

Background

In 2016 three New Zealand orange roughy fisheries (ORH 3B ESCR, ORH 3B NWCR and ORH 7A) were certified by MRAG-Americas against the Marine Stewardship Council standard (CR v1.3) as being sustainable.

This included two conditions of certification related to endangered, threatened or protected (ETP) corals in two of the three certified New Zealand orange fisheries. The fisheries affected are the northwest Chatham Rise (NWCR) and east and south Chatham Rise (ESCR) fisheries, both part of the ORH 3B management area. The assessed impact on ETP corals by the third fishery, ORH 7A, was considered too small to be of concern.

The two conditions focus on the need for the Client (Deepwater Group, DWG) to address identified deficiencies under two PIs, in the outcome of ETP corals (PI 2.3.1) and in the information available on ETP corals (PI 2.3.3). Essentially, these two conditions are seeking answers to fundamentally the same question: Is it likely that the 'real' level of interactions of these fisheries, taking into account relevant uncertainties in knowledge, is having unacceptable impacts on the populations of protected corals?

This paper outlines DWG's plans for addressing these two conditions.

Conditions 2 and 3 on ETP Corals

Condition	For ORH 3B NWCR and ORH 3B ESCR, by the end of the certification period:	PI
2	The direct effects of ORH fishing must be highly unlikely to create unacceptable impacts to ETP coral species	2.3.1 SI b
3	Information must be sufficient to determine whether the fishery may be a threat to the protection and recovery of the ETP coral species	2.3.3 SI b

DWG's response to the conditions

DWG's response to these two conditions seeks to improve the information and understanding on the probable impacts of each fishery on the populations of protected corals so as to attain at least the 80% scoring guidepost (SG80) for both the information PI (2.3.3) and the outcome PI (2.3.1) of the Marine Stewardship Council standard (CR v1.3).

These two conditions will therefore be addressed together under the same plan.

In the Final Report of the full assessment, MRAG-Americas determined that fishery impacts on protected coral in New Zealand should be considered at a population level. The assessment team determined that the spatial scale at which to determine population impacts was 100 km, based on their review of a single review paper that considered inshore invertebrate taxa¹. The basis of their determination with respect to the spatial scale of coral populations is therefore somewhat limited and a wider review of available information, particularly information directly concerning deepwater corals, may lead to a different understanding of population scale and thus of uncertainty with respect to fishery impacts.

DWG is committed to the implementation of this plan, and MPI is supportive of the work and will contribute where possible.

¹ Kinlan, B. P. & Gaines, S.D. (2003). Propagule dispersal in marine and terrestrial environments: a community perspective. *Ecology*, 84(8), 2007-2020.

Work programme

1. To improve our understanding of protected coral species distribution:

DWG will draft terms of reference for, and then contract an appropriate individual or organisation to:

- Review the available literature relating to deepwater water corals to address:
 - the definition of what constitutes a population of cold and/or deepwater corals;
 - aspects of reproductive biology and the dispersion of offspring so as to be able to better understand the scale of population distribution;
 - knowledge of genetic differentiation of corals, especially in relation to latitude, longitude, substrate and the depth;
 - depth distribution of deepwater corals, especially in New Zealand waters.

Timescale: terms of reference developed, contractor engaged and a report available by the second surveillance audit.

2. To improve our understanding of gear impacts on protected coral species:

DWG will:

- Review recent developments in approaches to applying risk assessment to fishing gear interactions with benthic habitats within New Zealand.

This review will specifically consider the development and application of a clearer definition of gear impacts, and how these differ between different substrates and habitat types, and outcomes in terms of probable impacts on and risks to coral taxa.
- Undertake a more detailed assessment of the nature and extent of the incidental interactions between corals and ORH target trawls in the two UoAs.

Timescale: terms of reference developed, contractor engaged and a report available by the second surveillance audit.

3. To improve our confidence in predictive coral distribution models:

DWG will:

- Prepare a review of recent developments in approaches to the application of mathematical models to predict coral distribution, incorporating new methodological approaches, additional benthic survey data and improved bathymetric data.

This review will specifically consider these developments with respect to the accepted understanding of fishery impacts and the level of uncertainty associated with those impacts on protected coral within the two UoAs as described in the Final Report of the certification assessment.

Timescale: terms of reference developed, contractor engaged and a report available by the second surveillance audit.

4. To ensure fishing is highly unlikely to create unacceptable impacts to ETP corals

DWG will:

- Use the reviews and data to assess the potential impacts of fishing on protected coral within each of the two UoAs.

The improved understanding derived from the detailed review of available literature coupled with improvements in technical analysis and incremental availability of data related to coral distribution will provide a better interpretation of the uncertainties surrounding the impact of these fisheries on protected corals.

Collectively, these reviews will be used, together with updated scale and intensity data for each fishery, to inform on the relative scale and intensity and the uncertainty of the potential impacts of fishing on protected coral within each fishery area.

Timescale: an update on analyses will be provided at the third surveillance audit and a final report available by the fourth surveillance audit.
