

The Hon. Adam Marshall MP
Minister for Agriculture and Western NSW
GPO Box 5341
SYDNEY NSW 2001



Dear Minister

Re: 2019-20 Annual Performance Report for the Shark Meshing (Bather Protection) Program

The NSW Shark Meshing (Bather Protection) Program (SMP) operates under two Joint Management Agreements (JMAs) and a management plan, which provides for improved environmental outcomes.

As required by Section 221Y of the *Fisheries Management Act 1994*, the Fisheries Scientific Committee's (FSC) role regarding the JMA is to:

- (1) conduct a review of the performance of all parties to the joint management agreement, and
- (2) advise the Minister of any deficiencies in implementation of the joint management agreement by any party to it.

The FSC has reviewed the performance of all parties as outlined in the SMP 2019-20 Annual Performance Report. The FSC commends the Department for the well-researched and tested manner in trialling SMART Drumlines as a shark mitigation device. It is clear from these trials that SMART drumlines provide an effective method of reducing the number of target sharks entering beaches with no lesser risk to human life. The FSC advocates for the use of SMART drumlines in place of SMP nets on the 51 beaches currently netted by this program. Further, the FSC suggests the use of SMART drumlines over a broader area into beaches where negative human-shark interactions have occurred and no mitigation device is in place.

The FSC commends the Department for its rigorous evaluation of the efficacy of aerial surveys of sharks from aircraft. As has been demonstrated at length, few target species are detected reliably in aerial survey methods using helicopters and planes with observers searching with the naked eye. The FSC suggests, in line with Departmental advice, that drone technology should replace fixed wing and helicopter aircraft survey as this has been proven to be more cost effective and accurate for these aerial surveys. The FSC also promotes the use of recorded video on drones so that a permanent record exists that can be assessed and utilised by researchers.

The FSC has also reviewed the 2019-20 SMP Trigger Point Review Report. FSC notes that the trigger point associated with a number of threatened species under the jurisdiction of the FSC has been tripped, including 42 White Sharks (24 dead, 18 released alive), 31 Greynurse Sharks (14 dead, 17 released alive), 4 Scalloped Hammerhead Sharks (all dead), and a Great Hammerhead Shark (released alive). This large catch of threatened species is concerning as it directly opposes the objective of the JMA to "ensure that the SMP does not jeopardise the survival or conservation status of threatened species" (JMA page iii). The FSC continues to be concerned that the current trigger points are not sensitive enough for threatened species that typically have fewer offspring

and are slow to mature. The FSC suggests further revision of the SMP as the impacts on threatened species are not acceptable, as demonstrated by the annual tripping of trigger points.

The FSC commends the Department for its use of Pop-up Satellite Archival Tags (PSATs) on Greynurse Sharks over the past season as this provides good insight into post-release mortality of the species, and encourages their continued use. Although the FSC acknowledges that numbers of tagged individuals are still small, the results of PSAT tags on released Greynurse Sharks are of particular concern. Two of the five tagged Greynurse Sharks died after release. This suggests that total mortality rates of released Greynurse Sharks is higher than previously reported. This reinforces the FSC's recommendation that SMART drumlines should be deployed in preference to mesh nets at beaches where Greynurse Sharks occur. It also suggests that post release mortality of other threatened species caught by mesh nets in the SMP should be assessed.

The FSC looks forward to working with Department staff to improve aspects of the SMP so as to lessen the impact of the program on threatened and non-target species generally.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Jane Williamson', with a stylized flourish at the end.

Assoc. Prof. Jane Williamson
Chairperson
Fisheries Scientific Committee
17 February 2021