

NSW Threatened Species Scientific Committee Response to the Shark Meshing (Bather Protection) Program 2022/2023 Annual Performance Report

The NSW Shark Meshing (Bather Protection) Program (SMP) is a joint management agreement (JMA) between the Department of Primary are to minimise the impact on species and to ensure that the SMP does not jeopardise the survival or conservation status of threatened species. populations and ecological communities, or cause species that are not threatened to become threatened (SMP). The NSW TSSC is required to respond to the annual report. Further, the NSW Scientific Committee initially listed 'Death or injury to marine species following capture in shark control programs on ocean beaches shark meshing' as a Key Threatening Process under the *Threatened Species Conservation (TSC) Act*. This KTP is now listed under the *Biodiversity Conservation Act (2016)*. It is also listed under the *Fisheries Management (FM) Act*.

With this in mind, we note several points in this year's performance report.

We continue to be concerned about the threatened species being caught in nets and the overall catch of non-target fauna. This year we note that 22% of the catch was of threatened species which is same as in 2021/2022. With over 200 animals caught who are largely species in the top trophic level, this represents a high impact on the local marine community structure. A large non-target catch has continued for many years with little effective action to reduce the numbers.

The percentage of captured animals released alive has remained steady at around 37% for the last two years. We do acknowledge that there has been an increase in the frequency of checking nets and the stable proportion of animals released alive suggests that checking nets even more frequently is needed. We also believe that the total mortality rate is likely to be higher, as there is no proof that any of the released animals survive. This is a clear research gap. There appeared to be fewer issues with net damage and removal this season which was encouraging with no nets lost permanently, reducing the risk of negative interactions from wayward nets in the waters.

As previously noted (TSSC 2021, TSSC 2022), the committee considers that **the 'current trigger point system lacks scientific validity and should be quickly replaced** with a trigger system that uses population parameters related to the life histories and current population estimates for each species. Trigger points are currently too coarse to initiate an effective change in management for species with declining or recovering populations. They do not account for the different threat categories in which a species is listed and their current risk of extinction level'. We do note the effort to improve trigger point calculations that are planned for the coming year, but even this more conservative approach is not really based on biologically relevant information such as population sizes.

As noted last year, we question the validity of using netting to reduce risk to swimmers when other methodologies are becoming available, particularly as nets are clearly harmful to threatened species. **The use of drumlines, drones, planes and emerging technologies such as VR4G should be seriously evaluated and trialled to replace nets.** Where nets are considered a key action, then daily checking would be needed.

An increase in the distribution of net coverage is noted with no overall increase in the number of nets. The increase in identification accuracy is a positive sign in this year's report as it is vital to the

understanding of the impact of the SMP on threatened species. It is also pleasing to see that contractors remained compliant throughout the season. **Overall, the reduced numbers of observers from fisheries that went out on boats has some risks and we would like to see better administrative actions to ensure that this threatening process is being managed well by the department.** The observer's value in contribution to data collection to facilitate conservation-based research is essential.

The seals that were caught suggest a need to understand whether this is an unusual phenomenon, and/or one that is likely to increase in the future. Understanding movements of seals and how herds move along the coast will improve your capacity to reduce this catch if it is likely to be clustered, particularly as there is opportunity to be proactive in removing nets if seal herds are in the area. This is indicative of an overall strategy that we would like to see, where there is enough understanding of movements of threatened species along the coast that can lead to direct proactive removal of nets in specific areas in order to minimise the impact on these threatened species. Key to this however is improved knowledge of movements and population monitoring. We consider this to be a vital direction of research currently missing from the research agenda.

Adequacy of research. The research program appears to be moving slowly with little understanding in the report of the research focused on assessing or improving with the SMP program. We have noted some initiatives with investigating the utility of drumlines. I encourage the government to invest more heavily in providing resources to undertake adequate and strategic research and monitoring to ensure the viability of species impacted by this threatening process with a more focused effort on mitigating impact on threatened species. From the perspective of the NSW TSSC, there is no research occurring to understand or monitor the species listed under the BC Act. In our response we already identified some key research directions that are needed. Once again we note that all three species of turtles listed as threatened under the *Biodiversity Conservation Act (2016)*, were caught. With catches occurring every year the movement patterns of these species and the impact on local population sizes would seem another important research direction. There is also no evidence within the research agenda, of techniques being developed to assess parameters important for conservation such as for example, population size, survival and movement for most threatened species. The lack of knowledge is severely hampering the protection of threatened species.

Overall, at present, the TSSC has no evidence that the risks to threatened species are being minimised, but we hope to have provided some suggestions that can be incorporated in the future. The NSW TSSC will continue to raise its concern regarding the SMP in order to assist in improving the operation of the Program in relation to mitigating impacts on non-target marine species.

Yours sincerely



Senior Professor Kristine French
Chairperson, NSW Threatened Species Scientific Committee
28th November 2023

References

NSW TSSC (2021) NSW Threatened Species Scientific Committee Response to the Shark Meshing (Bather Protection) Program 2020/2021 Annual Performance Report.

NSW TSSC (2022) NSW Threatened Species Scientific Committee Response to the Shark Meshing (Bather Protection) Program 2021/2022 Annual Performance Report.