



WAPFSA COMMENTS ON THE DRAFT SHARK BIODIVERSITY MANAGEMENT PLAN

2 July 2023



Image credit: [Lesley Rochat](#)

To:

The Deputy Director-General

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Oceans & Coasts

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The Wildlife Animal Protection Forum South Africa (WAPFSA) is a community of diverse South African-based organisations that share certain values, knowledge and objectives and who collectively comprise a body of expertise from different sectors including but not limited to scientific, environmental, legal, welfare, rights, social justice, indigenous and public advocacy backgrounds.

The Members of WAPFSA thank the Department of Forestry, Fisheries and the Environment (DFFE) for the opportunity to comment on this very important Draft Shark Biodiversity Management Plan (SBMP).

Furthermore, we will hereto, collectively refer to all the Chondrichthyes species (sharks, rays and chimaeras) as “sharks”.

GENERAL CONSIDERATIONS

According to the International Union for Conservation of Nature (IUCN), 37.5% of the 1 200 known species of sharks are threatened with extinction. Overfishing and the high incidence of sharks being caught as “bycatch” in the fishing industry have been identified as the major threats to all shark species. The exact size of the “bycatch” is estimated because a large part of any bycatch is [discarded at sea](#) or processed at sea as fishmeal and these exact amounts are not recorded.

The undersigning members of WAPFSA are of the view that the draft Shark Biodiversity Management Plan (SBMP) does not sufficiently and effectively address the reduction / phasing-out of the activities identified as major threats to the survival of shark species.

OVERFISHING FISHING AND CLIMATE CHANGE ARE THE MAIN EXTINCTION THREATS FOR SHARKS

Every year an estimated 2,7 trillion [individual wild fish](#) are extracted from ocean ecosystems. These fish are killed and commodified. During the extraction process, an unquantified number of habitats are destroyed. Scientists confirm that the aquatic wildlife ecosystem is vastly under-researched and as a result, we know very little about the many species that are negatively impacted by large-scale fishing practices and the fishing industry in general.

Several scientific sources have, however, confirmed that overfishing is the primary cause of marine defaunation.

Since 1970, according to the findings published in a [scientific article](#), the global abundance of oceanic sharks and rays has declined by 71% this is largely due to the 18-fold increase in the relative fishing industry.

The aforementioned depletion has increased the global extinction risk to the point at which three-quarters of the important shark species are threatened with extinction. Twenty-one scientific authors who were involved with this study have recommended “strict prohibitions and precautionary *science-based* catch limits”, in order to avert a total population collapse in order to avoid the disruption of ecological functions and in order to promote species recovery.

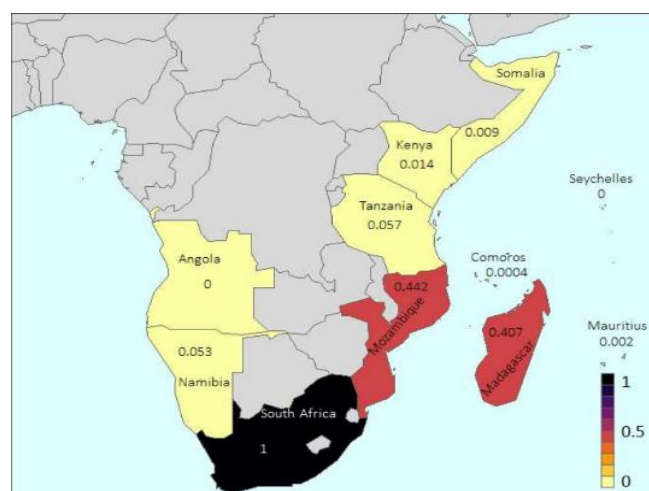
The members of WAPFSA support the implementation of the aforementioned suggested scientific prohibitions and limitations.

SOUTH AFRICA HAS BEEN IDENTIFIED AS HAVING THE BIGGEST NATIONAL CONSERVATION RESPONSIBILITIES FOR ALL SHARKS

A further [study](#) has confirmed that overfishing and the negative effects of climate change are the primary causes of population reductions which will exacerbate the risk of the extinction of endemic sharks in Southern Africa.

