

Marshall Islands Authority



ANNUAL REPORT 2021

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Photos: Absalom Edwards, Aquina Pyanne, Caleb Joseph, Chewy Lin, Deo Keju, Francisco Blaha, Garry Venus, Giff Johnson, Hilary Hosia, Jessie Capelle, Karen Earnshaw, Lyla Lemari, Tatiana Shoniber, Wilmer Joel.

This year's cover features the work of MIMRA's Competent Authority.

Front cover, top: Competent Authority Officer Lyla Lemari inspects tuna at the Marshall Islands Fishing Venture processing plant. **Below:** Competent Authority representatives conduct an inspection at the Pan Pacific Foods processing plant.

Back cover, top: MIMRA staff and industry representatives received their certificates following completion of a two-month food safety workshop. **Below:** Competent Authority Officer Tatiana Shoniber takes a water sample for laboratory testing at Marshall Islands Fishing Venture fishing processing plant.

Value chain action

espite the challenges of Covid, the Marshall Islands Marine Resources Authority saw numerous initiatives move ahead in 2021. One, in particular, is unprecedented in our region and is positioning the Marshall Islands to move into a new area of the tuna "value chain," increasing benefits and opportunities for

the nation through MIMRA's innovative engagement with the tuna industry. Another initiative, to establish the country's first Competent Authority that would enable fish exports to the European Union, the world's largest seafood market, made significant progress in 2021.

Other areas of MIMRA's fisheries engagement are also improving management of marine resources at the domestic, regional and international level. Domestically, MIMRA increased the footprint of the Protected Area Network and its Reimanlok Program for sustainably

managing coastal resources. Regionally, MIMRA is heavily engaged with the Forum Fisheries Agency, the Parties to the Nauru Agreement, and the Western and Central Pacific Fisheries Commission. This regional collaboration is heavily focused on work to reduce illegal, unreported and unregulated (IUU) fishing, establishing mechanisms to manage and control fishing at sustainable levels, and improve safety for both fishers and Pacific fisheries observers.

Climate change is now integral to MIM-RA's work in addressing the big picture of the health of our oceans globally, which includes everything from ocean acidification and plastic pollution to IUU fishing.

While MIMRA understands the geopolitical situation in the region, including heightened competition among large nations, we remain focused on our core issues of working internally and with our many partners to address and improve the health of our oceans and ensure that fishing activities both coastal and oceanic are conducted in a sustainable manner.

Of particular note during 2021:

• Five years of collaboration by the MIMRA and the US-based conservation organization The Nature Conservancy

Message from John M.
Silk, Chairman of the
MIMRA Board of
Directors and Minister of
Natural Resources and
Commerce.



BOARD MEMBERS

Minister John M. Silk — Chairman; Director Moriana Phillip — vice chair (EPA); Director Robert (Bobby) Muller — private sector (PII); Director William Reiher — scholastic institute (CMI); Director Danny Wase — SOE (shipping); Director Anjanette Kattil — International (MOFAT); Director Atbi Riklon — Local (Senator Nitijela).

(TNC) to promote the dual goals of developing new opportunities in the tuna value chain while at a the same time promoting sustainable and socially-responsible fishing operations will begin seeing results in 2022. The Marshall Islands is the first member of the Parties to the Nauru Agreement to break into the tuna supply chain with a contract for providing Marine Stewardship Council (MSC)-certified tuna to the American retail giant Walmart. PNA's game-changing "Vessel Day Scheme" that manages the purse seine fishery in the region has opened the door for the Marshall Islands to engage

in many aspects of the tuna value chain, not merely as a seller of licenses to distant water fishing nations. As part of the collaboration with TNC, Pacific Island Tuna Provisions (PITP) was established in the Marshall Islands as part of this tuna value chain business initiative. A contract between PITP and Walmart signed in 2021

will see PITP sourcing container loads of MSC-certified tuna for Walmart in 2022.

• Accessing the lucrative European Union seafood market has been a dream of the Marshall Islands for many years. Up to now, only four countries in the Pacific region have been able to establish the infrastructure and systems to meet strict EU standards, allowing them to export fish to the 27-nation group of nations. MIMRA began working on this initiative in 2019, with momentum picking up significantly in 2021. The key challenge

for the Marshall Islands is gaining recognition from the EU for its new Competent Authority, the agency that oversees quality assurance and compliance of local fish processing facilities with EU rules for fish handling and prevention of IUU fishing. Much progress was made in 2021, setting the stage for an anticipated initial review by the EU in 2022.

• MIMRA's Coastal Division continued and expanded its work with traditional and elected leaders and communities in isolated Neighboring Islands to develop sustainable marine resource management plans for their islands. This work, including MIMRA's ongoing rollout of the Protected Area Network, is essential to both raising awareness about the need for conservation and management of marine resources at the local and engaging these Neighboring Islands populations in overseeing sustainable resource use and management in their communities.

The domestic and international work that MIMRA performs on a daily basis is aligned with supporting fisheries-related developments that meet MIMRA's and the Republic of the Marshall Islands long-term Sustainable Development Goals.

John M. Silk

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'2021 was a rebound

lobal, regional and domestic challenges continue, but MIM-RA is keeping up. And despite the many disruptions caused by Covid, the Marshall Islands moved its fisheries development forward in 2021. In many ways, 2021 was a rebound year for us as MIMRA, the Marshall Islands and the world came to terms with Covid as an ongoing problem to be managed.

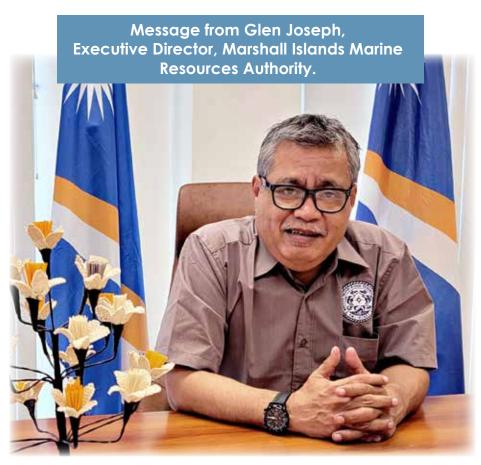
For example, in 2020 tuna transshipment was heavily curtailed and the deployment of fisheries observers was halted. But both saw rebounds in 2021. with transshipments increasing by 60 percent and fisheries observers getting back on vessels to perform their essential monitoring work toward the end of 2021. These were extremely positive signs for the Marshall Islands ongoing participation in and monitoring of the tuna industry.

MIMRA now employs approximately 100 staff who on a daily basis are engaged in an active program of managing marine resources at all levels.

The MIMRA partnership with The Nature Conservancy, that led to establishment of Pacific Island Tuna Provisions and the contract with Walmart to supply tuna for the US corporation's tuna brand, illustrates MIMRA's dual role in fisheries: MIMRA aims to identify and develop fisheries opportunities that support sustainable and responsible use marine resources.

What we have learned over many past years and continued to build on in 2021 is that cooperation works. MIMRA works with multiple domestic, regional and international partners to manage and develop the marine resources sector. These partnerships are essential to our success. For example:

• Our Coastal fisheries program has now expanded its Reimaanlok (Looking to the Future) Process to 21 of 24 local governments. This involves extensive communication and cooperation with traditional, elected and community leaders to develop locally-designed marine resource management plans that can be effectively implemented and enforced at the local level.



- Our Fish Aggregating Device (FAD) installation started as an occasional activity years ago. In 2021, it developed into a national program with regular maintenance and new installations around islands and atolls in different parts of the country. This expansion has been aided by MIMRA's partnership with the UN Food and Agriculture Organization and the Pacific Community
- MIMRA works locally and within the Forum Fisheries Agency and the Western and Central Pacific Fisheries Commission to monitor, prosecute and curtail illegal, unregulated and unreported (IUU) fishing. A report by the 2021 noted: "There is little doubt that the monitoring, control and surveillance (MCS) measures Forum Fisheries Agency members and their partners/ regional secretariats have implemented over recent decades have had a profound impact on both the nature and volume
- of IUU fishing in the region. The relatively low estimates of IUU activity in the FFA region compared to many other parts of the world is practical evidence of the MCS framework's success." This success is due to the many layers of cooperation among FFA members in MCS work, with MIMRA playing its part as a responsible regional partner.
- We are collaborating with SPC on a marine debris monitoring project that is addressing the increasingly serious waste problem related to tens of thousands of FADs in use in the region. This is a relatively new program to address another marine pollution concern.
- The European Union-funded consulting firm MRAG Asia Pacific in FISH4ACP project, in collaboration with the UN Food and Agriculture Organization, focused on Majuro's largescale tuna transshipment operation continued in 2021 looking at ways to expand MIMRA's involvement in the tuna value chain using transshipment as the basis of increased participation.

year for RMI fisheries'



• Development of many of the basic requirements needed to progress development of our first Competent Authority were completed in 2021. This included multiple trainings for industry representatives and inspections of domestic fish processing facilities in an effort to ensure these companies understand what they need to do to improve their facilities and operations to meet strict fish export standards of the EU. MIM-RA also laid the groundwork for bidding to be conducted in 2022 for its new four-story annex to be constructed as part of its headquarters building opened in 2019. Construction is expected begin in late 2022. It will include a state-ofthe-art laboratory, which is an essential element of the Competent Authority's oversight of future fish exports. Beyond the goal of qualifying to export fish products to the huge EU market, all of the trainings and inspections conducted in 2021 and ongoing are helping to expand MIMRA's enforcement capacity as

well as improve the quality of the fish processing operations currently operating in the Marshall Islands.

- MIMRA continued to benefit in 2022 from its partnership with the World Bank, Asian Development Bank, and many different government partners in our region. MIMRA successful completed the first phase of the World Bankfunded Pacific Regional Oceanscape Project (PROP), which has segued into a phase two known as PROPER, which is supporting capacity development in all areas of MIMRA operations.
- MIMRA's partnership with the Parties to the Nauru Agreement (PNA) is the foundation for the effective participation of the Marshall Islands in the global and regional tuna industry. PNA's Vessel Day Scheme (VDS) is a multi-layered management program for the purse seine and longline industry that, in addition to increasing the benefit the Marshall Islands receives annually from the tuna fishery, limits fishing to sustainable lev-

els. The fact that stocks of the four tuna species in this region remain healthy is testament to the success of the VDS and PNA management. MIMRA looks forward to playing its part within PNA and also to seeking ways to add value to the VDS for the benefit of the Marshall Islands and other PNA members.

As noted, we view 2021 as a rebound year. Following a difficult first year adjusting to the Covid pandemic, 2021 saw increased momentum behind a wide range of MIMRA activities, both Coastal and Oceanic.

The activity in 2021 has laid groundwork for implementation of new initiatives and expansion of ongoing programs in 2022 and beyond. Our outlook for the future is bright and we extend our appreciation to our hardworking MIMRA team members and to all the partners, domestically, regionally and internationally, who work with us.

Glen Joseph

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OUR OCEAN'S PROMISE

he story of how the Marshall Islands went from being a bystander in commercial fishing in the Pacific to operating the world's busiest tuna transshipment port, several fish processing facilities, a purse seine vessel net repair yard, and a fleet of locally-flagged and -based fishing vessels was documented in a groundbreaking book MIMRA published in late 2021.

"Our Ocean's Promise: From Aspirations to Inspirations — The Marshall Islands Fishing Story" is a 196-page overview of the Marshall Islands expanding engagement in the tuna fisherv value chain. The book documents how the Marshall Islands has benefited from purse seine fishery revenue rising from about \$4 million annually to over \$30 million a year since 2010 through the country's participation in Parties to the Nauru Agreement's (PNA's) globally recognized conservation and management regime that ensures sustainable fishing as well as dramatically increasing the islands' share of tuna

"I personally witnessed the transformation in Marshall Islands' fisheries through the collective endeavors of the PNA grouping of countries that control most of the tuna that is taken in the Western and Central Pacific Ocean," Dr. Transform Agorau, the founding CEO of the PNA Office in Majuro, writes in a foreword to the book. "As host of the PNA Office, the Marshall Islands was instrumental in promoting the PNA purse seine Vessel Day Scheme, and was a vociferous advocate of the PNA initiatives."

MIMRA Director Glen Joseph conceived the idea for a book narrating the history of commercial fishing in this central Pacific nation. A partnership between MIMRA and the Pacific Islands Forum Fisheries Agency provided necessary support for the work



Above, President David Kabua had high praise for Our Ocean's Promise at the book's launch. Next page, MIMRA Executive Director Glen Joseph, the President, and EPA General Manager and MIMRA Director Moriana Phillip with a copy of the book.

on the book that was researched and written by Giff Johnson.

Joseph recognized and thanked the FFA for its key role in supporting MIMRA "to document our story in the region."

While the book takes the reader on a journey that begins in the 1920s, it focuses on the period from the late 1970s - as the Marshall Islands was gaining its independence and beginning to engage in the tuna fishery as a sovereign nation — to the present day. It features a forward look at MIMRA's latest initiatives to participate in the many levels of the tuna value chain, well beyond the limited role it once played as a collector of license fees from distant water fishing nations.

"The 'oceanscape' in 2021 is unrecognizable from the 1970s, with numerous opportunities at MIMRA's doorstep and the agency well-prepared to purse those opportunities," writes Johnson in Our Ocean's Prom-

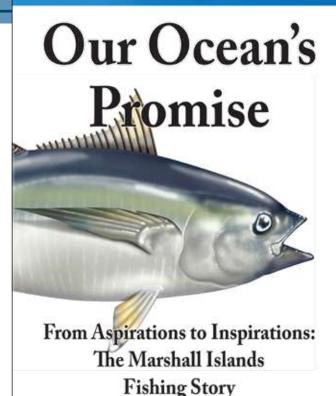
"Our interest goes back to our humble beginning, and that is the ocean's promise, which is our heritage, culture, food security, economic oppor-

MIMRA publishes the history of fishing in Marshall Islands



Excerpt from a review of Our Ocean's Promise by Pacific journalist Floyd K. Takeuchi

"A carefully documented tale of initial big dreams of fisheries as the proverbial pot of gold, followed by years of disappointment and failure. But unlike the retelling of this tale in many other regional nations, in the RMI, the national and fisheries leadership put ego aside and learned from their mistakes."



GIFF JOHNSON

tunity and highway to global engagement," says Director Joseph in a quote from the new book. "All we aspire to is to sustainably and successfully manage our fishery."

The book includes the first-ever detailed chronology of Marshall Islands and regional fisheries developments that catalogs the many challenges and roadblocks this nation and other independent Pacific islands faced as they worked to develop sovereign control first over their 200-mile exclusive economic zones and more recently to implement the PNA's Vessel Day Scheme in order to shift the paradigm of the commercial fishery to one of rights-based management controlled by Pacific islands.

publication at the Marshall Islands Resort in October 2021. Marshall Islands President David Kabua delivered kevnote remarks at the launch event. "I am privileged to have received a copy and I have to admit that I was captivated from the first page," said President Kabua at the launch. "It is our story and it is very much worth telling and I recommend reading it."

Speaking about his father, first President Amata Kabua and his involvement in efforts to establish commercial fishing activities in the Marshall Islands, President Kabua observed: "The legacy he left behind is truly coming together, as witnessed and documented in the book — indeed, the vision for self-determination. MIMRA held a formal launch of the economic development, regional and

international recognition, is taking shape. The book describes the late President and his government efforts to pursue Majuro as a hub for transshipment activities. In other words, they were visionaries of their time, for what is taking shape today."

MIMRA produced a video promoting the book that featured drone views highlighting the commercial fishery in Majuro and historical video clips of first President Kabua, as well as video comments from numerous fisheries officials in the region which noted the groundbreaking nature of the new publication.

The book is published by Amazon's Kindle Direct Publishing and available at amazon.com in both print and Kindle editions.

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Koo's 106, which is registered in Jaluit, offloads its catch to a transshipment vessel.

Despite challenges, MIMRA keeps pace in fisheries

hallenges in the oceanic fishery are many and range from climate affects and ongoing Covid health and safety issues to efforts to participate in many aspects of the tuna value chain largely controlled by nations and businesses outside the region and the sometimes limited capacity within our island environment to meet global, regional and domestic commitments. Despite these and many other challenges.

The Parties to the Nauru Agreement Vessel Day Scheme (VDS) is the foundational mechanism for managing the purse seine and longline fisheries. Since 2008, the VDS has fully rolled out and has consistently demonstrated its resilience for sustainably managing the purse seine fishery. It has helped the PNA members, including the Marshall

Islands, to adjust to the changed situation in the tuna fishery due to the start of the Covid pandemic in 2020. The management system provided by the VDS increases opportunities for participation by the Marshall Islands (and other PNA Parties) in the tuna value chain, which MIMRA is actively pursuing.

