

Hon Simon O'Brien MLC
Chairman of the Environment and Public Affairs Committee
Parliament House, WA

17 January 2014

Submission to the Legislative Council standing committee on Environment and Public Affairs re: Petition no 27 – Opposing the Great White Shark Cull

The Wilderness Society began a parliamentary petition to the Legislative Council, last month so the WA shark policy could be further scrutinised. **We are now following up with a submission to and are calling for a parliamentary inquiry into the shark cull policy.**

The recent WA government plans to cull Great White sharks and other species (Bull and Tiger sharks) larger than three meters through a baiting program, have been challenged across the country and the world for lacking common sense and threatening to make our beaches less safe – by baiting drum lines off our most popular beaches.

We need a plan that will increase, not threaten public safety. We are relying on the Environment and Public affairs committee, to take a 'facts before fear' approach and launch an inquiry into the shark cull policy, to ensure that real *public safety* solutions are adopted to keep our communities safe and our oceans healthy.

The facts

Great White shark population & protection status

Politicians and the public are often quoted in the media saying shark numbers in WA have increased since they have been protected, but shark experts agree that - there is no evidence to support such a statement.

There is, however, historical evidence of a greater decline in white shark numbers Australia-wide over the last 60 years, and no evidence to suggest that white shark numbers have recovered substantially since receiving protectionⁱ.

As Great White Sharks only begin to reach reproductive age at 18-20years, there would have to be a biological anomaly for there to be an increase in Australian populations. There has also been recent evidence they can live up to 70 years oldⁱⁱ.

CSIRO Marine Research Scientist, Barry Bruce says, "Researchers are interested in the movement patterns of white sharks and what is important to them. Once we understand that, we have a better chance of using that information to reduce the risks that we pose to them and also the risks that they pose to us. Researchers from CSIRO explain that there are two separate great white populations in Australia: the eastern population move up to Queensland in autumn and winter, returning south in spring and; the southern/western population which moves up as far as Exmouth, during spring and appears to return south during the summer.

Over 130 sharks have been tagged off the WA & SA coast, but this information has a long way to go before we understand the full extent of local populations. Recent South African population estimations conclude that there could be less than 2000 left in the population, with estimates of just between 2000-5000 globallyⁱⁱⁱ. If these estimates are correct it could mean that the Great White is more threatened globally than the Black Rhino or Snow leopard.

Protection wise, just last year in 2013, our federal government published a recovery plan for the Great White shark (*Carcharodon carcharias*), with the main aims of;

- improving the population status, leading to future removal of the white shark from the threatened species list of the EPBC Act
- ensuring that anthropogenic activities do not hinder recovery in the near future, or impact on the conservation status of the species in the future.

The WA government’s shark cull policy in is direct contradiction of actions for this plan of species recovery, and ignores the protection status of the species on WA state, Commonwealth and international levels.

Western Australia:	Listed as rare or likely to become extinct under Schedule 5 of the Wildlife Conservation Act 1950 in 1999 and protected under Schedule 46 of the Fish Resources Management Act 1994, in 1997.
Commonwealth:	Vulnerable and migratory under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) in 1999.
International:	<ul style="list-style-type: none"> • Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), in 2004. • Appendices I and II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS), in 2002. • 2012 International Union for the Conservation of Nature (IUCN) Red List, listed as vulnerable, in 1996.

Shark Attack Statistics

Recent research^{iv} has shown the number of shark bite incidents occurring each year appears to be directly related to the amount of time people spend in the sea. Given that Western Australia has the fastest population growth^v of any Australian state, there is likely to be an increasing number of people venturing out into our coastal waters every year. Thus, the likelihood of someone encountering a shark increases, and with it, a corresponding increase in shark bite incidents.

Data gathered by Surf Life Savers WA has been used to suggest an increase in the number of sharks in WA, by stating that more sharks were sighted in 2012/13 (285 sharks) than in 2011/12 (247 sharks).

In the last 50 years, there have been only 53 human fatalities in Australian waters from shark attacks. Some years there are no fatalities recorded, other years there have been up to three in a year, but the average remains around one per year, says a report by the Australian Shark Attack File (ASAF)^{vi}.

Shark researchers from CSIRO^{vii} studying the juvenile population of East Coast Great Whites reported that in the 2008–09 summer season, a beach at Port Stephens was closed 44 times because sharks swam near the flags. Yet there has never been a recorded attack there – no-one knows why. Clearly there are still major gaps in our understanding of these ocean guardians.

