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Sustainability Review 2018
Fisheries Management
Ministry for Primary Industries
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26 July 2018

Review of sustainability measures for 1 October 2018

The Environment and Conservation Organisations of NZ (ECO) is the national alliance of 48 groups with a concern for the environment. We welcome this opportunity to make a submission on the ECO has been involved in issues of marine and fisheries policy since its formation 47 years ago. This submission has been prepared by members of the ECO Executive and the marine and fisheries working group. It is in line with ECO Policy that was developed in consultation with ECO member bodies and endorsed by our AGM.

ECO has supported measures to protect threatened species and to sustainably manage fisheries for the present and the future generations.

Generic Issues

1. Harvest Strategy

ECO considers it is time the Harvest Strategy was reviewed and made more ecosystem focused. In most cases the proposals use the default provisions in the harvest strategy. These may not be relevant especially for species with biological characteristics of sharks and paua.

The strategy still refers to old default soft and hard limits. That do not meeting international best practice. For example, the hard limits are half the level used in Australia where targeted fishing for a species must stop.

The biomass targets are well below the practice used in CCAMLR for predator species (50%Bo) and prey species of (75%Bo). The strategy itself notes that *"it is becoming increasingly difficult to justify stock targets less than 30-40% Bo (or, equivalently, removing more than 60-70% of the unfished biomass)."*

For example ECO notes that the Worm et al (2009)[4] paper recommends that stocks be maintained above Bmsy: *"In fisheries science, there is a growing consensus that the exploitation rate that achieves maximum sustainable yield (u) should be reinterpreted as an*

upper limit rather than a management target. This requires overall reductions in exploitation rates, which can be achieved through a range of management tools.

In a review of biological reference points for a number of shark species, Bracinni et al (2015) showed that the biomass target for shark species can exceed 40%Bo and ranged from 46% to 65%Bo depending on the shark species.

Penney et al (2013) in their review for the Australian harvest strategy suggested a range of best practice approaches would involve higher stock levels:

- Target for important forage fish at 75%Bo "to ensure stocks remain large enough to fulfil their ecotrophic functions";
- The proxy for B_{MSY} for shark species may need to be closer to 50%Bo than the current proxy of 40%Bo;
- B_{MEY} proxy is more likely to lie in the range of 50-60%Bo.

2. Habitats of Particular Significance to Fisheries Management

There is still no identification of *"habitat of particular significance for fisheries management [that] should be protected"* (section 9 (c)). This is a major flaw in implementing the requirements of the 1996 Fisheries Act, over 20 years after it came into force.

Any reference to the BPAs should not be relevant. They protect very little in the way of areas impacted by fishing as the vast majority of the areas either where not fished or are too deep to fish. It is time the Ministry had a focus on protecting habitats in areas and depths which are currently fished.

3. Reporting regime:

ECO welcomes moves to improve reporting in inshore and other fisheries so that effort information is available in an accurate form for stock assessments and to assess the impacts of fishing on the marine environment. ECO looks forward to a commitment to install cameras on all vessels so that there is a robust system of verification of the current reporting regime.

In all fisheries it is essential to achieve and retain high levels of observer coverage. Coverage should be designed to be representative of the fishery (across seasons and areas), enable statistically robust estimates of by-catch with a 20%CV on the estimates, and at least 20% of effort monitored.

Observer information is crucial for stock assessments and the analysis of bycatch and discards, including bycatch of threatened or protected species. Observers provide information to MPI, research providers, and to DOC and is reported in some circumstances to working groups and plenaries. DOC produces an annual summary of information provided by observers: MPI should do the same.

Observers independent of industry are also important for high seas information and provide verification for other countries involved in highly migratory fisheries or other high seas or straddling-stock fisheries.

It will be essential to ensure that the IEMRS system has transparent reporting, analysis and regular auditing using MPI observers as controls and comparators to ensure the system works and is providing the information that researchers, enforcement officers and others think it is.

4. Shelving of quota:

In principle, we do not support the shelving of quota. Shelving goes against the fundamental direction of the quota management system and the setting a catch limits.

This questionable arrangement leaves balance sheets unchanged even though there are in fact no fish to match the "shelved" portion of TACC. This means in effect "ghost" ITQ on the company's balance sheets. Such an arrangement has uncanny similarities with the dead serfs accumulated by the would-be landowner, Chichikov, at the centre of Gogol's 1842 novel Dead Souls (Gogol, 1842).

