WWF NZ Submission to Deepwater Group:

"Fishery improvements plans for New Zealand orange roughy fisheries"

28th of February 2014

Deepwater Group Ltd
Private Bag 24901
Wellington 6142,
New Zealand

Dear George,

Thank you for sending us the draft fishery improvement projects that industry has developed on the four proposed orange roughy fisheries on the 13th of February.

As you are aware, WWF-NZ has been involved with trying to improve the sustainability of these fisheries over many years. WWF's interest generally is that fisheries be sustainable and their impacts minimised and WWF supports MSC certification as the best available proxy for sustainability and minimal impact. As I am sure you are aware, the MSC standard is currently under review and WWF is hopeful that the review will bring the standard closer to WWF's expectations for sustainable, low impact fisheries.

WWF NZ has been especially pro-active over the last year, making a substantial contribution to the Assessment of the Environmental Effects of four orange roughy fisheries (AEEF) meeting in August 2013. We have attended nearly every deepwater scientific working group (DWWG) on orange roughy stock assessments over the last year and have contracted an experienced consultant (Matthew Dunn) to aid in the interpretation of results in these meetings. In January 2014 we submitted a WWF NZ pre-assessment report on the four selected orange roughy fisheries and included a section on fishery improvement projects (FIPs). Soon after this we sent the DWG a recently developed WWF FIP standards guidebook clearly detailing the procedures and associated timelines that WWF expects from a fishery improvement project in order to be able to support it.

Whilst WWF NZ acknowledges that the fishing industry is actively engaged in the promotion of sustainable fisheries in New Zealand, we do not support the Sustainable Fisheries Partnerships (SFP) FIPs that the industry has submitted to stakeholders.

WWF NZ does not believe the proposal provides adequate levels of conservation or time for improvement or assessment and that it does not anticipate possible imminent improvements in the MSC standards on ecosystem protection. WWF NZ would also find it difficult to accept a harvest strategy and associated reference points for orange roughy that appear less than several more productive New Zealand MSC fisheries.

WWF NZ's participation with the industry in a WWF Fisheries Improvement Programme will involve sign off from WWF's Global Partnership Committee and this involves development of FIPS that have very high and robust standards for fisheries to attain.

The areas of concern that WWF NZ has with these fisheries can be broadly classified in the next few pages under the main MSC principles in P1 (stock assessments) and P2 (bycatch species, ETP species, habitats and ecosystems).

Principle 1: Target species background

Harvest Strategy and Reference points

Limit and target reference points are appropriate for the stock

b. The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.

DWG response:

- Document the scientific basis for New Zealand's Harvest Strategy Standard reference points and demonstrate that 20% B_0 is the effective LRP in terms of the MSC requirements
- Document the scientific basis of the appropriateness of the management target range

WWFNZ response:

To improve management for orange roughy, identification of suitable reference points is required. The default target and limit reference points used in the New Zealand's harvest strategy policy are not appropriate for deepwater species, particularly those that are long lived such as orange roughy. WWF NZ believes that it is possible to derive appropriate biological reference points for these long lived deepwater species which better reflects and takes into account their life characteristics, enabling the potential for long term sustainable management of the resources.

Harvest strategy

The harvest strategy that is employed for orange roughy, as reflected in the plenary reports, seems to differ from the harvest strategy employed for other species in New Zealand. The Operational Guidelines for New Zealand's Harvest Strategy Standard contain default ranges of proxies for B_{MSY} and F_{MSY} for species with different productivity levels (Table 1).

Table 1 suggests that the New Zealand Harvest Strategy Standard would require a Target Reference Point of at least >45%B_0 for orange roughy and therefore a soft limit of 22.5% B_0. The soft limits (or the Limit Reference Point :LRP) for all orange roughy, however, have been set at 20% B_0, which is closer to the suggested lower bound for low productivity stocks (17.5% to 25% = ½ the suggested 35% to 50% range). This indicates that, despite the creation of an additional very low productivity category and the acknowledgement that some orange roughy in Australia and similar species elsewhere have set higher targets, the very low productivity status of orange roughy has not yet been factored into the choice of reference points for the species in New Zealand.

