

ATSEA

N E W S L E T T E R

**Coastal Synergy:
Building Futures for
Resilient Living**

PROMOTING SUSTAINABLE PRACTICES TOWARDS RESILIENT COASTAL COMMUNITIES

ATSEA-2 Annual Report 2022
Promoting Sustainable Practices Towards Resilient Coastal Communities

ACHIEVEMENTS NUMBERS

347.22km
Coastline covered by Integrated Coastal Management (ICM) Program under ATSEA-2:
• 334.4km Rote Ndao, Indonesia
• 12.82km Barique, Timor-Leste



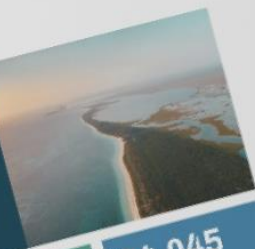
147 Technical Publications released



816 individuals benefited from livelihood-related trainings:
• 373 Men | 334 Women



200 Events organised or co-hosted (2019-2022) to share ATS information, initiatives and enrich learning on coastal and marine management



2,329 individuals benefited from trainings/capacity building activities:
• 1,134 Indonesia
• 45 Papua New Guinea
• 850 Timor-Leste



54,045 individuals
• 31.6% Women
• 56.39% Men
of stakeholders engaged in various activities (2019-2022)



Co-Financing Commitment mobilised from 4 ATS countries and key partners (as of 2022):
A. GRANT: **US\$ 3,976,028**
B. IN-KIND: **US\$ 23,158,713**



5,205.92km Extent of coastline implementing Ecosystem Approach to Fisheries Management (EAFM) under ATSEA-2:
• 4 EAFM Plans in place (3 EAFM Plans in Indonesia for Red Snapper, Shrimp and Barramundi; 1 EAFM Plan for South Coast Timor-Leste); EAFM Plans applied in Aru and Merauke of Indonesia, South Coast communities of Timor-Leste, and 1 draft Artisanal Fishery Management Plan for final validation in South Fly District of Papua New Guinea

5 local regulations issued
• 3 in Indonesia
• 2 in Timor-Leste
in support of ICM, pollution management, MPA establishment, IUU fishing

Total hectare of Marine Protected Area (MPA) coverage
A. Support to existing MPAs: Southeast Aru, Indonesia covers **114,000ha**, and Nino Konis Santana, Timor-Leste **55,660ha**
B. New MPA established in Kolepom, Indonesia: **356,337.90ha**
C. New MPA to be established in Manufahi, Timor-Leste: **~51,000ha**

WELCOME

Welcome to the final edition of the 2023 ATSEA newsletter!

In this edition, immerse yourself in the critical milestone achieved through the 5th Regional Steering Committee (RSC) Meeting in Indonesia. In this meeting, four ATS countries committed to the establishment of ATSEA's long term collaborations, particularly the Strategic Action Programme (SAP) for the next decade. Closing the year of 2023, we have been actively participating in a number of international events to share and exchange knowledge on sustainable marine and fisheries related practices.

Embark on a journey of discovery in Indonesia as we unravel the intricate balance of mangrove ecosystems and showcase our unwavering commitment to megafauna conservation. Witness the empowerment of coastal communities in processing marine resources and be inspired by stories of women driving economic development in fisheries and coastal management.

Engage with our emphasis on capacity building for sustainable fisheries, and explore a feature story on connecting communities with government initiatives in Papua New Guinea. Lastly, join us in celebrating the impactful strides made by women cooperatives, empowering them through coastal initiatives in Timor-Leste.

We trust this edition will resonate with our shared commitment to coastal synergy and building resilient futures. Join us as we navigate the currents of change and progress.

Wishing you well and a prosperous year ahead,
The ATSEA-2 Team

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Talk to us

✉ 3rd Floor Annex Building of Tuna Research Center, MMAF
Jl. Mertasari No. 140, Sidakarya,
Denpasar 80224 Bali, Indonesia

P: +62 361 4484 147
E: infoatsea2@pemsea.org
W: atsea-program.com







The 5th Regional Steering Committee Meeting: Advancing Sustainable Marine and Fisheries Governance

By Stella Yovita Arya Puteri

On 21 and 22 November 2023, the Indonesian Ministry of Marine Affairs and Fisheries (MMAF) hosted the 5th Regional Steering Committee (RSC) Meeting for the Arafura-Timor Seas Ecosystem Action Phase II (ATSEA-2) Project. The meeting represented a collaborative effort to engender sustainable practices and strengthen marine and fisheries governance in the Arafura and Timor Seas (ATS) region.

Antam Novambar, Secretary General of the MMAF, provided a timely reminder of the wider objectives of the RSC, stating that “this meeting underscores our shared dedication to safeguarding the marine resources of the ATS region and ensuring the governance of fisheries remains sustainable.”


Collaboration among ATS member countries is crucial to strengthening governance and achieving sustainable development. The 5th RSC meeting provided a valuable opportunity to review progress and address challenges, while also endorsing a number of key documents that will provide a roadmap for long-term collaboration among the four littoral countries of the ATS region; Indonesia, Papua New Guinea (PNG), Timor-Leste and Australia.

Participants at the meeting discussed the establishment of a long-term, program-based, country-led Regional Governance Mechanism (RGM). The 5th RSC provided its endorsement for the Transition Plan that forms part of the RGM, along with the Investment and Financial Strategy and Plan for the ATS RGM. This comprehensive plan includes commitments made by respective countries to support the bridging phase, marking a pivotal step towards the effective implementation of the RGM.

Dr I Nyoman Radiarta, Chairperson of the Agency for Marine and Fisheries Extension and Human Resources in Indonesia, gave his appreciation to the ATSEA-2 Project: “the project collaborates with the government at national and provincial levels, focusing on developing an Early Warning System (EWS) for disasters in Rote Ndao, supporting the management of marine protected areas in Aru and establishing new MPA. Gender mainstreaming is a key consideration in all our efforts.”

Formal endorsement was secured for the final draft of the Strategic Action Program (SAP) 2024-2033, connected with the Updated ATS SAP and National Action Programs (NAPs). Aimee Gonzales, Executive Director of PEMSEA, noted: “The collective endorsement of the regional SAP for the ATS by the four countries is a critical step towards the formal establishment of a regional ATSEA program.”

Dr Handoko Adi Susanto, ATSEA-2 Regional Project Manager, noted that the RSC meeting provides a crucial forum for evaluating the ATSEA-2 Project's progress in 2023, while also shaping its plans for 2024. “Our primary objectives include gaining consensus on the RGM and its operationalisation, alongside finalising the RGM financial plan,” said Dr Susanto. “The ATSEA-2 Project aims to establish a unified vision for the SAP, charting a course for the ATS region's sustainable development through the responsible management of marine-coastal ecosystems,” he added.

