

April 23, 2014

Referral Business Entry Point
EIA Policy Section (EPBC Act)
Approvals and Wildlife Division
Department of the Environment
GPO Box 787
Canberra ACT 2601



By email to: epbc.referrals@environment.gov.au

Re: Referral of Proposed Action: Extension of Western Australia Shark Hazard Mitigation Drum Line Program. Reference number: 2014/7174

To Whom It May Concern:

Shark Advocates International and Project AWARE appreciate this opportunity to comment on the Western Australia government's proposal to continue a regional cull of large sharks (in response to several fatal shark bites) to run from mid-November through the end of April for the next three years.

Our organizations are committed to advancing sound, science-based policies for sharks, and have collaborated in particular on shark conservation activities through the Convention on Migratory Species (CMS) and the Convention on International Trade in Endangered Species (CITES). We have long cooperated to channel and convey to governments the deep interest in sharks shared by most people associated with shark diving related tourism, a growing source of economic benefits recently valued at more than \$300 million annually.

Overview

After reviewing the associated documents and consulting with numerous experts, we assert that there is an unacceptably high likelihood that the proposed program will have a significant negative impact on numerous species of marine life, including those officially considered to be matters protected under the federal Environment Protection and Biodiversity Conservation Act (EPBC Act), specifically species listed as threatened (white sharks) and/or migratory (shortfin mako sharks).

In general, we remain concerned that the drum-lining program lacks a sound scientific basis, and clear measurable goals, and that proponents have not provided evidence that continuing this controversial program will actually reduce the risk of negative shark-human interactions. At the same time, claims that the proposed actions will not harm shark populations have not been well substantiated while potential negative effects on the ecosystem and on Australian shark fishermen have not been adequately addressed.

We oppose the proposal to continue the regional drum-line shark culling program, and support expansion of scientific study as a more effective means for reducing the chances of shark bites. Our specific concerns and comments follow.

*Shark Advocates International is a project of The Ocean Foundation formed to safeguard sharks through sound conservation policy.
Project AWARE Foundation is a growing movement of scuba divers protecting the ocean planet – one dive at a time.*

White sharks

While the population status of white sharks (*Carcharodon carcharias*) off Australia is unknown, the species is considered rare enough to warrant protections under the EPBC Act and resulting commitments to take all actions possible to reduce mortality. We can find no scientific evidence to support the Risk Assessment assertion (page 11) that white shark populations are stable or possibly increasing, with populations “of at least a few to several thousand individuals.” Without such evidence, program approval appears inconsistent with legal obligations.

In addition, the expectation of locally depleting white sharks is inconsistent with studies conducted in other regions. Specifically, data from the South African shark control program that showed that white shark catch rates off KwaZulu Natal beaches did not decline significantly over a 25 year period.¹ Hence, scientists contend that localized depletion does not occur for white sharks, likely because they are a highly migratory species.²

It is our understanding that the Western Australian government has not been forthcoming with data collected from the acoustic monitoring program, and yet such information would seem to be exceptionally useful in understanding the movements of white sharks within the Marine Monitored Areas (MMAs) and in evaluating the assumption that culling can reduce risk to beach goers. We are hopeful that these data will be made public very soon.

While the proponent asserts without adequate justification that the planned white shark removal will not have a significant negative effect on the population, it appears that effects on the species’ recovery rate have not been considered. This would seem to be a major flaw in the case for continued culling, given that recovery is the main thrust of the *White Shark Recovery Plan*, developed in accordance with the EPBC Act.

Mako sharks

To date, the drum-line program has taken more shortfin makos (*Isurus oxyrinchus*) than white sharks. As you are likely aware, shortfin and longfin mako sharks (*Isurus paucus*) are listed as migratory species under the EPBC Act, pursuant to their inclusion in Appendix II of CMS. A 2008 assessment of risk for Atlantic oceanic sharks highlighted these global species’ low reproductive capacity and high vulnerability to overfishing.³ If the drum-lining operation is allowed to proceed, we strongly urge the establishment of a conservative mako shark limits that, if reached, would trigger the end of the program.

¹ Dudley, S., and C. Simpfendorfer. 2006. Population status of 14 shark species caught in the protective gillnets off KwaZulu-Natal beaches, South Africa, 1978-2003. *Marine and Freshwater Research* 57:225-240.

² Bruce, B. D., J. D. Stevens, and H. Malcolm. 2006. Movements and swimming behaviour of white sharks (*Carcharodon carcharias*) in Australian waters. *Marine Biology* 150:161-172.

