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FISHERIES MANAGEMENT

WCPFC19 adopts a harvest strategy for WCPO skipjack tuna[2]

After two years of virtual meetings, the Western and Central Pacific Fisheries Commission (WCPFC) finally resumed in-person meetings with the Nineteenth Regular Session (WCPFC19) being held in Da Nang, Vietnam from 28 November – 3 December 2022.

As covered in the September-October 2022 edition of *FFA Trade and Industry News*, the most highly anticipated WCPFC19 agenda item by Commission Members and Cooperating Non-Members (CCMs), industry and NGOs alike was the adoption of a conservation and management measure (CMM) on an ***interim management procedure (harvest strategy) for skipjack tuna*** in the Western and Central Pacific Ocean (WCPO). FFA members' proposal was used as the basis for negotiation; following five small working group sessions, CCMs reached consensus in plenary on the adoption of the management procedure on the final day of WCPFC19. This measure will be effective from 2023-2030 and endeavours to ensure that the spawning potential depletion ratio of skipjack tuna is maintained on average at a level consistent with the target reference point (50% of unfished spawning biomass) and above the limit reference point (20% of unfished spawning biomass), with no greater than 20 per cent risk of the limit reference point being breached, in a manner that achieves relative stability in fishing levels between three-year management periods and in the longer term. There was some concern amongst several CCMs and NGOs that the management procedure is non-binding, given the conservation measure for tropical tunas (CMM 2021-01) still takes precedence for skipjack management. However, the management procedure is considered a positive step forward for the Commission and will pave the way for further progress as the capacity of members regarding harvest strategies continues to grow.

FFA's proposed textural change to the ***CMM on Establishing a Harvest Strategy for Key Fisheries and Stocks in the WCPO*** (CMM 2014-06) was also adopted. An additional paragraph has been included in the measure which commits the Commission to adopting harvest control rules (HCRs) for the four key WCPO tuna stocks before stocks decline below levels capable of production Maximum Sustainable Yield (MSY). The textural change to CMM 2014-06, coupled with the adoption of the interim skipjack management procedure, has yielded a positive outcome for 33 MSC-certified WCPO tuna fisheries. The Commission now meets MSC's requirement that 'an agreement or framework is in place that requires the management body to adopt HCRs before the stock declines below B_{MSY}'. The skipjack management procedure demonstrates there is an available harvest strategy for at least one of the key tuna stocks; this means that WCPO tuna stocks would be scored at a minimum of SG60 in an MSC assessment, which is a conditional pass. Overall, WCPO tuna stocks should continue to be capable of obtaining at least a conditional pass for MSC performance indicators relating to harvest strategies and harvest control rules.

There were several other notable developments regarding harvest strategies. Firstly, a harvest strategy was adopted for ***North Pacific albacore*** which is compatible with the harvest strategy adopted by IATTC in August 2022. With both RFMOs having a harvest strategy in place, this will strengthen management of the North Pacific albacore stock throughout its entire Pacific Ocean range. While scheduled for adoption in 2022, a candidate management procedure for ***South Pacific Albacore*** has been delayed to 2024 due to the need for further technical work; adoption of a target reference point is now scheduled for 2023. WCPFC19 adopted updates to the South Pacific Albacore Roadmap Intersessional Working Group's terms of reference and workplan. Target reference points for ***yellowfin*** and ***bigeye*** were not

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WCPFC19 adoption of a skipjack harvest strategy and amendments to the harvest strategy CMM ensure WCPO tuna fisheries meet MSC requirements

adopted at WCPFC19 as scheduled and have now been slated for 2024, following FFA members' request for additional time given the complexities involved in developing a multi-species management procedure. Consequently, the adoption of a management procedure for yellowfin and bigeye has been pushed out another two years to 2026. Updates were made to the Commission's ***Indicative Workplan for the Adoption of Harvest Strategies Under CMM 2014-06*** to accommodate these milestone changes. There were mixed views from Commission members on the utility of the first ***Science-Management Dialogue*** (SMD01) held in August 2022, which was intended to provide a dedicated forum for fisheries management and scientists to expedite harvest strategy development. Given the Commission's primary focus in 2023 will be on the negotiation of a new tropical tunas measure, members agreed to not schedule a second Science-Management Dialogue (SMD02) in 2023; a decision will be taken on holding SMD02 in 2024 depending on progress in the Commission's harvest strategy work.

After lengthy and multiple deliberations by a small working group, a US proposal was adopted which updates the ***Sharks CMM*** (CMM 2019-04). The revised measure extends the requirement for fins to be naturally attached to the carcass of landed sharks to 31 December 2025. It introduces new requirements effective 1 January 2024, that longline vessels targeting tuna and billfish between 20°N-20°S do not use wire trace as branch lines or leaders and do not use shark lines or branch lines running directly off longline floats or drop lines; unretained shark bycatch must be released as soon as possible.

