



FISHERIES TRADE

WTO fisheries subsidies negotiations heat up

WTO Members have committed to agree to new rules limiting subsidies to the marine fishing sector by 2020.² Only two months into the current work programme of the Negotiating Group on Rules (NGR), from January to July 2019, a flurry of new proposals has been advanced. Two have been formally tabled: by Australia, proposing text for a prohibition on subsidies to overfished stocks; and New Zealand/Iceland, proposing a prohibition on certain types of subsidies that contribute to overcapacity and overfishing. Other proposals have been circulated informally or orally, such as ideas for text on the elimination of subsidies to IUU fishing by the EU and US, and on the tiered ‘capping’ of subsidies by the US, which seeks to target especially the subsidy provision of the world’s largest producers and exporters of fish.

Both the Australia and New Zealand/Iceland proposals incorporate a ‘negative effects’ test. This seeks to mirror the adverse effects test of the existing Agreement on Subsidies and Countervailing Measures (ASCM), but instead of focussing on the impact of subsidies on trade, it targets subsidies that threaten the sustainability of marine-capture fish stocks. The Australia proposal would act as a measure of last resort – prohibiting subsidies where a fishery is *already* overfished. As such, the approach is relatively low-ambition and is more about acting as a discipline on Members when considering subsidy provision. The New Zealand/Iceland proposal is designed to stop subsidies used to reduce operating and capital costs where fish stocks are moving *towards* a condition of overfishing (e.g. are reaching a state of being maximally sustainably fished). The precise parameters of how to operationalise this in practice are not yet clear. Both cases depend on a negative effects test, which in turn will rely on Members notifying their fisheries subsidies programmes, as well as access to fisheries science, management and economic data. Presently, most Members do not fully notify their subsidies programmes under *existing* ASCM commitments. As such, the *enhanced* transparency requirement of any agreement on fisheries subsidies provisions may pose a challenge and will certainly be a focus of future negotiations.

Taken as a whole, these proposals represent a package. While sometimes containing competing ideas, the proposals demonstrate a significant degree of coordination among this small group of countries offering proposal, which also includes Norway. Each proposal is motivated by the stated interest of creating a realistic ‘landing zone’ for an agreement before the WTO’s Twelfth Ministerial Conference (MC12) in June 2020 in Astana, Kazakhstan. Each represents a degree of compromise from the prior positions held by these Members following the slow-moving discussions and rigid restatement of long-held positions in previous work programmes.

The negotiations are certainly heating up and a Member-driven process has begun. In this context it is now all the more crucial for the Pacific Group of WTO Members to continue to work together, including in concert with the African, Caribbean and Pacific (ACP) Group at the WTO, currently coordinated by South Africa, and the LDC Group, coordinated by Senegal. In addition to careful analysis of the various proposals made by the small group of Western countries, one option is for the ACP to begin to reflect on its prior positions in the light of these new developments and the known positions of other Members so as to advance compromise text of its own.

It is anticipated that new proposals will be formally tabled at the next negotiation clusters in March and May, including ones from the US (on capping) and the Philippines. The PIFS Geneva office will continue to coordinate a Pacific response and seek to ensure that any eventual agreement works to eliminate subsidies to illegal fishing and fishing on overfished stocks and effectively prohibits certain subsidies contributing to overcapacity and overfishing, especially by large-scale

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fishing nations; while simultaneously ensuring that eventual subsidy rules do not produce a disproportionate burden on PICs, have unintended consequences for non-commercial fishing and provide effective flexibilities for future PIC fisheries development.

Tariff hike deferred again as the US and China reportedly near deal to cool the trade war

The global seafood industry has been watching the ongoing trade war between the US and China to see how existing and potential future tariffs increases will shake-up business practices and procurement relationships. As reported in prior issues of FFA Trade and Industry News, the Trump Administration introduced 10% tariffs on more than US\$200 billion of products in September 2018 and planned to increase those tariffs to 25% on 1 January 2019, if the two countries were unable to come to agreement on a range of trade issues. The effect of this component of the trade war on the tuna industry is most pronounced for tuna loin imports to the US. China is the leading loin supplier to the US market and low-tariff loins have been the central logic of Bumble Bee and Chicken of the Sea's large processing operations in the mainland US.³ In addition to tariff increases on loins, US tuna processing facilities have also been stung by steel and aluminium tariffs in other parts of Trump's broad return to protectionism. As such, the tuna industry has been carefully monitoring the trade war and lobbying the Trump Administration, developing positions based on whether their competitive position will be harmed (Chicken of the Sea and Bumble Bee) or potentially helped (StarKist's production of mostly whole-round in American Samoa) by the tariff boosts.⁴

