in productive, reproductive and public roles, as well as limited participation in decision-making processes within the customary management system. Gender stereotyping and the belief that women lack technical knowledge were identified as factors perpetuating gender issues in the marine and fisheries sector.

The study results were shared with relevant stakeholders, and a meeting was held to develop an action plan to address gender issues in marine and coastal programs in Aru. The meeting recommended re-establishing a forum for women in the region, facilitating access to civil society organisations and government authorities. The project also plans to hold further discussions to incorporate gender mainstreaming within each program, including shared roles and responsibilities.

Women's Cooperatives: Nurturing A Brighter Future in Timor-Leste

The ATSEA-2 Project established a women's cooperative in Barique Posto Administrativo, Manatuto, Timor-Leste to empower women entrepreneurs in rural areas. The area relies on agriculture, livestock, and fishing for income, with women often bearing a significant financial burden but lacking access to information. The cooperative, with 16 inaugural members, has helped members improve their financial management skills and save money for future expenses, such as children's tuition fees. Members have shown a positive attitude towards managing their expenses, and the cooperative has enabled them to prepare for their families' daily expenses.

Jacinta Maria Da Cruz, a women's cooperative member, said, "Now, I know how to make a budget for my family's daily expenses – through the women's cooperative, I can save the extra funds for my children to pay their tuition fees in the future." The ATSEA-2 Project plans to continue supporting opportunities for women in Barique to increase their participation in organisational and business operations, accelerating the development process.



Jacinta Maria Da Cruz is one of women's cooperative members in Barique, Timor-Leste.



Dwi Suprapti, a sea turtle expert, hosting a training session in Com Village, Timor-Leste.

Women Helping to Protect Sea Turtles

The *Grupus Konservativu*, a local community-led conservation group in Com Village, Timor-Leste, has been working to protect sea turtle eggs from human exploitation and predators by relocating them to secure locations. However, they face several challenges such as low hatching and release rates, the need for legal recognition, monitoring, training and raising awareness.

To support their conservation efforts, the ATSEA-2 Project conducted a Sea Turtle Conservation Training session in November 2022, which included expert insights into turtle conservation methods, ecosystem linkages, and bacterial growth prevention. The training is a crucial first step towards sea turtle conservation in Com Village, and additional developments such as legal recognition, monitoring training, and awareness-raising are required. The *Grupus Konservativu* plans to raise awareness of the protection of sea turtles and develop eco-tourism to provide economic benefits to the local community, with support from the ATSEA-2 Project collaborating with PROSPEK.



With rapt attention, training participants listen as an expert provides insight into seafood processing.

Women’s Group in Manufahi Plays a Significant Role in Improving Seafood Processing Skills

In addition to Dwi Suprapti, who actively supports the community-led conservation group in Com Village, The ATSEA-2 Project has seen big improvements in terms of women’s seafood processing skills in Manufahi municipality in Timor-Leste. Here, there are days with more fish caught than sold and at other times, seafood needs to be preserved. The ATSEA-2 Project collaborated with the Ministry of Agriculture and Fisheries (MAF) to train women's groups from Betanu, Uma-Berloi and Clacuc villages on seafood processing techniques, sanitation, and hygiene to prevent spoilage and prolong shelf life. The training took place in September 2021 and high-ranking officials from the Ministry of Agriculture and Fisheries attended the event to show the program's goals' importance. The focus is on developing the Betano to Claluc Marine Protected Area (MPA), Integrated Coastal Management (ICM) plans, and sustainable fish feed production through an Ecosystem Approach to Fisheries Management (EAFM).



Hands-on training in seafood processing allows participants to refine their skills and techniques.

Women's Role and Involvement in an Ecosystem Approach to Fisheries Management

Papua New Guinea (PNG) is abundant in natural resources, particularly in its exclusive economic zone, which includes diverse marine fisheries and tuna resources. However, unsustainable resource use practices, pollution, habitat destruction and poor environmental governance have caused severe environmental degradation over the past decade. The ATSEA-2 Project team conducted a training session for the village community in South Fly, which relies on fishing and marine resources for their livelihoods. The training focused on using an Ecosystem Approach to Fisheries Management (EAFM), which helped participants identify issues in fisheries management, prioritise goals and establish a vision for future management.

The villagers expressed their appreciation for the training and plan to develop committees to enforce compliance. Meanwhile, in the Fore-coast Kiwai region, women play a significant role in fishing for crabs and shellfish, collecting bait, and preparing and processing the catch. However, societal expectations and lack of market accessibility limit their involvement in deep lining and fishing in reefs, hindering their financial gains.

In another part of the coastal area, the Fore-coast Kiwai region, women have a different – though no less important – role compared to men. While men go out to sea and set fishing nets, women fish for crabs and shellfish in mangrove forests and use small nets along the beaches. They also cast lines close to the coast and sometimes use poison roots when accompanying men to reefs. Women collect the bait needed for deep lining and contribute to a range of catches. They are also responsible for preparing and processing the catch, including cleaning, sorting, cooking and selling at markets.

However, due to societal expectations, women are comparatively less involved in activities such as deep lining and fishing in reefs. There is also a problem with accessibility to markets, making it difficult for them to sell their catch and benefit financially. It is hoped that in the future, more women will engage in these fields and that accessible markets will become available so that all fisherfolk can improve their lives and provide for their families.

This article has been published on [IW:Learn](#)

bit.ly/Article_IWD2023



Women are at the forefront of South Fly District's lively fish market, selling their daily catches.

Closing the Net: Supporting Effort to Combat IUU Fishing

By Dr Richard Stanford and Casandra Tania



The 15th Coordination Committee Meeting of the RPOA-IUU Secretariat.

Regional problems require regional solutions. This is why collaboration is so crucial to the work being done by the ATSEA-2 Project. Our approach is embodied in the Regional Plan of Action to combat IUU fishing (RPOA-IUU).

IUU fishing continues to pose a major threat to the Arafura and Timor Seas (ATS) region. Ever since its inception, the ATSEA program has sought to align its activities with the RPOA-IUU and support its implementation wherever possible. Between 2020 and 2021, the ATSEA-2 Project completed four studies on IUU fishing, then co-organised fisheries intelligence training and an international workshop on ‘Advancing regional standards for responsible fisheries’, in April and June 2022, respectively.

Since November 2022, RPOA-IUU implementation support on the part of the ATSEA-2 Project has been supported by Dr Richard Stanford. Specifically, this has involved the development of an information

sharing mechanism, along with Monitoring, Control and Surveillance (MCS) training needs assessment for the 11 RPOA-IUU participating countries (Australia, Brunei Darussalam, Cambodia, Indonesia, Malaysia, Papua New Guinea, The Philippines, Singapore, Thailand, Timor-Leste and Vietnam). The 11 countries are divided into three sub-regional groups: (1) Gulf of Thailand (GoT), (2) Southern and Eastern South China Sea (SESCS) and the Sulu-Sulawesi Seas (SSS) and (3) ATS.

A round of interviews was conducted with representatives of each country to better understand their perspectives and gather inputs that can inform the development process. Several key questions related to the types of data collected by each country, their willingness or objection to sharing those data and considerations behind their reasons. Regarding MCS training, questions dealt with country needs and pre-existing assessments on capacity, conducted internally or externally.



On 10 February 2023, participants engage in a Focus Group Discussion on the South China Sea and the Sulu-Sulawesi Seas via Zoom, exchanging insights and perspectives on important regional issues.

In addition to the key respondent interviews, the ATSEA-2 Project (again, represented by Dr Stanford), attended the 15th Coordination Committee Meeting (CCM) in Fremantle from 22-24 November 2022. After several years of virtual meetings, the CCM provided a long-awaited opportunity for many of the participants to meet face-to-face again. Each country was able to present a report on its progress towards responsible fisheries management and how they are combatting IUU fishing.

During that meeting, the ATSEA-2 Project presented some preliminary findings from its work related to data sharing and MCS capacity in support of the RPOA-IUU Secretariat. RPOA-IUU participating countries expressed their appreciation for the additional capacity building ATSEA was able to facilitate in this area. Dr Stanford also took the opportunity to engage with country representatives and gather more information on the regional MCS Training Curriculum, which is currently under development.

In the first quarter of 2023, the ATSEA-2 Project has continued to support the RPOA-IUU Secretariat by facilitating consultations on information sharing and MCS training needs alongside other activities. Two Focus Group Discussions (FGDs) for GoT and SESCOs and SSS were conducted to present key findings of the preliminary survey, to receive inputs from RPOA-IUU participating countries on these key findings and make recommendations for how they can collaborate towards information-sharing and enhance regional MCS capacity to combat IUU fishing.

Based on those activities, a roadmap for developing an information sharing mechanism has been developed, while training needs for MCS have also been identified. These have been submitted to the RPOA-IUU Secretariat for their consideration. In tandem with the work of the RPOA-IUU Secretariat, each of these initiatives will help to strengthen capacity and ‘close the net’ on IUU fishing in the region.