Other notable WCPFC19 outcomes included a decision to include ***climate change*** as a standing agenda item of the Commission and subsidiary bodies. On ***biodegradable FADs***, the Commission agreed to support IATTC's definition of 'biodegradable' and five distinct categories of bioFADs. The FAD Management Options Intersessional Working Group will further examine the bioFAD categories, explore a timeline for stepwise introduction of bioFADs and identify potential gaps/data needs. The ***COVID-19 temporary suspension of observers*** will be lifted, with observer placements on purse seiners resuming from 1 January 2023. Under the ***Compliance Monitoring Scheme*** (CMS), 94 audit points were adopted, with an agreement to prioritize work on the remaining 46 audit points in 2023; the Commission endorsed a Risk-Based Assessment Framework (RBAF) as a useful tool to guide CCMs consideration of future lists of obligations to review during the Compliance Monitoring Report Review.

In 2023, the Commission's main focus will be the renegotiation of the ***tropical tunas measure*** (CMM 2021-01); WCPFC19 agreed on a process for doing so which will be led by the Chair of the Commission, with support from the Vice Chair. The existing CMM text will be used as a basis for negotiations, with the Chair circulating a document at the end of February which highlights elements of the measure requiring revision (i.e. scientific information, limits, allocation etc.). By the end of April, the Chair will circulate a compilation of feedback received from CCMs, providing a side-by-side comparison of different views on relevant limits and allocation frameworks. At least two inter-sessional workshops will be held - the first, a virtual workshop in June focusing on hard limits for high seas purse seine effort and longline bigeye catch for all members and allocation; the second being either an in-person or virtual workshop in early October covering all remaining issues. FFA members expressed their expectation of a focused negotiation process that prioritizes the establishment of a hard high seas purse seine effort limit and allocation.

During WCPFC19, announcements were made regarding two key Commission appointments, amongst others. Mr. Feleti Teo from Tuvalu is concluding his second term as the Commission's Executive Director and will be succeeded by Ms. Rhea Moss-

Climate change will be a standing agenda item of the Commission and subsidiary bodies

WCPFC's priority in 2023 will be establishing hard purse seine and longline fishing limits and allocation under a revised tropical tunas measure

Christian from RMI. Ms. Riley Kim's (Korea) term as Chair of the Commission has also drawn to a close, with Ms. Josie Tamate (Niue) stepping into this role, supported by Vice Chair, Mr. Takumi Fukuda (Japan). Cook Islands will host the Twentieth Regular Session of the Commission from 4-8 December 2023 in Rarotonga.

Pacific seeks Green Climate Fund to support food security and fisheries management[3]

Fourteen Pacific Island nations are working together to access a USD 70 million grant from the Green Climate Fund (GCF) for fisheries adaptation.[4] The grant will examine the implications of climate change for access to fish stocks and population migration. The project proposal was made to the GCF on behalf of the Pacific Islands by Conservation International (CI), which is the Accredited Entity and Executing Entity.[5] The aim is 'to create a paradigm-shifting' regional GCF programme to:

1. increase the supply of tuna for domestic consumption as an adaption to climate-driven degradation of coral reefs/declining supply of coral reef fish, thereby reducing the food insecurity of vulnerable populations; and
2. develop the reforms needed to minimise the risks to citizens of Pacific Island countries with tuna-dependent economies that are highly vulnerable to climate-driven redistribution of tuna'.[6]

Once approved, it is estimated that the project will run for a period of seven years, with an estimated lifespan of 25 years.

All dimensions of this adaptation programme are vital to the Pacific. Socially and culturally, fish plays an important part in the lives and livelihoods of Pacific Islanders, and nutritionally, fish contribute between 20 and 50% of animal protein to the region.[7] A majority of these fish resources come from local coral reef systems. Climate change is causing coral bleaching events to occur more regularly, and in combination with ocean acidification, is reducing the structural complexity of reef habitats, thereby threatening regional food security. Economically, revenues generated from granting access to tuna resources are substantial, with an average 37% of government revenue being raised from access fees.[8] Climate change is raising sea surface temperatures and causing the convergence zone of the western Pacific warm pool and the Pacific equatorial divergence to shift eastwards. It is estimated that by 2050, this redistribution could result in the reduction of the combined tuna catch from the EEZs in the equatorial region by as much as 20%.[9]

The GCF programme's aims are to address the food security shortfall arising out of declining reef health and the adaptation of fisheries management to avoid potential economic losses because of shifting fish stocks. To make up for the estimated annual shortfall of 75,000 tons of fish on food security, the programme seeks to promote the consumption of tuna in local diets as a substitute for coral reef fish. The intention is to empower coastal communities to fish for tuna, starting with assessing the pros and cons of the dietary shifts, the mechanisms for behavioural change to nudge dietary shifts, an assessment to scale-up national FAD programmes, and a review of fishing and management measures for small-scale fisheries.