In a relief to mainland US processors, in the days before the start of 2019, the Trump Administration announced a 90-day delay in the deadline to increase to the 25% tariff level in order to provide time to negotiate and come to agreement on difficult trade issues including agricultural policies and procurement, technology transfer and intellectual property. As the new deadline approached, the Trump Administration extended the delay on increasing tariffs, citing progress in negotiations on important structural issues. Negotiations are expected to continue in late March 2019. Several important issues remain, including the countervailing tariffs China introduced on US products, Chinese currency management and enforcement of the deal.⁵ Reportedly, one of the remaining points of negotiation will be if the US immediately lifts its initial round of 10% tariffs, or if these tariffs are lifted incrementally to allow the US to monitor if China is meeting its obligations.⁶

FISHERIES MANAGEMENT

Attention on FAD management continues to grow

In recent years, there has been increasing focus on the management of fish aggregation devices (FADs) by RFMOs, governments, NGOs and industry, given negative impacts on juvenile tuna and by-catch species, as well as marine pollution risks. Several recent FAD management-related developments are highlighted here.

In December 2017, WCPFC14 agreed to include non-binding provisions relating to non-entangling FADs in the tropical tunas conservation and management measure (CMM 2017-01). Members were "encouraged" to utilise non-entangling designs and materials in the construction of FADs to reduce entanglement of sharks, marine turtles and other species. The use of natural or biodegradable materials for FADs was also "promoted" to reduce the amount of synthetic marine debris. In December

Australia and New Zealand/Iceland proposals both rely on a 'negative effects' test of the impact of subsidies on fish stocks

The Pacific Group at the WTO is working with the ACP to ensure that rules work for fisheries sustainability and local development

The US and China have avoided further tariff escalation; no firm date for rollback of existing tariffs

2018, WCPFC15 adopted a binding measure, effective 1 January 2020, requiring any FAD deployed in, or that drifts into, the WCPFC Convention Area to comply with specifications relating to non-entangling designs. If netting is used to cover the raft (floating part) of FADs, it must have a stretched mesh size less than 2.5 inches and be well wrapped around the entire raft to ensure no netting hangs below the raft. The hanging part of the FAD which is suspended in the water (tail) should avoid the use of mesh net; if mesh net is used the stretched mesh size should be less than 2.5 inches or tied tightly into bundles and weighed down to keep the netting taut in the water column. Alternatively, a single weighted panel of mesh (less than 2.5 inches) or solid sheets such as canvas or nylon can be used. The provisions on use of biodegradable materials remain non-binding, as research and the development of best practice guidelines is ongoing.⁷

In January 2019, the Spanish tuna fishing fleet (OPAGAC) and the Inter-American Tropical Tuna Commission (IATTC), signed an agreement to test biodegradable FADs (BIOFADs) in the Eastern Pacific Ocean. In 2019, fourteen Spanish purse seine vessels will deploy new BIOFAD prototypes which do not use synthetic materials (besides the satellite tracking buoy and identification markers) or chemicals (e.g. paints, gums, resins, glues). The BIOFAD prototypes will be evaluated in terms of durability, availability and cost of materials, as well as effectiveness in attracting fish, with all information gathered during the trial to be made publicly available. The trial is co-funded by OPAGAC and the European Union, with collaboration from the International Seafood Sustainability Foundation (ISSF) and ATZI, an institute developing technological solutions for sustainability.⁸

In February 2019, the Parties to the Nauru Agreement (PNA) held a working group session to finalise draft legal text for a PNA FAD Tracking and Registration Measure. This measure will be presented to PNA Fisheries Officials in March for review and approval, before presentation to PNA Ministers in May for final endorsement. PNA's FAD measure is intended to compliment WCPFC considerations on FAD design (as discussed earlier) and is expected to come into effect from 1 January 2020 for purse seine vessels fishing in PNA waters.⁹ Details on specifics of the measure are not yet publicly available.

Despite criticisms, MSC continues to gain traction in tuna fisheries

As covered in previous editions of *FFA Trade and Industry News*, the Marine Stewardship Council (MSC) certification for sustainable fisheries has come under scrutiny from the UK Parliament, NGOs and retailers (discussed below). Despite various criticisms, MSC continues to gain traction in tuna fisheries, with a number of recent announcements of new fisheries becoming certified or entering into full assessment.