Table 1. Recommended default ranges of proxies for B_{MSY} (expressed as $\%B_0$) and F_{MSY} (expressed as $F\%_{SPR}$ levels from spawning biomass per recruit analysis) (Table 2 page 9, from Operational Guidelines for New Zealand's Harvest Strategy Standard, Ministry of Fisheries December 2007)

Productivity level	**$\%B_0$**	**$F_{\%SPR}$**
High productivity	20-35%	$F_{20\%}$-$F_{35\%}$
Medium productivity	30-45%[7]	$F_{30\%}$-$F_{45\%}$[8]
Low productivity	35-50%	$F_{40\%}$-$F_{55\%}$
Very low productivity	> 45%[9]	< $F_{45\%}$[10]

Operationally, the Harvest Strategy also has to take into account the error associated with the estimates of Bo to derive the target biomass (Bt) and the current biomass (Bc). WWF believes that the probability of [Bc/Bt > 1] should be high, both as a general management target and as a recovery target. This principle of adequately incorporating estimation error also applies if F is used as a proxy. Any plans should also consider implementation error.

Rebuilding timeframes

Where the stock is depleted, there is evidence of stock rebuilding within a specified timeframe

b. A rebuilding timeframe is specified for the depleted stock that is the shorter of 20 years or 2 times its generation time. For cases where 2 generations is less than 5 years, the rebuilding timeframe is up to 5 years

DWG response:

- Develop and formalise a rebuilding plan for ORH fisheries to be implemented where the stock status is below the management target range to rebuild to the stock to a level at or above the management target within "the shorter of 20 years or 2 times its generation time".
- Test the robustness of the rebuilding plan using simulations based on the assessment model

WWFNZ response:

According to the Operational Guidelines for New Zealand's Harvest Strategy Standard, rebuilding timeframes needed for formal rebuilding plans are based on the time it would take a stock to rebuild to target levels without any fishing (T_{MIN}) and allows rebuilding to take up to twice this duration.

From an MSC perspective, rebuilding of all stocks to target levels must occur within 30 years as a single generation time of orange roughy is greater than 30 years.

Stock projections provided in the Plenary reports do not specify the estimated time to reach target levels and any such projections would be entirely dependent on the assumed levels of incoming recruitment. It is not clear, therefore, what levels of catch would still allow stocks to rebuild within the required timeframes.

Also note that changing reference points in P1 will also impact PI's 1.1.1, 1.2.1, and 1.2.2

In summary, WWF NZ believes that even though industry has substantial experience of trying to effectively manage orange roughy regardless of location and management jurisdiction, confidence in the success of this process still remains low. For this reason, WWF NZ believes that any Harvest Strategy for a FIP should be inherently precautionarily experimental to learn how best to manage orange roughy and serve as an example for other deep water, long lived and slowly producing fish populations.

Principle 2: Ecosystem background

By-catch species

The fishery does not pose a risk of serious or irreversible harm to the by-catch species or species groups and does not hinder recovery of depleted by-catch species or species groups

a. Main by-catch species are highly likely (70%) to be within biologically based limits (if not, go to scoring issue b below).

b. If main by-catch species are outside biologically based limits there is a partial strategy of demonstrably effective mitigation measures in place such that the fishery does not hinder recovery and rebuilding.

DWG response:

- Provide information to demonstrate (semi-quantitatively) that by-catch species are highly likely (70%) to be within biologically based limits or there is "evidence" that the fishery "does not hinder recovery and rebuilding" (BLIM)

- Identify “vulnerable” species and document impacts of this fishery on those species.
- Where possible document by-catches that are recorded under generic codes as species (e.g. rattails, slickheads and deepwater dogfish).
- Provide information (semi-quantitatively) to support findings and to demonstrate the nature and extent of the impacts of the orange roughy fishery on by-catch stocks

WWFNZ response:

For the purpose of this assessment and following the MSC guidance (GCB 3.8.2 CR v. 1.3, 2013) two species can be considered main by-catch species in the orange roughy fisheries (ORH3B ESCR, ORH3B NWCR, ORH7A, ORH MEC). Both Smooth skate (*Dipturus innominatus*) and deepwater dogfishes (spp.) are considered main by-catch species for the purpose of this assessment because there status is uncertain and both species are considered vulnerable to fishing due to their biology.

The risks to the deepwater sharks are also recognized in the New Zealand National Plan of Action (NPOA) for the Conservation and Management of Sharks, with a range of measures to prevent and reduce potential impacts of fisheries on shark species (Ministry of Fisheries 2008). Nevertheless, from this document it is not clear what these measures are and if these measures have been implemented. Furthermore WWF NZ believes that it is not possible to determine by June 2014 that these vulnerable species are highly likely to be within biologically based limits limits or there is “evidence” that the fishery “does not hinder recovery and rebuilding”. This will also impact PI 2.2.2.