Collaborating Across Borders for Environmental Protection and Management

By Ni Luh Putu Yulia Dewi

From 21-24 February 2023, the Arafura and Timor Seas Ecosystem Action Phase 2 (ATSEA-2) Regional Workshop on Transboundary Diagnostic Analysis (TDA) and Strategic Action Program (SAP) Updating was held in Bali, Indonesia. The workshop brought together 31 participants, comprising National Project Directors (NPDs); Regional and National TDA consultants; TDA-SAP National Working Group (NWG) representatives from Indonesia, Papua New Guinea and Timor-Leste; the ATSEA-2 Regional Project Management Unit (RPMU) members; and National Coordination Unit (NCU) Coordinators. The workshop aimed to elicit feedback on the final draft TDA and commence preparation of the revised SAP, which

will be submitted for endorsement of the Regional Steering Committee (RSC) in November 2023.

During his welcoming remarks, Dr Handoko Adi Susanto, ATSEA-2 Regional Project Manager, stressed the need for a shared understanding and agreement on key actions for the finalisation of the updated TDA and updating of the SAP and NAPs during the workshop, which is critical to achieving the project's targets in the coming months. With the ATSEA-2 Project facilitating the process, Dr Susanto also highlighted that the strategy and program ultimately belong to the four ATS countries who will be implementing them and benefiting from the results.



National Project Directors from four countries come together to kick off the workshop with their welcome remarks. Pictured from top left to bottom right: Yayan Hikmayani, Dr Andrew Chek, Noan Pakop and Celestino da Cunha Barreto.

"Through this joint event, I hope to support and respect each other in agreeing on cross-border issues with a common spirit in strengthening the governance of our waters in the Arafura and Timor Seas (ATS), benefitting the surrounding communities and supporting the sovereignty of our country," said Yayan Hikmayani, the National Project Director of Indonesia. Hikmayani also emphasised the need for collaboration between governments on technical transboundary matters, such as the issue of abandoned fishing gear, without assigning blame to any specific country. "The document should concentrate on joint action between countries to tackle the issue," she recommended.

Celestino da Cunha Barreto, the National Project Director of Timor-Leste, shared his optimism for the workshop. "Timor-Leste has tremendous potential for fisheries exploration and development," he said, drawing attention to the country's 780 km of coastline and an Exclusive Economic Zone of 77,474 km². "We are excited to collaborate with our regional partners in crafting a comprehensive SAP and NAP that will sustainably manage our marine resources and improve our quality of life," he added.

Dr Andrew Chek, the National Focal Point of Australia, also stressed the importance of identifying clear, tractable and focused regional issues to engage with, as well as defining a clear space for ATSEA and its specific role. "Let us be mindful of scope, niche and relationships in developing the future of ATSEA. I look forward to collaborating with all of you over the next four days," he stated.

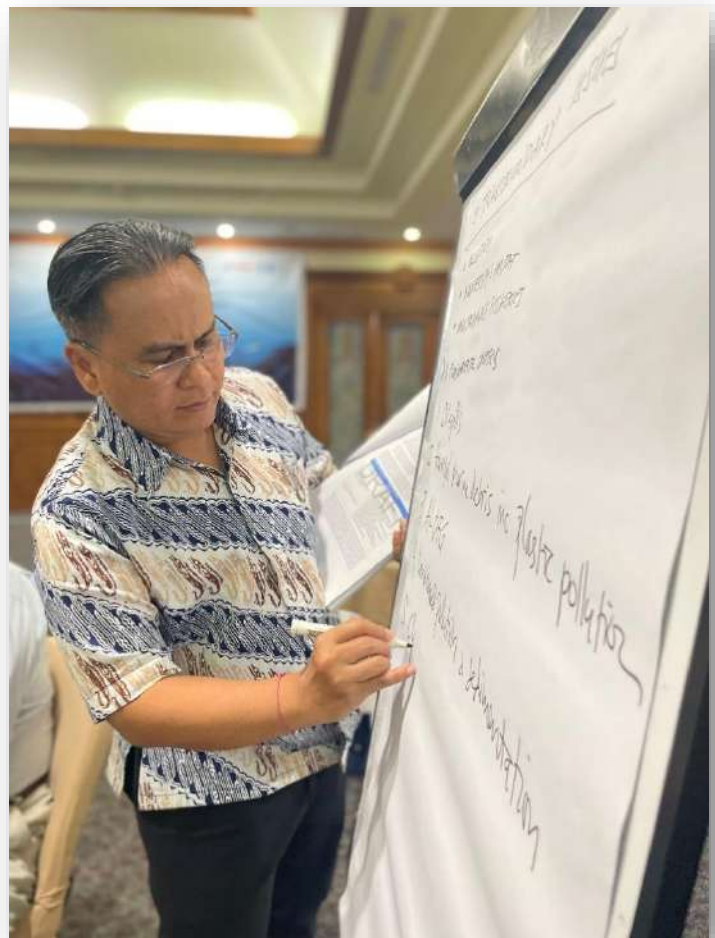
The workshop provided a platform for stakeholders to engage in dialogue, share experiences and perspectives and work collaboratively towards achieving environmental conservation and management in the region. The participants identified the most pressing transboundary environmental issues in the region: marine debris; Endangered, Threatened and Protected (ETP) species; Illegal, Unreported and Unregulated (IUU) fishing; and oil spills. They also discussed potential solutions and interventions, including better regulation, improved enforcement and community engagement.

Noan Pakop, the National Project Director of Papua New Guinea emphasised that a good understanding of the socio-economic dynamics at the community level is required to meaningfully address the IUU fishing in small-scale fisheries in the region as a transboundary issue. "This includes identification of the key drivers and taking steps to recognise existing practices and translating them into formalised arrangements to ensure proper data is captured to give better control and monitoring – that's the bottom line," he added.

The participants also learned about the SAP methodology and discussed the steps involved in updating the SAP. They agreed on the process and timeline, which involves stakeholder consultation, data analysis and action planning.



Following a team discussion on fisheries issues, Mario Cabral (in white shirt) presents his team's findings and insights.

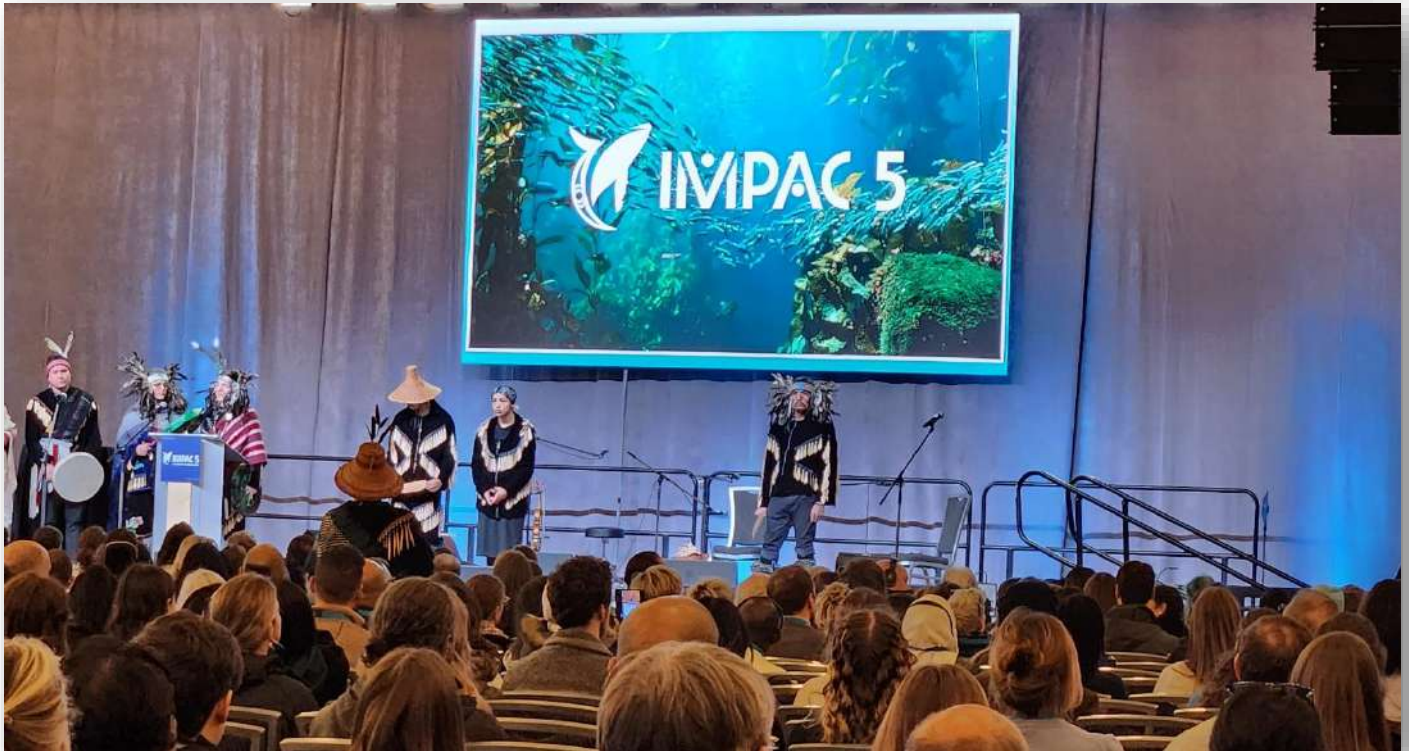


Participants engage in a lively discussion during a workshop session, exchanging ideas and perspectives to enhance their learning.