In light of bigeye tuna in the Western and Central Pacific Ocean now being deemed to be healthy and fished sustainably, a Federated States of Micronesia (FSM) longline fishery is the first ever to achieve MSC certification for its bigeye tuna catch. The certification covers yellowfin and bigeye catches in FSM EEZ by 58 longline vessels owned or managed by Liancheng Overseas Fishery (Shenzhen) Co. Ltd, China Southern Fishery Shenzhen Co. Ltd and Liancheng Overseas Fishery (FSM) Co. Ltd. The vessels are beneficially Chinese-owned and flagged to China, Taiwan and FSM, landing fish in Kosrae and Pohnpei in FSM, as well as Samoa and French Polynesia. The fishery has five years to address conditions related to harvest strategies and harvest control rules for bigeye and yellowfin tuna, as well as strengthened management relating to interactions with endangered, threatened and protected species, particularly sea turtles. The parent company, Liancheng Overseas Fishery (Shenzhen) Co. Ltd. also

**Biodegradable
FAD designs are
being tested
in the Eastern
Pacific Ocean**

**WCPFC has
adopted
a binding
measure for
non-entangling
FAD designs;
PNA will
implement an
in-zone FAD
tracking and
registration
measure in
2020**



received MSC certification for its Cooks Islands South Pacific albacore and yellowfin fishery in 2015 and has entered its Marshall Islands yellowfin and bigeye fishery into assessment, which is expected to be completed by the end of 2019.¹⁰

Tri Marine has also recently entered longline vessels chartered to its Solomon Islands' subsidiary company, National Fisheries Development Ltd. into MSC assessment for South Pacific albacore and yellowfin.¹¹ PNG's Fishing Industry Association's purse seine skipjack and yellowfin tuna fishery entered full MSC assessment in February 2019 for free-school, anchored FAD and drifting FAD sets.¹² If successful, this will mark the first Pacific Islands purse seine fishery to receive MSC certification for drifting FAD sets. Bumble Bee subsidiary, Anova Food has also announced its Indonesian yellowfin handline fishery will enter into MSC assessment, following the successful MSC certification of Indonesia's Sorong skipjack and yellowfin pole and line fishery in late 2018.¹³ There has also been a flurry of tuna fisheries entering into Fisheries Improvement Projects (FIPs), with the intention of addressing shortcomings to be able to enter into MSC assessment in the coming years. One such example is a partnership between Bumble Bee, global tuna trading company FCF and NGO Ocean Outcomes to improve fishing practices of albacore longline tuna fisheries in the Western and Central Pacific and Indian Oceans.¹⁴ An industry source indicated that there is increasing demand for tuna sourced from MSC-certified and/or robust FIP fisheries in major markets, as evidenced by public responsible sourcing policies implemented by tuna giants Thai Union and Bolton Foods. While premiums still exist for MSC-certified tuna, it is increasingly likely that these will erode as MSC certification becomes the norm to maintain access to developed-country tuna markets.¹⁵

On 17 January, the UK Parliament's Environmental Audit Committee (EAC) released a report on an inquiry into sustainable seas covering the issues of ocean acidification, overfishing, resource extraction and pollution. The inquiry included an investigation into the effectiveness of the MSC certification scheme and its contribution to sustainable fisheries. The report concluded that MSC is the market leader and the most rigorous certification in the seafood sector, compared to alternative labelling and certification systems. It also confirmed there is evidence that MSC is driving incremental change towards sustainable fish stocks through improvements in fishing practices. However, the inquiry recommended the MSC address specific issues raised by WWF and others in its five-year Fishery Standards Review, including Units of Assessment (i.e. ensuring only MSC-certified species are caught in single MSC trips), carbon emissions from ships, shark finning and barriers to entry for small-scale and developing fisheries. The EAC also called for the review to be transparent and independently reviewed. With the exception of carbon emissions from vessels, which currently falls outside the MSC fisheries certification standard, all of these issues are being addressed in the MSC Fishery Standard Review currently being undertaken and stakeholder consultations taking place in 2019.¹⁶

FISHERIES REGULATION

EU lifts Thailand's IUU 'yellow card'; Thailand and Marshall Islands sign MOU

In April 2015, Thailand received a 'yellow card' warning from the European Commission (EC) for not sufficiently tackling illegal, unreported and unregulated (IUU) fishing. Almost four years later in January 2019, the warning has finally been lifted. Thailand's Department of Fisheries (Thai DOF) has worked closely with EC officials to implement a number of measures to address its shortcomings. The fisheries legal framework has been comprehensively reviewed to be in line with international requirements; sanctions for non-compliance have been revised to

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ensure they serve as a strong deterrent for IUU activity. Thailand's fleet management arrangements, including registration, have been reformed to strengthen flag-state control. Monitoring, control and surveillance (MCS) has improved with vessel monitoring systems required on all industrial fishing vessels, coupled with rigorous port inspections. Thailand will also fully implement the FAO Port State Measures Agreement to better manage foreign vessels landing fish in Thailand for processing, together with a whole-of-supply-chain traceability system. Thai DOF has strengthened its enforcement capabilities, dedicating additional financial and human resources towards combatting IUU fishing and improving administrative procedures.¹⁷ The lifting of the yellow card warning no doubt comes as a great relief to Thailand's seafood sector, which has faced significant reputational damage over the past several years (for both IUU fishing and labour abuse) and risked losing EU market access for its domestically-caught seafood products.