As fish stocks move east, it is estimated that the participating members of the purse seine Vessel Day Scheme (VDS) will see a shift in the share of the resources from their EEZs; while some nations will see an increase in tuna in their waters, others might see the migration of tuna out of their waters. To address these challenges, adaptations will be needed in national and regional fisheries management mechanisms, such as joint management of redistributed stocks by the WCPFC and the IATTC.

Pacific seeks to future proof food security by shifting from reef fish to tuna consumption

At RFMO level, the programme focuses on the development of an Advance Warning System (AWS). The AWS will help tuna dependent economies 'predict nearer-term changes in the distribution of tuna across the tropical Pacific Ocean, providing robust forecasts' and 'allow other Pacific Island countries participating in the programme to identify adaptations to capitalise on projected increased abundances of tuna in their waters with greater confidence'.[10] This work is earmarked to be undertaken by SPC and FFA which includes a range of activities such as tuna tagging and tissue sample collections for conducting genetic population analyses and to generate tuna resource maps. Oceanic and tuna data will be collected in collaboration with industrial fishing companies. The AWS is aimed at providing Pacific Island countries with the models and the information to boost their negotiations at fisheries management and development forums to retain the right to manage the historical levels of tuna catch taken in their waters.

The proposal has been approved by the GCF and the next step is the signing of a Funded Activity Agreement between the Green Climate Fund and Conservation International, after which the disbursal of funds can begin.

Climate change throws up new challenges to fisheries management, including need for joint RFMO action and an advanced warning system

Global Fishing Watch explores AIS disabling and signs data sharing deal with Papua New Guinea

The non-profit Global Fishing Watch (GFW) has released a new study on the global occurrence of vessels disabling their automatic identification system (AIS) transponders.[11] While AIS technology can be a powerful tool for monitoring fishing activity, AIS transponders can be disabled, obscuring vessel activities. AIS disabling is not always illegal and as such, disabling may correlate with either legal or illegal activity. Furthermore, AIS is not the only mechanism for monitoring vessels. Vessels might be required to use government-mandated vessel monitoring systems (VMS) that would make them trackable, regardless of AIS use, though VMS data are not generally publicly available. However, attention to disabling events offers insights on which vessels disable AIS, where they do so, and potentially insights into why. Toward this end, the GFW study compiled a global dataset of AIS disabling in commercial fisheries, finding that disabling obscures the ability to use AIS to monitor 6% (or more than 4.9 million hours) of fishing activity.

A GFW study of AIS disabling offers insights into which vessels turn off their tracking devices, where, and potentially why

Zooming in on results, the analysis revealed that tuna purse seiners have their AIS disabled between ~10 and 20 per cent of the time that they are at sea. In terms of flag states, Spanish-flagged vessels stood out as having particularly high amounts of time with AIS disabled (up to 14%), followed by the US (up to 8%), Taiwan (up to 6%) and China (up to 5%). In terms of absolute hours, drifting longline gear and Chinese-flagged vessels had the most *total* time lost to suspected disabling across gear types and flag states, respectively. The study identified geographic 'hot spots' with high occurrences of AIS disabling in the Northwest Pacific, near Argentina, around West African nations and near Alaska, USA.

The authors also developed a model to evaluate why disabling occurs in certain areas and not others. That model suggests that, for longline and purse seine vessels, distance to shore was the most important driver in suspected disabling: peak disabling occurrences were located at or just outside the 200 NM from shore boundary and occurrences decreased further offshore. Across all flag states, China and Spain had higher percentages of suspected disabling events adjacent to EEZs relative to their fishing activity. Disabling at the EEZ boundary suggests that vessels might turn off AIS when they do not want boundary crossings to be visible. Squid jiggers had a pronounced pattern of disabling in areas with high transhipment activity, though this pattern was less important for tuna purse seiners, likely because of transhipment

regulations and observer requirements. For tuna purse seine vessels, there was a concentration of disabling events in areas of high pirate activity near West Africa and in the Arabian Sea. The models also suggested that disabling might also coincide with legal activity, such as to hide the location of productive fishing grounds from competitors.

Beyond the results of this study, interest in monitoring fishing for IUU activity and general monitoring, control and surveillance issues continues to expand in the Pacific, with Global Fishing Watch playing a growing role. Most recently, Papua New Guinea and Global Fishing Watch announced a partnership in which PNG will share vessel tracking data from its Fishing Industry Association on the GFW public map. The MOU on the agreement is between GFW and the PNG National Fisheries Authority. It will provide VMS data from the Fishing Industry Association's 50 vessels authorized to operation within the PNG EEZ. The Fishing Industry Association has also agreed to support the work that Global Fishing Watch is undertaking to explore how vessel location and tracking information can inform efforts to address forced labour in fisheries.[12] The GFW-PNG MOU follows from an April 2022 agreement between GFW and the Republic of the Marshall Islands for RMI to share its vessel monitoring data on the GFW public map. RMI will provide VMS data from all vessels flying the RMI flag and from foreign vessels fishing in RMI waters.[13]

