

Environmental Defence Society submission on Department of Conservation's review of Population Management Plan provisions

1. Introduction

The Environmental Defence Society (EDS) welcomes the opportunity to comment on the Population Management Plan (PMP) provisions of the Marine Mammals Protection Act 1978 and the Wildlife Act 1953.

EDS is a public interest environmental law group, formed in 1971. It is Auckland-based and has a membership that consists largely of resource management professionals. The focus of EDS's work is on achieving good environment outcomes through improving the quality of New Zealand's legal and policy frameworks and statutory decision making processes.

2. Summary of EDS submissions

A summary of our submissions is included in the list below. These points are expanded on in the sections following.

1. The legislation is currently lacking a clear statement of purpose for PMPs. EDS considers the purpose of a PMP should be achieving the recovery of marine species and populations and minimising direct and indirect mortality resulting from human activities.
2. A PMP needs to be able to respond to the full range of human-induced threats a species or population faces including mortality resulting indirectly from fisheries and other human activities. PMPs should be able to recommend a range of management actions to achieve species recovery, including, for example restrictions on fishing methods, the protection of important habitats, and ensuring the availability of food sources.
3. Legislative amendments to give PMPs greater influence in a range of relevant statutory decision-making processes should be considered.
4. The PMP preparation process should be amended to provide for a public hearing and the review of a proposed PMP by an independent body
5. If the Minister of Fisheries retains an approval role for PMPs, the legislation should clearly set out the Minister's role in the process and the relevant matters for the Minister's consideration. These matters should be confined to a decision on the fisheries impacts of the PMP.

6. PMPs should be available as a management tool for all protected species, not only those classified as threatened.
7. The objective of MALFiRMs should be amended to provide more certainty and consistency in application as follows:
 - An immediate objective that fishing related mortality not constrain the rate of population increase.
 - Where a population or species is threatened, a medium term objective that a population or species achieve non-threatened status in 10 years or three generations; and
 - A long term objective that fishing-related mortality reaches insignificant levels approaching zero mortality within 20 years of the approval of a PMP.
8. PMPs and MALFiRMs should be applicable to both species (ie the total population of the species in New Zealand Fisheries waters) and populations.

3. General Comments

The need for more effective management of human impacts on marine mammals

New Zealand is a global hotspot for marine mammals. At least 38 species of dolphin and whale are found within New Zealand waters, just under half of the world's total. Three species of seal also breed around the country's shores with a fourth visiting frequently. Many of these species and local populations are threatened as a result of human activities. Their future is of both national and international significance and it is essential that impacts on marine mammals are better managed.

It is therefore timely that the Department of Conservation (DOC) is undertaking a review of the provisions of the Marine Mammals Protection Act 1978 and the Wildlife Act 1953 to improve the effectiveness of PMPs as a management tool to address threats to marine species.

New Zealand has numerous marine species requiring protection from the effects of fishing and other human activities, however no PMP has been ever been approved under the legislation. This is despite:

- Hector's dolphin being classified as "endangered" and "nationally endangered" by the International Union for the Conservation of Nature Red List of Threatened Species (IUCN Red List) and the New Zealand Threat Classification System respectively, while Maui's dolphin is considered "critically endangered" and "nationally critical". Fishing is the greatest cause of human-induced mortality of both Hector's and Maui's dolphins where the cause of death is known.
- The New Zealand sea lion being one of the rarest sea lions in the world and the population being classified as "vulnerable" and "threatened" (range restricted) by the IUCN Red List and the New Zealand Threat Classification System respectively. The timing and location of the squid trawl fishery coincides with the pupping and lactating season of New Zealand sea lions, resulting in significant numbers of animals being caught and killed in these fishing operations. New Zealand sea lions are also caught in the subantarctic scampi, southern blue whiting and other fisheries. The indirect effects of fishing have yet to be thoroughly

quantified but are thought to include prey depletion, habitat degradation and ecosystem disruption.

- There being less than 200 Killer whales (*Orcinus orca*) in New Zealand and the species being classified as nationally critical by the New Zealand Threat Classification System.
- There being less than 150 Bryde's whales (*Balaenoptera edeni*) in New Zealand and the population being classified as nationally critical by the New Zealand Threat Classification System.
- There being only 30-50 southern right whales *Tohora* (*Eubalaena australis*) living off the New Zealand mainland and 800-900 animals in the subantarctic. The population is classified as nationally endangered by the New Zealand Threat Classification System.
- The southern elephant seal (*Mirounga leonine*) being classified as nationally critical by the New Zealand Threat Classification System with less than 260 animals remaining in New Zealand waters.
- There being only three small and isolated groups of bottlenose dolphins (*Tursiops truncatus*) in New Zealand – with one group located off the North Island's east coast, a second in Fiordland and a third in Marlborough Sounds. They are classified as nationally range restricted by the New Zealand Threat Classification System.