In another positive step towards eliminating IUU fishing, Thailand and Marshall Islands signed a Fisheries Collaboration Memorandum of Understanding on 22 February 2019 in Bangkok. Both countries are critical players in the global tuna industry – Thailand is the world's largest canned tuna processor, while Marshall Islands' Majuro is one of the busiest tuna transshipment ports in the world. The two countries have agreed to exchange fisheries data to strengthen traceability and enable mass-balance reconciliations of fish transhipped in Majuro and delivered to Thailand for processing. These steps will help to identify misreporting. The Marshall Islands Marine Resources Authority (MIMRA) will provide Thai DOF with transshipment data, including volumes transhipped, notification of departure clearance of carriers destined for Thailand together with carrier hatch plans. For its part, Thai DOF will provide MIMRA with verified weights of tuna transhipped in Majuro which has been landed in Thailand. Collaboration of this nature is critical between coastal, flag, port and market states if IUU fishing is to be completely eliminated from the global tuna supply chain.¹⁸

US authorities issue detention order on tuna harvested by forced labour aboard Vanuatu-flagged tuna longliner

On 6 February 2019, US Customs and Border Protection (CBP) issued a press release stating that it had ordered any tuna products from a Vanuatu-flag tuna longliner, Tunago No. 61, be detained at all US ports of entry under authorization of the US 1930 Tariff Act, due to forced labour aboard the fishing vessel.¹⁹

Section 307 of that Act prohibits the importation of merchandise mined, produced, or manufactured, wholly or in part, in any foreign country by forced labour (or indentured or forced child labour). According to CBP, merchandise that is detained and not released is subject to exclusion and/or seizure and may lead to criminal investigation of the importer(s). Importers of detained shipments are provided an opportunity to export their shipments or demonstrate that the merchandise was not produced with forced labour. If an importer's shipment is detained, it is the responsibility of the importer to demonstrate to CBP 'through clear and convincing evidence' that the merchandise was not produced with a form of prohibited labour. If this requirement is not met by the importer, CBP allows the importer to export their goods to a location outside the United States.²⁰

The press release from CBP occasioned a flurry of announcements and blog posts from various law firms and others specializing in international trade, customs, and import/export law that further publicized the actions of CBP in the Tunago No.61 case.

Thailand has reformed its fisheries legislation, law enforcement, fisheries and fleet management, MCS, and traceability

Thailand and Marshall Islands will exchange data on tuna transshipments and landings



From an examination of the US Customs and Border Protection website, (www.cbp.gov), it appears this is the first detention of any product in 2019, and the first time ever that products from a fishing vessel have been involved in such an action. It is not known how widespread the activities of CBP might become in the tuna industry. CBP explains the parameters of its involvement in identifying products that might have been produced by forced labor on its website, stating that 'it acts on information concerning specific manufacturers/exporters and specific merchandise. The agency does not generally target entire product lines or industries in problematic countries or regions'.²¹

This current incident highlights the link between national responsibilities to deter IUU fishing and forced labor. In the context of IUU, FAO has defined illegal fishing as that being 'in violation of national laws or international obligations, including those undertaken by cooperating States to a relevant regional fisheries management organization'.²² A recent WCPFC resolution (Resolution 2018-01) adopted in December 2018 addresses the obligations of its members in enacting and enforcing fair labour standards onboard their flag vessels.

In the context of exports of tuna products to the US, the link to IUU could be important. The US Seafood Import Monitoring Program (SIMP) requires tuna importers to trace their shipments to prevent fish from IUU fishing from entering the US market. Tuna products could also become a target of the US Department of Labor, which publishes an annual *List of Goods Produced by Child Labor or Forced Labor* that is used by policy makers and others in the US to determine if import restrictions or prohibitions are placed on products and countries listed. It is also used to pressure foreign governments to investigate and correct labour abuses in their countries, lest their products be excluded from the US.