The ongoing fisheries monitoring and surveillance as well as training programs and technical support from the Forum Fisheries Agency, the tuna stock assessments and related research work overseen by the Pacific Community (SPC), the Western and Central Pacific Fisheries Commission that oversees fishing on the high seas, and the Marshall Islands own domestic fishing laws and regulations all combine to establish an integrated and effective management structure for fisheries in the exclusive

economic zone (EEZ) of the Marshall Islands and its neighbors. What it shows is, simply put, cooperation works. "There is little doubt that the monitoring, control and surveillance (MCS) measures Forum Fisheries Agency members and their partners/regional secretariats have implemented over recent decades have had a profound impact on both the nature and volume of IUU fishing in the region," said a report on illegal, unregulated and unreported (IUU) fishing issued in late 2021. "The relatively low estimates of IUU activity in the FFA region compared to many other parts of the world is practical evidence of the MCS framework's success." Oceanic staff on a daily basis monitor and track fishing vessels in the Marshall Islands EEZ and throughout the region, actively contributing to the MCS framework in



RMI first nation to vaccinate fishermen

the region that is producing results.

During 2021, Oceanic staff were involved in monitoring Covid-prevention protocols for vessel entry to Majuro port, as well as assisting the National Disaster Committee's Maritime Working Group to modify protocols that had heavily impacted purse seine vessel use of Majuro, including for transshipment, in 2020. The easing of port restrictions, without compromising Covid prevention, was implemented in April with almost immediate effect on transshipment operations. After the lowest number of vessels transshipping in a decade in 2020, the numbers rebounded in 2021, increasing from 175 to 297. The Oceanic Division also found ways to keep some of its fisheries observers on the water collecting needed fisheries data by using them on domestically-based longline vessels. It was not possible in 2021 to get observers back onto purse seiners, which continued as a weakness in the monitoring, control and surveillance of the purse seine fishery. As part of supporting Covid prevention, MIM-RA collaborated with the Ministry of Health and Human Services so that the Marshall Islands became the first country in the Pacific region to offer Covid vaccines to commercial fishermen. This was launched with the Ministry of Health and Human Services in June and continued periodically as the ministry had staff availability to provide the vaccines at dockside.



Commercial fishermen are vaccinated against Covid at Delap Dock.

'MIMRA's strong governance structure that is supported by layers of fisheries governance mechanisms through PNA, the FFA, SPC and the WCPFC gives MIM-RA a firm foundation for managing the fishery.'

MIMRA's painstaking and long-term focus on value chain initiatives began to show results in 2021. The essential building blocks for establishing a Competent Authority to facilitate access to the European Union, the world's largest seafood market, moved ahead considerably during the year. At the same time, MIMRA advanced two important value chain efforts that, when they come to fru-

ition, will broaden the Marshall Islands engagement in the tuna fishery. The first is the corporate entity, Pacific Island Tuna Provisions, LLC. Established by a MIMRA joint venture with The Nature Conservancy in 2020 to pursue opportunities in the tuna value chain, the new company secured its first contract for supplying sustainably caught tuna to a major American retail corporation that was to begin in early 2022. The other is the FISH4ACP project. FISH4ACP is implemented by FAO and partners with funding from the European Union (EU) and the German Federal Ministry for Economic Cooperation and Development (BMZ). This is a multi-year effort aimed at increasing value chain opportunities through Majuro's substantial tuna transshipment operations.

The Competent Authority, the FISH4ACP project, and the Pacific Island Tuna Provisions, LLC saw significant progress in 2021. MIMRA's strong governance structure that is supported by layers of fisheries governance mechanisms through PNA, the FFA, SPC and the WCPFC gives MIMRA a firm foundation for managing the fishery and identifying new ways to innovatively engage in the tuna value chain. MIM-

OCEANIC



The launch of the FISH4ACP program at MIMRA in January, 2021.

CA facilitates access to EU

RA's governance framework, particularly through its membership in the PNA, supports innovation, which in turn has set the stage for developing sustainable fisheries initiatives. "The big picture question for MIMRA in scoping out the many fisheries opportunities for further engagement is clear," said MIMRA Director Glen Joseph in 2021. "Will this benefit the people, the government and the Marshall Islands as a country?"

Accessing the tuna value chain

After several years of discussions, planning and preparations, MIMRA in 2021 moved into the implementation phase of several initiatives that will transform Marshall Islands engagement in the commercial tuna fishery. Participation in PNA's Vessel Day Scheme (VDS) has been the foundation for the initial expansion of the Marshall Islands engagement in the tuna fishery value chain. But the country's participation is

still limited. In 2021, MIMRA focused on establishing a Competent Authority to facilitate access to the European Union, supporting Pacific Island Tuna Provisions, LLC as it began operations to gain contracts to supply sustainably caught tuna to global retail markets, and continuing the work of the FISH4ACP project with support of the EU and FAO. The VDS itself gives the Marshall Islands the confidence and leverage to move beyond selling fishing licenses to distant water fishing nations by engaging in different parts of the tuna value chain. MIMRA continued laying the foundation in 2021 for these tuna value chain initiatives that it hopes will begin showing results in the coming years.

• FISH4ACP: Government and private sector representatives met with development partners in early 2021 to review the findings of an assessment of the tuna sector in the Marshall Islands and discuss ways to add value and make the tuna sector more sustainable. The review of the tuna sector review was con-

ducted under the FISH4ACP, a development implemented by FAO and partners with funding from the European Union (EU) and the German Federal Ministry for Economic Cooperation and Development (BMZ). FISH4ACP is a global initiative in support of fisheries and aquaculture value chains. The Marshall Islands is one of 12 EU-associated Africa, Caribbean and Pacific (ACP) group members involved in the FISH4ACP, and the only Pacific Islands fisheries department engaged in this long-range EU-FAO program.

The Marshall Islands tuna sector assessment was based on focus group discussions with fishers, fish sellers and workers in containerization and cold storage, interviews with private sector and government stakeholders, and extensive desktop review of report and data sources. "Tuna accounts for almost all national fisheries production and exports from the Marshall Islands," said Director Joseph. The point of the study and next steps is to "help us increase the economic and social benefits of tuna for



Goal to raise frozen exports

the people of the Marshall Islands."

The assessment showed that in recent years, Majuro had become the world's leading transshipment port for tuna. From 2015-2019, Majuro port averaged 466 transshipments per year. An average of 360,000mt of tuna was transshipped annually during this period, representing nearly one-fifth of all tuna catches in the West and Central Pacific Ocean. This dropped due to Covid port entry restrictions in 2020 to only 175 transshipments and 118,743mt. Transshipment rebounded from 2020 to 297 transshipments and provisional tonnage of 221,609 in 2021 — still below pre-Covid average but a significant improvement over 2020. However, the study also showed that the bulk of this catch comes from offshore industrial fishing while only small amounts are landed in the Marshall Islands for export in containers. In 2019, only 17,500mt was landed in the Marshall Islands. Increasing the volume being landed here is one way for the Marshall Islands to increase its revenue from the tuna industry.

"The European Union supports the ambition of the Marshall Islands to reinforce its tuna sector," said Noa Sainz-Lopez, Program Manager at the EU Delegation for the Pacific. "With FISH4ACP, we aim to achieve this by ensuring sustainable management of fisheries resources, allowing people to improve their livelihoods while preserving their natural assets."



Tuna being placed in a freezer container at the PII Dock.

Walmart, the American meaa-retail store, approved its first order of sustainably caught tuna from a Marshall Islands company an order that was to launch regular purchases in 2022.'

step towards the formulation of a development plan for the Marshall Islands tuna sector that was in development with the support of FISH4ACP in 2021. Gilles van de Walle, who manages the FISH4ACP for the FAO, said the program aims to bring added value onshore in the Marshall Islands, while advancing ways to expand exports to markets such as the European Union. Among key elements under consideration as the Marshall Islands aims for increasing containerized exports of frozen tuna include the availability of land and labor, The tuna sector assessment was a first assessing its financial viability, and continuing to develop a Competent Authority to access EU markets.

• Competent Authority: MIM-

RA's work on the Competent Authority addresses an important value chain element that has potential spinoffs for other export markets beyond the European Union. During 2021, the plan progressed significantly, with both internal MIMRA developments and expanding work with domestic fish processing companies. See Competent Authority report, page 28.

• Pacific Islands Tuna Provisions: A door to a new part of the multi-billion dollar global tuna value chain opened for the Marshall Islands at the end of 2021, offering a glimpse of a potentially lucrative new source of revenue for the country. Walmart, the American mega-retail store, approved its first order of sustainably caught tuna from a Marshall Islands company — an order that was to launch regular purchases in 2022 of container shipment loads of canned tuna sourced through the Marshall Islands using tuna caught sustainably throughout PNA waters.

The Walmart connection was the re-

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Total Catch Purse Seine Fleets* in the Marshall Islands EEZ 2012-2021

Year	SKJ	YFT	BET	OTH	Total
2012	22,977	835	416	14	24,242
2013	40,113	1,514	538	6	42,171
2014	66,196	3,477	668	18	70,359
2015	21,293	4,295	126	0	26,344
2016	72,329	5,790	648	0	78,767
2017	22,765	2,901	788	65	26,519
2018	26,424	2,168	253	58	28,903
2019	4,806	65	410	11	5,394
2020	28,915	7,000	871	55	36,841
2021	35,842	18,270	514	14	54,640++
Eiguros	ara matria t	one * Mar	shall Islan	de Taix	an C Varaa

Figures are metric tons. * Marshall Islands, Taiwan, S. Korea, US, PNG, China, FSM, Kiribati, and Nauru (listed in order of catch tonnage). *Key:* BET=Bigeye Tuna, SKJ=Skipjack Tuna, YFT=Yellowfin Tuna, OTH=Other.

Total Catch Longline Fleets* in the Marshall Islands EEZ 2012-2021

Year	ALB	BET	YFT	OTH	Total
2012	254	4,027	1,372	737	6,390
2013	237	2,972	2,014	738	5,961
2014	172	4,680	2,346	680	7,878
2015	122	2,286	1,380	359	4,147
2016	67	1,522	1,127	420	3,136
2017	71	1,698	1,389	445	3,604
2018	52	2,210	1,262	316	3,838
2019	134	1,974	1,699	410	4,216
2020	21	1,640	1,282	256	3,199
2021	122	1,677	1,136	331	3,265++
Eiguros a	ra matria t	one * March	all Islands	obartoro	L ECM Lanan

Figures are metric tons. * Marshall Islands chartered, FSM, Japan, China and Taiwan (in order of catch tonnage). **Key:**

ALB=Albacore, BET=Bigeye Tuna, YFT=Yellowfin Tuna, OTH=Other.

Total Catch Pole-and-Line Fleets* in the Marshall Islands EEZ 2012-2021

Year	BET	SKJ	YFT	Total
2012	3	3,578	15	3,596
2013	3	1,719	4	1,726
2014	3	3,317	21	3,341
2015	0	615	2	617
2016	0	429	1	430
2017	0	72	0	72
2018	0	1,017	1	1,018
2019	0	1,022	2	1,024
2020	0	2,223	9	2,619
2021	2	761	14	777++

Figures are metric tons. * Pole-and-line fleet is exclusively Japan. **Key:** BET=Bigeye Tuna, SKJ=Skipjack Tuna, YFT=Yellowfin Tuna

PITP lands first contract with giant Walmart

sult of five years of collaboration by MIMRA and the US-based conservation organization The Nature Conservancy (TNC) to promote the dual goals of developing new opportunities in the tuna value chain while at the same time promoting sustainable and socially-responsible fishing operations.

"This is opening the opportunity for participating in the tuna value chain," said Gene Muller, the general manager of Pacific Island Tuna Provisions (PITP), a limited liability corporation registered in the Marshall Islands. Set up to pursue commercial tuna opportunities that support sustainable fishing in the region, PITP is a joint venture between the MIMRA and TNC. "We're starting small with the Walmart deal," said Muller, who spent 16 years as the fleet manager for Koo's Fishing Company, a Taiwan-based company that operates several Marshall Islands-flagged purse seine fishing vessels, before taking up his new role with PITP. "We hope over time it will grow and lead to partnership with other retail companies."

For now, PITP is focused on retailers in the United States. Once the Marshall Islands gains certification for the European Union market, they will look to add the EU to their focus as it is the world's largest seafood market.

The big picture perspective on PITP's contract to supply sustainably caught tuna from PNA waters to Walmart is that historically, the Marshall Islands role in the tuna fishery has been mainly selling access to fishing. The deal with Walmart opens up the entire value chain.

The new joint venture is set up so that

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Berry Muller, Deputy Director of Oceanic and Industrial Affairs

"I'm lucky to have found a career (hard to avoid with the ocean all around us) that I love and where you never stop learnina. Tuna fisheries has so many different aspects that you often times have to wear different hats and take on new challenges, particularly given the highly migratory nature of the stocks. At the end of the day, it's rewarding to know that I can play a small role in the work involved in ensuring that these vitally important resources and their environment remain well-managed and continue to benefit the RMI now and into the future."



Berry Muller, Deputy Director Oceanic and Industrial Affairs, with Mark "Beau" Bigler, Chief Oceanic Fisheries.

Tapping into PNA program

60 percent of any profit will go to MIM-RA, while 40 percent will be for climate resiliency and economic sustainability projects in the Marshall Islands. One hundred percent of the profit will return to the Marshall Islands through this joint venture company.

PITP's move into fish supply and distribution is risky because this area of the tuna value chain is dominated by huge multinational corporations, making it a challenge for the Marshall Islands to gain a piece of the market. But the Walmart deal has opened the door and now it's up to the new company to deliver for Walmart and pursue other opportunities that may arise as a result.

MIMRA has a joint venture with Koo's Fishing Company for operation of two purse seiners. And Majuro has

private sector-led processing and transshipment operations. But these activities are focused at one end of the tuna value chain. The tuna supply contract with Walmart is a first small step for the Marshall Islands into a new area of the value chain.

Key to PITP's work is that as a Marshall Islands company, it can capitalize on PNA's sustainable management program as well as the large-scale transshipment operation in Majuro. In addition, in recent years there has been a shift in consumer and business awareness about sustainable use of resources and responsible treatment of fishers on board commercial fishing vessels. This is an important aspect of the PNA management framework that Walmart and other major corporations place value

on. Retailers are now focused on sustainably sourced fish. The companies and customers want to know where the tuna comes from and have proof that it is not being sourced from illegal fishing operations. PNA's world-class chain-of-custody management system through the VDS allows PNA members to show proof of traceability of tuna. "We can maintain the chain-of-custody from fishing to delivery of the finished product," said Director Joseph. "Only PNA provides a chain-of-custody on free school caught tuna."

The Walmart contract has its roots in a 2017 visit by the PNA members to Alaska to see the fishery system used by Native Alaskan communities as a possible model for Pacific Islands fisheries managers. The Alaska tour was sponsored

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The Koo's 108 purse seiner at anchor in the world's biggest tuna transshipment port: Majuro.

Sustainable fishing is the key

by TNC. The most important aspect of the partnership with TNC is that TNC is working with MIMRA on what is being done and is in place here. It is not cutting and pasting something from another island and expecting it will work in the Marshall Islands. This is significant and a reason that some donor-supported development initiatives do not produce results. As Director Joseph put it: TNC is "plugging into what we have rather than telling us what to do."

The overall goal is to get tuna marketing connected to sustainable fishing. This is what underpins the deal with Walmart. MIMRA has worked with TNC to initiate this effort. But opportunities like this are open to all PNA members due to the VDS.

WCPFC fishery issues

• WCPFC Tropical Tuna Measure: hroughout 2021. Oceanic Division staff

Throughout 2021, Oceanic Division staff worked behind the scenes and through technical and working committees of the Western and Central Pacific Fisheries Commission on a variety of WCPFC-related matters, including the important Tropical Tuna Measure, which was to expire December 31. MIMRA, along

'The International Seafood Sustainability Foundation recognized the importance of WCP-FC rolling over its existing tuna conservation measure.'

with other FFA members, considered the existing Tropical Tuna Measure (TTM) an important management measure of the WCPFC and wanted to ensure that there was no diminution of this conservation measure.

Gaining agreement from the more than 30 WCPFC members — both island nations and distant water fishing nations — is challenging even on some of the relatively easy decisions of the Commission. Discussions conducted almost exclusive by Zoom or other online platforms in 2021 added a further layer of challenge to negotiations on important fisheries matters. The tropical tuna measure is a complex policy governing fishing for the different tuna species in the region.

The WCPFC annual meeting in December, also conducted virtually, resulted in agreement to extend the Tropical Tuna Measure for an additional two years. This was a positive outcome and enables MIMRA and its partners in the FFA additional time under the TTM to continue working on development of effective harvest strategies and harvest control rules. Harvest control rules have been under discussion and development for several years.

