

**Submission
No 56**

MANAGEMENT OF SHARKS IN NEW SOUTH WALES WATERS

Name: Name Suppressed
Date Received: 22/10/2015

Partially Confidential

Submission to Parliamentary Committee Inquiring Into Management of Sharks in NSW Waters

Dear Parliamentary Committee,

Thank you for considering my comments regarding the management of sharks and the economic impact of shark incidents on communities in NSW with particular reference to:

1. The impact of shark incidents on tourism and related industries;
2. Changes in shark numbers, behaviour or habitat;
3. Adequacy of management strategies;
4. Measures to prevent shark incidents, including strategies adopted in other jurisdictions; and
5. Any other related matters.

1. The impact of shark incidents on tourism and related industries

Claims that the tourism industry is affected by shark incidents are speculations and impossible to verify. Anecdotes by a handful of tourism operators and shop owners are not a reliable source of information.

If tourist numbers were indeed declining this may as well have plenty of other reasons, i.e. people from outside Australia not being able to afford overseas holidays at the moment, people trying or preferring other destinations for various other reasons, especially value for money of cheap Bali holidays etc.

If surfing or other water based sports businesses were really suffering, non-water based sports and activities businesses as well as shark shield businesses and the like should benefit from this. There will always be changes as to which sports and activities are most popular and this will affect different industries accordingly.

Please consider that even if there were any economic impacts whatsoever they would not be caused by the still very low number of actual shark incidents but rather by the sensationalism and fear mongering around sharks. After decades of misinformation and scaremongering by the film industry, the media and individuals alike, an unfounded fear of sharks seems to prevail among the Australian population. The language, images and footage usually used by the media reporting about sharks, even when it is only about shark sightings are exceptionally negative and totally blowing things out of proportion. Every shark that swims past a beach or boat is described as “a lurking, stalking, menacing, giant monster forcing people out of the water” etc when in reality it was just a fish in the ocean swimming past.

Please also keep in mind that people are at a considerably higher risk of drowning than dying in a shark incident. If beaches were to be made safer it

would make much more sense to focus on preventing more drowning deaths than focusing on shark incidents. The risk of being bitten by a shark is incredibly tiny. Even the risk of dying being struck by lightning is much higher than the risk of dying in a shark incident, yet people are made to believe sharks were hideous and malicious monsters lurking just off the beach, waiting to bite someone. I assume it's not possible to stop the heavily biased media reports, so we may just need more and better education of the general public about sharks and shark behaviour.

2. Changes in shark numbers, behaviour or habitat

Long-term statistics do not show a recent increase in fatal shark incidents with shark bites being random incidents, which may occur in clusters with very long periods in between clusters.

Apart from anecdotal evidence such as reports of shark sightings by fishermen or beach goers there seems to be no proof at all that shark numbers have significantly increased in recent years.

Scientists say that sharks are under considerable threat and that shark numbers have declined significantly in recent years, mainly through fishing for meat and shark fins and also through by-catch of the fishing industry.

There are theories that we may simply hear about shark sightings more often now because more people are in and on the water, more people are reporting sightings and are using social media to do so. Others say sharks may venture into other areas due to overfishing of their prey.

However, again we cannot rely on any anecdotal evidence to determine changes in shark numbers, behaviour or habitat. Instead we need extensive peer-reviewed studies and research in this area to obtain reliable data. Until then everything is mere speculation.

3. Adequacy of management strategies

Lethal shark hazard mitigation strategies like shark nets and drumlines are cruel and have not been demonstrably effective elsewhere. From 1959 to 1976, the state of Hawaii culled over 4,500 sharks but in spite of such efforts no significant decrease in rate of shark incidents was ever detected. (<http://www2.hawaii.edu/~carlm/>) Yes, there has been a significant decline in Queensland's rate of shark incident fatalities but it started 40 years **before** drumlines were first deployed. There has been no further reduction in fatalities since the program began, despite half a century of increasing drumline deployments. (<http://theconversation.com/has-queensland-really-saved-lives-by-killing-thousands-of-sharks-23437>). As far as I know there is no peer-reviewed scientific research that would prove that shark nets were an effective safety measure. The nets are an outdated and barbaric approach to shark hazard mitigation that stems from a time when people didn't know any better

and didn't have any alternatives. It is about time nets and drumlines are removed everywhere.

Nets are designed to reduce shark numbers by killing, so effectively they are a means for culling sharks. However, the nets not only kill certain shark species that are deemed "dangerous" but kill indiscriminately whatever happens to get caught in them, including undersized sharks, cetaceans, turtles, whales and many vulnerable and endangered species. About 70% of the animals caught in the NSW shark nets are non-target species. Even people have got entangled and died in shark nets. I urge you to check the statistics of how many tens of thousands of animals have been killed by the nets in NSW. The figures are mind-boggling.