A photograph of Antam Novambar, Secretary General of the Indonesian Ministry of Marine Affairs and Fisheries, speaking at a podium. He is wearing a dark suit, a white shirt, and a dark tie. A microphone is positioned in front of him. The background is a blurred presentation slide with some text and a blue graphic.

Antam Novambar, Secretary General of the Indonesian Ministry of Marine Affairs and Fisheries

As per Dr Susanto's expectation, the 5th RSC successfully gathered endorsements, inputs and recommendations on each topic that was discussed. Additionally, the RGM Terms of Reference and the Transition Plan were endorsed, along with the final draft SAP (2024-2033) and a roadmap for its implementation in alignment with national priorities.

Moreover, commitments from Indonesia, PNG and Timor-Leste were secured for the Investment and Financial Strategy and Plan for the ATS RGM. These countries also agreed to facilitate the desk-to-desk signing of the SAP by their respective ministries, underscoring their support for the financial aspects integral to the success of the SAP.

The event appointed Dr Hendra Yusran Siry as the chair and Acacio Guterres as the co-chair. Delegates from Timor-Leste, PNG, Australia and Indonesia actively contributed valuable insights, reflecting the collaborative spirit of ATS member countries. The RSC acknowledged actions taken based on recommendations from the 4th RSC Meeting and Intersessional Meeting. Recognition was given to

Australia for hosting the Regional Senior Government Officials Meeting and to Timor-Leste for hosting the Ministerial Forum in 2024. Various initiatives from Australia and Indonesia's consultation process for ATSEA membership were acknowledged.

Another key development from the 5th RSC Meeting was that Indonesia, PNG and Timor-Leste all demonstrated their support for the Project Identification Form (PIF) submission to the GEF Council. This commitment signals a united effort among these countries to ensure the timely progression of the ATSEA-3 project, reflecting a shared dedication to the objectives of the larger initiative.

Looking ahead, the 2024 East Asian Seas (EAS) Congress in Xiamen, China, presents an opportunity to introduce the ATSEA Program to a broader audience. Indonesia is confirmed as the host of the 6th and final RSC Meeting in Bali, November 2024, marking the next key milestone in the ATSEA-2 Project journey.



The 5th Regional Steering Committee Participants



ATSEA's Knowledge Shared at Xiamen World Ocean Week 2023

By Stella Yovita Arya Puteri

Dr Handoko Adi Susanto, Regional Project Manager of the Arafura and Timor Seas Ecosystem Action Phase II (ATSEA-2) Project, was invited by Fujian Institute for Sustainable Oceans (FISO) of Xiamen University to the Workshop on Sustainable Ocean 2023. The Workshop, taking place on 10 November 2023 in Xiamen, addressed urgent coastal concerns and served as a crucial platform for discussions. Dr Susanto was one of key speakers presenting at this workshop, which was a sub-forum of the annual global marine event, World Ocean Week (WOW) 2023. The Workshop on Sustainable Ocean 2023 drew over 200 marine experts from 23 countries, making it a vital hub in the worldwide endeavour to advance sustainable development in coastal regions.

Coastal areas, crucial for ecosystem balance and human activities, are highlighted by the United Nations Sustainable Development Goals. President

Xi Jinping actively promotes sustainable coastal practices in China. Introduced in 2013, the Belt and Road Initiative fosters economic cooperation and connectivity among nations for shared development. Safeguarding coastal areas is crucial under this initiative due to threats like rising sea levels, pollution, land use issues, and biodiversity loss, posing risks to their sustainability.

Dr Susanto's keynote presentation, titled "Towards a Regional Governance Mechanism for the Arafura and Timor Seas (ATS)," delved into the unique challenges faced by coastal regions, with a special emphasis on the ATS region. His insights added a valuable perspective to the collective efforts aimed at achieving the United Nations Sustainable Development Goals (SDGs), particularly SDG 14 and SDG 15.



Networking discussion between Dr Handoko Adi Susanto (Regional Project Manager of the ATSEA-2 Project), Prof Luky Adrianto (IPB University) and Prof Fang Qinhua (Xiamen University)

According to Dr Susanto, "The workshop provided a crucial platform to share insights and strategies for fostering sustainable coastal development. It is heartening to witness the commitment of diverse stakeholders towards a shared vision of safeguarding our coastal ecosystems."

In his presentation, Dr Susanto emphasised that Australia, Indonesia, Papua New Guinea, and Timor-Leste collaborated in the ATSEA program, focusing on the initial SAP implementation and developing the 2nd SAP. This effort enhanced the well-being of the Arafura and Timor Seas region.

"To ensure the 2nd SAP's success, the region must establish a Regional Governance Mechanism, including its financing strategy. This will be formalised next year through a ministerial declaration, marking a shift from project-oriented to program-oriented cooperation," emphasises the need for a structured approach.

"Improving the region creates opportunities for alternative livelihoods and income, especially for coastal communities through the blue economy. This initiative began during ATSEA-2 and will continue through the second SAP implementation

(2024-2033)," Dr Susanto added, highlighting the ongoing commitment to enhancing the region's socio-economic prospects.

The collaborative spirit and insightful discussions at the workshop contributed significantly to the ongoing dialogue on sustainable coastal development. As the event concluded, its impact resonates as a testament to the collective dedication to shaping a sustainable and resilient future for our coastal environments.

Finally, Dr Susanto articulated ATSEA's aspirations, inviting all participants to actively engage in collaborative efforts through various forms of partnerships for the future of the Arafura and Timor Seas (ATS) region. Together, let us build upon the momentum generated at the Workshop on Sustainable Ocean 2023, nurturing partnerships that contribute significantly to the well-being and resilience of our coastal ecosystems. Dr Susanto specifically encourages participants to explore diverse avenues of collaboration that hold the potential to positively impact the ATS region in the times ahead.

Blueprints for Change: ATSEA-2 Supports Marine Spatial Planning Collaboration in Indonesia

By Deti Triani



Indonesia's ambitious plan to establish a new capital, Nusantara, in East Kalimantan, presents a unique opportunity to integrate sustainable Marine Spatial Planning (MSP) into the developmental framework. The Directorate General of Marine Spatial Management of the Indonesian Ministry of Marine Affairs and Fisheries (MMAF) has partnered with the Fujian Institute of Sustainable Ocean (FISO), Xiamen University, to leverage their expertise. The collaboration has been discussed by both parties since March 2023, facilitated by IPB University, Gadjah Mada University, and Arafura and Timor Seas Phase II (ATSEA-2).

To kick-start this collaboration, FISO-Xiamen University and the Directorate General of Marine Spatial Planning and Management of the Indonesian MMAF organised a training workshop in Xiamen, China from 2 to 8 December 2023. The workshop brought together 30 participants, encompassing representatives from MMAF, the Coordinating Ministry for Maritime and Investment Affairs, the ATSEA-2 Project and IPB University. This event marked the commencement of a higher-level collaboration between MMAF and the China Oceanic Development Foundation (CODF). The workshop aimed to equip government officials and

partner universities with the skills needed for MSP in the Balikpapan Bay region.