Habitats and Ecosystem (includes ETP species: cold water corals)

The fishery does not cause serious or irreversible harm to habitat structure, considered on a regional or bioregional basis

a. The fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.

DWG response:

Undertake an analysis of the habitats (centred on identifying their structure and function) that overlap with the distributional range of this orange roughy fishery.

- As New Zealand’s orange roughy fisheries fall within the lower bathyal New Zealand Kermadec bio-geographical province (UNESCO (2009)), the entire distributional range of orange roughy and the orange roughy fishery within this ‘bio-geographic area habitat should be taken into account

- Where changes in substrate type, geomorphology and dominant biota type describe a habitat type that differs from the New Zealand Kermadec bio-geographic area (e.g. UTFs) then these habitat areas should be considered as different habitat types
- Summarise information on the extent and homogeneity/heterogeneity of particular habitat types on UTFs
- Undertake analyses of the impacts this orange roughy fishery on those habitats, and determine quantitatively whether or not there is "serious or irreversible harm" to the "structure and function" (i.e. not the habitat itself) taking into account ("on a regional or bioregional basis") the area covered by bottom-trawl tow paths, the areas that are not fished, areas that are no longer fished, and the areas that are closed to fishing for protection of the benthic biodiversity.

WWFNZ response:

WWF NZ is very concerned that the usual past treatment of this element of the MSC standard has been completely unsatisfactory with regard to vulnerable marine habitats that are associated with bottom trawling of deep water, long-lived and low production marine fishes that may also have a complex but little understood life history strategy.

Therefore, WWF NZ believes that this element should be approached in a very precautionary way, even more so than the actual harvest strategy, and it should be approached in a way that we can learn from in an appropriate experimental design. The general principles should at the very least include:

- a decrease in the ecological footprint of the fishery as much as possible using best available practices and technology along with careful economic analyses to equilibrate fishing effort to the lowest level commensurate with maximizing net profitability or less
- a robust and effective research and development program on practices, techniques and technology aimed at continuously reducing the fishery's ecological footprint over time
- a research program using modern technology like CCTV and AIS, for example, to collect data on the habitat associated with orange roughy in a way that we can learn about and mitigate any effects as needed

WWF NZ recognizes that there are several areas of concern under P2 that require a robust and detailed approach, and this will be covered in a WWF robust FIP.

Summary

The measures and concerns listed in this document can be addressed by the implementation of a robust Fisheries Improvement Project (FIP) by WWF with the support and collaboration of the industry, in particular the Deepwater Group.

WWF NZ would refer the DWG to the paragraphs in the pre-assessment document it submitted in January on its FIP process and associated timeline involved:

"A FIP is defined as a multi-stakeholder effort to improve a fishery. FIPs are unique because they utilize the power of the private sector to incentivize positive changes in the fishery towards sustainability. FIP participants may include stakeholders such as producers, NGOs, fishery or aquaculture managers, government, and members of the supply chain. The ultimate goal of a FIP is to have the fishery performing at a level consistent with an unconditional pass of the Marine Stewardship Council (MSC) standard.

A FIP involves three stages:
(1) Scoping: Identify all stakeholders and agree on the environmental issues that need to be addressed by the project.
(2) Action Planning: Bring together all stakeholders to develop a plan to transition the fishery to the required standards; and
(3) Implementation: Implement the plan and report on its progress.

It would be the intention of WWF NZ to suggest that a scientific workshop meeting is convened before stage (1) to address the unique issues with orange roughy fisheries that are concerned with stock status and management to provide the best and most robust FIP plan."

It is WWF NZ's opinion that the proposed orange roughy fisheries mentioned in this document are not at the standard were they would reach and pass the guidelines needed for full MSC certification. Furthermore, full implementation of SFP FIPs by July 2014 (whilst resolving some issues) would still be not acceptable for WWF NZ as to the sustainability of these fisheries. The only way for orange roughy fisheries to be recognized as credible and to receive market recognition is for them to undergo a robust WWF FIP procedure, the outline of which has been detailed in this document.

WWF NZ can not support the drafts as written, but looks forward to receiving comments from the Deepwater Group on this submission and our request to develop a truly collaborative FIP with WWF in the near future. If agreed we look forward to discussing these issues and how to approach them in far more detail on a schedule that recognizes the capacity of every stakeholder.

Regards

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