
FISHING OUTSIDE THE LINES

Widespread noncompliance in
Indian Ocean tuna fisheries

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Photo: Alex Hofford/Greenpeace

KROLL



BLUE MARINE
FOUNDATION



**A REPORT BY BLUE INVESTIGATIONS
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This report has been published in conjunction with **IOTC Catch-effort assessment, and AIS usage by flag-states in the Western Indian Ocean, 2016-2020** undertaken by OceanMind

This report has been updated following changes made to the OceanMind report.

Photo: Alex Hofford/Greenpeace



EXECUTIVE SUMMARY

More than a million tonnes of tuna were caught in the Indian Ocean in 2020. Years of rampant overfishing has resulted in catches of valuable yellowfin tuna now needing to be reduced by almost a third in order for the stock to recover by 2030. Despite this, the region's most rapacious yellowfin harvester – the EU – is proposing that no further catch reductions be made this year, contrary to scientific advice. This kind of noncompliance – with the science and with the various laws, conventions and regulations that exist to monitor and control fishing in the region – makes up the focus of this report.

One such set of regulations are those that prevent foreign vessels from fishing within the exclusive economic zones (EEZs) of coastal states without authorisation. This report details several instances of likely unauthorised fishing on the part of distant-water, EU-owned purse seine vessels in the EEZs of Indian Ocean coastal states. In addition to the EU's so-called Sustainable Fisheries Partnership Agreements (SFPAs), which subsidise EU vessels to fish in the waters of third countries (often at a fraction of what it would otherwise cost), there also exist opaque and highly controversial private access agreements made between fishing companies and coastal state governments.

In this report, Blue Investigations, together with global investigations firm Kroll, has compared the fishing activity identified in the waters of coastal states to an analysis of the access agreements (both "sustainable" and private) that exist in the Western Indian Ocean. This comparison has highlighted potential noncompliance with national and international regulations by Spanish-owned fleets which appear to have spent time fishing in the waters of both India and Somalia without authorisation.

The generally opaque nature of access agreements raises additional questions around

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the compliance of these EU-owned fleets in the waters of several other coastal states, including Mozambique where no private agreements could have been legally issued because of the dormant SFPA in place.

The mapping of fishing activity referred to in this report was commissioned by Blue Marine, undertaken by OceanMind and [published](#) alongside this report. In addition to analysing reported fishing catch and effort in and around the boundaries of coastal states' EEZs, the report also highlights widespread noncompliance with the regulations that govern the use of the Automatic Identification System (AIS) – an important safety tool that transmits a ship's position.



The report explains that Spanish-flagged purse seine vessels operating in the Western Indian Ocean “went dark” by switching off their AIS for an average of almost three quarters of the two-year study period. Importantly, the study found that significant fishing activity was undertaken without the associated use of AIS. This comes just weeks after an admission from a representative of a prominent Spanish fishing association in the Indian Ocean that AIS could indeed be switched off for commercial advantage. In addition to being inconsistent with EU law, going dark for commercial advantage also jeopardises crew safety.

This noncompliance with national and international law is taking place against the backdrop of relentless overfishing of yellowfin tuna in the Indian Ocean, with the EU being the number-one harvester of the overfished stock.

Unsurprisingly, given that the three species of tropical tuna are caught together by these industrial vessels, bigeye tuna is now also subject to overfishing and even skipjack – the most abundant of the major commercial tuna species – has had its catch limit ignored for the last three years. There is also significant noncompliance with bycatch resolutions adopted by the Indian Ocean Tuna Commission (IOTC), affecting vulnerable species like sharks and turtles.

Blue Marine is calling for stricter compliance with existing laws and regulations, for private access agreements to be made more transparent and accountable, and for decision makers to be led by science at the upcoming meeting of the IOTC, rather than by greed, self-interest and short-term gain at the expense of the livelihoods and food security of coastal communities.

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ABBREVIATIONS

AGAC	Asociación de Grandes Atuneros Congeladores	OPAGAC	Organización de Productores Asociados de Grandes Atuneros Congeladores
AIS	Automatic Identification System	RFMO	Regional Fisheries Management Organisation
ANABAC	Asociación Nacional de Armadores de Buques Atuneros Congeladores	SFA	Seychelles Fishing Authority
CTTF	Coalition for Transparent Tuna Fisheries	SFPA	Sustainable Fisheries Partnership Agreement
DG MARE	Directorate General for Maritime Affairs and Fisheries	SIDS	Small Island Developing States
dFAD	Drifting Fish Aggregating Device	SOLAS	International Convention for the Safety of Life at Sea
EEZ	Exclusive Economic Zone	TAC	Total Allowable Catch
FAO	Food and Agriculture Organisation of the United Nations	UNCLOS	United Nations Convention on the Law of the Sea
FiTI	Fisheries Transparency Initiative	VMS	Vessel Monitoring System
HRA	High Risk Area	WPEB	Working Party on Ecosystems and Bycatch
IOTC	Indian Ocean Tuna Commission	WPTT	Working Party on Tropical Tunas
MSC	Marine Stewardship Council	WWF	World Wide Fund for Nature
MSY	Maximum Sustainable Yield		
NPOA	National Plans of Action		



INTRODUCTION

Well-managed tuna fisheries are essential to the healthy functioning of marine ecosystems and are also an integral part of ensuring food security, especially for coastal communities. This is particularly true for Western Indian Ocean countries like Comoros and Mozambique whose populations greatly depend on fish for protein and for economic stability.¹ However, the latest State of World Fisheries and Aquaculture report published by the UN Food and Agriculture Organisation (FAO) found that more than a third of the world's marine fish stocks are fished at biologically unsustainable levels.² One such stock is yellowfin tuna in the Indian Ocean.

Managing highly migratory tuna stocks that are fished by more than 30 countries is a daunting task, but one that falls to the Indian Ocean Tuna Commission (IOTC). Blue Marine Foundation has published detailed criticisms³ of the failure of the IOTC to effectively manage the region's tuna stocks, and continues to be an active observer to the regional fisheries management organisation (RFMO). With yellowfin tuna overfished, bigeye tuna subject to overfishing and skipjack's catch limit ignored for the past three years, there can be little doubt that compliance with scientific advice

Yellowfin tuna overfished, bigeye tuna subject to overfishing and skipjack's catch limit ignored for the past three years

Photo: Alex Hofford/Greenpeace

and the precautionary approach to conservation is sorely lacking.

Noncompliance forms the foundation of this report and examples range from the failure to comply with IOTC resolutions to a clear disregard for scientific advice to the violation of EU regulations and even potentially unauthorised fishing by industrial vessels in the waters of developing coastal states. Two of the main sections of this report are linked closely to a study commissioned by Blue Marine but undertaken and published by OceanMind. This study can be found [here](#).



NONCOMPLIANCE WITH IOTC SCIENCE

In the Indian Ocean, yellowfin tuna is overfished and has been since 2015. Revised catch figures estimate that, in 2015, 402,828 tonnes of yellowfin tuna were caught by the many industrial, semi-industrial, small-scale and artisanal fisheries that are represented by the IOTC's 30 contracting parties.⁴ In the years that have passed since then, several yellowfin rebuilding plans have been adopted and updated, with coastal states like Maldives pushing for responsible catch limits to be set in order to avoid further decline of the stock and harsher catch reductions in the future.

Despite this, catches of yellowfin tuna in 2020 totalled 430,977 tonnes – more than 28,000 tonnes higher than they were in 2015 when the IOTC's Scientific Committee recommended that catches be reduced by 20% to allow the stock to recover.⁵ In an attempt to remove the exemptions that existed in previous versions of the yellowfin tuna recovery plan, a new set of reductions was

adopted in 2021, assigned this time at the member state level rather than by gear-type.

However, this new rebuilding plan was objected to by six IOTC countries – Oman, Iran, India, Somalia, Madagascar and Indonesia. As objectors, these six nations are not bound by the new yellowfin tuna resolution and, as such, are not subject to the new catch limits. As a result, there is no agreed total allowable catch (TAC) for the stock which presents a significant obstacle to effective conservation.

As Figure 1 shows, the EU's industrial distant-water purse seine fleet is the largest contributor to overfishing by virtue of it being the largest harvester of the species, and has been for as long as the stock has been overfished. Other IOTC member states like Oman have compounded the problem by dramatically increasing their catch since 2019.

Total yellowfin tuna catch by IOTC member (2019-2020)

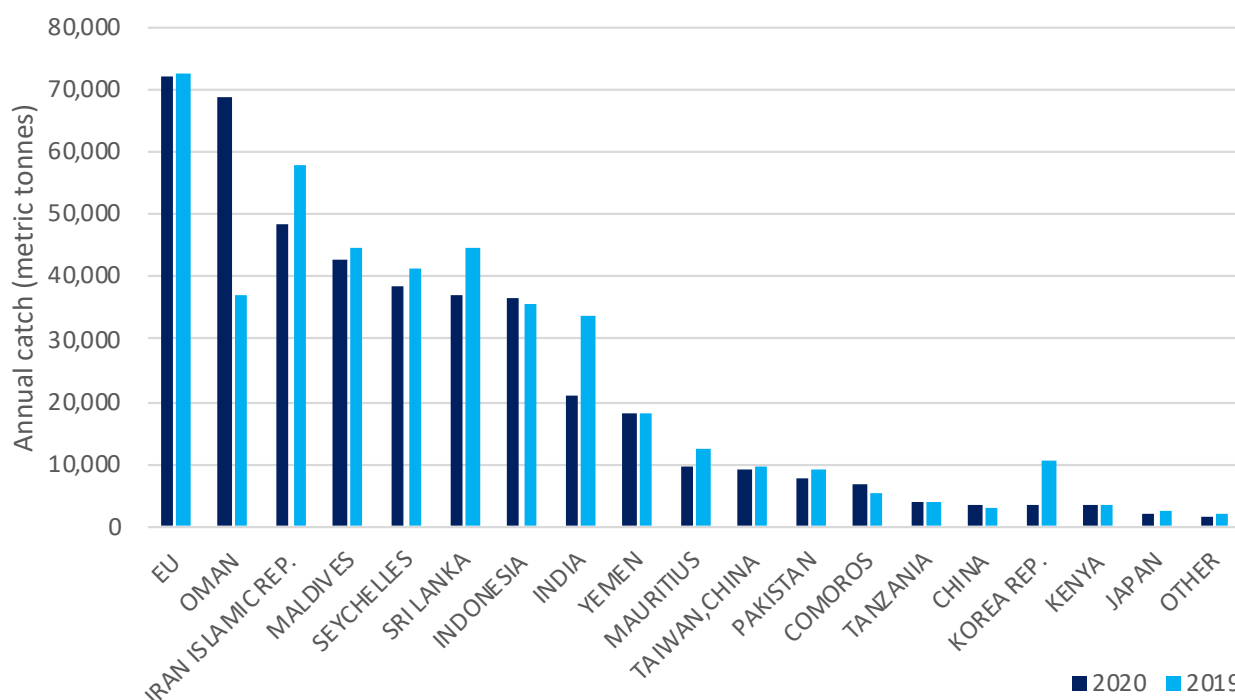


FIGURE 1: TOTAL ANNUAL INDIAN OCEAN YELLOWFIN TUNA CATCH BY IOTC MEMBER FOR 2019-2020⁶



In the time since the last IOTC Commission meeting in June 2021, a new stock assessment for yellowfin tuna has been undertaken. The results of the assessment and the subsequent management advice were published in the IOTC's latest Scientific Committee report.⁷ Unsurprisingly, the new stock assessment has determined the maximum sustainable yield (MSY) of the yellowfin stock to be some 54,000 tonnes less than previously thought, highlighting the growing impact of overfishing.