Mario Marques Cabral, an expert from Timor-Leste who participated in the workshop, expressed his satisfaction with the outcome. "The workshop exceeded my expectations. I was impressed with the level of attention given to each participating country's individual challenges and needs, which has led to a more comprehensive and customised approach to sustainable marine resource management," said Cabral.

The workshop proved to be a significant step towards addressing the transboundary environmental issues in the region. A number of important results were achieved, including final inputs on TDA; identifying leverage points; completing the process of prioritisation for transboundary issues identified in the 2022 draft TDA; clarifying SAP methodology, best practice and expectations; agreeing on SAP structure and presentation; commencing strategic thinking on SAP; and agreeing on next steps, roles and responsibilities in completing the SAP.

Overall, the ATSEA-2 Regional Workshop on TDA and SAP Updating was a productive and collaborative effort towards environmental conservation and management in the region. As Matt Fox, the Regional TDA consultant, pointed out, "this workshop was just the first step in a larger process of developing effective, evidence-based strategies for managing the marine resources of this region. The recommendations made during our time together will serve as a crucial foundation for the future development of the TDA and SAP Updating documents." The success of this workshop serves as a testament to the importance of regional collaboration in achieving sustainable management of marine resources.



IMPAC5 Congress: Advancing Ocean Protection Through Regional Collaboration

By Dr Handoko Adi Susanto

The International Marine Protected Areas Congress (IMPAC) is a platform for marine conservation managers and practitioners worldwide. Its aim is to share best practices and exchange knowledge for the protection of marine biodiversity and cultural heritage. IMPAC congresses are held every four years, with five iterations of the congresses already held to date. The most recent, called IMPAC5, was held in Vancouver, Canada, on 3-9 February 2023. It focused on advancing ocean protection through the conservation of marine biodiversity, the blue economy and tackling the climate crisis.

The ATSEA-2 Project was invited to attend IMPAC5 by the Global Environment Facility (GEF) Secretariat. Representatives of the project spoke in a side event organised collaboratively between the GEF, High Ambition Coalition for Nature and People (HAC) 2.0, and World Resources Institute (WRI), entitled “Achieving High Ambitions for MPAs and Finance: 30x30 Implementation through GEF and HAC 2.0”.

The event aimed to provide an overview of how the GEF and HAC 2.0 support countries in achieving the recently adopted Kunming-Montreal Global Biodiversity Framework, particularly Target 3 on 30x30.

Kristian Teleki, representing the WRI, highlighted the significant positive effects that marine protected areas (MPAs) have had on local economies, cultures and the marine ecosystem. “This is not just an investment in biodiversity, it is an investment in people, in the climate, in food and much more,” explained Teleki. He also acknowledged the urgent need for momentum in creating new and larger protected areas – time is running out to achieve the 2030 goal, with less than 6.5 years remaining on the clock.

The ATSEA-2 Project provided specific examples of how GEF investment in the Arafura and Timor Seas (ATS) region is helping to achieve the 30x30 target by strengthening existing MPAs and establishing new

ones, while also developing a regional MPA network, roadmap and regional action plan for the enhanced protection of sea turtles. Dr Handoko Adi Susanto, ATSEA-2 Regional Project Manager, highlighted the project activities and their key areas of focus, including the sustainable blue economy, training, capacity building and gender equality.

“There are many actors in our collaborations, including national and sub-national governments, civil society, academia and the private sector,” explained Dr Susanto, before adding: “the blue economy is one of our key considerations; when we work on MPA network designs, we look at how we can achieve a sustainable blue economy and what training and capacity building is needed, including with regard to gender equality.”

IMPAC5 brought together ocean conservation professionals, high-level government officials, Indigenous leaders and youth representatives. The event included keynote addresses, interactive sessions, and arts and cultural elements to explore how to advance ocean protection. Key focus areas included support for MPAs, Other Effective area-based Conservation Measures (OECMs) and marine spatial planning, Indigenous-led ocean conservation and knowledge, sustainable finance solutions, and technological innovations.



Dr Handoko Adi Susanto, ATSEA-2 Regional Project Manager shares the project's contribution to achieve 30x30



Side event on 30x30 commitment

The M2 software developed by Protected Seas was another innovative example discussed during the Congress. This cloud-based platform is specifically designed to help monitor MPAs, providing real-time monitoring of marine ecosystems within these areas and thereby ensuring they are properly managed and protected. While the use of such software has not been widely implemented to monitor MPAs in the ATS, it presents a valuable opportunity to enhance monitoring and management efforts in the area. By collecting and analysing a range of data, such as environmental data, vessel tracking data and acoustic data, the M2 software can provide a comprehensive and real-time view of the marine ecosystems in the ATS region. This, in turn, can support effective management and protection of these valuable resources, contributing to the sustainability of the region's marine ecosystem.

Overall, the IMPAC5 Congress provided a vital platform for stakeholders to exchange knowledge and share best practices to promote the sustainable management and protection of marine ecosystems worldwide. The participation of the ATSEA-2 Project and its contributions highlighted the importance of regional collaborations and investment in the sustainability of the marine ecosystem. The innovative solutions presented, such as the M2 software, demonstrated the potential for technology to support effective monitoring and management of MPAs.



Red Snapper Data Collection in Arafura Sea: First Look Analysis

By Deti Triani

Since February 2020, the ATSEA-2 Project has been working with the Centre for Fisheries Research (CFR) of the Ministry of Marine Affairs and Fisheries (MMAF) to collect daily data on red snapper in the Arafura Sea. The main species of red snapper targeted for study included *Lutjanus malabaricus*, *Lutjanus erythropterus*, *Lutjanus sebae* and *Pristipomoides multidens*. An additional type of snapper, *Lutjanus johnii*, was also collected. ATSEA-2 also conducted biological sampling for various analysis needs such as stock and total allowable catch (TAC) assessment.

Four enumerators were deployed in two landing sites, namely Merauke and Probolinggo, in order to collect information on daily landing data such as length and weight of fish, and also overall monthly

production data. The biological sampling method used was visual observation, in order to identify sex and gonad maturity level. Data were analysed using life history estimations and Length-Based Spawning Potential Ratio (LB-SPR).

During the data collection process, the study faced a number of challenges. This included budgetary constraints for hiring fish-weighing scales (*juru timbang*) in Probolinggo, which resulted in enumerators having to visit individual vendors to collect data. There were also challenges in identifying the species and gonad maturity level, which were addressed by having fisheries experts review all the data submitted. Enumerator training was conducted before deployment and annual evaluations.



The ATSEA-2 team collaborates with MMAF and enumerators from Probolinggo to collect precise and comprehensive information on red snappers.

On 27 and 28 February 2023, enumerators from Probolinggo, a fisheries expert and Kamaluddin Kasim from the MMAF Fisheries Research Centre gathered to discuss an initial analysis of the data collected, as well as to evaluate the enumerators. The data included 5,160 observations of length and weight data for the five species of snappers. The Probolinggo site had the most snapper data, with 3,086 observations, and it was from here that the initial analysis was conducted on the Malabar data. For the biological data, 148 samples were dissected to determine their gonad maturity level. Data highlighting the other target species is currently ongoing, and will continue throughout 2023.

Using the LB-SPR and Yield per Recruit (YPR) methods, it was discovered that the average length of fish caught was 51cm. The recruitment pattern for Malabar snapper occurred in February, April, May and September. From biological sampling, it was found that the Spawning Potential Ratio (SPR) of *L. malabaricus* is 17%, meaning that the *L. malabaricus* population in the Arafura Sea is still considered to be over-exploited, hence the need to control fishing pressure. This is still an initial analysis, while the scientific paper is currently being developed.

The study has made significant progress in collecting valuable data on red snapper populations in the Arafura Sea. Data collected on TAC assessment and quota assigned for each species of fish can help to ensure these resources are managed sustainably. The study represents an important step forward in our understanding of the current state of red snapper in the Arafura Sea and could inform the development of more effective management strategies that will help to ensure the long-term sustainability of these populations.

In terms of next steps, the information collected on TAC assessment and quota assigned for each species of fish will support the MMAF program, called Quota-based Fisheries Management (*Penangkapan Ikan Terukur*), which helps ensure that these resources are managed sustainably.