Despite the geographic focus extending beyond the Arafura and Timor Seas (ATS), the inclusion of ATSEA-2 allowed for the sharing of valuable insights and experiences, including the development of the MSPs around the region. These contributions enhanced the overall training by providing a broader perspective on MSP challenges and opportunities.

The opening ceremony, hosted by Prof Xue Xiongzhi of FISO, featured remarks from key representatives of both Indonesian and Chinese delegations. Their shared vision emphasised the importance of the partnership in integrating land and sea use, fostering knowledge exchange, and implementing MSP strategies in both countries.

The workshop agenda comprised a lecture series addressing key themes such as MSP for Marine Conservation and Sustainable Utilisation, Integrated Coastal Management (ICM), a case study examining MSP and the Blue Economy in Fiji, and another case study exploring MSP in Malaysia.

Furthermore, participants had the opportunity to engage in a field visit to Xiamen marine waters, where they observed real-world examples of integrated MSP implementation. This visit underscored the importance of sustainable development practices, particularly through the application of the Integrated Coastal Management approach. The approach, which takes into account both environmental conservation and social



Prof Xue, Dean of FISO, Xiamen University presents the certificate of completion to Deti Triani (ATSEA-2)

considerations, offered valuable insights applicable to the Arafura and Timor Sea region.

Beyond sharing knowledge specific to the ATS region, the training has provided lessons from the implementation of MSP in diverse locations, notably in Malaysia and Fiji. The learnings from these experiences offer a wealth of practical knowledge and strategies that hold the potential to be effectively applied within the unique context of the ATS region.

Coordination Committee Meeting on Advancing Responsible Fishing Practices in the Arafura and Timor Seas

By Stella Yovita Arya Puteri



In a crucial endeavour to champion responsible fishing practices and combat Illegal, Unreported, and Unregulated (IUU) fishing, the 16th Regional Plan of Action to Promote Responsible Fishing Practices, including Combating Illegal, Unreported, and Unregulated Fishing (RPOA-IUU) Coordination Committee Meeting (CCM) convened from 26-27 October 2023, in Dili, Timor-Leste. Dr Handoko Adi Susanto, Regional Project Manager for The Arafura and Timor Seas Ecosystem Action Phase II (ATSEA-2) Project, participated as an observer at this gathering, emphasising ATSEA-2's ongoing commitment to addressing IUU fishing in the Arafura and Timor Seas (ATS) region.

"Our engagement in the 16th RPOA-IUU CCM reflects the shared dedication of ATSEA-2 and regional stakeholders to combat IUU fishing. It is a collective effort that underscores the urgency of addressing this issue for the well-being of our marine ecosystems and coastal communities," highlighted Dr Susanto.

The meeting brought together member countries, advisory bodies, and observers, collectively addressing the challenges posed by IUU fishing. Timor-Leste's State Secretary of Fisheries, Domingos da Conceição dos Santos, set the tone by opening the meeting and expressing the nation's commitment to collaborating with others to tackle this critical issue.

"Timor-Leste recognises that this issue transcends national boundaries and we emphasise the importance of global collaboration to mitigate IUU fishing," said dos Santos in his opening remarks. "Timor-Leste is committed to working with neighbouring countries to collectively address IUU fishing in the ATS region," he added.

During the two-day CCM, the participating countries of the RPOA-IUU acknowledged the progress in addressing IUU fishing. They agreed on the need for a clear data-sharing mechanism and outlined a work plan for 2024, focusing on meetings, capacity



Dr Susanto, Regional Project Manager of the ATSEA-2 Project, in a courtesy meeting with the Secretary of State of Fishery in Timor-Leste's Ministry of Agriculture, Livestock, Fisheries, and Forestry (MALFF), presenting the Updated Transboundary Diagnostic Analysis (TDA) of the Arafura and Timor Seas (ATS) Region Document

building and discussions on market measures and gender issues. The ATSEA-2 Project plans to collaborate with the RPOA-IUU to organise the advanced Fisheries Intelligence Training (FIT) in the first quarter of 2024.

Some emerging issues were also identified, including improving food security for sustainable resource use, exploring a potential regional hot pursuit arrangement for IUU vessels, and launching a public information campaign in the transboundary area with marked gear types. These discussions underscored ongoing efforts to combat IUU fishing through regional cooperation.

Dr Susanto's mission in Dili included crucial discussions with key officials and stakeholders. Notably, he engaged with Director General Celestino da Cunha Barreto and former Director General Acacio Guterres to plan the Regional Steering Committee (RSC) meeting in Jakarta in the following month (November). Timor-Leste's agreement to co-chair the meeting signifies robust support for regional collaboration.

"In our discussions with Timor-Leste officials, there was a clear commitment to collaborative efforts. The agreement to co-chair the upcoming RSC meeting and support for the ATSEA program highlight the region's determination to foster sustainable fisheries and combat IUU fishing," added Dr Susanto.

Additionally, Dr Susanto had a courtesy meeting with the State Secretary of Fishery, Dos Santos covered critical topics such as project progress, RSC preparation, the Ministerial Forum that will take place in August in Timor-Leste, Regional Governance Mechanisms (RGM), and ATSEA-3. The State Secretary affirmed its support for the continuation of the ATSEA program and expressed readiness to provide financial backing for 2025 and 2026.

These efforts symbolise a collective commitment toward sustainable fisheries and the protection of marine ecosystems in the ATS region.



Towards Sustainable Red Snapper Fisheries: Three Years of Data Collection in Probolinggo

By Casandra Tania

Red snapper is a catch-all term that is commonly used to describe a number of key fish species, including saddletail snapper (*Lutjanus malabaricus*), crimson snapper (*L. erythropterus*), red emperor (*L. sebae*) and goldband snapper (*Pristipomoides multidens*). Each of these species play a crucial role in commercial, artisanal and recreational fisheries within the Arafura and Timor Seas (ATS) region. To ensure the sustainability of these four species, the ATS red snapper Ecosystem Approach to Fisheries Management (EAFM) Plan was developed throughout 2020 and 2021.

Among the four littoral nations of the ATS region, only red snapper from Fisheries Management Area (FMA) 718 – in Indonesian waters – are considered to be at high or medium risk of overfishing (Knuckey et al., 2021). In 2018, FMA 718 constituted the primary contributor to snapper production in Indonesia, contributing 25.41% of the annual output, as outlined in the Marine Affairs and Fisheries Ministerial Decree No. 123 Year 2021 on Snapper and Grouper Fisheries Management. Demersal fish, encompassing snapper and grouper, exhibit the highest stock biomass compared to the other eight fish groups, namely small pelagic, big pelagic, reef fish, penaeid shrimp, lobster, crab,

small crab, and squid, as specified in the Marine Affairs and Fisheries Ministerial Decree No. 19 Year 2022 on Estimate of Fish Resource Potential, Total Allowable Catch, and Fish Resource Utilisation in Fisheries Management Areas of the Republic of Indonesia.

