GHANA TUNA ASSOCIATION

GUARANTEE OF A SUSTAINABLE FUTURE

EASTERN ATLANTIC PURSE SEINE TUNA

FIP

ETP MANAGEMENT STRATEGY

FOR THE

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1 Introduction

The fishery being assessed is the Eastern Atlantic Ocean tuna purse seine fishery. The fishery targets bigeye tuna (*Thunnus obesus*), skipjack tuna (*Katsuwonus pelamis*), and yellowfin tuna (*T. albacares*) using pelagic purse seine gear. The purse seine sets are made on both Fish Aggregation Devices (FADs) and free-school (non-FAD associated) sets. The purse seine vessels are flagged to Ghana and fish in EEZs of Ghana, Benin, Liberia and Cote d'Ivoire and on the high seas in the Eastern Atlantic Ocean. The companies managing the fishing vessels are all members of the Ghana Tuna Association (GTA). The fishery is managed regionally by the International Commission for the Conservation of Atlantic Tunas (ICCAT).

The MSC definition of an ETP species is:

- Any species that are recognized by national ETP legislation.
- Species listed in the binding international agreements given below:
    - Appendix 1 of the Convention on International Trade in Endangered Species (CITES), unless it can be shown that the particular stock of the CITES listed species impacts by the UoA under assessment is not endangered.
    - Binding agreements concluded under the Convention on Migratory Species (CMS), including:
        - Annex 1 of the Agreement on Conversation of Albatross and Petrels (ACAP);
        - Table 1 Column A of the African-Eurasian Migratory Waterbird Agreement (AEWA);
        - Agreement on the Conservation of Small Cetaceans of the Baltic and North Sea (ASCOBANS);
        - Annex 1, Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea, and Contiguous Atlantic Area (ACCOBAMS);
        - Wadden Sea Seals Agreement;
        - Any other binding agreements that list relevant ETP species concluded under this Convention.
- Species classified as 'out of scope' (amphibians, reptiles, birds, and mammals) that are listed in the IUCN Redlist as vulnerable (VU), endangered (EN), or critically endangered (CE).

The use of purse seine fishing gears in the Eastern Atlantic FIP can have negative impacts on non-target species as a result of bycatch. The large, encompassing net can engulf several important ETP species as well.

The silky shark is listed as a vulnerable species by the International Union for the Conservation of Nature (IUCN) and some species of hammerheads and thresher sharks are also ETP species. The reporting of any shark encounter on the Eastern Atlantic purse seine fleet is mandatory. Observer coverage of the Ghanaian fleet is 100% and these observers record the species, length and release fate of all sharks the fishery interacts with.

Each Eastern Atlantic purse seine vessel is listed on the ISSF PVR. As a minimum, vessels have been confirmed by the PVR auditors to use low risk entangling FADs. Entangling FADs are a particular threat to a range of marine species and habitats because anything can become trapped in the floating net portion of the FAD and risk suffocating or drowning. Entangling FADs also pose a large threat to ETP

species like many shark species and turtles. If there is inconsistent use of non-entangling FADs across the fleet, then the risk to ETP species from entangling FADs is high.

The GTA has now adopted a new FAD management policy stating that best practices for FAD management, identified in ISSF Technical Report 2019-11, "Recommended Best Practices for FAD management in Tropical Tuna Purse Seine Fisheries", shall be implemented. Commitments of the policy include:

- Collecting data on the number of active FADs and FAD activity (deployments, visits, sets and loss) as required by tRFMO and submitting them to the required authority and tRFMO.
- Abiding by the limit of active number of FADs adopted by tRFMOs.
- Deploying only FADs with satellite tracking buoys.
- Managing the activation and deactivation of buoys taking into account the corresponding tRFMO's measures. Abiding by the time area closure (including FAD area closures) established by the corresponding RFMO.
- Using only fully non-entangling FADs to reduce ghost fishing.
- Applying Best Practices for safe handling and release of sharks and rays the fishery interacts with.
- Participating/supporting studies to evaluate the contribution of purse seine fisheries to catches of silky sharks, and the impact of implementation of the Good Practices on post-release survival.
- Participating in projects aiming to develop and test new tools to release sharks and mobulids in tuna purse seiners that maximize their survival and are practical to use onboard.

1.1 Scope

This strategy has been created because the susceptibility of critical ETP species to overfishing warrants further documented conservative action. We endeavour to encourage and implement best practice policies to reduce the impacts that the FIP is having on ETP species. This document will act as a guide for skippers on the actions required of them to reduce all ETP species interactions and how to manage those that inevitably occur.

