



BEHIND THE MSC BLUE TICK

ILLEGAL FISHERIES, MARINE POLLUTION, HIGH GRADING AND BLOWOUTS

**FURTHER INFRINGEMENTS IN MSC-CERTIFIED TUNA FISHERIES OF THE
WESTERN AND CENTRAL PACIFIC**

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Western and Central Pacific Ocean

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EXECUTIVE SUMMARY

This report begins with an update to our previous report, 'Slipping Through the Net' (May 2022 ^[1]) which examines the response by the Marine Stewardship Council (MSC) and its accreditation body, Assurance Services International (ASI) to our revelations of specific and systemic problems in Western Central Pacific Ocean (WCPO) fishery Observer reporting.

We then reveal more new findings of vessels, including Marine Stewardship Council (MSC) certified purse seiners and longliners, involved in; IUU, unlawful interactions with Species of Special Interest (SSI), labour rights abuses, infringements of marine Conservation and Management Measures and MSC rules based on credible evidence.

This new evidence comes from an ongoing review of Observer data sets provided to CNS Global Consulting following the publication of 'Slipping Through the Net' and details further infringements which were not included in our first report. Documents provided to CNS date from 2017 to 2020 and relate to the PNA Observer Agency (POA) and Bilateral Fisheries Access Agreements in the Western and Central Pacific Ocean.

This review of data sets from the PNA Observer Agency (POA) reveals multiple incidents of negligence and disregard of the Western and Central Pacific Fisheries Commission (WCPFC) Conservation and Management Measures (CMM) by Distant Water Fishing Fleets (DWFF) in WCPO tuna fisheries. The vessels were operating under the Federated States of Micronesia Arrangement for Regional Fisheries Access (FSMA) and Bilateral Fisheries Access Agreements between the Pacific Island Countries (PIC) governments and the governments of Distant Water Fishing Nations (DWFN). MSC-certified vessels operating under the PNA FSMA licence and Bilateral Fisheries Access Agreements were found to have committed violations against the Conservation and Management Measures of the WCPFC and against the MSC's own Fisheries Standard. Violations were reported, however, once again we were alarmed to find no evidence that they were meaningfully investigated following the release of our last report.

Essentially, we fail to understand how any fishery can be properly assessed against the MSC Fisheries Standard by any CAB without Observer reports being examined, even in a cursory way.

Violations of the WCPFC's CMMs and the MSC Standard include:

- Vessels deliberately setting their nets around live whales, dolphins and whale sharks (CMM 2019-04, CMM 2019-05, CMM 2011-03)
- Vessels' officers and crew using their auxiliary boats to try to scare a whale trapped inside a net into breaking free, instead of ceasing fishing operations and safely releasing the whale (CMM 2011-03)
- Illegal, Unlicensed and Unregulated (IUU) fishing in the form of unreported fishing by MSC-certified vessels is very common; discrepancy in reporting target and non-target (bycatch) species (CMM 2013-05)
- High grading the catch (CMM 2009-02)
- FAD fishing during FAD closure period (CMM 2009-02)
- Interference in Observer duty (CMM 2018-05, CMM 2017-03)
- Marine pollution (CMM 2017-04 & MARPOL Regulations)
- Mistreatment of vessel crew (WCPFC Resolution 2018-01 on Labour Standards for Crew on Fishing Vessels).

Anonymous sources told CNS that, following the debriefing process, infringements reported by Observers are often neglected. Regulations state that all reported PNA data must be fully debriefed before an Observer receives their trip payments from the POA. When a debriefer reports an infringement based on an Observer's report, the responsibility to carry out further investigations becomes that of the flag or coastal state. It is at this flag state or coastal state level, where the majority of the infringement reports are allegedly 'lost' or ignored.

Once they have submitted infringement reports, Observers and debriefers in Regional Observer Programmes are not informed about follow-up proceedings. Sources spoken to by CNS allege that after infringement reports are sent to the relevant authorities, neither Observers nor debriefers receive any further communication from compliance officers and monitoring, control and surveillance (MCS) analysts. This lack of transparency by fisheries authorities has a negative impact on the MCS of IUU practices in the WCPO region.

Finding cases of mistreatment of vessel crew in such a small data set is grounds for concern.

Based on the findings of this report, the role of Conformity Assessment Bodies (CABs) must be questioned. We found that CABs – supposedly auditing against the MSC Standard – failed to follow up on numerous problems reported by Observers, and made no attempt to interview any whistle-blower Observers. Without interviewing Observers, who are the 'eyes and ears' of civil society on the ocean – which is a common resource and biosphere for all humanity and not just the fishing companies who extract vast profits from them – the CABs have failed in their duty.

UPDATE TO SLIPPING THROUGH THE NET

Our report 'Slipping Through the Net' (2022) received public responses from two CABs, SCS Global¹ and LRQA,² and following these from Assurance Services International (ASI),³ the organisation charged with overseeing the CABs. ASI's role is to evaluate the CABs' ability to implement their certification system in accordance with accreditation requirements. Following the public response, we have had ongoing engagement with ASI through email and video calls.

We appreciate and acknowledge ASI's sincerity of engagement and willingness to have a dialogue with us. We are concerned about the two CABs' lack of engagement with the actual Observers and their reports. In the following we present our review of the responses to our report.

We thank accreditation oversight body ASI for its engagement and collaboration and are grateful that ASI have pledged to develop a new framework for auditing processes. The two ASI 'witness assessments' (which later became Final Assessments Reports) of SCS Global and LRQA are (at the time of writing) published online here:

SCS Global: Assurance Services International. (2022c). ASI Final Assessment Report – SCS Global Services – MSC Assessment. Asi-Assurance.Org.
<https://www.asi-assurance.org/s/assessment/a1P5c000008BKJtEAO/a20210245054>

LRQA: Assurance Services International. (2022b). ASI Final Assessment Report – Acoura Marine Limited trading as LRQA – MSC Assessment. Asi-Assurance.Org.
<https://www.asi-assurance.org/s/assessment/a1P5c000008BKmzEAG/a20210545419>

A detailed review of the ASI Final Assessment Reports is available in the Appendix to this report.

We have examined the two ASI Final Assessments Reports and noted the three Minor Nonconformity and three Opportunities for Improvement found for LRQA, and one Minor Nonconformity and two Opportunities for Improvement found for SCS Global.

Our major concern remains the fact that no Solomon Island Observers were interviewed, and no attempt was made to interview any Observers by either CAB.

Our 'Slipping Through the Net' report gave voice to the legitimate stakeholder concerns of multiple Solomon Island Observers through hundreds of Observer reports that were handed to us by a whistle-blower. We were disappointed to learn that these stakeholder concerns were not adequately listened to or actioned upon, by either of the CAB surveillance reports. As the only official complaints channel open to escalating the problems highlighted in our report, we believe the concerns of the Solomon Island fisheries Observers should have been a lot more rigorously investigated by the CABs than they were.

1. SCS Global Services. (2022). <https://www.scsglobalservices.com/>

2. LRQA – Assurance, Certification, Inspection, Training. (2022). <https://www.lrq.com/>

3. Assurance Services International. (2022). ASI. <https://www.asi-assurance.org/s/about>

We believe that unless a broad cross section of Observers is interviewed, and their reports properly evaluated as part of the CAB's surveillance audit, the systemic problems we highlighted in our report will continue unchecked. This will inevitably lead to the further degradation of marine ecosystems across the Western and Central Pacific Ocean.

As our 'eyes on the ocean', it makes no sense that the CABs do not, as a rule, interrogate Observer reports during the course of their MSC fishery assessments. These are, after all, extremely important, if not the only independent sources of primary data, in assessing the sustainability of any given fishery. We do not understand how a CAB can determine a fishery's compliance with, and scoring against the MSC Standard, if they do not review Observer reports regularly, and just accept what any given fishery client tells them at face value. This appears to create a conflict of interest, given that a CAB receives a fee from the very fishery that it is assessing. Clearly, as part of the MSC process, transparency would be greatly enhanced by making fishery Observer reports fully available to CABs.

We strongly reject the Solomon Islands Ministry of Fisheries and Marine Resources so-called "confidentiality concerns", and concerns about the "reliability of the results of the proposed methodology given the sensitivity of the topic", as highlighted in the ASI Final Assessment Reports, which effectively led to the shutting down of a proper inquiry into our investigation. The lack of cooperation by the Solomon Islands government should have been challenged and circumvented by the CABs. The Solomon Islands government's attempt to silence whistle-blowers in its own fishery Observer programme, and to whitewash the findings of our report is shocking, looks suspicious and requires deeper investigation. We look forward to the release of the Solomon Islands government MFMR report, although we note that no timeline has been given for this.

NEW REVELATIONS

The tuna fisheries in the Western and Central Pacific Ocean (WCPO) are the largest in the world. Under the jurisdiction of the Western and Central Pacific Fisheries Commission, they range from small-scale artisanal operations in the coastal waters of the Pacific states to large-scale industrial operations in the exclusive economic zones of Pacific nations and international waters.

Within the WCPO, distant water fishing fleets access Pacific Island Countries' (PICs) EEZs under various fishing access arrangements, including:

Bilateral Fisheries Access Agreements between the PIC governments and the governments of bilateral partners

- Vessels operating under Parties to the Nauru Agreement (PNA)
- Vessels operating under a cross-party, multi-zone access pool. Vessels from other Pacific Island nations fish under the Federated States of Micronesia Arrangement
- Vessels operating under the multilateral treaty between Forum Fisheries Agency member countries and the United States of America (US Tuna Treaty).

The PNA is considered a global leader in tuna conservation and management measurements, with the world's first conservation measurements, such as high seas closures to fishing, controls on fish aggregating devices (FADs), protection of whale sharks, and 100% Observer coverage of purse seine fishing vessels. As a focus of the PNA sustainability strategy, no dolphins are said to be caught in PNA waters, and the PNA is actively involved in limiting bycatch in other species. In total, the PNA controls around 50% of the global supply of skipjack tuna (SKJ), the most commonly canned tuna found in supermarkets across the world. The PNA is regarded as an ecologically sustainable fishery.

CNS aims to generate usable evidence in the global fight to eliminate illegal fishing and human rights abuse in tuna fisheries, to promote industry reform through the reform of fisheries certification schemes (such as the MSC), RFMOs and Observer programmes, and to advocate for increased transparency. CNS wishes to improve sustainability and corporate responsibility in all fisheries by highlighting the impact of highly subsidised DWFFs on coastal states and their artisanal fishing activities, and endorsing and enhancing the United Nations' Sustainable Development Goal (SDG) 14, 'Conserve and sustainably use the oceans, seas and marine resources for sustainable development'.

In preparing this paper, researchers reviewed and catalogued 54 Observer trip data sets. Forty-one were from the PNA Observer Agency (POA) (2017 to 2020). Thirteen were from Bilateral Fisheries Access Agreements Observer data sets from SBOB (2018 to 2020). These include: General (GEN) 1-6 Forms (Observer forms used for reporting sighted vessels, SSI interactions and sightings, noted infringements, FAD encounters and pollution reports), Observer Trip Journals with elaborated details, PS 1-5 Forms (SPC/FFA Observer forms used for purse seiners), Supplementary Information (SUP) 1-4 Forms (SPC/FFA Observer preparation forms), Purse Seiner (PS) Trip Reports (the final report of the fishing trip with summarised information) and Long Liner (LL) 4 Forms (SPC/FFA Observer forms for longliners). The data was analysed and catalogued in a database spanning over 700 entries, organised by type of observations reported.