According to the WCPFC Register of Fishing Vessels, Tunago No. 61 is a 53.45 metre tuna longliner built in Taiwan in 2001. It is believed to be owned by Taiwan interests, as are five other Tunago vessels also flagged in Taiwan. Tunago No. 61 was involved in an incident in 2016 where the captain was murdered by members of its Indonesian crew. The incident became internationally known when Greenpeace East Asia included it in a widely-disseminated 2018 report on the Taiwan Government's inability to control IUU and abusive human rights in its fisheries and claimed the captain had been abusing the crew, which drove them to kill him.²³

It is not known how the shipment of fish from Tunago No. 61 purportedly produced by forced labour came to the attention of CBP. CBP regulations state that any person who has reason to believe that merchandise produced by forced labour is being, or is likely to be, imported into the United States may communicate his/her belief to any Port Director or the Commissioner of CBP. It also states that allegations of forced labour violations can be submitted to CBP and provides a hyperlink for such communication.²⁴

Regarding the resolution of the current Tunago No.61 situation, CBP says it does not generally publicize specific detentions, re-exportations, exclusions, or seizures that may have resulted from the detention of merchandise. If CBP has been provided with information sufficient to make a determination that the tuna imported from Tunago No. 61 is subject to the provisions of the law, it will publish a formal finding explaining their decision in the *Customs Bulletin and Decisions* and in the *Federal Register*. No such finding has yet been published for this case.

**Products from
a fishing vessel
have been
targeted by the
forced labor
provisions of the
US Tariff Act for
the first time**

**The linkage
between
IUU and
forced labor
could have
consequences
for importers**

China's growing leadership in global fisheries governance is challenged by poor score on new IUU Fishing Index

China is the world's largest distant water fishing nation. While the government set restrictions in 2018 on the total number of distant water vessels to be within 3,000 by 2020, this gives the current fleet over 15% room to grow (it stood at ~2,500 vessels in 2017). Moreover, the state and industry are increasingly focussed on improving technological advances, meaning that this growing fleet will be more efficient.²⁵

China has reduced its fisheries subsidy programme in response to growing international pressure (see story on WTO above), but this applies only to boats in its EEZ, not its distant water fleet (DWF).²⁶ Indeed, China's 13th Five-Year Plan (2016-2020) places considerable emphasis on the development of high seas fishing and the processing of fish caught outside of its national waters.²⁷ This was reinforced in January 2019 by Fisheries Minister Yu Kangzhen's visit to the Zhoushan National Distant-Water Fishery Base – a new 'giant industrial park to handle a huge increase in distant-water catches'.²⁸

Part and parcel of China's growing power as a fishing nation is its growing influence over global fisheries regulation. In a recent interview, Liu Zhong Xin, the deputy head of China's Fisheries Management Bureau, pointed out that the size of China's fishing fleet, market and exports means that it is overtaking the role previously assumed by traditional fishing nations such as Japan and Spain.²⁹ This process is evidenced in the WCPO industrial longline industry where China's capacity is growing while that of Japan and South Korea recedes.³⁰

China's rise as a leading maritime nation presents several challenges to PICs, as highlighted in the new IUU Fishing Index, which ranks China as the worst-scoring state.³¹ The index was developed by the Global Initiative Against Transnational Organized Crime and the marine consultancy firm, Poseidon. It seeks to develop a more objective and benchmarked approach to compare countries on various measures of IUU fishing in the context of UN Sustainable Development Goal targets 14.4 and 14.6. Of crucial importance to PICs, the index ranked China as the world's worst 'flag', which is a composite of indicators 'related to things states should do and their obligations in relation to IUU fishing that are specific to vessels they flag (i.e. that are on their vessel register)'.³² However, the IUU Fishing Index uses historical data and China stresses that it is continuing to crack down on the violation of laws by its vessels fishing on the high-seas, including charging large fines and piloting 24-hour video surveillance.³³

TUNA INDUSTRY

WWF continues to advance blockchain technology for seafood traceability

Blockchain technology is a public, tamper-proof platform that digitizes 'blocks' of information at key transaction points in supply chains (e.g. fishing, unloading, entry/withdrawal from cold storage, processing, distribution). It is generally understood to be a ledger that is secure because it is both distributed across many nodes (rather than a single server) and because entries are cemented into the record using cryptography.³⁴ This approach to traceability relies on a digital tag (e.g. a radio frequency identification or RFID) that is inserted into the animal at the original point of production and linked to a blockchain. The blockchain records data on the location and movement of the product to, for instance, verify that it was caught in a legal fishing area. The technology also allows the product to be traced as it moves

China continues to promote its distant water fleet and domestic fish processing

New IUU Fishing Index ranks China as worst-scoring state; government announces stricter controls of high-seas fishing



through processing and into markets. The blockchain can store additional data, such as storage temperatures that are relevant to food safety concerns. A key component is that the blockchain technology makes use of database records shared across a network that constantly checks record details and ensures that any changes can be seen across the entire network.

