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Secretary
Primary Production Select Committee
Parliament Buildings
Wellington

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SUBMISSION ON: FISHERIES ACT 1996 AMENDMENT BILL

1. Introduction

The Environment and Conservation Organisations of NZ (ECO) is the national alliance of 62 groups with concern for the environment. ECO was established in 1972. ECO has long been concerned at the sustainable management of fisheries in New Zealand and beyond.

This submission has been prepared by members of ECO Executive and is in line with ECO Policy that was developed in consultation with ECO member bodies and endorsed by our AGM.

Thank you for the opportunity to make submissions on this Bill

ECO supports the need for changes to section 13 of the Fisheries Act and wishes to make further comments on the Bill's details.

ECO wishes to appear before the Select Committee to speak in support of this submission. Please contact the ECO office on 04-385-7545 at eco@eco.org.nz to make arrangements for this.

2. Summary

The Amendment Bill responds to a recent court decision (*Antons Trawling Company Limited vs Minister of Fisheries* CIV 2007-485-2199 (22 February 2008)) where the High

Court said the Minister can only set a TAC under s13(2) on the basis of information on stock size. As there is no information on the current stock size for the vast majority of stocks under the Quota Management System this decision put at risk the sustainability of these stocks.

The current review of the Bluenose stocks is one example of this situation. As the current stock assessment states:

- *Standardised CPUE series, based on data from six fisheries which span most of major fisheries taking BNS in the NZ EEZ, have declined an average of 64% over the period 2001–02 to 2006–07 (Table 3).*
- *If this decline is indicative of the overall abundance of bluenose in these areas, then BNS abundance could have declined by more than 50% across all areas over these six years.*
- *“The current status of the bluenose populations in each of the BNS QMAs relative to B_{MSY} is unknown.”*

If the Court decision was to stand the Minister would have difficulty making decisions to ensure sustainability of the bluenose stock(s).

The Court decision made the law inconsistent with New Zealand’s international obligations for precautionary management under the Rio Declaration, the UN Fish Stocks Agreement, and the FAO Code of Conduct. These provisions require that the lack of full scientific certainty **shall not** be used as a reason for postponing or failing to take conservation and management measures.

The provision needs to be amended to ensure sustainable fisheries management.

3. Proposed Changes

The purpose of the Act is stated in Section 8:

(1) The purpose of this Act is to provide for the utilisation of fisheries resources while ensuring sustainability.

(2) In this Act—

Ensuring sustainability means—

- (a) Maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations; and
- (b) Avoiding, remedying, or mitigating any adverse effects of fishing on the aquatic environment:

The environmental principles are set out in section 9:

All persons exercising or performing functions, duties, or powers under this Act, in relation to the utilisation of fisheries resources or ensuring sustainability, shall take into account the following environmental principles:

(a) Associated or dependent species should be maintained above a level that ensures their long-term viability:

- (b) Biological diversity of the aquatic environment should be maintained;*
- (c) Habitat of particular significance for fisheries management should be protected.*

In total the purposes and principles of the Act is much wider than just achieving maximum sustainable yield or the biomass that supports the maximum sustainable yield.

These provisions include consideration of other environmental effects on other fish stocks, non-target species and protected species. They include consideration of the “reasonably foreseeable needs of future generations” and the “adverse effects of fishing on the aquatic environment”. Such adverse affects have been the focus of much domestic and international dialogue.

Given the uncertainty in stocks the provisions should be only able to be used to reduce TACs and not increase catches. If the new provision allowed catch increases it could be used by the Minister to make environmentally risky decisions on the basis of little information. It is clear from the experience in New Zealand and world wide the fisheries decision makers, in this case the Minister of Fisheries needs to make decision that reduce risk to stocks and the environment rather than increase those risks.

There should be an obligation on the Minister to consider the seeking of additional information to assist decision making in future years.

ECO proposes that Clause 4(1) should be amended to read:

- (c) set **or vary a** total allowable catch –*
 - (i) using the best available information; and*
 - (ii) that is consistent with the purpose and environmental principles of the Act.*

The addition of new paragraphs (d) and (e) to read:

- (d) the Minister may not increase a total allowable catch under this section.*
- (e) In considering, setting or varying a total allowable catch under this section, the Minister must have regard to the following:*
 - (i) The need to commission appropriate research to assess the impact of the order on the stock; and*
 - (ii) The need to implement measures to improve the quality of information about the stock; and*
 - (iii) Whether it is appropriate to close areas to commercial fishing to reduce any sustainability risk to that stock; and*
 - (iv) The need to avoid any significant adverse effects on the aquatic environment of which the stock is a component.*

The Amendment to subsection (3) should be amended to ensure that the Ministers considerations are subject to the other environmental considerations in the purpose and principles of the Act.