This document will be approved by participating companies with an obligation for skippers to sign and accept the terms of best practice. A hard copy will be required on all vessels and will be always available.

This document aims to improve the Principle 2 Performance Indicator (PI) scores, with explicit mention of PIs 2.3.1, 2.3.2, and 2.3.3 for ETP species, to achieve a total score of SG80. Achieving SG80 will eventually lead to the submission to the Marine Stewardship Council (MSC) for full certification.

2 ETP species

Purse seine fishing vessels have low selectivity due to the large, encircling net that traps animals within. This fishery also uses FADs to attract schools of tuna and make purse seining more efficient. However, it is the same attraction, which entices tunas to the FAD, that also attracts a range of different marine animals, including sharks, dolphins, turtles, and birds. Predominantly ETP species, these animals are at risk of becoming bycatch in purse seine gears and can often be killed as a result of drowning and suffocation.

2.1 Elasmobranchs

Sharks and rays are vulnerable to the global fishing effort because of their life-history traits, including slow growth, late maturation, low fecundity, and long lifespan, which make their populations vulnerable to overfishing and at risk of collapse (Molina & Cooke, 2012).

Minimal incidents of shark and ray catch can still be detrimental to fragile ETP stocks. Any efforts in place to reduce the catch of these species and therefore their mortality will be beneficial for their longevity and conservation.

In the Eastern Atlantic Ocean, there are several ETP sharks and rays that could be at risk from the Eastern Atlantic purse seine fishery (Table 1).

Table 1 – ETP elasmobranch species that the fishery is known to or predicted to interact with using previous catch data and research from other fisheries.

Common name	Scientific name	UoAs to which applicable	Justification
Silky shark	*Carcharhinus falciformis*	Ghanaian purse seine fishery	CMS Appendix II; ICCAT 11-08
Hammerhead shark	*Sphyrna* spp.	Ghanaian purse seine fishery	ICCAT Rec (10-08); CMS Appendix II; CITES Appendix II
Great hammerhead	*Sphyrna mokarran*	Ghanaian purse seine fishery	ICCAT Rec (10-08); CMS Appendix II; CITES Appendix II
Scalloped hammerhead	*Sphyrna lewini*	Ghanaian purse seine fishery	ICCAT Rec (10-08); CMS Appendix II; CITES Appendix II
Copper shark	*Carcharhinus brachyurus*	Ghanaian purse seine fishery	CITES Appendix II
Manta ray	*Mobula birostris*	Ghanaian purse seine fishery	CMS Appendix II; CITES Appendix II

2.1.1 Issue

Observed catch

Using observer data collected, there were silky sharks (*Carcharhinus falciformis*), brown sharks (sandbar sharks) (*Carcharhinus plubeus*), hammerheads (*Sphyrna* spp., *Sphyrna lewini, Spyrna makarran*), and mantas (*Manta birostris*) recorded by the Ghanaian purse seine fishery. The Ghanaian purse seine fishery uses best released practices to make every effort to release these species alive.

Unobserved mortality due to entanglement

In April 2024, the FIP has produced and implemented a FAD management policy in line with ISSF conservation measure 3.7. The FAD management policy confirms the following best practices for FAD management, identified in ISSF Technical Report 2019-11, "Recommended Best Practices for FAD management in Tropical Tuna Purse Seine Fisheries", shall be implemented:

a) Comply with flag state and RFMO reporting requirements for fisheries statistics by set type.
b) Voluntarily report additional FAD buoy data for use by RFMO science bodies.
c) Support science-based limits on the overall number of FADs used per vessel and/or FAD sets made.
d) Use only non-entangling FADs to reduce ghost fishing.
e) Mitigate other environmental impacts due to FAD loss including through the use of biodegradable FADs and FAD recovery policies.
f) For silky sharks (the main bycatch issue in FAD sets) implement further mitigation efforts.

The full FAD management policy shall be included in **Error! Reference source not found.**.

Drifting FADs (dFADs) are also at risk of becoming lost and not retrieved from the FIP for a variety of reasons. As a result, the netting beneath the FAD may continue to catch a range of marine species without ever being utilised, also known as ghost fishing (Stelfox, et al., 2016). One of the main concerns with ghost fishing is that there is no quantifiable way of estimating the number of individuals from a species or stock that are impacted/caught by the nets.