As part of the ATSEA-2 project's updated baseline data, a comprehensive assessment of the top 20 species from Indonesian deepwater demersal fishery in 2019 reveals that the four red snapper species from FMA 718 constitute 2.53% of the global catch (Mous et al., 2020).

To gauge the current stock status, the ATSEA-2 Project collects and analyses a range of primary and secondary data. The former entails supporting the Ministry of Marine Affairs and Fisheries (MMAF) in fisheries enumeration and biological sampling of red snapper, particularly in Probolinggo, East Java, Indonesia; the latter is derived from fishery baseline assessments, reports and data generated by various countries and studies.

Since February 2021, Mihariyadi "Andik" Sulamono from the Mayangan Fishery Port Management Unit and Hariyanto (or "Yanto") from the Food

Security, Agriculture and Fisheries Agency of Probolinggo City have led data collection using digital monitoring apps called Kobo Toolbox. This dynamic duo collected landing data, identified species groups, measured fish lengths and conducted biological sampling, including measurements of length, weight and gonad maturity for the four red snapper species. To date, in terms of biological sampling, the duo has sampled 148 saddletail snapper, 96 crimson snapper, 93 red emperor and 92 goldband snapper. As the data collection concludes this December after almost three years, the initial results are promising. The biological sampling efforts have shown positive signs for the saddletail snapper in particular. Initially assessed as high risk, the Spawning Potential Ratio (SPR) value for this species has improved from 2% to 17% in the last five years.

The SPR is a metric used to assess the reproductive potential of a fish stock. It helps fisheries managers determine whether or not certain stocks are being utilised sustainably. A high SPR suggests that the fish stock is producing close to its maximum reproductive potential, indicating sustainable fishing levels; conversely, a low SPR



The dynamic duo - Andik (in orange t-shirt) and Yanto (in blue t-shirt) dedicated ATSEA-2 Enumerators from Probolinggo

may indicate overfishing, whereby the spawning stock is depleted, potentially leading to long-term negative impacts on the population.

Based on SPR values, fish stocks are categorised as overexploited when the SPR is below 20%, moderately exploited when SPR falls between 20% and 40%, and underexploited when SPR exceeds 40%. While sustainability thresholds have not yet been met, these improvements underscore the positive impact of the ATSEA-2 Project. At the national level, ATSEA-2 contributes to supporting the updating of the Fisheries Management Plan for FMA 718 and EAFM plan for red snapper fisheries in the Aru Archipelago. The project has also facilitated capacity building for meeting Marine Stewardship Council certification for fisheries business owners and handling endangered, threatened and protected (ETP) species bycatch.

The ATSEA-2 Project's efforts in monitoring and managing red snapper species align with the global initiative for sustainable fishing practices. As the assessment will be concluded soon, this preliminary result provides hope for the sustainable use of red snapper in the ATS region.



Andik cuts the sample open, measures its total length and weight, and takes out the gonad





Revealing the Rich Mangrove Ecosystems on Enu and Karang Islands

By Janson H. Pietersz (Universitas Pattimura) and Muh. Adinda Zhadeka Al Gozali (BKKPN Kupang)

The Arafura and Timor Seas (ATS) region is home to a quarter of the world's mangroves. At the local level, these ecosystems provide nurseries, shelter and sustenance for a multitude of marine life, contributing to the overall biodiversity of the region, while also helping maintain ecological balance on a global scale.

To support the preservation of these vital habitats, the Arafura and Timor Seas Ecosystem Action Phase II (ATSEA-2) Project has been conducting regular monitoring activities in the Southeast Aru Marine Protected Area (MPA), highlighting the natural wealth of the area and engaging local communities in its preservation. This conservation area is made up of various islands, including Enu, Karang, Djeh, Maar, Jin and Jeudin. Together, they create a chain of biodiversity hotspots that links the surrounding ecosystem together.

The Various Benefits of Mangroves on Enu and Karang

The fertile tidal areas of Enu and Karang Islands support a number of mangrove species, including *Xylocarpus moluccensis* (Lamk) M. Roem. On Enu Island, these trees grow to impressive heights of around 460 cm, with a stem circumference reaching 109 cm. On Karang Island, they also provide significant benefits to the local community; from fuelwood and boat-building materials to tannins for net preservation, traditional medicine and even puzzle-like seeds, these mangroves serve multiple purposes.

The mangroves on Enu and Karang also support populations of mud crabs, specifically *Scylla spp.* (Karaka). The natural habitat provided for these crabs by the mangroves, with muddy sediments offering shelter and fallen leaves providing a reliable source of food, also delivers benefits to the surrounding communities, especially in Aparu Village. Abundant catches of mud crabs during 7-10 day expeditions, in which each person can collect between eight and 15 crabs, demonstrate both the productivity of the ecosystem and the positive impact mangroves provide to local livelihoods.

The mangrove ecosystems on Enu and Karang are essential for both the environment and local communities. Support and participation from various stakeholders, including monitoring activities by the ATSEA-2 Project, are crucial to preserving and sustaining these ecosystems in the Southeast Aru MPA. It is hoped that, through collective efforts, mangroves and the multifaceted benefits they provide can be managed and maintained sustainably.

Expedition to the Southeast Aru MPA

Having viewed the importance of mangrove ecosystems in general, research conducted by Muh. Adinda Zhadeka Al Gozali from National Marine Conservation Office Kupang (*Balai Kawasan Konservasi Nasional Kupang/BKKPN Kupang*). The research conducted from 2-6 November 2023, explored the Aru Archipelago, a captivating expanse within the National Marine Conservation Area spanning 114,000 hectares, showcasing a rich diversity of mangrove ecosystems. Situated within the Southeast Aru MPA, the six main islands in this area bear witness to the beauty and resilience of mangrove ecosystems.

This research project originally set out to explore 11 stations on six islands within the conservation area. Although time and transportation constraints reduced the number of stations to nine, the project was nevertheless indicative of the many unique challenges faced by researchers in the region; from wild crocodiles to magical taboos, these islands present a different challenge to those studied by researchers in other conservation areas.



Fruit of *Xylocarpus moluccensis*

Crab catching gear (Crab Trap)

The research employed a systematic approach, utilising standardised methods across multiple stations, each with three repetitions and a consistent plot size of 10m x 10m. Various data points were collected, encompassing crucial aspects of the mangrove ecosystem. These include assessing canopy coverage, evaluating mangrove ecosystem structure, measuring tree stem circumference and height, and identifying mangrove species. In addition, the research incorporated an examination of environmental factors such as pollution (mostly household waste and the detritus of fishing activities) and included measurements of water quality parameters. This comprehensive methodology ensured a thorough understanding of the ecological dynamics and health of the mangrove environment under study.