In 2000 there was a decision by the then Minister of Fisheries' to undertake a review of the shelving of quota. Could you please advise when the review of shelving of quota is to take place?

5. Research needs

We are concerned that the Ministry is not undertaking adequate research to manage most of the species under the Quota Management System. Less than 15 percent of the stocks in the quota management system have estimates of current biomass or yield estimates.

New Zealand is undertaking less trawl surveys and fisheries research than it was 25 years ago. The comments that McKoy (2006) made in 2006 are still relevant that New Zealand has a fisheries management regime which has:

- "Insufficient research resources, people, equipment and funding;
- Limitation of scientific method and theory to tackle many questions;
- An inadequate understanding of the dynamics of New Zealand marine ecosystems;
- A management system which provides very strong perverse incentive to keep research funding low;
- A management system which treats the QMS as the whole of the system and which has not been able to develop any coherent management objectives on which to base decisions about the effectiveness of management or the allocation of scarce resource such as research resources."

Inshore stocks, in particular, need a stronger focus for research, collecting biological information, and carrying out stocks assessments.

The long-echoed comment in Antarctic fisheries management (CCAMLR) first echoed by the former UK representative, John Heap, in 1990 of "no data, no fish", should be taken to heart in the New Zealand fisheries management regime.

6. National Plan of Action on Seabirds

ECO supports moves to better implement the current National Plan of Action on Seabirds and measures to reduce and eliminate seabird bycatch in New Zealand fisheries and by New Zealand and other vessels on the high seas.

Measures taken in the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) waters to eliminate seabird bycatch and keep the focus on measures and implementation are an important benchmark for other fisheries.

The long term objective of the 2013 NPOA-seabirds is: *'New Zealand seabirds thrive without pressure from fishing related mortalities, New Zealand fishers avoid or mitigate against seabird captures and New Zealand fisheries are globally recognised as seabird friendly.'*

The high-level subsidiary objectives of the NPOA-seabirds 2013 are:

i. Practical objective: All New Zealand fishers implement current best practice mitigation measures relevant to their fishery and aim through continuous improvement to reduce and where practicable eliminate the incidental mortality of seabirds.

ii. Biological risk objective: Incidental mortality of seabirds in New Zealand fisheries is at or below a level that allows for the maintenance at a favourable conservation status or recovery to a more favourable conservation status for all New Zealand seabird populations.

iii. Research and development objectives:

a. the testing and refinement of existing mitigation measures and the development of new mitigation measures results in more practical and effective mitigation options that fishers readily employ;

b. research and development of new observation and monitoring methods results in improved cost effective assurance that mitigation methods are being deployed effectively; and

c. research outputs relating to seabird biology, demography and ecology provide a robust basis for understanding and mitigating seabird incidental mortality.

iv. International objective: In areas beyond the waters under New Zealand jurisdiction, fishing fleets that overlap with New Zealand breeding seabirds use internationally accepted current best practice mitigation measures relevant to their fishery.

ECO supports measures to strengthen the NPOA and its implementation.

The related documents should have included the current National Plan of Action on Seabirds.

7. Effects of fishing

We support the implementation of the Strategy for the Environmental Effects of Fishing (SMEEF) and are disappointed that there has been little progress in applying it since it was published in 2005.

The Ministry needs to consider the SMEEF including:

- Emphasises the need to assess the effects of fishing on all parts of the aquatic

environment, not just respond to obvious adverse effects.

Further Principles relevant to the Strategy as a whole are:

- Avoid, remedy, or mitigate any adverse effects of fishing on the aquatic environment.
- Give effect to the purpose of the Fisheries Act 1996 (to provide for the utilisation of fisheries resources while ensuring sustainability.
- Meet New Zealand's international obligations.
- Clearly define roles, responsibilities, and accountabilities.
- Adopt a "learning culture" to support improvement of environmental effects management over time.
- Use best available information.
- Take into account wider (non-fisheries) New Zealand government priorities.
- Monitor and assess effects of fishing on an ongoing basis.

New Zealand has a range of international obligations that are relevant to marine management. These obligations mean New Zealand:

- has an obligation to protect and preserve the marine environment (UNCLOS Article 192);
- is committed to an eco-system based approach to managing the use of natural resources;
- is committed to the precautionary approach to minimising risk to the environment;
- is committed to the concept of inter-generational equity.

