

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



Dear Minister

Re: 2018-19 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 2018-19 Annual Performance Report and provides the following comments:

- 1) The FSC notes that there has been a substantial increase in catches of non-target species including the critically endangered grey nurse shark and the vulnerable great hammerhead along with the target species, the vulnerable white shark over the past 10 years. The FSC supports the reduction in relative catch of non-target species as has been recorded for SMART drumlines but is concerned about the increase in catches of threatened species documented in the current SMP Annual Report.
- 2) The SMP Annual Report discusses the limitations of aerial surveillance using observers searching with the naked eye. The use of unmanned aerial vehicles in place of aircraft surveys for the detection of sharks on beaches is commended by the FSC and it sees this as a strategy that in future should eventually replace manned aircraft.
- 3) The soak time of SMP nets is discussed as part of the review of net configurations. The FSC is unable to assess the efficacy of change in soak time without information on the net type/size/sites and general methodology associated with the changes. The FSC requests more information be made available for it to independently assess the science behind these processes and would like access to the raw data on net configuration to independently assess soak time of nets in relation to shark management. The current report refers to one methodology being used in one area and trialled in another.
- 4) The FSC suggests that new information within the reporting period should be highlighted against data in previously reported years. For example, bull shark movement research is

discussed for all data since 2015 and not specific to the 2018-19 reporting year.

- 5) The FSC has been concerned with knowledge on post-release survival, particularly for grey nurse sharks. The Department agreed to use pop-up archival tags to assess post-release survival of individuals caught in the SMP, but the FSC was advised that only one pop-up archival tag was deployed and would like to be advised of the outcome. The FSC highlights that post release survival remains a high priority knowledge gap and reiterates its request for more tagged animals in the 2019–20 season.
- 6) The FSC is interested to see the diversity of new publications referenced within the SMP report this year, but had some difficulty accessing a number of these references. For example, the FSC has been unable to comment on the claim that reduced mortality results from the reduction in checking times from 96 to 72hrs due to this information (Broadhurst and Cullis) not being available. Read-Anderson et al 2019 is also discussed within the report but is not included within the list of references. Generally, the report seems rather piecemeal with missing references, inconsistency in terminology (shark attack vs human shark interactions) and a number of areas of repetition between sections. For example, white shark and close kin genetics is discussed in 3.1.1 and repeated again in Section 3.2.1.

In conclusion, the FSC welcomes the recommended mitigation actions contained in the 2018–19 Report and awaits the release of the SMP trigger point review, including options for reducing interactions with smooth hammerheads, in January 2020. We note again that catches of smooth hammerheads have substantially increased over the last four years and have prompted a trigger point review that was due in January 2020.

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



Assoc. Prof. Mark Lintermans
Chairperson
Fisheries Scientific Committee
21 February 2020