Amend this provision to read:

*(3) In considering the way in which and rate at which a stock is moved towards or above a level that can produce maximum sustainable yield under paragraph [\(b\)](#) or paragraph [\(c\)](#) of subsection [\(2\)](#) of this section, the Minister shall **consistent with the purpose and environmental principles of the Act** have regard to such social, cultural, and economic factors as he or she considers relevant.*

4. Conclusion

Thank you for the opportunity to make this submission. ECO wishes to be heard in support of this submission please contact the ECO Office at 04-385-7545.

Yours sincerely,

Barry Weeber
Co-Chairperson

APPENDICES

APPENDIX I: BLUE NOSE ASSESSMENT

6. STATUS OF THE STOCKS

CPUE has previously not been considered to be a reliable indicator of abundance of BNS stocks. However, close coincidence observed in declining trends in most CPUE indices in recent years has increased confidence in their value as indices. Standardised CPUE series, based on data from six fisheries which span most of major fisheries taking BNS in the NZ EEZ, have declined an average of 64% over the period 2001–02 to 2006–07 (Table 3).

If this decline is indicative of the overall abundance of bluenose in these areas, then BNS abundance could have declined by more than 50% across all areas over these six years. If there has been replenishment of the features being fished in the period prior to the decline, the overall decline in abundance could be even larger. Although factors other than abundance may have contributed to the declines in CPUE and catches, current BNS catches and TACCs do not appear to be sustainable.

There is currently no stock assessment available for any BNS stock to allow estimation of B_{MSY} and B_{CURR} . Further, uncertainty regarding the extent of the stock which is contributing to the bluenose fisheries in the various QMAs makes it difficult to estimate B_{MSY} for these stocks. The current status of the bluenose populations in each of the BNS QMAs relative to B_{MSY} is unknown.

The concurrent decline of six independent CPUE series covering all the main NZ EEZ bluenose fisheries may indicate that there is a single New Zealand stock of bluenose. The Plenary noted that declines in CPUE have been observed even in areas that are relatively lightly fished such as BNS 7 and BNS 8. The existence of a single NZ-wide bluenose stock declining in all areas would imply not only that current catches are unsustainable, but that the overall combined TACC is also unsustainable.

From: Ministry of Fisheries (2008). Report from the Fisheries Assessment Plenary, May 2008: stock assessments and yield estimates. Ministry of Fisheries, Wellington, New Zealand. 990p.

APPENDIX II: PRECAUTIONARY MANAGEMENT

HISTORY

The reference to precautionary measures, precautionary approach or principle has been around for over 25 years. First references occur in German and European law or resolutions. In 1980 precautionary measures were referred to in a EC Council Decision in relation to CFCs.

The concept arose from a recognition that environmental damage was being recognised many years after a supposedly safe event occurred, that scientific uncertainty always exists, and with environmental issues knowledge of damage could take years, and that there were obligations to future generations.

The precautionary approach, measures or principles have been applied to a wide range of environmental situations and law including:

- protection of the ozone layer;
- response to potential climate change;
- trade in hazardous waste;
- dumping of sewage sludge;
- dumping at sea;
- fisheries sustainability;
- general environmental principle;
- management of hazardous substances;
- control on imports of new organisms;
- control of genetically modified organisms.

As Hewison (1993) put it: *“the core elements of the precautionary principle are a recognition of:*

- 1) *the vulnerability of the environment and the scarcity of resources;*
- 2) *the limited ability of science to accurately predict threats to the environment;*
- 3) *the need to set conservative evidentiary thresholds;*
- 4) *the requirement to reserve the burden of proof away from those opposing an activity onto those seeking to promote an activity; and*
- 5) *the use of impact assessment.”*¹

Type I vs Type II Statistical Error:

Dayton (1998) has reported on the need for the burden of proof to be on the side of the resource exploiter. He recommended that the “burden of proof must be applied to our marine resources so that those hoping to exploit them must demonstrate no ecologically significant long-term changes” (1998). This approach is consistent with precautionary

¹ Hewison G J (1993) The Precautionary Principle and its application to the management of straddling stocks and highly migratory fish stocks. July 1993. 21p.

management and recognises the need for environmental impact assessments prior to allowing resource exploitation or use of a product.

“The challenge to management of any wild resource is to provide a buffer for uncertainties to safeguard the future health of the population or ecosystem.” (Dayton)

Dayton compares the problem of type I and type II statistical error when assessing whether an effect has been established ie testing the null hypothesis that there is no effect. Type I error is when an effect is detected when in fact none exist. Type II error is when an effect is not detected when in fact an impact does exist.