Problems with current legal framework

The PMP provisions of the Marine Mammals Protection Act (sections 3E-3H) and the Wildlife Act (sections 14F-14I) were inserted in the legislation on 1 October 1996, via the Fisheries Act 1996. No PMPs have been approved during the intervening 14 years, although there have been several attempts to develop them. This means that decisions about managing fisheries impacts are being made under the Fisheries Act (which emphasises utilisation of resources) rather than the Marine Mammals Protection Act (which emphasises protection). It is essential that this situation be redressed.

Reasons for the lack of PMPs include:

- An overly complicated process for their development and numerous opportunities for delay.
- The need to obtain the Minister of Fisheries' concurrence for the approval of a PMP.
- Lack of sufficient information to identify absolute level of fishing related mortality.
- Inappropriate and unattainable management goals.
- Lack of scientific certainty causing inertia in decision-makers.
- Lack of an effective conflict resolution process and threat of judicial review

Other problems with the legal provisions include:

- Lack of a clear articulation of the purpose of PMPs.

- Scope of the PMPs and available mechanisms to achieve their purpose are too narrowly circumscribed.

4. Purpose of PMPs

EDS considers there needs to be a clear statement in the legislation of the purpose of PMPs. The legislation needs to be clear that the purpose of PMPs is the recovery of marine species and populations and minimising direct and indirect mortality resulting from human activities. PMPs should have a clear conservation objective, and while any management responses identified in a PMP should be designed to minimise adverse impacts on activities such as fishing, conservation objectives should not be compromised through the promotion of economic outcomes.

This approach is consistent with the broader intention and overall purpose of both the Marine Mammals Protection Act and the Wildlife Act. The Marine Mammals Protection Act clearly states in its long title it is an Act “to make provision for the protection, conservation, and management of marine mammals within New Zealand and within New Zealand fisheries waters”. In a similar vein the Wildlife Act declares all wildlife to be absolutely protected throughout New Zealand and New Zealand fisheries waters subject to the provisions of the Act.

Accordingly, PMPs have the potential to be a key legislative tool for marine species recovery. However for PMPs to be effective in this task they must take an integrated approach to management that is able to develop measures that respond to a range of threats to marine species including direct and indirect fishing and other human impacts. A PMP must also be able to respond to mortality resulting from all three types of fishing that occurring in New Zealand (customary, recreational and commercial).

The New Zealand sea lion is a clear example of a species that requires an integrated approach to management whereby the full range of threats can be recognised and responded to in a management plan that has statutory standing. This species continues to show long term significant decline despite the setting of an annual limit on fishing related mortality (MALFiRM). The focus on the setting of a MALFiRM has proved inadequate in protecting this species. In particular, it has failed to address potential indirect fishing impacts such as prey depletion, habitat degradation and ecosystem disruption. Other potential sources of mortality which may need to be considered include a loss of breeding sites following a rise in sea level due to climate change, interactions with humans during tourism, entanglement in marine debris, disease and predation.

The legislation therefore needs to enable a range of measures to be provided for in PMPs, so that the most appropriate can be applied in each individual circumstance, and so that measures can be adapted as scientific understanding of a species improves.

Currently, with the exception of requiring the Minister of Fisheries to take all reasonable steps to ensure that a MALFiRM is not exceeded, PMPs are unable to require the Minister to take management actions. However a MALFiRM is not appropriate for all species (e.g. MALFiRMs are inappropriate to manage Hector’s and Maui’s dolphins where the fishing related mortality which will enable the species to recover is close to zero). For many species including the New Zealand sea lion, a MALFiRM will only be part of a bundle of measures required to achieve species recovery. Further, in some cases, a MALFiRM may not be able to be calculated with any certainty.

Options that might be adopted to address this deficiency include:

1. *PMP provisions are not mandatory to consider or implement*

A range of measures (such as restrictions on specific fishing methods, the protection of important habitats, or reducing the total allowable catch to ensure availability of food supply) could be included in a PMP, however implementation of these measures would not be mandatory (unlike a MALFIRM). The Minister of Fisheries would have discretion whether or not to implement these measures. The existing section 15(1)(b) of the Fisheries Act provides the option of implementing these measures.