The International Seafood Sustainability Foundation recognized the importance of WCPFC rolling over its existing tuna conservation measure. ISSF noted that this "includes fish aggregating device (FAD) closures and bigeye tuna catch limits, among other key elements, for two more years. Maintaining important protections for these tuna stocks is a critical step..."

An important fact about the Western and Central Pacific tuna fishery is that all tuna species are being fished sustainably as a result of responsible management of these fisheries. This includes the layered management and MCS systems in the region, from PNA's VDS management of the fishery within the 200-mile exclusive economic zones of its members, FFA's management and oversight of MCS work, and WCPFC

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TTM is essential for the status quo

measures such as the TTM.

Due to the relatively healthy status of tuna in the Pacific, however, there is pressure from some WCPFC members to ease conservation rules to open up more fishing opportunities. This is why continuing the TTM was essential to maintain the status quo, while continuing to advance harvest control rules that are essential to ensure long-term sustainability of tuna stocks.

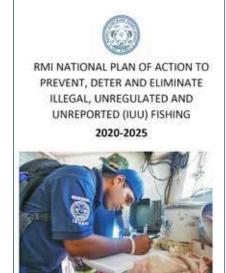
PNA Office CEO Dr. Sangaa Clark, following the WCPFC annual meeting, acknowledged that the TTM "had gaps and weaknesses in it that would continue to need addressing, especially in the management of longline fishing in the high seas." But, she pointed out, "there were limits to what could be achieved in a virtual session." Dr. Clark underlined the importance of the TTM for conservation, calling it "the Commission's flagship measure. The measure had performed well in the previous three years. It had contributed substantially to the current healthy status of tropical tuna stocks and fisheries, which are the only sustainable global fisheries for tropical tunas."

Action on illegal fishing

• Illegal, unreported and unregulated (IUU) fishing: In late 2018, then-Marshall Islands President Hilda Heine



PNA Office Chief Executive Officer Dr. Sangaa Clark.



took the unprecedented step to challenge fisheries authorities — both from Pacific and distant water nations — to agree to abolish IUU fishing by 2023. Following on President Heine's call for action on IUU fishing, in June 2021, MIMRA formally deposited the nation's National Plan of Action (NPOA) to Prevent, Deter and Eliminate IUU with the UN Food and Agriculture Organization's repository. This was a step to demonstrate the Marshall Islands

commitment as a responsible fishing nation and in line with its intentions to become a party of the FAO Port State Measures Agreement.

The Marshall Islands NPOA-IUU was developed following the International Plan of Action to prevent, deter and eliminate IUU fishing (IPOA-IUU) adopted in 2001 by the FAO's Committee on Fisheries. The IPOA-IUU is a voluntary instrument and is one of four IPOAs that fit within the framework of the FAO Code of Conduct for Responsible Fisheries. The Marshall Islands NPOA-IUU describes how it adheres to the provisions of the International Plan of Action and identified further action needed to ensure full implementation. The MIMRA-prepared NPOA-IUU aligns with the principles of transparency, cooperation, integration, and the sharing of information and assets within the Marshall Islands government to address IUU fishing. The MIMRA plan emphasizes the need for cooperation with the FFA, the SPC, the Western and Central Pacific Fisheries Commission, market states and industry to effectively combat IUU fishing.

Later in 2021, a new study on IUU fishing in the region by the Australia-based fisheries consulting firm MRAG

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New report 'groundbreaking'

Asia Pacific. It suggested the problem of IUU fishing in this region, while still serious, was not nearly as big a problem as suggested by earlier reports. The report cited the multi-layered fisheries monitoring and surveillance systems coupled with improved data reporting as being among reasons cited the problem of illegal fishing in the western and central Pacific is far less than a 2016 report that estimated losses of over \$600 million a year.

The new report was called "groundbreaking" and "unique" to the Pacific region by Francisco Blaha, the offshore fisheries advisor to MIMRA. "Nowhere else, in any ocean basin, there is a body like the Pacific Islands Forum Fisheries Agency (FFA) nor the strength of collaboration among coastal states and regional bodies," said Blaha, who was part of the study team that generated the 2021 report on IUU fishing in the Western and Central Pacific. "While other oceans talk and mostly blame others on IUU fishing, at FFA we are measuring it...to guide our monitoring, surveillance and control efforts and to adjust our data granularity and collection points to have better and more accurate data for this one."

He said the report proved that the assumption that unlicensed fishing is rampant is false. The report showed that misreporting accounts for nearly 90 percent of IUU fishing. An earlier report on IUU fishing issued in 2016 estimated that 306,440mt of tuna annually was involved in IUU fishing. The latest report estimates IUU fishing at a level of 192,186mt per year. The MRAG report described the earlier study as a "first cut" assessment based on "highly uncertain data" with the "estimates kept deliberately broad to account for high levels of uncertainty." The new report said "changes in the information base" produced the biggest overall changes in volume and value estimates by the new



MIMRA's Lomodro Jibas takes samples of tuna.

"There is little doubt that the monitoring, control and surveillance (MCS) measures Forum Fisheries Agency members and their partners/regional secretariats have implemented over recent decades have had a profound impact on both the nature and volume of IUU fishing in the region," the report said. "The relatively low estimates of IUU activity in the FFA region compared to many other parts of the world

'It is the continuous work of the MIMRA staff engaged in monitoring the tuna industry that feeds data essential to scientists working to understand the health of tuna stocks.'

is practical evidence of the MCS framework's success."

The report added that the purse seine industry is the subject of "very strong MCS" oversight, including the requirement of 100 percent coverage on fishing trips by fisheries observers and inport transshipment. "In contrast, MCS arrangements in place for the longline sector are weaker with lower observer coverage, a far higher proportion of effort on the high seas, and a higher proportion of the catch transshipped at sea which limits opportunities for port state MCS measures," the report said, adding greater focus is needed to improve oversight of the longline fishery.

Sustained sampling produces results

Like Port State Control vessel monitoring, port sampling of tuna may not appear on the surface to be a particularly exciting line of work. Nevertheless, it is the continuous work of the MIMRA staff engaged in monitoring the tuna industry that feeds data essential to scientists working to understand the health of tuna stocks in the region. In mid-2021, the significance of tuna sampling in port

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Samplers have a 'direct impact'

Majuro was underlined by SPC scientist Dr. Graham Pilling, the deputy director of SPC's Oceanic Fisheries Program. "The biological sampling of tuna undertaken by the Marshall Islands and in the wider Western and Central Pacific Ocean region is critical to improving our understanding of the key biological 'settings' that are used when SPC undertakes the regional stock assessments," he said.

Dr. Pilling was talking about the work of MIMRA "biological samplers," who regularly collect samples from tuna caught by different fishing vessels that use Majuro to transship their cargoes. These samples are analyzed and the data used by SPC in its assessment of the health of the various tuna species. Understanding how tuna grow with time and their pattern of maturity all define how resilient a tuna species is to fishing and how vulnerable fish are to the different fishing gears that catch them. This knowledge is gleaned by measuring the length of the fish, collecting otoliths (ear bones), and through examination of a fish's gonads. The otolith is the most commonly used structure for determining the age of fish. Otoliths are calcium carbonate structures found inside the heads of bony fish.

MIMRA port sampler Lomodro Jibas has been engaged in measuring tuna, species identification, documenting size and weights of fish, and also randomly collecting otolith samples since 2016.



MIMRA and Health officials prepare for a fishers vaccination event.



Deputy Director of SPC's fisheries program Dr. Graham Pilling,

His sampling work is one example of the collaboration MIMRA has with SPC for data collection in aid of stock assessments and related scientific work on tuna. Dr. Pilling said work of the region's port samplers such as Lomodro Jibas has a "direct impact" on stock assessments. He pointed to SPC's 2017 stock assessment for bigeye tuna. "New information on the patterns of bigeye growth and maturity, based upon ages

identified through collected otoliths, had a profound impact on the assessment results," he explained. "Including this knowledge changed our perception from the stock being considered to be overfished to one that was assessed to be sustainably exploited."

Covid vaccines for fishers

The Marshall Islands launched Covid-19 vaccinations for commercial fishers temporarily in port Majuro during June 2021 — the first Pacific island to vaccinate fishers. With the country vaccination program nearing 80 percent completion for the two urban centers by June 2021, the Ministry of Health and Human Services in partnership with MIMRA announced earlier it would begin offering the one-shot Johnson & Johnson Covid vaccine for fishers. The vast majority of commercial fishers working both purse seine and longline vessels are Asian. One of the locally flagged purse seine companies has about 40 Marshallese as crew.

MIMRA communicated the Ministry of Health's vaccine offer to the fishing companies through their local agents

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In an early version of the MIMRA vaccination program, fishermen line up to receive a Covid shot.

World Bank supports MIMRA

and received an immediately positive response. Public health nurses set up operations at Delap Dock to handle the vaccine delivery. The seaports, like the airports, are under strict Covid prevention protocols that do not allow anyone to come ashore except for beginning quarantine in government-approved facilities in Majuro and Kwajalein. Public health nurses handling the vaccinations were decked out in personal protection gear, and all fishing crews in the first group to be vaccinated wore masks and gloves. At that time, the Marshall Islands had not yet seen community transmission of Covid. As the vaccination program for fishing crews continued later in 2021, MIMRA and Health authorities set up the secure area on the dock, with stations for fishermen to wait for their shots, to receive their shots, and to wait for a 10-minute observation period afterward prior to being allowed to return to their vessels. Three public health nurses provided the immunizations from behind plexiglass dividers that had a small sliding window big enough for the person to place their arm next to it to receive the shot. Nurses employed the Johnson & Johnson brand vaccine as this is a one-shot vaccine.

Over 500 fishers received Covid vaccination shots following the initial roll-

'The development objective of the project is to strengthen the management of selected Pacific Islands oceanic and coast fisheries.'

out in June and the continuation of the program for several months. Both from a health and economic standpoint, vaccinating fishing crews makes sense. The last thing MIMRA wants is fishing crews sick with Covid that could interrupt commercial tuna operations as well as pose risk to health workers and local residents if crew members must be medically evacuated off vessels to Majuro hospital.

World Bank PROP program

The Pacific Regional Oceanscape Program (PROP) is a multi-country

program funded by the World Bank that has been supporting work at MIMRA for six years. The development objective of the project is to strengthen the management of selected Pacific Islands oceanic and coast fisheries, and the critical habitats upon which they depend, as the basis for sustainable and increased economic benefits. The first phase of the PROP program wrapped up September 30, 2021 after six years. The success of the PROP first phase led the World Bank to approve a one-year project preparation period in 2022 for the second phase, which is known as Pacific Regional Oceanscape Program for Economic Resilience (PROPER). Following the successful closure of PROP phase one, MIMRA decided to seek continuing World Bank support to build on the achievements from the first phase to move to the second phase focused on economic resilience. MIMRA's request was approved by Cabinet on December 9, 2021 requesting a second phase for PROP be included in the next stage of World Bank International Development Assistance, known as IDA20, for the World Bank Portfolio for Marshall Islands. This request was transmitted to the World Bank through the Minister of Finance. The proposed project duration for PROPER is six-years from Decem-

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Important increase in tuna numbers

ber 2022 to December 2028.

While the request was being approved and transmitted, the World Bank approved an up to one-year project preparation period effective February 8, 2022. The aim of this preparation period is to finalize all proposed activities prior to the signing of the Financing Agreement for implementation of PROPER later in 2022. To maintain continuity during 2022 MIMRA proactively reengaged the Project Management Unit staff who were in place during the first phase of PROP to continue with the project management for PROPER. The World Bank Task Team for PROPER, the Division of International Development Assistance within the Ministry of Finance and MIMRA are collaboratively working on the PROPER plan that is expected to have a total allocation of \$18 million. The aim is to have an agreement for the PROPER project ready for signing by December 2022 for smooth transition to implementation of the second phase of the Pacific Regional Oceanscape Program for Economic Resilience.

Tuna transshipments and exports

The year saw tuna transshipments rebound after a 13-year low was experienced in 2020 due to Covid port entry restrictions. Although 2021 did not approach the pre-Covid years of 2018 and



Tuna transshipment in Majuro lagoon.

2019 when Majuro port averaged 426 transshipments per year, the rebound was nevertheless significant. A total of 297 purse seiners transshipped to carrier vessels in the lagoon and unloaded at docks for freezer container shipments a provisional tonnage total of 221,609mt. The number was a 65 percent increase over the 175 transshipments in 2020. Of significance, the 2021 transshipments averaged 767mt, the second highest average recorded in the past eight years.

From 2014-2019, Majuro was the busiest tuna transshipment port in the world. But that level of transshipment collapsed in 2020 due to Covid, as Majuro port saw a 60 percent decline in transshipment operations. The first four months of 2021 did not offer optimism on the transshipment front. While 2020 saw a monthly after of 15 transshipments, the first four months of 2021 saw the average decline even more to only 11 per month. This compares to the 2018-2019 monthly average of over 35 transshipments.

Oceanic Division staff were active

in the National Disaster Committee's (NDC's) Maritime Working Group that developed Covid-prevention protocols in early 2020, and continuously reviewed port-related issues in the thennew Covid environment. In early 2021, Oceanic staff proposed to the Maritime Working Group changes to the port entry protocols to ease entry in an effort to bring back the purse seine fleet to Majuro port. The proposal to ease entry rules was based on the fact that there had been few breaches of Covid restrictions by vessels and their crews in the more than a year since they were imposed to reduce the threat of Covid getting into the country. Oceanic staff also stressed the significant negative economic impact of a 60 percent drop in transshipment activity, which resulted in loss of port entry revenue, transshipment fees, and jobs, while the transshipment business was pushed to other ports in the region that maintained less challenging port entry rules.

The most important change proposed was to eliminate the rule requiring that

Provisional purse seine transshipments in Majuro port in 2021

Flag	Number of PS Transshipments	SKJ	YFT	BET	
China	2	1,553	32	0	
FSM	72	43,339	8,729	737	
Kiribati	3	1,141	628	46	
S. Korea	1	1,074	19	24	
Marshall Islands	62	46,541	4,884	328	
Nauru	41	23,060	7,486	745	
Papua New Gui	nea 19	8,473	3,840	433	
Philippines	3	2,302	248	7	
Solomon Islands	6	3,351	368	516	
Spain	3	4,538	378	1,750	
Taiwan	77	44,379	12,264	1,185	
Tuvalu	8	5,935	825	125	
Total	297	185,686	39,701	5,896	

Note: The numbers listed under different tuna species are metric tons.

Key: SKJ: Skipjack; YFT: Yellowfin; BET:

Bigeye.

Taiwan leads transshipments

vessels be on the water for at least 14 days from their previous port of departure until entering Majuro port. The new proposed port entry protocols were endorsed by the Maritime Working Group and forwarded to the NDC, which approved them toward the end of April. The revised protocol for port entry did not change the no human contact requirements of entry, but did eliminate the 14-day rule. This had an immediately positive impact on transshipments. In May 2021, the month following the easing of port entry rules, the number of transshipments increased to 24, more than double the average of the first four months of the year. In fact, the May total was the highest in one month since December 2019, when Majuro saw 33 transshipments. It was higher than the monthly totals for all of 2020, indicating the slump the Majuro had been in as a result of Covid. The increase was viewed as mainly due to the 14-day isolation requirement being dropped, although there was also an uptick in purse seine fishing at the southern portion of the Marshall Islands EEZ in May that may have also played a role in the increased transshipment level. Then June saw a pre-Covid-like total of 49 transshipments in one month. It had been 18 months, since October 2019, since a higher number of purse seiners — 50 — transshipped their tuna in Majuro.

While transshipments and unloadings did not continue at the pace of June, they did remain significantly higher than 2020. By the end of the year, Majuro port had recorded 297 transshipments and unloadings, for a monthly average of 25. This was still well below the 35.5 transshipments per month average in 2018 and 2019, but well above the 15-transshipment average per month in 2020. The breakdown of the transshipments to carrier vessels and unloadings at dockside in 2021: 250 trans-

shipments, 39 split transshipments and unloadings, and nine unloadings.

Taiwan-flagged vessels again led all purse seiners in the number of transshipments conducted in Majuro port. In 2021, Taiwan vessels transshipped 77 times, or over 25 percent of the total number of transshipments. After Taiwan, Federated States of Micronesia vessels conducted 72 transshipments, followed by Marshall Islands vessels, which delivered their catches to Majuro port for transshipment 62 times. Nauruflagged vessels were in fourth place with 41, while Papua New Guinea purse seiners had 19 transshipments. Other purse seine vessels that used Majuro to transship tuna in 2021 included Tuvalu (8), Solomon Islands (6), Philippines, Spain and Kiribati (3 each), China (2) and S. Korea (1).