As a result, a sustained 30% catch reduction is now necessary to bring about the likely recovery of the stock by 2030. This reduction would necessitate a new catch limit of roughly 301,000 tonnes – almost 130,000 tonnes less than was caught in 2020. However, there is currently no proposal put forward for discussion at the upcoming IOTC Commission meeting that meets this goal.

While it does not amount to the full 30% reduction required, the proposal put forward by Maldives⁸ has once again come the closest to addressing the problem of overfishing. On the other end of the responsibility spectrum, the proposal tabled by the EU suggests that no further catch reductions should be discussed at the upcoming meeting, despite clear scientific advice to the contrary. The submission of this proposal comes just a few weeks after EU Fisheries Commissioner Virginijus Sinkevičius stated in an online interview that “the EU is usually the one actually pushing the scientific advice to be fully implemented and we always advocate for the scientific advice implementation”.⁹

The EU's proposal suggests that IOTC members should wait until a peer review of the stock assessment can be completed in 2023 before discussing amendments to the existing stock rebuilding plan¹⁰ which would only come into effect in 2024 at the earliest. It also suggests that a temporary sub-commission on yellowfin tuna be established to deal with the status of the stock and the implementation of the required catch limits.

The creation of the sub-commission envisaged by the EU would remove the normal majority decision-making under the IOTC Agreement and replace it with consensus decision-making only for yellowfin tuna conservation and management measures.

A legal review of the EU's proposal finds that it entails an extreme deviation from the normal decision-making procedures of the IOTC. Concerningly, the proposal states that conclusions of the sub-committee shall be taken by consensus. Normally, while there may be a practice of seeking consensus when adopting conservation and management measures like the yellowfin tuna rebuilding plan, they can nonetheless be adopted by a two-thirds majority vote in the Commission.

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In addition to not complying with its own principles of good governance – namely decision-making based on best available scientific advice – the EU has also failed to comply in a timely manner with direct requests from the IOTC’s Compliance Committee to explain the ongoing issue pertaining to its misreporting of yellowfin tuna catches. Blue Marine’s information paper [Inconsistencies in tropical tuna catch calculations and reporting by Spain](#) published in 2020 described in detail the errors in catch reporting by the EU that were identified by the IOTC’s Working Party on Tropical Tunas (WPTT) in 2019.

Because the three tropical tuna species – skipjack, bigeye and yellowfin – are often caught together by purse seine vessels, a certain ratio of species composition can be expected. The WPTT noted that the 2018 catches of bigeye tuna reported by the Spanish purse seine fleet alone exceeded the catches recorded by all purse seine fleets the previous year. The species composition reported by the EU for Spain did not match the data reported by other purse seine fleets (some owned by the same fishing companies) during the same year, nor the data reported by the EU purse seine fleet in years prior to 2018. It was suspected that the EU had misreported yellowfin tuna as bigeye. When the species ratio from previous years was applied to Spain’s 2018 purse seine

catches, the yellowfin total was found to be 31% higher than was reported.

In 2020, the IOTC Compliance Committee noted that some IOTC members were worried about the EU’s data collection methods, especially regarding reporting discrepancies described above. They stressed the need for the timely submission of harmonized datasets. At the same meeting, the EU delegation to the IOTC committed to launch an internal review of its data collection methods and to verify the 2017 and 2018 data sets for its fleet. The IOTC Compliance Committee requested that the EU inform the IOTC Secretariat by letter of the timescale for the completion of this study and that a short description of the study’s content be included before the next Compliance Committee meeting in mid-2021.

The EU failed to comply with this request and did not send the letter prior to the 2021 Compliance Committee meeting. When asked why, the EU delegation stated that it did not have enough time to finalise the administrative aspects of the study. Given the implications of this significant misreporting of an already-overfished stock, this noncompliance with direct requests further highlights the EU’s disregard for both the health of tuna stocks in the Indian Ocean and their fellow IOTC members who expressed their concern on multiple occasions.

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NONCOMPLIANCE WITH AIS REGULATIONS

Blue Marine recently commissioned OceanMind to update the study they undertook in 2020, mapping and analysing the use and misuse of the automatic identification system (AIS), which transmits a ship's position, on the part of distant-water purse seine fleets operating in the Western Indian Ocean. The [original study](#), which analysed the AIS use of the Spanish and French purse seine fleets for a period of over two years, from 1 January 2017 to 30 April 2019, found that the French and Spanish fleets failed to transmit on AIS for 68% and 80% of the analysis days, respectively.

EU law relating to AIS is Article 10 of EU Regulation 1224/2009 and Article 6a and Annex II, part I, of Directive 2002/59/EC. Article 10 states that "a fishing vessel exceeding 15 metres' length overall shall be fitted with and maintain in operation an automatic identification system", with Article 6 explaining that "ships fitted with an AIS, shall maintain it in operation at all times except where international agreements, rules or standards provide for the protection of navigational information."

Despite this requirement for AIS to be maintained at all times, the 2017-2019 study found that one Spanish-flagged vessel failed to transmit on AIS for a continuous period of 519 days, with 12 other vessels also "going dark" for more than 100 days at a time. Blue Marine raised this issue with the Directorate General for Maritime Affairs and Fisheries (DG MARE) in late 2019 and, in a response received in December 2019, Ms Veronika Veits confirmed the following:

"AIS must be maintained in operation at all times. As an exemption from this general rule, the master may switch it off but only in exceptional circumstances when the master considers this necessary in the interest of the safety or security of the vessel (imminent danger). Member States have transposed this Directive into national law and shall ensure its correct implementation."

Ms Veits also promised that the European Commission would "follow this up as a matter of urgency with the relevant Member States, given the safety and surveillance implications". Despite this, the results of the [new AIS study](#) undertaken by OceanMind show that there is still widespread noncompliance with EU law on the part of these distant-water purse seine fleets.

The newly published study analyses EU vessels' AIS usage in the Western Indian Ocean over the course of 731 days – from 1 January 2019 until 31 December 2020. While the EU's delegation to the IOTC tries to argue that the EU should be considered a coastal state by virtue of France's overseas territories, the industrial Spanish, French and Italian purse seine vessels are, of course, distant-water fishing vessels operating far from home.

The new study also analyses the AIS use of the Seychellois and Mauritian purse seine fleets, both of which are predominantly owned by French and Spanish fishing companies taking advantage of flags of convenience. This effectively makes them an extension of the EU's distant-water fleet.

Flagging their vessels to these small island developing states (SIDS) allows the Spanish and French-owned vessels access to the Seychellois and Mauritian exclusive economic zones (EEZs) and means that they are able to take advantage of the yellowfin tuna "allocation" belonging to these two nations. As a result, and in addition to the EU's own sizable 2022 yellowfin tuna catch limit of 73,146 tonnes – the largest of all

73,146
TONNES
EU'S OWN SIZABLE
2022 YELLOWFIN TUNA CATCH LIMIT



the allocated catch limits – the extended EU-owned fleet can also dip into the Seychelles and Mauritius 2022 catch limits of 30,359 tonnes and 10,490 tonnes, respectively.

Despite being EU-owned, these vessels are not bound by the EU law that mandates constant AIS use. However, they are still bound by the International Convention for the Safety of Life at Sea (SOLAS) which also applies to the Spanish and French vessels. SOLAS establishes that AIS must be fitted aboard all ships of 300 gross tonnage and upwards engaged on international voyages, all cargo ships of 500 gross tonnage and upwards, regardless of where they operate, and all passenger vessels.

AIS use by the Spanish-flagged purse seine fleet

AIS NONCOMPLIANCE BY SPANISH-FLAGGED VESSELS

The newly published study shows that, on average, the Spanish-flagged purse seine fleet went dark for almost three quarters of the analysis period from the beginning of 2019 to the end of 2020. One vessel, *Albacora Cuatro*, spent a continuous period of nine months and 28 days with its AIS switched off. While this is an inexplicably long time to spend in continuous contravention of EU law, it pales in comparison to the 519 days that the Spanish-flagged *Izurdia* spent dark during the previous 2017-2019 analysis period. Figure 2 shows the percentages of the two analysis periods that each Spanish-flagged purse seine vessel spent transmitting on AIS, as well as the average for each vessel across both studies.

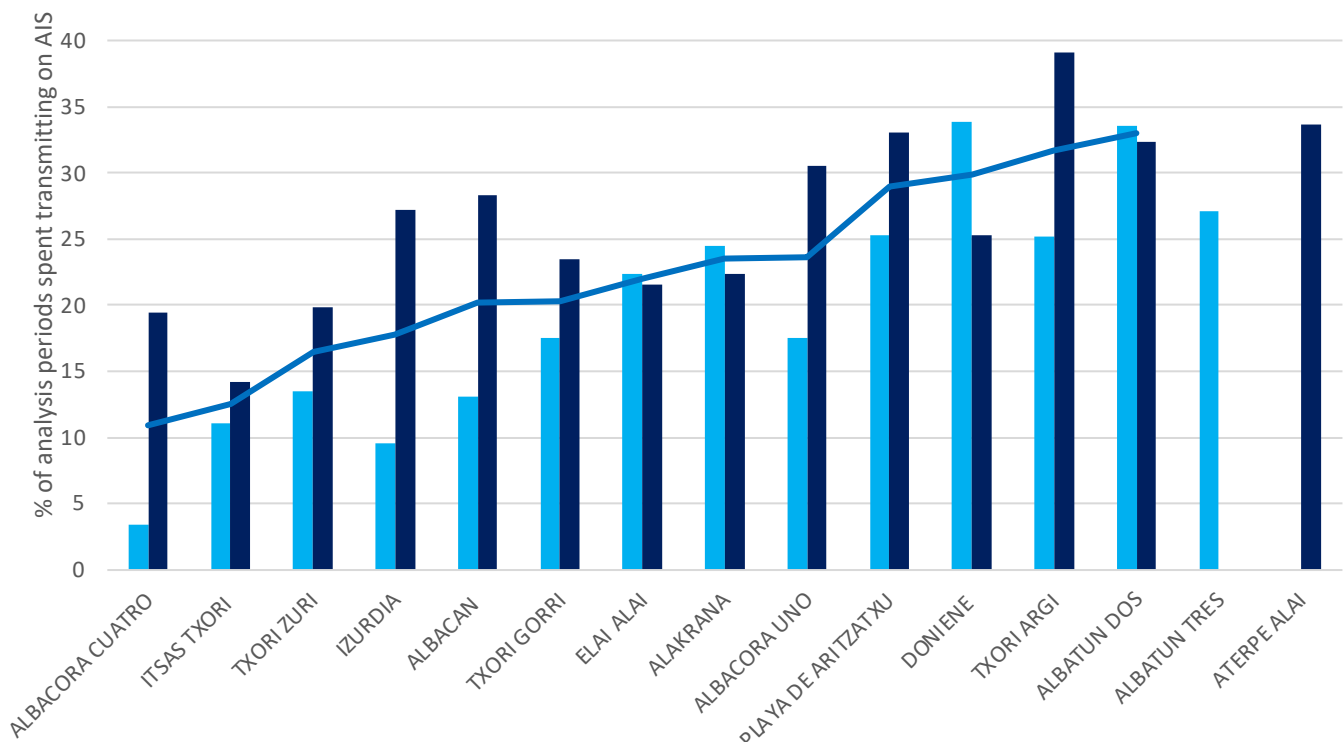


FIGURE 2: PERCENTAGES OF BOTH ANALYSIS PERIODS SPENT TRANSMITTING ON AIS BY THE SPANISH-FLAGGED PURSE SEINE FLEET ¹¹

■ Study A (2017-2019) ■ Study B (2019-2020)
— Average across both studies

While *Albacora Cuatro* has the lowest average percentage transmission across both studies' analysis periods (an average of 11%), *Albatun Dos* could be celebrated for having the highest average transmission, if it weren't still a meagre 33%. Not a single vessel in the Spanish fleet kept their AIS on for more than a third of the analysis periods on average, despite being obliged to do so under EU law.

