

Environmental Protection Act 1986

Section 39A(7)

PUBLIC ADVICE

Proposal: Non lethal trial of SMART drumlines

Proponent: Department of Primary Industries and Regional Development

Decision:

The EPA considers that the proposal is unlikely to have a significant impact on the environment and does not warrant formal assessment.

Background:

On 21 December 2018, the Department of Primary Industries and Regional Development (DPIRD) referred the non-lethal trial of the Shark Management Alert in Real Time (SMART) drumlines proposal to the Environmental Protection Authority (EPA) under section 38 of the *Environmental Protection Act 1986* (EP Act). The proposal aims to measure the effectiveness of SMART drumlines as a non-lethal shark mitigation tool. The proposal will involve the capture, tagging, relocating and release of white sharks, and the deployment of VR2 acoustic receivers to better understand white shark movements following release. It is proposed that 10 SMART drumlines will be set and retrieved daily, approximately 500 metres (m) offshore along an 11.5 kilometre (km) stretch of coast off Gracetown in the Ngari Capes Marine Park, for a period of 15 months.

The proposal was advertised for public comment and the Environmental Protection Authority (EPA) notes that 99 public comments were received. The key issues raised included:

- Potential impacts to marine fauna through hooking, entanglement and/or interaction with the drumlines.
- The standard of marine fauna handling procedures and implications on the welfare of sharks
- The location of the proposal and the potential for SMART drumlines to attract sharks closer to shore

- Alternative methods of shark hazard mitigation measures (eg. drone surveillance)
- Community engagement and public reporting

At the time of referral, the EPA considered that it did not have enough information regarding the potential impacts of the proposal to make a decision as to whether or not to assess the proposal, and if so the level of assessment. The EPA requested further information from the proponent in light of some of the issues raised during the 7-day public comment period about environmental impacts. This information was received by the EPA on 15 January 2019.

Relevant Statutory and Administrative Provisions

The EPA has considered the proposal in accordance with the requirements of the EP Act and the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2016 and Procedures Manual*.

Materials considered in making this decision

The EPA has considered and had regard to the information:

- provided in the proponent's referral information, which is available on the EPA's consultation hub;
- derived from comments received during the 7-day comment period;
- set out in the advice from the Department of Biodiversity, Conservation and Attractions;
- derived from the EPA's own inquiries; and
- in the proponent's in response to the EPA's request for further information.

Considerations

In making its decision on whether to assess the proposal, the EPA had regard to various matters, including the following (as outlined in the EPA's *Statement of Environmental Principles, Factors and Objectives*):

- a) values, sensitivity and quality of the environment which is likely to be impacted
- b) extent (intensity, duration, magnitude and geographic footprint) of the likely impacts
- c) consequence of the likely impacts (or change)
- d) resilience of the environment to cope with the impacts or change
- e) cumulative impact with other projects
- f) level of confidence in the prediction of impacts and the success of proposed mitigation
- g) public interest about the likely effect of the proposal, if implemented, on the environment, and public information that informs the EPA's assessment.

In considering the potential direct and indirect impacts of the proposal on the **Marine Fauna, Benthic Communities and Habitat**, and **Social Surroundings**, the EPA has had particular regard to:

- The values and sensitivities of the marine environment including the marine conservation values in the Ngari Capes Marine Park.
- The small extent of likely impacts in terms of the short duration (15 months) and limited geographic footprint of the proposal (the broad spacing of 10 drumlines and 125 acoustic receivers over an 11.5 kilometre stretch of coastline). The Department of Biodiversity, Conservation and Attractions has advised that the 'footprint' of the trial infrastructure is considered relatively small in relation to the extent of Ngari Capes Marine Park, with limited impacts and risks to conservation values including marine benthic habitats.
- The low likelihood of consequences on populations of white sharks and other non-target marine species because of the mitigation strategies proposed by the proponent to avoid and minimise impacts. The measures include:
 - designing the proposal to be non-lethal trial. By non-lethal it is meant that white sharks (or target sharks) that are caught will be tagged, relocated further offshore and then released;
 - adopting a rapid response time (within 30 minutes of receiving an alert on a SMART drumline). The aim of the rapid response time is to reach the drumline and relocate the white shark before white sharks and non-target marine species are impacted;
 - only deploying drumlines during the day (not at night time); and
 - the inclusion of negatively buoyant rope (i.e weighted and non-floating) as part of the drumline configuration to minimise the risk of entanglement with migrating whales.
- The proponent's prediction that there will be minimal impacts to white sharks and other non-target marine species based on available information from the New South Wales SMART drumline program about shark survival rates. For example, the 294 white sharks caught in the NSW SMART drumline operations resulted in only two known deaths following release.