Building a More Inclusive Fisheries Industry in Aru Archipelago

By Ni Luh Putu Yulia Dewi

Through gender mainstreaming and capacity-building programs, the ATSEA-2 Project is committed to promoting gender equity in the sustainable management of coastal resources. From 6-10 March 2023, the project hosted a gender workshop in Dobo, Aru Archipelago. A total of 34 people attended, comprising representatives from national, provincial and district government departments, a women's organisation, non-government organisations and the ATSEA-2 National Coordinator Unit Indonesia.

The workshop covered multiple topics related to gender and marine economic development. Attendees learned about basic gender concepts and their relevance to the field, as well as wider gender issues. The participants also had a chance to see the results of a gender assessment that was conducted in 2021, which revealed the disparities between men and women in terms of access to marine and fisheries resources, including capacity building and fisheries technologies. In addition, the workshop provided practical tools for conducting gender analysis and budgeting, with the goal of promoting equal rights for greater development outcomes.



Presentation from Maimuna Tualeka (left), Head of the Quality of Life for Women and Families Department at P3A Maluku province and Hendrick Haluruk (right), Head of the Social and Cultural Division at the Regional Planning and Development Agency in Aru.



Group presentation on GAP making trial.



Technical assistance making GAP and GBS documents for Aru Fisheries Agency.

Laeli Sukmahayani is the ATSEA-2 Gender Specialist. During the workshop, she emphasised the importance of understanding basic gender concepts. "The understanding of basic gender concepts is vital in mapping gender gaps or issues in coastal communities," said Sukmahayani. "It is known that one of the poverty pockets is in coastal areas that are dominated by women; therefore, this knowledge can help the government plan development programs that promote gender equality for both men and women."

The workshop featured presentations on gender mainstreaming policy and programs at the national, provincial and district levels. Helsyanita, Assistant Deputy of Gender Equality in the field of Economy at the Ministry of Women's Empowerment and Child Protection of the Republic of Indonesia (KPPPA), presented the national perspective on gender mainstreaming policy and programs. She explained that, although there has been an increase in the Gender Development Index (GDI) from 2020-2021, women's involvement is still far below the target of 30%.

Maimuna Tualeka, Head of the Quality of Life for Women and Families Division at the Department of PPPA Maluku province, also shared some insights from a provincial perspective: "the Gender Empowerment Index (GEI) in Maluku has remained stagnant for the past three years from 2019-2022 at 75.54%. Although there are more women represented in the Maluku government, when it comes to education and positions of authority, women lag significantly behind men". Hendrick Haluruk, who is Head of the Social and Cultural Division at the Regional Planning and Development Agency in Aru, added that "the condition is further compounded by the very low quality of education and healthcare services".

During the workshop, participants engaged in several group discussions, during which they developed a schedule for men and women in coastal communities in Southeast Aru to analyse the disparities between their triple roles (productive, reproductive and community). The participants identified key areas for improvement in the Aru Archipelago to reduce the gender gap, including ensuring equal access to capacity building and



Technical assistance making GAP and GBS for Aru Child Protection and Women Empowerment Agency.



Workshop participants.

facilities for both men and women fishers, preventing and managing gender-based violence and preventing child marriage. The findings were documented in a Gender Analysis Pathway (GAP) matrix.

To tackle the gender issues identified during the workshop, the participants created planning documents that accommodate women's interests and perspectives in the fisheries sector, such as gender analysis documents, GAP and Gender Budget Statement (GBS) documents. GAP and GBS are gender-responsive documents that help government agencies consider gender equality when planning and budgeting for their programs and activities. To develop a GAP draft, nine steps need to be taken, including conducting a situation analysis, developing gender analysis questions, and monitoring and evaluating progress.

To ensure sustained progress towards gender equity in fisheries management, it is crucial for all stakeholders to work together and implement the recommendations made during the workshop. The ATSEA-2 Project and its partners are dedicated to supporting the Fisheries Department of Aru

Archipelago District in integrating the GAP and GBS documents to promote gender-responsive programs and budgeting. As part of this effort, the Fisheries Department plans to implement programs that cater to the specific needs of both men and women, such as providing fishing gear and equipment that are appropriate for both genders. For instance, they are considering lighter and more compact nets for women and developing technology that is easier for women to operate. By implementing these programs, the Fisheries Department aims to promote gender-responsive practices in fisheries management, which will benefit all individuals involved in the industry, regardless of gender.

The ATSEA-2 workshop successfully raised awareness and encouraged collaboration towards reducing gender disparities. The pre-test and post-test results showed a 30% increase in participants' understanding of gender concepts and issues. A follow-up workshop will be held in May 2023 to build on this success and continue the efforts towards gender equality in fisheries management in Southeast Aru. The workshop was a significant step towards promoting gender equity in the sustainable management of coastal resources; it provided an essential forum through which stakeholders could share their experiences and perspectives on gender issues and develop recommendations for reducing gender disparities in the fisheries sector. With sustained efforts and collaboration, we can ensure a more inclusive and equitable future for all involved



Group presentation GAP making trial.



Advocating for Comprehensive Coastal Management Policies in Rote Ndao

By Dwi Ariyoga Gautama

Rote Ndao is an island district that is particularly rich in resources. With 27,493 ha of coral reefs, 4,699 ha of seagrass beds and 2,156 ha of mangrove areas, the region provides livelihoods for more than 2,393 fishing households. However, these resources – and the people that rely on them for survival – are vulnerable to climate change impacts and marine pollution, particularly in the form of oil spills.

The district requires comprehensive policies to advance sustainable development. The ATSEA-2 Project took a significant step forward in promoting regional policies related to integrated coastal management (ICM), by handing over an academic paper to the Rote Ndao District Government. Delivered by Dwi Ariyoga on behalf of the project team, this document was received by the Head of Rote Ndao District, Paulina Haning-Bullu, on 2 March 2023.

The academic paper had been developed by a team of scholars from Nusa Lontar University in Rote Ndao, who identified the current issues based on various sources of information, including field consultations and literature review by the ATSEA-2 Project. The aim of the paper is to propose a comprehensive approach for ICM that addresses five crucial domains: protection, restoration and management of habitats; early warning mechanisms to respond to natural disasters and programmes integrated with climate change adaptation; increasing community capacity and resilience to disasters through food security, alternative livelihood management, utilising



Handing over an academic paper to the government of Rote Ndao District.

sustainable resources from the sea and managing clean water; preventing pollution in coastal areas and encouraging waste management efforts; and increasing women's role in coastal governance, especially in terms of their access to natural resource management, clean water, opportunities to voice their opinions, and inclusion in decision-making processes.

Rote Ndao is home to promising natural resources, as evidenced by its productive capacity: fish production (3,361 tonnes), dried seaweed (15,776 tonnes) and non-fishery products (187.4 tonnes) (BPS, 2017). Since 2019, the tourism sector has also been steadily increasing; with visitor numbers rising from 4,988 in 2019 to 7,500 in 2022, development in this area has helped to boost the local economy. However, the dependence on natural resources leaves many Rote Ndao families exposed to man-made (anthropogenic) and natural disasters.

Recent years have seen a decline in marine ecosystem quality due to unsustainable practices such as destructive fishing methods, sand mining and marine pollution from plastic waste and oil spills. To make matters worse, the local government also has to contend with cross-border fishing challenges that pose risks to safety and violate other countries' jurisdictional sovereignty. Natural disasters, such as unpredictable storms and

weather, make it increasingly difficult for coastal communities to sustain their livelihoods. From 3-5 April 2021, Cyclone Seroja damaged over 1,190 houses and affected 20,000 people in 119 villages. The disaster directly affected livelihoods in the local community, with a disproportionate impact on women.

The academic paper prepared by the team from Nusa Lontar University and the ATSEA-2 Project offers hope that issues related to climate change and disasters can be addressed in a more adaptive manner. Moving forward, the paper will also be shared with the Ministry of Law and Human Rights Regional Office in Kupang, East Nusa Tenggara (NTT), to be integrated into a local regulation that refers to applicable legal rules. It is expected that this policy will support local governments in coordinating more holistic coastal management efforts.



Empowering Women and Enhancing Marine Resource Management in Aru Archipelago

By Sila Kartika Sari

In Dobo, the capital of the Aru Archipelago, The ATSEA-2 Project recently initiated coordination and training on the processing of fish skin waste produced by local fish companies. Together with the Aru Department of Fisheries and CV Niaga Indonesia, this collaboration forms part of wider efforts to reduce fish processing waste and create added value in the management of marine resources using an Ecosystem Approach to Fisheries Management (EAFM). Red snapper and shrimp are the main commodities targeted for

EAFM interventions in Aru. The training and coordination were conducted in two different sessions, both of which were held this February in Dobo, Aru Archipelago District.

The first session, conducted on 23 February 2023, focused on fish skin waste processing training. The aim was to support household income for fisheries workers by promoting alternative livelihoods that utilise local resources, through skills training for fishers' wives and other local



Participants in a fish skin waste processing training put their knowledge into practice, transforming the waste into delicious and nutritious snacks.

women. The training was attended by 20 coastal women from Wangel Village, along with members of the Protestant Church Council of Wangel and Marbali, a fisheries extension officer, members of the Aru Department of Development of Disadvantaged Regions and Transmigration Agency, and Aru's Department of Trade. Aru's Department of Health was also involved in the training, in order to assess the suitability of good processing procedures and ensure good nutritional content in the resulting products.