Environmental NGO WWF-Australia continues to advance blockchain technology as a tool for seafood traceability. WWF began experimenting with blockchain technologies for seafood traceability by implementing a pilot tuna traceability project in Fiji with Sea Quest Fiji Ltd.³⁵ Building from this work, in early 2019, WWF-Australia and BCG Digital Ventures have partnered to launch a new blockchain-based platform to track the environmental and ethical impacts of food and products. The platform – called OpenSC – focuses on providing information to businesses and consumers, with the aim of identifying and then avoiding illegal, environmentally damaging, mislabelled or unethical products. The programme offers a quick response (QR) code tag for each product, which can be scanned by the user. The QR code allows the user – who might be a buyer, retailer or an end-consumer – to see information about where a specific product came from, when and how it was produced and how it travelled along the supply chain. OpenSC is being designed to be compatible with existing supply chain certification systems, not least to address industry concerns about the mounting paper work required to comply with a range of state and non-state efforts to address IUU fishing and other sustainability concerns.³⁶ Perth-based Austral Fisheries were chosen as the industry partner for the launch. The firm's Glacier 51 Toothfish will be used as a demonstration.

WWF is envisioning a large scope of potential for blockchain technology. The organisation is highlighting potential to address social issues in fisheries, such as poor working conditions and human rights abuses related to coerced labour and has ambitions to extend the approach to a wide range of sectors including timber and palm oil.³⁷ Developers hope that the platform will help businesses optimize supply chain operations, reduce costs and enable them to manage situations like product recalls.

While traceability technologies garner media attention, the technology itself is not a cure-all and implementation will require building a large infrastructure and training personnel throughout supply chains. While some markets might regulate around sustainability or human rights concerns revealed through traceability tools, others might be more tolerant and provide an outlet for products shown to be unsustainable or unethical. Further, as blockchain processes will be costly in the near term, QR-coded fish are likely to be limited to high-end markets that can support a price premium for products with traceability and/or sustainability attributes. That point at least played out as WWF sought to model their new products by serving blockchain tracked and traceable food to business leaders at the World Economic Forum,³⁸ an organisation which has highlighted traceability and traceability technologies as a mechanism for tackling illegal fishing – in the tuna industry specifically.³⁹

Will tuna processing be automated?

A major interest of Pacific Island countries in the canned tuna industry is employment generation. The processing of fish into loins for canning is the most labour-intensive stage in the value chain and provides thousands of jobs in Fiji, Marshall Islands, Papua New Guinea and Solomon Islands. It is precisely because of differences in wage rates that producers in high-cost countries such as Italy and Spain import frozen tuna loins which are defrosted and inserted into cans.

**WWF-Australia
is pushing
forward
blockchain
technology
for seafood
traceability**

**Traceability
technologies
can shed light
on seafood
challenges, but
cannot solve
problems on
their own**



Yet this international division of labour may be under threat if a new project in Spain to automate tuna processing proves commercially successful. Coordinated by Spain's canned seafood industry association Anfacoc-Cecopesca, the three-year SpecTUNA project has a budget of €1.7 million, of which the European Commission has committed to subsidise 65%.

SpecTUNA is pitched as having the potential to 'revolutionise' the canned tuna industry by automating and optimising all the preparatory stages of raw material processing, such as the sorting and basic cutting of frozen tuna.⁴⁰ The motivation is to enhance quality control and Spain's competitiveness, especially compared to Thailand.

The project seeks to develop advanced robotics using artificial vision and 3D scanning to classify and sort a frozen tuna and then transfer it for automated cutting of head and tail. It will then undergo hyperspectral imaging which allows for the detection of small differences in similarly coloured materials to detect freshness, moisture, salt, protein and fat content, thereby allowing for automated quality control.

However, the loining of the fish will still be necessarily done by hand given the wide variation in size among tuna, even within the same species, and the objective of maximising the recovery rate of meat to by-products. Nonetheless, if the technology being developed by SpecTUNA is commercialised, it will reduce the number of workers needed in tuna factories and may be the first step in the automation of the entire process.