2. *PMP provisions are mandatory considerations*

A range of measures as indicated above could be included in a PMP and these provisions would become mandatory considerations for decision-making under the Fisheries Act. This could be achieved by amending section 11 of the Fisheries Act, to require the Minister of Fisheries to also take into account any relevant PMP in setting or varying a sustainability measure or making any decision or recommendation under the Act to regulate or control fishing.

3. *PMP provisions are mandatory to implement*

A range of measures as indicated above could be included in a PMP and it would be mandatory for the Minister of Fisheries to implement these provisions. This could be achieved by amending section 15 of the Fisheries Act as follows:

Fishing-related mortality of marine mammals or other wildlife

(1) If a population management plan has been approved under section 14F of the Wildlife Act 1953 or section 3E of the Marine Mammals Protection Act 1978, the Minister—

(a) shall take all reasonable steps to ensure that the maximum allowable fishing-related mortality level set by the relevant population management plan is not exceeded

(b) shall take other reasonable measures to implement the provisions of a PMP

(c) may take such other measures as he or she considers necessary to further avoid, remedy, or mitigate any adverse effects of fishing on the relevant protected species.

In addition, similar links should be made between the PMP and other legislation relevant to managing impacts on marine mammals such as the Resource Management Act 1991 (RMA) which addresses a range of impacts including marine pollution, dredging, dumping, aquaculture, marine energy generation, vessel movements, seismic activity, and construction of coastal structures such as ports and marinas. Amendments should be made to the RMA to ensure that PMPs are included in the matters to be taken into account when preparing policies and plans and when considering resource consents. A similar linkage should be made with the proposed legislation to manage environmental impacts in the Exclusive Economic Zone.

5. Process for PMP approval

The current process for the approval of PMPs is summarised in Table 1. EDS agrees with DOC that the current process for approval of PMPs is unnecessarily complex in several respects. The preparation of three drafts before final approval by the Minister of Conservation unnecessarily lengthens the process, as does the 40-day period for submissions. There are also inherent difficulties

in the requirement of final approval by the Minister of Fisheries which are elaborated on in section 6.

DOC proposes a new approach similar to that adopted in developing ministerial advice concerning fisheries management matters. This approach would include a draft position paper, stakeholder consultation, submissions, and a final advice paper to the Minister of Conservation (see Table 1).

EDS considers several aspects of DOC's proposal are problematic. First, the proposed process makes no provision for consultation prior to the preparation of the first draft. Such consultation is important to help scope the content of the draft and is now standard practice for the preparation of many statutory policy documents such as national policy statements, national environmental standards and regional policy statements under the RMA.

Secondly EDS queries whether the use of fisheries terminology ("position" paper) is appropriate, given that a PMP is a management tool to address threats to marine species, as opposed to an issue that requires a "position" to be taken. The use of the term also implies an adversarial process where parties take positions. EDS considers that a more appropriate title for this initial document would be "draft PMP".

DOC's proposal also does not provide for the hearing of submissions, or any form of independent scrutiny of PMP provisions. There is also no provision for an effective conflict resolution procedure in the event that there is disagreement between the parties. Consequently decisions on PMPs are likely to be challenged through judicial review proceedings as frequently happens in the case of decisions made under the Fisheries Act which follow a similar procedure to that proposed by DOC for PMPs. Judicial review is not only expensive for the parties but it often results in poor outcomes. This is because the Court is not able to reconsider the merits of decisions and decisions can be overturned on technicalities.

There is clearly scope to improve the current process. In EDS's view, a new process should:

- Be informed by scientific evidence and provide for the testing of scientific evidence;
- Provide stakeholders with the opportunity to have their views considered;
- Not be unnecessarily lengthy, given the urgency to protect various marine species;
- Be open and transparent; and
- Reflect the protection, conservation, and management purposes of the legislation.

EDS suggests the PMP preparation process could be based around the board of inquiry process for the preparation of national policy statements. A suggested process is set out in Table 1. Key features of this process that are lacking in DOC's proposal are the review of the draft PMP by an independent body and a public hearing where submitters are heard and can present evidence in support of their submissions.