8. International Obligations

Relevant International obligations includes those in the Law of the Sea as well as the Convention on Biodiversity, and UN Commitments.

New Zealand has signed up to the Sustainable Development Goals (SDG) and SDG 14 is to "Conserve and sustainably use the oceans, seas and marine resources".

Sub-goal 14.4 is
By 2020, effectively regulate harvesting, and end overfishing, illegal, unreported and unregulated (IUU) fishing and destructive fishing practices and implement science-based management plans, to restore fish stocks in the shortest time feasible at least to levels that can produce maximum sustainable yield as determined by their biological characteristics

International agreements and measures have further articulated the precautionary approach. Section 5 of the Fisheries Act requires decision makers to act in a manner consistent with "New Zealand's international obligations relating to fishing". Amongst these obligations is the United Nations Food and Agriculture Organisation (FAO) Code of Conduct on Responsible Fisheries (1995) which states that:

> *"6.5 States and sub-regional and regional fisheries management organizations should apply a precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment, taking account of the best scientific evidence available. The absence of adequate scientific information should not be used as a reason for postponing or failing to take measures to*

conserve target species, associated or dependent species and non-target species and their environment."

Article 7.5 of the Code of Conduct further set out what constitutes precautionary management in fisheries.

7.5 Precautionary approach

7.5.1 States should apply the precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment. The absence of adequate scientific information should not be used as a reason for postponing or failing to take conservation and management measures.

The United Nations Implementing Agreement on High Seas Fisheries and Straddling Stocks includes a requirement on *"coastal States and States fishing on the high seas [to] apply the precautionary approach in accordance with article 6."* Article 6 includes requirements for:

"1. States shall apply the precautionary approach widely to conservation, management and exploitation of straddling fishstocks and highly migratory fishstocks in order to protect the living marine resources and preserve the marine environment.

2. States shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures."

Therefore, where information is uncertain or unknown about the state of a stock or biological information, the decision should favour lower catch limits or more environmentally stringent regulations.

States have a general and unqualified duty to protect and preserve the marine environment and rare or fragile ecosystems and habitats (Law of the Sea Articles 192 and 194(5), Article 14 of the Noumea Convention).

Article 192: General Obligation: States have the obligation to protect and preserve the marine environment.

And 194(5) The measures taken in accordance with this Part shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.

9. Effects of Climate change and ocean acidification

The effects of climate change on fisheries and the emissions of greenhouse gases from the fishing industry needs to be included in the considerations of the Ministry.

A recent FAO review concluded that: *"Though precise consequences cannot yet be forecast, climate change is likely to affect fisheries and aquaculture, their dependent communities and related economic activities along three main pathways:*

1. *indirect wider socio-economic effects (e.g. fresh water use conflicts affect all food production systems, adaptation and mitigation strategies in other sectors impact aquatic systems in general or fisheries and aquaculture directly);*
2. *biological and ecological responses to physical changes (e.g. productivity, species abundance, ecosystem stability, stock locations, pathogen levels and impacts); and*
3. *direct physical effects (e.g. sea level change, flooding, storm impacts).”*

When setting catches or implementing other measures the Minister should consider the effect of climate change and ocean acidification on long-term sustainability.

4.0 CONCLUSIONS

If you require further information could you please contact the ECO office on 385-7545 or contact me on 021-738-807.

Yours sincerely,

Barry Weeber
ECO Co-Chairperson

Consultation Proposals

In addition to our general considerations above which is relevant to all the proposals, we make the following specific recommendations.

Area	Change	Proposal summary	ECO Submission
Southern bluefin tuna in all New Zealand waters (STN 1)	↑	Increase in catch limit proposed. Best available information suggests an increase in abundance.	ECO does not support and increase in the catch limit for southern blue fin tuna. Given that the stock is still under 20%Bo this fishery should have been closed to targeting. Seabird bycatch is an additional concern – see our submission on proposal to change the seabird mitigation measures on longline fisheries.
Northwest North Island green-lipped mussel (GLM 9)	**Varies**	Changes are proposed to the way that harvested mussel-spat, which is the largest source of fishing in GLM 9, is measured and reported. A review of catch limits is also being undertaken to consider	ECO supports a change on the seaweed:spat ratio to make it more consistent with current information. There should be a regular review of this ratio. ECO supports option 1 which would: • maintain the current level of harvest of spat of the spat ratio was changed as proposed; • avoid additional harvesting activity which could cause additional or exacerbate current environmental impacts. ECO supports ongoing research in to the source and sustainability of green-lipped mussel beds off Ninety Mile