Transshipment fees increased to \$348,000 in 2021 compared to \$319,000 the previous year. Fisheries observ-



MIFV leads the export industry

ers were not deployed on any purse seiners during 2021 as Covid safety and port entry rules around the region precluded their work. The Oceanic Division was successful, however, in deploying observers 23 times on locally-based longline vessels during 2021. Due to Covid restrictions, port monitoring was suspended in 2021 but coverage for portside unloadings continued with adherence to strict standard operating procedures.

In addition to the purse seine transshipment activity, the 40 vessels associated with the Marshall Islands Fishing Venture-operated fish base (28 Chinese charters and 12 FSM) had a provisional total of 3,033mt offloaded. MIFV is a Majuro-based tuna processing and export company that is a subsidiary of Luen Thai. MIFV exported most of its fresh tuna to sashimi markets in the US, China and Canada during 2021. Over half of this 2021 catch was bigeye tuna, which accounted for a provisional total of 1,560mt. Next was 1,030mt of yellowfin tuna, followed by blue marlin with 219mt. These three species comprised 92 percent of the overall catch by these longline vessels. The remaining tonnage was comprised of a mix of albacore, wahoo, skipjack tuna, sailfish, mahi mahi, striped marlin and moonfish.

Pan Pacific Foods maintained six purse vessels associated with its tuna processing plant, the same number as in 2020. PPF usually exports both proNumber of foreign longline, pole-and-line and purse seine vessels licensed to fish in RMI EEZ by year and flag from 2017 to

2021.

FLAG	GEAR	2017	2018	2019	2020	2021
CHINA	LL	30	0	22	20	28
	PS	6	8	9	9	9
FSM	LL	13	9	9	10	12
FSMA	PS	76	49	54	70	83
JAPAN	LL	6	6	9	2	2
	PL	16	11	20	21	25
	PS	25	25	26	28	29
KIRIBATI	PS	0	5	7	3	4
KOREA	PS	26	24	25	25	21
PHILIPPINES	PS	0	13	10	15	15
CH-TAIPEI	LL	0	0	1	0	0
	PS	27	23	24	18	21
TUVALU	PS	1	1	1	0	1
USA	PS	31	31	6	25	16
TOTAL	LL	49	15	41	32	42
	PL	16	11	20	21	25
	PS	192	179	162	190	199

'Pan Pacific Foods (RMI) Inc. did not process fish in 2021 due to a number of factors, including Covid entry restrictions impacting staffing.'

cessed and whole tuna, but in 2021 its plant was not operational for processing tuna, in large part due to staffing issues related to Covid entry restrictions. As a result, it was limited to cold storage and containerization of fish for export.

PPF, Marshall Islands Fishing Venture and PII combined to export 11,291mt with containerized shipments making up the majority of tonnage. Skipjack made up the majority of the tonnage with 6,824mt. Yellowfin accounted for 3,648mt and bigeye was 819mt. PPF exported over half of this tonnage, shipping out 6,043mt during the year. The exports of whole frozen tuna went to the

following countries: Thailand, Vietnam, Indonesia, Fiji, Japan, and Taiwan.

Private sector growth

MIMRA has maintained a joint venture partnership arrangement with Koo's Fishing Company that is carried out through the Marshall Islands Fishing Company. This has placed two purse seine fishing vessels in joint venture with the Koo's-MIMRA partnership. The joint venture was started with one vessel, Marshalls 201, in 2006. Although revenue flows depend on fishing trends from year-to-year, over the 15-year life of the arrangement, this has developed an additional revenue stream for MIMRA by engaging in another area of the tuna value chain.

Pan Pacific Foods (RMI) Inc. operates a tuna processing plant but did not process fish in 2021 due to a number of factors, including Covid entry restrictions impacting staffing. It operates six purse seine fishing vessels in association with the processing plant, and handled cold storage and export of whole tuna during the year. PPF exported 6,043mt of tuna in 2021.

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Marshall Islands Fishing Venture workers lift fish onto the processing line.

266 foreign vessels licensed

Pacific International Inc. handled unloading of 3,811mt of tuna from seven purse seine vessels into 199 freezer containers for shipment to offshore processing facilities. The economic impact of Covid can be clearly seen in the port entry restrictions and dock protocols affecting PII's net yard facility. It also serviced only two vessels for net repairs, which when compared to pre-Covid peak of 45, is an indication of the impact the pandemic has had on domestic fisheries operations.

Marshall Islands Fishing Venture has maintained a fish base operation in Majuro since the early 2000s, managing a fleet of longline vessels and export of whole tuna to sashimi markets globally. In 2021, MIFV exported mainly to markets in the United States, China and Canada. It exported 1,438mt of tuna during the year.

The national feet of 11 Marshall Islands-flagged purse seiners operated in 2021. These 11 vessels caught an estimated 89,434mt of tuna in 2021, an increase over 2020's total of 81,913mt.

Tuna caught in RMI EEZ

A total of 266 foreign fishing vessels were licensed to fish in Marshall Islands waters in 2021, an increase from the 243 licensed the previous year. As is the case each year, not all licensed vessels actually fished in the Marshall Islands EEZ during the year. The breakdown of the fishing licenses was 199 purse seine, 42 longline, and 25 poleand-line vessels.

Eight countries and vessels under the FSM Arrangement (FSMA) licensed their vessels to fish in the Marshall Islands EEZ during 2021. The two major differences between 2020 and 2021 were: No US-flagged purse seiners fished in 2021 and the number of vessels under the FSMA increased by nearly 20 percent. The increase in the FSMA vessels continues a several year trend. For the past three years, from 2019, the number of vessels has increased annu-

ally from the 49 licensed to fish in 2018. FSM accounted for over one-third of all vessels licensed in 2021 and 45 percent of the 183 purse seiners that were registered

Outside of the FSMA, Japan maintained the most purse seiners, with 29. Japan was also the only country to operate pole-and-line vessels, with 25, an increase of four over the previous year. It also licensed two longliners, that gave Japan 56 vessels licensed to fish in the Marshall Islands EEZ, the largest fishing fleet of any single nation licensed to fish in the Marshall Islands. Taiwan and S. Korea both licensed 21 purse seiners in 2021. China licensed nine purse seiners and 28 longliners. The FSM licensed 12 purse seiners, while Kiribati licensed four and Tuvalu 1.

The commercial catches within the Marshall Islands EEZ are taken predominantly by the purse seine fishery but longline and pole-and-line operations also occur. In 2021, estimated total catch for all gears combined was 58,682



Skipjack dominant catch at 35,842mt

metric tons with purse seine accounting for 93 percent followed by longline, six percent, and pole-and-line, one percent. Purse seine catch in the EEZ increased from 36,841mt in 2020 to 54,640mt in 2021. The relatively small number of longline vessels licensed, 42, caught an estimated 3,265mt in 2021, a slight increase on the 3,199mt in 2020. The catch by pole-and-line vessels, operated exclusively by Japan, declined in 2021 to 777mt compared to 2,610mt the previous year. Year-to-year catch tonnage fluctuates depending on climate conditions and the movement of tuna schools across the Western and Central Pacific

The breakdown of the catch tonnage for the three types of fishing gears active in Marshall Islands waters in 2021:

• Purse seine catches: Available logsheet data show that total catch by purse seine fleets operating in the RMI EEZ increased in 2021 to its highest level since 2016. A provisional total of 56,640mt of tuna was caught in 2021, a nearly 50 percent increase over the 36,841mt caught the year before. The year 2021 demonstrated the high degree of variability in catch volumes — from year to year and even from week to week — and how dependent they are on climate conditions.

During August 2021, MIMRA saw a large pocket of vessels in northern Kiribati and Nauru. Over one weekend, the



fish migrated slightly north, crossed into the RMI EEZ and were followed by between 40 and 50 purse seiners. This was an unusual event that lasted three weeks which is the main reason the catch increased in 2021 compared to previous years. In fact, there was more catch in two weeks during August 2021 than all of 2019.

As usual, skipjack was the dominant catch, accounting for 35,842mt or 66 percent of the total catch. A total of 18,270mt of yellowfin, 514mt of bigeye, and 14mt tons of "other" species rounded out the 54,640mt 2021 catch in the Marshall Islands EEZ.

• Pole-and-line catches: Japan is the only country that employs this method of fishing. It licensed 25 vessels in 2021, the highest number in several years. Another indication of seasonal and climate conditions impacting fishing can be seen in the pole-and-line tonnage for 2021.

The catch declined considerably from the previous three years to 777mt in

2021. This compares to 2,619mt tons caught the year before. As usual, skip-jack accounted for nearly all of the pole-and-line catch at 761mt, with 14mt classified as other species.

• Longline catches: The provisional longline catch of 3,265mt in 2021 was slightly higher than the previous year's 3,199mt. Bigeye made up over half of the total tonnage, with an estimated 1,677mt caught. Next was yellowfin, with 1,136mt tons collected. Albacore accounted for 122mt and other species were estimated at 331mt. The 28 chartered longline vessels associated with the Marshall Islands Fishing Venture fish base operation in Majuro accounted for the majority of the longline catch with an estimated 1,741mt. FSM-registered vessels caught the next highest volume, estimated at 1.189mt. In contrast to the purse seine fishery, which is mostly concentrated in southern waters of the Marshall Islands' EEZ, longline fishing is more widely dispersed throughout the EEZ.

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Oceanic highlights

Vessels tonnage

An estimated 298 purse seine vessel transshipments took place in Majuro port in 2021. This accounted for a provisional total of 221,609 metric tons being transshipped, an average of 743mt per transshipment.

Although the total number of vessels transshipping remained considerably lower than in the pre-Covid era, 2021 showed a significant rebound compared to the 175 vessels that transshipped in 2020. The breakdown of the transshipments to carrier vessels and unloadings at dockside in 2021: 250 transshipments, 39 split transshipments and unloadings, and nine unloadings.

VDS success

Vessel Day Scheme (VDS) revenue declined by over \$2 million in 2021 compared to the previous year, dropping to \$26 million after the VDS generated \$28.1 million in 2020. Fishing rights revenue at \$3.6 million was almost identical to the 2020 revenue number, while licensing fees declined from \$2.3 million in 2020 to \$2.2 million in 2021.

Total operating revenue at \$34.9 million was nearly equal to 2020's \$35.2 million.

Vessel licenses

A total of 266 purse seine, longline and pole-and-line vessels were licensed to fish in Marshall Islands waters in 2021, an increase from the 243 licensed the previous year. The breakdown was 199 purse seine, 42 longline, and 25 pole-and-line vessels. As is the case each year, not all licensed vessels actually fished in the Marshall Islands EEZ during the year.



Tuna transshipment Majuro 2014-21

Year	Number	Metric Tons *	*Average	
2014	382	158,065	414	*Average
2015	504	368,323	731	metric tonnage
2016	551	403,809	733	per trans-
2017	424	292,754	690	shipment.
2018	403	307,164	762	** Pro-
2019	449	362,454	807	visional
2020	175	118,743	679	tonnage
2021	297	221,609**	746	estimate.

Funding to RMI

MIMRA transferred \$26 million to support the national government's budget in 2021, a figure that amounted to over 10 percent of the budget.

It was less than the previous two years, reflecting the decline in VDS

National fleet

The Marshall Islands-flagged purse seine fleet of 11 vessels caught an estimated 89,434mt of tuna. In addition, the provisional catch of the 28

longline vessels associated with the Majuro-based Marshall Islands Fishing Venture-operated fish base totaled 1,733mt.

Observer action

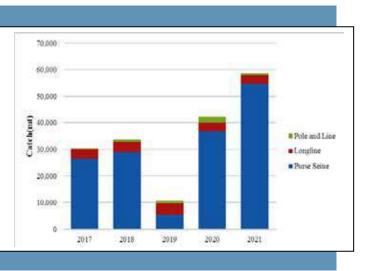
MIMRA maintained 41 active fisheries observers in 2021, many of whom were hired to short-term contracts performing shore-related work for MIMRA due to border closures that kept observers off vessels until toward the end of 2021. Ultimately, MIMRA observers carried out a total of 23 trips on longline vessels. The low number was due to Covid prevention restric-



for MIMRA in 2021



Total catch by different fishing gear-types operating in the RMI EEZ from 2017-2021



While the total number of vessels transshipping in Majuro was lower than normal in 2021, there was a significant rebound compared to 2020. The estimated number of purse seiners that transshipped their tuna in Majuro in 2021 was 297.

Source of tables on p24 and 25: MIMRA Oceanic Division.

tions in Marshall Islands and throughout the region that halted deployment of fisheries observers on purse seiners in February 2020.

PII vessel service

Covid port entry restrictions continued to handcuff use of Pacific International Inc.'s Net Yard and dock facility. However, PII handled unloading of 3.811mt of tuna from seven purse seine vessels into 199 freezer containers for shipment to offshore processing facilities. It also serviced only two vessels for net repairs, which when compared to pre-Covid peak of 45, is an indica-

tion of the impact the pandemic has had on domestic fisheries operations.

Onshore processing, exports

Pan Pacific Foods loining plant limited its operations in 2021 to cold storage and containerization of fish for export. The company did not produce processed fish during the year due in part to Covid restrictions and staff shortages. PPF, Marshall Islands Fishing Venture and PII combined to export 11,291mt with containerized shipments making up the majority of 2020 to 54,640mt tons in 2021.

tonnage. PPF exported over half of this tonnage, shipping out 6,043mt during the year.

RMI EEZ tonnage

An estimated 58,682mt of tuna was caught in the Marshall Islands EEZ by all vessel types, with purse seiners accounting for 93 percent of the total tonnage. Longline and pole-and-line vessels accounted for six and one percent of the total catch in the EEZ, respectively. The purse seine catch in the RMI EEZ increased from 36,841mt in

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Fisheries Observer trips by flag and gear 2021

Flag Purse Seine Longline

0	23
0	6
0	17
	0



OBSERVER PROGRAM

Ongoing border closure

isheries observers continued to be the most seriously affected program within MIMRA in 2021. The ongoing border closure in the Marshall Islands as well as in many Pacific islands prevented deployment of observers on purse seiners. Pre-Covid, purse seiners comprised the bulk of observer assignments.

Fortunately for MIMRA observers, they were eligible for Covid relief under the United States Covid Unemployment Assistance Program that provided observers with aid in both 2020 and 2021 due to loss of their work. In addition, MIMRA offered temporary as well as alternative employment options for some observers during 2021. Nevertheless, a number of observers left the program, either to pursue other employment opportunities or to migrate with their families to the United States.

MIMRA maintained 42 active observers in 2021. This number included one female. While the shutdown of observer activity on fishing vessels was complete from March to December 2020, during 2021 MIMRA managed to implement observer coverage of 23 fishing trips involving locally-based longline vessels associated with the Marshall Islands Fishing Venture, which operates a fish base in Majuro. The observer trips on the longline vessels averaged over 13 days per trip.

In 2021, the observer program, in cooperation with the College of the Marshall Islands, focused on training new and retraining current observers. In February, 24 observers successfully completed a two-week refresher course. In June and July, 34 trainees successfully completed a STCW sea safety training. Over a six-week period in June and July, 32 trainees and existing observers successfully completed a series of one-week Fisheries Information Management System (FIMS) e-reporting trainings.

MIMRA's observer program is wellprepared for the resumption of monitoring work on purse seiners and longliners once restrictions ease. It has five observer staff who oversee the program: A Compliance Officer, Data Specialist, Data Entry/Debriefer Assessor, a Trainee Debriefer Assessor, and a Longline Port Sampler. In addition, it has six Pacific Islands Regional Fisheries Officer (PIFRO)-certified debriefers and seven more in training. It also has one trainer trainee who completed Level IV training in 2021 and was awaiting his assessment to be certified.

In 2021, 97 percent of all observer data was submitted as part of full debriefings by MIMRA debriefers.

Among developments and needs identified during the year:

• FIMS Observer Apps – E-reporting was inactive for most of 2021. App updating and more training is needed to address issues relating to some parts of





Far left, Makbi Bwijko, Observer Compliance Officer. Left, observers practice using a liferaft. Above, observer training.

hurts observer program

still under consideration since first introduced in 2016. Rock Star (two-way transmission devices) were purchased but had to be phased out due to technical issues. Garmins were ordered, received and registered to replace the phased-out equipment. These must be activated to be used with purse seine and longline iFIMS apps.

• A draft standard operating procedure (SOP) was developed since 2018, with revisions to fit local needs. A final draft was submitted for review and approval to Oceanic Division staff. An Emergency Action Plan was also introduced in 2021. The EAP was updated and revised during 2021 with the goal of having the draft endorsed by MIMRA leadership in 2022. It involves coordination with the National Police/Sea Patrol, Ports Authority, Red Cross Society, MIMRA and US Coast Guard.

