File No: V17/87#2

The Hon. Niall Blair, MLC
Minister for Primary Industries
GPO Box 5341
SYDNEY NSW 2001

Fisheries Scientific Committee

Dear Minister

Re: 2016-17 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 2016-17 Annual Performance Report and makes the following comments.

The FSC is pleased to see genetic analysis is being undertaken to confirm species identification of hammerhead sharks. This is important given the increase in catch of Smooth and unidentified hammerhead sharks in the SMP in recent years. The FSC looks forward to seeing the results of this genetic analysis.

The FSC is also pleased with the incorporation of our previous suggestions for more transparent reporting, with the inclusion of 'minor shark incidents' and trigger point trips in Table 7. However, the FSC notes that the Report should state that the trial deployment of nets one metre off the seafloor was discontinued, and why. This alteration to gear configuration had the potential to lower the catch rates of some threatened species. The trial deployment had been identified in previous SMP annual reports (from 2012-13 onwards), and so in the interests of public transparency, information is required regarding the efficacy or outcome of this trial, or why it has been discontinued.

The FSC notes the considerably higher catch rates over the last two years for Greynurse Shark, White Shark, Smooth Hammerhead and "combined rays". The FSC seeks the Department's advice on possible drivers for these concerning patterns of capture.

The FSC is particularly concerned at the large increase in Greynurse Shark interactions over the last two meshing seasons. The combined total of interactions in these two seasons exceeds the total of the previous ten years. The FSC notes that the vast majority of individuals came from the Hunter region and a large proportion from a single beach. The FSC notes that a Trigger Report

for this trigger point will be prepared sometime in 2017. The east coast population of Greynurse Shark is listed as Critically Endangered under Part 7A of the *Fisheries Management Act 1994* partly because of the species' inability to recover well from interactions such as capture in the SMP. The FSC would like for the Department to consider potential mitigation options to reduce this unacceptable number of interactions with Greynurse Sharks including: changes to the timing and position of net deployment in the SMP, more frequent inspection of the nets at the locations of concern, monitoring of the sharks themselves, and trials of SMART Drumlines to replace the SMP.

This is the first year of reporting on the revised trigger points for the new JMA and the FSC is concerned that the new trigger points for endangered and vulnerable species are set at a substantially higher level than in the past, being 2.7 times higher on average than the previous trigger points. The FSC queries how these increased trigger levels will provide increased protection to threatened species.

The FSC would like the Department to investigate the potential of the SMP to adversely impact on currently listed and unlisted species. The SMP is a listed Key Threatening Process, and post-entanglement mortality of released animals is of consequence to threatened and non-threatened species alike. Data obtained by the Department show considerable differences in survivability between animals caught on longlines, with substantial mortality of some species (Butcher et al. 2015). The FSC recommends that similar research be undertaken in the context of the SMP, across the spectrum of regularly entangled species (with a focus on threatened species). The FSC is concerned that survivability of threatened species post-capture and release may be low, particularly for species such as Greynurse Shark. The FSC strongly recommends a targeted study, utilising methods such as satellite or acoustic/archival tagging, on post-release behaviour and survival of threatened species (as is outlined in Section 2.5.2 of the Strategic Research and Monitoring Program where data is collected from tagged sharks caught from SMART Drumlines in the North Coast Shark Mesh-Net Trial). The FSC considers data on the fate of sharks and rays released under the SMP critical for determining post-release survival rates.

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 species and non-target species generally.

Yours sincerely

Assoc. Prof. Mark Lintermans
Chairperson
Fisheries Scientific Committee
19 September 2017

References:

Butcher, P.A., Peddemors, V.M., Mandelman, J.W., Mcgrath, S.P. & Cullis, B.R. (2015) At-vessel mortality and blood biochemical status of elasmobranchs caught in an Australian commercial longline fishery. Global Ecology and Conservation, 3, 878-889.