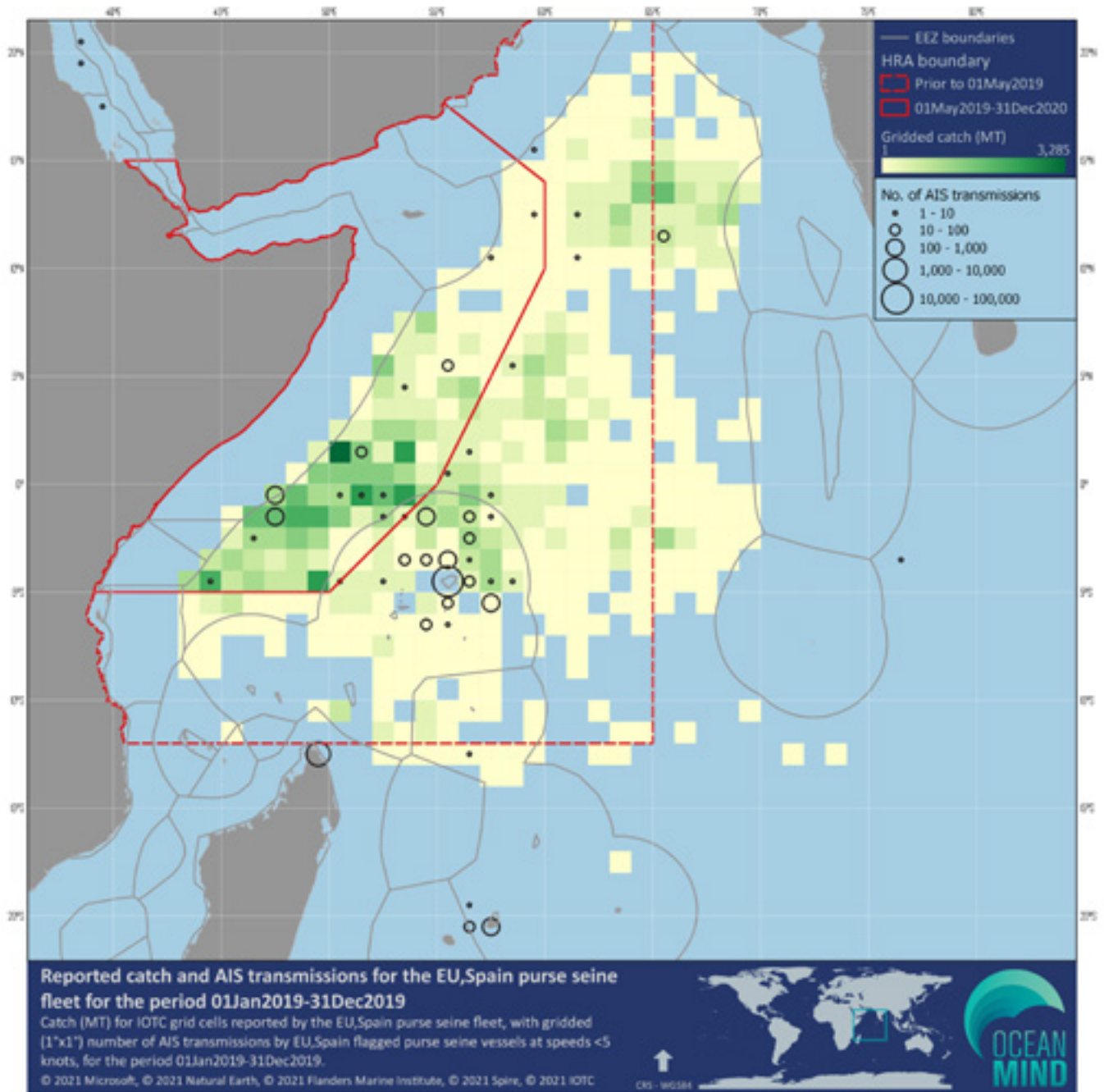


FIGURE 3: REPORTED CATCH AND AIS TRANSMISSIONS FOR THE SPANISH-FLAGGED PURSE SEINE FLEET IN 2019¹²

Additionally, the new OceanMind study shows that, while the Spanish fleet's use of AIS is highest in and around ports, it is at its lowest on the high seas and during likely fishing operations. Figure 3 shows that many of the grid cells with highest catch weights reported by the Spanish purse seine fleet do not contain any AIS transmissions.

Only 39 of the 450 total grid cells where catch-effort was reported by the Spanish purse seine fleet contained any AIS transmissions, suggesting very low use of AIS during fishing operations. These 39 grid cells where AIS was used represent only 16.7% of the Spanish fleet's total reported catch weight.



AIS NONCOMPLIANCE BY FRENCH-FLAGGED VESSELS

In general, the French-flagged purse seine vessels operating in the Indian Ocean are a great deal more compliant than their Spanish-flagged counterparts, with one vessel – *Cap Saint Vincent* – even spending more time with its AIS on than off during the 2019-2020 study period. Across the entire EU fleet, this vessel alone had a transmission rate of over 50%.

On the other end of the spectrum, *Dolomieu* went dark for an average of over 75% across both studies.

Figure 4 shows the percentages of the two analysis periods that each French-flagged purse seine vessel spent transmitting on AIS, as well as the average for each vessel across both studies. While the French fleet still had unacceptably low levels of transmission, its levels were significantly higher than those of the Spanish fleet operating in the same region.

AIS use by the French-flagged purse seine fleet

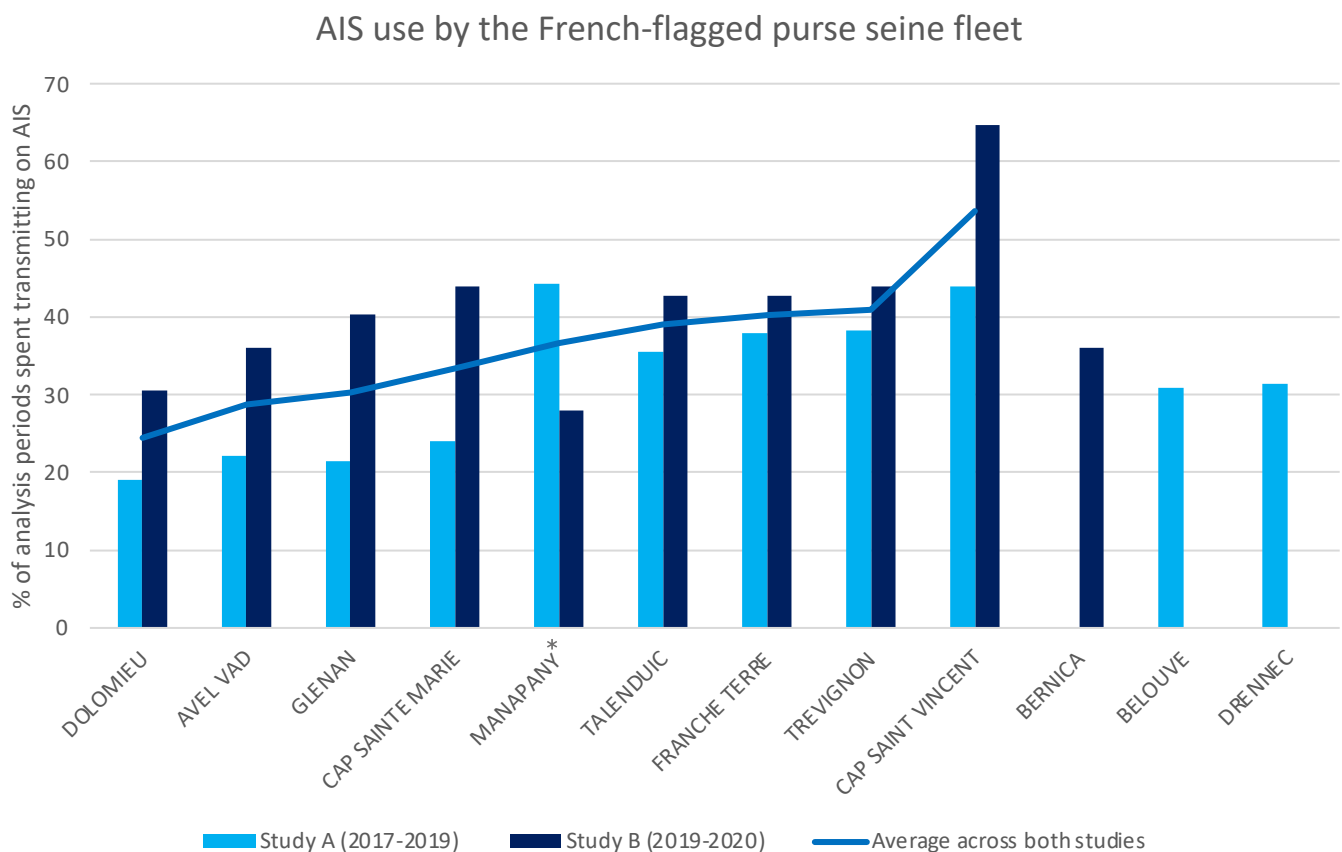


FIGURE 4: PERCENTAGES OF BOTH ANALYSIS PERIODS SPENT TRANSMITTING ON AIS BY THE FRENCH-FLAGGED PURSE SEINE FLEET¹³

*MANAPANY'S LOW TRANSMISSION RATE IN STUDY B MAY BE THE RESULT OF IT HAVING BEEN IN DRY DOCK FOR MOST OF 2020

It is worth noting that there is also one Italian-flagged purse seine vessel active in the Western Indian Ocean. *Torre Italia*, like so many of its French and Spanish counterparts, transmitted for less than a third of the study. The purse seiner spent 71% of the two-year analysis period with its AIS off, with a continuous dark stretch of over three months.