Area	Change	Proposal summary	ECO Submission
		whether to provide for increased catches in the spat fishery in response to increasing demand.	Beach and south.
Kaipara Harbour scallops	**Closure**	A closure of the Kaipara Harbour recreational scallop fishery is proposed under section 11 of the Fisheries Act 1996. Best available information suggests a sustainability concern.	ECO supports the closure of the Kaipara Harbour scallops fishery for an indefinite period. ECO notes: • The most recent 2017 scientific survey indicates that scallop abundance in the harbour is very low and the distribution of scallops in the harbour is increasingly limited, with very few scallop beds having scallops of harvestable size. • Survey results have also shown very low juvenile scallop abundance, and sampled scallops in the harbour were identified to be in poor condition, with several diseases detected. ECO supports another survey in 2020 and using this information to guide future management. Benthic impacts of scallop dredging should be considered and the there is currently no strategy to avoid, remedy or mitigate the impacts of bottom fishing.

Area	Change	Proposal summary	ECO Submission
Northern North Island flatfish (FLA 1)	↓	Decrease proposed. Best available information suggests a sustainability concern.	ECO supports a reduction in the TACC for FLA1 to option 3. This change recognises: • The latest assessment in 2018 indicated that the CPUE4 indices for two of the three main areas of targeted fishing for flatfish in FLA 1 (the Kaipara and Manukau Harbours) have continued to decline since the last assessment in 2015. • The other fishery (Hauraki Gulf) has also declined apart from a jump in the last year. In addition, ECO is concerned that: • Benthic impacts of bottom trawl fishing when there is no strategy to avoid, remedy or mitigate the impacts of bottom fishing; • Habitat of particular significance for fisheries management has not been identified. • Maintenance of biological diversity has not been given the effect to. MPI should work towards a full assessment of this fishery.
Northern North Island John Dory	↓	Decrease proposed. Best available	ECO supports a reduction in the TACC in JDO1 to option 3.

Area	Change	Proposal summary	ECO Submission
(JDO 1)		information suggests a sustainability concern.	This change recognises: • That this option is the only option to reduce current catches based on the decline in standardised catch rates; • This is the only option that would allow a rebuild of the fishery based on current catches. In addition, ECO is concerned that: • Benthic impacts of bottom trawl fishing when there is no strategy to avoid, remedy or mitigate the impacts of bottom fishing; • Habitat of particular significance for fisheries management has not been identified. • Maintenance of biological diversity has not been given the effect to. MPI should work towards a full assessment of this fishery.
East coast North Island and South Island tarakihi (TAR 1, 2,	↓	Decrease proposed to support a rebuild of this fishery. These tarakihi stocks are	ECO support option 1 which should result in a 10 year rebuild of the fishery. This is more consistent with international obligations than option 3. This is due to: • The 2018 tarakihi stock assessment indicating that the stock is

Area	Change	Proposal summary	ECO Submission
3, & 7)		managed as one stock unit, and best available information suggests a sustainability concern	at 17 percent of unfished levels (17% SB_{03}), which is below the default soft limit in the Harvest Strategy Standard (HSS). • The need to take action in period which could result in benefits of cuts being seen by the ecosystem and current fishers. Economic considerations cannot be only focused on benefits or impacts to the fishing industry. Economic considerations must consider the changes in natural capital. Given that reducing the stock is an adverse effect on natural capital. The proposed industry strategy would not achieve the level of reduction in catches needed to rebuild the fishery. In addition, ECO is concerned that: • Benthic impacts of bottom trawl fishing when there is no strategy to avoid, remedy or mitigate the impacts of bottom fishing; • Habitat of particular significance for fisheries management has not been identified. • Maintenance of biological diversity has not been given the effect to.
East coast South Island kingfish	↑	Increase proposed. Best available	ECO does not support an increase in the KIN3 fishery. While we recognise warming of sea temperature will likely

