

Hon Matthew Swinbourn MLC
Chair, Environment and Public Affairs Committee

Dear Mr Swinbourn

RE: Petition No. 099 – SMART Drumline Trials

Thank you for the opportunity to write in support of Petition No. 099, which calls on the State Government not to implement the proposed non-lethal S.M.A.R.T Drum Line (SDL) trial to be held near Gracetown in early 2019. The petitioners request that reliable evidence that SDLs increase safety and protect sharks and other marine life is sought from the New South Wales SDL trial, before considering their use in Western Australia. To the best of my knowledge, the issues described in this petition have not been taken to the Ombudsman.

I would like to mention that the online version of this petition, has achieved significant support with almost 7500 signatures to date¹.

The Greens (WA) policies² that relate to the treatment of wildlife are:

- To raise the status of animals and bring an end to their exploitation through community education and greater protection under the law.
- Protect, restore and extend remaining habitats, preserving biodiversity and maintaining ecological balance.

The Greens (WA) also share the drive for human safety and the need to provide appropriate standards to mitigate the loss of human life. We recognise the impact on tourism and the attention required to maintain our good reputation as a tourist destination.

While I fully support the need to take effective steps to minimise the risks of shark attacks while protecting the ocean ecosystem, there is insufficient evidence to suggest that SDLs are effective. The SDL trial itself may pose unacceptable risks to sharks and people. To date, there have been no independent reviews undertaken on SDLs regarding their ability to reduce shark bites and increase ocean-user safety³. Without evidence to prove the effectiveness of the SDLs, there is a potential risk that the baited SDLs could attract more sharks from the deeper ocean to the area or increase the shark presence in another area. For example, there have been mixed results from the Recife SDL program in Brazil, where sharks are attracted by rubbish in the ocean and breeding sites have been disturbed the construction of Port Suape. Data shows that the number of shark attacks in Recife itself have reduced, however there has been an increase in the number of shark attacks at an adjacent beach⁴.

In addition, David Guyomard of the Reunion Island Regional Committee for Sea Fisheries and Aquaculture, told Fact Check⁵ that “the immediate release of captured sharks could reduce the efficacy of the SDLs, given the efficacy of drum lines is demonstrated when sharks are captured and killed”. Some community members have voiced their concerns to me that the government may revert back to lethal measures rather than exploring alternative measures that are proven to be more effective than drum lines.

In WA, ocean-users encounter sharks regularly in ways that do not lead to injury by taking precautions in order to limit risk of a dangerous encounter. In particular, a WA study found that using the ocean with others was the most commonly reported hazard mitigation strategy⁶. The study highlights that many ocean-users strongly support further research and education focusing on shark behaviour, shark deterrents and approaches that enable people to understand and accept risks associated with ocean use.

I strongly support this petition’s suggested alternative risk reduction methods that better protect people and the marine environment, such as the encouragement of personal responsibility. Ocean-users should be encouraged

¹ <https://www.change.org/p/premier-mark-mcgowan-say-no-to-the-smart-drumline-trial-in-wa?fbclid=IwAR1j9ogrG3fge4wbul5vP0NiyT5UT5wt1AnSVwLEkCTMJYvrDccye0BODi4>

² <https://greens.org.au/wa/policies/animals>

³ <https://www.seashepherd.org.au/news-and-commentary/commentary/the-smarts-on-smart-drum-lines.html>

⁴ <https://www.abc.net.au/news/2015-12-23/shark-attacks-smart-drum-lines-fact-check/7030538>

⁵ <https://www.abc.net.au/news/2015-12-23/shark-attacks-smart-drum-lines-fact-check/7030538>

⁶ Gibbs L, Warren A (2015) Transforming shark hazard policy: Learning from ocean-users and shark encounter in Western Australia. *Marine Policy*. Vol 58:116-124 <https://www.sciencedirect.com/science/article/pii/S0308597X15000962>

to check Shark Smart applications for shark sightings, whale carcasses and other circumstances that may attract sharks. I urge the government to further invest in these alternative measures, including in shark spotting surveillance, continued rebates on scientifically proven personal shark repellents, better public warning systems, ecologically sound shark-proof swimming enclosures and the installation of shark trauma medical kits on beaches.

Furthermore, despite SDL's classification as a non-lethal measure, there is no guarantee that SDLs are non-lethal for target sharks and bycatch during the period of being caught on the SDL or after release. The SDLs can only be effective in reducing mortality if the contactor is always available to rapidly attend to a SDL when an animal is captured and ocean conditions allow for immediate attention to the SDL. This system is not only costly to taxpayers, but it is impractical. The captured animal is therefore at high risk of dying from stress, suffocation or being eaten by another animal if not attended to immediately.

In addition, there is no way to determine the survival of the SDL's bycatch post-release if the animal is not tagged. The west-coast grey nurse shark, listed as vulnerable by the International Union for Conservation of Nature (IUCN)⁷ and the scalloped hammerhead shark, listed as endangered by the IUCN⁸ are among the species at risk of being caught on the SDLs. Research shows that the hammerhead species are inherently vulnerable to capture stress and post-release mortality resulting from fisheries interactions⁹. For example, a 2015 report¹⁰ by Cardno in conjunction with Daryl McPhee from Bond University on the results of SDL captures in Reunion Island found that there was a 50% mortality rate of some shark species, particularly the Hammerhead. Therefore, the use of SDLs pose a threat to the ecological balance of already vulnerable and endangered species.

In summary, there is insufficient evidence to support the use of SDLs as the best choice to reduce the risk of shark attacks, since:

- there is a lack of conclusive evidence that SDLs reduce risk;
- the trial could increase risk by attracting more sharks to areas that people use;
- The SDLs are potentially lethal to sharks, which is unacceptable for ethical reasons and because sharks are necessary for the health of our ocean ecosystems;

Community members are advocating for alternative options to SDLs that are safer for humans and marine life, which include:

- better promotion of evidence based shark repellents by offering continued rebates;
- trial other systems that do not risk the environment;
- address the issues of whale carcasses, salmon, seals, and rock lobster pots in attracting sharks¹¹;
- install shark trauma medical kits at beaches; and
- do more to correct negative perceptions of sharks through education about their critical role in our environment, the small risk they pose to humans, and the need for personal responsibility of all ocean users.

The proposed 2019 Gracetown SDL trial should not proceed until scientific evidence proving that SDL are effective is found by the NSW SDL trial. WA should not risk increasing ocean-users safety by providing the community with a false sense of security when alternative proven measures could be utilised.

Thank you once again for listening to the concerns of the community.

Yours sincerely,



Hon Diane Evers MLC

Member for South West Region

20 December 2018

⁷ <http://www.iucnredlist.org/details/39386/0>

⁸ <http://www.iucnredlist.org/details/39385/0>

⁹ Gallagher AJ, Serafy JE, Cooke SJ, Hammerschlag N (2014) Physiological stress response, reflex impairment, and survival of five sympatric shark species following experimental capture and release. *Mar Ecol Prog Ser* 496:207-218. <https://doi.org/10.3354/meps10490> <https://www.int-res.com/abstracts/meps/v496/p207-218/>

¹⁰ http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0020/621407/cardno-review-of-bather-protection-technologies.pdf

¹¹ Lea J. S. E., Daly R., Leon C., Daly C. A. K., Clarke C. R. (2018) Life after death: behaviour of multiple shark species scavenging a whale carcass. *Marine and Freshwater Research*, <https://doi.org/10.1071/MF18157>