Mutia, the director of CV Niaga Indonesia was the trainer for the session together with Sila Kartika Sari, ATSEA-2 Field Facilitator for the Aru Archipelago. They were supported by staff from the Fisheries Agency. Participants were provided with raw materials and then taught how to use basic and affordable ingredients such as wheat flour, cornstarch and spices to make fish skin into chips and snacks. At the end of the training,



Mutia, the director of CV Niaga Indonesia as the trainer for the workshop.



After undergoing fish skin waste processing training, participants successfully create crispy and flavourful chips as the final product

the participants successfully created fish skin chips and packaged the products, which were then showcased in a coordination meeting.

The second session, held on 28 February 2023, was a coordination meeting conducted as part of follow-up activities regarding fish skin waste training. The objective of the meeting was to bring together stakeholders from different levels across the Aru Archipelago and foster collaboration towards enhancing household income. The meeting was attended by nine local government agencies, three central Ministry of Marine Affairs and Fisheries (MMAF) agencies working in Dobo, three village officials, two church councils, two coastal women's groups and several government partners.

During the meeting, participants discussed ways to leverage advanced development techniques that could significantly enhance the value added and sales potential of the region's fisheries

products. In addition to processing fish skin waste, Namara village's shrimp paste and Aparu Village's Balobo salted dry fish have also been identified as important targets for alternative livelihoods, with the potential for development at the next level for communities in Aru. These products are mainly processed by women who are wives of fishermen living along the coast. Providing alternative livelihoods will not only support household income in the fisheries sector, but also contribute to the effective management of the Southeast Aru Marine Protected Area (MPA), since Aparu Village is one of the nearest villages and a user of this MPA. By developing alternative livelihood strategies, these communities can maximise the use of available resources, while preventing overexploitation of marine resources in the area.

The discussions also highlighted the need for collaboration between stakeholders to maximise the potential of local fishery resources and turn



Discussion session.



The head of Wangel and Marbali church council delivers a presentation on the potential of local resources.

waste into an added-value product. Various stakeholders, including local government, church councils and village officials, have agreed to help expedite the process of obtaining home industry product permits (PIRT) for the three processed products. They also prioritised further training to improve the products, along with mentoring on Good Manufacturing Practice (GMP) and product labelling. Moving forward, a commitment in the form of a Memorandum of Understanding (MoU), monitored by the district government, is still needed to ensure the joint contribution and commitment of all parties in realising the Aru

Archipelago micro fisheries products' national competitiveness. This will strengthen the sustainable economic impact and recognition of women's roles in the productive sector of marine and fisheries.

The ATSEA-2 Project's initiative to reduce fish processing waste and turn it into an added-value product is an important step towards achieving sustainable fisheries management in the Aru Archipelago. The initiative is part of wider efforts to improve marine resource management using an EAFM in the Arafura Timor Seas (ATS) region.



Rote Ndao Government and Private Sector Partnership for Economic Resilience

By Stella Yovita Arya Puteri

To build a strong joint commitment between the Rote Ndao District Government and Bank NTT, and in support of sustainable economic activities in the local community, phase two of the Arafura and Timor Seas Ecosystem Action (ATSEA-2) Project facilitated the signing of a Memorandum of Understanding (MoU) and a Cooperation Agreement (PKS) between the two parties on 23 February 2023, at the Office of the District's Accelerated Development Team (TBUPP), Rote Ndao District, East Nusa Tenggara (NTT).

This commitment is geared towards conserving the wealth of marine resources in Rote Ndao, which are currently threatened by degradation and damage (particularly from oil spills). The waters of NTT form an integral part of the Arafura and Timor Seas (ATS) region, which is susceptible to a

number of threats; its proximity to exploration activities, and its utility as a transportation route for oil, make the ATS particularly vulnerable to spills and other incidents.

The scope of the cooperation agreement includes the provision of loan facilities, production facilities, product packaging and marketing support, as well as bookkeeping systems training, planned for rollout over the next two years. The cooperation agreement signing ceremony between the two parties was officially opened by the Head of Rote Ndao District, Paulina Haning-Bullu, who emphasised the local government's support for the development of alternative livelihoods for local communities – especially those who depend on marine and coastal resources – to increase their resilience and adaptability.

Haning-Bullu stated that the signing of the MoU and PKS has been carried out to support the improvement of product quality and added value as well as competitive productivity, especially for women and disabled communities. "All of us in Rote Ndao must support and use these local products to help improve the welfare of the community," she added.

Working in collaboration with the ATSEA-2 Project, positive steps have been taken by the Rote Ndao District Government. This includes facilitating adaptation, capacity building and resilience in communities' lives, by involving women and persons with disabilities in processing marine products as alternative food sources. In addition to household consumption, marine products can also be marketed to support family economic resilience. In addition, raising awareness and developing the skills of village communities with regards to climate change adaptation has also been facilitated through this effort.

"The Ministry of Marine Affairs and Fisheries (MMAF) through the ATSEA-2 Project supports capacity building, improving the skills of women and disabled communities through practical training in processing marine products," said Mikael Leuape, who is the Field Facilitator for the ATSEA-2 Project in Rote Ndao. "The hope is for this to be sustainable and to receive intensive mentoring, so that work groups are more confident and useful, and remain resilient in facing the impact of oil spills and climate change in the Rote Ndao region," he added.

In support of the sustainable development achieved thus far through the ATSEA-2 Project, Bank NTT has initiated a collaboration with the Rote Ndao District Government. "Bank NTT wants to stimulate the economy and strengthen village competitiveness through the Festival of Fostered Villages [an annual event organised by Bank NTT and local government]," explains Sender Dewa Lele, who is the Rote Ndao Branch Manager of Bank NTT. "Hopefully, this can strengthen villages to compete healthily, both in the digital and physical space, with unique and superior values; in addition, there is coaching and initiation for SME actors, market information and off-takers," he added.



Closing ceremony, Sender Dewa Lele (left) and Lestari Handayani ATSEA-2 Indonesia (right)

This collaboration forms part of a series of activities that began with the recognition of four community groups supported by the ATSEA-2 Project. There is the Dale Esa group in Daiama Village, which produces mangrove-based drinks and syrups; the Ina Landu group in Landu Tie Village, which specialises in ready-to-eat seaweed products; the Tasi Bo'a group in Bo'a Village, which is known for its massage oil products; and the Ita Esa group in Oeseli Village, which has produced and marketed soap made from marine and mangrove products under the brand name Minano.

With support from the various collaborations outlined above, ATSEA-2 will continue working to empower the people of Rote Ndao. Ultimately, these actions will help those living and working in coastal communities to become more adaptive, more resilient and better equipped to withstand any future threats that may occur.

Strengthening Community-Based Monitoring in Merauke

By Johanis Valentino Fofied



Marine and fisheries resources in the Arafura Sea (WPP 718) must be utilised responsibly in order to ensure their sustainability and improve the welfare of those who rely on them for survival. Considering the vastness of this area and the many types of violations that occur here, a strong monitoring instrument is needed.

Despite many institutions being involved in monitoring this area, a general lack of capacity means violations continue to occur. To address this problem, the ATSEA-2 project collaborated with Navy Main Base (Lantamal) XI Merauke to carry out a series of activities, working with local communities to help expand protection for marine and fisheries resources around WPP 718.

As a first step, on 22 and 23 February 2023, a socialisation activity for the community-based monitoring system (Siswasmas) was conducted for coastal communities under the supervision of Lantamal XI Merauke, specifically in the coastal villages of Kumbe and Lampu Satu, where ATSEA-2 is currently active.

The objective was to familiarise these communities with the monitoring system and form a Fisheries Community Watch Group (Pokmaswas). This group will assist the government in legal awareness efforts, through socialisation and implementation of the 3M principles (known in Indonesian as *Melihat/mendengar, Mencatat dan Melaporkan*, which means Seeing/hearing, Recording and Reporting in English).



Representing South Papua Province, the Department of Agriculture, Marine Affairs, Fisheries and Food Security (*Dinas Pertanian, Perikanan dan Ketahanan Pangan-DPPKP*) of South Papua Province provided direction and opened this activity. In his speech, Junus Polikarpus, as the Head of the Capture Fisheries Section of DPPKP South Papua, expressed hope for the formation of an integrated community-based monitoring mechanism by the government, the community, non-governmental organisations and the fisheries business world, while drawing attention to applicable laws and regulations.

"Hopefully, there will also be good cooperation from the community to assist the government, especially in monitoring the sea in the WPP 718 area," said Polikarpus in his opening remarks to the participants. The socialisation activity was attended by a group of around 30 people, made up of community leaders, religious figures, female leaders and youth representatives.