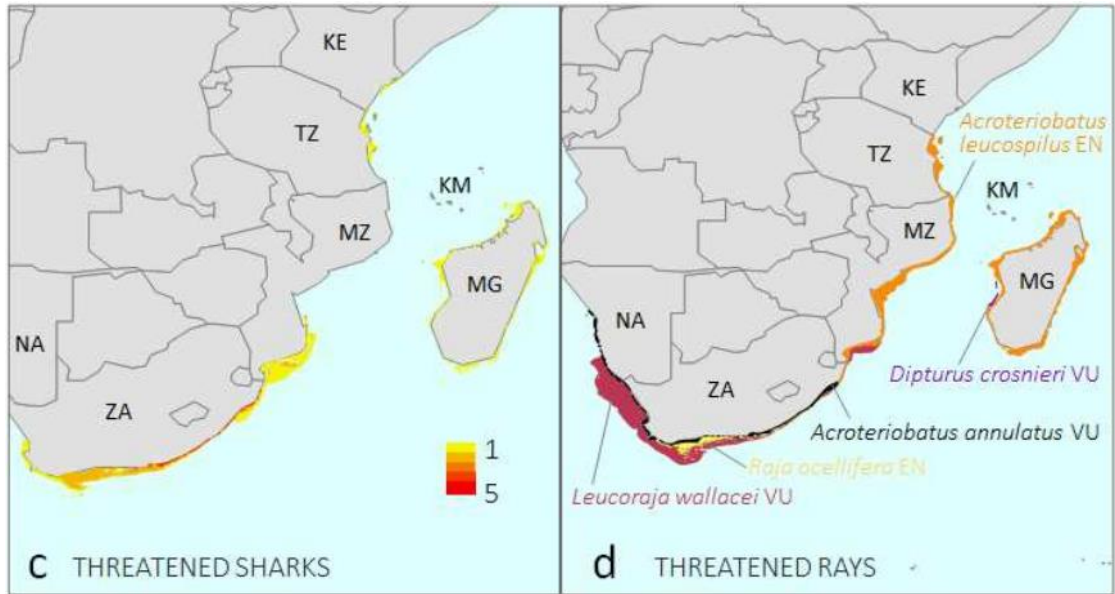
This particular study provides an assessment of the extinction risk status of 70 shark and ray species that are endemic to Southern Africa (38 sharks and 32 rays).

South Africa has 181 of the world’s 1200 species of chondrichthyan, 34 of which are endemic to Southern Africa. South Africa was identified as having the highest conservation responsibility, due to the number of endemic species present in its three oceans, followed by Mozambique and Madagascar.



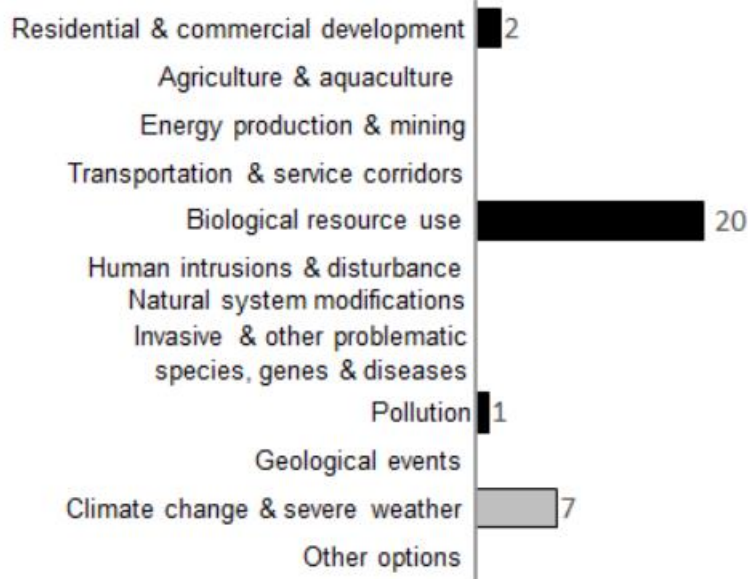
National conservation responsibilities of range country for all shark and ray endemics in Southern Africa, where Red List statuses are known

Credit – [Research](#)



Credit – [Research](#)

“Biological Resource Use” and, more specifically, “Fishing and Harvesting Aquatic Resources” were identified as threatening processes, while climate change and other threats (habitat loss and degradation, pollution) caused reductions or a continuing decline in population size.