The ultimate aim of monitoring the mangrove ecosystem in the Southeast Aru MPA was to observe, understand and protect biodiversity in this area. With continuous monitoring, changes in the ecosystem can be detected, threats to species can be identified and effective conservation strategies can be designed. This provides crucial insights that can help to maintain the integrity of the mangrove ecosystem, thereby preserving environmental balance and supporting the sustainability of this region.

Addressing Challenges and Embracing the Beauty of Nature

The unique challenges presented by each island have added an intriguing dimension to this research. Djeh Island, with crocodile nests visible along with sunbathing traces, necessitates extra caution for the research team. Conversely, approaching Jeudin Island and its many sacred areas requires a certain amount of circumnavigation, in deference to local traditions.

Despite myriad challenges, the beauty of nature in the Southeast Aru MPA remains astonishing. The mangrove ecosystem, with its dense canopy coverage and diverse fauna, showcases a level of preservation that is worth preserving and appreciating. From crabs to molluscs, these islands serve as homes to various species that enrich underwater life.

In embracing the beauty of nature and addressing challenges in this conservation area, communities need to continuously enhance their understanding of the sustainability of mangrove ecosystems. This can be achieved by co-designing more effective conservation efforts, empowering local communities to protect life in the Aru Islands and mitigate the impacts of environmental changes.

A person wearing a green long-sleeved shirt, dark shorts, and a blue cap is standing in a mangrove forest. They are holding a blue tape measure around the trunk of a large mangrove tree. The tree has a thick, textured bark with many small holes. The background shows other mangrove trees and a dense canopy of green leaves.

This activity involves measuring the circumference of mangrove tree trunks using a tape measure



Exploring the Aru Archipelago: Megafauna Conservation and Discovery

By Dwi Ariyoga Gautama and Andreas Muljadi

In the picturesque Aru Archipelago, the Arafura and Timor Seas Ecosystem Action Phase II (ATSEA-2) team has teamed up with the Southeast Aru Marine Protected Area (MPA) Work Unit, National Marine Conservation Office Kupang (*Balai Kawasan Konservasi Nasional Kupang/BKKPN Kupang*), and community-led surveillance groups (*Kelompok Masyarakat Pengawas/Pokmaswas*) to form a dynamic megafauna team. Led by I Made Jaya Ratha, the team, including Christian Frederik Tamaela, Ikrima Avicenna and Dwi Ariyoga Gautama, conducted cetacean and turtle data collection from 1 to 6 November 2023.

The monitoring initiative spanned four major islands within the 115,000-hectare conservation area, part of a routine three-year biophysical program. The objective was to update the ecosystem's status, measure management effectiveness and assess intervention impacts in the Southeast Aru MPA. The team explored coral reefs, mangroves and seagrasses, studying marine life including sea turtles and Australian humpback dolphins.

Sea turtle monitoring

By the dim light of flashlights at 4 a.m. on 1 November, the megafauna monitoring team embarked on their survey activities in the Southeast Aru MPA. The focus was on Enu Island, known for its high conservation value. Due to its vital role in preserving biodiversity, the island has been designated a crucial part of the Aru Southeast MPA. Within a 10 km stretch along the coast, the team encountered 48 turtle tracks and 28 locations for collecting turtle specimens. Subsequent DNA analyses help to assess unique genetic patterns and species connectivity with regions like Australia. This information was combined with other data such as track dimensions and human impact assessments on species sustainability. The results offer insights into the health and sustainability of the marine ecosystem around Enu Island.

This monitoring initiative also shed light on a pressing issue. Human exploitation of turtles remains a significant threat to turtle conservation in the Southeast Aru MPA, with persistent poaching of turtles for both meat and eggs evidenced by the discovery of smoking areas and egg cages. Although Enu Island is uninhabited, temporary residents engage in fishing activities within the conservation area, heightening the risk of turtle exploitation. According to Ramli Lengam, a member of Pokmaswas Gwer Katabar from Aparas village in the monitoring team, the continuation of this practice raises concerns about the livelihoods of fishermen in the region.

Additionally, the increase of jellyfish in these waters poses a threat to fish fry, emphasising the critical need for turtle protection. Safeguarding turtles goes beyond their well-being; it is integral to ensuring a healthy and flourishing ocean environment.

Efforts since 2020 by BKKPN Kupang, the Aru Fisheries Extension Office and the ATSEA-2 team have focused on raising awareness about the importance of sea turtle conservation. Socialisation initiatives focus on reaching out



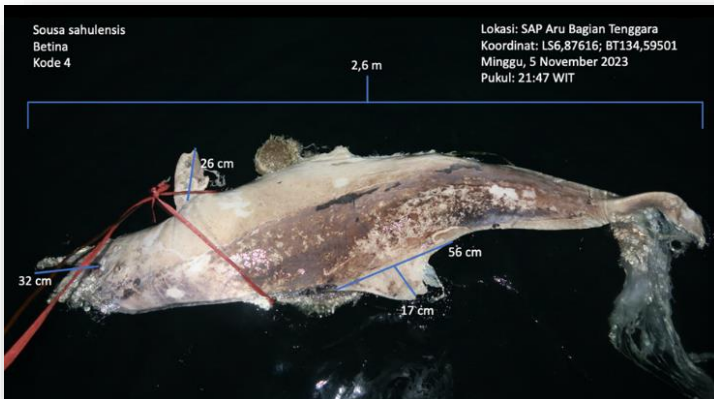
(Left to right) Christian F. Tamaela (BKKPN Kupang Satker Dobo) and Ramli Lengam (POKMASWAS Gwer Katabar) measuring the carapace of a sea turtle found on the beach, Enu Island



The discovery of a sea turtle egg burning site. The team found the embers were still warm, indicating that the consumption of turtle eggs occurred recently

to coastal communities, emphasising the importance of conservation areas for community life and the protection of endangered species. To support monitoring efforts, Pokmaswas groups have been formed in two villages, namely Aparas and Karey.

The involvement of the community in sustainable area management and utilisation is expected to reduce threats to turtles and lessen the degradation of marine resources in the Southeast Aru MPA. Investing in community understanding encourages better utilisation patterns. Support from various parties to collaborate with the community on an equal basis in management is a crucial aspect that needs to be promoted in these waters.



The Australian humpback dolphin was found floating not far from the location of the KAL Trangan ship in the waters around Djeudin Island. The team successfully took samples for future DNA analysis

Australian humpback dolphins discovery

In the serene waters near Jeudin Island, a thrilling encounter unfolded at 10 a.m on the very first day, as two Australian Humpback dolphins (*Sousa sahalensis*) gracefully emerged from the depths. Another pod, comprising a larger number of individuals, playfully navigated the mangrove estuary. This rare spectacle was captured by the megafauna team.