Have baited drum-lines reduced shark attacks anywhere?

The answer is no. In fact, when shark culling was carried out in Hawaii [between 1959 to 1976](#), over 4,500 sharks were killed and yet, there was no significant decrease in the number of shark bites recorded^{viii}.

In addition, a WA Government funded report into shark control measures found that “due to the environmental impacts of shark control activities, it is not recommended that either shark nets or drum-lines be introduced into Western Australia”.

The Fears

Public Safety Concerns

There has been minimal information published by our government about how people can prepare themselves for a safer ocean experience; whether it is a surf, swim, fish, snorkel or a dive. Our government needs to abate these concerns by putting further funds into educating the marine users with facts about our marine guardians and ideas on how people can feel safer when they enter the water such as;

- Stay out of the water if sharks have been sighted in the area.
- Stay close to shore (within 30m of the water's edge).
- Don't go in the water alone (stay in groups).
- Avoid water temperatures lower than 22C.
- Avoid water depths of greater than 5m when swimming or surfing.

By-Catch Issues of National Significance

There are a number of nationally threatened species that could be affected by any proposed shark control activities in Western Australia. These include:

Grey nurse shark (vulnerable, west coast population); Green sawfish (vulnerable); Freshwater sawfish (vulnerable); Loggerhead turtle (endangered); Leatherback turtle (endangered); Green turtle (vulnerable); Humpback whale (vulnerable); Southern right whale (endangered) and, Australian sea lion (vulnerable).

Given the numerous potential impacts on Matters of National Environmental Significance (MNES), it is highly likely that the WA Government would need to prepare an EPBC Referral for submission by the Commonwealth which would need to outline the proposed activity in detail, the potential impacts on MNES, how potential impacts will be mitigated, and alternative approaches considered instead of the proposed activity^{ix}.

Real Solutions for Public Safety

If people are going to peacefully coexist with sharks, we need sound policies from our government for ocean users on how we can make our experiences in the ocean safer. Instead of targeting a species which has successfully evolved over millions of years to use their instincts to keep our marine food chains in a healthy balance.

Increased understanding of the behaviour and biology of target species is necessary for evaluation of the effectiveness of any public safety policy. Acoustic telemetry, conventional tagging, and studies on population dynamics may be used to obtain data about activity patterns, distribution, and population parameters, providing information useful for reducing the risk of shark attack.

The truth is that we will never be able to completely prevent shark attacks. However, with better education and improved investment in monitoring and research - we can reduce the risk and frequency of these tragic events.

Jenita Enevoldsen
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ⁱ Reid, D. D., Robbins, W. D., & Peddemors, V. M. (2011). Decadal trends in shark catches and effort from the New South Wales, Australia, shark meshing program 1950–2010. *Marine and Freshwater Research* 62, 676–693.

ⁱⁱ Great white sharks live longer than thought -- as long as 70 years old Read more: http://www.upi.com/Science_News/2014/01/13/Great-white-sharks-live-longer-than-thought-as-long-as-70-years-old/UPI-78521389652806/#ixzz2qdhGSOoE

ⁱⁱⁱ Great White Shark population estimates; <http://www.sharkwatchsa.com/projects/great-white-shark-population/>

^{iv} West, John G. (2011). Changing patterns of shark attacks in Australian waters. *Marine and Freshwater Research* 62, 744–754. <http://dx.doi.org/10.1071/MF10181>

^v Australian Bureau of Statistics (2009). 'Australian Population Figures.' Available at <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3101.0>

^{vi} Australian Shark Attack File (ASAF), Taronga Zoo. <http://taronga.org.au/animals-conservation/conservation-science/australian-shark-attack-file/annual-australian-shark-attack-report-summary-2012>

^{vii} Bruce, B. D., Stevens, J. D., and Malcolm, H. (2006). Movements and swimming behaviour of white sharks (*Carcharodon carcharias*) in Australian waters. *Marine Biology* 150, 161–172.

^{viii} Wetherbee BM, Lowe CG, Crow GL. 1994. A review of shark control in Hawaii with recommendations for future research. *Pac Sci* 48(2): 95-115. <http://scholarspace.manoa.hawaii.edu/handle/10125/2202>

^{ix} McPhee, D.P. (2012) Likely Effectiveness of Netting or Other Capture Programs as a Shark Hazard Mitigation Strategy under Western Australian Condition. http://www.fish.wa.gov.au/Documents/occasional_publications/fop108.pdf Accessed: 17/1/14