For longline and purse seine vessels, disabling was most common near EEZ boundaries

TUNA INDUSTRY

Tuna transhipment in Majuro struggles to return to pre-Covid levels

The tuna transhipment era in the Marshall Islands began in earnest in 1998 with the unloading of Taiwanese and Korean purse seine-caught tuna to refrigerated carrier vessels in the Majuro lagoon. The activity grew steadily during the following decade so that by 2010 315 transhipment events, accounting for 25% of purse seine transhipments in the five major WCPO transhipment ports, took place in Majuro.[14] Factors contributing to Majuro's desirability included its large protected lagoon with sufficient anchorage to accommodate refrigerated fish carriers and fishing vessels, and reasonable transhipment, anchorage and other incidental fees that did not discourage vessels from utilizing the port. Most recently, the opening of a net repair yard and ship chandlery by Pacific International Inc. (PII) provides an additional attraction for vessels requiring those services.

As transhipment activity in Majuro intensified, the Marshall Islands Marine Resources Authority (MIMRA) cited Majuro as the busiest tuna transhipment port in the world from 2014-2019, with a high point in 2015 and 2016 when 505 and 551 transhipments were undertaken in Majuro lagoon, with 368,323 and 403,809 metric tons of tuna respectively unloaded from purse seiners operating in the WCPO.[15]

Majuro laid claim to being the busiest transhipment port in the world from 2014-2019

Since 2016 the tuna transhipment landscape in the WCPO has fluctuated, with changes in national fleet composition and increased usage of ports such as those in Kiribati and Tuvalu by international purse seine fleets. In 2017-2019 Majuro was already struggling to return to 2015-2016 transhipment levels but still experienced over 400 transhipments per annum during that 3-year period. Then the Covid pandemic hit the region and its tuna purse seine fishery.

MIMRA actively participated in the RMI National Disaster Committee's Maritime Working Group that developed Covid prevention protocols in early 2020. Those stringent measures resulted in transhipment delays and in some vessels moving

to other transhipment locations where entry restrictions were not as severe. The number of transhipments plummeted in 2020 to 175 due to Covid, with most of the activity having taken place early in the year.

In early 2021, MIMRA proposed easing entry rules in an effort to bring back purse seiners to Majuro. The first four months of 2021 had seen an average of only 11 transhipments per month, far below averages from prior years. The bases of the MIMRA proposal were that there had been very few breaches of Covid restrictions by vessels or crews, and that the 60% drop in transhipments had seriously impacted port and commercial revenue. The most important change proposed was to eliminate the '14-day rule', a requirement that vessels be at sea for at least 14 days after the port of their previous departure. Requirements for no human contact with shoreside personnel upon entry and other safety measures were not changed. These changes were adopted in late April 2021 resulting in an almost immediate increase in Majuro transhipments, and by the end of the year there had been 297 unloading operations that included a few containerizations onshore.[16]

The number of transhipments in Majuro in 2022 was disappointingly below pre-Covid levels despite a relaxation in restrictions

MIMRA was optimistic that 2022 would see a return to a larger number of transhipments than 2021 and hopefully reach pre-pandemic levels of 2014-2019, but that scenario did not eventuate. Tuna unloadings in Majuro in 2022 dropped to 259, 13% less than those that took place in 2021. A bright spot was that in addition to 221 transhipments directly to carriers in Majuro lagoon, three purse seiners unloaded their catch into containers dockside, and 35 split their unloadings between containers at the dock and carriers in the lagoon.[17] The filling of containers dockside has been encouraged by MIMRA and portends further opportunities to obtain larger benefits for the Marshall Islands from transhipping.

As self-stable tuna market is poised for growth, firms look to develop markets

Recently released projections for the canned tuna market suggest reasons for optimism for the industry. A report from Straits Research suggests that the global canned tuna market will grow in value from USD 9 billion in 2022 to USD 13.36 billion by 2031.[18] The group predicts that the two main drivers for this growth include expansion in the e-commerce channel and growing consumer dependence on 'ready to eat' meals. On the former, the report identifies the growing use and user-friendly nature of online food-buying platforms, as well as younger generations' familiarity with online shopping. On the latter, the report cites new product innovations that expand product selection as well as creative design and packaging as drivers of expanded demand. Straits Research predicts expansion in all major markets, as well as in emerging markets across Latin America, the Middle East and Africa.