Shark finning

Shark finning is the removal of shark fins from the body of a shark and discarding the carcass back into the sea. The fins are retained on board until they can be sold upon landing the vessel. The practice is against the FAO Code of Conduct for Responsible Fisheries and the International Plan of Action for the Conservation and Management of Sharks. Similarly, in 2018, ICCAT recommended that the "(Contracting Parties, Cooperating non-Contracting Parties, Entities or Fishing Entities (CPCs)) shall prohibit the removal of shark fins at sea and require that all sharks be landed with their fins naturally attached".

The act of shark finning is barbaric, wasteful, and contributes greatly to the global rise in shark mortality and population decline. Efforts to mitigate this act are essential to global shark conservation.

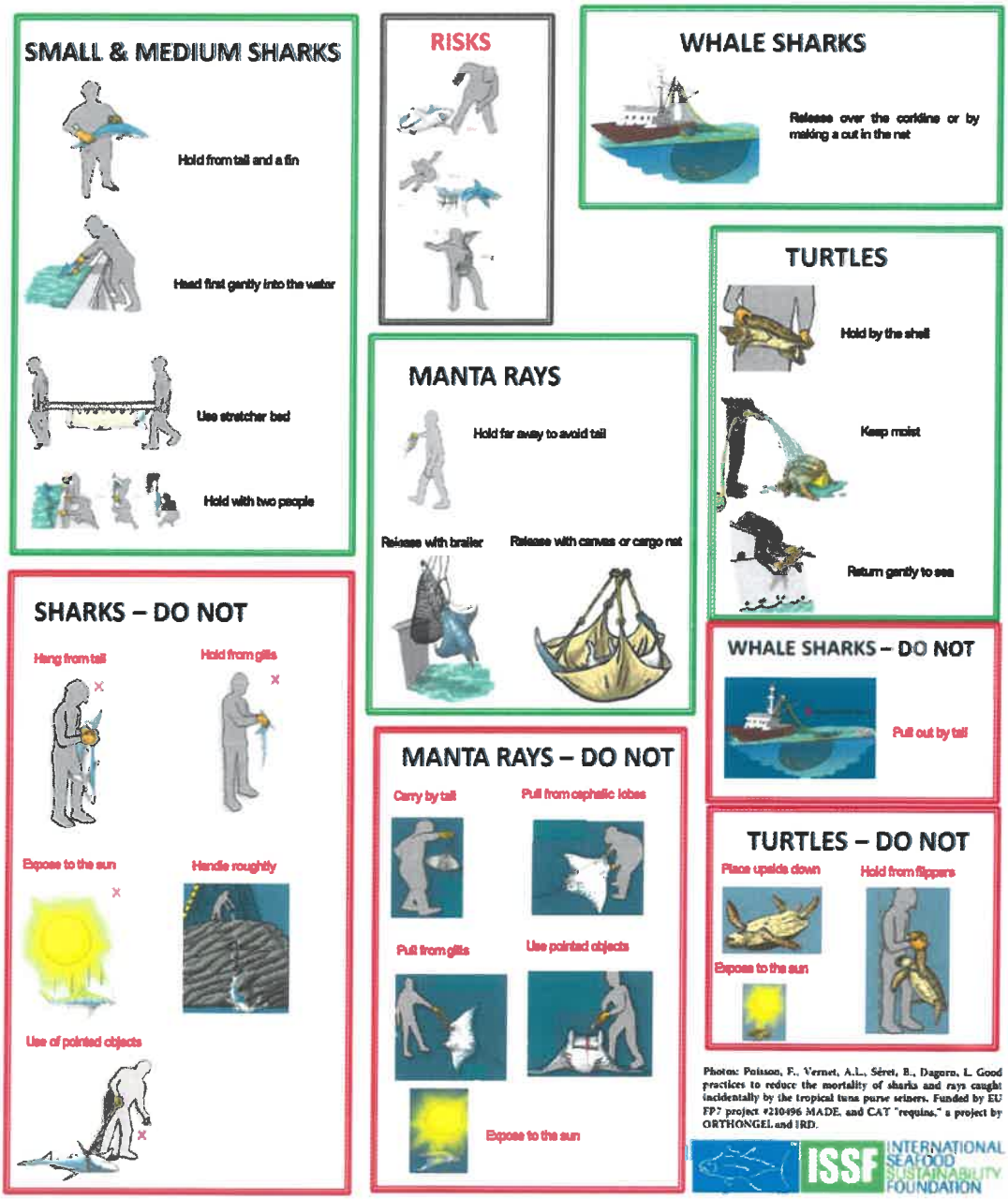
2.1.2 Mitigation

Observed catch

Live release – Following best practices on board purse seine vessels to release live sharks from the nets can reduce mortality.