Area	Change	Proposal summary	ECO Submission
(KIN 3)		information suggests an increase in abundance.	increase kingfish in this QMA, sea temperatures are variable between years. ECO consider it would be better to wait to see if the current trend in catches continues and there is more analysis of catches.
East coast South Island elephant fish (ELE 3)	↑	Increase proposed. Best available information suggests an increase in abundance.	ECO does not support an increase in the ELE3 fishery. Catch rates are flat and below past peaks so there is only a weak argument to increase catches on the basis of catches. ECO is concerned at the impact of an increase in this fishery on the bycatch of Hector's dolphin especially when a threat management plan is being developed. In addition, ECO is concerned that: • Benthic impacts of bottom trawl fishing when there is no strategy to avoid, remedy or mitigate the impacts of bottom fishing; • Habitat of particular significance for fisheries management has not been identified. • Maintenance of biological diversity has not been given the effect to. A full stock assessment should be possible for this fishery. In line with the NPOA on Sharks:

Area	Change	Proposal summary	ECO Submission
			"*Management targets for shark species should be reviewed and catch limits set at appropriate levels. The absence of stock assessments introduces risk and uncertainty to management. Quantitative assessments are best practice and should be applied for all species in the QMS, especially those identified as high risk. For those species where adequate information can be obtained within the period of the plan, quantitative stock assessments will be undertaken."* Action on the NPOA includes: • *"Management action is needed to ensure that significant habitats for sharks, like pupping and nursery grounds, are identified and the attributes and functions of those habitats are appropriately protected."* • *"To ensure proper conservation and management of shark populations there must be adequate information about catch and effort in all sectors, as well as information on other potential impacts on shark populations."* • *"Observer coverage is sufficient to monitor compliance, verify catch information, and collect scientific data for all New Zealand commercial fisheries that take sharks. At sea monitoring is at a level sufficient to provide statistically robust monitoring of progress towards achieving the objectives of the NPOA-Sharks."* MPI should work towards a full assessment of this fishery. This should include a review of the appropriateness of harvest strategy default levels for sharks, including the target biomass.

Area	Change	Proposal summary	ECO Submission
East coast South Island red gurnard (GUR 3)	↑	Increase proposed. Best available information suggests an increase in abundance.	ECO does not support an increase in the GUR3 fishery at this stage. Catch rates have declined in the last two years and there is no obvious big increase in recruitment from the trawl series. In addition ECO is concerned that: • Benthic impacts of bottom trawl fishing when there is no strategy to avoid, remedy or mitigate the impacts of bottom fishing; • Habitat of particular significance for fisheries management has not been identified. • Maintenance of biological diversity has not been given the effect to. MPI should work towards a full assessment of this fishery.
East coast South Island scampi (SCI 3)	↑	Increase proposed. Best available information suggests an increase in	ECO does not support an increase in the East Coast South Island scampi fishery (SCI3). ECO is concerned at the impact of any increase on: • Benthic impacts of bottom trawl fishing when there is

Area	Change	Proposal summary	ECO Submission
		abundance.	no strategy to avoid, remedy or mitigate the impacts of bottom fishing on SCI3; • Habitat of particular significance for fisheries management, which has not been identified. • Maintenance of biological diversity, which has not been given the effect to.
Chatham Rise orange roughy (ORH 3B)	↑	Increase proposed. Best available information suggests an increase in abundance in 2 orange roughy sub-stocks: Northwest Chatham Rise, and East and South Chatham Rise.	ECO does not support and increase in the orange roughy stocks in ORH3B. ECO is concerned at the impact of any increase on: • Benthic impacts of bottom trawl fishing when there is no strategy to avoid, remedy or mitigate the impacts of bottom fishing on ORH3B; • Habitat of particular significance for fisheries management, which has not been identified. • Maintenance of biological diversity, given the effect of bottom fishing.
Chatham Rise oreo (OEO 4)	↑	Increase proposed. Best available information suggests an increase in abundance.	ECO does not support an increase in the TACC for OEO4. ECO is concerned at the impact of any increase on: • Benthic impacts of bottom trawl fishing when there is no strategy to avoid, remedy or mitigate the impacts of bottom fishing on OEO5;

Area	Change	Proposal summary	ECO Submission
			• Habitat of particular significance for fisheries management, which has not been identified. • Maintenance of biological diversity, given the effect of bottom fishing. ECO Supports the splitting of the catch between oreo species with a catch limit for smooth oreos. The three oreo species should be managed as three units because of their different biological characteristics, and different north-south and depth ranges.
West coast South Island John Dory (JDO 7)	↑	Increase proposed. Best available information suggests an increase in abundance.	ECO does not support and increase in this fishery. ECO is concerned at the impact of any increase on: • Benthic impacts of bottom trawl fishing when there is no strategy to avoid, remedy or mitigate the impacts of bottom fishing on SCI3; • Habitat of particular significance for fisheries management, which has not been identified. • Maintenance of biological diversity, which has not been given the effect to. MPI should work towards a full assessment of this fishery.