All documented violations were validated by national, regional and international regulations, including the MSC Standard, where relevant.

Researchers met with several limitations, most notable was scarce longline data. Pre COVID-19, Observer coverage of longline vessels was struggling to meet the 5% WCPFC target, pandemic restrictions and the consequent suspension of the Observer programme coverage means longline data is at an all-time low. Unfortunately, researchers had limited access to government offices and relevant offices of interest to ask for additional information.

TABLE I. LIST OF PACIFIC ISLANDS REGIONAL FISHERIES OBSERVER (PIRFO) CODES AND FAO SPECIES CODES USED.

Target tuna species codes		Sharks & rays FAO species codes	
SKJ	Skip Jack Tuna	FAL	Silky Shark
YFT	Yellow Fin Tuna	OCS	Oceanic Whitetip Shark
BET	Big Eye Tuna	RMV	Devil Ray
Bycatch and target catch fate codes		RMB	Manta Ray
DCF	Discarded Cut Free or Far	RHN	Whale Shark
DFR	Discarded Fins Retained (Sharks only)	Other bycatch species FAO codes	
DUS	Discarded Unwanted Species	RRU	Rainbow Runner
DDL	Discarded Difficult to Land	CNT	Oceanic Trigger Fish
DSD	Discarded Shark Damage	MSD	Mackerel Scud
DGD	Discarded Gear Damaged	KYC	Blue Sea Chub
DTS	Discarded Too Small	BUM	Blue Marlin
DPD	Discarded Protected Species Dead	BLM	Black Marlin
DPA	Discarded Protected Species Alive	GBA	Great Barracuda
DPU	Discarded Protected Species Condition Unknown	DOL	Mahi Mahi/Dolphin Fish
DOR	Discarded Other Reasons	WAH	Wahoo
ROR	Retained Other Reasons	SFA	Indo Pacific Sailfish
RFR	Retained Fins Retained (sharks only)	MLS	Stripe Marlin
RCC	Retained for Crew Consumption	SSP	Shortbill Spearfish
Cetacean FAO species codes		GLT	Golden Travelly
SIW	Sei Whale	NXI	Giant Travelly
FAW	False Killer Whale		
RTD	Rough Toothed Dolphins		
BRW	Bryde's Whale		
DCO	Short Beak Common Dolphin		
DCZ	Long Beak Common Dolphin		
KPW	Pygmy Killer Whale		
MIW	Minke Whale		

FINDINGS

Analysis of Observer data from 53 purse seine trips and one longline vessel trip, from the PNA Observer Agency and Bilateral Fisheries Access Agreements, identified a total of 797 cases of potential violations of CMMs and MSC regulations. The Observer data came from a total of 37 purse seine vessels (35 were MSC-certified vessels and two were not) and one longliner which was not an MSC-certified vessel. A list of vessels with their MSC certificates can be found in Appendix 1.

A breakdown of the 797 cases follows:

1. The review of POA Observer data (27 MSC-certified purse seine, one non-MSC-certified purse seine vessel⁴ found:

- 32 violations of CMM 2011-03.
- 298 violations of CMM 2019-04 and CMM 2019-05.
- 277 violations of CMM 2013-05.
- 14 violations of CMM 2009-02.
- 12 violations of CMM 2017-04 and MARPOL regulations.
- Three violations of mistreatment of vessel crew.

2. The review of Bilateral Fisheries Access Agreements Observer data (eight MSC-certified purse seine, one non-MSC-certified purse seine vessel, one non-MSC-certified longliner) found:

- Five violations of CMM 2011-03.
- 81 violations of CMM 2019-04 and CMM 2019-05.
- 70 violations of CMM 2013-05.
- One violation of CMM 2017-04 and MARPOL regulations.
- One violation of mistreatment of vessel crew.
- Three violations of CMM 2018-05 and CMM 2017-03.

KEY FINDINGS – MSC-CERTIFIED VESSELS

MSC-certified vessels operating under PNA/FSMA licences and Bilateral Fisheries Access Agreements between Pacific Island governments and the governments of Distant Water Fishing Nations (DWFN) are guilty of violating WCPFC CMMs.

Observer data from 35 MSC-certified vessels (92% of total vessels analysed) involved in 51 PNA and Bilateral Fisheries Access Agreements (94% of the total Observer sets) was reviewed by the researchers. Their analysis brought to light cases of MSC-certified vessels committing 32 critical infringements involving cetaceans (whales and dolphins).

Incidents involving protected shark species such as silky sharks (FAL), oceanic whitetip sharks (OCS), whale sharks (RHN), giant manta rays (RMB) and devil rays (RMV) were also uncovered by the researchers. The incidents occurred across 41 trips conducted by 27 MSC-certified and one non-MSC-certified purse seine vessels operating under the FSMA licence agreement between the years 2017 and 2020. Forty-seven out of 298 incidents were incurred during MSC-eligible sets.

4. MAX 101 was not an MSC-certified vessel at the time of the trip that was reviewed by this research. The vessel's name was later changed to WIN Best 707, which was then MSC-certified (MSC-F-31245) under the Tri Marine Western and Central Pacific Skipjack and Yellowfin Tuna Fishery.

In addition to the reported evidence of vessels deliberately setting nets around live whales and dolphins, the data revealed cases of vessel crew interfering with Observers' work, and of undersized and unmarketable fish being discarded and wasted (high grading the catch).

MSC-certified vessels were also found to have breached fisheries agreements around the handling of SSI. The data review identified cases where SSI were neglected and left inside a net sack⁵ while vessels continued brailing their catch on board. In some cases, SSI were left on deck to die. In others, SSI were let go through the net power block and crushed to death or butchered while they were entangled with the net.

Discrepancies in the reporting of bycatch and target catch by MSC-certified vessels were common. Cases were identified where vessels failed to log bycatch or target tuna species that had been discarded or retained for crew consumption. According to WCPFC CMM 2013-05, vessels are required to produce complete and accurate daily catch and effort information. The data recorded for each day's fishing operations must also include accurate target species and bycatch information for stock assessment and other scientific evaluation purposes. Vessels are required to report information about both retained and discarded target species and bycatch accurately.

Several cases of marine pollution were identified on board MSC-certified vessels and serious allegations of mistreatment of vessel crew, which again highlights the urgency to introduce a CMM for crew and human rights.

Of most concern, critical violations on MSC-certified vessels were not followed up in a timely manner. This suggests a worrying lack of transparency around how MSC-certified vessels operate in the WCPFO, and how Observer data is being used (if at all) to identify violations. All PNA data must be fully debriefed before Observers can claim trip payments from POA. If a debriefer has reported an infringement, the responsibility lies with the flag or coastal state to carry out an investigation. This research suggests this rarely happens.

It is troubling that MSC-certified vessels aren't penalised for irregular or illegal fishing activities and that they are allowed to continue fishing in the WCPO regardless of violations.

5. Net sack, sometimes called the net bag, is a more durable section at the skiff end of the net. Able to sustain the stress weight of the catch after the main body of the net has been rolled on board the vessel (similar to the cod end of a trawl net), it is usually made with stronger netting material (or double netting) than the main body of the net because it is the area that is responsible for holding the entire weight of the catch, sometimes up to 400 metric tons.

POA DATA REVIEW ON PURSE SEINE VESSELS

Forty-one Observer data sets from 28 vessels were reviewed. Twenty-seven of those were MSC-certified purse seine vessels and one was not MSC-certified. Of the 41 trips, 29 were MSC trips and 12 were not.

TABLE 2. REVIEW OF VIOLATIONS ON BOARD PURSE SEINE VESSELS OPERATING UNDER THE FSMA MULTILATERAL AGREEMENT.

Year	Trips Analysed	Type Of Observation	Number Of Reported Violations	Description	Vessel Name(s)	
					MSC Trip	Non-MSC Trip
2017	7	CETACEANS INTERACTIONS (CMM 2011-03)	6	Vessels setting the net around a school of tuna associated with live cetaceans.	Queen Isabelle 88	Sophia Martina, Southern Seas 303
		SHARKS & GIANT RAYS INTERACTIONS AND LANDINGS (CMM 2019-04 & CMM 2019-05)	57	Shark and ray species interacting with vessel gear or landing on deck and mishandling of sharks and giant rays by vessel crew.	Majestic Sun, Atun Sta/Eastern Star, Koo's 107/ Marshalls 202, Queen Isabelle 88	Max 101/ Win Best 707, Sophia Martina, Southern Seas 303
		DISCREPANCY IN BYCATCH AND TARGET CATCH DISCARD REPORTING (CMM 2013-05)	53	Vessels not reporting or inaccurately reporting on bycatch and target catch that were DUS, RCC, DGD, DPD, DPA, DPU, DSD or DTS.	Majestic Sun, Atun Sta/Eastern Star, Koo's 107/ Marshalls 202, Queen Isabelle 88	Max 101/ Win Best 707, Sophia Martina
		MISTREATMENT OF VESSEL CREW	1	Vessel captain assaulted crew members.	Atun Sta/Eastern Star	-
2018	16	CETACEAN INTERACTIONS (CMM 2011-03)	10	Vessels setting the net around a school of tuna associated with live cetaceans.	Kaile 888, Trinidad III, Marita 88, Nupla Kumul/New Splendor, Queen Alexandra 959, Nupla Solwara/New Marine, Queen Anne 959, Melissa, Moamaeu, Atun Sta/Eastern Star	cronesia 103 and Southern Seas 302
		SHARK & GIANT RAYS INTERACTIONS AND LANDINGS (CMM 2019-04 & CMM 2019-05)	105	Shark and ray species interacting with vessels gear or landing on deck and mishandling of sharks and giant rays by vessel crew.	Kaile 888, Trinidad III, Marita 88, Nupla Kumul/New Splendor, Queen Alexandra 959, Atun Kalap/Eastern Marine, Atun Planti/Oriental Marine, Nupla Solwara/New Marine, Queen Anne 959, Melisa, Moamaeu	Micronesia 103, Koo's 108 and Southern Seas 302