In a less uplifting encounter with these animals, the team also collected samples of dolphin meat and skeletons during an onshore survey. In addition to dolphins, skeletal remains of whales were found on the four surveyed islands. The species is yet to be confirmed, but the monitoring team took DNA samples to analyse and identify which species had become stranded in this conservation area. DNA-based analysis helps government agencies to better understand where and what species losses are occurring, while also helping to formulate strategies for species conservation efforts.

Dolphins play a crucial role in maintaining marine ecosystem balance. The Southeast Aru MPA ecosystem provides an excellent habitat in which Australian humpback dolphins can nurture their offspring (the dolphins spotted during the monitoring activity were observed with their young). The hope is that effective management of this conservation area will ensure that populations of dolphins continue to visit for many more generations to come.

Rare fish species found

As part of the ongoing biophysical survey of marine resources in the Southeast Aru MPA, a team led by Andreas Muljadi, alongside Ariefianto Tri Mahadi and Respaty Yudha Putranto conducted comprehensive coral reef and reef fish research in the area from 1 to 6 November 2023. The project focused on nine different locations, including Enu Island, Karang Island, Djeudin Island, Manjar Island and Djeh Island. Andreas Muljadi was the leader of the coral reef team and the overall biophysical survey leader, while Ariefianto was the coral reef observer and Respaty assisted in measuring species and coral reef.

The primary objective of the reef fish survey was to identify economically valuable fish groups that can also serve as indicators of coral reef health. In addition, the team meticulously tallied endemic, vulnerable and protected species, paying special attention to specific characteristics such as schooling and spawning aggregation. The team conducted dives at depths of 5-8 metres, swimming along 70-metre transects to monitor and record targeted fish. However, the survey faced significant challenges due to low visibility, which at times was limited to just 3-5 metres. However, the team's struggles were rewarded when they stumbled upon certain fish species that are rarely or never seen in other conservation areas around Indonesia. There are six unique fish species found during the survey.

The six species are listed below which underscore the importance of effective management in the Southeast Aru MPA. Ensuring the preservation of the area's life support systems, along with the diversity of its biological resources and their sustainable utilisation, is imperative for the well-being of

communities in and around the MPA. From sea turtles and sharks to dolphins and reef fish, ATSEA-2 is working to document, preserve and protect the many species that are central to the health of the Aru Archipelago and the future of its people.



Acanthurus grammoptilus

This surgeonfish, also known as *Ikan kulit pasir*, is an algae feeder that lives within coral reefs. It can be found in waters such as Mindoro in the Philippines, the north coast of Australia and the Aru Archipelago in Indonesia. The team observed this species schooling in six out of nine locations.

The angel fish, native to northern Australia, was another species recently documented in the waters of the Aru Archipelago. This colourful fish feeds on algae and zoobenthos (animals living on the seafloor).



Chaetodontoplus duboulayi



Chaetodon aureofasciatus

Golden butterfly fish are coral-eaters, usually found in muddy coral reef habitats or waters near river mouths. During the survey, they were encountered in pairs or small groups in eight out of nine observation locations. The presence of this fish has not been reported in other Indonesian areas previously.

The walking shark from the Aru Archipelago is a rare species that is protected by the Indonesian Ministry of Marine Affairs and Fisheries (MMAF). Spotted around Mar Island – the same site as the previous survey in 2020 – this may signify an important site for *Hemiscyllium trispeculare*.



Hemiscyllium trispeculare



Chelmon marginalis

Snouted butterflyfish feed on marine invertebrates and are distributed throughout the coastal waters of northern Australia, the Great Barrier Reef and Papua New Guinea. They were found in eight out of nine observation locations.

The sweetlips fish, seen for the first time in Indonesian waters during the most recent survey, had previously only been reported in northern Australian waters since its discovery in 2015.



Plectorhinchus caeruleonothus

Mama Metri: A Journey of Empowerment and Pride in Rote Ndao, Indonesia

By Stella Yovita Arya Puteri and Chris Alexander



“
We appreciate the shared knowledge
and gained experience that have
improved our income
”

To the village community in the heart of Rote Ndao District in East Nusa Tenggara Province, Metri Nainatu (known locally as Mama Metri) is a source of inspiration and a symbol of resilience. Her transformative journey from fisher to entrepreneur has blazed a trail for other coastal communities to follow towards a more adaptive, resilient future. With support from the Arafura and Timor Seas Ecosystem Action Phase II (ATSEA-2) Project and the local government, her story offers a beacon of hope – and it begins with soap.

Mama Metri is a skilled fisher and seaweed farmer. In recent times, when her catch became less reliable, she went looking for a way to supplement

her income and, using a combination of local knowledge and natural ingredients, found a solution in the production of soap. Her unique innovation was to add leaves from the Siam weed or ‘Jack in the bush’ (*Chromolaena odorata*) called balakacida, which have long been used by women in the community as a herbal pain remedy. Next, together with 15 friends, she established *Ita Esa* (a name that means ‘we are one’) to begin producing her all-natural soap in larger batches. She didn’t realise it at the time, but the group would go on to have a profound impact on the lives – and livelihoods – of many women fishers in her community.



Members of the Ita Esa group making a batch of their Minano soap



Mama Metri stacks up freshly made bars of soap

A Clean Break: Developing Alternative Livelihoods Around Sustainable Soap

Mama Metri has played a crucial role in guiding the *Ita Esa* group to success. By channelling her knowledge into new innovations, she has been a driving force for economic sustainability in her community. The group's profitability has even contributed to community development, by supporting the construction of a local church and funding a local food programme designed to combat childhood stunting.

Mama Metri and her team are committed to preserving coastal ecosystems around the village, especially the mangroves. As she explains, "they protect the marine environment and lessen the impact of things like tsunamis." To keep the mangroves healthy, her group are very selective in their ingredients. "We only use fruits that have already fallen," she says. "If it has sprouted roots, we don't take it." This approach is helping to ensure the long-term health of mangroves in her community, while also enabling natural resources to form the basis of sustainable livelihoods.

A New Wave of Innovation: Local Women Leading the Way

Mama Metri's impact extends beyond the confines of the *Ita Esa* Group. As a respected figure in her community, she has encouraged other women to embrace alternative livelihoods; to many, her story is a beacon of empowerment, illuminating the narrow lanes of Oeseli Village and encouraging others to follow a similar path.

Her journey highlights the transformative potential of women-led initiatives. Through her influence within the group and across the community, she embodies the crucial role women have to play in shaping adaptive, resilient coastal communities.

She sees her Minano soap as a transformative local product; a source of pride and inspiration for everyone in the community: "thanks to the help we have received from ATSEA-2, Rote Ndao, and especially Oeseli village, is known all over Indonesia and even overseas. Knowing that foreigners are already using Minano soap, we feel proud that we can put Rote Ndao on the map."

