



WWF-NEW ZEALAND RECOMMENDATIONS FOR THE 2019 CSP PLAN

June 2019

WWF- New Zealand appreciates the opportunity to have input into the 2019 CPS Plan. We have five key recommendations. We recommend DOC and MPI work together to ensure the CSP work programme is designed to:

1. Reduce observer bias for improved assessment of fisheries risk to protected species
2. Improve measures of cryptic mortality (drop-out-rate) of dolphins
3. Build understanding why bycatch events happen and improving fine scale estimates of “vulnerability” for quantitative risk assessment (SERFA)
4. Make protected species bycatch information and analysis more accessible and useable for key stakeholder and science groups
5. Use electronic tracking devices to build knowledge of distribution, diving, and foraging behaviour of Hector’s dolphins; and to enable health assessment.

1. Reduce observer bias

Independent international experts (the TMP review panel, and the IWC) reviewing the Maui and Hector’s dolphin TMP science have identified the potential issue of observer bias in the observer data used in modelling. In particular – spatial bias from boats changing where they fish when they have an observer on board.

WWF recommends the observer programme is designed and planned in a way to reduce potential spatial observer bias. E.g. does observing the same boats constantly for a season versus in an adhoc or opportunistic way help reduce bias? If it would be helpful, I can consult with colleagues and provide some science and advice on this.

2. Improve measures of cryptic mortality (drop-out-rate) of dolphins

The estimate of cryptic mortality of Maui and Hector’s dolphins is one of the most influential/significant factors effecting the estimation of fisheries risk to the dolphins. Therefore, improving the estimation of cryptic mortality is important. The current estimate is that about 50% of set-net caught dolphins drop out of the net, unseen by observers, when it breaks the water. Observers generally do not look at that place where



the net breaks the water and only look at what is brought on deck, which means they only see 50% of dolphin bycatch.

The best way to improve this estimate of how many dolphins drop-out is to use a camera to monitor the exact place where the net breaks the water on hauling.

WWF recommend that as an EM priority, a camera is put on every set net boat fishing in high risk areas of the East Coast South Island (unless the TMP removes fishing from these areas) watching the place where the net breaks the water on hauling.

3. Build understanding why bycatch events happen and improving fine scale estimates of “vulnerability” for quantitative risk assessment (SERFA)

Estimates of “vulnerability” of particular species to fisheries bycatch is an essential component of the Spatially Explicitly Risk Assessment (SEFRA) tool. The SEFRA will increasingly be used for the management of fisheries risk to protected species. Currently the estimates of “Vulnerability” for different species are quite coarse. For example, the vulnerability of Hector’s dolphins to set-net is one consistent measure – even-though in reality, it is likely to vary depending on the net configuration, the depth of fishing, the target species etc.

All the pieces of information needed to improve estimates of vulnerability are probably already being collected, however they may need to be better linked into data systems for ease of analysis. The pieces of info that need to be linked for analysis include:

Environmental factors

- Time of year, month, moon/ and tide cycle, day
- Weather and climate cycle (el Nino etc)

Fisher behaviour

- Location
- Target fish
- Net/ gear type
- Mitigation use

Bycatch events

- Species, number, behaviour etc

WWF recommends some work is done to ensuring all of these data are electronically linked and reported together in ways that better enable analysis to answer questions including:

- What are the significant factors that influence the vulnerability of protected species to fisheries?
- What types and ways of fishing and mitigation use helps to avoid or minimise bycatch e.g. gear configurations, fishing at night etc.
- What increases the risk of bycatch?



4. Make protected species bycatch information and analysis more accessible and useable for key stakeholder and science groups

We also recommend that DOC and MPI set up better systems to share information and analysis to people that need that information. For example, new information and analysis of how to best avoid bycatch should feed into the fishing companies, liaison officers, back to observers, and also to the different science working groups working on these problems. An example of how this is not happening - there was a multi-bycatch event of albatross recently, and no analysis of what went wrong, what might have contributed to the captures has been made available to the Seabird Advisory Group or TAG working on mitigation standards.

WWF recommends MPI and DOC spend some time talking to the different groups that would like better information and analysis (fishers, fishing companies, liaison officers, observers, stakeholder/ science working groups) to find out how best to share the info in a form that is useful.

5. Use electronic tracking devices to build knowledge of distribution, diving, and foraging behaviour of Hector's dolphins; and to enable health assessment.

WWF supports this project; however, we wonder if there needs to be this pre-project to investigate the tagging options, or whether work should just get on and plan a proper tagging study. There is value in a tagging study to understand the habitat use, but also for health assessment. An early tagging study on Hector's (Stone et al. 2005) attached to my email with this document, shows that it is safe and useful for multiple purposes. We are happy to connect DOC with colleagues that are tagging experts, and can talk through options and questions.