		DISCREPANCY IN BYCATCH AND TARGET CATCH DISCARD REPORTING (CMM 2013-05)	94	Vessels not reporting or inaccurately reporting on bycatch and target catch that were DUS, RCC, DGD, DPD, DPA, DPU, DSD or DTS.	Kaile 888, Trinidad III, Marita 88, Nupla Kumul/New Splendor, Queen Alexandra 959, Atun Kalap/Eastern Marine, Atun Planti/Oriental Marine, Nupla Solwara/New Marine, Queen Anne 959, Melissa, Moamaeu	Micronesia 103, Koo's 108 and Southern Seas 302
		HIGH GRADING THE CATCH (CMM 2009-02)	2	Discarding undersized or less marketable tuna species to make room for more marketable tuna species.	Moamaeu	-
		MARINE POLLUTION (CMM 2017-04 & MARPOL Regulations)	9	Disposing of plastic, metal and other rubbish into the ocean.	Melissa, Kaile 888. Atun Kalap/Eastern Marine, Atun Planti/Oriental Marine	-
		FAD FISHING DURING FAD CLOSURE (CMM 2009-02)	2	Vessel was alleged to be carrying out FAD fishing during FAD closure period.	Kaile 888	-
		MISTREATMENT OF VESSEL CREW	1	Vessel officers neglect to fix the crew ablution block resulting in a very unhygienic environment where the crew had to resort to relieving themselves over the side of the vessel.	Kaile 888	-
2019	12	CETACEAN INTERACTIONS (CMM 2011-03)	11	Vessels setting the net around a school of tuna associated with live cetaceans.	Atun Sta/Eastern Star, Atun Planti/Oriental Marine, Marita 88, Nupla Solwara, Simbun 88,	Trinidad III
		SHARKS & GIANT RAYS INTERACTIONS AND LANDINGS (CMM 2019-04 & CMM 2019-05)	97	Shark and ray species interacting with vessel gear or landing on deck and mishandling of sharks and giant rays by vessel crew.	Atun Planti/Oriental Marine, Marita 88, Queen Alexandra, Nupla Solwara, Simbun 88	Joon Discoverer, Unaak, Mathawmarfach, Mamautari, Trinidad III
		DISCREPANCY IN BYCATCH AND TARGET CATCH DISCARD REPORTING (CMM 2013-05)	94	Vessels not reporting or inaccurately reporting bycatch and target catch that were DUS, RCC, DGD, DPD, DPA, DPU, DSD or DTS.	Atun Planti/Oriental Marine, Marita 88, Queen Alexandra, Nupla Solwara, Simbun 88	Joon Discoverer, Unaak, Mathawmarfach, Mamautari, Trinidad III
		MARINE POLLUTION (CMM 2017-04 & MARPOL Regulations)	3	26 empty 44-gallon oil drums, plastic and other garbage discarded into the ocean.	Atun Planti/Oriental Marine	Unaak

2020	6	CETACEAN INTERACTIONS (CMM 2011-03)	5	Vessels setting the net around a school of tuna associated with live cetaceans.	Southern Seas 302, Moamari	-
		SHARKS & GIANT RAYS INTERACTIONS AND LANDINGS (CMM 2019-04 & CMM 2019-05)	39	Shark and ray species interacting with vessel gear or landed on deck and mishandling of sharks and giant rays by vessel crew.	Moamaeu, Southern Seas 302, Southern Seas 301, Moamari, Kaile 88	Trinidad III
		DISCREPANCY IN BYCATCH AND TARGET CATCH DISCARD REPORTING (CMM 2013-05)	36	Vessels not reporting or inaccurately reporting on bycatch and target catch that were DUS, RCC, DGD, DPD, DPA, DPU, DSD or DTS.	Southern Seas 302, Moamaeu, Southern Seas 301, Moamari, Kaile 88	Trinidad III
		HIGH GRADING THE CATCH (CMM 2009-02)	10	Discarding undersized or less marketable tuna species to make room for bigger, better more marketable tuna species.	Moamaeu, Kaile 88	Trinidad III
		MISTREATMENT OF VESSEL CREW	1	Crew resorted to using violence against vessel property and other crew members because of frustration of not being allowed to go ashore.	Moamaeu	-

SHARKS & GIANT RAYS INTERACTIONS & LANDINGS

A total of 298 incidents involving protected shark species such as silky sharks (FAL), oceanic whitetip sharks (OCS), whale sharks (RHN), giant manta rays (RMB) and devil rays (RMV) were uncovered by the researchers. The incidents occurred across 41 trips conducted by 27 MSC-certified and one non-MSC-certified purse seine vessels operating under the FSMA licence agreement between the years 2017 and 2020. Of the 298 incidents, 47 were incurred during MSC-eligible sets.

The research shows over 2,400 silky sharks (FAL), 21 whale sharks (RHN), 13 oceanic whitetip sharks (OCS), 59 giant manta rays (RMB) and 16 devil rays (RMV) were interacted with, landed and, more often than not, discarded dead.

Observers reported that crew treatment of sharks and giant ray species was often cruel. Animal welfare concerns were non-existent on board all observed vessels. The research found detailed descriptions of sharks being sent through power blocks and crushed to death, offloading hooks used to drag sharks and giant rays across the deck, crew grabbing sharks and giant rays by their gill slits, gaffing sharks and rays and neglecting them by leaving them on deck in the sun to die while vessels continued with their fishing operations. Incidents were also reported by Observers of whale sharks (RHN) caught inside and vessels continuing with the brailing process to scoop out fish before attempting to release the sharks.

Prior to 2019, when the CMM 2019-05 (Conservation and Management Measure on Mobulid Rays) ^[2] was put in place, some Observers did not consider giant manta rays and devil rays as SSI, and so did not report their mistreatment during sets or record their condition codes correctly. WCPO guidelines on how to properly handle sharks and rays caught inside a purse seine net were ignored in these incidents. ^{[3][4][5]}

There are several interactions with silky sharks (FAL) on MSC-certified vessels. These stand out for the sheer number of silky sharks (FAL) interacted with during each set and the way they were treated:

In one instance, 189 silky sharks (FAL) were landed on deck during an MSC-eligible trip by fishing vessel Simbun 88. Of the 189 sharks, 13 were landed alive but injured and were then rolled through the power block to be squashed and discarded. The other 176 sharks were landed on deck dead during the brailing process and discarded with the use of hooks.⁶

In another incident, 59 silky sharks (FAL) were landed during a set on FV Unaak. They were all discarded dead. Twenty-six of them were entangled in the net during hauling and sent through the power block, which caused them to sustain severe injuries. These sharks were left on board to die until the sacking up process began, after which they were discarded overboard. The other 33 sharks were landed during brailing and were discarded. The Observer mentioned in his journal that the treatment and handling of the SSI was “bad, rough and cruel.”⁷ During an MSC-eligible trip by Southern Seas No. 302, 72 silky sharks (FAL) were landed on board. Thirty-two went through the power block and 40 were landed during brailing. All sharks were discarded dead.⁸

Not all SSI interactions or landings are considered violations, as protected shark species and cetaceans are often caught by accident during fishing sets. If an SSI is landed on board or interacts with gear, and is released appropriately, the incident is not considered an infringement.

According to CMM 2019-04 (Conservation and Management Measure for Sharks), protected shark species or cetaceans, such as silky sharks (FAL), oceanic whitetip sharks (OCS) and whale sharks (RHN), are to be immediately released after the species is brought alongside the vessel, in a manner that results in as little harm to the shark as possible.^[5]

If SSI are neglected, left to die on deck (which often happens with silky sharks (FAL)), deliberately left in the net, or if deliberate sets on cetaceans are observed, these incidents should be classified as violations.

Observers reported incidents of SSI deliberately encircled with tuna schools, then neglected and left to suffer or die inside the net or on deck (in contravention of CMM 2019-04), before being discarded overboard as unwanted or unmarketable species. SSI were routinely neglected and left on deck until after the set before they were discarded overboard.

6. Simbun 88, (MSC Trip # Not Recorded), Set #5@0906hrs, 9 August 2019 (FSMA/POA/26/401)

7. Unaak, (MSC Trip Not Applicable), Set #4 @0507hrs, 15 June 2019 (FSMA/POA/26/292)

8. Southern Seas #302, (MSC Trip # Not Recorded), Set #3 @1007hrs, 31 January 2020 (FSMA/POA/27/035)

A silky shark (FAL) with injuries to its gill slits indicating that it has been carelessly handled by the vessel crew.





An oceanic whitetip shark (OCS) being sent through the power block, left unattended and entangled in the netting while the vessel continued with hauling the net on board.



A whale shark (RHN) is caught and left inside the net struggling and distressed while the vessel prepares for the brailing process.

CETACEAN INTERACTIONS

Researchers identified 32 incidents where 16 MSC-certified purse seine vessels set their nets around tuna schools associated with live cetaceans. These included: baleen whale, bryde's whale, sei whale, minke whale, false killer whale and fin whales (MYS, BRW, SIW, MIW, FAW, FIW) and dolphins (DCO, DCZ). Overall, seven incidents took place during MSC-eligible sets (Tables 3–6). WCPO CMM 2011-03 prohibits purse seiners from setting their nets around tuna schools associated with live cetaceans such as whales and dolphins, and if they are inadvertently caught, they are to be immediately released after the species is brought alongside the vessel, in a manner that results in as little harm to the shark or cetacean as possible.

The Observer reports revealed that most of those sets were deliberately made, and cetaceans were often sighted with tuna schools before nets were set. In follow-up conversations, Observers pointed out that it is very easy to spot whales associated with tuna schools. For example, when false killer whales (FAWs) prey on a free tuna school, they break the ocean's surface and blow every few seconds making them obvious to the lookout crew on board vessels. Additionally, sei whales (SIW) are very large and easily spotted from a great distance. Observers told the researchers that "Purse seine fishermen believe there is a higher chance of catching an associated tuna school if the whale is encircled with the seine".

Generally, fishing masters would know there were cetaceans present before calling for the set. That is to say, vessel officers would have been aware that the tuna schools were near live whales, but chose to ignore the relevant CMM regulations and go ahead with setting their net anyway, maybe hoping that the whale would somehow escape the net boundary.

According to Observers, there is a term for such practice: a whale breaking through the net body is known as a 'blowout'. Vessels encourage this cruel practice by deploying their workboats (auxiliary) to make fast circular motions close to the whale, 'encouraging' the terrified whale to escape by breaking free through the net main body.

Cases were reported where a whale was trapped inside the net and vessels' officers and crew, using their auxiliary boats, would try to scare the whale into breaking free. It is stipulated under CMM 2011-03 that as soon as a cetacean is seen entrapped in the net, all fishing operations should cease and the vessel is to aid in its safe release.^[6]

CMM 2011-03 describes how to safely release a live cetacean trapped inside the net. It instructs fishers to open the net to create a safe passage for the whale to swim out freely. Unfortunately, vessels tend to not follow the guideline if there is a school of tuna inside the net as well. If SSI are neglected, left to die on deck, deliberately left in the net, or if deliberate sets on cetaceans are observed, these incidents should be classified as critical violations.

TABLE 3. CETACEAN INTERACTIONS ON MSC-CERTIFIED VESSELS, POA DATA, 2017.

YEAR: 2017						
NO OF REPORTED VIOLATIONS: 6						
Vessel Name	Flag	MSC certification code/number present and at time of incident	MSC Trip No.	Description	Set No.	Set MSC Eligible (Y/N)
Queen Isabella 88	Federated States of Micronesia	MSC-C-53088	M12310	A false killer whale (FAW) was reported to be encircled during the set; however, it managed to escape unharmed (DPA). The Observer did not mention if the set was deliberately made on the school associated with the live whale.	#4@ 1209hrs	Y
Southern Seas No. 303	Solomon Islands	MSC-C-53088	N/A	A sei whale (SIW) @1mT, associated with a tuna school, was deliberately set upon by the vessel and ended up being trapped in the net. The whale was seen trying to escape by pushing out on netting from within the net enclosure. Vessel crew assisted in cutting open the net, to allow the whale to escape in a safe manner (DPA).	#3@ 1438hrsw	N
Sophia Martina	Philippines	MSC-C-53088	N/A	The vessel targeted a mixed tuna school that was associated with a live sei whale (SIW). The whale interacted with the vessel's primary gear when it came dangerously close to being entrapped in seine enclosure. It escaped by diving out under the seine before it was fully enclosed (DPA).	#7@ 0952hrs	N
				The vessel targeted a tuna school that was associated with a live sei whale (SIW). The whale interacted with the vessel's primary gear when along with the tuna school it was encircled by the seine but escaped by diving out under the seine before it was fully enclosed (DPA).	#11@ 1532hrs	N
				The vessel targeted a tuna school that was associated with a live sei whale (SIW). The whale interacted with the vessel's primary gear when it and the tuna school were encircled by the seine. Both whale and tuna school escaped by diving out under the seine before it was fully enclosed (DPA).	#18@ 1309hrs	N
				The vessel targeted a tuna school that was associated with a live sei whale (SIW). The whale interacted with the vessel's primary gear when it and the tuna school were encircled by the seine. The whale along with the tuna school escaped by diving out under the seine, before it was fully enclosed (DPA).	#25@ 1657hrs	N

TABLE 4. CETACEAN INTERACTIONS ON MSC-CERTIFIED VESSELS, POA DATA, 2018.