Our concern (and Dayton’s) is that current management focuses on reducing the type I error because this involves catching fewer fish or further controlling an introduction and is therefore highly visible to politicians, fishing industry, employers etc. “Those defending the profiteering can argue endlessly over the accuracy of statistics that are virtually impossible to verify..”

“But ignoring type II error results in failure to recognise and avoid serious long-term damage such as the collapse of the fisheries or environmental destruction... The environmental consequences from type II error are much more serious because of the great time lags in the recovery of ecosystems or animal populations. Type I errors usually result only in short-term economic costs.”

The precautionary approach is essential to avoiding type II error and environmental consequence in management decisions.

Precautionary Fisheries Management

Any fisheries management regime for New Zealand's must include the precautionary approach. The UN FAO Code of Conduct for Responsible Fisheries (1995) includes in its general principles:

6.5 States ... 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 into account 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.”

Section 7.5 of the Code sets out a 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.

7.5.2 *In implementing the precautionary approach, States should take into account, inter alia, uncertainties relating to the size and productivity of the stocks, reference points, stock condition in relation to such reference points, levels and distribution of fishing mortality and the impact of fishing activities, including discards, on non-target and associated or dependent species as well as environment and socio-economic conditions.”*

An FAO technical review of precautionary management of fisheries considered the approach requires:

- a) “consideration of the needs of future generations and avoidance of changes that are not potentially reversible;*
- b) prior identification of undesirable outcomes and of measures that will avoid them or correct them promptly;*
- c) that any necessary corrective measures are initiated without delay, and that they should achieve their purpose promptly, on a timescale not exceeding two or three decades;*
- d) that where the likely impact of resource use is uncertain, priority should be given to conserving the productive capacity of the resource;*
- e) that harvesting and processing capacity should be commensurate with estimated sustainable levels of resource, and that increases in capacity should be further constrained when resource productivity is uncertain;*
- f) all fishing activities must have prior management authorisation and be subject to periodic review;*
- g) an established legal and institutional framework for fishery management, within which fishery management plans that implement the above point should be instituted for each fishery;*
- h) appropriate placement of the burden of proof by adhering to the requirements above.”*
(FAO, 1995)

The US Panel on Ecosystem based fisheries management called for policies which include applying the precautionary approach:

“2. Apply the precautionary approach. The precautionary approach is a key element of the United Nations Agreement for Straddling Stocks and Highly Migratory Species (United Nations 1996) and the Food and Agriculture Organization of the United Nations (FAO) Code of Conduct for Responsible Fisheries (FAO 1995).

All ecosystems are complex and uncertainty is unavoidable. Within uncertainty, there is always a risk of undesirable consequences on fishery resources (e.g., overfishing) and/or on ecosystems. The precautionary approach was motivated by the widely accepted conclusion of scientists and fishery managers that many of the current problems of fisheries (i.e., a large number of overfished stocks) have been caused by the practice of making risk-prone fishery management decisions (i.e., to err toward overfishing) in the

face of uncertainty (Garcia and Newton 1994). One approach to coping with uncertainty, which is widely applied to other human endeavors, is to encourage behaviors (often by enacting regulations) that reduce risk. Thus, the precautionary approach calls for risk averse decisions (i.e., to err toward conservation). FAO (1995) provides guidelines on the application of the precautionary approach.

The Implementing Agreement on High Seas Fisheries and Straddling Stocks includes in it general the requirement to “apply the precautionary approach in accordance with article 6”...”in order to conserve and manage straddling fish stocks and highly migratory fish stocks”...

Article 6 requires states “*shall apply the precautionary approach widely to conservation, management and exploitation of straddling fish stocks and highly migratory fish stocks 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.*

3. *In implementing the precautionary approach, States shall:*

(a) *improve decision-making for fishery resource conservation and management by obtaining and sharing the best scientific information available and implementing improved techniques for dealing with risk and uncertainty;*

(b) *apply the guidelines set out in Annex II and determine, on the basis of the best scientific information available, stock-specific reference points and the action to be taken if they are exceeded;*

(c) *take into account, inter alia, uncertainties relating to the size and productivity of the stocks, reference points, stock condition in relation to such reference points, levels and distribution of fishing mortality and the impact of fishing activities on non-target and associated or dependent species, as well as existing and predicted oceanic, environmental and socioeconomic conditions; and*

(d) *develop data collection and research programmes to assess the impact of fishing on non-target and associated or dependent species and their environment, and adopt plans which are necessary to ensure the conservation of such species and to protect habitats of special concern.*

4. *States shall take measures to ensure that, when reference points are approached, they will not be exceeded. In the event that they are exceeded, States shall, without delay, take the action determined under paragraph 3 (b) to restore the stocks.*

5. *Where the status of target stocks or non-target or associated or dependent species is of concern, States shall subject such stocks and species to enhanced monitoring in order to review their status and the efficacy of conservation and management measures. They shall revise those measures regularly in the light of new information.*

The provision also requires States to be cautious when managing new and exploratory fisheries.