In addition, there is also experience about the effectiveness of shark handling procedures from the DPIRD's own shark catching and tagging program which has been carried out for over 15 years. In this regard, the EPA notes the independent Animal Ethics Committee has considered and approved the proponent's shark handling protocols for the trial from an ethical treatment and shark welfare perspective.

- Advice from the proponent that the drumlines would not be attracting sharks from long distances into the area. In reaching this conclusion the proponent has referred to the small bait size to be used, no use of burley and the broad spacing of drumlines. The proponent has advised it is not likely that the use of a 2 kilogram bait would produce an underwater odour corridor that would attract sharks from

long distances thereby increasing the number of sharks to the area. Furthermore, the proponent has sought advice from scientists that monitor the SMART drumline program in NSW who have advised there has been no evidence from their trials over several years to indicate increased numbers of sharks in the vicinity of the drumlines.

As the manager of the Ngari Capes Marine Park, the Department of Biodiversity, Conservation and Attractions has advised the EPA that it is supportive of the proposed shark mitigation trial and that the trial is seen as a mechanism to proactively investigate and implement suitable measures to reduce the risk of shark interactions for people undertaking water based activities within the marine park.

The EPA notes the information gained from the proposed trial, particularly from the tagging of white sharks, will serve to further increase the level of confidence in the predicted survival rates and behaviour of released white sharks, and therefore the effectiveness of the proponent's measures. This information has the potential to further improve white shark conservation management and protection, more generally.

In summary, although the proposal raises a number of environmental issues, the EPA considers that its objectives for **Marine Fauna, Benthic Communities and Habitat**, and **Social Surroundings** can be met. There were no factors that were determined to be key environmental factors that would require formal assessment under Part IV of the EP Act.

In conclusion, the likely environmental effects of the proposed trial are not so significant as to warrant formal assessment because the extent and consequence of the potential impacts are predicted to be small. The EPA is of the view that the potential impacts of the proposal can be adequately managed through implementation of the proposal in accordance with the referral documentation, and the proponent's measures to minimise impacts to marine fauna species.

The EPA has noted the level of public interest about the potential impacts of the proposal and has therefore provided advice and recommendations to the proponent about making available the results of the trial and ongoing reviews during the implementation of the proposal.

Advice and Recommendations

Having noted the public interest in the proposal, the EPA recommends that the community is regularly informed of the ongoing implementation of the trial, including the results of reviews and any modifications to the trial in response to the reviews.

The proponent has advised that it proposes to undertake reviews and reports during the trial consistent with the following:

Report requirement / What	Who	When
Count of all captures	Ministerial Reference Group	Weekly
Risk assessments of species that incur mortality. Performance of contractor.	Ministerial Reference Group	Monthly
Progress report – collating risk assessments, summaries of operational matters, and preliminary analyses of shark movement data as it becomes available.	Chief Scientist Ministerial Reference Group	4-monthly

The Ministerial Reference Group, established by the Minister for Fisheries, will be provided with the opportunity to review numbers of all captures and the analyses undertaken by the proponent. The Group is comprised of: Surf Life Saving WA; Conservation Council of WA; Sea Shepherd; Surfing WA; Shire of Augusta-Margaret River; and the Department of Biodiversity, Conservation and Attractions (as observer).

In addition, the proponent has advised that if there are any mortalities of white sharks or other listed species it may suspend operations while an investigation of the incidence is undertaken. This would be considered in consultation with the Ministerial Reference Group.

The EPA supports the proponent's commitment for ongoing consultation with the Ministerial Reference Group during the implementation of the trial. To further enhance the transparency aspects of the trial the EPA recommends that the reviews and reports are made publicly available as soon as possible.



Tom Hatton
Chairman

16 January 2019