YEAR: 2018						
NO OF REPORTED VIOLATIONS: 10						
Vessel Name	Flag	MSC certification code/number present and at time of incident	MSC Trip No.	Description	Set No.	Set MSC Eligible (Y/N)
Queen Anne 959	Federated States of Micronesia	MSC-C-53088	M12617	The fishing master deliberately made a set on a tuna school associated with a live false killer whale (FAW) @0.5mT. The whale was encircled and trapped inside the net along with the school. Work boats were then used to try and get the whale out from inside the net and it managed to escape by leaping over the net corks (DPA).	#44@ 1621hrs	Y
Kaile 888	Papua New Guinea	MSC-C-53088	M13042	The fishing master deliberately made a set on a school of tuna associated with two live baleen whales (MYS). One whale was caught inside the net along with a portion of the tuna school while the other managed to evade the net boundary. Work boats were used to scare the whale inside the net boundary and it broke free through the netting halfway during hauling the net on board (DPA).	#43@ 1535hrs	N
				The fishing master deliberately made the set on the school of tuna associated with the live baleen whale (MYS). The whale managed to escape the net boundary as the vessel encircled the school (DPA).	#46@ 1122hrs	N
				The fishing master deliberately made the set on the school of tuna associated with the live baleen whale (MYS). The whale managed to escape the net boundary as the vessel encircled the school (DPA).	#49@ 1459hrs	N
Melissa	Federated States of Micronesia	MSC-C-53088	M13001	The Observer sighted a bryde's whale (BRW) trapped inside the net while the vessel continued pursuing. Later the net was opened to allow the whale to escape but it was weak and injured (DPA).	#8@ 1330hrs	N
Atun Planti	Papua New Guinea	MSC-F-31470	M13122	The vessel deliberately set the net on a school associated with two live sei whales (SIW). The bigger whale managed to escape before the net was closed. The smaller whale was trapped inside the net. Vessel used work boats as a sort of scare tactic to trigger the whale to forcefully break free through the nettings which it did manage to do (DPA).	#16@ 1223hrs	N
				A live bryde's whale (BRW) was trapped inside the net during the set but there was no evidence that it was deliberately set on. The SSI was released by opening up the net (DPA).	#2@ 1755hrs	N

Micronesia 103	Federated State of Micronesia (FM)	MSC-C-53088	n/a	The vessel deliberately set her seine around a skipjack tuna free school associated with three false killer whales (FAW) @2mT. The vessel failed to release whales in a safe and timely manner resulting in all three landing on board in the fish sack, injured. They were then removed from the fish sack and discarded overboard via a single auxiliary winch – their tails were secured by a sling to winch and cut free once off board. The whales were discarded alive but injured (DPA) (See images Set 41, Pictures 001-006 below).	#41@ 0654hrs	N
Southern Seas No.302	Solomon Islands	MSC-C-53088	n/a	The vessel deliberately set her seine around a tuna school associated with a live false killer whale (FIW) @1mT. The tuna school managed to evade capture but the whale did not. The vessel crew released the SSI from within the seine enclosure alive (DPA).	#8@ 1330hrs	N
				The vessel deliberately set her seine around a tuna school associated with two live false killer whales (FIW) @2mT. Both managed to evade capture, unaided, by diving out under seine before it was fully enclosed (DPA).	#11@ 1517hrs	N

SET NO. 41

18/07/10

LANDED TIME: 0855 hrs



(003)

Set 41 false killer whales (FAW) landings – FSMA/POA/25/289 Micronesia 103, Picture 003

SET NR 41

18/07/10

LANDED TIME: 09:55 hrs



(004)

Set 41 false killer whales (FAW) landings – FSMA/POA/25/289 Micronesia 103, Picture 004

SET NO. 41

18/07/10

LANDED TIME: 0855hrs



(005)

Set 41 false killer whales (FAW) landings – FSMA/POA/25/289 Micronesia 103, Picture 005



Set 41 false killer whales (FAW) landings – FSMA/POA/25/289 Micronesia 103, Picture 006

TABLE 5. CETACEAN INTERACTIONS ON MSC-CERTIFIED VESSELS, POA DATA, 2019. ⁹

YEAR: 2019						
NO OF REPORTED VIOLATIONS: 11						
Vessel Name	Flag	MSC certification code/number present and at time of incident	MSC Trip No.	Description	Set No.	Set MSC Eligible (Y/N)
Marita 88	Papua New Guinea	MSC-C-53088	M14192	The vessel deliberately made a set on a tuna school associated with a live sei whale (SIW). The whale was trapped in the seine fish sack and was released alive by the crew who cut it free from the netting (DPA). ⁹	#2@ 1133hrs	Y
				The vessel deliberately made a set on a tuna school associated with two live sei whales (SIW). One whale escaped before the net was closed, the other was trapped in the seine enclosure and later managed to evade capture, unaided, by breaking through netting (DPA).	#7 @1524hrs	Y
Nupla Solwara	Papua New Guinea	MSC-F-31470	M13438	A pygmy killer whale (KPW) @3mT was incidentally caught when it was encircled and trapped in a seine enclosure. The cetacean managed to escape alive but was injured, by breaking through the net body (blowing out the net) (DPA). Vessel failed to assist the cetacean in safely releasing it from within the net enclosure.	#25@ 1421hrs	N
				A minke whale (MIW) @7mT was incidentally caught when it was encircled and trapped in a seine enclosure. Cetacean did not manage to escape capture on its own. It ended up in the fish net sack and was released late by crew (DPA).	#26@ 1740hrs	N
Simbun 88	Papua New Guinea	MSC-C-53088	Not Recorded	Two minke whales (MIW) @30mT associated with a tuna school were encircled by the vessel's seine. Both whales were entrapped in a seine enclosure and were scared off by the vessel's workboats. Whales escaped by blowing out the net. A helicopter was in flight before the set and so most likely the vessel was aware of the presence of the whales before the set was called. Vessel showed no regard for the safety of the whales and endangered the protected species (DPU).	#12@ 0727hrs	N
				The vessel targeted a tuna school associated with a live minke whale (MIW) @20mT. It was encircled in seine and managed to evade capture by blowing out the net, when chased by workboats. Vessel again showed no regard for the well-being of the cetacean and put the whale in danger (DPU).	#20@ 1604hrs	N

9. Vessel investigated the tuna-free school that was associated with the live SIW before making Set #2. Vessel was therefore well aware of the presence of the SIW with the tuna-free school prior to the set. (SIW are very large creatures and are very easily spotted even miles away.)

				Two live minke whales (MIW) @50mT that were associated with the tuna school were set upon by the vessel. Both were entrapped in a seine enclosure and were later scared off by vessel's workboats (workboats chased whales around in net enclosure forcing them to breakout). Whales escaped by blowing out the net. A helicopter was in flight before the set and so it is most likely that the vessel was well aware of the presence of the MIWs with the tuna school, before the set was called. Vessel showed no regard for the safety of the whales and endangered the protected species (DPU).	#22@ 1602hrs	N
Atun Sta	Papua New Guinea	MSC-F-31470	M13457	A school of tuna associated with a live bryde's whale (BRW) was deliberately set on. The SSI was sighted prior to setting the net around the school. The SSI managed to escape the net boundary just before the bottom of the net was closed (DPA).	#9@ 1731hrs	N
Trinidad III ¹⁰	Micronesia	MSC-C-53088	n/a	The vessel deliberately targeted and made a set on a tuna school associated with a live bryde's whale (BRW). The whale escaped and was not entrapped in the seine enclosure (DPA).	#10@ 1813hrs	N
				The vessel deliberately targeted and made a set on a tuna school associated with a live bryde's whale (BRW). It was encircled with seine and was entrapped in the net enclosure until speed boats were directed by the fishing master to scare it out. The cetacean escaped by blowing out (breaking through) the net body (DPU).	#11@ 0956hrs	N
Atun Planti	Papua New Guinea	MSC-F-31470	M13458	Three common dolphins (DCO) were caught and left inside the net until the brailing process. The dolphins did not land on deck but were removed from inside the net sack by deck crews. All were reported dead (DPD)	#11@ 0555hrs	N

TABLE 6. CETACEAN INTERACTIONS ON MSC-CERTIFIED VESSELS, POA DATA, 2020.

YEAR: 2020						
NO OF REPORTED VIOLATIONS: 5						
Vessel Name	Flag	MSC Certification Code/Number Present And At Time Of Incident	MSC Trip No.	Description	Set No.	Set MSC Eligible (Y/N)
Moamari	Kiribati	MSC-C-53088	Not Recorded	The vessel intentionally targeted a tuna school associated with two live false killer whales (FAW). Tuna-free school along with cetaceans were enclosed in seine, both whales managed to evade capture unaided, by breaking through the body of the net (DPA). ¹¹	#3@ 0628hrs	Y

10.FV Trinidad III has been decommissioned.

11.The Observer's journal record states that the vessel had first sighted both FAWs with the tuna school during investigation – prior to conducting the fishing set. The vessel, therefore, clearly showed no regard towards the safety of the cetaceans and wilfully allowed their endangerment.

Southern Seas No.302	Solomon Islands	MSC-C-53088	Not Recorded	The vessel deliberately set on a tuna school associated with two live bryde's whales (BRW). Both cetaceans were trapped in the net enclosure and managed to escape, unaided, by blowing out – forcibly pushing out on the net body breaking holes in the net to escape (DPA).	#6@ 1647hrs	Y
				The vessel deliberately set on a tuna school associated with two live bryde's whales (BRW). Both cetaceans were encircled with seine and were trapped inside the net enclosure during net hauling. Both cetaceans managed to escape, unaided, by blowing out the net main body (DPA). ¹²	#8@ 1250hrs	Y
				A bryde's whale (BRW) @8mT was caught alive inside the net as the vessel was circling the school. The whale managed to break through the net and escape during pursing, alive but injured (DPA).	#4@ 1542hrs	N
				Two bryde's whales (BRW) @20mT were caught alive inside the net as the vessel was circling the school. They managed to break through the net and escape alive but were injured as the vessel was hauling the net onto the stern end (DPA).	#6@ 1335hrs	N

DISCREPANCIES IN BYCATCH AND TARGET CATCH DISCARD REPORTING

There were frequent discrepancies in the reporting of both bycatch and target catch by purse seine vessels. In 99% of the purse seine trips reviewed vessels were misreporting.

Researchers found a total of 277 discrepancies in bycatch and target catch reporting from just 41 trips. Those 41 trips were conducted by 27 MSC-certified and one non-MSC-certified purse seine vessel operating under the FSMA licence agreement between the years 2017 and 2020.

Vessels were found to have:

- inaccurately recorded retained target catch
- inaccurately or not recorded target catch discards
- recorded target species inaccurately
- not recorded bycatch discards
- inaccurately recorded retained bycatch species
- inaccurately recorded discard bycatch species.