The Ghanaian purse seine vessels keep a stretcher onboard to aid in the quick, efficient release of shark species if required.

All crew members onboard follow ISSF's best-practice release measures to release shark and ray species.



Unobserved mortality due to entanglement

All efforts should be made to reduce the entangling potential across the fishery, this includes using non-entangling FADs or reducing the number of FADs used collectively. Non-entangling FADs are those that have no netting on their structure. This would mean replacing the net below the FAD raft with a piece of material that has no mesh. Previous mitigation techniques included the use of ropes to wrap the nets up into long sausage-like structures beneath the FAD raft.

All fishing vessels within this FIP use non-entangling FADs, as stated in the GTA FAD management policy.

Shark finning

The Ghana Tuna Association (GTA) implemented a Fins Naturally Attached (FNA) policy in January 2023 which is aligned with the requirements of the new MSC Fisheries Standard v3.0 and the International Seafood Sustainability Foundation (ISSF) Conservation Measure 3.1 (c). Additionally, the FNA policy states that all shark handling and release will be carries out by trained crewmen as per the ISSF guidebook. The full GTA FNA Policy is included in Annex II.

All vessels have a copy of the shark finning policy on board to remind the crew and skippers about the appropriate procedures when handling a caught shark.

2.2 Whale sharks

Tropical tuna species are known to associate with large, slow-moving animals, such as whale sharks (*Rhyncodon typus*). Although interaction rates are low, any level of fishing mortality is of concern due to their life history and ecological significance.

2.2.1 Issue

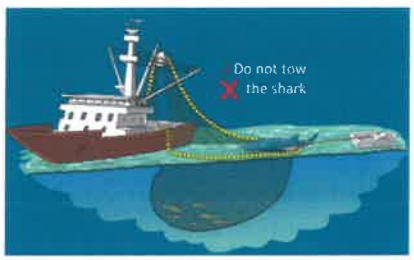
Whale shark interaction rates with tuna purse seine gear are very low Whale sharks are characterised by slow growth, delayed maturity, extended lifespan with a low reproductive potential (Compagno 1984). Furthermore, this species is listed as vulnerable by the IUCN (IUCN 2013), is listed under CITES and there is concern that whale shark populations are declining worldwide.
Whale shark interactions with purse seine gear result from both setting on tuna schools found in association with whale sharks and accidental encirclement when the sharks and tuna occur together. It has been noted that whale shark-associated sets are likely to be under-reported in vessel logsheet data or misreported as to set type (SPC-OPF 2011). One explanation has to do with the fact that the animals are often not visible at the start of the set which is then logged as an unassociated set. The main concern is that when encircled, the slow-moving animals are not able to evade capture or capable of freeing themselves without considerable interaction from the crew. Release techniques employed by purse seine crews vary widely. Methods that remove sharks from the water or vertically lift the sharks by the tail fin can inflict serious injury and are strongly discouraged by management bodies. Studies examining observer and logbook data report very low encounter rates overall and good condition at release with apparent high survival rates (Capietto et al. 2014). However, post–release survival needs to be scientifically verified with pop-up satellite tags and tested across a variety

of release methods in all oceans to develop best practices for release techniques proven to maximise post-release condition.

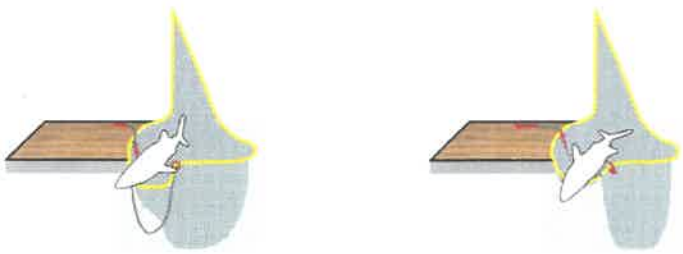
2.2.2 Mitigation

Avoidance - Avoidance of whale sharks during fishing operations is a simple mitigation concept but often impossible to achieve if the animals are not visible prior to encirclement, which is often the case. ICCAT Recommendation 23-12 prohibits vessels from retaining onboard, transhipping or landing whole or in part any specimen of whale shark. The recommendation also prohibits fishing vessels from setting on a school of tuna associated with a whale shark if sighted prior to the set commencing. If a vessel incidentally encircles a whale shark, the mater of the vessel shall take all reasonable steps to ensure its safe release.