Table 1: PMP APPROVAL PROCESS		
Current	DOC proposal	EDS proposal
1. Consultation with Conservation Boards/Maori/environmental/commercial/recreational organisations		1. Consultation with Minister of Fisheries and Māori, environmental, commercial and recreational organisations
2. Draft PMP prepared by Director-General (Draft 1)	1. Draft position paper prepared (Draft 1)	2. Policy paper prepared by Minister of Conservation setting out PMP options and recommending a preferred option for the PMP (Draft 1)
3. Publicly notify draft PMP. Submission period of at least 40 working days	2. Submissions received and stakeholders consulted	3. The Minister appoints a board of inquiry which calls for submissions within 20 working days
4. Hearing before Director-General of Conservation		4. Board of inquiry holds a public hearing
5. Director-General prepares summary of submissions and public opinion		
6. Director-General may revise draft (Draft 2)	3. Draft revised (Draft 2)	
7. Draft and summary of submissions sent to Minister of Fisheries and to NZ Conservation Authority		
8. NZ Conservation Authority provides comments to Director-General and Minister of Conservation		5. After considering the submissions and other relevant information, the board of inquiry prepares a written report and recommendations for the Minister of Conservation
9. Director-General may revise draft (Draft 3)		
10. Director-General sends draft PMP to Minister of Conservation	4. Final advice paper/draft sent to Minister of Conservation	
11. Minister of Conservation approves draft PMP and refers draft PMP to Minister of Fisheries for concurrence	5. Minister of Conservation and Minister of Fisheries approve draft PMP in a joint decision	6. The Minister of Conservation considers the report and recommendations and may revise the preferred option (Draft 2). Minister of Conservation approves PMP.
12. Minister of Fisheries concurs with draft PMP		
13. PMP approved	6. PMP approved	7. PMP approved

6. Minister of Fisheries and Minister of Conservation’s involvement in decision making

The current decision-making framework provides that the Minister of Conservation may approve a PMP, having regard to provisions of the Act, submissions and other matters as considered relevant - subject to the concurrence of the Minister of Fisheries who may concur with the draft plan after having regard to the impacts of implementing the maximum allowable level of fishing-related mortality on commercial fishing and such other matters as that Minister considers relevant.

DOC suggests that instead of a concurrence approach where one Minister approves and another concurs, Ministers could jointly make a decision on whether to approve a PMP, or Ministers could make decisions on a PMP as a whole, or on different aspects of the overall decision. Both the current and suggested approaches fail to recognise that protection, conservation and management of marine wildlife is the fundamental concern of PMPs. This approach is consistent with the broader intention and overall purpose of both the Marine Mammals Protection Act and the Wildlife Act. The Marine Mammals Protection Act clearly states in its long title it is an Act “to make provision for the protection, conservation, and management of marine mammals within New Zealand and within New Zealand fisheries waters”. In a similar vein the Wildlife Act declares all wildlife to be absolutely protected throughout New Zealand and New Zealand fisheries waters subject to the provisions of the Act.

Providing the Minister of Fisheries with joint decision-making power is inappropriate within the context of the purpose of this legislation which focuses on protection and conservation. EDS considers that while the Minister of Fisheries should have a role in the preparation of PMPs, particularly in ensuring that any required measures are designed in a way that minimises the impacts on fisheries, this role needs to be carefully defined to ensure that the purpose of the Marine Mammals Protection Act and Wildlife Act is still achieved.

DOC’s suggested approach of joint decision-making is also inconsistent with a basic principle of good governance, namely that the power to make a decision should be aligned with the person that has accountability for the outcome of that decision. The Minister of Conservation is accountable for the outcome of decisions relating to PMPs on protected species and the decision should therefore be taken by this Minister. The issue of joint decision-making by Ministers has recently been addressed by the Parliamentary Commissioner for the Environment, Dr Jan Wright, in her report *Making difficult decisions: Mining the conservation estate* (September 2010). The report draws on this principle to recommend the Minister of Conservation should remain the sole decision-maker for granting access to conservation land for mining, as opposed to making the decision jointly with the Minister of Energy and Resources, drawing on this principle.

In the event that the Minister of Fisheries retains a power of approval of PMPs, the legislation should clearly set out the Minister’s role in the process and state what the relevant matters are for the Minister’s consideration. These matters should be confined to a decision on the fisheries impacts of the PMP. For example the Minister might decide on whether the PMP is designed in a way that minimises impacts on fishing. This assessment would ensure PMPs achieved conservation gains at minimal economic cost.