Discrepancies in bycatch and target catch reporting compromises the accuracy of information passed on to scientists for stock assessment and fishery management in the WCPO.

Our research found some vessels were over-reporting, i.e. reporting more bycatch than the on-board Observer. There are several possible reasons for these discrepancies: a) the vessel's estimation method could be different to the Observer's, b) the Observer may have underestimated, or c) the vessel may deliberately record higher bycatch landings to manipulate data to indicate that the bycatch fish stock is still healthy. According to conversations with Observers, vessel companies are allegedly instructing vessel crew to over-record. Assessments indicating that fish stocks are still thriving gives the fishing industry indirect permission to continue fishing, despite the vast industrial fishing operations taking place in the region.

¹²The Observer's journal record states that both cetaceans were sighted with the tuna school during investigation – prior to the fishing set. The vessel again had no concern for the safety of the cetaceans and allowed for them to be in danger.

Our research suggests that regional and national fisheries governing bodies are not taking cases of discrepancies in bycatch and target catch discard reporting seriously, and have not been issuing penalties to vessels for misreporting. Often only weak warnings are issued to vessel operators. Misreporting appears to be all too common, and requires urgent attention and effort. Incorrect and false reporting creates an inaccurate interpretation and assessment of the fish stock in the WCPO. Not paying attention to actual practices, and relying exclusively on information relayed through intermediaries who often have conflicting interests, means the MSC is unwittingly promoting an unscientific and false stock assessment.

As noted in CMM 2013-05, non-compliance with this measure shall be considered in accordance with CMM 2010-06, the CMM set up to establish a list of vessels presumed to have carried out illegal, unreported and unregulated fishing activities in the WCPO.



Some common purse seine bycatch species that are misreported by vessels. From top to bottom: oceanic triggerfish (CNT), rainbow runner (RRU) and mackerel scad (MSD).



Bycatch species and target catch species fate. From left to right: silky sharks (DPD), mahi-mahi (dolphinfish) (DUS), juvenile big eye tuna (DTS), juvenile yellowfin tuna (DGD) and adult big eye tuna and yellowfin tuna (RCC).

HIGH GRADING & FAD FISHING DURING FAD CLOSURE

When vessels discard undersized or lower quality tuna species, they are high grading the catch. It often happens during the brailing process, or during the transfer of fish between wells, to make room for larger sized tuna species. Researchers uncovered 12 incidents of high grading on three MSC-certified vessels. These violate the CMM 2009-02^[7] rule for catch retention, which prohibits discarding undersized or unmarketable target tuna species after the brailing process has commenced. As per the catch retention rule, if the fishing master sees that the school of tuna is undersized, they should not make the set in the first place. If they have already made the set and then see that the school is undersized, they should open the net to release the school. If the fishing master continues and starts brailing the catch on board then he is not allowed to discard the fish.



High grading the catch during fish transfer between wells.

Two incidents of FAD fishing during the FAD closure period (which normally takes place between 1 July until 30 September) were reported by the Observer during MSC trip (M13042) on board MSC-certified vessel Kaile 888.

The Observer reported that on 11 August 2018, set 19 (set not MSC-eligible) was made on a school of tuna that he assumed aggregated underneath the vessel during the night while the vessel was drifting. As it was during the FAD closure period, vessels were not allowed to set on any school of tuna that take refuge underneath the vessel overnight because the drifting vessel is said to be acting as a FAD.

A similar incident happened on 12 August 2018. The Observer reported that during set 20 (set not MSC-eligible), FV Kaile 888 set the net on a school of tuna. The Observer reported in his journal that the tuna school either aggregated under his host vessel (FV Kaile 888) or the FV Sajo Concordia which, he wrote, was drifting nearby. Since it was during the FAD closure period, vessels were not allowed to set on tuna taking refuge beneath vessels drifting at night, because those vessels are said to be acting as FADs. The Observer elaborated in his journal that he was certain the school of tuna must have taken refuge underneath his host vessel because he was tracking and comparing the position when the vessel was last recorded drifting and the position of the set. He noted that the positions were almost identical.

PNA MSC certification focuses on skipjack tuna (SKJ) and yellowfin tuna (YFT) caught FAD-free. Tuna caught in free schools is said to be sustainable. However, changes were recently made to MSC rules that now effectively allow PNA MSC-certified fishery to include not only free school sets but also FAD sets.

Given past activities of PNA-licensed purse seine fishing vessels, it is questionable who benefits from a FAD management strategy that will undoubtedly have negative impacts on fish stocks.

The three principles of the MSC Fisheries Standard are:

- Sustainability of the stock
- Ecosystem Impacts
- Effective management.^[8]

FAD fishing for target tuna species whether anchored, natural or drifting often lands undersized and juvenile species, along with other bycatch species including sharks and rays. Certifying FAD fishing under the MSC label contradicts the first principle of the MSC Fisheries Standard, both for the sustainability of the tuna stock, and for other bycatch species. Shark landings in FAD fishing are very common, and the majority of sharks that land on deck are already dead or are left on deck to die before being discarded overboard.

Taiwanese designed Fish Aggregating Devices (FAD) ready for deployment into the ocean.



MISTREATMENT OF CREW

Three cases of mistreatment of vessel crew were found in the 41 PNA Observer data sets reviewed. It is noteworthy that the applicable WCPFC Resolution 2018-01 on Labour Standards for Crew on Fishing Vessels, encourages member states (CCMs) to adhere to a) relevant national legislation and b) “to implement measures, consistent with generally accepted international minimum standards for crew on fishing vessels”.^[9] While the resolution does not formulate binding legislation, the WCPFC is in the process of finalising a CMM on Labour Standards for crew on fishing vessels. Its latest draft was published in July 2022. That draft, with the title changed to “CONSERVATION AND MANAGEMENT MEASURE ON SAFETY AND SECURITY FOR CREW ON FISHING VESSELS”, calls on the CCM, the vessel operator and the Secretariat to take relevant actions in cases where harassment of vessel crew (that includes the Observer) has been reported.^[10]

On 8 May 2017 during MSC trip (M11789), the Observer reported in his journal that at position LAT: 00°11.829 N & LON: 167°54.219 E the MSC-certified purse seine vessel Atun Sta s Taiwanese captain assaulted a crew member from the Philippines. The journal records the captain held the crew member's neck, causing him to choke, while asking whose turn it was to clean the mess room and hallway. Afterwards, the captain approached a PNG crew member with clenched fists and looked like he was about to beat that crew member. According to the Observer, the argument started over unfinished chores. After the incident, the vessel crew and radio operator reported to the Observer that the captain had been harassing members of the crew for some time, but they were afraid to report him to the authorities.

On 3 August 2018, during MSC trip (M13042) onboard MSC-certified vessel Kaile 888, the Observer reported in his journal that the toilet they were using had plumbing issues. As a result, he and the deck crew had to resort to using the side of the vessel to relieve themselves, which the Observer said was very dangerous, especially when the vessel was cruising.

The Observer reported the situation to the fishing master and radio operator, who said they were going to fix the problem, but nothing was done about it. Observing the crew using the side of the vessel as an alternative and the “disgusting scene in the toilet”¹³ over a period of one week bothered the Observer, who felt that the crew were denied their rights to a clean and proper sanitation facility. The Observer also noted that using the side of the vessel to relieve themselves while the vessel is moving was very dangerous. Since the officers on board didn't take the situation seriously, he decided to report the case to the PNA Observer Agency via email on his weekly reporting. When the vessel officers saw the Observer filing a report to the PNA about the plumbing issue, they finally addressed the situation and fixed the toilet.

The Observer reported a serious incident of misconduct during MSC trip (M14678) on board the MSC-certified vessel Moamaeu, on 27 March 2020 at around 0830hrs (UTC+12). His journal entry described two Kiribati crew drinking during the night and damaging some of the property on board the vessel. The Kiribati crew assaulted the chief engineer, punching him on the left forehead above his left eye and injuring him. The Observer reported in his journal that the two Kiribati crew were angry because transshipment in port Tarawa was suspended and no one was allowed to disembark after the vessel arrived in port on 25 March 2020, due to restrictions put in place by the Kiribati Government because of the COVID-19 pandemic.

As of the publication date, there is neither a WCPFC CMM on Labour Standards for crew on fishing vessels nor a CMM on Safety and Security for crew on fishing vessels in place. Resolution

13. Quote from the Observer's journal.

2018-01, adopted by the WCPFC, encourages member states (CCMs) to implement measures, “consistent with generally accepted international minimum standards for crew on fishing vessels, where applicable, to ensure fair working conditions on board for all crew working on fishing vessels”, including safe working environment, decent living conditions on board, fair remuneration and opportunity to disembark vessels.

Given ongoing stories of poor labour conditions on fishing vessels, there is an urgent need to finalise and ratify the existing draft for such a CMM.

MARINE POLLUTION

The reviewed PNA Observer data sets revealed 12 cases of marine pollution in violation of MARPOL Regulations^[11] and respective CMM 2017-04^[12] on five MSC-certified vessels. Observers reported that vessels dumped old purse winch cables, approximately 150 metres to 200 metres in length, straight into the ocean rather than storing them on board for proper disposal on the vessel's return to port. Observers witnessed scrap metals and plastic wastes deliberately discarded overboard, along with empty 44-gallon oil drums. Marine pollution is a hazard to the oceans' ecosystems and fishing vessels are a major contributing factor to polluting our oceans. It is the responsibility of the fishing company, vessel operator and vessel officers to educate their crew about the hazards of polluting our oceans and to uphold relevant regulations.

TABLE 7. MARINE POLLUTION INCIDENTS ON MSC-CERTIFIED VESSELS DURING MSC TRIPS, POA DATA, 2018 AND 2019.

NO OF REPORTED VIOLATIONS: 12						
Year	Vessel Name	Flag	MSC certification code or certificate number present and at time of incident	MSC Trip No.	Description	Time
2018	Kaile 888	Papua New Guinea	MSC-C-53088	n/a	On 28 July 2018, as the vessel was cruising along, the Observer noticed a lot of rubbish passing by in the ocean on the starboard side of the vessel. He went up to the bow of the vessel and saw the deck boss, Mr Chang Chin Sheng, and four Indonesian crews dumping rubbish overboard into the ocean including plastic bottles, instant noodle packets, packing straps, plastic bags, empty cigarette packs, cans, bottles, card boxes and food waste. The dumped rubbish was roughly estimated to be around 1 ton.	0814hrs
	Atun Kalap	Papua New Guinea	MSC-F-31470	n/a	As the vessel was cruising along toward another fishing ground, crews were replacing the old purse cable with a new one. The Observer witnessed that inside International Waters (High Sea Pocket No.1) the old purse cable of 800 metres was dumped into the ocean. According to MARPOL regulations, dumping of old fishing gear in the ocean is prohibited.	0619hrs