Unlocking Fisheries Potential: Empowering Coastal Communities in Merauke

By Johanis Valentino Fofied



Lampu Satu Beach in Merauke is a thriving hub for the local fisheries sector. Located on the shores of the Arafura Sea, with easy access to fish landing facilities and the Merauke Nusantara Fisheries Port (PPN), Lampu Satu has evolved over time from a remote fishing village into a bustling hub of commerce. But today the beach faces a number of serious challenges, especially regarding sedimentation leading to shoaling in the surf zone and significant changes in the coastline due to erosion.

Further inland via the Kumbe River is the densely populated Malind Subdistrict. Here, Kumbe Village is home to around 4,000 people, with the majority being non-Indigenous, or non-Native Papuans. Over half of Kumbe Village's population work as farmers, while another 40 percent are fishermen and the remaining 10 percent are engaged in

trading or other forms of employment. This village has substantial potential in the fisheries sector, boasting two of the largest fish sales depots in Merauke District. To harness this potential, community groups (particularly in Lampu Satu and Kumbe River) have been formed, with a focus on empowering women in coastal communities and generating additional income.

In response to these challenges and opportunities, the Arafura and Timor Seas Ecosystem Action Phase II (ATSEA-2) Project partnered with the TAKA Foundation to conduct a comprehensive business feasibility study program, along with identification of fishery processed product potential and business planning. A direct visit to these communities facilitated engagement and laid the groundwork for targeted interventions.

As part of this support, a training session was conducted on 7 November 2023 at Lampu Satu, and then continued in Kumbe Village on 8 November 2023. The sessions, attended by approximately 20 community representatives, were conducted at the Kalaju Lampu Satu Information Centre. Following this, TAKA field facilitators observed post-training developments from 15 to 23 November 2023. Participants were made up of TAKA staff, community representatives, and members of ATSEA-2.

Two groups that joined this training were the Eltimo Food Group in Lampu Satu and the Yanbui Group in Kumbe Village. According to information obtained in the field, both groups often face challenges in the development of their fisheries businesses. For the Lampu Satu group, issues encountered include licensing problems with BPOM (which will be assisted by TAKA); damage to cooling equipment for processed fish ball products; and incomplete testing of fish ball samples at BPOM Jayapura, such as heavy metal registration parameters for arsenic (As) and stannum (Sn), whereby the registration requirements must be below 5 for lead (Pb), cadmium (Cd), mercury (Hg), arsenic (As) and stannum (Sn). As for the Kumbe group, issues include insufficient fish stocks for production, lack of cooling facilities for fish storage, the use of cold boxes that do not help the longevity of salted fish products, and current road construction hindering production.

From the survey conducted by TAKA, it was found that in Lampu Satu, the Eltimo Food Group has implemented production standards and hygienic equipment and has regularly recorded administrative expenditures and incomes. Meanwhile, in Kumbe Village, the Yanbui group exhibits a strong commitment to increase production, even though the availability of fish stocks for processing into salted fish remains limited.



Facilitators from TAKA Foundation and ATSEA-2 team give training to community in Lampu Satu and Kumbe Village



Trainers provided materials on the grouping of fishery processing technologies, identification of the potential of processed fishery products, and business planning

The training activities conducted in Lampu Satu and Kumbe River are expected to have a positive impact. Both groups showed enthusiasm for increasing production and developing a better understand of group administration. Despite facing various obstacles, the significant potential in both locations can continue to be developed with the right support. With collective efforts and support from various parties, Lampu Satu Beach and Kumbe Village have the chance to become competitive centres of Merauke's fisheries sector in future.





Charting a Sustainable Future: Fisheries Initiatives in South Fly District

By Joe Kiningi and Kenneth Yhuanje

The Fore Coast of South Fly district, located in Western Province, Papua New Guinea, is a remote area that is heavily dependent on fisheries and marine resources. The people here rely mainly on traditional practices in the management of marine resources. However, the pressures of a growing population and the increasingly commonplace use of modern fishing gear highlight the need for contemporary fisheries management approaches.

Fishers in the Fore Coast have observed a decline, both in the number of fish they can catch and the size of the animals that remain; this signals a clear need for external support to enhance the management of fisheries resources. In response, the National Fisheries Authority (NFA) plays a crucial role, focusing on nationally managed fisheries for resources such as sea cucumber, mud crab, prawns, lobsters and sharks. Working collaboratively with communities and local stakeholders, the NFA conducts resource surveys and monitoring to ensure compliance with fisheries management plans.

Recognising the need for capacity building, the ATSEA-2 Project provides a catalyst for positive change. Through targeted initiatives encompassing training, awareness programs and regional exchange visits, fisheries managers in the Fore Coast are being equipped with the skills and knowledge needed for effective community-based fisheries management. The significance of this capacity building is underscored by the participation of key

individuals in events, such as a climate change adaptation training session in Bali, in 2022; and a regional exchange workshop on rights-based fisheries management in Darwin, Australia, held in 2023.

Fisheries officers who participated in these regional training sessions have since become more actively engaged in community outreach, educating locals in Fore Coast about climate change, fisheries management and the conservation of endangered, threatened and protected (ETP) species. The ripple effect of these initiatives is evident in the initial feedback, which indicates heightened awareness among communities regarding the consequences of overfishing and a greater willingness to proactively address these challenges.



Artisanal fisher folks' boats in Daru Island

Together, the NFA and the ATSEA-2 Project complement the work being done by local authorities, by focusing on community-based approaches to fisheries management. The implementation of the Fore Coast Artisanal Fisheries Management Plan, scheduled for the first quarter of 2024, is a significant step forward in this regard; supported by relevant laws, it will undergo a process of socialisation through additional training programs.

Post-implementation, a comprehensive monitoring and evaluation process for the ATSEA-2 Project will commence. This assessment will gauge the impact of capacity-building efforts and the implementation of the management plan within the local fisheries ecosystem.

In conclusion, the collaborative efforts of the NFA, local authorities and the ATSEA-2 Project signify a positive shift toward sustainable fisheries management in the Fore Coast. The ongoing initiatives, coupled with community engagement and capacity building, hold promise for the revitalisation of marine resources and the conservation of this unique ecosystem in the ATS region.



Participants at the rights-based fisheries management regional exchange workshop (including two representatives from South Fly), held in Darwin, Australia

Dainah Gigiba: Connecting Communities and Government for Sustainable Fisheries in PNG

By Chris Alexander



“Our community leaders are pleased with ATSEA’s impact, seeing the positive results of collaborating with others”

Over the years, Dainah has seen many examples of unsustainable practices in Western Province, from overfishing and bycatch to Illegal, Unreported and Unregulated (IUU) fishing. In just one example, fishers tied their nets together to ensnare schools of jewfish in a narrow channel; this not only resulted in indiscriminate catch, but was extremely wasteful, as most fishers were only interested in harvesting the fish maw (swim bladder). As she recalls, “when they got what they wanted, they threw the carcasses away.”