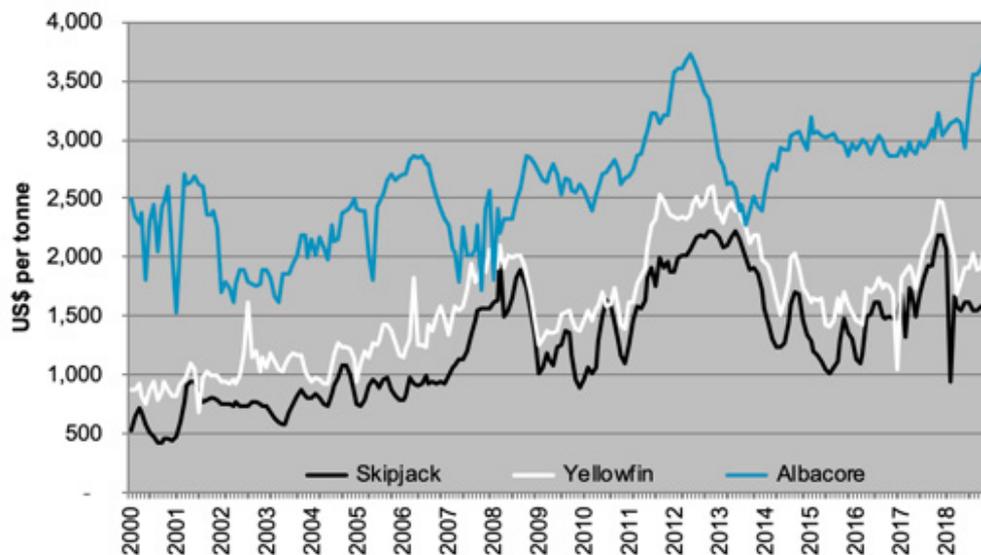
This follows on from another European Commission-funded study in 2013-15 that applied hyperspectral imaging to the quality assessment of cod and salmon.⁴¹ The use of EU research funds to support industrial competitiveness is an important realm of fisheries subsidy that rarely receives attention at the WTO (see the above story).

*SpecTUNA
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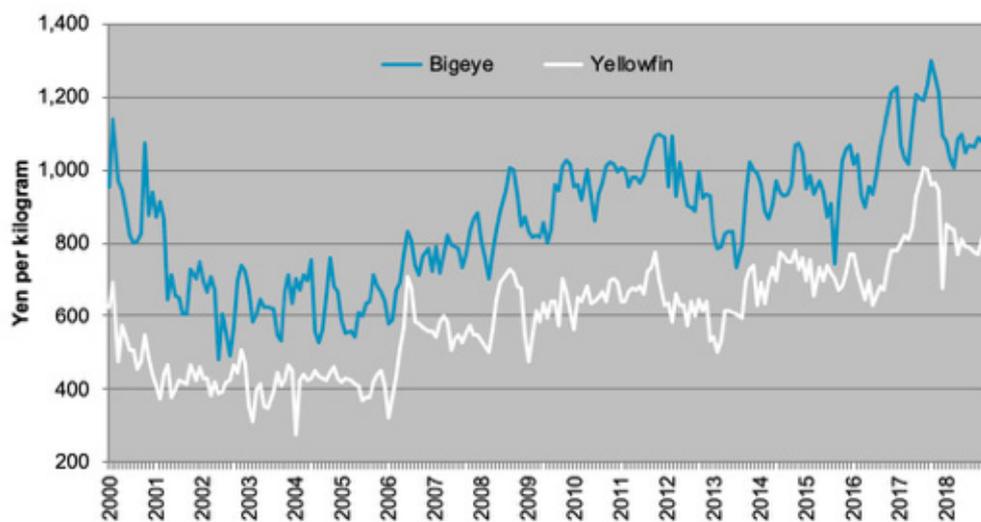
*EU public funds
are being used
to subsidise
private industry
innovation*

TUNA PRICE TRENDS⁴²

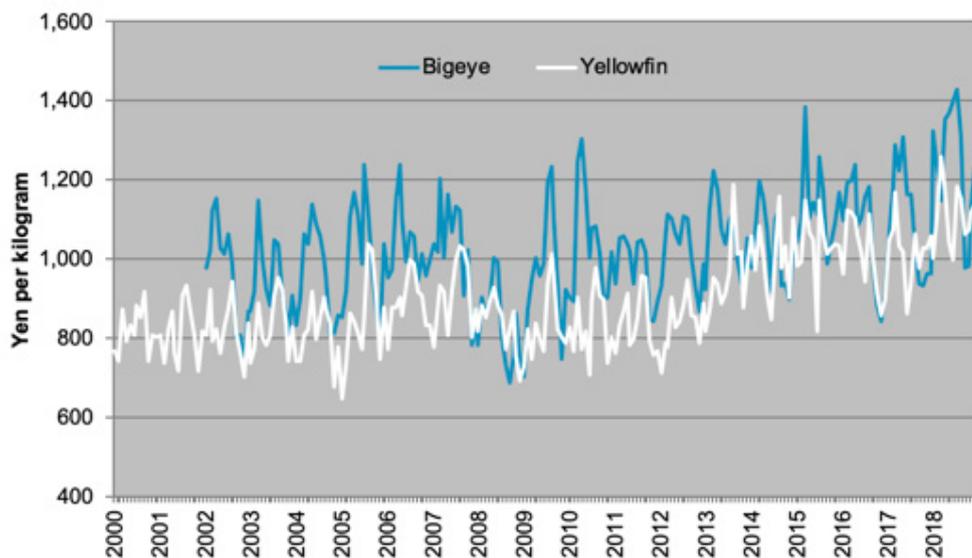
Bangkok canning-grade prices to December 2018⁴³