	Melissa	Federated States of Micronesia	MSC-C-53088	M13001	While the vessel was concentrating on a school of tuna inside Nauru EEZ, the Observer noticed that a garbage bag was dumped into the ocean. The bag contained plastic materials, cans and plastic water bottles.	1140hrs
					Inside FSM EEZ, the Observer saw two crew members throw away a rectangular-shaped metal object 3 x 1 metre, with a net around it into the ocean.	1620hrs
					After the vessel departed from the port of Tuvalu, the Observer reported that nine bags of general waste like tin, plastics and others accumulated on board were dumped into the ocean when the vessel was transiting to the fishing ground.	2030hrs
					Inside international waters, the Observer suspected that a garbage bag that was present inside the galley was dumped overboard because the garbage bag was nowhere to be found on board the vessel anymore.	0230hrs
					Inside international waters, while the crews were replacing the cable on the purse winch, the Observer reported that two old cables of 7/8 inch and around 100m in length were dumped into the ocean.	1808hrs
2019	Atun Planti	Papua New Guinea	MSC-F-31470	M13122	The Observer reported that crew carrying out maintenance work on the purse winch cable dumped 200 metres of cut cable into the ocean inside the Kiribati EEZ.	1924hrs
					The Observer reported that the incinerator which the crew used to burn general garbage along with empty cans were dumped into the ocean inside the Kiribati EEZ.	1040hrs
	Atun Planti	Papua New Guinea	MSC-F-31470	M13458	The Observer reported that trash bags filled with garbage were dumped overboard along with 26 empty 44-gallon drums inside Kiribati EEZ.	N/A
					The Observer reported that one trash bin filled with garbage including plastic, cans and old fishing gear was dumped overboard inside Nauru EEZ.	N/A
	Unaak	Marshall Island	MSC-C-53088	n/a	The Observer reported that a vessel crew deliberately threw away a half-full sack of mixed trash into the ocean at position 01°13.779 N, 178°41.944 E inside international waters. Contents of the sack include greasy oily rags, used gloves, paper, pieces of rope (twines), plastic bottles and metals.	N/A

BILATERAL FISHERIES ACCESS AGREEMENTS, PURSE SEINE DATA REVIEW

Bilateral Fisheries Access Agreements are made between island nations and distant water fishing nations, either government to government or government to industry. The agreements allow the distant water fishing fleet (DWFN) to fish inside the island nation's EEZ. Access fees, Vessel Day Schemes (VDS) and other agreements are made for mutual benefits between the two parties. "The PNA Vessel Day Scheme (VDS) sets an overall Total Allowable Effort (TAE) limit on the number of days fishing vessels can be licensed to fish in PNA Exclusive Economic Zones (EEZs) per year. Each country is allocated a share of the TAE for use in its zone each year. VDS days can be traded between countries in cases where a country has used up all its days and another has spare days."^[13]

Researchers reviewed 12 Observer data sets from nine purse seine vessels operating under Bilateral Fisheries Access Agreements from the Solomon Island Observer Data Programme (SBOB) from the years 2018, 2019 and 2020. Of these nine vessels, eight were MSC-certified and one was not.

A total of 156 violations were uncovered. This involved shark and giant ray interactions and landings, interactions with cetaceans, discrepancies in bycatch and target catch discard reporting, and marine pollution.

Furthermore, a case with the MSC-certified vessel Fu Kuan 808 was brought to the attention of the researchers. In June 2019, the vessel was reported to have been involved in a shark finning incident during MSC Trip (M13910).^[1] Why the vessel was still authorised to continue fishing under the MSC certificate after the shark finning incident was reported is questionable and a violation of MSC Standards. The table below indicates the violations the vessel was involved in during a Bilateral Fisheries Access Agreement trip with an MSC-certified Observer from the SBOB on board. This was a PNA-authorized MSC trip.

TABLE 8. REVIEW OF VIOLATIONS ON BOARD PURSE SEINE VESSELS OPERATING UNDER THE BILATERAL FISHERIES ACCESS AGREEMENTS.

Year	Trips Analysed	Type Of Observation	Number Of Reported Violations	Description	Vessel Name(S)	
					MSC Trip	Non-MSC Trip
2018	3	CETACEAN INTERACTIONS (CMM 2011-03)	1	Vessel setting the net around a school of tuna associated with live cetacean(s).	-	Sajo Familia
		SHARK & GIANT RAYS INTERACTIONS AND LANDINGS (CMM 2019-04 & CMM 2019-05)	18	Shark and ray species interacting with vessel gear or landed on deck and mishandling of sharks and giant rays by vessel crew.	-	Koyo Maru No.78, Sajo Familia
		DISCREPANCY IN BYCATCH AND TARGET CATCH DISCARD REPORTING (CMM 2013-05)	18	Vessel not reporting or inaccurately reporting on bycatch and target catch that were DUS, RCC, DGD, DPD, DPA, DPU, DSD or DTS.	-	Koyo Maru No.78, Sajo Familia
2019	4	SHARK & GIANT RAYS INTERACTIONS AND LANDINGS (CMM 2019-04 & CMM 2019-05)	24	Shark and ray species interacting with vessel gear or landed on deck and mishandling of sharks and giant rays by vessel crew.	Fu Kuan 808, Dolores 870	Miraero, Sajo Posedonia
		DISCREPANCY IN BYCATCH AND TARGET CATCH DISCARD REPORTING (CMM 2013-05)	20	Vessel not reporting or inaccurately reporting on bycatch and target catch that were DUS, RCC, DGD, DPD, DPA, DPU, DSD or DTS.	Fu Kuan 808, Dolores 870	Miraero, Sajo Posedonia
		MARINE POLLUTION (MARPOL Regulations)	1	Dumping of plastic and garbage into the ocean.	Fu Kuan 808	-
2020	5	CETACEAN INTERACTIONS (CMM 2011-03)	4	Vessel setting the net around a school of tuna associated with live cetacean(s).	-	Miraero, Deolinda, Sajo Alexandria
		SHARK & GIANT RAYS INTERACTIONS AND LANDINGS (CMM 2019-04 & CMM 2019-05)	39	Shark and ray species interacting with vessel gear or landed on deck and mishandling of sharks and giant rays by vessel crew.	Fu Kuan 808	Miraero, Deolinda, Sajo Concordia, Sajo Alexandria
		DISCREPANCY IN BYCATCH AND TARGET CATCH DISCARD REPORTING (CMM 2013-05)	31	Vessel not reporting or inaccurately reporting on bycatch and target catch that were DUS, RCC, DGD, DPD, DPA, DPU, DSD or DTS.	Fu Kuan 808	Miraero, Deolinda, Sajo Concordia, Sajo Alexandria

SHARK & GIANT RAYS INTERACTIONS AND LANDINGS

Researchers found 81 cases of shark and ray interactions and landings on a total of nine vessels, of which eight were MSC-certified. Within these 81 cases there were multiple incidents, involving 477 silky sharks (FAL), 36 devil rays (RMV), 21 giant manta rays (RMB), six whale sharks (RHN) and two oceanic whitetip sharks (OCS).

Incidents that stand out include large numbers of silky sharks landed on deck.

During an MSC-eligible trip on MSC-certified vessel Delores 870, 52 silky sharks were landed on deck during an MSC-eligible set at various times of hauling, net sacking and brailing. All sharks were discarded, their condition was unknown.¹⁴

In another incident, 44 silky sharks landed on board the MSC-certified vessel Deolinda were alive. Half were discarded alive but unlikely to live and the other half were discarded dead.¹⁵

Shark handling by vessel crew was often reported to have been careless, including incidents where crew:

- let the sharks go through the power block, crushing them in the process
- neglected shark and ray species and left them to die on deck, before discarding them back into the ocean
- continued to brail the catch on deck while sharks, specifically whale sharks (RHN) were left inside the net sack.

14. Delores 870, (MSC Trip #M14387), Set #3@1010hrs, 16 November 2019 (RIO 19-01)

15. Deolinda (MSC Trip Not Applicable), Set #5@1616hrs, 31 March 2020 (BGK 20-02)

Oceanic whitetip shark (OCS) and silky shark (FAL) being left unattended to die on deck.



CETACEAN INTERACTIONS

Research uncovered five incidents of vessels setting their nets around tuna schools in association with three live bryde's (BRW) and two sei whales (SIW). The whales were trapped inside the net boundary but managed to break free through the nettings.

TABLE 9. CETACEAN INTERACTIONS ON MSC-CERTIFIED VESSELS, POA DATA, 2018 AND 2020.

NO OF REPORTED VIOLATIONS: 5							
Year	Vessel Name	Flag	MSC certification code or certificate number present and at time of incident	MSC Trip No.	Description	Set No.	Set MSC-Eligible (Y/ N)
2018	Sajo Familia	South Korea	MSC-C-53088	n/a	The vessel targeted a tuna school that was associated with a sei whale (SIW); the vessel set her seine about the tuna school. SIW managed to evade capture (DPA).	#2@ 1726hrs	N
2020	Miraero	South Korea	MSC-C-53088	n/a	The vessel made a deliberate set on a tuna school associated with a live bryde's whale (BRW). As per the trip report, the Observer saw the BRW alive and healthy in the net during the hauling process but didn't see what condition it was in when it escaped (DUS).	#15@ 1810hrs	N
	Sajo Alexandria	South Korea	MSC-C-53088	n/a	The vessel made a deliberate set on a tuna school associated with a live sei whale (SIW). The SSI was trapped inside the net during pursing and hauling process and was stressed. It was finally released alive by opening up the net just before the sacking up (DPA).	#21@ 1226hrs	N
	Deolinda	South Korea	MSC-C-53088	n/a	The vessel made a deliberate set on a tuna school associated with a bryde's whale (BRW). The whale was encircled by the seine and was trapped inside, it eventually escaped by blowing out the net main body. A workboat was used to chase and scare the cetacean to break out of the net entrapment (DPA).	#5@ 1616hrs	N
					The vessel made a deliberate set on a tuna school associated with bryde's whale (BRW). The whale was encircled in seine and managed to evade capture by diving out under the net, but the workboat again was used to scare off the whale (DPA).	#10@ 0627hrs	N

DISCREPANCIES IN BYCATCH AND TARGET CATCH DISCARD REPORTING

A total of 69 cases of discrepancies in bycatch and target catch reporting by vessels were uncovered during 12 Bilateral Fisheries Access Agreements purse seine trips that were reviewed on nine vessels. Eight of the vessels were MSC-certified and one was not.

MARINE POLLUTION

A case of a vessel crew throwing plastic materials into the ocean was reported by the Observer on board the Fu Kuan 808. The Observer reported that, on 1 July 2019, on the MSC-certified vessel Fu Kuan 808 during a MSC trip, he saw plastic packaging (5 x 5 m² in dimension) along with plastic and packaging cases floating away from the starboard side of the vessel at position 02°01.184 S, 168°39.656 E, which is inside Kiribati waters. The Observer did not see or know who dumped the waste overboard. The vessel was said to be drifting at the time the infringement was committed.

BILATERAL FISHERIES ACCESS AGREEMENTS, LONGLINE DATA REVIEW

TABLE 10. REVIEW OF VIOLATIONS ON BOARD LONGLINER VESSELS OPERATING UNDER THE BILATERAL FISHERIES ACCESS AGREEMENTS.

Year	Trips Analysed	Type Of Observation	Number of Reported Violations	Description	Vessel Name
					Not MSC-Certified Vessel
2019	1	DISCREPANCY IN BYCATCH REPORTING (CMM 2013-05)	1	Vessel not reporting or inaccurately reporting on bycatch that landed on deck during the trip.	Zhong Shui 758
		INTERFERENCE IN OBSERVER DUTY (CMM 2018-05 and CMM 2017-03)	3	Vessel officer asking the Observer not to report on an event.	
				Harassing the Observer. Not providing the Observer with basic necessities on board equivalent to that of an officer on board received.	
				Vessel officer failing to provide the Observer with proper safety gear.	
		MISTREATMENT OF VESSEL CREW	1	Officer bullying deck crew member.	