Release from the net - Best practice guidelines for release of whale sharks from the net provide a set of options to apply depending on several factors, including the environmental conditions and sea state; the size/weight of the catch, the size and orientation of the whale shark (facing to bow or stern); and the brailing style employed (with or without skiff). Best practices developed for the release of whale sharks generally propose a list of do's and don'ts considering issues of crew safety and minimising impact to the shark. In some cases, cutting the lacing between the corkline and net or the net itself may be the safest way to release a whale shark if conditions are favourable. Passively rolling the shark out of the sack or bunt end of the net is generally accepted to be a highly desirable, low impact method of releasing whale sharks that is relatively safe for the crew. Whale sharks should always be dealt with in the water.



At no time should the whale shark be handled by its tail (e.g., lifted using the crane, or towed it with a speed boat). This can cause severe injury to the animal. (Photo: Poisson et al, 2012)



If a whale shark appears early during hauling and is at the surface while the tunas remain below, then the animal may tear the net on its own or a crew member can cut a few meters of net near the head of the animal to allow it to escape. Alternatively, the crew in charge of the net hauling operation can use the winch and the capstan to bring the animal close to the hull, to drain the animal, and then to roll it outside the bunt. A rope placed under the animal and tied on the cork line could help roll it outside the net (Photo: Poisson et al, 2012)

2.3 Turtles

Turtles are long-lived species with a life history that makes them extremely susceptible to global fishing efforts. As a result, all marine turtles are protected by national and international regulations. Purse seine fishing gears pose a significant threat to marine turtles because of their low selectivity. Likewise, the use of FADs will also increase the risk of interaction with turtles, because turtles will often use the floating raft of FADs as a respite in the open ocean. Efforts to reduce and avoid fishing mortality, as well as utilizing the ISSF best practice bycatch release report, will be beneficial for their global conservation.

Table 2 – ETP turtle species that the fishery is known to or predicted to interact with, using fishery catch data and research from other fisheries.

Common name	Scientific name	UoAs to which applicable	Justification
Green turtle	*Chelonia mydas*	Ghanaian purse seine fishery	ICCAT Rec. (13-11) CITES Appendix I; CMS Appendix I
Leatherback turtle	*Dermochelys coriacea*	Ghanaian purse seine fishery	ICCAT Rec. (13-11) CITES Appendix I; CMS Appendix I
Loggerhead turtle	*Caretta caretta*	Ghanaian purse seine fishery	ICCAT Rec. (13-11) CITES Appendix I; CMS Appendix I
Hawksbill turtle	*Eretmochelys imbricata*	Ghanaian purse seine fishery	ICCAT Rec. (13-11) CITES Appendix I; CMS Appendix I
Olive Ridley turtle	*Lepidochelys olivacea*	Ghanaian purse seine fishery	ICCAT Rec. (13-11) CITES Appendix I; CMS Appendix I

2.3.1 Issue

The systematic use of FADs across the vessels in the Eastern Atlantic FIP means that there is the potential for turtles to become entangled in the netting attached. Despite the FIP using non-entangling FADs, most FAD rafts have a layer of the net that covers the floating potion of the device. Turtles notoriously use flotsam in the ocean as a respite (Casazza & Ross, 2010) and may use the raft of a FAD to take a break from swimming. Once on the raft, turtles have been seen entangled in the net, from which there is minimal chance of escape. Likewise, unless there is aid provided to cut the turtle from the net, it will most likely die (Duncan, et al., 2017).

2.3.2 Mitigation

Removing all netting from the FAD raft and ensuring that the drifting net portion underneath the raft is non-entangling. If the raft requires being covered, the material used should be non-entangling, and mitigation efforts to deter the turtles from climbing on top of the raft should be implemented. Deterrents include lining the edges of the raft with cylindrical barriers, which would make it difficult for the turtle to access.

Fishers also inspect the FAD to identify any entangled species, dead or alive, and attempt to free any animal that is entangled. Fishers can also study and adhere to the best practice release handling protocols to ensure that minimal damage is inflicted on the animal when being released, to ensure its survival.

All fishing vessels within the Ghanaian purse seine FIP use non-entangling FADs, as stated in the GTA FAD management policy.

2.4 Juvenile tunas

The Eastern Atlantic purse seine tuna fishery targets skipjack tuna (*Katsuwonus pelamis*), yellowfin tuna (*Thunnus albacares*), and bigeye tuna (*Thunnus obesus*). The mixed-species fishery increases the risk of catching small and juvenile individuals from the stock. Juvenile fish catch contributes to the global overexploitation of tunas.