In addition, contracts for observers hard hats, and VHF radios.

the app. A total of 60 Rugged tablets are have been drafted for final review. Insurance for observers is an important concern. Progress was made in 2021 when insurance was included in the agreements with the vessel companies. The observers are also covered under the arranged Insurance Policy with Moylan's Insurance Company in Majuro.

- The Forum Fisheries Agency and the World Bank-funded PROP program supported purchase of essential sea safety gear for observers. This included 60 life jackets and 60 Personal Life Beacons which were procured with assistance from FFA and PROP; 25 PLB have been registered with US Coast Guard (with assistance from Ministry of Transportation and Communication).
- · Additional observer working gear and equipment was either purchased or in the process of being procured through the World Bank-funded PROP program in 2021, including: Uniforms, rain gear,

Fisheries Observer trips 2015-2021

Year	PS	LL	Total
2015	182	9	182
2016	175	28	203
2017	153	39	192
2018	145	34	179
2019	141	33	174
2020	20	12	32*
2021	0	23	23*
I			

* Observer coverage restricted due to Covid

Source: MIMRA Oceanic Division.

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COMPETENT AUTHORITY

The goal: Access to the European Union market

The big picture

Many small islands in the Western Pacific that are home to commercial fishing operations wish to gain access to the lucrative European Union seafood market. To date, only four nations — Papua New Guinea, Fiji, Solomon Islands, and Kiribati — have successfully established the infrastructure and systems to meet strict EU standards, allowing them to export fish to the 27-nation bloc. The Marshall Islands is now the fifth island country to set its sights on gaining access to the EU market for fish exports. After many years of discussion, efforts by MIMRA were initiated in 2019, work began in earnest in 2020, and momentum picked up significantly in 2021 to build the foundation needed to address the key challenge for the Marshall Islands: Gaining recognition from the EU for a Competent Authority. In 2021, important organizational steps were taken to establish the Marshall Islands' first Competent Authority (CA). The CA is the entity that oversees quality assurance and compliance of local fish processing facilities, landing containerization, cold stores, fishing vessels and transporters to ensure they meet strict EU rules for fish handling and prevention of illegal, unreported and unregulated (IUU) fishing. Linked to the work of the CA is the need for local processors to improve their infrastructure and facilities and raise the standards of their processing systems to meet international standards.

Although the primary purpose of the CA is to facilitate fish exports to the EU market and its value chain of activities, the secondary purpose is to establish and



CA Officer Tatiana Shoniber, left, and MIFV Quality Assurance Supervisor Rose Leah Palo.

improve the inspections, certification process and systems, and exports.

In light of the Marshall Islands having one of the busiest tuna transshipment ports in the world, the drive toward the establishment of the CA is a positive move to both boost economic activity and drive exports. The CA work in 2021 was funded as part of the World Bank's PROP program grant funding to MIM-

Key developments in late 2020 and 2021 included: Recruitment and hiring of new staff for the CA; completion of CA legal instruments, standards and operational procedures (National Control Plan); stakeholder workshops; multiple inspections of tuna processing

facilities, landing containerization, and some domestic chartered vessels; and follow up with processors.

Regulations, Standards, Training and Monitoring

Legal instruments and trainings: The final quarter of 2020 and early part of 2021 resulted in the completion of the CA legal instruments, standards and operational procedures (National Control Plan). A milestone was reached when, in May 2021, MIMRA's Board of Directors adopted three key documents for the CA: The Fish Processing and



Top, Food safety training for industry. Left, CA staff inspect PPF. Right, inspection at MIFV.

Export Regulations 2020, the Marshall Islands Industry Standards, and the CA National Control Plan. The board's approval of these important instruments established the foundation for CA existence and the readiness for implementa-

This was followed by a CA sponsored workshop with industry and government stakeholders. Numerous trainings and workshops were held throughout the year on various aspects of CA operations, including participation in regional and international workshops and train-

A two-month food safety workshop was held virtually and led by Helder Silva, a consultant from Portugal. Partici-

'The training benefited the participants not only by capacity building but also by enhancing communication skills.'

representatives of both industry and the CA. The training was followed with an exam and award ceremony. Topics of the training included EU regulatory pating in the food safety training were framework, fish processing and preser-

vation technologies and processes, fish biochemical and post mortem changes. fishing handling preservation techniques, and Hazard Analysis and Critical Control Point (HACCP), the heart of the food safety system. The training helped equip CA officers with knowledge and skills for practical application. As part of this training program, the CA staff and representatives from industry gathered in study groups to review training notes and attempt exercises in preparation for the examination at the conclusion of the program. This generated useful CAindustry collaboration and helped ensure everyone completed the training with a thorough understanding of the materials covered.

"The training benefited the partici-

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COMPETENT AUTHORITY

Focus on sampling, testing

pants not only by capacity building but also by enhancing communication skills between the industries and the Competent Authority," said CA Advisor Aquina Pyanne. "The training showcased the importance of teamwork among different fisheries entities, and the opportunity to learn from one another through each others' weaknesses and strengths."

In addition to this and other trainings, numerous Internal in-house trainings and awareness activities were carried out for the CA and industry. During 2021, the CA officers were mentored and delivered presentations about their areas of work. The purpose was to provide an opportunity for officers to present what they had learned to reinforce the concepts and understanding of their work. This was integrated as a continuous element of the CA learning process. Numerous presentations were

delivered by CA Officers Lyla Lemari and Tatiana Shoniber during the year. Among the topics were various aspects of the RMI Industry Standards, Hazardous Analysis and Critical Control Point (HACCP), sampling and testing, and others

Fish sampling and histamine testing: Sampling and testing are one of the important components of CA work. It acts as a means of verification of fish handing practices during landing, and to assess the environmental impact on levels of contaminants that may make fish unsafe. During the year, CA officers took samples and tested fish for histamine at the Pan Pacific Foods laboratory



PPF Laboratory Supervisor Analyn Lanchita.

using the fluorometric method.

Water tests: Water was tested at different processing facilities to determine if water used for processing fish was safe for food production and safe for carrying out food production activities. Regular monitoring and testing of water at processing plants is essential for water safety. Moreover, these tests assist the processors to identify problems that can be corrected. CA officers took water samples at the MIFV, PII and MIFV processing plants to submit to the Marshall Islands EPA laboratory for testing.

Inspections of processing plants: Inspections are a crucial component of CA work. These plant visits in 2021 were conducted to make sure the industry

complies with the requirements of the new Marshall Islands Industry Standards as well as those of the importing nations. The sector was allowed a transitional period to address infrastructure problems and hygiene concerns, and to develop or improve food safety procedures. Once the Marshall Islands Standards are in force, non-compliant companies may incur penalties.

During 2021, following inspections by CA staff, some improvements were seen in processing facilities. There were still major structural deficiencies and development of food safety systems for one of the operators.

Marshall Islands Fishing Venture, Pan Pacific Foods, and Pacific International Inc., as well as Kendall Micronesia Inc. are fully aware of the requirements to be met as they work to upgrade and improve their infrastructure and operational requirements in line with the

new industry standards and regulations as a result of the workshops and plant visits by CA staff in 2021. Aside from a focus on the processing facilities that aim to export to the EU market, the goal is to improve the sanitary standards of all domestic fish processing companies regardless of the destination of their exports.

Documents and Traceability as-

sessment: Traceability and the documented aspects of the operators, including HACCP, must be evaluated before an on-site plant assessment. The ability to trace a product's origin is crucial for ensuring that it is following proper processing procedures to ensure safe food



PPF inspection, from left: CA Officer Tatiana Shoniber, PPF Lab Supervisor Analyn Lanchita, CA Manager Aquina Pyanne, and PPF Quality Control Manager Dexter Martinez.

Necessary steps to success

and that the fish used in the process was lawfully captured in accordance with applicable fisheries management measures.

EU Accreditation Process: This is the most important aspect of the establishment of the Competent Authority: Gaining access to the European Union market. The accreditation process began in 2020 through to 2021 with the initial listing letter, followed with questionnaires along with the submission of the MIMRA and CA regulatory framework, RMI Industry Standards, and support CA mechanisms provided to the EU for assessment and feedback.

The communication and assessment process will continue until the EU is satisfied with the quality of the information provided and that the RMI CA has complied with the conditions set by the EU. When all those conditions are fulfilled, the country can be ready for an authorization.

Looking to the future

The Marshall Islands' quest toward gaining access to EU markets has started.

There was still a lot of work to be done. To guarantee the journey's success, the crucial factors listed below must be taken into consideration.

- Structural improvements of all the processing plants, containerization landing sites, and Marshall Islands-flagged fishing vessels are needed.
- Completion of food safety systems and processes for those companies that lack such systems.
- All relevant stakeholders must be part of this effort and fully aware of the various stages of the CA development.
- The CA and the industry must prepare and get their in-house systems and processes in order while waiting for the EU to respond and provide feedback to the RMI Questionnaire.
- Laboratory access for CA and industry testing is an essential need.
- The CA team must develop and expand its competency by continuous learning and practice, including by establishing links with regional CA bodies and stakeholders.

An essential missing link for the CA has been MIMRA's lack of a complete laboratory needed for sampling and test-

ing fish products. Work to remedy this situation in 2021 moved plans forward for construction of a new MIMRA Annex that will include a state-of-the-art laboratory. One floor of the Annex will house the laboratory with three units: Chemical, Microbiology and Radioanalytical.

Plans for building a laboratory for the CA completed in 2021. A tender process was held in late 2021, with a contractor to be selected in 2022 to begin the actual construction. When the MIMRA Annex with laboratory is complete, another essential piece of MIMRA's effort to meet EU requirements will be in place.

Noting that not all tests will be performed in the Marshall Islands due to technological capacity, external laboratories will still be used for tests that cannot be done domestically.

The formation of the Competent Authority, according to MIMRA Director Glen Joseph, is gaining momentum. But he noted that MIMRA's ongoing efforts "will involve significant work with industry to improve standards necessary to meeting European Union requirements for exporting fish into that market."

MIMRA GALLERY

Some of the many people who

Armer Ishoda,

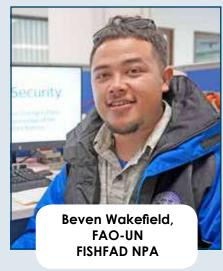
Fisheries

Development Officer





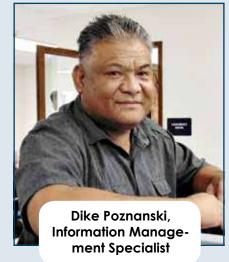






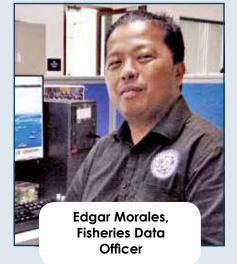


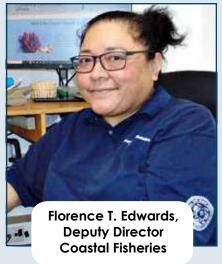


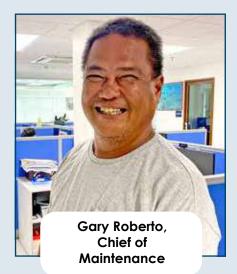


MIMRA GALLERY

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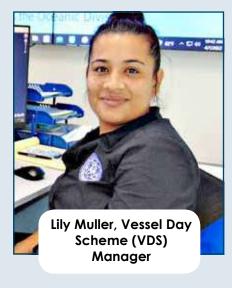
MIMRA GALLERY

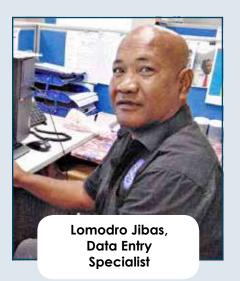
Some of the many people who

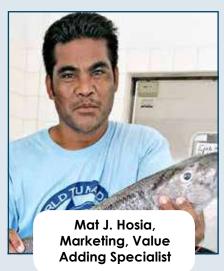
Jude Labi, Security Officer. Sonny David

Sanchez, Value

Adding Specialist



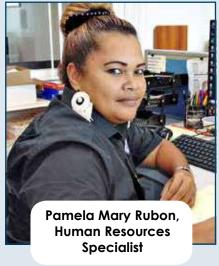


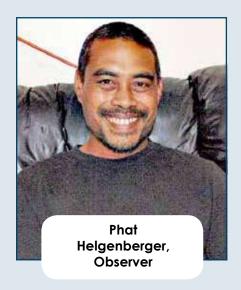




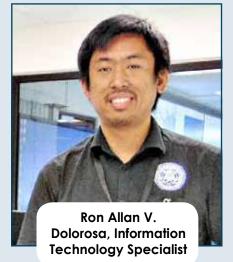








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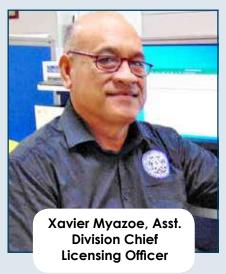
MIMRA GALLERY















Coastal Fisheries Officers participating in a workshop on international fisheries law.

Taking care of business

he Legal Division provides advice to the MIMRA Board of Directors and management regarding fisheries legal issues at the national, sub-regional, regional and international levels. All legal work carried out by the Legal Division is based on the principles of upholding the rule of law and conserving the nation's marine resources for the benefit of the people of the Marshall Islands.

The Legal Division advises both the Coastal and Oceanic Divisions. For the Oceanic and Industrial Affairs Division, the Legal Division is tasked to review national fisheries laws that may require review against regional and sub-regional measures that are binding on the Marshall Islands as a member of the Western and Central Pacific Fisheries Commission, Pacific Islands Forum Fisheries Agency, Secretariat of the Pacific Community, Parties to the Nauru Agreement, and the United Nations Convention on the Law of the Sea.

In addition to these duties, the Legal Division assists MIMRA in legal representation in court for prosecution against fishing vessels or companies alleged to have engaged in unlawful acts in violation of national fisheries laws and regulations of the Marshall

Islands. This includes illegal, unreported and unregulated fishing, contravention of conditions of fishing licenses, obstruction of fisheries observers, misreporting, and other infractions. For the past five years, most cases have been settled out of court by way of summary proceedings, which is allowed under the Fisheries Enforcement Act. There were no cases filed in 2021.

The Legal Division provided inhouse training for compliance and enforcement officers within MIMRA on an "as-needed" basis for capacity building and understanding of the laws of the Marshall Islands. The Le-



on many legal fronts

gal Division also handled legal drafting of bills, resolutions, regulations, bilateral access agreements, and local government ordinances in support of safeguarding marine resources in the Marshall Islands.

The Legal Division also assists management in the negotiation of fishing day sales under PNA's Vessel Day Scheme. Fishing days are sold to bilateral fishing partners and to domestic partners (in line with the FSM Arrangement which provides for preferential treatment to purse seine vessels flagged in island nations, including the RMI). Before fishing vessels are issued licenses to fish in the RMI

EEZ, they are required to have an access agreement with MIMRA. This is required before commencement of fishing prior to January 1 of each New Year. These license conditions are outlined in access agreements required under the Fishing Access and Licensing Act.

Coastal Fisheries Law is still a fairly new landscape, especially for the Marshall Islands. As such, a lot of the work that the Legal Division undertakes focuses on drafting legislation and reviewing policies so that the framework for the Coastal Division is clear in terms of law, enforcement, monitoring, and ensuring compliance of individuals and businesses that interact with RMI's coastal waters. Current coastal legislation focuses on regulating the licensing process; regulating and conserving certain species that are used for commercial purposes; and regulating the import and export process for sea cucumbers and aquarium fish. The legislation that was updated or developed in 2020 included the Protected Areas Network Regulations, Tuna Game Fish Conservation Zone (Amendment) Act, Tuna Game Fish Conservation Zone Regulations; Fish Harvest Regulations; and finalization of Aquaculture Regulations.



LEGAL 2021 HIGHLIGHTS

World Bank workshops

The Legal Division led or assisted a number of workshops involving MIMRA staff during 2021. These in-

- UNCLOS Training: On January 27, 2021, MIMRA, with funding support from the World Bank, initiated an in-house legal workshop for internal MIMRA officers on the basic principles of the United Nations Convention on the Law of the Sea and its relevance in the national
- **PSMA Seminar:** On February 10, 2021, MIMRA, with funding support by the World Bank, conducted a Port State Measures Agreement (PSMA) Seminar for MIMRA Officers. The purpose of this seminar was to provide some legal insights to the PSMA, to which the Marshall Islands is not a Party, and implications for MIMRA of future of this legal instrument.

Both of these workshops were funded by the World Bank's Pacific Regional Oceanscape Project (PROP).