AIS NONCOMPLIANCE BY SEYCHELLOIS AND MAURITIAN-FLAGGED VESSELS

As explained on page 10, the Seychellois and Mauritian purse seine fleets have been included in this analysis and, for the purpose of this study, are considered honorary distant-water fleets because of their foreign ownership. It is therefore no coincidence that the Mauritian fleet's AIS use mimics that of the French fleet, given that all three Mauritius-flagged purse seine vessels share the same French beneficial ownership. On average, the Mauritian fleet transmitted on AIS for 42.2% of the two-year 2019/2020 analysis period.

The new OceanMind study shows that a total of 195 grid cells were reported with catch-effort from the Mauritius fleet, 83 of which had AIS transmissions. These 83 grid cells represented just over half of the fleet's total reported catch weight.

Because Mauritius was not included in the initial AIS study, Figure 5 only shows the percentages of the 2019/2020 analysis period that each of the three Mauritius-flagged purse seine vessels (*FV Belle Rive*, *FV Belouve* and *FV Belle Isle*) spent transmitting on AIS, in addition to the transmission of the Seychellois-flagged fleet.

AIS use by the Mauritian and Seychellois-flagged purse seine fleet

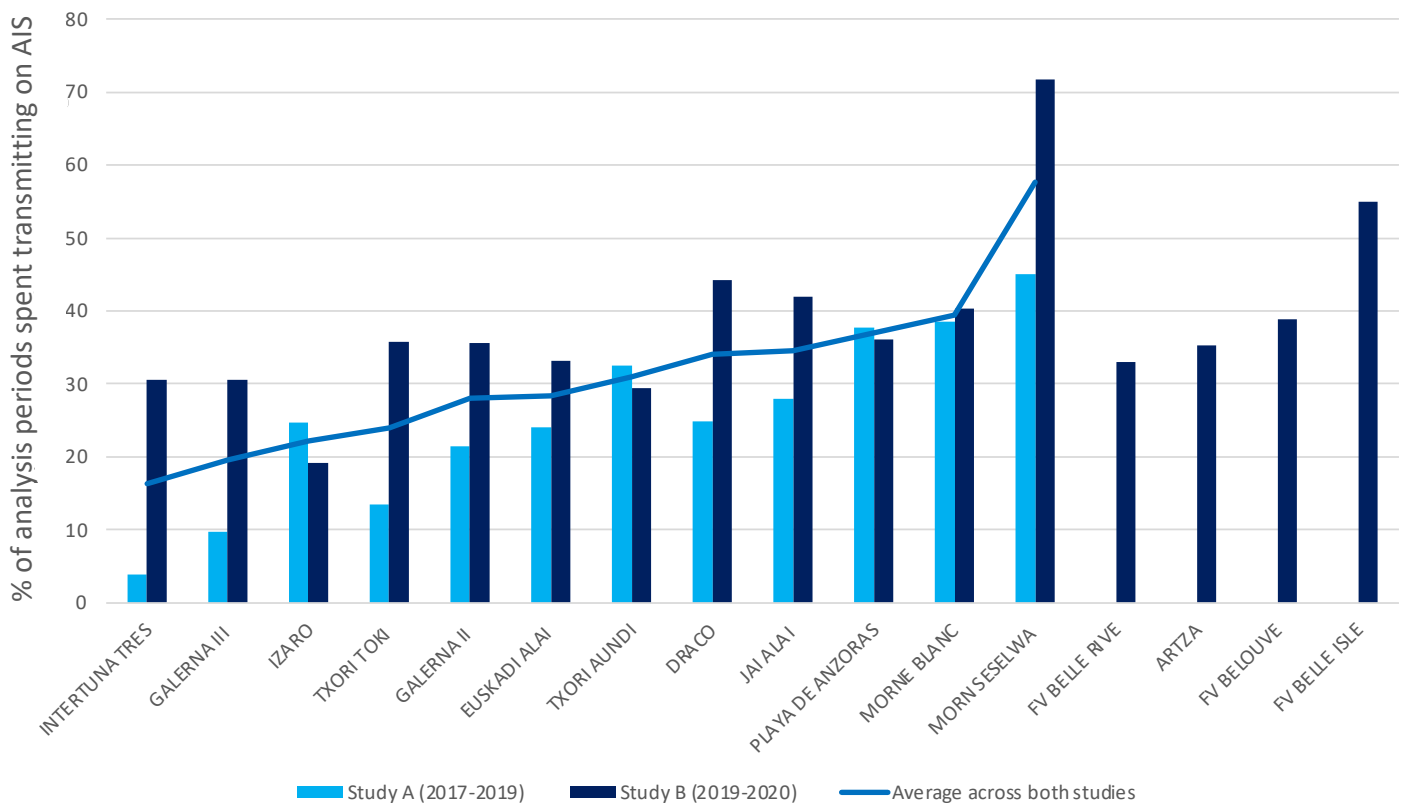


FIGURE 5: PERCENTAGES OF BOTH ANALYSIS PERIODS SPENT TRANSMITTING ON AIS BY THE FRENCH-FLAGGED PURSE SEINE FLEET¹⁴



Seychellois-flagged purse seine vessels only transmitted on AIS for an average of 37% of days over the 2019/2020 analysis period. This represents a significant increase from the previous study. However, one vessel still spent just under nine months of the 2019/2020 study dark. Figure 6 illustrates that many of the grid cells with highest catch weights, as reported by the Seychellois-flagged purse seine fleet, do not contain

any AIS transmissions from the fleet. Of the 467 total grid cells where catch-effort was reported, only 120 (representing 36.3% of total reported catch weight) contained any AIS transmissions, suggesting very low use of AIS during fishing operations. While some of these high catch-weight grid cells lay within the HRA for piracy, Figure 6 also shows many other grid cells outside the high risk area (HRA) with little or no corresponding AIS transmission.

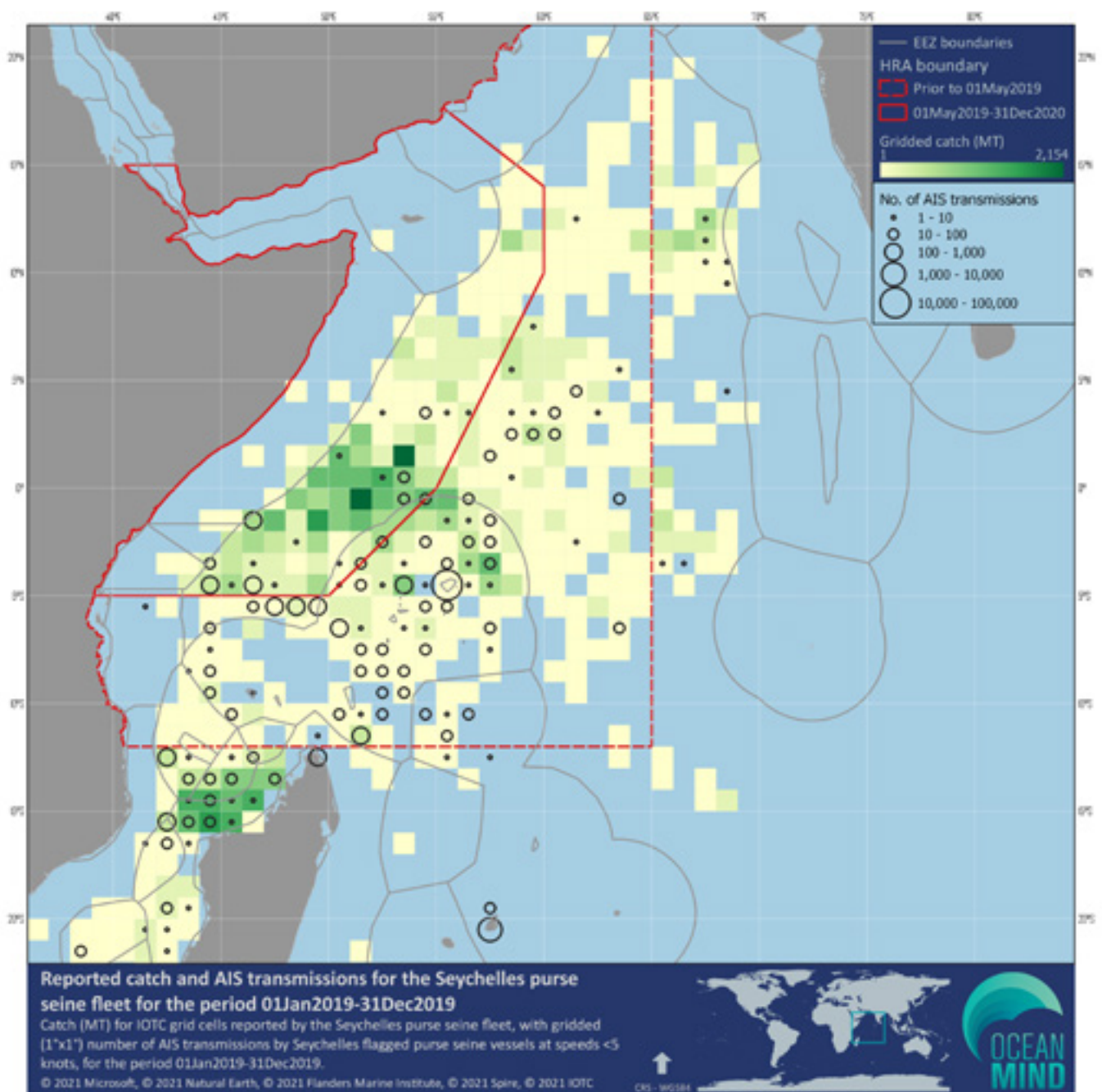


FIGURE 6: REPORTED CATCH AND AIS TRANSMISSIONS FOR THE SEYCHELLOIS-FLAGGED PURSE SEINE FLEET IN 2019¹⁵



While the EU regulations pertaining to AIS use do not apply to these vessels (despite their EU ownership), there are regulations in Seychelles and Mauritius that do apply. The Seychelles' Merchant Shipping Act, Chapter 127A, applies to "Seychelles ships wherever they may be", as well as all other ships while in a port or place within the territorial waters of Seychelles. The Act refers directly to SOLAS which establishes that AIS must be fitted aboard all ships of 300 gross tonnage and upwards engaged on international voyages, calling it "the Safety Convention" and calling all ships to which the Convention applies "Safety Convention Ships".

Importantly, the Merchant Shipping Act states that "the Safety Convention shall have the force of law in Seychelles", with section 86 of the Act stating:

**86. (1) Where, in respect of a ship that is -
(a) registered under this Act; and
(b) a Safety Convention ship,

there is a failure to comply with a
requirement of the Safety Convention, the
master and the owner of the ship are each
guilty of an offence.**

Mauritius's Fisheries and Marine Resources (Automatic Identification System) Regulations of 2016 go even further. In short, the regulations state in part that all fishing vessels over 12 metres in length shall be fitted with AIS which does not permit the input or output of false positions, is not capable of being manually overridden, and is maintained in operation at all times except where the vessel is anchored in the port of Port Louis or within the lagoon area.

AIS must be fitted aboard all ships of 300 gross tonnage and upwards engaged on international voyages

PIRACY OR COMMERCIALLY MOTIVATED NONCOMPLIANCE?

In May 2019, the geographic boundaries of the HRA for piracy in the Indian Ocean were reduced. The two sets of boundaries – the more extensive one in place prior to May 2019 and the smaller one in place thereafter – can be seen in Figures 3 and 6. It is worth noting that the HRA was reduced further in September 2021 as a result of the continued downward trend in Somali piracy.