Credit – [Research](#)

Coastal development and pollution contributed to localized extinction risk for three species, but overfishing and incidental catches (bycatch) are the primary threat for all species of shark.

Overfishing is compounded by climate change and the resulting change in species distribution.

In addition to fishing pressure and climate change, habitat degradation from coastal development and pollution further exacerbates overfishing impacts.

CLIMATE CHANGE

The members of WAPFSA recommend that the draft SBMP specifically addresses the important implications of Climate change on all the shark species.

A panel of 14,000 scientists [warned](#) that ignoring the negative effects of climate change will yield “untold suffering”. Global climate scientists have specifically noted the serious negative impacts of climate change including the [rise in sea levels](#) and changes in circulatory and sea surface temperature patterns, with associated southwards expansion of the ranges of tropical species.

In 2021, climate-specific scientific [research](#) indicated the warning signs of the collapse of the Gulf Stream. , collapse. This collapse could spark a tipping point for the planet with devastating negative global impacts. Further [research](#) has illustrated, due to climate change, the possibility of the overturning of the Atlantic Meridional Circulation (AMC) – a system of ocean currents that has an essential role in the Earth’s climate, for redistributing heat and influencing the carbon cycle.

The negative effects of marine habitat destruction due to commercial fishing has been well documented. However, the potential negative ramifications to the ecological function of seafloor communities and ecosystems have not been widely considered.

A team of 26 scientists and economists have calculated that the bottom-trawling fishing industry is responsible for 1 billion tonnes of underwater emissions every year and have recommended that this should be recorded in [greenhouses gas inventories](#).

Bottom-fishing trawlers wipe out marine wildlife and entire ecosystems and whilst dragging nets along the seabed, they disturb the carbon stored in sediment, releasing carbon dioxide and acidifying the ocean. The annual emissions from this practice are greater than those from [an entire country like Germany](#).

The 2020 Convention on Biological Diversity (CBD) Marine Aichi Biodiversity targets have not been adequately met. In particular, we refer to [Target 6](#): Fisheries sustainability, [Target 11](#): Increase of coastal Marine Protected Areas (MPA) to 10% and [Target 14](#): Restoration of water ecosystems. A real-time shift away from the “business as usual” attitude is necessary in order to achieve the targets by 2030.

According to [media reports](#) the South African ecolabelling system has, at present, failed to properly acknowledge the devastating impacts of deep-sea trawling, and as a result, the numbers of shark species are dwindling.

The members of WAPFSA are of the opinion that this BMP lacks adequate climate change direction and timelines in order to ensure the continuation of life on the planet as we know it; in addition, WAPFSA members continue to witness the continuation of harmful fishing activities, which is leading to negative impacts on marine species and entire ecosystems.

WAPFSA encourages the Department of Forestry, Fisheries and the Environment to acknowledge the fundamental importance of biodiversity and the importance of mitigation of causes of climate which are negatively affecting marine wildlife. Precautionary measures are also encouraged in order to reduce the extraction and use of marine life, as we enter the era of the 6th mass extinction. Our oceans play an important role, and the negative impacts of climate change and over-industrialisation will have a negative effect on the country's economy and food security.

“SUSTAINABLE USE”, LACK OF KNOWLEDGE AND THE PRECAUTIONARY PRINCIPLE

To reiterate there is a significant gap in our scientific knowledge of life on Earth especially of life in our oceans. A [study](#) estimated in 2011 that 91% of species in the ocean still await description. The questions are, how do all these species interact to support life in aquatic environments? How can we accurately determine whether the extraction of “target” species and “bycatch” is going to be sustainable? Without more scientific-based knowledge of our ocean environment and the biodiversity it supports, how can we assume to know the negative effects of when species are subjected to a level of “depletion” and “severe depletion”?

The Precautionary Principle, as outlined in Section 2(4)(a)(vii) of NEMA, provides that sustainable development requires the consideration of all relevant factors, including “that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decision and actions”.