DISCREPANCIES IN BYCATCH AND TARGET CATCH DISCARD REPORTING

The Observer reported that when he checked the vessel's logbook and log sheets back in port (Honiara), he saw that the vessel had not recorded any bycatch species caught and discarded during the course of the fishing trip.

MISTREATMENT OF CREW

An incident of mistreatment of a crew by a vessel officer on Zhong Shui 758 took place on 5 December 2019 during set 15. The vessel was hauling in the line when a fight broke out around 0150hrs (UTC+11) between the vessel's chief officer and the assistant deck boss. The Observer reported that he wasn't sure what started the argument. The chief officer started using items lying around as weapons to strike the assistant deck boss. Other Filipino crew members got involved in the fight and one of them punched the chief officer in the face. This made the chief officer angrier and he threatened to kill the Filipino crew member when he was asleep at night.

INTERFERENCE IN OBSERVER DUTY

Two incidents of interfering with Observer duties were reported. The Observer reported in his journal that at around 1300hrs (UTC+11) on 15 November 2019, he was at the bridge recording the time, LAT & LONG positions, and details of the other vessel during an open ocean crew transfer activity between his host vessel and another vessel. The host vessel's chief officer came up behind him and disrespected him by grabbing his breast, rubbing it with his fingers and proceeding to suck on it. The Observer reported that he yelled at the chief officer while removing the chief officer's hand.^[14]

On 5 December 2019, during setting the line procedure at 0500hrs (UTC+11), the Observer reported that, at around 0510hrs (UTC+11) while he was carrying out his duty monitoring the start of set 16, the chief officer approached him and angrily forced him to go and take a nap instead. This happened right after the fight incident between the chief officer and a crew member. The Observer, fearing for his safety, decided to retire from the work deck and went back to his cabin to rest.

One incident of the vessel's officer failing to provide the Observer with proper safety gear was reported. On 15 November 2019, the Observer reported that at 2338hrs (UTC+11) he asked the chief officer to issue him with a raincoat to use on deck, because the spray from the waves hitting the vessel was making him wet and cold. The chief officer refused to assist the Observer, stating that the raincoats available on board were only for the vessel crew and that the Observer should just go to sleep. The Observer proceeded with his duty until 0001hrs (UTC+11) on 16 November when he decided to sign off from monitoring the catch. It had become hard for him to continue his work given the weather conditions and not having a raincoat.

WCPFC CMM 2018-05 in force since February 2019 states, under Annex B: "The responsibilities of vessel operators and captains shall include: Allow and assist the ROP observer to carry out all duties safely."^[17]¹⁶ Following CMM 2018-05, a vessel's captain and crew, as well as a vessel's operator are legally bound to protect Observers on board.^[17]

In addition, the WCPFC Regional Observer Programme Standards & ROP Guidelines updated 2023 stipulate: "The standard for 'Equipment and Materials' is that Observers are provided with appropriate equipment, including safety equipment to carry out their roles and tasks on board a vessel."^[18]¹⁷ Expectations by the ROP on the equipment and materials provided to the Observer are defined to include suitable equipment for applicable weather conditions. "Equipment should be dependent on climate area the vessel is fishing [sic]."^[18]¹⁸

16. WCPFC, "CMM 2018-05 Conservation and Management Measure for the Regional Observer Programme," wcpfc.int, 2018. <https://www.wcpfc.int/doc/cmm-2018-05/conservation-and-management-measure-regional-observer-programme> (accessed Oct. 25, 2022), Pg 7 of 10.

17. WCPFC, "WCPFC Regional Observer Programme Standards & ROP Guidelines updated 2023 | WCPFC," WCPFC.int, 2022. <https://www.wcpfc.int/wcpfc-regional-observer-programme-standards%20latest> (accessed Jan. 25, 2023), Pg 8 of 22.

18. WCPFC, "WCPFC Regional Observer Programme Standards & ROP Guidelines updated 2023 | WCPFC," WCPFC.int, 2022. <https://www.wcpfc.int/wcpfc-regional-observer-programme-standards%20latest> (accessed Jan. 25, 2023), Pg 8 of 22.

CONCLUSIONS

The researchers' analysis of 53 purse seine and one longline Observer trip data, from the PNA Observer Agency and Bilateral Fisheries Access Agreements, identified a total of 797 cases in violation of CMMs and MSC regulations. The Observer data came from a total of 37 purse seine vessels out of which 35 were MSC-certified vessels and two were not. The longliner was not an MSC-certified vessel.

The research revealed that MSC-certified vessels operating under the PNA FSMA licence and Bilateral Fisheries Access Agreements are guilty of committing violations of the Conservation and Management Measures of the Western and Central Pacific Commission. Vessels deliberately set their nets around live whales, dolphins and whale sharks. There are cases of vessels interfering with Observer work. Cases of marine pollution, mistreatment of vessel crew, and discarding undersize and unmarketable 'low-value' fish in favour of high-value fish (High Grading) were also identified from the 54 Observer data sets reviewed.

This research has identified several cases of mistreatment of vessel crew from a comparatively small data set. We recommend that all parties to the WCPFC should ratify the drafted CMM on Labour Standards for crew on fishing vessels/Conservation and Management Measure on Safety and Security for Crew on Fishing Vessels at the next Commission meeting without delay.

MSC-certified vessels were also found to have failed in their methods of handling Species of Special Interest (SSI). In some cases, the SSI were neglected and left inside the net sack, while vessels continued with brailing their catch on board. In others, SSI were left on deck to die or were treated inhumanely by letting them go through the net power block or by being gaffed¹⁹ when they were entangled with the net.

Additionally, unreported fishing, in the form of discrepancies in the reporting of bycatch and target catch by MSC-certified vessels, is very common. Cases were found where vessels did not even bother to report bycatch or target tuna species that were discarded or retained for crew consumption, in their logbooks.

Researchers found incidents of unreported fishing. Of the 54 Observer data sets reviewed, shark and ray interactions and landings, and discrepancy in bycatch and target catch reporting, are the most common violations and type of IUU infringement. Unreported fishing has also been identified as the major problem area for IUU fishing in the Pacific in an FFA study.^{[15][16]}

"Unreported fishing refers to fishing activities: 1) which have not been reported, or have been misreported, to the relevant national authority, in contravention of national laws and regulations, or 2) undertaken in the area of competence of a relevant regional fisheries management organisation which have not been reported or have been misreported, in contravention of the reporting procedures of that organisation."^[16]

Discrepancies in bycatch and target catch discard reporting were found to be prevalent to

19. To gaff = to strike or secure with a spear or hook.

a problematic level, with only weak warnings being issued to vessel operators. As incorrect reporting leads to a false interpretation and assessment of the fish stock in the WCPO, misreporting needs urgent attention, and an ongoing effort to stamp it out.

Reports of the routine mistreatment and neglect of Species of Special Interest are of high concern, in particular for vessels operating under the MSC umbrella, and during sets classified as MSC-eligible. This lack of reporting and transparency creates a false perception of sustainability in the skipjack and yellowfin tuna purse seine and longline MSC fisheries.

RECOMMENDATIONS

The MSC must ensure fish caught with its certification are caught according to its own standards. It must urgently assert its significant influence and responsibility in the region to improve reporting practices and the enforcement of existing regulations, such as CMMs and its sustainability standards.

This research and data review shows that Fisheries Observers are working hard to fulfil their mandates, but when their reports hit the next level in compliance monitoring and prosecution, compliance officers appear to be letting cases grow cold.

The MSC again must adhere to the standards it has set. Sanctioning fisheries that are known to manipulate Observer programmes undermines the verifiability and objectivity of Observer reports. CABs need to reform themselves to take Observers' reports seriously and act on them.

To ensure fair and accurate compliance enforcement and prosecution procedures, auditing practices and Observer data flow must be improved to ensure Observer reports are acted upon. Without accurate reporting and reliable reporting procedures, buyers, stakeholders and consumers have no guarantee of the genuine sustainability of all fisheries of the WCPFC or tuna fisheries anywhere.

APPENDICES

APPENDIX I. VESSELS AND CERTIFICATES

Vessel Name	MSC Certification number and status		Total No. of Incidents
	At time of incident	Current	
Atun Kalap/Eastern Marine	MSC-C-53088 ²⁰	MSC-F-31554	7
Atun Planti/Oriental Marine	MSC-C-53088	MSC-F-31554	76
Atun Sta/Eastern Star	MSC-C-53088	MSC-F-31554	20
Deolinda	MSC-C-53088	MSC-F-31441	15
Dolores 870	MSC-C-53088	MSC-F-31470	6
Fu Kuan 808	MSC-C-53088	N/A ^{21,22}	14
Joon Discoverer	MSC-C-53088	N/A	12
Kaile 888	MSC-C-53088	MSC-F-31554	47
Koo's 107/Marshalls 202	MSC-C-53088	N/A	14
Koo's 108	MSC-C-53088	N/A	12
Koyo Maru No. 78	Not Applicable	Not Applicable	17
Majestic Sun/Shilla Explorer	MSC-C-53088	N/A	12
Mamautari	MSC-C-53088	N/A	14
Marita 88	MSC-C-53088	MSC-F-31554	25
Mathawmarfach	MSC-C-53088	N/A	17
Max 101/Win Best 707	Not Applicable	MSC-F-31245	19
Melissa	MSC-C-53088	MSC-F-31515	15
Micronesia 103	MSC-C-53088	MSC-F-31245	12
Miraero	MSC-C-53088	MSC-F-31441	28
Moamaeu	MSC-C-53088	N/A	27
Moamari	MSC-C-53088	N/A	7
Nupla Kumul/New Splendor	MSC-C-53088	MSC-F-31554	20
Nupla Solwara/New Marine	MSC-C-53088	MSC-F-31554	21
Queen Alexandra 959	MSC-C-53088	MSC-F-31245	22
Queen Anne 959	MSC-C-53088	MSC-F-31245	21
Queen Isabella 88	MSC-C-53088	N/A ²³	31
Sajo Alexandria	MSC-C-53088	MSC-F-31555	21
Sajo Concordia	MSC-C-53088	MSC-F-31555	15
Sajo Familia	MSC-C-53088	MSC-F-31555	20
Sajo Posedonia	MSC-C-53088	MSC-F-31555	20
Simbun 88	MSC-C-53088	MSC-F-31554	44
Sophia Martina	MSC-C-53088	MSC-F-31470	13
Southern Seas No. 301	MSC-C-53088	N/A	10
Southern Seas No. 302	MSC-C-53088	N/A	35
Southern Seas No. 303	MSC-C-53088	N/A	9
Trinidad III ²⁴	MSC-C-53088	MSC-F-31515	60
Unaak	MSC-C-53088	N/A	14
Zhong Shui 758	Not Applicable	Not Applicable	5

20. MSC-C-53088 certificate expired on 13 July 2022.

21. N/A refers to not available as certificates were not found on any MSC certification lists.

22. FU Kuan 808 MSC certification has been removed by the PNAO as of October 2022 for two years due to shark finning incidents in 2019.

23. Queen Isabella 88's MSC certification has been removed by the PNAO as of October 2022 for two years due to shark finning incidents in 2020.