The shelf-stable tuna market is projected to grow in traditional and emerging markets over the next decade

In the present moment, firms are seeking to drive this projected growth by making new investments and efforts to reach into new markets. Recent examples offer illustrations of different growth strategies (see also the story about Frinsa's investment in the US below). For instance, Mexican tuna firms are seeking to gain traction in the sizeable US market. One firm, Grupomar saw significant sales growth in the US during the pandemic and is now increasing its cold storage facilities, upgrading its factory, and renovating its fleet to produce more yellowfin products. It is experimenting with flavoured tuna pouch products as well as its frozen product line and seeking to market its products to Mexicans that now live in the US and miss a taste of home; it aims to also expand into Canadian and Central American markets. The group expects sales of canned goods to total about USD 320 million for 2022, a 28% increase over 2019.[19] Seafood giant Thai Union is also looking for ways to access new markets and to do so, is looking in its own back yard. To celebrate its

30th anniversary, it is launching a new 'Healthy Living, Healthy Oceans' campaign to market its own 'Sealect Tuna' brand to increase canned tuna consumption in Thailand. Sealect Tuna is responsible for roughly 58% of total market share (~USD 27.6 million) in Thailand and is growing at a rate of 8%. Thai Union is aiming to increase consumption from 50g/person/year to 100g/person/year in Thailand by 2025.[20]

For Pacific Island countries, both near term examples of efforts to grow markets and diversify product offerings, as well as the long-term projections for continued growth, suggest opportunities. Tuna from PIC waters will continue to be in high demand, as will verifications that tuna stocks are well managed and able to continue to supply growing markets well into the future. Growth may also present opportunities for PICs to continue to develop direct market relationships that increase returns.

Tuna class action suit approved in the US Supreme Court

FFA Trade and Industry News has followed the long progression of legal action around US big-three tuna brands' price-fixing saga, which prosecutors argued affected more than USD 600 million worth of canned tuna sales. As reported in prior issues, the price fixing disputes were around both criminal and civil concerns. The criminal charges, brought by the US Department of Justice, have been settled. StarKist pleaded guilty to price fixing and received a USD 100 million fine. Bumble Bee and three industry executives also pleaded guilty and former Bumble Bee CEO, Chris Lischewski was convicted at trial and sentenced to 40 months in prison.

The civil cases have been ongoing as retailers and other buyers of canned tuna have sought damages for the effects of the collusion.[21] In the process, several tuna buyers have filed proposed class actions accusing the big three of violating federal and state antitrust laws and in doing so, causing them to overpay for tuna. In 2019, a judge granted class action status to three groups of tuna buyers: direct purchasers (e.g. retailers and grocery stores), commercial food preparation sector and individual consumers. Class action status allows a few plaintiffs to litigate on behalf of much larger group – such as all consumers of canned tuna – rather than forcing individuals to litigate separately over the same issues.

The tuna companies appealed the class-action status, arguing that 28% or more of direct purchases may not have been harmed. However, the 9th Circuit Court of Appeals decided not to adopt a rule that would have prohibited certifying a class action, even if only a trivial number of class members were harmed. StarKist appealed the decision, which sent the case to the highest court in the land – the US Supreme Court – for consideration.[22] StarKist's appeal asked the court to consider if a) plaintiffs could still win a class action status in cases in which some members of the class were not injured by a company's wrongdoing and b) if the lower court decision defies Supreme Court precedent in ruling that plaintiffs can prove harm across the *whole* class by using statistical evidence to show that its 'average' member was injured.[23]

In November, the US Supreme Court declined to hear StarKist's appeal, meaning that the lower court's decision to let three groups of tuna purchasers receive class action status to jointly sue will stand, even though a large number of buyers may not have been overcharged or injured by the price fixing. If the Court had agreed to hear the case, it would have had to decide if it should be more difficult than it presently is for consumers and other plaintiffs to receive class action status.[24] For the tuna business, the decision potentially exposes the big three to large damages because of the size and diversity of the classes, and may put pressure on the firms

Tuna buyers in the US have secured class action status to litigate damages from price fixing

The big-three US brands will continue to face lawsuits from buyers over damages incurred from price-fixing

to settle out of court, which can also be costly. More broadly, the ruling comes at a time when the US big three tuna brands are focusing on capitalising on the positive exposure they gained in the US market during the pandemic, and on enhancing their reputations after several different scandals around product price, quality and overall pressure to demonstrate ecological and social sustainability in the sector.

Spanish tuna firm makes historic investment in US-based processing

The Spanish seafood firm Frinsa – estimated to be the seventh largest buyer of tuna in the world – is investing USD21 million in a canning plant in Florida, USA.[25] Frinsa's decision to invest in North America puts it in sharp contrast with its competitors in Galicia – Calvo and Jealsa – which have long-standing investments in Central and South America that they use to export canned tuna to North America.