THE ROLE OF THE PRIVATE SECTOR, THE FISHERIES AND THE IUU

WAPFSA members are concerned that the Shark Advisory Groups, established by the Department's Oceans and Coasts (O&C), to oversee the implementation of the management plan, might not have representatives from the environmental, climate and welfare sectors.

We take note that the steering committee is comprised of individuals from the government, institutions and the private sector, including the Fisheries. We are concerned that there might be a conflict of interest or bias with

regard to decisions concerning overfishing and bycatch, as well as the problems associated with Illegal, Unreported and Unregulated fishing (IUU) and the question of the protection of sharks. The Draft SBMP suggests that the Fisheries are utilised as a “tool which can address shark and ray population declines” WAPFSA members are of the opinion that this is not feasible for all the reasons noted above.

In our opinion, the BMP fails to address the issue of IUU fishing in any depth as well as any proposed measures to address and mitigate this important concern.

The [Global Initiative Against Transnational Organised Crime](#) launched the [IUU Fishing Index](#) in early 2019 as a way of ranking countries for their vulnerability and response to IUU fishing.

Individual country profiles are updated every two years and provide indicators and trends from 2019 to 2021. For interest, the index ranked China as the country with [the greater vulnerability](#) to IUU fishing over 152 countries analysed, both in 2019 and 2021.

According to the Index, South Africa’s vulnerability to IUU fishing has increased in the two-year period from 2019 until 2021. In 2019 South Africa was ranked 45 out of 152 countries in terms of vulnerability to illegal fishing, with no 1 being the more vulnerable country. In 2021 South Africa was ranked [13th place over the 152 countries](#) analysed. The 2019 vulnerability general score for South Africa was 2.43 over 5, with 5 representing maximum vulnerability, but it rose to 2.64 in 2021. The increased vulnerabilities for South Africa were identified in compliance inspections, particularly in port operations.

The increase in vulnerability to illegal activities is a concerning trend. WAPFSA members are concerned that there are rising threats that could negatively affect the survival of sharks. This vulnerability extends into Marine Protected Areas where IUU fishing can, and does, take place.

WAPFSA urges that sufficient attention is directed to adequately addressing the issue of the mitigation of IUU fishing and the funds that are urgently required in order to do so effectively.

The impacts of IUU fishing go beyond the protection of the ocean and the environment.

The [Symposium Summary Report](#) on “*Illegal Fishing in Southern African Waters and Beyond: Prevention and law enforcement*”, held at the University of Cape Town, highlighted the concerns about the escalation of transnational and organised criminal networks engaged in illegal fishing. “*Fisheries crime*” threatens food security and livelihoods destabilises vulnerable coastal regions due to limited law enforcement capabilities and corruption and is linked to other serious crimes including money laundering, fraud, tax evasion, armed violence, wildlife and drug trafficking.

FISH SWAPPING, MISLABELING AND THE DEMAND FOR AUSTRALIAN FISH AND CHIPS

There is no regulation or ban in South Africa preventing shark meat from being sold under [different names](#), such as “ocean fillet”, “gummy” or “lemon fish”. [It is not illegal](#) for retailers to sell shark meat but more concerningly, selling sharks under different names enables fishers to slaughter and sell more than permitted target and bycatch limits.

Some South African fish and chip retailers are taking advantage of this diversity in nomenclature. Most shark and ray meat and body parts processing is carried out in and around Cape Town. Small parts or meat amounts are sold locally, either frozen, smoked or as dried shark “biltong”.

As the draft, SBMP points out, in the meat trade, sharks ranging between 1.5 and 12kg are considered ideal, as sharks over 12kg can contain high levels of mercury which is poisonous to humans if eaten in large quantities.

The draft also addresses the fact that the majority of frozen shark meat is [sold to Australia](#) where it is utilised in the fish and chips trade, with large quantities also being sold to Greece and Italy, shark fins are dried and mostly sold to Asian markets.

The [demand](#) for smooth-hound sharks (called flake or gummy sharks) for export to Australia continues to have a negative effect on South Africa’s endangered shark species.

Gummy sharks are [endemic to Australia](#). Caught in southern Australian waters, this species is considered a *sustainable* choice by the federal government on the basis that the biology of the gummy shark is different from the great white, tiger and hammerhead sharks, and it is a relatively fast-growing shark with a high reproduction rate that gives room to species recovery.