7. Species for which a PMP is available

Currently the provisions of the Marine Mammals Protection Act and the Wildlife Act allow for development of PMPs for both threatened and non-threatened marine species.

A “threatened” species under the Marine Mammals Protection Act is one declared threatened by the Minister pursuant to section 2(3), which requires the Minister to have regard to any relevant

international standards and any relevant standards within New Zealand. The declaration of “threatened” status under the Act is made by notice in the Gazette.

The relevant international standard for this purpose is the International Union for the Conservation of Nature (IUCN) Red List of Threatened Species. The New Zealand Threat Classification Systems list is the relevant standard within New Zealand. The New Zealand Threat Classification System uses the term “threatened” to describe taxa in three categories: Nationally Critical, Nationally Endangered and Nationally Vulnerable.

Currently the only species that have been declared threatened under the Marine Mammals Protection Act are the Hector’s dolphin and New Zealand sea lion, despite other marine mammals being considered “threatened” under the New Zealand Threat Classification System (eg Bryde’s whales and southern right whale).

DOC suggests reducing the legislative scope of species for which a PMP may be developed so that a PMP may be implemented for marine species that are classified as “at risk” or “threatened” using a threat classification such as the NZ Threat Classification System. This proposal does not appear to address any identifiable problem with the current PMP provisions. No PMPs have been finalised under the current legislative provisions in 14 years, and so there does not appear to be any compelling reason to restrict the potential scope of PMPs, and therefore their applicability to a range of species and populations. The Minister of Conservation should retain the discretion to prepare PMPs when this tool will assist with meeting the purposes of the legislation.

EDS opposes the suggested restriction on the species that PMPs may be applied to as it fails to recognise the following factors:

- PMPs are one of the legislative mechanisms with which to manage the impacts of fishing related mortality and other human activities on marine mammals under the Marine Mammals Protection Act. PMPs were not intended, and should not now become, an eleventh hour measure to prevent extinctions. Rather they are a conservation, protection and management tool that should be implemented and available to all species that are impacted by human activities. Examples of species that would benefit from this approach include the common dolphin and various seabirds.
- This is consistent with the Act’s presumption of protection of marine mammals, an underlying principle of the Marine Mammals Protection Act (section 4). It would be contrary to the Act’s intent to restrict the applicability of PMPs as a management tool to only those species that are already threatened according to a set of classification criteria.
- Waiting for a population to become “at risk” or “threatened” before initiating any of the PMP assessments and processes goes against prudent conservation practice.
- There may be a lack of scientific data to support a “threatened” classification. The precautionary principle requires action to reduce mortality despite scientific uncertainty.

8. Objective of the MALFiRM

The objective of a MALFiRM in the legislation is important, as it will ultimately determine the number of fishing-related deaths a species should be subject to.

There are a number of different approaches that may be followed in setting the objective for the MALFiRM. Table 2 outlines some of the approaches drawing on the United States' Marine Mammal Protection Act 1972 and also the Marine Animals Protection Law Reform Bill, a private members bill introduced to Parliament on 2 July 2009 by Metiria Turei (the Bill did not receive a first reading).

DOC has proposed including a shorter term "management objective" that fishing related mortality not constrain the rate of population increase that would have been achieved in the absence of fishing; and to amend the existing longer term goal so that species achieve an improvement in threat status in 10 years or three generations.

EDS considers the language of these objectives should be tightened for clarity and consistency and also to require immediate action to be taken.

- The short term objective should become an "immediate" objective.
- The term "constrain" should be defined. EDS suggests a definition should be developed that is biologically meaningful and sets a clear and measurable goal.
- EDS recommends replacing the phrase "achieve an improvement in threat status" with "achieve non-threatened" status, which is how the objective is currently framed. DOC's choice of language weakens the objective. It is important that, when applied to threatened species, PMPs are designed to shift species and populations away from a threatened status so that they are no longer at risk of extinction.
- EDS also recommends adopting a long term objective that fishing-related mortality reach insignificant levels approaching zero mortality. This is similar to the approach adopted in the US and EDS considers that while it would be unrealistic for this to be achieved immediately it should be recognised as the ultimate objective of a MALFiRM and should have a 20 year time frame to be achieved.