Other developments

- MIMRA HR Policy: The Legal Division assisted MIMRA management and the other divisions in drafting, reviewing and finalizing a series of new MIMRA policies. These included: Human Resources Policy 2021.
- Enforcement: MIMRA continued active enforcement of Marshall Islands fisheries laws and regulations. Over the past several years, this has resulted in court filings and out of court settlements against a number of fishing vessels which led to a total of \$1,945,000 in fines collected for the past five years, from 2016 to 2021. There is zero tolerance for fisheries violations in the Marshall Islands.

MIMRA, with the support of the Marshall Islands Police Department/Sea Patrol and the Attorney-General's Office, actively monitors commercial tuna fishing operations in Marshall Islands waters. In 2021, there were no cases filed against fishing boats or companies as there were no allegations of violations that occurred in the Marshall Islands EEZ. Despite the lack of allegations, there is no room for complacency as MIMRA officers are continuing to vigilantly monitor fisheries activity and any alleged infractions.



Laurence Edwards II, MIMRA Legal Counsel

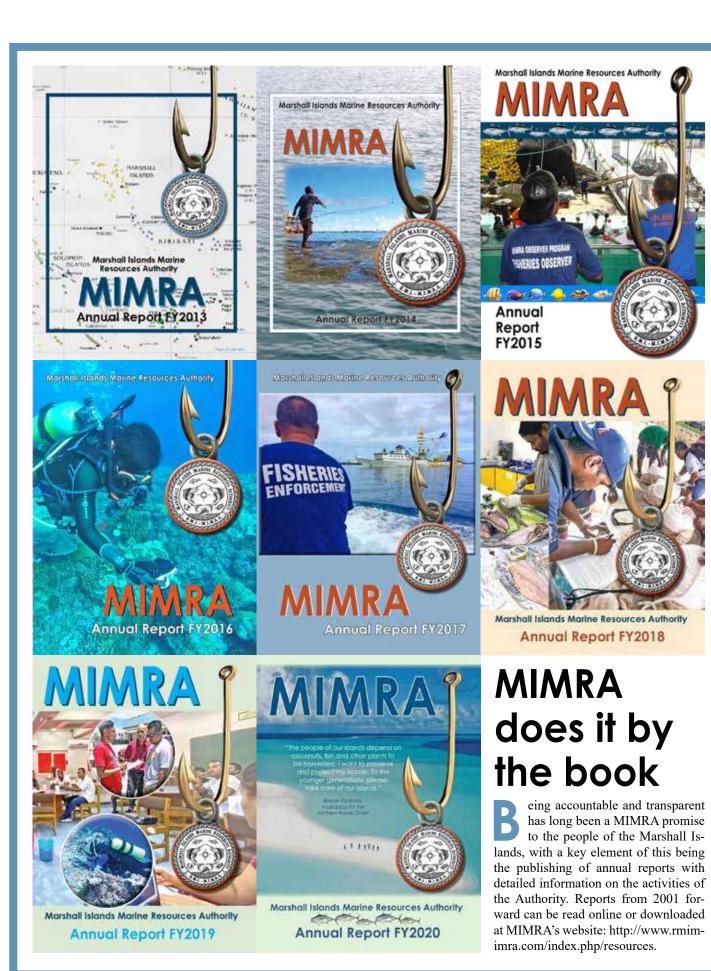
"What drove me to work for MIMRA was my interest in promoting the protection of the marine resources and its reputable status it serves for the people and Government of the Republic of the Marshall Islands.

"The rule of law in the fisheries realm serves as a guiding step in implementing our international, regional, and sub-regional obligations as members of various organizations at the national forefront (e.g. UNCLOS, WCPFC, SPC, FFA, etc.).

"Most people in the nation rely heavily on our fish as a top priority for food security and subsistence livelihoods for social and economic dependence. My role as the legal counsel within the legal division for MIMRA requires responsibilities keeping in line with national legal obligations as well as serving the best interest of the RMI as legal custodians of the RMI Exclusive Economic Zone.

"One of my passions in working for MIMRA is reviewing our fisheries legislations and regulations, and prosecuting companies that violate our laws and/or regulations. With the addition of Dr. Transform Agorau, we are very fortunate to have him onboard at MIMRA.

"Overall, working for MIMRA requires high standard and quality professionalism in achieving the best results."



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Iroojlaplap Boklon Zackious and Mayor William Saito, seated, signed the Maloelap Atoll Local Resource Management Plan with the Local Resource Committee members in June 2021.

Strong progress made

he Reimaanlok (Looking to the Future) Process made significant progress in 2021. New islands and atolls were brought into the conservation management program, while others were advanced toward the goal of implementing locally-designed resource management plans. The Reimaanlok work on multiple outer islands links closely with the rollout of the Protected Areas Network, now fully established with a PAN office at MIMRA.

Meanwhile, the fish markets at Majuro and Kwajalein provided fish and local food products from multiple outer islands in the fish market network. This both injected income into the economies of these remote islands as well as increasing local food availability in the urban centers, contributing to overall food security. Aquaculture programs made some progress, including increasing exports over Covid-impacted 2020,

'Eight additional atolls reached the milestone of signing off on their resource management plans in 2022 bringing the number of to reach Step 7 to 15.'

and hatcheries were renovated and improved.

Covid continued to impact MIMRA Coastal programs, as the Authority supported the government's National Disaster Committee by providing its vessels to assist with delivery of medical teams, supplies and equipment to the remote islands as part of the Covid response throughout 2021.

Among important developments in 2021:

- Eight additional atolls reached the milestone of signing off on their resource management plans in 2022, bringing the total number of atolls to reach Step 7, the next-to-last-step in the Reimaanlok Process, to 15. Approval of the resource management plans triggers implementation of monitoring and other conservation management work. Two new atolls started the Reimaanlok process, while others progressed through the steps.
- Five new anchored fish aggregating devices (aFADs) were installed around the Marshall Islands. FADs were constructed and then deployed near Ailuk, Ujae, Namu and Majuro atolls, and Kili Island. This brought to 13 the number of aFADs installed around various outer is-





Coastal survey team on Madmad islet in Namdrik Atoll as part of Reimaanlok Process activity.

despite Covid impact

lands since 2018.

- The Protected Areas Network (PAN) Office within MIMRA began full operation following promulgation in late 2020 of PAN Regulations. These regulations set criteria for eligibility of sites to gain funding in support of conservation management. The PAN Office initiated its program to offer funding of up to \$20,000 to five sites each year in support of project activities, with the goal of beginning to award these small grants in 2022.
- Due to Covid prevention and preparedness needs, Coastal vessels were used for numerous charters by the national government's National Disaster Committee/National Disaster Management Organization to deliver food, supplies, equipment and medical teams conducting Covid immunizations to the outer islands. Nevertheless, the Outer Island Fish Markets in Majuro and Kwajalein

'After several
years of planning
and preparation,
giant clam
spawning
launched at the
Woja, Majuro
hatchery for the
first time.'

purchased 41,746 pounds of fish from remote fishers, resulting in \$50,708 in payments to the fishers.

• Japan's Overseas Fishery Cooperation Foundation continued to provide needed technical and financial support to assist the operation of the Outer Island Fish Markets in Majuro and Kwajalein. In addition, the Japanese Embassy handed over 18 boats and radio communications equipment for the Coastal fisheries program. Two 38-foot vessels are being used by Majuro and Kwajalein Coastal staff in support of fisheries developments

• Coastal supported three giant clam hatcheries, assisting local communities with training and facilities management and renovations, to stimulate local involvement in growing giant clams for export to the aquarium market internationally. After several years of planning and preparation, giant clam spawning launched at the Woja, Majuro hatchery for the first time. This also involved training members of the communities near the hatchery to supervise small-scale grow-out of giant clams in the lagoon for later sale to MIMRA for export.



Leaders sign resource plans

The Reimagnlok **Process progresses**

Engagement with all levels of society on the remote outer islands is an essential part of the Reimaanlok Process for sustainable resource management. Involving the leadership and local communities in Reimaanlok's eight-step process ensures a step-by-step process through which the communities and their leaders become fully aware of the importance of conservation management and most importantly are empowered to develop community-driven resource management plans. As the atoll communities move to step six and seven, with draft resource management plans prepared, the leaders of these remote communities sign the plans, demonstrating their endorsement of the

In September 2021, Irooj Manuel Joklur and Mayor Bernard Chong-Gum signed the Arno Atoll Local Resource Management Plan. Similarly, the same month, Iroojlaplap Boklon Zackious signed Local Resource Management Plans for Bikar and Bokak, Wotje and Maloelap atolls. He signed along with Utrok Mayor Tobin Kaiko for Bikar and Bokak, Mayor Joe Hanchor for Wotje, and Mayor William Saito for Maloelap.

A milestone activity for 2021 was initiating the Monitoring, Evaluation and Adaptive Management survey work at Namdrik Atoll. This is Step 7 in the Reimaanlok Process. In mid-July, the Coastal Division implemented the activities listed under Step 7 of the Reimaanlok Process: Monitoring, Evaluation, and Adaptive Management by doing a follow-up marine survey assessment in Namdrik Atoll. Three teams were involved in carrying out the work: 1) Biological marine survey, 2) Aquaculture habitat assessment, and 3) aFAD deployment. This three-stage



Japan Ambassador Norio Saito.

project is an all-important part of the work MIMRA and its partners to ensure the community has adequate support for ongoing management. After completion of the work at Namrik, the three teams reported the results to Namdrik leadership.

Through the eight-step Reimaanlok Process, eight additional local jurisdictions have signed off on their resource management plans (Arno, Bikar, Bokak, Maloelap, Mili, Namo, Wotho, and Wotje), and four more (Ailinglaplap, Jabot, Mejit, Majuro Ajeltake) are in their final stages for endorsement after receiving the proper blessings from their respective local resources committee members including traditional leaders, local government council, and resource users.

The Coastal Division in 2022 continued to facilitate its mandate to support management and development efforts to foster sustainable coastal fisheries in the Marshall Islands through conservation measures and alternative livelihood programs, which include giant clam farming and placement of FADs. Many of these local jurisdictions that are now under Step 7 of Reimaanlok have designated their own management

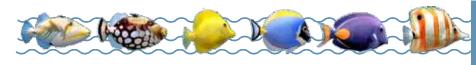
and development efforts based on the scientific information MIMRA and its partners collected and delivered to the community.

Japan donation of vessels

Japan Ambassador Norio Saito handed over 18 boats and a radio communication system to MIMRA in a ceremony at Uliga Dock May 25. The ceremony was witnessed by President David Kabua, Reverend Palukne Johnny, President of United Church of Christ, Minister of Natural Resources and Commerce Sandy Alfred, Minister of Works, Infrastructure and Utilities Jiba Kabua, Minister of Works, Infrastructure and Utilities, Minister of Health and Human Services Bruce Bilimon, MIMRA Director Glen Joseph, and other officials.

The boats and radio communication system are part of the equipment granted through the Economic and Social Development Program of Japanese Grant Aid, signed on March 10, 2016. The total value of the equipment handed over was

Of 18 boats, two 38-foot boats are for Majuro and Kwajalein for transporting goods and services between Majuro and nearby islands such as Rongrong, Arno and Mili; and between Ebeye and nearby communities such as Lib, Namu and Ujae. The remaining 16 smaller boats were distributed to 16 atolls for intraatoll transportation of residents and goods, which is expected to meet basic needs of the residents and vitalize industry in the neighboring islands. At the ceremony, Ambassador Saito stated that Japan has been committed to the vision of "Strengthening the Basis for Resilient and Sustainable Development" of the Marshall Islands since the eighth Pacific Islands Leaders Meeting (PALM8) held in Japan in 2018 endorsed the concept.



The eight steps to a great local plan

The eight-step Reimaanlok Conservation Area Management Planning Framework helps communities in the Marshall Islands think globally and act locally. It employs community-based tools and approaches to articulate local objectives that translate to national, regional and international goals for conservation management of local re-

The Reimaanlok eight step process, when triggered by a community's leadership (Step 1), includes a scoping and budgeting exercise (Step 2), site visits by Reimaanlok facilitators to build awareness on the need for resource planning by the target atoll community (Step 3), followed by the gathering and analysis of various natural and social resource data parameters (Step 4) in order to design (Step 5) and ultimately legislate (Step 6) an integrated atoll resource management plan inclusive of programs to ensure ongoing monitoring and adaptive management (Step 7) and local commitment retention (Step 8).

Given the specific needs and unique circumstances of atoll municipalities, the Reimaanlok facilitation consortium known as the Coastal Management Advisory Council (CMAC) may follow these eight steps in a linear or iterative process. This helps foster a sense of trust and shared purpose within the community and of the Reimaanlok facilitators, so that the process itself is an empowering experience for atoll communities and a vehicle for national co-







Signing Local Resources Management Plans, top: Irooj Manuel Joklur and Arno Mayor Bernard Chong-Gum; middle: Iroojlaplap Boklon Zackious and Utrok Mayor Tobin Kaiko; and bottom: Iroojlaplap Bok-Ion Zackious and Wotje Mayor Joe Hanchor.

hesion and shared purpose among members of CMAC.

Among the many noteworthy atollappropriate features of the Reimaanlok process, in Step 3 a Local Resource Committee is established by the local government, which then oversees the development of the resource management plan in that atoll or island. Step 4 is also noteworthy in that it entails gathering rich datasets along socioeconomic, ecological, and physical parameters. The information collected feeds into the ConservationGIS database that has been developed and is constantly updated by CMAC.

Some communities using this approach are finding early success as they proceed in the step-by-step process of articulating threats and their needs and priorities, codifying these into a management plan with various short, me-

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The Reimaanlok steps

Initiation

A need to develop a communitybased resource management plan is identified either at the local government level or at the national level.

Project Scoping and Setup
Establishment of a project workplan, a team of facilitators, and identification of budget and resources.

3 Building Commitment
An initial visit is made by the national team to carry out education awareness about the benefits of conservation and resource management, and to build trust with the community.

Collecting and Managing Information

Further visits focus on collection and documentation of local knowledge and use of resources, socio-economic information, and baseline scientific information.

5 Developing the Management Plan

Several visits are made to the community to develop, draft, and revise a detailed management plan.

Sign-Off

• Achieve commitment to the plan through sign-off of management plan.

Monitoring, Evaluation, and Adaptive Management

Monitor achievement of the objectives — both biological and socio-economic. Adapt the management plan accordingly.

Maintaining Commitment
Ensure community has adequate support for ongoing management.



Where are they now?

- Step 1 Kwajalein (Jabro Island), Erikub
- Step 2 Lib, Jaluit, Jemo
- Step 3 Majuro (Buruon, Bokelatulik)
- Step 5 Aur*, Likiep*
- Step 6 Ailinglaplap, Jabot, Mejit*, Majuro (Ajeltake)*
- **Step 7** Ailuk, Arno, Bikar, Bokak, Ebon*, Lae, Maloelap, Mili, Namo, Ujae, Utrok, Wotho*, Wotje, Bikirin, Drenmeo, Bokan Botin, Ene Kalamur, Woja (all Majuro)

Step 8 Namdrik

Atolls that are "pending" for launch of Reimaanlok steps:

Rongerik, Rongelap, Ailinginae, Bikini, Enewetak, Ujelang, Taka, Kili

* Ridge-to-Reef site

8-step process

dium, and long-term measures including in enhancing their ecosystem and socio-economic resilience to climate impacts. Moreover, these communities remain engaged in the process of implementing and monitoring these measures as a unifying activity for their community.

At the national level, the Reimaanlok Framework is finding success as it becomes increasingly embedded within national government legislation, governance, and financing systems. The most important of these is its inclusion within the Marshall Islands Protected Area Network (PAN) legislation.

In addition to smaller grants from funding partners such as Seacology, GEF Small Grants Program, and the Micronesia Conservation Trust, there are a few large multi-million dollar initiatives that advance the Reimaanlok Framework including: World Bank/GEF-6 Pacific Regional Oceanscape Project (PROP) and its phase two, PROP Economic Resilience (PROPER), United Nations GEF-5 Ridge-to-Reef Project, German BMUB International Climate Initiative Project, and the US Department of Interior Coral Reef Initiative.



PAN program goes forward

PROTECTED AREA NETWORK



A fisherman at Wotho Atoll waits for the right moment to toss his throw net into the shallows.

The establishment of the Protected Areas Network (PAN) Office at MIMRA was a milestone development. It was established following Nitijela adoption of legislation to establish the PAN program in the Marshall Islands. The development of the PAN Strategic Plan and its endorsement by the MIMRA Board of Directors in late 2020 gave momentum to begin to fully implement the PAN program, which aims to expand conservation efforts throughout the Marshall Islands.