Given the above, the fishing of this species in Australia is allowed but strictly controlled by the government via a Total Allowable Catch (TAC) set at very conservative levels.

Restrictions are relatively [well enforced](#). Australia’s smooth-hound shark fishery records quite accurate statistics and utilises the most effective management models available.

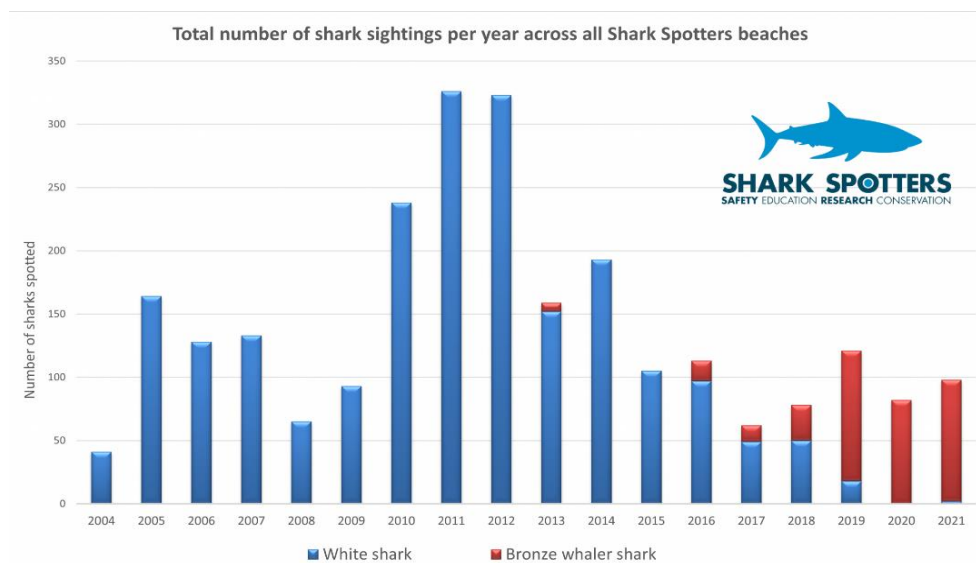
According to a [media article](#), Australia is doing better than most of the world on fisheries sustainability. However, in order to meet the demand for Fish and Chips in Australia, the government is simply importing the excess stocks needed from South Africa.

The common smooth-hound shark, instead, classified as vulnerable on IUCN's red list of threatened species, is considered comparably slow-growing, long-lived, low fecundity fish.

This species' life history traits make them particularly [vulnerable to overfishing](#).

In South Africa, a 2016 [study](#) reported that the overfishing of the smooth-hound shark and the soupfin sharks has negatively impacted the great white shark [who relies](#) on these shark species for food. The research shows that the great white shark is totally reliant on these species.

The decline of white sharks in certain areas such as the False and Algoa Bays and has been recorded and reported to the DFFE as well as the [conflict](#) between fishers and the tourism sector which was negatively impacted by shark decline.



Decline of White Shark sightings in the False Bay 2004 to 2021 – Credit: SharkSpotters

Shark conservationists have lodged complaints with DFFE, to have the demersal long-line shark fishery phased out. Algoa Bay Conservation has called for immediate implementation of limitations on shark longliners. The concern is that the fishing of sharks is detrimental to both small shark populations as well as to the great white shark.

BATHERS NETS

In South Africa, shark nets are installed at numerous beaches in KwaZulu Natal by the KwaZulu Sharks Board. Shark nets have been installed in KwaZulu Natal since the 1950s to reduce the number of shark attacks along the beaches where they were installed. In 1999 drumlines were introduced to reduce the total amount of target and nontarget entanglements in the nets and to contain the loss of marine life.

The drum line, however, baits and mostly likely kills the shark before or while the system is pulled up unless the shark is [big and strong enough](#) to bend the hook and free itself; the killing of sharks is unacceptable even if results from measures to deter shark attacks over surfers. Such attacks are defined by shark behaviourists as predominantly [incidental](#).