Current **best practices** to deter piracy, which have been in place since June 2018, recommend that AIS should remain switched on throughout passages through the HRA "to ensure militaries can track the ship, but restrict data to ship's identity, position, course, speed, navigational status and safety related information".¹⁶ Despite this, piracy is often used as the reason for purse seine vessels switching off their AIS.

The latest analysis by OceanMind found that, in general, the low figures cannot be explained by the existence of the piracy high risk area, as a significant proportion of non-transmission has been observed outside of the HRA. The study found that the location of AIS transmissions by the French-flagged fleet suggests that proximity to the HRA for piracy was not a key factor in determining transmission, and the generally low levels of AIS transmission by the Spanish and Seychellois-flagged purse seine fleet coupled with the observed locations of the vessels cannot be wholly explained by the vessels turning off AIS due to the risk of piracy.

A 2019 paper analysing the AIS and vessel monitoring system (VMS) use of the Seychelles-flagged longline and purse seine fleets puts forward another explanation for the "high likelihood of considerable AIS switch off"¹⁷ exhibited by the purse seine fleet. Unlike longline fishing, which is a passive fishing gear, purse seiners actively search for schools of tuna to catch, be they free-swimming schools or schools that have gathered beneath a drifting fish



aggregating device (dFAD). With purse seine fishing comes a risk of failing to catch the tuna one has targeted, and the time it takes to deploy and retrieve a purse seine net adds to the risk of another purse seiner arriving to catch the tuna themselves. In short, the paper highlights that “the presence of a longliner suggests there might be some tuna in an area while the presence of a purse seiner in operation indicates there are tuna in an area. Thus, purse seiners are likely more motivated to keep their position private by switching off their AIS than longliners”.¹⁸

This assertion was recently confirmed by a representative of an Indian Ocean purse seine fishery during an MSC assessment objection hearing. The objection was brought by the Coalition for Transparent Tuna Fisheries (CTTF), of which Blue Marine is a member, against the proposed certification of the AGAC Four Oceans

Integral Purse Seine Tropical Tuna Fishery in the Indian Ocean – a fishery consisting of 15 of the Seychellois and Spanish-flagged purse seine vessels analysed in both OceanMind studies. During the hearing, in response to evidence of AIS misuse presented by Blue Marine, a representative of AGAC stated that AIS “... ***could have been switched off for a commercial advantage. This is not illegal or inappropriate.***”¹⁹

The independent adjudicator took issue with this blatantly incorrect assertion by stating that ***“to switch off AIS for commercial reasons may imperil crew safety and is not consistent with EU law. This is part and parcel of the requirement for the fishery to comply with national legislation in respect of its management strategy.”***²⁰ A remand was issued on this ground, the outcome of which has not yet been determined.

DISTANT-WATER FLEETS FISHING IN COASTAL STATES' EEZS

In addition to looking at the AIS use of the Western Indian Ocean's distant-water purse seine fleets, Blue Marine also commissioned OceanMind to undertake an analysis of these fleets' reported catch and fishing effort within the EEZs of coastal states. This was achieved by extracting data from available IOTC datasets and converting them into georeferenced 1°x1° data grid cells for all distant-water purse seine fleets operating in the Western Indian Ocean. While a full account of the catch-effort analysis can be accessed in the main report, there are a number of key findings that required a more in-depth investigation, discussed in the following sections.

As discussed on page 7, the introduction of a yellowfin tuna stock rebuilding plan has resulted in catch limits being put in place for most IOTC

members. Given that all three species of tropical tuna are caught together by purse seiners (especially those setting on drifting FADs), the yellowfin tuna catch limit applied to a vessel's flag state represents a limiting factor for that vessel's tuna fishing activities. As discussed on page 10, one way in which EU fisheries operators circumvent the limitations placed upon them by the EU's (sizable) catch limit is by reflagging their vessels to Indian Ocean coastal states while retaining beneficial ownership, in order to take advantage of those nations' tuna allocation.

In addition to the well-established EU-owned Seychellois and Mauritian-flagged vessels, this worrying trend is now being seen in other countries. Earlier this year, ***Pacific Star*** – a purse seine vessel owned by Spanish tuna company



3,905 TONNES

TANZANIA'S YELLOWFIN TUNA CATCH LIMIT FOR 2022

Albacora – reflagged to Tanzania and arrived in the Indian Ocean. An automatic translation of a newspaper article from *Napashe*, a daily Swahili newspaper in Tanzania, on 23 March 2022 implied that more vessels were expected.²¹ According to IOTC Resolution 21/01, Tanzania has a yellowfin tuna catch limit of 3,905 tonnes for 2022 – the same amount that was caught by its own vessels in 2020. It remains unclear how much of the quota will be taken away from these vessels and given to Albacora's *Pacific Star* and any others that reflag to Tanzania.

While any trend that adds capacity to an already-overfished ocean is concerning, the greatest danger lies in vessels reflagging to any of the six countries – India, Indonesia, Iran, Madagascar, Oman and Somalia – that have objected to the new yellowfin tuna stock rebuilding plan. Because these countries are not bound by the resolution, they are not bound to comply with yellowfin tuna catch limits and, presumably, neither would any purse seine vessel that reflags to them.

Without reflagging their vessels, there are at least two other ways in which distant-water tuna purse seine vessels can gain access to Indian Ocean coastal states' EEZs. The first is through so-called **Sustainable Fisheries Partnership Agreements (SFPAs)** – access agreement made with non-EU countries, negotiated and concluded by the European Commission on behalf of the EU.

SFPAs allow EU vessels to fish for 'surplus' stocks in the waters of these third countries, while claiming to focus on resource conservation and environmental sustainability, as well as

scientific management and social empowerment.

²² However, the notion of a surplus can be ambiguous or even troubling²³ in regions where overfishing is occurring or where stocks may be data-poor. In addition, while SFPAs do require a certain (arguably inadequate) level of transparency and accountability on the part of the EU, several case studies from West and Central Africa have found cases of IUU fishing by EU vessels as well as complaints regarding stock decline from coastal state partner countries.²⁴

It is important to note that, according to Article 3 (1)(d) of the Treaty on the Functioning of the EU, the conservation of marine biological resources falls under the exclusive competence of the EU. This means that individual EU member states are not entitled to negotiate fisheries agreements with third countries themselves.

The second way in which vessels can gain access to Indian Ocean coastal states' EEZs is through private access or chartering agreements negotiated directly between EU fishing operators and non-EU coastal state governments. Very little information about these clandestine agreements is publicly available but, despite this lack of transparency, fisheries operators taking advantage of them still enjoy the same EU market access as EU vessels that are part of official sustainable fisheries partnership agreements.

While any trend that adds capacity to an already-overfished ocean is concerning, the greatest danger lies in vessels reflagging to any of the six objecting countries.



Importantly, due to the presence of an ‘exclusivity clause’ in SFPAs, these private agreements negotiated between private fishing companies and coastal state governments are only permitted where there is no SFPA in place.²⁵ This applies even if the SFPA is deemed ‘dormant’, meaning that there is no active protocol in place (and therefore no fishing permitted) but the agreement is not yet denounced.

Who Fishes Far is the most comprehensive database of the EU’s distant-water fleet and its various access agreements with third countries. The database contains licence lists of non-EU coastal states which have published, or given permission to publish, the list of EU and non-EU vessels authorised to fish within their waters, but Who Fishes Far acknowledges that the database is incomplete.

Access to fishing grounds for EU vessels operating in countries that have an SFPA is enormously cheaper than private arrangements – in some cases less than a tenth of the private cost.

A 2019 report by WWF confirmed that “signing of private agreements between African countries and EU vessels, for example, have largely gone unreported and have seldom provided details on target species, fishing areas, gear usage and catch data”.²⁶

Around €160 million of EU public funds are used annually to pay for SFPAs and the access to developing country EEZs that they enable.²⁷ Access to fishing grounds for EU vessels operating in countries that have an SFPA is enormously cheaper than private arrangements – in some cases less than a tenth of the private cost.²⁸ Consequently, SFPAs can be considered to be subsidies, since the cheaper access contributes to the profitability of these distant-water vessels. This places SFPAs at odds with the Common Fisheries Policy’s commitment to prohibit subsidies that contribute to overfishing by 2020,²⁹ since several of the stocks in the Indian Ocean are in an overfished state.

SPAIN’S FISHING ACTIVITY IN COASTAL STATES’ EEZS

In addition to reflagging their vessels to countries like Seychelles, Spain’s purse seine fleet also takes advantage of SFPAs and private access agreements. OceanMind identified catch and fishing effort by the Spanish purse seine fleet in the EEZs of Comoros in 2016, Madagascar in 2016-2018 and both Mauritius and Seychelles from 2016 until 2020 – all in green in Figure 7. It can be assumed that this activity was covered by the SFPAs in place with all four of these coastal states at the time. It is less simple to explain Spain’s fishing activity identified in the waters of Tanzania, Kenya and India with whom the EU holds no SFPAs.



Spanish-flagged purse seine fleet's reported fishing activity in coastal states' EEZs