PAN Strategic Plan 2020-2025

With the establishment of the PAN office, a strategic plan to guide the implementation of the PAN was formulated with assistance from The Nature Conservancy and in consultation with various stakeholders, particularly the Coastal Management Advisory Council. After several workshops throughout 2019, the PAN strategic plan was finally endorsed by the MIMRA Board in October 2020. The major goal of this Strategic Plan is to guide the operations of the PAN Office in its quest to meet its statutory mandate through delivery

of effective and efficient support to PAN sites in tandem with the PAN Act 2015, PAN Amendment Act 2018, and the PAN Regulations 2020.

The Strategic Plan outlines the big picture objectives:

- Vision: Sustainable and resilient Marshall Islands where natural and cultural resources are effectively and equitably managed and conserved for future generations
- Mission: To secure and enable mobilization of resources in support of the establishment and management of a network of protected areas in the RMI
- Goal: To ensure the PAN Office effectively and efficiently serves the RMI Protected Areas Network.

PAN Regulations

In October 2020, PAN Regulations were promulgated to create an avenue for the PAN Office to receive and disburse funding to support protected areas established by communities in the Marshall Islands. Under the PAN, there are certain criteria for eligibility in order for sites to be able to receive funding support and technical assistance through the PAN Office. The Regulations also provide the legal framework for the process of nominating areas for protection under the Act.

The Reimaanlok (Looking to the Future) Program is the primary mechanism to attain PAN support and the focal ar-





The Reimaanlok Process' Local Resource Committee on Woja, Ailinglaplap Atoll.

PAN Fund shows RMI loyalty

PROTECTED AREA NETWORK

eas to be assessed for funding or technical support from the PAN Office are:

- **Protected areas:** The creation, monitoring, management, or enforcement of marine and terrestrial protected areas
- Associated sustainable livelihoods: The development of new and alternative livelihoods for communities living in the proximity of protected ar-
- Capacity building: The training of resource management personnel, conservation officers, fishermen, aqua culturists, or others.
- Education and awareness: Educational and awareness-raising programs for community members or students for issues related to resource management or conservation.

Funding of up to \$20,000 will be made available each year to five individual projects that spread out over a one-to-two year period.

More information is available on the PAN webpage under the MIMRA website

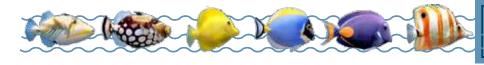
PAN Fund

The establishment of the PAN Fund reflects a significant commitment by the Marshall Islands Government to support efforts under the Reimaanlok Program and the Micronesia Challenge. Under the PAN legislation, the PAN Fund consists of revenues from the Marshall Islands Micronesia Challenge Endowment Fund, any appropriation from Nitijela and contributions from the Marshall Islands Government, and any other sources of funding.

The first drawdown of funds, \$230,776, from the MC Endowment Fund occurred in February 2021. The funds are now in the PAN Fund account under MIMRA. The funding provides a source of supplemental funding to local governments and communities for pro-

jects that support the sustainable use and management of natural resources.

Aside from the PAN Regulations 2020, the work of the PAN Office is guided by its Strategic Plan 2020-2025, and a finance policy, both of which have been endorsed by the MIMRA Board. The PAN is also supported by the Coastal Management Advisory Council (CMAC), which originally functioned as ad-hoc working group with a focus on community-based fisheries management and later became formalized under PAN. CMAC serves as the advisory and technical arm for the PAN, and provides a cross-sectoral platform for collaboration and technical advice because it consists of seven core members from a broad range of entities: RMIEPA, MIMRA, Marshall Islands Conservation Society, Ministry of Natural Resources and Commerce, Climate Change Directorate, Ministry of Culture and Internal Affairs, and National Disaster Management Organization.



COASTAL

Giant clam growing ready for a big rebound

The Aquaculture program supported three giant clam hatcheries around the Marshall Islands in 2021. Each of the three hatcheries support local giant clam farmers in the atolls of Majuro, Likiep and Arno. Aquaculture staff worked with local farmers to train and equip them for successful giant clam grow-out operations. The program also focused significant effort on upgrading and renovating the different hatcheries to keep them in operation so they can continue supplying local farmers with clam seedlings. In relation to Arno Atoll, a new giant clam distribution scheme was put into place.

Arno Hatchery

Revenue generation for giant clam farmers on Arno Atoll decreased in 2021 due to reduced numbers of shipments to Majuro of clams to sell from Arno farmers. Further review showed that this was the result of farmers not receiving clam seedlings. The Arno giant clam hatchery had been producing clam seedlings regularly twice a year — so evidently lack of seedlings was not the issue. Misunderstanding of roles and responsibilities between MIMRA and farmers was identified as the challenge affecting giant clam production.

To respond to this need, MIM-RA's Aquaculture team conducted a three-day consultation with different communities throughout Arno Atoll. The team introduced the revised Distribution Scheme, which describes the whole distribution process and responsibilities for both MIMRA and farmers on the atoll. The misunderstanding was settled and distribution schedule was established and agreed upon by both the team and the farmers. This is expected to improve the outlook for 2022 and beyond for the production of giant clams on Arno.

AQUACULTURE



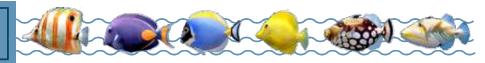
MIMRA staff consult with Arno hatchery farmers.

Woja, Majuro Hatchery

After three years of planning, raceway construction and running trial artificial spawning at the Woja hatchery in Majuro, the giant clam farming project was

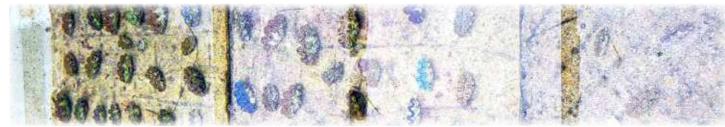
finally implemented in Majuro Atoll in August 2021. Eighteen farmers were recruited from the Woja and Ajeltake communities and went through a three-week training. The training involved classroom and practical hands-on sessions where farmers were taught different techniques and responsibilities for constructing and

COASTAL **W**









Trials of key species planned

maintaining low-tech nursery cages. At the end of the training, each farmer was supplied with a nursery cage, snorkeling gear and 800-900 juvenile clams for grow-out. Monitoring and clam maintenance in the cages continued as part of the training. At the end of 2021, Woja hatchery staff was gearing for another round of clam distribution and training with a new group of farmers from these two communities in order to expand the program within these communities.

The Aquaculture program aims to expand and diversify marine species to support local communities with food security and alternative income generating opportunities. Initially, this can be achieved through development of potential key species that show the most promising opportunities for economic growth and benefits to the local communities. Trials and assessments will need to be conducted to test the practicality of various species.

AQUACULTURE

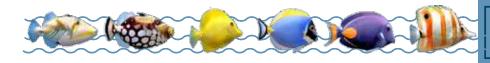
'Revenue for farmers at Likiep Atoll also decreased in 2021 with only a few clam shipments coming to Majuro.'

The building structure that was once used to cultivate black pearl oysters at the Woja hatchery was identified for use to conduct research and trials on other marine invertebrate and seaweed species. Inspection of the building struc-

ture was carried by Project Management Unit of Ministry of Works, Infrastructure and Utilities in late 2021. Work was started to renovate and convert the facility as an additional research facility for MIMRA. The goal is to have it in operation in 2022.

Likiep Hatchery

Like the situation with Arno giant clam farmers, revenue for farmers at Likiep Atoll also decreased in 2021 with only a few clam shipments from Likiep farmers coming in to Majuro for further export. Throughout the year, construction work was ongoing at Likiep dock which had the side effect of causing sediment disturbance around the coastal area. As a result, most of the grow-out







AQUACULTURE

Likiep sees more people farming

cages with clams that were placed in the lagoon near the shore ended up buried in sand, resulting in a high mortality rate. This was the primary reason for the decline in clam sales from Likiep in 2021.

The hatchery was on a roll with no difficulties in its production and distribution of clam seedlings. The Aquaculture program, however, is seeing a substantial increase in the number of local clam farmers. During 2021, this demand showed that the 10 existing raceway tanks at the Likiep Loto hatchery may not be adequate to accommodate the high number of farmers in the three communities on the islands of Likiep, Jepal and Melan. A total of 183 farmers are registered with the Likiep Atoll Aquaculture Association.

MIMRA's Aquaculture team worked with the International Organization for Migration (IOM) to establish a partnership for implementing alternative livelihood options through a giant clam

project for both Likiep and Aur atolls. These atolls come under the Ridge to Reef (R2R) initiative, which like MIMRA's Reimanlok Program, aims to strengthen conservation and sustainable use of land and marine resources through national and community actions. This partnership with IOM will be beneficial to support increased production of clam seedlings to accommodate the high number of farmers in Likiep Atoll.

Plans are underway to construct additional raceway tanks for Likiep Farmers Associations, both men and women, that are to be funded under IOM R2R alternative livelihood project.

Aside from continuous production of clam seedlings, MIMRA has carried out a complete renovation of the hatchery's' facilities and lodging compound. Like the Arno Giant Clam facility, Loto facility includes three sleeping quarters, a kitchen and a laboratory.

Opposite page: MIMRA distributes snorkeling gear to farmers in Woja and Ajeltake. Nursery cages are deployed in Woja. A 'raceway' of clams. This page: Clam seedlings ready for distribution. A MIMRA staffer fabricates nursery cages.

COASTAL

Giant Clam Distribution Scheme

In collaboration with giant clam farmers in Arno Atoll, Aquaculture staff worked out a system to improve the distribution of clam seeds. This follows a series of steps and aims to ensure a smooth distribution process with the local communities.

The giant clam distribution scheme:

- 1. Prior to distributing clam seeds, MIMRA staff will contact local community leaders to set up a meeting with each village's farmer members to go through the distribution process.
- 2. MIMRA will notify farmers when it is time to construct their "cookie cement" and will make the materials available for all farmers. These are used as alternate substrates for clam seedlings to settle on.
- 3. Each village will have a window of one month to prepare their cookie cement. Should farmers fail to have their cookie cement ready and available, the next village on the waiting list will be given the opportunity to prepare cookie cement so that they can move ahead in the giant clam grow-out process.
- **4.** Farmers that have completed their set of nine cookie cements will then be provided with clam seeds.
- **5.** Each cage/farmer will be allotted a total of 2,000 clam seeds
- **6.** Any clams that are 2cm and above will not be distributed to farmers. This is why it is important that farmers have their cookie cement ready to collect their clams during distribution sessions.

Coral, clam exports rebound

Although Covid hurt the ability to export aquaculture products from the Marshall Islands, the global trade in ornamental marine species remained a huge opportunity for income generation for local communities, especially those in rural neighboring islands. The export of ornamental marine species continued to prove beneficial for income generation in the Marshall Islands.

The Marshall Islands experienced a rebound in both exports and re-exports of live corals and giant clams in 2021.

Although revenue for local farmers from clam sales decreased in 2021, the number of exports slightly increased compared to 2020 due to increasing air service to the Marshall Islands. Total exports from the Marshall Islands for both cultured giant clams and live corals increased in 2021 compared to the previous year when Covid-19 seriously affected the global trade world-wide.

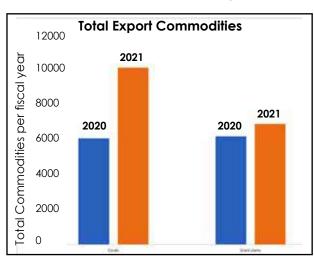
In 2021, total live coral exports rose to over 10,000, significantly above the level in 2020 at just above 6,000. Similarly, giant clam exports increase from 6,000 to 7,000. Re-exported corals also outdid the 2020 pace with over 16,000, about 1,000 more. The number of re-exported clams was down from 2020.

In addition to exporting giant clams grown in the Marshall Islands, giant clams and live corals from the Federated States of Micronesia and Kiribati are re-exported.

AQUACULTURE

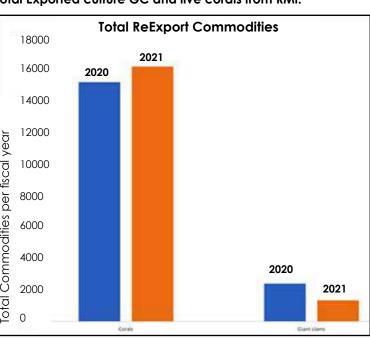
Aquaculture for Marine Ornamental Exports (Giant clam & Corals)

The trade of ornamental marine species continues to prove to beneficial for the local community's income generation in the Marshall Islands. Although local farmers revenue from clams' sales have decreased this year, the number of exports has slightly increase due to increasing numbers of flights in and out of RMI. As seen in the figures below, total exports out of RMI for both cultured Giant Clams and live Corals has increased compared to Year 2020 when COVID-19 affected the global trade worldwide.





Total Exported culture GC and live corals from RMI.



Total ReExported GC and live corals from FSM and Kiribati.

Above, Likiep visit.



Cleaning in Woja.





The Outer Islands Fish Market Center at the Uliga Dock area in Majuro

MIMRA boats collect fish and assist with Covid issues

he two MIMRA fish markets at Majuro and Ebeye as well as the neighboring islands network of fish bases were significantly impacted by Covid even though the Marshall Islands remained Covid-free in 2021. This was in part due to employees or their families being unable to return from the United States after the border was closed in March 2020. As a result, some employees stayed in the US or moved to the US to join their families who were stuck outside, causing turnover in the Coastal Division. As the Marshall Islands government stepped up its Covid preparedness programs in 2020 and 2021, this meant a focus on delivering food, supplies, equipment and other gear for people on remote islands. The Coastal Division's transport vessels,

'OIFMC was able to visit neighboring islands 35 times to collect fish for transport to Majuro for sale.'

normally used for picking up fish and local produce from the outer islands for sale in Majuro and Ebeye, joined the government's effort to help prepare islands for Covid. The Outer Islands Fish Market Center (OIFMC) in Majuro and

the Kwajalein Atoll Fish Market Center (KAFMC) in Ebeye and their vessels assisted with delivery of "Covid food baskets," fishing gear and agriculture equipment, and private food delivery charters, as well as assisting the overall Coastal Division with its Reimaanlok Program visits to the outer islands, as well as aquaculture trips and fish aggregating device (FAD) deployments.

Despite these priorities for Coastal Division vessels, OIFMC was able to visit neighboring islands 35 times to collect fish for transport to Majuro for sale. This was about the same as in 2020, with the Covid pandemic predominating, and higher than 2019 when an extended outbreak of dengue fever shut down travel to the outer islands for an extended period of time.



Markets see lower sales in '21

OIMFC

The Outer Island Fish Market Center (OIFMC) in Majuro saw the effects of Covid restrictions. It showed in decreased sales and increased use of MIMRA vessels for deliveries of food baskets and related supplies, and private charters to deliver food items to outer islands, as well as assisting the acceleration of other coastal fisheries programs such as aquaculture and FAD deployment.

Still, OIFMC vessels successfully picked up fish from the following outer islands during 2021: Arno (22 trips), Maloelap (4 trips), Aur (3 trips), Wotje (2 trips), and Jaluit, Mili, Likiep, and Namu (1 trip each). These trips provide fishers with income as the Coastal Division through the purchase of fish and fish products.

For the Arno fishers, a total of 15,036.8 pounds of fish were purchased at a value of \$16,018.43; 5,107 pounds of fish were purchased from Aur fishers at a value of \$4,354.50; Jaluit fishermen received \$596.25 for 725 pounds of fish; Maloelap fishers received \$4,126.30 for 4,765 pounds of fish; Mili fishers received \$1,500.25 for 1,078 pounds of fish: Namu fishers received \$1.835.00 for 1,835 pounds of fish; and Wotje fishers received \$4,522.62 for 3,358.5 pounds of fish.

The monetary benefits that the fishers from these seven atolls received directly totaled \$32,953.30 for the 31,905.3 pounds of fish purchased. The OIFMC enforced quality and size limits on the fish that are brought in from the outer islands. With fuel costs remaining high, OIFMC several years ago initiated grouping atolls in one trip to maximize the amount of fish landed on Majuro per trip. In addition, for fishers from Arno with access to boats, OIFMC directly purchases their catches on Majuro.



FISH MARKET

The bright green Kwajalein Atoll Fish Market Center.

KAFMC

Although the Kwajalein Atoll Fish Market Center (KAFMC) now has a vessel to use for trips to its fishbase partners and projects on the neighboring islands, limited availability and high cost of fuel on Ebeye has limited the number of trips KAFMC made during 2021.

Ebeye's fuel price is generally 40 percent higher than in Majuro, and due to inconsistent deliveries of fuel from Majuro to Ebeye, is often unavailable. In addition, repairs and regular maintenance is needed, the F/V Laintok must to be brought to Majuro, taking it out of service.