The cost to protect South Africa's beaches from shark attacks is very high in terms of marine wildlife mortality. Known as "curtains of death", according to the [KwaZulu Natal Sharks Board](#) (KZNSB), four hundred sharks suffocate each year after being trapped in these nets, with around [fifty of these species](#) being listed under the IUCN Red List of Threatened Species or the Convention on International Trade in Endangered Species of Flora and Fauna (CITES).

The members of WAPFSA have noted that while the Draft SBMP focuses on bathers nets, no alternative options to protect both bathers and marine wildlife have been investigated. WAPFSA recommends that more environmentally friendly solutions are properly explored, in order to mitigate the unintentional capture and death of sharks and non-target species that are accidentally trapped in bathers nets or drumlines.

The KZNSB has long been investigating the use of new technologies as [shark-repellent](#), to provide alternatives. The cable emits a low-frequency pulsed electronic signal, which has been shown to repel white sharks. In addition, divers and other bather users are encouraged to wear personal shark repellent devices according to affordable technologies developed since the 1990s.

The cable system has been tested in open water, including in the Western Cape. The risers from the cable must be semi-rigid to avoid mammal entanglements and have to be kept upright by small sub-surface buoys. This research and project has the full support of SanParks, the City of Cape Town, SharkSpotters and other stakeholders. We recommend the DFFE include this option in the Plan.

In False Bay, Western Cape, this technology has been complemented by the [use of drones](#) provided by [weFix](#), to track sharks and to timeously send warning signals to the SharkSpotters and bathers.



A copper shark is spotted by a drone in False Bay, Cape Town | © weFix

BYCATCH

[Research evidence](#) shows two-thirds of the reported shark catch was “bycatch”. The [Observers Report](#), however, recorded by the South African inshore trawler fishery only recorded that 3.5% of all trawls, including unsorted and discarded samples contained bycatch.

This discrepancy needs to be investigated as an urgent matter of concern.

Numerous scientific sources confirm a history of the overharvesting of sharks, “stock” decline, and limited recovery, if any, demonstrating significant risks of collapse. Shark longevity, slow growth, low natural mortality rates and low fecundity, collectively render sharks particularly vulnerable to overfishing

Several species caught as “bycatch” have [very high mortality](#) (between 53.7 and 80.8 per cent rates) on pelagic longline gear, while the shark “bycatch” in some fisheries like the “small-pelagic” is discarded once the main catch has been sorted, with 100% mortality of all sharks.

The midwater trawl fishery occasionally catches pelagic sharks such as bronze whaler, blue and shortfin mako sharks, as well as species such as mobulid rays, and silky and oceanic whitetip sharks, several of which are of conservation concern. Since many of these species aggregate seasonally, they are occasionally caught in

large numbers. When the total catch is small, most of the chondrichthyan catch is released alive. In larger nets, only chondrichthyans in the first section of the net are released alive (Da Silva, 2015).

MONITORING AND ENFORCEMENT

An [estimated 30.000 vessels](#) sail through South African waters annually.

According to a 2020 [study](#) on Maritime Security, South Africa, despite being surrounded by three oceans containing important marine life, historically focuses its attention landward, towards the African continent in the north.

Relatively speaking the South African Navy, has seemingly been a low priority for the allocation of Defence funding. Government spending to ensure adequate policing and law enforcement of the rule of law at sea and the protection of wildlife in our oceans requires urgent attention.

The research highlights how South African fishing resources are threatened by poachers, crime syndicates, high levels of corruption and poor compliance levels. It mentions that enforcement is weak and no observer programme at sea exists. Both local as well as international crime syndicates plunder sections of South Africa's fishing industry, with international fishing vessels, also entering the Exclusive Economic Zone and transgressing. Naval investments have not kept pace with developments and have no capacity to effectively patrol the MPAs. South Africa spends approximately 1% of its GDP on the military, while the global average is 2% and its neighbours expend 3%. Relying exclusively on the under-resourced SA Navy to patrol its oceans, South Africa does not have a dedicated coast guard, and the South African Police Services and DFFE are forced to operate under financial and resource constraints.

The Stable Seas 2020 [Maritime Secure Index](#) addresses international marine security and enforcement capabilities with regard to crimes committed at sea such as robbery or weapon, drug, wildlife, nuclear smuggling, illegal trade, dumping of hazards, IUU fishing and human trafficking. The index highlights the vulnerabilities of South African ports and waters and the local reduced capability to cost-effectively and rapidly respond to threats such as illegal trafficking and fishing.