The factory will have five product lines for tuna, salmon, sardines and chicken and directly employ up to 115 people.[26] Frinsa hopes to start US production in September- October 2023. Presumably, the factory will be highly mechanised and use imported frozen pre-cooked tuna loins given the relatively low employment numbers reported. Frinsa market through Trader Joe's online portal, with whom it is has an existing relationship, and its first 'made in America' products will be retailed through Amazon Fresh. It is also negotiating with retail distribution channels, including Kroger and Walmart. [27] Frinsa USA will be led by Otis Coracides, a former Chicken of the Sea executive, who previously developed his career at Kraft Heinz, providing strong US food industry connections.[28]

Frinsa has invested US 21 million in a US seafood canning facility to supply online retail and supermarkets

The Frinsa Group is family-owned and based in Galicia, Spain's tuna-capital.[29] Historically and today, it is specialised in packing private label for Europe's leading supermarkets such as Carrefour and Lidl, but it also sells self-stable seafood under its own brands *Frinsa* for retail markets and *Ribeira* for catering markets, both of which it is aggressively expanding since 2015.[30] Frinsa is one of Europe's largest tuna and seafood processors, with an annual turnover of around 550 million euro in 2020 and 2021, employing over 1,400 people. Moreover, it is a highly profitable business which pays out significant dividends for a company of its size.[31]

Florida is a good US location for Frinsa for a number of reasons. Firstly, being loated on the US east-coast means there is only a six-hour time difference from Galicia, Spain. Secondly, the city of Lakeland, in the Tampa Bay Area, is well served by transport links and the city is evaluating whether to provide investment sweeteners to mitigate water and wastewater fees to the tune of USD 400,000.[32] Thirdly, and perhaps most crucially, suburbs in the Tampa Bay Area are *the* leading destination for foreign-born immigrants moving within the US,[33] suggesting the ready availability of a relatively low-cost workforce.

Mitsubishi named as largest importer of tuna fished by Chinese IUU vessel[34]

An investigative report by *Mongabay* (a conservation news service) claims that Japan's Mitsubishi Corporation – ranked 41 in the Fortune 500 – purchased sashimi-grade tuna from the Chinese firm Dalian Ocean Fishing (DOF) in whose tuna fishing operations shark-finning has been found to be endemic.[35] DOF has been linked previously to extensive human rights abuses, with at least 10 workers on board the company's fishing vessels dying while at work between 2019 and 2020.[36] This new investigative report now links DOF's tuna fishing vessels to the use of gear to deliberately catch and illegally cut off the fins of sharks.[37]

Mitsubishi's trading arm Toyo Reizo Co. Ltd. – Japan's number one ultra-low temperature (ULT) sashimi tuna trader – was historically DOF's largest tuna buyer.[38] While Mitsubishi severed ties with DOF in 2020 'without explaining why',[39] Mitsubishi's 20-year relationship helped sustain DOF since its inception in 2000. For example, in the 2014 initial public offering of DOF, it admitted to achieving 88.4% of its revenue of the initial quarter of 2014 via sales to Toyo Reizo Co. Ltd.[40]

While Mitsubishi's partnership with DOF was well documented, tracking tuna from individual fishing vessels to the Japanese firm's supply chain proved difficult until *Mongabay* used satellite-tracking data to strongly indicate a link. This data was derived from Global Fishing Watch which uses the AIS transponders on fishing and transshipment vessels to monitor their movements. The data shows that at least one of the reefers chartered by Mitsubishi subsidiary MRS Corporation 'encountered' DOF vessels alleged to have illegally finned sharks and abused its crew. 'Encountering' – staying unmoving next to a fishing vessel for several hours – doesn't *necessarily* mean an exchange of tuna, but 75–80% of such 'encounters' tend to be transshipments, says *Mongabay*'s source who was formerly employed as an observer on transshipment vessels.[41]

Mongabay argues that Mitsubishi's prior system of addressing human rights violations by holding dialogue sessions with suppliers and, since 2017, circulating annual questionnaires has failed.[42] Business & Human Rights Resource Centre, a human rights charity, asked Mitsubishi to respond to *Mongabay*'s claim that the Japanese firm's relationship with DOF sustained human rights violations and IUU fishing. Mitsubishi accepted that it had purchased from DOF until April 2020, but said that if the investigation proved true, then it was 'truly regrettable'.[43] It also promised to 'review' business relationships with companies that do not take corrective measures.

Mitsubishi has highlighted a new Policy for Sustainable Supply Chain Management which would address 'human rights, labor rights and environmental issues' across all its products,[44] this includes 'Tuna Procurement Guidelines'.[45] The targeted action that the company promises to undertake includes supporting suppliers that implement Fishery Improvement Projects (FIP), conducting risk assessments and external audits of suppliers, holding workshops on IUU fishing and human rights with suppliers, participating in initiatives for human rights issues, cooperating with suppliers and stakeholders to create an environment of Decent Work as defined by international labour conventions, and procuring at least 30% of tuna with Global Sustainable Seafood Initiative (GSSI) certification by 2030.[46]