³ Simpfendorfer, C., E. Cortés, M. Heupel, E. Brooks, E. Babcock, J. Baum, et al. 2008. An Integrated Approach to Determining the Risk of Over-exploitation for Data-poor Pelagic Atlantic Sharks: An Expert Working Group Report.

Other species

Some shark species, at risk for capture in the proposed operation, including the dusky shark (*Carcharhinus obscurus*), are the subject to science-based catch limits as part of relatively well-managed and sustainable shark fisheries. The Western Australian Department of Fisheries Risk Assessment describes the catch of dusky sharks as “negligible” so far, but the continuation of low catches cannot be assumed, as interactions may well increase in the summer months. In the case of increased dusky shark catches on drum-lines, the Risk Assessment (page 4) points to “the option to adjust the management of the commercial fisheries that operate on this species”. While likely beyond the scope of this comment opportunity, it is worth pointing out that the proposed culling operation could have negative economic impacts on Australian fishermen, through population depletion and/or quota reduction, unless strict, science-based limits (significantly lower than the 30 shark threshold mentioned in the document) that trigger the end of the drum-line program are set.

To date, the drum-line operation has taken dozens of tiger sharks (*Galeocerdo cuvier*), with potentially negative consequences for the population. It is hard for us to accept this allowance given the absence of a stock assessment and/or evidence that tiger sharks pose a risk to swimmers off Western Australia, particularly within the MMAs. Accordingly, we encourage removing tiger sharks as a target species for the drum-line program.

We also remain concerned generally that drum-lines, though targeting large sharks, are also taking small, completely harmless sharks, as well as rays, and could harm other vulnerable megafauna, such as sea turtles and dolphins.

An ineffective program

The proponent has provided no evidence that the drum-lining program will benefit the region’s beach goers. Moreover, scientists have been long warned of the low likelihood that shark culling will result in the death of the individual sharks that bit people and/or reduce the chances of negative interactions.

In particular, lessons from the well-referenced case study of Hawaii’s shark control programs in the 1960s and 70s bear repeating. Although 4,668 sharks were killed in these expensive programs, scientists found no measurable effects on the rate of shark attacks in Hawaiian waters. They advised against future large-scale control programs, and recommended instead tagging programs and research into tiger shark population dynamics, distribution, and activity patterns as the best means for reducing the risk of shark bites.⁴

Moreover, the fact that the drum-line program has yet to catch a white shark casts further doubt as to the program’s ability to achieve its intended results.

⁴ Wetherbee, B.M., C.G. Lowe, and G.L. Crow: A Review of Shark Control in Hawaii with Recommendations for Future Research. Pacific Science. 1994.

International context

Based on our experience in international fisheries and wildlife debates, we take this opportunity to express our deep disappointment that Australia – a shark conservation leader that has used science-based arguments to secure global safeguards for white sharks – has decided to do less for this vulnerable species than it has urged other countries to do. In particular, the Western Australian cull runs counter to Australia's commitments to strictly protect white sharks made through CMS and associated national legislation.

Rather ironically, some of the most compelling arguments for exercising restraint with respect to the persecution of white sharks come from Australian government officials. Australia's 2004 proposal to list the white shark under CITES explained: *"the negative image of the white shark and the fear it inspires in humans often precipitates unwarranted killing of the species."* A leading Australian CITES delegate told the media: *"No other species has been subject to such conjecture, so vilified, so targeted through fear".*⁵

Conclusion

In summary, we find the proposal to continue the Western Australian drum-line shark culling program to be seriously lacking in scientific justification. In short, the benefits for people have not been substantiated while the unnecessary risk for myriad marine species is clear.

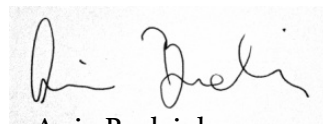
We therefore strongly support – as the most responsible and scientifically justified means for addressing shark bite risk -- **discontinuation of the shark culling program and expansion of regional white shark research**, including the acoustic monitoring program. At the very least, a more rigorous and detailed impact assessment should be conducted and carefully considered before any extension is granted. If drum-lining is allowed to resume in the future, science-based, precautionary limits that promptly trigger the program's termination should be imposed for non-target species.

Thank you for considering our views.

Sincerely,



Sonja Fordham
President
Shark Advocates International



Ania Budziak
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⁵ Levett, Connie. "Man gives white shark a helping hand." *The Age*, October 13, 2004.