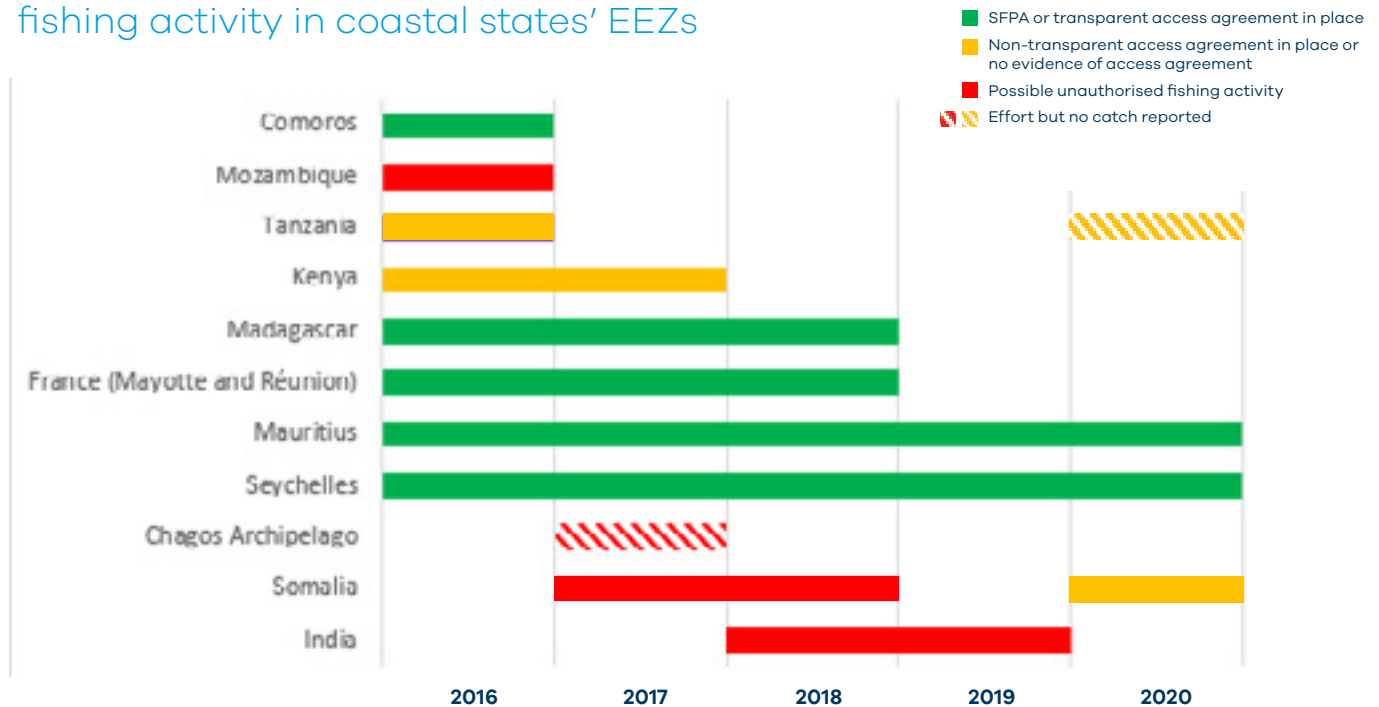


FIGURE 7: SPANISH-FLAGGED PURSE SEINE FLEET'S REPORTED FISHING ACTIVITY IN COASTAL STATES' EEZS³⁰

Spanish-flagged purse seine vessels spent 673.3 fishing hours in Tanzania's EEZ in 2016 and reported 2,139.83 tonnes of catch. They also reported 11 fishing hours spent in the EEZ in 2020 but reported zero catch. In 2016 and 2017, the fleet spent 66 hours in the Kenyan EEZ, catching just under 250 tonnes. A 2017 European Parliamentary briefing paper confirms that "the EU fleet also operates in the waters of third countries with which the EU does not have an SFPA, based on private access agreements with the countries in question, as is the case for Kenya and Tanzania,"³¹ confirming that this fishing activity is likely to have been covered by private access agreements.

On behalf of Blue Marine, Kroll spoke to state officials from both Kenya and Tanzania regarding these private access agreements.

An official from Kenya, familiar with the Fisheries Services Licensing, told Kroll the following:

"There were seven Spanish fishing vessels licensed in Kenyan deep seas between 2012 and 2018. These vessels were licensed under private access agreements. Currently, we do not have any foreign fishing vessels in Kenya's deep sea following suspension of all such licenses in 2018. All foreign agreements were suspended in late 2018."

Spanish-flagged purse seine vessels spent 673.3 fishing hours in Tanzania's EEZ in 2016 and reported 2,139.83 tonnes of catch.



While this is a relatively straightforward explanation, a former senior government official from Tanzania told Kroll the following:

"Both Spain and France have fishing agreements with Tanzania. What happens is that the countries negotiate the agreements for a period of 10 years, but vessels or fishing companies have to apply for individual licences that need to be renewed each year. So, while the countries have the overarching agreement, it could be that individual vessels had licences which expired but they still continued to fish."

"There is dissatisfaction on behalf of fishing companies with the Deep Sea Fisheries Management and Development Act 2020, which was passed under Magufuli to increase fees."

In conversation, a senior government source told Kroll that both countries have access agreements. However, they suggested that, rather than the countries negotiating the agreements, it is in fact fishing companies like Albacora that do the negotiating. Indeed, given that Tanzania is not listed among the EU's SFPAs, the fishing agreements with Spain and France mentioned above are likely to have been with private companies.

They also said that concerns have been raised within government circles that Tanzania is not benefitting enough from the existing agreements and that *"the Zanzibar government has also been involved in a dispute with the Union government for not properly sharing the revenues from the fishing agreements with Spain. The matter remains unresolved to date."*

"Under Tanzania's blue economy initiative," the source said, "both Zanzibar and the mainland prioritised signing fishing agreements with

Both Zanzibar and the mainland prioritised signing fishing agreements with European countries that increased the number of European fishing vessels in Tanzanian waters

European countries that increased the number of European fishing vessels in Tanzanian waters."

A report published by WWF in 2019 stated that, since 2017, no EU vessel owners had taken licences in Tanzania due to local licensing conditions including pre-fishing inspections and the requirement to have local observers and local crew on board.³²

Nonetheless, the source mentioned "a Spanish fishing company, Albacora Group, which signed a new fishing licence with Tanzania in March, 2022." This is most likely a reference to the reflagging of Albacora's *Pacific Star*, as discussed above.

Spanish-flagged purse seine vessels also spent nearly 80 fishing hours in India's EEZ in 2018 and 2019, catching 784 tonnes, with no evidence of a private access agreement in place. Given the clandestine nature of the EU's private agreement system, it would normally be plausible that an agreement between the fishery operator and the government could have been reached. However, an anonymous source close to the Indian Head of Delegation to the IOTC informed Blue Marine that *"India has not issued any permission or license to any Spanish or Seychelles-flagged purse seine vessels so far"*.

It also seems highly unlikely that India would knowingly allow purse seine vessels to fish in



its waters, given that the Tamil Nadu state government has banned the use of purse seine nets, as per the Tamil Nadu Fishing Regulation Act 1983.

In March 2022, The Hindu newspaper reported on fish caught using banned purse seine nets being seized by police.³³

Another The Hindu article with the headline “Fishermen warned against using purse seine nets” stated the following:

“Collector V. Vishnu has warned the country boat fishermen of the district that using purse seine nets banned by the State government would lead to serious legal consequences, besides seizure of nets, boats and the entire catches.”³⁴

This strongly suggests that the purse seine fishing activity carried out by Spanish-flagged

vessels within the Indian EEZ could have been unauthorised.

In 2016, Spanish-flagged purse seine vessels spent 12 fishing hours catching 19 tonnes of fish in Mozambique’s EEZ. It is unlikely that this fishing activity was lawful, given that the protocol to the SFPA between the EU and Mozambique expired in 2015, making the agreement dormant. As explained above, no private access agreements may be negotiated when there is an SFPA in place (even if it is dormant). This was confirmed by the European Commission in a response to a request for access to documents pertaining to various private access agreements made in January 2022. In this reply, Charlina Vitcheva, Director-General of DG Mare, confirmed that *“a fishery partnership agreement exists with Mozambique but its implementing protocol elapsed on 31.01.2015. Since then, no Union fishing vessels may be authorised to fish in that EEZ”*.

Spanish-flagged purse seine vessels also spent nearly 80 fishing hours in India’s EEZ in 2018 and 2019, catching 784 tonnes, with no evidence of a private access agreement in place.

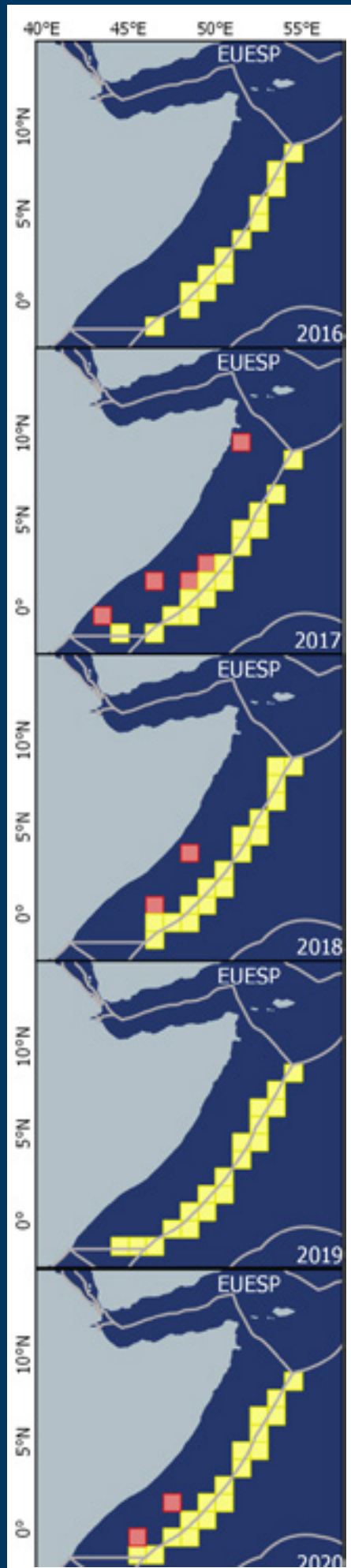


Figure 7 shows two other instances of possible unlawful fishing by the Spanish purse seine fleet, in the EEZs of Somalia and the Chagos Archipelago. In April 2010, a 640,000 km² no-take marine protected area banning all commercial fishing and extractive activities was established around Chagos. It is therefore not possible for any Spanish-flagged purse seine vessels to have been given authorisation to fish in the protected area. Despite this, Spain reported spending 12.2 fishing hours wholly within the Chagos EEZ in 2017 but reported zero catch.

Perhaps the most convincing evidence of unauthorised fishing on the part of Spanish-flagged purse seine vessels operating in the Western Indian Ocean is the catch and effort reported within the Somali EEZ. Figure 8 shows Spanish vessels operating well within the highly productive Somali EEZ in 2017, 2018 and 2020, with the red squares representing the fishing effort cells that were situated entirely within the boundaries of the EEZ and the yellow squares representing effort cells that occurred on the EEZ-boundary.

In 2017 and 2018, Spanish purse seiners spent 64 fishing hours catching more than 330 tonnes of fish. Regarding this activity, the OceanMind report states that “as offshore licences were not issued by Somalia prior to 2019, the effort reported by EU-Spain in 2017 and 2018 within the Somalia EEZ was unlikely to be under an access agreement.”³⁶

Indeed, a World Bank article published in 2019 described how new offshore licences issued to Chinese vessels “marked the first time in more than two decades that licences were issued legally and transparently by Somalia.”³⁷ The WWF report cited above also confirms that “no purse seine vessel owners have yet acquired licences” in the Somali EEZ.³⁸

Paragraph 3.1.1 of the FAO’s International Plan of Action to Prevent, Deter and Eliminate Illegal,

FIGURE 8: REPORTED FISHING EFFORT IN AND AROUND THE SOMALI EEZ BY SPANISH-FLAGGED PURSE SEINE VESSELS (2016-2020)³⁵



Unreported and Unregulated Fishing states that illegal fishing refers to activities “conducted by national or foreign vessels in waters under the jurisdiction of a State, without the permission of that State, or in contravention of its laws and regulations”.³⁹ Under Articles 58(3) and 62(4) of the United Nations Convention on the Law of the Sea (UNCLOS), flag States have an obligation to adopt the necessary measures prohibiting their vessels from fishing in the EEZs of coastal states, unless so authorised by the coastal states. Similarly, Article 12(3) of the Somali Fisheries Law states that “[n]o person shall use any vessel for fishing in Somali waters without having a valid registered fishing license.” Article 12(5) goes on to state that “[a]ny person who uses any vessel for fishing in Somali waters without a valid certificate of registration shall face prosecution under the laws of the country.”

More specifically with respect to foreign fishing vessels, Article 15(1) states: “No foreign fishing vessel shall fish, attempt to fish or participate in fishing operations in Somali waters without a valid license issued under this Law”, with Article

15(2) stating: “Any fishing vessel that enters Somali waters without having a valid license shall be presented to the Court and subjected to Somalia Fisheries Law.”