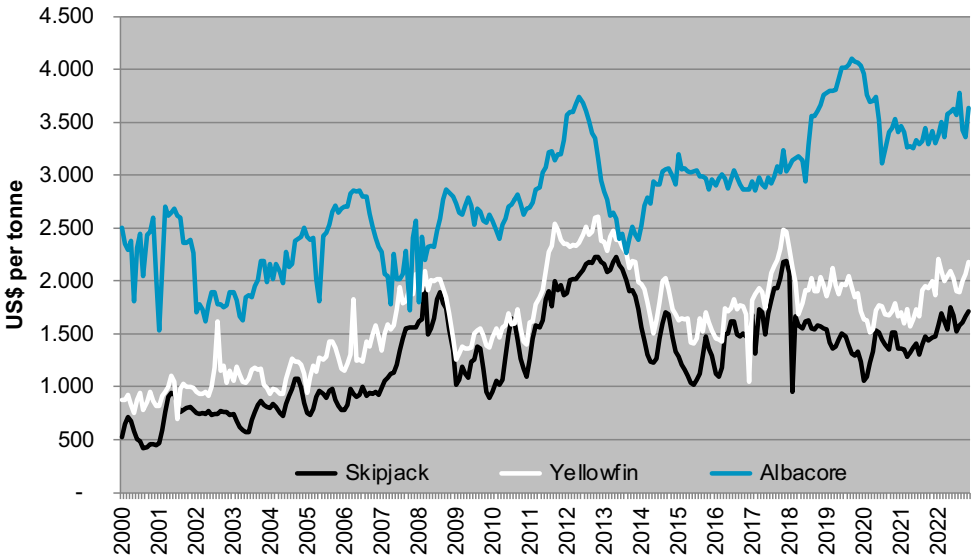
Further, DOF has been hit with a fresh round of sanctions by the United States this December, following sanctions last year, as reported in the May-June 2021 issue of *FFA Trade and Industry News*.[47]

Satellite data suggests links between Dalian Ocean Fishing and Japan's largest ULT sashimi trader

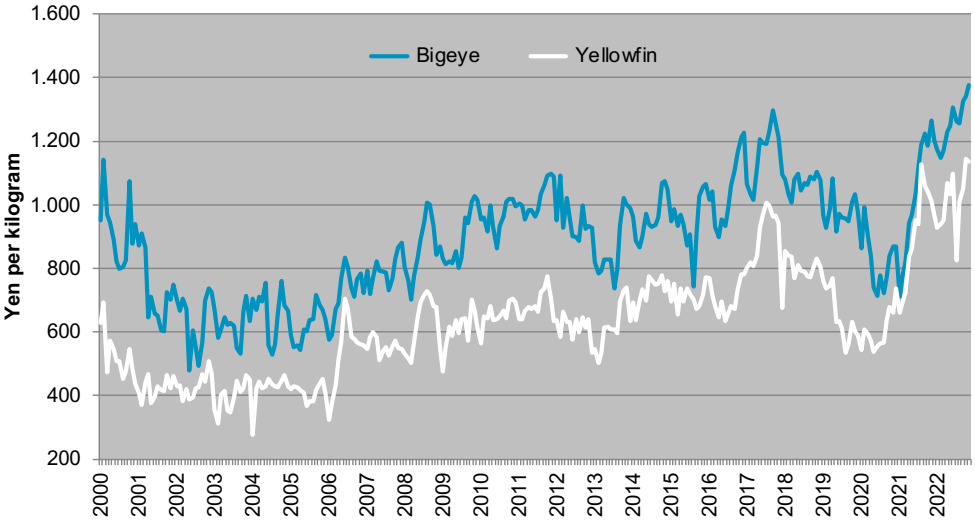
Mitsubishi launches new Tuna Procurement Guidelines to combat supply chain risk

TUNA PRICE TRENDS[48]

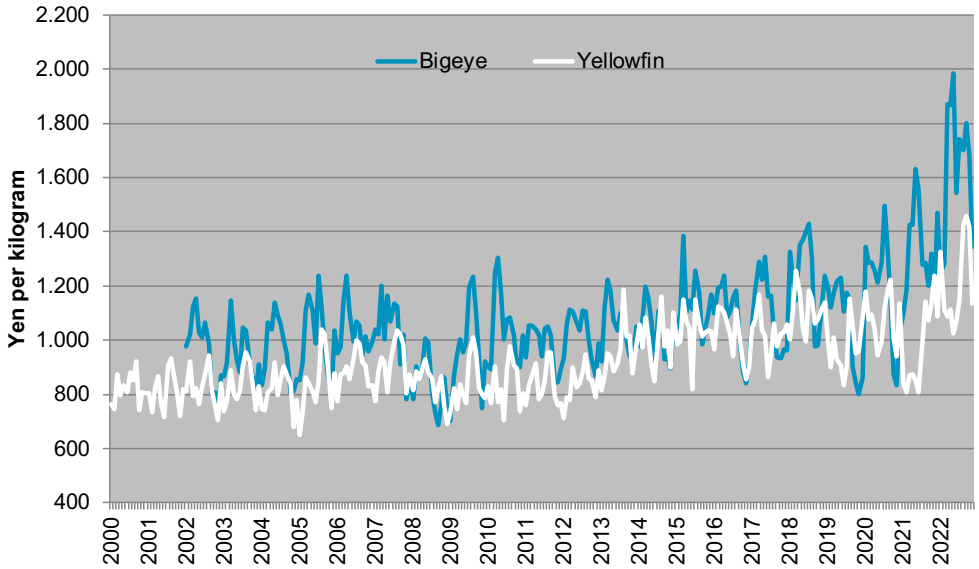
Bangkok canning-grade prices to December 2022[49]