Area	Change	Proposal summary	ECO Submission
West coast South Island rig (SPO 7)	↑	Increase proposed. Best available information suggests an increase in abundance.	ECO does not support and increase in the catch limit for SPO7. A full stock assessment should be possible for this fishery. In line with the NPOA on Sharks: "*Management targets for shark species should be reviewed and catch limits set at appropriate levels. The absence of stock assessments introduces risk and uncertainty to management. Quantitative assessments are best practice and should be applied for all species in the QMS, especially those identified as high risk. For those species where adequate information can be obtained within the period of the plan, quantitative stock assessments will be undertaken."* Action on the NPOA includes: • *"Management action is needed to ensure that significant habitats for sharks, like pupping and nursery grounds, are identified and the attributes and functions of those habitats are appropriately protected."* • *"To ensure proper conservation and management of shark populations there must be adequate information about catch and effort in all sectors, as well as information on other potential impacts on shark populations."* • *"Observer coverage is sufficient to monitor compliance, verify catch information, and collect scientific data for all New Zealand commercial fisheries that take sharks. At sea monitoring is at a level sufficient to provide statistically robust monitoring of progress towards achieving the objectives of the NPOA-Sharks."*

Area	Change	Proposal summary	ECO Submission
			MPI should work towards a full assessment of this fishery. This should include a review of the appropriateness of harvest strategy default levels for sharks, including the target biomass.
Southern ling (LIN 5)	↑	Increase proposed. Best available information suggests an increase in abundance.	ECO does not support an increase in the catch limit for LIN5. ECO is concerned at the impact of any increase on: • Benthic impacts of bottom trawl fishing when there is no strategy to avoid, remedy or mitigate the impacts of bottom fishing on LIN5; • Habitat of particular significance for fisheries management which has not been identified. • Maintenance of biological diversity given the effect of bottom fishing. • Seabird bycatch in an area where bycatch is particularly high and it is doubtful that the current management measures are working and not meeting the overall goal of the NPOA on seabirds and the Biological Objective.
Stewart Island pāua (PAU 5B)	↑	Increase proposed. Best available information suggests an increase in abundance.	ECO could support a cautious increase in the catch limit for PAU5B option 2. Issues that need to be considered are: • It is unknown to what extent the CPUE series tracks stock abundance. • Concerns over potential for serial depletion,

Area	Change	Proposal summary	ECO Submission
			• contraction of stocks, • potential for recruitment failure; • it is unlikely there is homogeneous biology, habitat and fishing pressures within the QMA. ECO questions whether a 40%Bo is an appropriate target for a shellfish species like paua. There should be a review of the appropriateness of harvest strategy default levels for paua, including the target biomass. There are also a range of research needs identified in the stock assessment report for Paua.

Deemed value rate reviews are proposed for:

ECO supports changes to deemed values to reduce the incentive for over-fishing.

• Northeast North Island trevally (TRE 1)	• ECO supports changes to deemed values to reduce the incentive for over-fishing
• Northern North Island flatfish (FLA 1)	• ECO supports changes to deemed values to reduce the incentive for over-fishing
• Northern North Island John Dory (JDO 1)	• ECO supports changes to deemed values to reduce the incentive for over-fishing
• East coast North Island and South Island tarakihi (TAR 1, 2, 3, & 7)	• ECO supports changes to deemed values to reduce the incentive for over-fishing
• East coast and southern South Island bluenose (BNS 3)	• ECO supports changes to deemed values to reduce the incentive for over-fishing
• East coast and southern South Island gemfish (SKI 3)	• ECO supports changes to deemed values to reduce the incentive for over-fishing but a reduction in the level of this depleted stock needs monitoring.
• West coast South Island gemfish (SKI 7)	• ECO supports changes to deemed values to reduce the incentive for over-fishing but a reduction in the level of this depleted stock needs monitoring.
• West coast South Island John Dory (JDO 7)	• ECO supports changes to deemed values to reduce the incentive for over-fishing
• West coast South Island pilchard (PIL 7)	• ECO supports changes to deemed values to reduce the incentive for over-fishing
• West coast North Island pilchard (PIL 8)	• ECO supports changes to deemed values to reduce the incentive for over-fishing