While this report does not imply that all Spanish-flagged vessels were engaged in unauthorised fishing, these instances appear to be clear indications of unauthorised fishing on the part of some Spanish fishing companies.

FRANCE’S FISHING ACTIVITY IN COASTAL STATES’ EEZS

As with Spain’s distant-water purse seine fleet, the OceanMind study found substantial fishing activity on the part of French-flagged purse seine vessels within coastal states’ EEZs, as shown in Figure 9. Like Spain, SFPAs covered a substantial portion of this activity, specifically in the waters of Madagascar, Mauritius and Seychelles. However, when it comes to private access agreements, there is even less information available for French vessels than there is for Spanish vessels.

French-flagged purse seine fleet’s reported fishing activity in coastal states’ EEZs

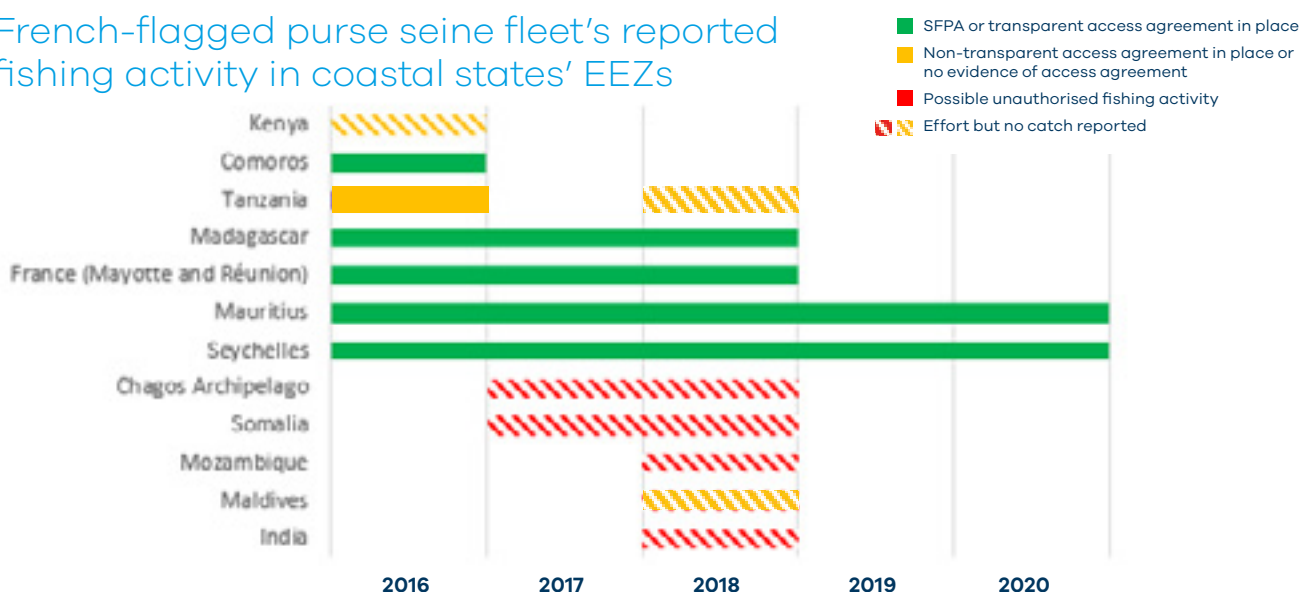


FIGURE 9: FRENCH-FLAGGED PURSE SEINE FLEET’S REPORTED FISHING ACTIVITY IN COASTAL STATES’ EEZS⁴⁰



The explanation provided in the previous section regarding the Spanish vessels' activity in Tanzania's EEZ can also be used to explain the presence of French purse seiners in the EEZ. There is no obvious explanation for the remaining French fishing effort reported in the following EEZs: Kenya (11.9 fishing hours in 2016); Mozambique (48.36 fishing hours in 2018); Maldives (24.05 fishing hours in 2018); India (12.35 fishing hours in 2018); Somalia (36 fishing hours in 2017 and 2018); and lastly the Chagos Archipelago (85 fishing hours in 2017 and 2018).

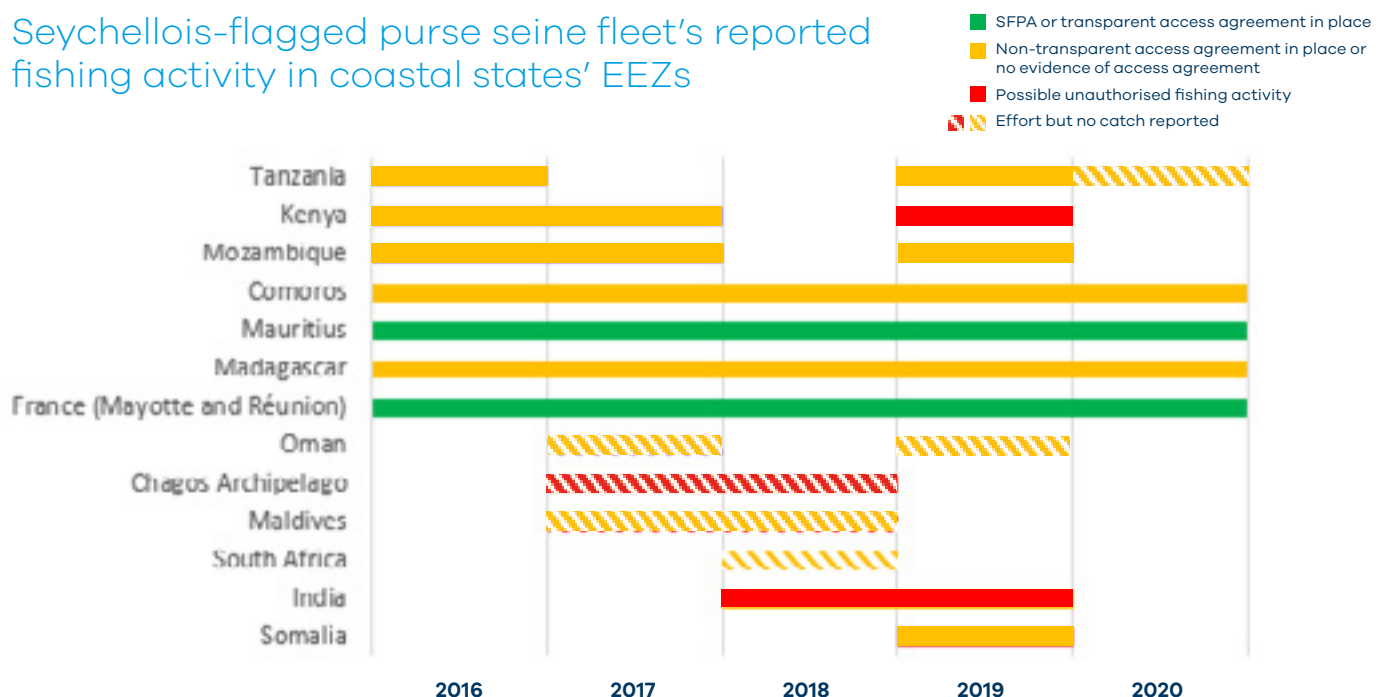
While it is not clear whether there is a private access agreement in place with Kenya, it can be suggested that any French purse seine fishing activity within the EEZs of India, Maldives, Somalia and Chagos are potentially unlawful by virtue of there being no access agreements in place. Similarly, it is not possible for a legal private access agreement to exist with Mozambique, given the dormant SFPAs. While this report does not imply that all French-flagged vessels were engaged in unauthorised fishing, these instances appear to be clear indications of unauthorised fishing on the part of some French vessels.

FISHING ACTIVITY IN OTHER COASTAL STATES' EEZS BY THE MAURITIAN AND SEYCHELLOIS FLEETS

In the absence of SFPAs, which apply only to the EU's fleets, it can be challenging to find information pertaining to the bilateral agreements that exist between coastal states. However, as a member of the Fisheries Transparency Initiative (FiTI), Seychelles publishes an annual report containing information on its fisheries, including some details of its access agreements. In April 2021, at the launch of the Seychelles' first FiTI report, the Minister for Fisheries and the Blue Economy Jean-François Ferrari stated: "his government has a clear vision to make Seychelles' fisheries the most transparent in the world. We have nothing to hide; we have everything to share."⁴¹

FIGURE 10: SEYCHELLOIS-FLAGGED PURSE SEINE FLEET'S REPORTED FISHING ACTIVITY IN COASTAL STATES' EEZS ⁴²

Seychellois-flagged purse seine fleet's reported fishing activity in coastal states' EEZs





Admirably, the Seychelles Fishing Authority (SFA) has published on its website the agreements that Seychelles holds with Mauritius – one that allows Mauritian-flagged vessels to fish in Seychelles' waters, and another that permits Seychellois-flagged vessels to fish in Mauritius' waters. The SFA has also published the agreement it holds with the EU, allowing Seychellois vessels to fish in the waters of Mayotte.

The Seychelles' 2020 FiTI report also makes reference to Seychellois vessels having access to the waters of Madagascar (11 vessels) and Comoros (the exact number of vessels was not specified but is estimated to be eight)⁴³, but the details of these private access agreements have not been published by the SFA. In the case of Madagascar, private access agreements exist between Spanish fishing associations like ANABAC and OPAGAC that allow EU-owned, Seychelles-flagged purse seiners to fish in Malagasy waters. In April 2022, Madagascar's Ministère de la Pêche et de l'Economie Bleue posted to its Facebook page some of the details of a new private access agreement between Interatun Ltd and the Malagasy Government, allowing five vessels to fish for tuna in the

Malagasy EEZ for two years. The Facebook post stated that the deal is worth 1,812,147,000.00 ariary (approximately £362,180.00).⁴⁴

It is unclear what kind of access agreements may have existed between Seychelles and Mozambique in 2016, 2017 and 2019, and between Mauritius and Yemen in 2017 when Mauritian-flagged purse seine vessels caught 109 tonnes of fish inside the Yemeni EEZ. Similarly, there is little transparency regarding the private access agreement in place between foreign fishing operators and the Malagasy Government, allowing the EU-owned, Mauritian-flagged vessels to access the EEZ.