CERTIFICATIONS

[“Eco-labels”](#) are seals of approval awarded by the [Marine Stewardship Council](#) (MSC), to “products” from the sea. The labels supposedly describe which “products” have less impact on the environment, consumers can then compare “products” and make informed decisions. In WAPFSA members’ view, these labels should guarantee no bycatch. This is not the case for the MSC eco-labels nor the certifications from [Friends of the Sea](#), approving up to 8% bycatch.

WAPFSA members question how these certifications are issued. Are licenses monitored and enforced, how and how often?

The MSC is according to their website [87.8% funded](#) by the fees generated by these labels and is therefore highly dependent on the fishing industry. The MSC website [certification guide](#) also clarifies that the “MSC certification is available to all wild-capture fisheries, regardless of their size, scale, ecology, geography or technology.”

WELFARE AND WELL-BEING CONSIDERATIONS

The White Paper on the Conservation of South Africa’s Biodiversity visualises a society living in harmony with nature, where biodiversity conservation and sustainable use are transformed, ensuring improved benefits from healthy ecosystems, that are fairly and equitably shared for present and future generations.

The White Paper also frames Ubuntu as a traditional unifying way of life that recognises the importance of interdependent and respectful relationships among the human, natural and spiritual elements, taking into consideration dignity, compassion, cooperation, communalism, sharing, caring, and responsiveness that individuals and groups display for one another and the environment.

In the Draft SBMP, there is no mention of any welfare or well-being considerations.

Scientists are in appreciation of the full spectrum of fish behaviours in their natural environments. In particular, there has been a recent surge of interest in studying [fish cognition](#).

Manta rays have exhibited behaviour linked to self-awareness in [mirror test](#) cases. Placed in front of a mirror, individual rays engaged in contingency testing, that is repetitive behaviour aiming to check whether their reflection’s behaviour mimics their body movement. Very few species have passed the mirror test: the cleaner wrasse, the great apes, the Asiatic elephant, dolphins, orcas and the Eurasian magpie.

In general, it has been assessed that fish perceptual and cognitive abilities compare very well to other vertebrates [on most tasks](#).

For example, there are [parallels](#) between fish and non-human primates on many social cognition phenomena such as individual recognition, cooperation, eavesdropping, social learning, cooperative hunting, cheating, punishment, and altruism.

Recent [studies](#) at the Rochester Institute of Technology included experiments on visual object perception, perceptual constancy and numerical perception. A group of researchers also investigated 2018 the visual features used by fish to discriminate among objects such as geometric and complex shapes. The study suggested that fish given extensive training (over 1000 trials) could achieve accuracy on a numerical task comparable to well-trained birds, humans, or non-human primates. The same group of researchers is currently examining the ability of fish to identify 2D and 3D objects despite orientation changes.

[Research](#) on pain perception in fish confirms they have cognitive ability and sentience, that they perceive danger and have sophisticated sensory receptors to feel discomfort and pain, they show avoidance learning; they display protective motor reactions that might include reduced use of an affected area such as limping and rubbing.

In the United Kingdom protection legislation recognising the sentience of crustaceans and molluscs was passed in 2022.

Aquatic animals have [social intelligence](#); they can show compassion and make prosocial choices; they have abilities for intentional sharing, social decision making and cooperation.

Most aquatic species have excellent [colour vision](#) and can see ultraviolet and polarized light.

They discern sounds and smells with their nostrils and feel temperatures and pressure; they can taste and hear with thousands of receptors and with their [lateral line](#), an organ located along the side of the fish. The lateral line contains small sensory hairs that help detect underwater vibrations and determine their source, enabling fish to navigate even in low light or murky water.

Fish can coordinate their movements with billions of peers; they can coordinate hunts, [use tools](#) – which is something really a few animals can do - they can practice associative learning, can navigate for thousands of kilometres and find breeding or feeding sites or the locations where they were born.

Wrasses have also passed the mirror test in a 2018 [scientific study](#). Cases of [tool use](#) have been noticed also in the Choerodon family, in archerfish and Atlantic cod.