2.4.1 Issue

Juvenile skipjack, yellowfin, and bigeye tuna are at risk of being caught by purse seine fisheries because they are also seen attracted to FADs, like adult individuals. Bigeye tuna has slower growth rates and becomes sexually mature later than the other two species, therefore making its populations more vulnerable to fishing pressure.

Catching too many adults and juveniles is particularly detrimental for a slow-growing population of animals. Removing juveniles from a population ensures that they have not yet been able to reproduce and replace themselves in the population. Likewise, removing too many adults will also be detrimental to the continuation and longevity of a stock. Catching fish of different sizes leads to changes in potential yield. From a theoretical point of view, there is an optimum size at which the maximum sustainable yield (MSY) would be highest if all the fish were caught at that size, depending on the life history of the species (growth, maturity, natural mortality, and spawner-recruit relationship). This optimum can never be achieved exactly because it is not possible to design a fishing gear that will catch all the tuna at the same size. But there are fisheries whose size selectivity will be close to this optimum size and, if those fisheries are the main source of fishing for the stock, then MSY will be close to the theoretical optimum. In contrast, if the main source of fishing is from fisheries that catch fish of sizes away from the optimum (either too small or too large), then MSY will be less than the optimum (Restrepo, et al., 2017).

2.4.2 Mitigation

Reducing the use of FADs will help to prevent aggregation of both adult and juvenile tuna species in a fishing area and therefore reduce the catch rate from different sizes of tuna. Reducing the number of FADs or shifting to free school fishing and locating tuna schools via fish tracking and telemetry systems, will reduce the aggregation of juveniles around a floating object.

Setting catch size limits will ensure that fishers return undersized/juvenile tunas into the ocean, rather than retaining them as part of the vessel catch. A study of the management of tuna and billfish stocks by RFMOs found that implementing and enforcing total allowable catches (TACs) had the strongest positive influence on rebuilding overfished stocks (Pons, et al., 2017).

2.5 Cetaceans

Several cetaceans are declared ETP species, primarily due to their vulnerability to global fisheries. In purse seine fisheries, cetacean bycatch is frequently witnessed due to the low selectivity of their method and unless efficiently handled, the risk of the animal drowning is severe. Likewise, with the other ETP species discussed, the use of FADs can have detrimental implications for cetaceans because they are attracted to the school of tuna and other pelagic fish species that aggregate around them..

Table 3 - ETP cetacean species that the fishery is known to or predicted to interact with, using fisheries observers catch data.

Common name	Scientific name	UoAs to which applicable	Justification
Dolphin	Delphinidae	Ghanaian purse seine fishery	ICCAT Rec. (18-11); CITES Appendix I; CMS Appendix II
Orca	*Orcinus orca*	Ghanaian purse seine fishery	ICCAT Rec. (18-11); CMS Appendix II

2.5.1 Issues

Their long-life history traits, including slow growth, late sexual maturity age, and low fecundity mean that even low numbers of bycatch can have significant implications for a population. Likewise, removing an individual that has not reached sexual maturity means that they haven't yet been able to reproduce and contribute to the population.

Dolphins often migrate with tuna schools and follow them when hunting so there is a risk that a dolphin may become entangled in a FAD net after being attracted by the aggregation of tuna around it.

2.5.2 Mitigation

Fishers should be trained in the best practice release handling methods of cetaceans to prevent further injury or damage inflicted on the animal and ensure its survival post-release. Avoiding schools of dolphins when setting the net is also a way that fishers can prevent future bycatch incidents.

Reducing the use of entangling FADs is another method to reduce the number of cetacean bycatch incidents.

Reporting all incidents of cetacean catch and interactions to record the species' identity. Knowing the species identity is important in understanding the health of a population and therefore influences conservation efforts.

2.6 Birds

Some bird species, including several boobies, gulls, and albatross are ETP due to their life history traits. Albatross and petrels can live for over 60 years, reproducing only once every year or two (Lewison & Crowder, 2003). Many albatross species also mate for life and bycatch incidents with even a small number of individuals is severely detrimental for global populations. There are 22 species of albatross; 17 are threatened with extinction.

2.6.1 Issues

Being large migratory birds, these animals often encounter operating fisheries and are particularly at risk from purse seine and longline vessels (Lewison & Crowder, 2003). Incidents of birds catch are also high when the use of FADs is implemented into a fishery because this creates an optimal feeding ground for migrating birds who can feed on the schooling fish surrounding the raft.

2.6.2 Mitigation

Crew and skipper training on how to safely a caught bird without inflicting more injury is an important mortality mitigation effort that should be required on each vessel.