With this socialisation activity, it is hoped that coastal communities can better understand the importance of monitoring marine and fisheries resources and can actively participate in monitoring. This is expected to help improve the sustainability and preservation of marine and fisheries resources in this area.





Taking a Bold Step: Indonesia Establishes First Marine Protected Area in South Papua

By Dwi Ariyoga Gautama and Stella Yovita Arya Puteri

Indonesia, the world's largest archipelago, is renowned for its stunning marine biodiversity and is a critical global hotspot for marine conservation. In an effort to protect and preserve its marine resources, the Government of Indonesia recently announced the establishment of a new Marine Protected Area (MPA) in South Papua – specifically Kolepom Island in Merauke.

Through Ministerial Decree Number 5 of 2023 (KEPMEN-KP No.5/2023), the Ministry of Marine Affairs and Fisheries (MMAF) of the Republic of Indonesia officially made the waters surrounding this island an official MPA on 5 January 2023. This

designation not only added a new conservation area to eastern Indonesia, but also made Kolepom Island MPA the first of its kind in South Papua. The move represents one of five priority development programs identified by the MMAF and based on the blue economy, namely expanding MPA coverage to include 30 percent of Indonesia's total marine area.

According to the Director General of Marine Spatial Management (*Pengelolaan Ruang Laut-PRL*) the PRL has taken steps to assist the Papua Provincial Government and support this target. This is



Fish swim bladders (also known as fish maw) are central to community economies in the ATS region.

Marine Conservation that Supports Livelihoods

Three years ago, in order to secure important demersal fisheries habitats and protect species on Kolepom Island, the Governor of Papua signed Governor Decree No.188.4/295/2019, which initiated the process of designating Kolepom as an MPA. The waters surrounding Kolepom Island (known locally as ‘Dolok’ Island) are home to barramundi, shrimp and pelagic fish; these species are central to food security and offer a source of livelihood for the people of Kolepom Island and Merauke in general. Therefore, it is essential to ensure the management and preservation of these species’ habitat. This area is also an important habitat for an endangered species that is fully protected, both at the national and international level: the sawfish. There are three species of sawfish, namely the *Anoxypristis cuspidata*, *Pristis clavate* and *Pristis pristis*.

The Head of the MMAF in Papua Province, Iman Djuniawal, explains that this determination was a long process, and one which had been pursued collaboratively. The issuance of this decision is a joint effort between stakeholders who are members of the Kolepom Island MPA Zoning Plan Development Task Force; together, they have collected, compiled and analysed data and information, designed zones and subzones, and conducted public consultations to gather inputs from other stakeholders. This taskforce is led by the Papua Marine Affairs and Fisheries Service and supported by the MMAF work unit, local universities, representatives of community leaders

from three districts (Kimaam, Waan and Tabonji) and the ATSEA-2 Project.

This MPA will serve various important functions, including managing the use of natural resources in a sustainable manner, through protection and preservation of biodiversity and ecosystems; and limiting activities that damage ecosystems and the biota in them. Moreover, conservation areas such as this can help realise economic potential, through cultural attractions, tourism and other natural resources, which can directly improve the economy and raise living standards for people in the vicinity.

The designation of this MPA also mandates its sustainable management and preservation to the Provincial Government of South Papua. Furthermore, the preservation of such areas will also entail monitoring fishing practices, with a view to eliminating – or at least minimising – conflicts stemming from the use of fishing areas, especially for local fishermen and other, larger-scale fishing enterprises.

Iman also highlighted that this stipulation will also regulate the extraction of fish maw, shrimp fishing activities, utilisation of mangroves and managing habitats, ecosystems, fish species and other natural resources. “So, it is hoped that the management of conservation areas by the South Papua provincial government can improve the welfare of the community,” he added.

ATSEA-2 Support for the Kolepom MPA

The ATSEA-2 Project has provided technical support in the process of establishing this area through a series of activities. It has contributed by facilitating capacity building and community awareness, while also providing assistance in public and technical consultations for the preparation of the zoning plan document for this conservation area.

This MPA establishment is aligned with Project targets to contribute, not only to the achievement of the Indonesian government's national commitments, but also to global sustainability targets. Determination of this conservation area is a major step towards achieving Sustainable Development Goals (SDGs), especially point 14 (life below water), along with various other global marine conservation targets. Going forward,

institutional arrangements and management plans need to be carried out, which are expected to include capacity-building program planning for local communities and practitioners in the area, to secure ecosystem benefits and support the livelihoods of people living and working in the Arafura Sea region.

This milestone has been widely welcomed by marine and coastal communities and related stakeholders. The official launch will be conducted in Merauke within the first quarter of this year. Let's hope this initiative can contribute to the strengthening of coastal community resilience and the preservation of marine ecosystems for generations to come.



Public consultation for by establishment of New MPA in Kolepom Island



Technical Consultation for Marine and Fisheries Management in Merauke

By Johanis Valentino Fofied

Located in the Pacific Ocean between Australia and Papua, the Arafura Sea is a valuable source of fisheries resources for Indonesia, due to the high volume of shrimp and demersal fish species in the area. However, illegal fishing activities in the region are depleting fish stocks and resulting in significant losses for the Indonesian government.

To tackle these issues, the Arafura and Timor Seas Ecosystem Action Phase 2 (ATSEA-2) Project has been working with the Indonesian Ministry of Marine Affairs and Fisheries (MMAF) since 2019. The project conducts various activities to support conservation area designation and has been helping the Papua Province Fisheries Crime Forum to draft a District Action Plan (*Rencana Aksi Daerah-RAD*) related to Illegal, Unreported and Unregulated (IUU) fishing.

From 15-16 February 2023, a technical discussion was held with the South Papua Provincial Government to provide updates on the progress of the ATSEA-2 Project and its 2023 action plan. The meeting covered the conservation area designation on Kolepom Island, along with the preparation of a conservation management plan and recent developments in relation to the IUU Fishing RAD. The meeting was attended by approximately 45 participants from various governmental agencies and was conducted in a hybrid manner, both in Merauke and online.

The outcome of the meeting was an improved draft of the IUU Fishing RAD, comprising six strategies with sub-activity components. The priorities of RAD activities are as follows: (1) regular meetings of the Fisheries Crime Forum in



All participants sign the Activity Report, marking the successful activity.

Papua, (2) drafting academic papers to support the provincial action plan for fisheries enforcement (3) and developing an integrated fisheries database at the provincial and district level. Following the creation of the new South Papua Province in November 2022, the RAD will adjust its focus to cover WPP 718, along with plans for the management of the Kolepom MPA. The activity wrapped up with the signing of the Activity Report by all participants present.

The successful implementation of this activity represents a major step forward in tackling overfishing and IUU fishing, with additional focus on environmentally friendly fishing gear and pollution from land and sea. These initiatives will support a recovery in production capacity and ultimately help restore the Arafura Sea area to its former state.





Advocating Sustainable Fishing in PNG

By Joe Kiningi

Coastal communities in the Arafura and Timor Seas (ATS) rely mainly on fishing for their livelihoods. In Papua New Guinea (PNG), for example, there are 13 coastal villages located in the South Fly region which share a border with Indonesia; commonly referred to as 'Treaty Villages', they also share a sea border with Australia. Unfortunately, villagers here lack the necessary skills to effectively protect ecosystem services, which has led to the depletion of marine resources through habitat destruction and overharvesting.

From 29 January to 2 February 2023, National Fisheries Authority (NFA) and the ATSEA-2 team conducted a field trip alongside the Western Provincial Fisheries Officers of PNG. Focusing on



The ATSEA-2 team observes the fishing gear used by local fishers in the South Fly district, as part of their efforts to promote sustainable fishing practices



Examples of the different types of fishing gear used in the Jarai villagers' fishing camp.

these particular sites in PNG, the aim was to advocate for the proper conservation of marine resources. Through interviews with local fisherfolk, the project team discovered that the 13 coastal villages in the area were engaged in unsustainable fishing practices, with overharvesting of fish resources occurring daily, seven days a week.

The group also found that fishing camps were frequently set up in or around natural habitats, thereby causing significant damage to the surrounding ecosystem. In addition, indiscriminate fishing methods, such as the use of long-line fishing nets placed along the coast, were commonplace, with little regard for the types of fish caught and with the nets often left discarded on the seafloor. These practices pose a serious threat to the long-term sustainability of the marine environment, necessitating immediate intervention.

In addition, Illegal, Unreported and Unregulated (IUU) fishing activities in that part of the ATS are common, with illegal fisher folks from border countries regularly trading for fish maw (swim bladder) and other fish products. These activities are seldom reported to the authorities within the littoral nations of the ATS region, leading to the overharvesting of fish and a subsequent decline in certain species. In response to these various threats, the ATSEA-2 Project team is advocating for conservation concepts to be uniformly adopted among ATS countries.