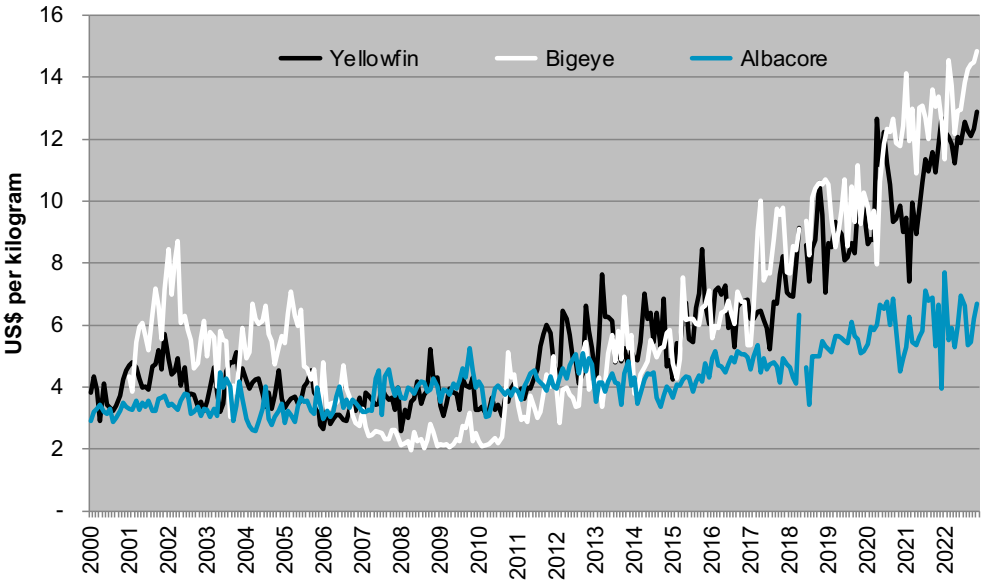
Japan frozen sashimi prices (ex-vessel, Japanese ports) to November 2022[50]



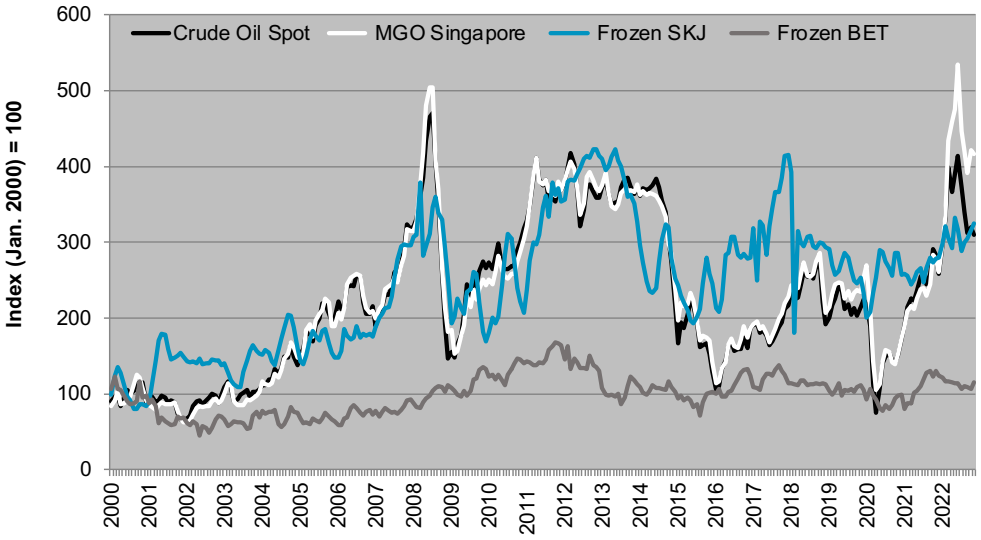
Japan fresh sashimi prices (origin Oceania) to November 2022[51]



US imported fresh sashimi prices to November 2022[52]



Crude oil, canning-grade frozen skipjack (SKJ) and frozen bigeye (BET) price index to December 2022[53]



[1] Prepared for the FFA Fisheries Development Division by Professor Liam Campling, School of Business and Management, Queen Mary University of London, Dr Elizabeth Havice, University of North Carolina at Chapel Hill and Mike McCoy, independent consultant, all Consultant Fisheries Trade and Market Intelligence Analysts, Fisheries Development Division, FFA. Desktop publishing by Antony Price. The authors would like to thank FFA for their input on an earlier draft of this briefing. The contents of this briefing (including all analysis and opinions) are the responsibility of the authors and do not necessarily reflect the positions or thinking of the FFA Secretariat or its Members.

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