Reporting any incidental catches down to the size, weight, and species will help to assess the population sizes of the species.

2.7 Non-species specific

In addition to the species-specific strategies mentioned above, the fishery shall:

- Avoid all known ETP hotspots and communicate effectively between vessels to tell other fishers where these are.
- Comply with both the shark finning and ETP policies in Appendix B
- Keep abreast of new science and promote research to further develop best practices for handling and safe release
- Improve the low human observer coverage
- All skippers shall attend and engage in the Skipper Training program being run through the FIP work plan
- Vessels should accurately record all ETP interactions including reporting interactions and the fate of any releases (e.g. released alive; discarded dead, injuries), and collecting any data requested by scientists (e.g., photographs). Including documenting the inventory and use of equipment for the handling and safe release techniques.
- Collaborate with the RFMO to adopt mandatory handling and safe and live release best practices for ETP species.
- Facilitating research that addresses mitigation of ETP species bycatch, and voluntarily adopt best practices when these become known including participating in research programs that reduce mortality of ETP species outside the fishery — for example, ISSF projects
- Collaborating with other fleets to estimate the overall interaction of ETP species and research on mitigation measures to reduce the cumulative impacts.

- Follow best practices of live release methods to minimize mortality and document their use of all ETP species and support mandatory adoption of these practices by the flag state and RFMO.
- Estimate, monitor and manage potential sources of unobserved mortality (post-release, entanglement, etc).

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GHANA TUNA ASSOCIATION

GUARANTEE OF A SUSTAINABLE FUTURE

FAD MANAGEMENT POLICY ISSF CM 3.7

(ISSF Conservation Measure 3.7)

Ghana Tuna Association, an environmentally responsible organization, hereby publicly states that starting on April 1,2024 ([1]), the following best practices for FAD management, identified in ISSF Technical Report 2019-11, "Recommended Best Practices for FAD management in Tropical Tuna Purse Seine Fisheries", shall be implemented:

a) Comply with flag state and RFMO reporting requirements for fisheries statistics by set type.

We commit to:
Filling out completely and accurately the logbooks, including FAD logbook information, by set type required by the flag state and submitting them by electronic reporting to the required authority and/or tRFMO.

Maintaining, as has been the case since 2015, 100% observer coverage, even if not required by the tRFMO, on all fishing trips through the use of a combination of human observers and voluntary Electronic Monitoring (EM). For EM, best-practice minimum standards developed by ISSF, or those developed by the tRFMO, will be followed.

Collecting data on the number of active FADs and FAD activity (deployments, visits, sets and loss) as required by tRFMO and submitting them to the required authority and tRFMO.

b) Voluntarily report additional FAD buoy data for use by RFMO science bodies.

We commit to:
Report FAD buoy daily position data to the scientific institution AZTI with a maximum time lag of 90 days, and request that these data be made available to the relevant tRFMO for scientific purposes. The data submitted must include the vessel name and IMO number (if available). When possible, deployments should be identified in the data submission. In cases where data is being reported to scientific institutions or the flag State, we shall request that these data be made available to the relevant tRFMO for scientific purposes.

Provide FAD buoy echo-sounder acoustic biomass data to the scientific institution AZTI with a maximum time lag of 90 days, and request that these data be made available to the relevant tRFMO for scientific purposes. The data submitted must include the vessel name and IMO number (if available)

c) Support science-based limits on the overall number of FADs used per vessel and/or FAD sets made.

We commit to:
Abiding by the limit of active number of FADs adopted by tRFMOs.
Deploying only FADs with satellite tracking buoys.

Managing the activation and deactivation of buoys taking into account the corresponding tRFMO´s measures.

Abiding by the time area closure (including FAD area closures) established by the corresponding RFMO.

d) Use only non-entangling FADs to reduce ghost fishing.

We commit to:
Only deploying or redeploying FADs that are completely non-entangling (i.e., without any netting), even when is not a requirement of the tRFMO, according to the ISSF Guide for Non-Entangling FADs ([2]).

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Not deploying any "high entanglement risk" FAD according to the ISSF Guide for Non-Entangling FADs (i.e., those using large open netting either in the raft or in the underneath part of the FADs: >2.5 inches or 7 cm mesh).

Retrieving from the water and modifying the design of "high entanglement risk "FADs according to the ISSF Guide for Non-Entangling FADs that are reused by the fleet, to make them non-entangling as per the ISSF classification ([3]).

e) Mitigate other environmental impacts due to FAD loss including through the use of biodegradable FADs and FAD recovery policies

We commit to:
Studying the feasibility of using FADs with only biodegradable material in their construction except the floatation structure of the raft. The association and its members are looking to start implementing BioFAD in its fishing activities.