In order to preserve marine resources in this area of PNG and support wider conservation efforts in the ATS region, coastal communities should be encouraged to adopt alternative, sustainable livelihoods. Activities such as agriculture, inland fish farming and other means of making a living can help to ease the pressure that is currently being applied to marine resources. The project team noted these issues and will bring them up at the ATSEA-2 Stakeholders Partnership Forum (SPF), where they will be addressed appropriately and in turn.

The SPF is made up of relevant state agencies and private sectors operating within South Fly and Western Province, along with donor agencies like the Australian Department of Foreign Affairs and Trade (DFAT). The ATSEA-2 Project set up the SPF in order to address major issues collectively and collaboratively, with certain issues and deliverables targeted in particular. With support from the Regional Project Management Unit (RPMU), the SPF has been established to address issues and find workable, amicable solutions.



The Head of Mabudawan village (standing), Gau Banni expresses his appreciation for the ATSEA-2 project's efforts to empower local communities in conserving their marine resources.

To date, the ATSEA-2 Project has achieved notable success in its mission to empower coastal communities in South Fly to take ownership and conserve their marine resources. As the project team developed and drafted the artisanal fisheries management plan, they introduced a new and innovative approach to conservation, previously untried in the South Fly District or indeed Papua New Guinea. Through consultation and awareness campaigns conducted on the ground, the team successfully raised awareness of this management development among South Fly communities. As Gau Banni, the chairman of Mabudawan Village, expressed with delight, “it's something new to them...and it will help them a lot to conserve marine resources and their ecosystems properly.”

The coastal fishing communities along the South Fly district of Western Province were appreciative of the ATSEA-2 Project's target and deliverables, which are community-oriented and designed to have a positive impact on vulnerable habitats and populations of rare species. The ATSEA-2 Project will continue to work with these communities, to help them overcome challenges and support them on their path to a more sustainable future.



The Impact of Market Proximity on Socio-economics in South Fly

By Kenneth Yhuanje

The National Fisheries Authority (NFA) and the ATSEA-2 Project from 29 January to 2 February 2023 conducted a study on fish maw fisheries and fishing gear use in South Fly, Papua New Guinea, which has yielded crucial information about the socio-economic status of communities in the area. The project surveyed fishing gear use in several villages located along the eastern, central and western fore-coast of South Fly.

The study revealed that the eastern villages, which are closer to Daru township and Port Moresby, were more likely to sell their marine products in these towns. On the other hand, the western villages, which are located closer to the PNG-Indonesia border and farther from the provincial capital, primarily traded their products in Merauke, Indonesia. Many village communities, including those in central Fore-coast Villages, sold their marine products to local buyers, some of whom acted as agents of traders from Merauke.

Mark Bize, the Head of Bula Village, highlighted that the majority of buying and selling of marine products occurs in Merauke, Indonesia. “Neighbouring villages in the western fore-coast also engage in trade with Merauke due to the considerable distance from Daru,” said Bize in a recent interview.

Fish maw was identified as the most valuable fishery resource being traded, with jewfish (*Nibea squamosa*) fetching the highest average price of US\$158 per kg, followed by croaker (*Protonibea diacanthus*), which sold for an average price of US\$120 per kg. Interestingly, the prices did not vary much depending on the proximity to the market. Other species from which fish maw is harvested, such as barramundi and catfish, sell for about US\$50 and US\$6, respectively. Due to their low value, they are not usually targeted for fish maw.



The ATSEA-2 team conducts an interview with the Head of Bula Village, gathering valuable insights and information about the local fish trade industry and its impact on the community.

In addition, according to the survey, most fishers in the area use gillnets, with the most common mesh sizes ranging from three to five inches. Surprisingly, the use of gillnets larger than 6 inches in mesh size was found to be prevalent in the western villages closer to the Indonesian border, despite being banned in the area. This size is also banned by the Barramundi Management Plan, which is a national regulation, to prevent the harvest of large, breeding females.

The data collected by the ATSEA-2 Project will be used to revise the project targets for sustainable harvest of fish maw and improved fishing gear use. Furthermore, these targets will be incorporated into the artisanal fishery management plan to be implemented in the fore-coast villages. The study emphasises the need for policies and interventions that promote sustainable fishing practices and equitable access to markets to improve the socio-economic conditions of communities living in remote areas.

In addition to the proximity of markets, the abundance of fish maw species in a village is closely related to the size of the fishing grounds. Although alternative economic activities like agriculture could potentially enhance cash flow in these communities, economic activities in the fore-coast villages are currently limited.

Overall, data collected by the ATSEA-2 Project demonstrate that the proximity to fisheries resource markets has a significant impact on the socio-economic well-being of the inhabitants of South Fly, PNG. The study highlights the need for policies and interventions that can promote equitable access to markets and improve the socio-economic conditions of communities living in remote areas.

This need for support should be preceded with consideration of a traditional practice in the area. In South Fly, a customary approach is to establish taboo zones that prohibit fishing, hunting or harvesting of fish, dugongs or turtles for a certain period before a traditional ceremony. This practice aims to protect these species and allow their populations to replenish before they are harvested for the event.

Accessing markets poses a significant challenge for remote communities due to the scarcity of outboard motor fuel for travelling to these markets. This predicament makes the village community susceptible to unscrupulous traders, who purchase fisheries and marine products. To mitigate this issue, it is also essential to regulate the illicit trade and encourage authorised traders to buy from the village community.



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A Visit to Timor-Leste: Supporting the Country's Commitment to Establish a New Marine Protected Area

By Deti Triani and Stella Yovita Arya Puteri

From 8-12 March 2023, the ATSEA-2 Regional Project Management Unit (RPMU) visited Dili and Viqueque in Timor-Leste, in order to provide updates on project progress through meetings with related organisations. The team included the Regional Project Manager, Dr. Handoko Adi Susanto, together with RPMU members Stella Puteri and Deti Triani, who met with representatives from the Minderoo Foundation, Blue Ventures and World Fish, as well as officials from the Ministry of Agriculture and Fisheries (MAF) and the National Coordinating Unit (NCU) of Timor-Leste.

All representatives discussed the progress of their respective projects and shared information to ensure the various organisations are aligned and can work effectively together in Timor-Leste to secure priority areas for fisheries and

biodiversity. Barefoot Ocean will focus on fish larvae dispersal modelling to find the best area for the no-take zone; WorldFish will focus more on programs in the field, supported by capacity building; and Blue Ventures will work on engagement with local people, with the aim of supporting community-based fisheries management.

On the second day of the visit, the team had a meeting at the MAF office, which was attended by MAF officials and representatives from other NGOs. Dr Handoko Adi Susanto presented the project updates, end-of-project targets and future plans for ATSEA program. He reiterated that ATSEA-2 Project is a government project, not an NGO or an exclusive entity, and that the RPMU is responsible for updating the progress of the project to the government and Regional Steering Committee (RSC). He also provided information regarding future activities and milestones relevant to the four NGOs, as collaborative stakeholders who will subsequently be involved in the ATSEA program implementation.

Dr Susanto then provided updates on several activities, including the recent Transboundary Diagnostic Analysis (TDA) and Strategic Action Plan (SAP) workshop, which was attended by representatives from MAF and a TDA consultant from UNTL, along with the Timor-Leste TDA Regional Working Group. The workshop was held to review and collect inputs on the final draft of the TDA, including agreement on the prioritisation of transboundary issues. The MAF is expected to endorse the document by the end of March. NCU Timor-Leste has prepared an invitation letter for the TDA validation workshop on March 14, 2023.

With regards to the Regional SAP, Dr Susanto informed the MAF that there will be a meeting in May as a follow-up to the previous session in Bali. This will be attended by the MAF, specifically the National Program Directors (NPD). In parallel, NCU Timor-Leste will also update the Timor-Leste National Action Program (NAP).

The team also provided updates on ongoing activities related to the end-of-project targets in Timor-Leste. These include the establishment of the National Inter Ministerial Committee (NIMC), the implementation of local regulations for MPA Manufahi, and the hiring of consultants by UNDP to update the NAP. In addition, Indonesia has gazetted



Program alignment with Minderoo Foundation, WorldFish, Blue Venture and Barefoot Ocean Foundation.

a new MPA area in Kolepom Island, South Papua, and the team is working on an oil spill response system that should be integrated into the Integrated Coastal Management (ICM) plan in Manatuto.

Customary Laws and MPA Establishment in Timor-Leste

Timor-Leste heavily relies on marine resources for its economy and food security. However, the livelihoods of its people, particularly in the southern coastal region, are at risk due to climate change and external threats such as Illegal, Unreported, and Unregulated Fishing (IUU) fishing and oil spills.

In response to these challenges, the MAF of Timor-Leste has pledged to establish a Marine Protected Area (MPA) in the south coast region. UNDP Timor-Leste, as the ATSEA-2 Project implementer, followed up on this commitment with the support of the Coral Triangle Center (CTC) in 2022, by conducting a scoping study in Manufahi Municipality. The study included a desktop study, consultative workshop with stakeholders and field surveys to collect biophysical, socio-economic and cultural data.