Nets do not form a barrier that fully encloses a beach but are fishing mesh nets that only cover a tiny stretch of the beach. Sharks can swim around them and apparently are most often found caught on the beach side of the net on their way away from the beach. The nets currently used in NSW are only in the water for a limited time of the year and of each month during the time they are deployed. If nets made beaches safer, would that mean that the beaches are "unsafe" during the time they aren't deployed? If you talk to the general public, you will find out that the majority of people are not aware of these facts. Most people wrongly think that shark nets form a barrier. I am convinced that if people knew that the nets are not full enclosures they wouldn't think they were an appropriate safety measure.

Shark hazard mitigation strategies like nets and drumlines that haven't proven effective do not make beaches safer but only give people a false sense of safety.

Considering the evidence from the WA drumline trial in 2014 I think baited drumlines may actually increase the risk of shark incidents. During the trial hooked sharks repeatedly regurgitated stomach contents in an effort to get rid of the hooks. This created an oily slick that spread very quickly and far and depending on the wind conditions such a slick may be directed straight to shore where people are in the water. Also the blood, motions and sounds of struggling sharks or other animals caught on the lines will certainly attract other predators to come in and investigate. White shark cage diving and other shark eco-tour providers have been successfully using bait and chum (oily slick) and bashing the water to attract large sharks for decades.

Baited drumlines also attract and kill many undersized sharks and other marine life. They clearly are not suitable to only attract certain targeted shark species of greater size and thus are posing a significant threat to marine life other than the targeted shark species including dolphins and many vulnerable or endangered species, i.e. Grey Nurse Shark, Loggerhead Turtle, etc

Even if "smart drumlines" are used it still takes quite a long time to reach hooked animals, which are likely to be half-drowned and/or severely injured by the time someone attempted to free them. Safely removing hooks from large unwanted by-catch is very difficult and can be dangerous, ie if non-

targeted sharks, Sting Rays etc are caught, and thus released animals would probably have little chance of surviving once removed from hooks and thrown back into the water.

The presence of sharks is vital for functioning marine ecosystems. The removal of apex predators has proved to severely disrupt marine ecosystems and even impact on the fishing industry.
(http://www.coml.org/discoveries/trends/shark_decline_effects).

The targeted sharks of greater size are likely reproductively mature animals. Killing off breeding stock can substantially damage the reproductive capability of the whole population. Shark hazard mitigation policies that specifically target Great White Sharks, which are vulnerable to extinction and are protected under Australian environmental law and several international agreements, are cause for great concern. Killing migratory Great White Sharks in NSW is likely to impact on other Australian and international ecosystems. The latest, most credible estimates of White Shark populations suggest there are as little as 2000 left in the wild and that removing even just 10 breeding age sharks could devastatingly impact on the global population.

Instead of indiscriminately killing sharks and other marine life we need to invest in effective non-lethal methods with minimal environmental impact such as tagging and monitoring, aerial surveillance and shark spotting programs, eco shark barriers, education of the public and increased scientific research into shark numbers and behaviour.

4. Measures to prevent shark incidents, including strategies adopted in other jurisdictions

We need much more scientific research into shark numbers and behaviour. Australia has world-class tagging and monitoring programs in place, which should be further extended. Beach surveillance and closures seem to have worked well for many beaches. The surveillance by helicopters is limited and extremely expensive though. Spotter planes, towers, surveillance balloons and drones or shark spotting programs like <http://sharkspotters.org.za/> should be considered.

We need neutral information and education of the public instead of fear mongering. People need to be reminded that sharks are predators who deserve respect but aren't mindless killers trying to get us. People need to be made aware that the risk of getting bitten by a shark is minimal and that a spear fisher diving alone in a remote location is taking a far greater risk than someone swimming close to shore at a monitored beach. There are many ways to minimise the risk of shark encounters, ie <https://taronga.org.au/animals-conservation/conservation-science/australian-shark-attack-file/prevention-shark-attacks>. Warning signs at the beach in times of increased shark activity due to seasonal migration, water temperatures, baitfish or whale carcasses in the area etc are a simple and low cost option.

We should also invest in personal safety devices for surfers and divers, ie <https://sharkshield.com> and <http://surfsafe.net.au/>, and also in effective shark barriers for swimmers like the Shark Safe Barrier <http://www.sharkdivingunlimited.com/new-sharksafe-barrier-system-to-protect-both-sharks-and-people/> and the Ecosharkbarrier <http://www.ecosharkbarrier.com.au>, which was trialed at Coogee Beach WA for a few months in 2014 and which has been reinstalled since. The Ecosharkbarrier has been a great success. This barrier provides 100% shark safety for worried beach goers, does not pose a threat to marine life, and has received widespread community support among the locals and also from people who instead of going to their local beaches regularly travel up to an hour just to be able to swim within the barrier.

5. Any other related matters

The drumline trial in WA in 2014 was extremely controversial and caused considerable backlash. Hundreds of scientists, thousands of members of the public, and even shark bite survivors and relatives of shark incident victims opposed the killing of sharks. Thousands of people attended protests, wrote letters to MPs, and submitted comments to EPA and EPBC referrals. I think this and also many online surveys show that the majority of the general public do not support unnecessary killing of sharks and other marine life, especially when there are plenty of non-lethal safety options are available.

Yours sincerely,