Despite this situation, KAFMC continued in 2021 to supply limited amounts of fish to the Ebeye community through direct purchase of fish and local produce from Namu, Ailinglaplap, Ailuk, Likiep and Ebeye fishers as well as providing assistance with fuel and

ice provisions. Due to mechanical issues with the boat, limited trips were carried out as F/V Laintok waited for parts to arrive from off-island and focused only on trips to the western part of Kwajalein Atoll. F/V Jebro and F/V Timur from Majuro helped to supply the KAFMC. For 2021 fiscal year, KAFMC was able to directly inject to the communities \$17,754.91 for 9,841.18 pounds of fish and \$3,979 for produce totaling \$21,733.91.

The facility has continued operations in a limited capacity through selling fish and local produce purchased from Ailuk, Ailinglaplap, Namu, Likiep and the Ebeye community as well as ice and other commodities.

It continues to look for avenues to secure fuel purchases to allow for a greater number of trips to the outer islands to purchase fish and local produce from the communities of Likiep, Ailinglaplap, Namu and Ailuk that have fish bases.









OFCF partnership a big bonus

The nearly 30-year relationship between the Coastal Division and Japan's Overseas Fishery Cooperation Foundation (OFCF) has been of great mutual benefit since it began in 1992. At that time the OFCF launched a Pacific Island Nationals fisheries development program for MIMRA and other Pacific fisheries departments. Each year, MIMRA and OFCF representatives hold a consultation to review the previous year and plan for the upcoming year.

OFCF provides fisheries support consisting of assistance ranging from repairs and restoration of fisheries-related vessels and facilities as well as skills training and technology transfer with Coastal Division staff. Each year, during the annual OFCF Japan/Pacific Island Nations Fisheries Directors Meeting on Fisheries Cooperation, OFCF receives requests from each country for FDAPIN projects. After conducting field surveys and consultation with each government, the scope of the projects are developed and are followed by a drafting and signing of a memorandum of understanding and an implementation plan. Essential requests that MIMRA made and which were im-

FISH MARKETS

plemented by OFCF in 2021 included the following:

- Maintenance and repair of MIMRA transport vessels MIMRA and KAFMC.
- Maintenance and repair of MIMRA ice plants, including Majuro, Ebeye and the neighboring islands.
- Maintenance and repair of outboard motors in community fishing boats.
- Maintenance of Arno Giant Clam Hatchery.

The annual maintenance and repair program for 2021 included maintaining and fixing numerous MIMRA marine as-

Transport vessels: Yearly dry-dock and maintenance service and repairs of all MIMRA fish transport vessels (Jolok, Timur, Jebro, Lentanir, and Laintok) was achieved.

Community Boats: Seven community fishing boats and their engines on the outer Islands were repaired.

Fish base renovations: Maintenance and repairs on the fishbases at Jaluit, Wotje and Arno and the Ine subfishbase were conducted. These outer island fish bases received maintenance on their ice machines, outboard engines, and facilities. At Jaluit, the old cold storage unit was removed.

OIFMC and KAFMC: Maintenance and inspection of ice machines and other equipment.

MIMRA vehicle maintenance:

Maintenance service and repairs for six vehicles, and clearance/inspections of 37 donated community and vehicles from the World Bank and Japan, was performed. In addition, Coastal staff supervised engine break-in and boat sea trials, and distribution of boats to selected neighboring island sites.

Hatchery maintenance: Maintenance and repairs on the Loto Giant Clam Hatchery at Likiep, raceway tank construction on Jebal Island; maintenance and repairs on Woja Hatchery, Majuro; and maintenance on Arno Giant Clam Hatchery was performed during the

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Residents of Namdrik help in the production of FADs.

Candice Guavis, Laboratory Manager

'The best part of working at MIMRA is that you become a "Jill of all Trades". From working alongside communities on developing their fisheries management plans; conducting dive and household surveys; constructing and deploying FADs followed by training on fishing techniques; collecting marine samples for radiation analysis to designing MIMRA's future state of the art National Laboratory, best implies some of my personal experience over the years. Enduring first hand community work definitely teaches you humility and molds your future, for you are able to work alongside national, regional and international bodies. It may seem like it is all work and play but in the end, the reward is gratifying. '

FISH AGGREGATING DEVICES

FAD program expands with



A Google map of FADs ground the Marshall Islands.

IMRA's fish aggregating device (FAD) installation program has ramped up from an occasional activity to a national program of the Coastal Division since the late 2010s. In 2021, five FADs were installed near five neighboring island atolls. This added onto the eight FADs that were installed over the previous three years. Coastal staff design and build the FADs, then install them in deepwater locations in proximity to inhabited islands with the goal of improving food security opportunities for local residents.

The FAD national program is supported by the World Bank, under its Pacific Regional Oceanscape Program (PROP) in phase one. Now it is known as PROPER with "Economic Resilience" added to the title. In addition to the World Bank's support, the United







A new FAD being put together on Kili Island. Right, the Namdrik FAD is deployed by a happy team.

FISH AGGREGATING DEVICES

five new installations in 2021

Nations Food and Agriculture Organization is a partner with MIMRA's FAD national program.

In 2021, FADs were constructed and then deployed near Ailuk, Kili, Namdrik, Ujate, Namo, Majuro. This follows on the five installed off Likiep, Mili, Aur, Maloelap and Jaluit atolls in 2020.

These anchored fish aggregating devices (aFADs) were all deployed to promote sustainable fishing and food security in the neighboring islands. These aFADs were first introduced in the Marshall Islands in 1986, and more than 35 aFADs were deployed by MIMRA in Marshall Islands fishery waters since then.

The aFADs are placed at depths ranging from 1,200 to 1,500 meters (3,937-4,921 feet). MIMRA's FAD Team will continue deploying aFADs.





SCAN ME!

Residents of Aur Atoll put together a FAD near the beach. Above, scan the QR code above to see the Google map of FADs across the Marshall Islands.

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VDS revenue falls, as does

inancial accountability is an essential aspect of the work that MIMRA performs to ensure that operations are implemented effectively, efficiently and according to the law. This is essential for the Authority to carry out its mandate for managing coastal and oceanic fisheries activities for the Marshall Islands. In this regard, MIMRA has had no unresolved or outstanding audit findings in recent years, demonstrating its commitment to accountability. It maintains its financial recordkeeping in auditable condition at all times.

For Fiscal Year 2021, the annual MIMRA audit was not completed by the time of publication of this report due to circumstances unrelated to MIMRA and its readiness for audit.

Due in large part to the Marshall Islands being part of the PNA, MIM-RA's operating revenue has remained above \$31 million since FY2015 and 2021 was no different. The ongoing Covid pandemic impacted revenues in 2021 as it did in 2020. Still, MIM-RA's overall operating revenues in 2021 of \$33,417,453 lower than that of 2020, when it was \$35,199,282. Non-operating revenues added another \$2,157,094, giving MIMRA total revenues for 2021 of \$35,574,547 compared to \$38,005,434 the previous year. Higher non-operating revenues of \$649,058 and greater Vessel Day Scheme revenue led to the higher total revenue figure in 2020.

'Transshipment fees averaged \$536,500 a year from 2017-2019 because Majuro was the world's busiest tuna transshipment port.

But these fees plummeted in the wake of the Covid-19 pandemic.'

After eight years of increase in revenue from the Vessel Day Scheme (VDS), 2021 saw a seven percent decline compared to 2020. In 2020, the VDS generated \$28,112,074. This figure fell to \$26,027,040 for various reasons, mostly relating to a decline in "pooled" fishing day revenue. The "pool" day system allows members of the Parties to the Nauru Agreement (PNA) to pool fishing days that are usually sold at a higher fee because they provided fishing vessels that purchase pooled days access to all of the fishing zones of the countries participating in the pool day system. The Forum Fisheries Agency pool days generated no revenue in 2021, compared to \$1,670,974 in 2020, while PNA pool days also saw a decline in 2021, from \$4,485,600 to \$3,687,040. This resulted in the lower VDS revenue amount.

Most of the other operating revenue areas remained stable or increased in 2021 (2020 figures in parenthesis):

- Licensing and registration of fishing vessels, \$2,164,040 (\$2,300,800)
- Fishing rights, \$3,629,878 (\$3,579,787)
- **Observer fees**, \$610,450 (660,594)
- Transhipment fees, \$347,000 (\$319,000)
- Fishing violation fees, \$600,000 (\$100,000)
- Others, \$39,113 (\$127,584).

Following the trend of the past several years, "bad debts" were reduced to almost nothing — \$27.

The fluctuation in fishing licensing and registration revenue reflects changes from year-to-year in the number of vessels licensed to fish in Marshall Islands waters. In 2021, there were 240 purse seine, pole-and-line and longline vessels licensed to fish. In 2017, 255 vessels were licensed. In 2019, 223 were licensed. Revenue reflects these trends, which further reflect locations in the region of tuna schools.

Fishing rights revenue rose to an alltime high of over \$3.6 million, continuing a two-year trend of increases. The



government contribution

previous record was set in 2018 with over \$3.3 million in revenue. Fishing rights revenue increased due to a 29 percent rise in the revenues from purse seine vessels fishing under the FSM Arrangement and a seven percent increase in revenue from the US Treaty. These increases offset a 63 percent drop in fishing rights revenue from the Japan-Marshall Islands bilateral fishing agreement.

Transshipment fees averaged \$536,500 a year from 2017-2019 because Majuro was the world's busiest tuna transshipment port. But these fees plummeted in the wake of the Covid pandemic, which saw a 60 percent decline in the number of purse seine transshipments in 2020 compared to the previous year. In 2020, \$319,000 in fees were collected from transshipment. The revenue improved slightly to \$347,000 in 2021 as Covid port entry restrictions eased, allowing transshipments to increase.

Two fishing companies were charged for violating fishing rules in Marshall Islands waters in FY2020. After the operators and master fishermen were cited, both companies agreed to pay fines. This resulted in \$600,000 being paid to MIMRA. The timing of the payments meant the revenue is reflected in FY2021. It represents the ongoing nature of monitoring of fishing and enforcement of fishing rules in the EEZ.

Due to the reduced VDS revenue, as noted earlier, the funding contributed to

MIMRA Contributions to RMI FY2013-FY2021

Fiscal Year Contribution

2013	\$6,348,374
2014	\$11,549,000
2015	\$15,773,000
2016	\$26,285,938
2017	\$40,129,700
2018	\$29,440,214
2019	\$29,141,128
2020	\$31,300,000

2021

Source:
MIMRA Financial
Statements and
Independent Auditors'
Report, FY2014-FY2020.
*2021 figure was not yet
audited as of the date of
publication of this report.

\$26,000,000*

the Marshall Islands government national budget was \$26 million, 17 percent below the 2020 amount of \$31.3 million. Nevertheless, the MIMRA contribution accounted for about 10 percent of the FY2021 national budget income

Total assets increased by nearly \$4 million in 2021, giving MIMRA a to-

tal net position at the end of FY2021 of \$40.3 million, an increase of 10 percent on the previous year. At the end of FY2021, MIMRA's combined funds (savings and current account) amounted to \$20,853,175, which was higher by 59 percent compared to \$13,095,807 at the end of FY2020. The increase can be attributed to the collections from PNA for the FSM Arrangement fishing days payment for days used in 2018/2019 and VDS pooling during 2020.

MIMRA's operating expenses increased by four percent over 2020, going from \$5,707,367 to \$5,957,541. The biggest change in expenses was in professional fees. In 2020, MIMRA spent \$497,615 on this budget category. In 2021 the amount increased to \$1,078,466.

Challenges for MIMRA included the fact that throughout 2021, the Marshall Islands continued to have the highest fuel prices in the Micronesia region. They averaged well above \$6 per gallon. Many commodities saw an increase in prices during the year, particularly with Covid disruptions of supply chains globally. Climate change and its impact on location of tuna schools does impact MIMRA's revenue generation. In addition, while the annual three-month FAD closure is an important conservation measure, it does affect MIMRA revenue collections, especially transshipment revenue. Historically, the FAD closure means fewer purse seiners transshipping in Majuro.



MIMRA: Management's Financial Condition and Operations for fiscal years 2021, 2020 and 2019

(%) Change

2019

This table summarizes the financial condition and operations of MIMRA for fiscal years 2021, 2020 and 2019.

<u>2020</u>

2021*

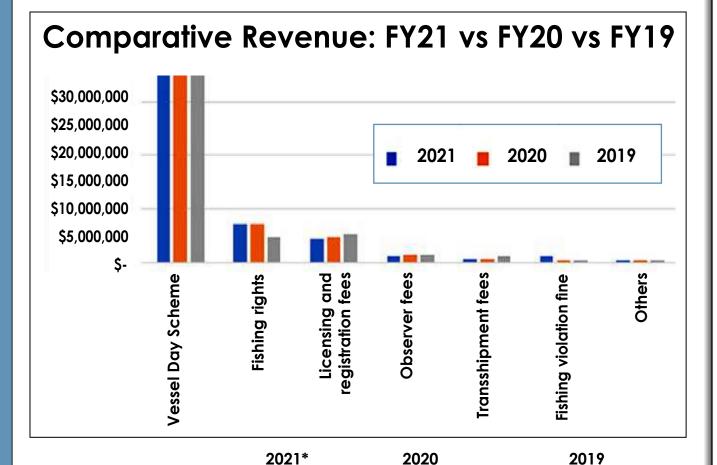
Statements of Net Position

ASSETS:

Current and other assets	\$ 31,221,251	\$ 27,776,659	12%	\$ 27,103,182
Capital assets	6,517,456	5,413,423	20%	4,201,373
Investment in JV	3,474,136	4,696,089	(26%)	5,222,356
Total Assets	\$ 41,212,843	\$ 37,886,171	9%	\$ 36,526,911
LIABILITIES:				
Current Liabilities	\$ 917,277	\$ 1,207,613	(24%)	\$ 846,420
NET POSITION:				
Investment in capital asse	, ,	\$ 5,413,423	20%	\$ 4,201,373
Restricted	219,607	991,623	(78%)	430,995
Unrestricted	33,558,503	30,273,512	11%	31,048,123
Total Net Position	40,295,565	36,678,558	10%	35,680,491
	\$ 41,212,843	\$ 37,886,171	9%	\$ 36,526,911
Statements of Revenue, Ex	xpenses and Cha	nges in Net Position	<u>n</u>	
DEVENIUEC.	<u>2021*</u>	<u>2020</u>	(%) Change	<u>2019</u>
<u>REVENUES:</u> Operating Revenues	\$ 33,417,453	\$ 35,199,282	(5%)	\$ 34,597,266
Capital Revenues	-	ψ <i>55</i> ,1 <i>77</i> ,202	-	ψ 5 1,5 71,200
Non-Operating Revenue	s 2,157,094	2,806,152	(23%)	1,286,445
Total Revenues	35,574,547	38,005,434	(6%)	35,883,711
EXPENSES:				
Operating Expenses	5,957,541	5,707,367	4%	4,882,750
Non-operating expenses	26,000,000	31,300,000	(17%)	29,141,128
Total Expenses	31,957,541	37,007,367	(14%)	34,023,878
Changes in net position	3,617,007	998,067	262%	1,859,833
Net position at start of year	ar 36,678,558	35,680,491	3%	33,820,658
Net position at end of year	\$ 40,295,565	\$ 36,678,558	10%	\$ 35,680,491
*Unaudited				

FINANCE

MIMRA: Management's Discussion and Analysis for fiscal years 2021, 2020 and 2019



Vessel Day Scheme	\$26,027,040	\$28,112,074	\$28,143,896
Fishing rights	3,629,878	3,579,787	2,314,357
Licensing/registration	2,164,000	2,300,800	2,573,000
Observers fees	610,450	660,594	766,760
Transshipment fees	347,000	319,000	538,000
Fishing violation	600,000	100,000	200,000
Boat charter fees	-	-	-
Other	39,113	127,584	73,253
Total operating			
revenues	33,417,481	35,199,839	34,609,266
Bad debts	(27)	(557)	(12,000)
Total net operating			
revenues	\$ 33,417,453	\$ 35,199,282	\$ 34,597,266
* Unaudited.			

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Observant group of people







Top: Following completion of a series of trainings run by the College of the Marshall Islands in partnership with MIMRA on sea safety and related fisheries observer work in mid-2021, the graduating observers were joined by CMI officials, seated, from left, President Dr. Irene Taafaki, Director of Maritime Vocational Training Center Edward Adiniwin, and Vice President for Academic and Student Affairs Dr. Elizabeth Switaj, and MIMRA Legal Counsel Laurence Edwards, II, standing center. Above: Fisheries observers Alington Abija, left, and Stephen Domenden on longline vessels. Left: Simon Lucky, Ricky Lalimo and Fred McKay try out new observer safety equipment.