Dainah Gigiba is the District Fisheries Officer for South Fly District in the Western Province of Papua New Guinea (PNG), where she has worked with the National Fisheries Authority (NFA) for the past 30 years. In her capacity as a delegate for the provincial government, she provides essential support to ATSEA-2 in our mission to improve compliance, while also building the capacity of local communities and helping them manage fisheries more sustainably.

She attributes these practices, and the resulting environmental impact, to a lack of community awareness. “We didn’t have the mechanism in place to assist our communities, to help them,” says Dainah, who also believes local people were often “overlooked” in the establishment and enforcement of laws, so were either unaware or chose not to comply with them.

Today, through a combination of outreach, education and capacity building, Dainah is working to address this issue, by providing an essential link between government, NGOs and local communities. Working together, these groups are better able to identify socio-economic and environmental problems in fishing communities, then empower the fishers themselves to participate in the creation and implementation of laws that can address such challenges.

“I see this as a very important area to help my people,” explains Dainah, who has overseen major improvements in public awareness and compliance with sustainable management. “ATSEA-2 has helped in a big way,” she says, reflecting on research and outreach efforts that have collected baseline data through surveys, completed transboundary analyses and regularly engaged in consultation with village communities.

A major aspect of this approach has been training and education. Together with ATSEA-2, Dainah and the NFA have provided Ecosystem Approach to Fisheries Management (EAFM) training for local fishers. “The training was very good, very beneficial for them,” says Dainah, who “saw them drawing up their own boundaries and laws.” She believes this emphasis on co-creation is critical to community buy-in and compliance. As she puts it, “because the training was centred to them, they actually got the message.”

The new regulations have already had an effect. In Sigabaduru Village, the community devised their own policies for the management of a known barramundi spawning area, banning the use of nets and opting instead for the use of lines to catch “only what you need.” Crucially, this regulation came from the community themselves – not as a directive from an outside organisation that would be unable to enforce it.

Through education and outreach, ATSEA-2 has helped to legitimise the concerns of local people, listening to them and empowering them to be the architects of positive impacts through community-led management. This in turn has engendered a positive, hopeful mindset; fishers are better informed and more motivated to become active in the ownership and management of their reefs and resources.

In addition to raising awareness, ATSEA-2 has also focused on connecting fishing communities with government; empowering them to co-create sustainable management solutions, then providing support for legislation that addresses their concerns. According to Dainah, by visiting these communities in person with the NFA, ATSEA-2 has helped to make positive impacts appear more tangible and attainable. “Our community leaders are pleased with ATSEA’s impact, seeing the positive results of collaborating with others”, says Dainah.

One of the positive impacts of this collaboration is that fishing communities in PNG are more excited about the future and determined to make a difference. As Dainah explains, “this is what they have been crying out for. They’re all eager for change – they can’t wait.”





The Tok-Derek Cooperative: Empowering Women through Coastal Initiatives

By Dominica Paula Jeronimo Guterres

In the picturesque coastal enclave of Natarbora in Timor-Leste's Manatuto Municipality, the Tok-Derek Women's Cooperative has emerged as a beacon of community empowerment. Supported by the Arafura and Timor Seas Ecosystem Action Phase II (ATSEA-2) Project and the UNDP Integrated Coastal Management (ICM) program, this success story is rooted in a transformative collaboration that addresses gender imbalances and champions economic sustainability in the fisheries sector.



The women – led cooperative with the ATSEA-2 staff team

First established in 2022, the Tok-Derek Women's Cooperative was set up to facilitate the inclusion of women in decision-making processes. To this day, it remains more than just an economic entity; it stands as a symbol of strength, born from a singular community vision. In the past year, the ATSEA-2 Project has helped bring this vision into focus, as part of wider plans to support gender equality and women's economic empowerment in Timor-Leste.

Fulfilling economic potential

The original concept for the Tok-Derek Women's Cooperative came from a series of training sessions hosted by ATSEA-2, which helped local women develop the skills they needed to cultivate, catch and sell fish more effectively. The ATSEA-2 Project, working in collaboration with relevant ministries and experts, provided capacity-building instruction in skills such as financial analysis, accounting, cooperative management and fish feed practices.

The Tok-Derek Women's Cooperative serves a dual purpose — fostering financial ingenuity and enhancing community strength. Functioning as a microcredit entity, it provides financial means for sustainable agricultural and fisheries activities, enriching the broader coastal economic system, with a community of women at its heart.

Maria da Gloria Mendes is the group's coordinator. She believes this sense of community is central to success. "We're not just creating a cooperative," she explains. Membership of the cooperative can only be achieved through capacity-building activities and training – a process that helps bind the community together in a shared journey. As Maria sees it, "we're fostering a community that thrives together – financial empowerment is the key to unlocking our potential."

Overcoming challenges, building collaborations

This journey has already seen a few bumps in the road. But despite legal registration issues and member participation concerns, Tok-Derek remain

undeterred. According to Maria, “every challenge is an opportunity for growth. We're actively working on legal registration, and we emphasise open communication to overcome barriers.”

The ATSEA-2 Project has been helping to smooth the pathway forwards, working in collaboration with the NGO NETIL to help secure legal recognition from the Ministry of Justice. This has already resulted in a certificate signed by the former Director General for Fisheries, Aquaculture and Marine Resources, along with the Manatuto Administrator; following this establishment, the Tok-Derek cooperative will be required to undergo registration with the Ministry of Justice to finalise the legalisation process.

Collaborative efforts between the ATSEA-2 Project, NGO Netil and local authorities have played a pivotal role in supporting women's cooperatives in Timor-Leste. Together, they have provided essential capacity-building initiatives; established fish shops, women’s cooperatives centres and fishponds; and advocated for legal certification – all of which has helped create an enabling environment for the group’s economic activities.

From family to community: a range of positive impacts

Members of the cooperative can earn a profit from the fish shop, which contributes to the financial well-being of its members. The success of the shop has created a ripple effect, whereby job creation and increased economic activity have further enhanced the overall prosperity of the community.



Maria da Gloria Mendes, Women's Cooperative coordinator

Looking ahead, members of Tok-Derek are determined to empower more women and bring economic sustainability to other local families. “We're not just stopping here,” says Maria. “Tok-Derek is a movement, and our future involves empowering more women and diversifying our impact.”

The success of the Tok-Derek Women's Cooperative is a testament to the transformative impact of a shared vision and collaborative endeavours. Through collaboration and perseverance, this journey has united a community and led them on a path to independence and prosperity.



ATSEA-2 Regional Project Management Unit

3rd Floor Annex Building of Tuna Research Center, MMAF
Jl. Mertasari No.140 Sidakarya,
Denpasar 80224, Bali, Indonesia

P: +62 361 448 4147

E: infoatsea2@pemsea.org

W: <https://atsea-program.com/>