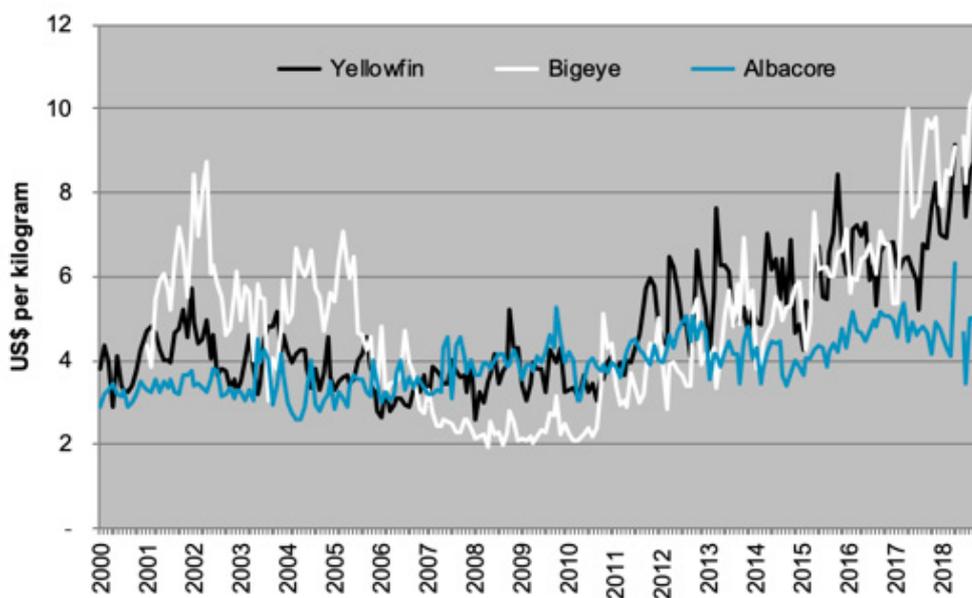
Japan frozen sashimi prices (ex-vessel, Japanese ports) to December 2018⁴⁴



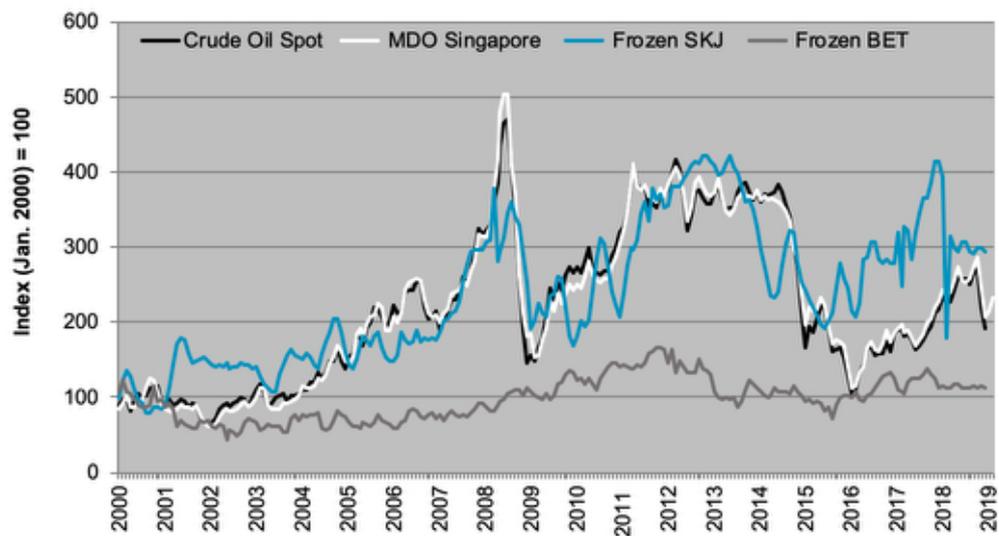
Japan fresh sashimi prices (origin Oceania) to December 2018⁴⁵



US imported fresh sashimi prices to Decembe 2018⁴⁶



Crude oil, canning-grade frozen skipjack (SKJ) and frozen bigeye (BET) price index to February 2019⁴⁷



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