Group photo of progress update meeting at MAF Office, Dili

Initially, MAF decided to establish an MPA covering only 20,906 hectares in Manufahi Municipality. However, after a recent meeting with the ATSEA-2 RPMU in Dili on 9 March 2023, MAF made a bold commitment to more than double the MPA's coverage to 51,000 hectares. This extension will cover four nautical miles of Manufahi waters and extend the MPA to Barique, Manatuto Municipality, thereby covering the ICM area.

This decision is a significant step towards achieving the country's target of ensuring the long-term sustainability of small-scale fisheries that are essential to the local economy. The MPA is expected to support the development of sustainable fisheries practices that can adapt to changing environmental conditions, such as the use of selective fishing gear and the establishment of fishery co-management systems. By prioritising the protection of small-scale fisheries and promoting sustainable practices, MAF Timor-Leste is taking a proactive approach to ensure the long-term viability of livelihoods for fisherfolk and the health of marine ecosystems in the south coast region.

As the next step towards MPA establishment, the ATSEA-2 Project team in Timor-Leste will conduct an extended survey in Barique, Manatuto, while also designing the no-take zone area based on the overall survey and finalising the management plan. This commitment to marine conservation by Timor-Leste and its partners is commendable and will

undoubtedly have a significant impact on preserving the country's marine resources for future generations.

Following a fruitful discussion with a number of stakeholders, the team's agenda also included in-depth interviews with local stakeholders and community members to develop community stories in Viqueque. Here, the ATSEA-2 Project team had the opportunity to find out how the fishers live and how they have been involved in a number of training and capacity-building sessions. The team were also able to explore a customary law called *Tara Bandu*, which not only protects and preserves the environment, but also ensures food security for the local community.

After learning about the community's use of *Tara Bandu* as a means of preserving the environment and ensuring food security, the ATSEA-2 project team is excited to share more about this unique customary law in our upcoming quarterly newsletter. Stay tuned to learn more about how communities in Viqueque and beyond are using traditional knowledge and practices to protect their natural resources and improve their livelihoods.



From Fishing to Farming: Home Garden Initiative Supports Livelihoods in Manatuto

By Dominica Guterres

The ATSEA-2 project has been collaborating with the Hader Foundation, a local non-governmental organisation that supports the implementation of home gardens in the Manatuto Municipality of Timor-Leste, specifically in Aubeon; a drought-resistant village in the Barique Administrative Post. The primary goal of the home garden program is to support livelihoods in the community. It focuses on agriculture and aquaculture, with specific activities including the cultivation of vanilla, vegetables and corn, along with raising chickens, pigs and fish.

To support the beneficiary farmers, the Hader Foundation has conducted training sessions on various topics, including cultivating dry and wet organic fertilisers, expanding and nurturing gardens, breeding vanilla brood stock, administering animal vaccines, processing fish feed and gaining access to marketing opportunities. The training was facilitated by skilled trainers from the National University of Timor-Leste (UNTL) and was conducted over a period of three days.



With the guidance of field coordinator Julia da Costa (green polo shirt), beneficiary farmers plant a diverse range of vegetables, including chili and vanilla, in the agricultural lands of Aubeon Village.

The program featured approximately 20 farmers divided into different groups, each with a specific focus area. The groups included eight farmers who focused solely on growing vanilla; three subgroups comprising between five and ten members each, dedicated to planting vegetables and producing wet and dry organic fertilisers; another group of eight individuals, who focused on corn cultivation; and two main groups for chicken rearing and pig farming, comprising five to ten members each. Additionally, there was a group of eight farmers who concentrated on aquaculture, specifically raising fish and producing fish feed.

In coordinating the home garden program, the collaboration between the ATSEA-2 Project and the Hader Foundation has played a crucial role among local authorities and leaders. Specifically, this has involved providing an introduction to the program and conducting coordination meetings for Municipality leaders, local authorities, veterans and the Ministry of Agriculture and Fisheries' Municipality Director and staff.

The home garden initiative forms part of wider efforts to support communities through farming; helping them expand their livelihoods beyond fishing activities so they have alternative sources of income, particularly when the weather is not conducive to fishing activities. The farmers have received support from the ATSEA-2 Project in the form of seed for several crops, including papaya, onion, mustard greens, lettuce, bitter melon, melon, cucumber, watermelon, tomato, drumstick, cabbage, water spinach, aubergine, mung beans, peanuts and corn.

This initiative plays a vital role in supporting the livelihoods of the Aubeon Village community. It has the potential to help build greater resilience in the community and promote sustainable development, while also supporting the conservation and sustainable use of marine resources.



National Transboundary Diagnostic Analysis Validation Meeting Held in Timor-Leste

By Dominica Guterres

On 14 March 2023, the Ministry of Agriculture and Fisheries (MAF) of Timor-Leste, in collaboration with ATSEA-2 project hosted the National Transboundary Diagnostic Analysis (TDA) Validation Meeting in Dili. The primary objective of the meeting was to review the draft country synthesis report and collectively address any gaps or issues. The meeting provided a platform for stakeholders to share their insights and expertise; by adopting a collaborative approach, it embodied the importance of cooperation in managing transboundary environmental challenges effectively.

The meeting brought together stakeholders and representatives from various sectors, including government bodies, Navy and Port Timor-Leste. It also involved academics from the marine and fisheries department at the National University of Timor-Leste (UNTL) and the project coordinator of the Indonesian Sea Large Marine Ecosystem (ISLME).

The stakeholders and representatives joined together in an open dialogue and provided constructive feedback on the report's findings, discussed priority national and transboundary



Participants actively engage in lively discussions during the workshop, sharing valuable insights and ideas on key national priority and transboundary issues, in pursuit of sustainable and collaborative solutions.

issues emerging from the report, identified challenges and needs at the national level, and formulated strategies to address environmental issues that could impact the Timor-Leste's social, economic and environmental well-being. Climate change and Illegal, Unreported and Unregulated (IUU) fishing issues were among the major topics discussed during the meeting.

During the meeting, Acacio Guterres, the National Project Director of Timor-Leste, relayed information regarding the plan of the General Directorate of Fisheries, Aquaculture and Marine Resources with development partners. In his welcome speech, the General Director of Fisheries reiterated that this document can help to synergise all interested parties in the marine sector with various governmental agencies in Timor-Leste. The meeting lasted for half a day, and the finalisation of the Timor-Leste country

synthesis report was based on the recommendations made during that period. One of the critical areas discussed was the need to actualise the data including population and fishing in the document.

The National TDA Validation Meeting facilitated open dialogue and constructive feedback on the report's findings and discussions on the priority national and transboundary issues emerging from the report. It provided a crucial platform for stakeholders to share their insights and expertise, showcasing the importance of managing transboundary environmental challenges effectively. The ATSEA-2 Project is confident that the successful outcomes of this meeting will help address environmental issues that impacting social, economic and environmental well-being in Timor-Leste.

Announcement

Upcoming Event: The Fourth International Conference on Integrated Coastal Management and Marine Biotechnology (the 4th ICM-BT)

The Arafura and Timor Seas (ATS) region is extremely rich in living and non-living marine resources, including major fisheries and oil and gas reserves. Significantly, the ATS region exhibits high productivity that sustains both small- and large-scale fisheries, including several high-value fish stocks (e.g., red snapper, barramundi and shrimp). These resources provide livelihoods for millions of people in the region and make a significant contribution to food security.

On 12-14 September 2023, the ATSEA-2 Project and IPB University's Center for Coastal and Marine Resources Studies are teaming up to organise a conference called the fourth International Conference on Integrated Coastal Management & Marine Biotechnology (the 4th ICM-BT). The conference is an opportunity for the ATSEA-2 Project to gather various key stakeholders in the region who have undertaken initiatives at the technical and governance level and share lessons learned in implementing their Strategic Action Program, and to discuss future plans. Held in Bali, this event will showcase regional progress with regards to accelerating actions on sustainable development.

This will be open to the public and welcome the input from the academia, private sector and coastal communities. This invitation includes anyone with interests in fisheries, coastal and marine pollution, biodiversity and other cross-cutting issues, such as Gender Equality and Social Inclusion (GESI) and climate change.

The ATSEA-2 project is open to exploring potential collaborations with co-organisers, if these partnerships can help make the conference more engaging and impactful. If you or your organisation are interested in collaborating, please contact us at infoatsea2@pemsea.org. Stay tuned to our social media channels for more information!

New Publication Released!

We are thrilled to announce the release of latest publication entitled “How Indonesian Protected Areas (MPAs) are Doing: A Management Performance-Based Evaluation”. This study assesses the current state of Indonesian MPAs in meeting the Aichi targets. It also highlights that the Arafura and Timor Seas Ecosystem Action (ATSEA) Program has supported the government in establishing a new MPA on Kolepom Island in South Papua, covering approximately 353,287 ha, to enhance marine biodiversity management.

For a complete version of this publication, scan here.

bit.ly/MPAIndonesia_Publication





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