24. FV Trinidad III was decommissioned in 2022.

APPENDIX 2. SHARK GUARDIAN REBUTTALS TO CAB RESPONSES TO OUR LAST REPORT

CAB Statements	Reference (CAB surveillance report title & page number)	Shark Guardian rebuttals/follow-up suggestions
<p>"Nevertheless, the seven Observers the Audit Team spoke to almost all highlighted and expressed frustration that they were not usually aware of what happened as a result of their reports on non-compliance being submitted. In essence, information flow back to Observers regarding their reports appears to be poor, and limits their confidence in the effectiveness of the system overall."</p> <p>This section of the report states, "The Year 3 Audit Team therefore makes a new non-binding recommendation against the certified PNA fishery, that a system should be established to ensure that, to the extent that confidentiality requirements allow, Observers can follow the progression of relevant cases through to their conclusion. In essence, information is key, and it seems likely this would help to give Observers greater confidence in the management system's effectiveness and in their role within it."</p>	<p>PNA Western and Central Pacific skipjack and yellowfin, unassociated/non-FAD set, tuna purse seine fishery, LRQA Surveillance Report Pg. 18 of 92</p>	<p>The Audit Team's suggestion that their new recommendation on information relayed back to Observers be non-binding, defeats the purpose it is intended to serve. Our investigations have consistently found that Observers are not kept in the loop when they report incidents of non-compliance. This diminishes the effectiveness of their role, and the system which was set up to report on violations.</p> <p>The CAB's point that because there is 100% Observer coverage in PNA fisheries compared to other MSC-certified global fisheries, cases of neglect, including sharking finning, IUU or intimidation of Observers, would be much higher in PNA fisheries is irrelevant. Shark Guardian is not making comparisons between PNA and other fisheries, but is looking at how the MSC continues to certify vessels that are not following MSC best practices, or those of the WCPFC CMMs. There is no point having 100% Observer coverage if reported incidents are not followed up in a timely manner, and if necessary enforcement action and/or sanctions are not taken against vessels and their owners.</p>
<p>In response to allegations of violations of CMM 2018-05 on FV Moamaeu, the PNA Fishery Audit report states, "...the team was informed that the case of intimidation was subject to an ongoing investigation, and the case of bribery had resulted in a prosecution, with the operator of the vessel involved being fined. It is noted that the approach taken by the Observer with respect to the attempted bribery case, as reported in Shark Guardian Table 21, follows recommended practice in helping to ensure Observer safety when working offshore."</p>	<p>PNA Western and Central Pacific skipjack and yellowfin, unassociated/non-FAD set, tuna purse seine fishery, LRQA Surveillance Report Pg. 17–18 of 92</p>	<p>We are pleased to learn that this incident was followed up on and the vessel operator was fined.</p>

<p>In response to allegations of violation of CMM 2009-02, the PNA Fishery Audit report states, "CMM 2009-02 applies only to vessels operating on the 'high seas' of the WCPFC, which does not include the PNA EEZ where the MSC-certified PNA fishery takes place. Therefore, CMM 2009-02 is not relevant for the PNA fishery. However, for vessels operating on the high seas, the Clauses noted above evidence that the Shark Guardian statement regarding the prohibition on discarding of tuna catches is incorrect in detail; under the circumstances presented in Articles 8, 9a and 10, operators of vessels on the high seas are permitted to discard tuna."</p> <p>"For the PNA fishery, the relevant catch retention and reporting requirements are provided in CMM 2021- 01 (and predecessors). Under CMM 2021-01, therefore, there are reasons why tuna may be discarded; these may include, for example, where fish are crushed or gear damaged during the fishing process. Further, there is no requirement under CMM 2021-01 specifying the level of accuracy or detail required in catch reporting. Nevertheless, the 'violations' identified by Shark Guardian (as reported in Shark Guardian Table 17, 18 and 19) reflect generally very small quantities of tuna (table, below)."</p> <p>"Overall, the Audit team cannot say that catches of tuna are never deliberately misreported by vessels within the certified PNA fishery. However, there is no Total Allowable Catch (TAC) or quota system applied within the PNA fishery which might incentivise under- or over-reporting, and by their nature the catch estimates as provided by vessels and Observers are subject to estimation error. CMM 2009-02 is not relevant for the certified PNA fishery, and catch may be discarded, including for reasons of gear damage. Further, the Audit Team was reassured in our discussions with SPC that the quantities of tuna identified in Shark Guardian Tables 17–19 were not significant with respect to science or management."</p>	<p>PNA Western and Central Pacific skipjack and yellowfin, unassociated/non-FAD set, tuna purse seine fishery, LRQA Surveillance Report Pg. 18–20 of 92</p>	<p>CMM 2009-02 might not be relevant to the PNA fishery but there is an equivalent regulation consistent with the Third Arrangement Implementing the Nauru Agreement of May 2008.</p> <p>The Audit Team's suggestion that because there is no requirement of accuracy in reporting under CMM 2021-01, it is therefore OK that there is non-reporting of discarded target species, completely defeats the purpose of the sustainable fishing practices outlined in CMM 2021-01. The level of violation might be small within this sample, but overall we have found consistent non-reporting and/or discrepancy of target species in Observer reports. Accurate catch statistics are needed to address overfishing and inform better management.</p> <p>The audit team's argument that CMMs are guidelines rather than requirements demonstrates that there are inconsistent definitions of 'sustainability' among fisheries management authorities in objectively evaluating sustainability and management goals.</p>
<p>"The Audit Team interviewed seven Observers during the audit of the PNA fishery. All seven had worked as Observers since at least 2016, with multiple trips undertaken each year prior to the suspension of activities in 2020. Several confirmed that they had observed and reported on what they considered to be deliberate setting on tuna schools associated with cetaceans." In response to allegations of violations of CMM 2011-03, the PNA Fishery Audit report concludes that, "Overall, there may be occasions when purse seine vessels set deliberately on cetaceans, but determining this requires consideration of the evidence in detail by trained debriefers and investigators. It is highlighted that cetaceans may be caught in sets accidentally even with care being taken to minimise the risk of this possibility. It is also highlighted that if a whale is caught, even accidentally, any catch from that set is not MSC-eligible under the terms of the PNA MSC Chain of Custody MoU (PNA 2021), which helps to further minimise risks and incentives where vessels are seeking to benefit from the PNA's MSC certification by targeting free school catches."</p>	<p>PNA Western and Central Pacific skipjack and yellowfin, unassociated/non-FAD set, tuna purse seine fishery, LRQA Surveillance Report Pg. 21–22 of 92</p>	<p>The Audit team accepts that cetaceans may be deliberately set on, but goes on to say this needs to be further confirmed by trained debriefers and investigators. If Observers are trained to report on these cases, why are they then not followed up on, especially as they are in contravention of CMM 2011-03, which categorically states that if cetaceans are sighted by a flagged vessel before the set then it is prohibited to make the set, and if after, then all efforts to release the cetaceans must be made.</p> <p>Observers are trained professionals and their reports of violations regarding cetaceans should be taken seriously. There is no point having an independent Observer programme, if reports by trained Observers are not trusted and no consequent consideration of evidence by trained debriefers and investigators takes place. This Shark Guardian report has found that the incidents of deliberate sets on cetaceans were not followed up on, which brings into doubt the effectiveness of industry conservation tools.</p>

<p>In response to allegations of violations of CMM 2013-05, the PNA Fishery Audit team noted that "CMM 2013-05 again applies only to vessels operating on the 'high seas' of the WCPFC, which does not include the PNA EEZ where the MSC-certified PNA fishery takes place. Therefore, CMM 2013-05 is not relevant for the PNA fishery."</p> <p>On the matter of non-reporting of non-tuna species, the SPC "confirmed that the vessels identified were not systematically failing to report catches of shark or other non-target species – their data routinely included reports of catches of non-tuna species. In essence, these failings appear to be estimation, counting or reporting errors, as may occur due to undertaking busy fishing operations and where the intent with the shark species is to return them to the water as soon as possible."</p> <p>It then went on to state that "it is satisfied that the evidence presented does not reflect that there is systematic, deliberate misreporting across the fishery. Nevertheless, it is apparent that reporting by some vessels is not fully comprehensive, and we therefore make a new non-binding recommendation against the certified PNA fishery, that efforts are made to ensure catch reporting for SSLs is undertaken rigorously by all vessels in support of scientific and management initiatives."</p>	<p>PNA Western and Central Pacific skipjack and yellowfin, unassociated/non-FAD set, tuna purse seine fishery, LRQA Surveillance Report Pg. 22–23 of 92</p>	<p>Our Shark Guardian report looked at a small data sample and within that found that discrepancies in discarded and retained bycatch reporting is one of the most frequent and common violations and occur on vessels in large numbers. From this we deduce that the amount of discrepancy in report bycatch is far bigger than the stated SPC level.</p> <p>A non-binding recommendation is entirely inadequate. Full and accurate data from fishing vessels is required to inform stock assessment and other scientific evaluations.</p>
<p>"Nevertheless, it is apparent that reporting by some vessels is not fully comprehensive, and we therefore make a new non-binding recommendation against the certified PNA fishery, that efforts are made to ensure catch reporting for SSLs is undertaken rigorously by all vessels in support of scientific and management initiatives."</p>	<p>PNA Western and Central Pacific skipjack and yellowfin, unassociated/non-FAD set, tuna purse seine fishery, LRQA Surveillance Report Pg. 24 of 92.</p>	<p>Again, we found that a non-binding recommendation is made by the audit team, which creates no incentive for vessels to follow so-called guidelines. Worse, when guidelines are not followed, CABs are then able to say that these are only recommendations/guidelines so they can't hold vessels accountable. This in no way guarantees the sustainable fishing that MSC-certified vessels continue to prize themselves on.</p>
<p>"The Audit Team requested additional information from Mr Hafford as an author of the Shark Guardian report, but no further information was provided."</p>	<p>PNA Western and Central Pacific skipjack and yellowfin, unassociated/non-FAD set, tuna purse seine fishery, LRQA Surveillance Report Pg. 26 of 92</p>	<p>A request was made by the audit team to Shark Guardian for the original Observer reports. To protect Shark Guardian sources, these reports were not provided. It is however surprising that neither the CABs nor ASI have access to, or are making the effort to get access to, the original Observer reports, and instead rely on secondary information from a possibly corrupt fisheries ministry which has a vested interest in protecting itself from damage caused by the exposure of shortcomings or bad practices. Further it goes to show that the Audit team has not accessed the original Observer reports to study the primary source of data.</p> <p>The Observer reports handed to us by the whistleblower were witnessed and independently verified as authentic by reporter Karen McVeigh of The Guardian, a reputable broadsheet newspaper based in the UK, and yet this was not referenced in LRQA's report:-</p> <p>https://www.theguardian.com/environment/2022/may/26/msc-orders-inquiry-into-shark-finning-on-tuna-vessels-in-the-pacific</p>

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GLOSSARY

CCM	Commission Members, Cooperating Non-Members, and Participating Territories of the WCPFC
DWFF	Distant Water Fishing Fleet
EEZ	Exclusive Economic Zone
FAD	Fish Aggregating Device
FFA	Pacific Islands Forum Fisheries Agency
FSMA	Federated States of Micronesia Arrangement for Regional Fisheries Access
IUU	Illegal, unreported and unregulated fishing
MCS	Monitoring, control and surveillance
MSC	Marine Stewardship Council
PNA	Parties to the Nauru Agreement
POA	PNA Observer Agency
RFMO	Regional Fisheries Management Organisation
SBOB	Solomon Islands National Observers Programme
SPC	Secretariat of the Pacific Community
SSI	Species of Special Interest
WCPFC	Western and Central Pacific Fisheries Commission
WCPO	Western and Central Pacific Ocean

NOTES

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