Admirably, the Seychelles Fishing Authority (SFA) has published on its website the agreements that Seychelles holds with Mauritius

Mauritian-flagged purse seine fleet's reported fishing activity in coastal states' EEZs

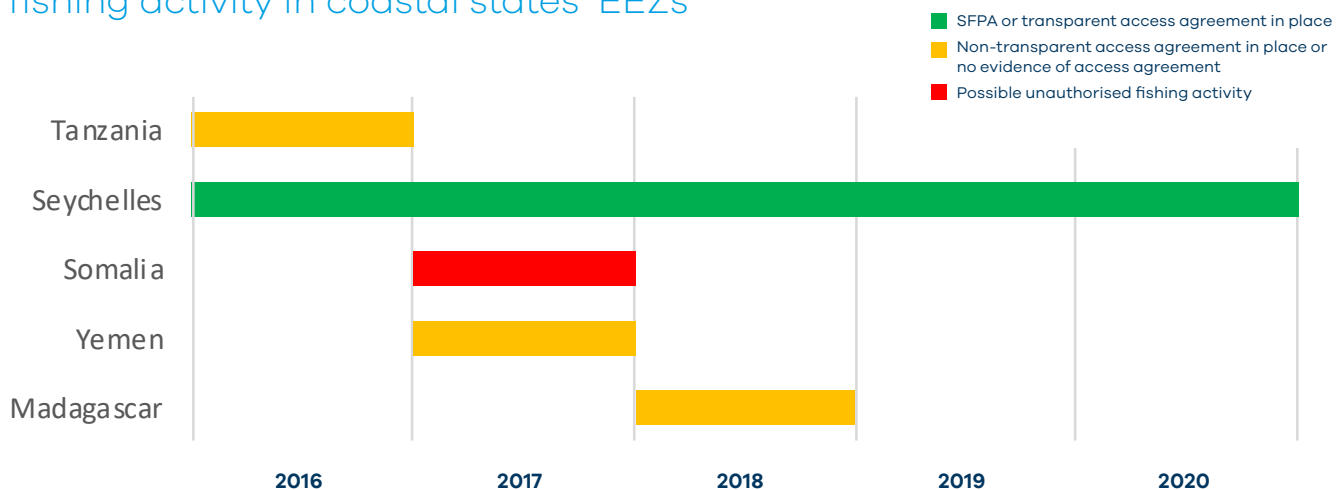


FIGURE 11: MAURITIAN-FLAGGED PURSE SEINE FLEET'S REPORTED FISHING ACTIVITY IN COASTAL STATES' EEZS⁴⁵



The amount of time that Seychellois and Mauritian vessels spent in Tanzania's waters in 2016 (600 fishing hours and 15 sets, amounting to 1,425 tonnes of fish caught by Seychelles and 408 caught by Mauritius) suggests there must have been access agreements in place during this time. However, this is less likely to have been the case in 2019 when Seychelles-flagged purse seiners spent 13 hours catching 56 tonnes of fish as Seychelles' 2020 FiTI report did not state that any Seychellois vessels had permission to fish in the Tanzanian EEZ.

The same is probable for Seychelles' vessels in the waters of Kenya. In 2017, it was reported that seven Seychellois-flagged vessels had access to Kenya's EEZ⁴⁶ but, in September 2019 when Seychelles-flagged purse seine vessels caught over 50 tonnes of fish inside the Kenyan EEZ, there is no evidence of an access agreement. Additionally, as discussed in previous sections, an official from Kenya, Familiar with the Fisheries Services Licensing told Kroll that all foreign agreements were suspended in late 2018. This means that this catch in Kenya's waters was almost certainly not authorised.

Of great concern is the substantial fishing activity reported by Seychelles-flagged purse seine vessels in the Indian EEZ. In 2018 and 2019, Seychelles-flagged vessels spent 47 fishing hours inside the EEZ, catching 241 tonnes of fish. For the reasons explained on page 22, it is highly unlikely that the Seychellois vessels were authorised to fish in India's EEZ.

It is even less likely that the Mauritian fleet received valid authorisation to fish in the Somali EEZ in 2017, when they reportedly set their nets seven times and caught 16.69 tonnes, for the reasons explained on page 23. In 2019, Seychellois-flagged purse seiners also reported spending almost 33 fishing hours catching 85 tonnes.

While this report does not imply that all Seychellois and Mauritian-flagged vessels were engaged in unauthorised fishing, these instances appear to be clear indications of unauthorised fishing on the part of a subset of these fleets.

50

TONNES

CAUGHT IN THE KENYAN EEZ
BY SEYCHELLOIS VESSELS IN
SEPTEMBER 2019

Of great concern is the substantial fishing activity reported by Seychelles-flagged purse seine vessels in the Indian EEZ. In 2018 and 2019, Seychelles-flagged vessels spent 47 fishing hours inside the EEZ, catching 241 tonnes of fish



INDIAN OCEAN TUNA FISHERIES' BYCATCH NONCOMPLIANCE

More than a million tonnes of skipjack, albacore, yellowfin and bigeye tuna were caught by IOTC vessels in 2020,⁴⁷ both in coastal waters and on the high seas, and using a wide variety of gear. Fishing on this industrial scale has a huge impact on the creatures that share the Indian Ocean with the four main tuna species, because so many non-tuna species are caught as bycatch.

Tuna fishing in the Indian Ocean is dominated by purse seines, longlines and gillnets, of which longlines and gillnets in particular are lethal to a broad array of animals. For example, seabirds are attracted to the bait used during longlining, but can easily become trapped on the hooks.⁴⁸ Most of the world's cetacean bycatch comes from entanglement in gillnets, and a recent paper estimated that tuna gillnet fisheries caught an extraordinary 4.1 million small cetaceans between 1950 and 2018.⁴⁹

The IOTC acknowledges the wider impact of its fisheries through its Working Party on Ecosystems and Bycatch (WPEB). The WPEB monitors bullet and frigate tunas, billfish, sharks, turtles, seabirds and cetaceans. It gathers information from IOTC members about how their vessels interact with the different species, produces stock assessments from catch data, and presents bycatch reduction mechanisms to the IOTC Scientific Committee.

In principle, a detailed overview of the main species that interact with the tuna fisheries is a good position from which to assess bycatch levels and devise methods of mitigation. Unfortunately, there is a serious disconnect with the reality of the IOTC's monitoring of bycatch.

The first problem that is immediately striking is the lack of information on which to base stock assessments. Six of the seven shark species do not have stock assessments. Likewise, two of the neritic tunas and mackerel are missing, as are two billfish, while assessments for black marlin, Indo-

Pacific sailfish, kawakawa and Indo-Pacific king mackerel are all rated as 'uncertain' or 'highly uncertain'. The statuses of all turtles, seabirds and cetaceans are completely unknown.⁵⁰

The WPEB's own documents consistently note that the lack of information is a result of failures by IOTC members to comply with reporting requirements. For example, [Resolution 13/06](#) prohibits the retention of oceanic whitetip sharks, and [Resolution 12/09](#) does the same for pelagic and bigeye thresher sharks. Because these sharks are still caught incidentally, the Resolutions also encourage vessels to report all shark interactions, and obliges CPCs to report this shark data annually. These vital data are not being recorded and reported, so basic fishery indicators are described as 'limited' and stock assessments are not possible.

This yawning data gap is particularly alarming given that IOTC investigations have indicated that longline bycatch mortality is high for these sharks, oceanic whitetips are critically endangered, and that an average of 30,277 tonnes of unidentified sharks were landed annually between 2015-19.^{51,52,53,54}

More than a million tonnes of skipjack, albacore, yellowfin and bigeye tuna were caught by IOTC vessels in 2020



Leatherback and loggerhead turtle populations in the Indian Ocean are critically endangered, and marine turtles generally are at high risk of mortality as bycatch in gillnet fisheries, so [Resolution 12/04](#) requires the Scientific Committee to make an annual evaluation of turtle populations. However, as with the oceanic whitetip and thresher sharks, IOTC members are not adequately reporting their turtle interactions, including at a species level, and the annual evaluations have not taken place.

It is recognised that the recorded levels of bycatch are a 'severe underestimate', with one estimate of turtles caught in gillnets presenting an enormous possible range of 11,400–47,500 turtles per annum. The high degree of uncertainty around mortality, catch and population numbers makes it very difficult to fully assess which species are being worst affected by the tuna fisheries, nor to implement appropriate bycatch mitigation measures.⁵⁵

Like turtles, seabirds suffer from a lack of reporting by IOTC members, meaning the level of fishing mortality is poorly known.⁵⁶ In the absence of data, the IOTC Scientific Committee has requested that each fishing nation comes up with its own set of guidelines to mitigate bycatch for seabirds and sharks, as well as implementing the FAO guidelines for mitigating turtle bycatch. These are called National Plans of Action (NPOAs), and the degree of compliance across IOTC members is disappointingly low. Australia implemented the first marine turtle NPOA in 2003, but as of 2021 shark NPOAs had only been implemented by 48% of the relevant countries, while turtles stood at 34% and seabirds at 28%.⁵⁷

Along with blue sharks, some of the neritic tunas, mackerel and billfish have sufficiently large reported catches to allow for stock assessments. These species are not caught in the same volume as yellowfin tuna or skipjack, but they are targeted by some fisheries and are not purely bycatch.

Just like yellowfin, several of the stock assessments paint an alarming picture of the health of the Indian Ocean: blue marlin, striped marlin, longtail tuna and narrow-barred Spanish mackerel are all overfished and experiencing overfishing. Blue marlin needs a 35% reduction in catch for a 65% chance of turning things round in the next five years, and catch limits are warranted for longtail tuna to recover the stock to MSY. In fact, it is estimated that most of the neritic tunas and mackerel were already fished to MSY by 2009–2011 and, more than a decade later, it is still recommended that catches do not exceed those levels. For bullet tuna, this would require a catch limit of around 8,500 tonnes but in 2018 the catch was 34,000 tonnes.

There is also concern surrounding noncompliance with resolutions pertaining to yellowfin, skipjack and bigeye, as described in previous sections. In addition to the continued overfishing, a recent paper was submitted to the IOTC Compliance Committee by Kenya regarding "persistent non-compliance" with Resolution 19/02 which outlines the IOTC's dFAD management plan. Specifically, the paper cites "ongoing use of entangling dFAD designs with netting and/or other meshed materials, low replacement of plastics with biodegradable components within dFAD designs, and a lack of compliance with the requirement to have the deploying vessel's unique IOTC registration number clearly marked on each operational buoy".

Clearly, issues of non-compliance with its own Resolutions mean that the IOTC is failing to adequately manage and protect a large number of the bycatch species that are heavily affected by the main tuna fisheries. The IOTC must take action immediately to correct this, or risk continued widespread harm to the ecosystem.



CONCLUSION

This report aimed to investigate possible instances of noncompliance with international regulations, IOTC resolutions and national law, with a specific focus on the industrial purse seine fleets highlighted by the newly published OceanMind report. The continued misuse of AIS by EU-owned purse seine vessels raises serious concerns, both for the safety of crews and the transparency of these distant-water fleets operating out of sight and out of mind.

Of even greater concern are the instances of purse seine fleets fishing in coastal states' EEZs where all evidence points to there being no access agreement or authorisation in place. This uncertainty and suspicion could be eliminated if key information on private agreements were to be included in a publicly accessible database, including the identity of the vessels involved, the terms of the agreement, and the associated fishing activities. This would allow for greater transparency and for all EU-owned vessels to be

held to the same standard, regardless of where they fish.

Given the ubiquitous nature of the EU's purse seine fleet in the Indian Ocean, it comes as no surprise that the EU is still the number-one harvester of the overfished yellowfin tuna, and the one pushing for no new catch reductions to be adopted for yellowfin tuna in 2022, despite the urgent need for an immediate 30% reduction.

Blue Marine calls for stricter compliance with and enforcement of existing laws and regulations governing the fishing activities of purse seine vessels operating in the Indian Ocean, and for private access agreements to be made more transparent and accountable. Additionally, decision-makers at the upcoming IOTC meeting must be led by science and the need for improved conservation of tuna and bycatch species in the region, rather than by greed, self-interest, and short-term gain.

Of even greater concern are the instances of purse seine fleets fishing in coastal states' EEZs where all evidence points to there being no access agreement or authorisation in place.



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