New Zealand Law

A type of precautionary management exists in section 7 of the Hazardous Substances and New Organisms Act but it does not capture all the concepts included in international law.

Agreement for the Implementation of the Provisions of the UNCLOS relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, 1995

Article 6

Application of the precautionary approach

1. States shall apply the precautionary approach widely to conservation, management and exploitation of straddling fish stocks and highly migratory fish stocks 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.
3. In implementing the precautionary approach, States shall:
 - (a) improve decision-making for fishery resource conservation and management by obtaining and sharing the best scientific information available and implementing improved techniques for dealing with risk and uncertainty;
 - (b) apply the guidelines set out in Annex II and determine, on the basis of the best scientific information available, stock-specific reference points and the action to be taken if they are exceeded;
 - (c) take into account, inter alia, uncertainties relating to the size and productivity of the stocks, reference points, stock condition in relation to such reference points, levels and distribution of fishing mortality and the impact of fishing activities on non-target and associated or dependent species, as well as existing and predicted oceanic, environmental and socioeconomic conditions; and
 - (d) develop data collection and research programmes to assess the impact of fishing on non-target and associated or dependent species and their environment, and adopt plans which are necessary to ensure the conservation of such species and to protect habitats of special concern.
4. States shall take measures to ensure that, when reference points are approached, they will not be exceeded. In the event that they are exceeded, States shall, without delay, take the action determined under paragraph 3 (b) to restore the stocks.

5. Where the status of target stocks or non-target or associated or dependent species is of concern, States shall subject such stocks and species to enhanced monitoring in order to review their status and the efficacy of conservation and management measures. They shall revise those measures regularly in the light of new information.
6. For new or exploratory fisheries, States shall adopt as soon as possible cautious conservation and management measures, including, inter alia, catch limits and effort limits. Such measures shall remain in force until there are sufficient data to allow assessment of the impact of the fisheries on the long-term sustainability of the stocks, whereupon conservation and management measures based on that assessment shall be implemented. The latter measures shall, if appropriate, allow for the gradual development of the fisheries.
7. If a natural phenomenon has a significant adverse impact on the status of straddling fish stocks or highly migratory fish stocks, States shall adopt conservation and management measures on an emergency basis to ensure that fishing activity does not exacerbate such adverse impact. States shall also adopt such measures on an emergency basis where fishing activity presents a serious threat to the sustainability of such stocks. Measures taken on an emergency basis shall be temporary and shall be based on the best scientific evidence available.

ANNEX II

GUIDELINES FOR THE APPLICATION OF PRECAUTIONARY REFERENCE POINTS IN CONSERVATION AND MANAGEMENT OF STRADDLING FISH STOCKS AND HIGHLY MIGRATORY FISH STOCKS

1. A precautionary reference point is an estimated value derived through an agreed scientific procedure, which corresponds to the state of the resource and of the fishery, and which can be used as a guide for fisheries management.
2. Two types of precautionary reference points should be used: conservation, or limit, reference points and management, or target, reference points. Limit reference points set boundaries which are intended to constrain harvesting within safe biological limits within which the stocks can produce maximum sustainable yield. Target reference points are intended to meet management objectives.
3. Precautionary reference points should be stock-specific to account, *inter alia*, for the reproductive capacity, the resilience of each stock and the characteristics of fisheries exploiting the stock, as well as other sources of mortality and major sources of uncertainty.
4. Management strategies shall seek to maintain or restore populations of harvested stocks, and where necessary associated or dependent species, at levels consistent with previously agreed precautionary reference points. Such reference points shall be used to trigger pre-agreed conservation and management action. Management strategies shall

include measures which can be implemented when precautionary reference points are approached.

5. Fishery management strategies shall ensure that the risk of exceeding limit reference points is very low. If a stock falls below a limit reference point or is at risk of falling below such a reference point, conservation and management action should be initiated to facilitate stock recovery. Fishery management strategies shall ensure that target reference points are not exceeded on average.

6. When information for determining reference points for a fishery is poor or absent, provisional reference points shall be set. Provisional reference points may be established by analogy to similar and better-known stocks. In such situations, the fishery shall be subject to enhanced monitoring so as to enable revision of provisional reference points as improved information becomes available.

7. The fishing mortality rate which generates maximum sustainable yield should be regarded as a minimum standard for limit reference points. For stocks which are not overfished, fishery management strategies shall ensure that fishing mortality does not exceed that which corresponds to maximum sustainable yield, and that the biomass does not fall below a predefined threshold. For overfished stocks, the biomass which would produce maximum sustainable yield can serve as a rebuilding target.