Participating in tests of locally-sourced biodegradable materials in collaboration with AZTI, ISSF or any other scientific institution.

Studying the feasibility of deploying simpler and smaller FADs.

Participating in trials of biodegradable FAD designs and tests with the participation of tRFMO science bodies and/or CPCs or ISSF scientist.

Endorsing risk and feasibility research programs aimed to determine deployment areas that are highly likely to result in stranding, in countries where FAD recovery policies could be put in place.

Participating in cooperative efforts, such as the FAD-Watch in the Seychelles, to remove stranded FADs, in the case the fleet operates in the determined area(s).

Gradually replacing FAD components with biodegradable materials as soon as such are proven efficient.

Not disposing of any FAD component at sea, unless it is proven biodegradable: should a FAD be mended and/or any component replaced, the remainder material must be reused or disposed at port

Whenever possible, use supply vessels to recover FADs that might be in risk of sinking or stranding.

Promoting the use of bio-based material to make FADs.

Promoting a definition of BIODEGRADABLE materials applicable to marine environment.

f) For silky sharks (the main bycatch issue in FAD sets) implement further mitigation efforts.

We commit to:
Applying Best Practices for safe handling and release of sharks and rays brought onboard.

Participating/supporting studies to evaluate the contribution of purse seine fisheries to catches of silky sharks, and the impact of implementation of the Good Practices on post-release survival.

Participating in projects aiming to develop and test new tools to release sharks and mobulids in tuna purse seiners that maximize their survival and are practical to use onboard.

On behalf of the Participant (GTA)

Name & Job Title: Frank K. Aihoon - President
This policy was adopted on March 15, 2024

GHANA TUNA ASSOCIATION

GUARANTEE OF A SUSTAINABLE FUTURE

Public Shark Finning Policy

Introduction

Globally, incidental shark captures in purse seine fisheries are not as common as in longline fisheries. However, there is still a significant issue within these net fisheries due to the non-selective nature of the fishing gears, and potential risk to vulnerable shark and ray populations. The slow growth rates, late maturation, low fecundity, and long life spans of these animals means that the removal of individuals from a population can have cascading effects on the food web. Sharks also suffer from stress during the handling and release procedure of becoming caught in fishing gear. This stress induces dangerous concentrations of chemicals into the blood of the shark, which can lead to death even after it has been released from the vessel alive. Therefore, any sharks that are not retained by the vessel should be released using the safest and most efficient methods.

Shark finning is the practice of retaining shark fins and discarding the remaining carcass while at sea. The practice is against the FAO Code of Conduct for Responsible Fisheries and its International Plan of Action for the Conservation and Management of Sharks, as well as the resolutions of a number of other international marine bodies, all of which call for minimising waste and discards. There are major uncertainties about the total quantity and species of sharks caught, and shark finning has added to this problem. As part of the new MSC Fisheries Standard (v3.0), there is a new requirement that all sharks that are retained by a fishing vessel must have their fins naturally attached (FNA) to the carcass. This means that sharks will not be accepted upon landing if there are no fins attached to the body. Therefore, the companies operating in the Ghana pole and line tuna fishery would like to highlight the actions being taken by the fishery to prevent shark finning onboard its vessels.

Public policy

The Ghana Tuna Association (GTA) make this public policy stating that shark finning is prohibited aboard all vessels and does not occur. GTA adopts the "fins naturally attached" rule for sharks aligned with the requirements of the new MSC Fisheries Standard (v3.0), and the International Seafood Sustainability Foundation (ISSF) Conservation Measure 3.1(c). Any sharks that are retained, stored, and landed will be reported and shark fins must be naturally attached to the carcass. For storage capacity and space, partially cutting the fins to fold them around the body is acceptable.

However, all fins must remain attached to a large part of the carcass. Shark carcasses with fins artificially attached to the body, via ropes, wire, or other unnatural materials will constitute a violation of this policy. Any sharks that are landed should be photographed to be used as evidence of compliance with the policy. No shark species that are prohibited by national law or RFMO regulations will be landed.

All shark handling and release will be carried out by trained crewmen as per the ISSF guidebook. This includes best practice handling and release methods to ensure both crew and shark safety during release procedures.

On behalf of the Participant (GTA):

Signature: _____

Name and job title: Samuel Boye Ayertey

Date: 24th January, 2023

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