Some fish have been shown to have [compassion and emotions](#): in 2019, scientists have shown that members of the monogamous species *Amatitlania siquia* exhibit pessimistic behaviour when they are prevented from being with their partner.

Fish are able to communicate acoustically through stridulatory or non-stridulatory sounds including [grunts](#), clicks, growls, or through body vibrations, produced [in courtship](#), [feeding](#), aggression or distress.

Many cruel experiments to provide evidence that fish have pain and fear responses have been done. Toadfish have been electrically shocked to produce their typical grunting; over time they came to grunt at the mere sight of an electrode

Professor James D. Rose of the University of Wyoming published a [study](#) arguing that fish cannot feel pain because their brains lack a neocortex. However, animal behaviourist Temple Grandin [counter-argued](#) that fish could still have pain consciousness without a neocortex because "different species can use different brain structures and systems to handle the same functions".

In 2012, a prominent international group of cognitive neuroscientists, neuropharmacologists, neurophysiologists, neuroanatomists and computational neuroscientists gathered at the University of Cambridge to reassess the neurobiological substrates of conscious experience and related behaviours in human and non-human animals and signed a [declaration](#) which stated that animals (not just vertebrates) have conscious awareness: "The absence of a neocortex does NOT appear to preclude an organism from experiencing affective states. Convergent evidence indicates that non-human animals have the neuroanatomical, neurochemical, and neurophysiological substrates of conscious states along with the capacity to exhibit intentional behaviours. Consequently, the weight of evidence indicates that humans are not unique in possessing the neurological substrates that generate consciousness."

There is abundant science behind the complex behaviour and functioning of fish. When we deny this scientific evidence, we are deliberately avoiding the ethical and welfare implications involved in the horrific ocean trade.

In South Africa, fish are not covered by the Animals Protection Act 71 of 1962. The result of this means that fish, including shark species, are exposed to a variety of [cruel slaughter methods](#), dependent on industry, company and species. This is to be included in the draft SBMP.

[Peta exposed](#) how fish, once trapped by fishers may suffer a prolonged agony.

Target fish and “bycatch” of large demersal nets, if they make it to the deck alive, are normally either suffocate or are stubbed and cut open while still alive. Coming up from the depths of the ocean, when hauled out of the water species undergo excruciating decompression. The intense internal pressure ruptures swim bladders. The compression from the nets kills many individuals and only the individuals at the top of the net make it alive. This applies also to sharks accidentally caught.

Commercial fishing is cruelty to animals on a colossal scale. Research on the cognitive abilities of fish should [play a pivotal role](#) by providing policymakers with a sound scientific basis for their ethical assessment.

The members of WAPFSA urge the DFFE to take into account this important scientific evidence relative to sharks and fish in general.

There is, in general, a very concerning lack of public education, at all levels, about the complexities of individual aquatic species and marine ecosystems. In particular, there is no awareness about the impacts from the various uses of marine life and the risks associated to mineral extraction and the mass-killing and use of aquatic wildlife for food or entertainment.

RECOMMENDATIONS

The members of WAPFSA recommend the following:

- a. The planning and urgent implementation of the phasing out and prohibitions of those activities that multiple scientific evidence have identified as leading to the extinction of sharks. This primarily includes overfishing and climate change to be included in the draft SBMP
- b. Addressing the threats linked to the practice of demersal trawling. Phasing out the practice for its negative impacts in terms of:
 - i. Destruction of ecosystems
 - ii. Bycatch
 - iii. Carbon emission and climate change acceleration
- c. Addressing the threats linked to the practice of longlines.

- d. Addressing the issues of illegal activities and IUU fishing vulnerabilities particularly in ports and in MPAs.
- e. Fund and implement monitoring and enforcement in ports and at sea.
- f. Address the risks of misinformation and greenwashing linked to the use of eco-labels.
- g. Include considerations over the welfare and well-being of aquatic animals and crucial apex predators such as the shark on the basis of overwhelming scientific evidence.
- h. Promote education and public awareness.

Kind regards,

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Centre for Animal Rehabilitation and Education	Director	Stephen Munro
CLAW	Founder	Cora Bailey
Dzomo La Mupo	Founder	Mphatheleni Makaulule
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