Table 2. Various approaches to MALFiRM objectives

Current	DOC's proposal	US Marine Mammal Protection Act 1972	Marine Animals Protection Law Reform Bill	EDS proposal
<p>In the case of any threatened species, a level of fishing-related mortality which should allow the species to achieve non-threatened status as soon as reasonably practicable, and in any event within a period not exceeding 20 years.</p> <p>In the case of any other marine mammal, a level of fishing-related mortality which should neither cause a net reduction in the size of the population nor seriously threaten the reproductive capacity of the species.</p>	<p>Including a shorter term “management objective” that fishing related mortality not constrain the rate of population increase that would have been achieved in the absence of fishing; and</p> <p>To amend the existing longer term goal so that species achieve an improvement in threat status in “10 years or three generations”.</p>	<p>An immediate goal to reduce, within 6 months of the plan’s implementation, the incidental mortality or serious injury of marine mammals incidentally taken in the course of commercial fishing operations to levels less than the potential biological removal level established for that stock.</p> <p>A long-term goal to reduce, within 5 years of its implementation, the incidental mortality or serious injury of marine mammals incidentally taken in the course of commercial fishing operations to insignificant levels approaching a zero mortality and serious injury rate, taking into account the economics of the fishery, the availability of existing technology, and existing State or regional fishery management plans.</p> <p>The term “ potential biological removal level” as defined in the US Marine Mammal Protection Act 1972 means the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population. The potential biological removal level is the product of the following factors: (A) The minimum population estimate of the stock. (B) One-half the maximum theoretical or estimated net productivity rate of the stock at a small population size. (C) A recovery factor of between 0. 1 and 1. 0. The term “optimum sustainable population” means, with respect to any population stock, the number of animals which will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element.</p>	<p>The maximum level of fishing-related mortality for each population, in New Zealand fisheries waters that would allow the following purposes to be met:</p> <ul style="list-style-type: none"> • To provide for the protection of marine mammals. • Protection of marine mammals means ensuring that— • marine mammals are able to be a functioning element of their ecosystem; • populations of marine mammals are maintained above the level at which they have their maximum net productivity throughout their natural range; • depleted or threatened populations of marine mammals are able to recover to non-threatened status within a reasonable timeframe; • human impacts on marine mammal populations are managed so that— <ul style="list-style-type: none"> ○ populations do not decline; and ○ there is a high probability that each population will be at or above the level at which it has its maximum net productivity within 10 years after the coming into force of Part 1 of the Marine Animals Protection Law Reform Act 2009; and ○ human-induced mortalities of marine mammals are reduced to insignificant levels, approaching zero, within 20 years after the coming into force of Part 1 of the Marine Animals Protection Law Reform Act 2009; and ○ management of local and regional populations and areas meet the objectives in this section for each individual population and for the species as a whole. 	<p>An immediate objective that fishing related mortality not cause a decline in the size of the population nor constrain the rate of population increase that would have occurred in the absence of fishing;</p> <p>For threatened species or populations, a medium term objective that species or populations achieve non-threatened status in 10 years or three generations; and</p> <p>A long term objective that fishing-related mortality reach insignificant levels approaching zero mortality within 20 years from the approval of a PMP.</p>

9. Area-based MALFiRMS versus general MALFiRMS

Area-based MALFiRMS currently can be set for populations of threatened species that are geographically or genetically discrete.

DOC has identified an inconsistency in the objective of area-based MALFiRMS (for populations) versus the objective of MALFiRMS for species.

Currently, in setting an area-based limit the Minister must determine a level of fishing-related mortality which neither causes a net reduction in the discrete population nor seriously threatens the reproductive capacity of that population (ie a maintenance objective). In contrast, in setting the general limit for a species the Minister must determine the level of fishing related mortality which would allow threatened species to achieve non-threatened status as soon as reasonably practicable, and in any event within a period not exceeding 20 years (ie a recovery objective).

DOC suggests firstly removing area-based MALFiRMS and secondly applying a recovery objective to both populations and species.

EDS encourages DOC's suggestion in principle as a recovery objective is more desirable than simply maintaining the status quo of what may be an already depleted species.

EDS also encourages the application of PMPs and MALFiRMS to both species (ie the total population of the species in New Zealand Fisheries waters) and populations.

Accordingly the legislation will require a definition of population. This definition would require scientific input but might be guided by the definition of "sub-population" in the New Zealand Threat Classification System ie "Groups of individuals that have resulted from past or ongoing fragmentation (natural or human induced) between which there is now little genetic exchange. Sub-populations must have a demonstrable reproductive capability. Re-introduced wild populations must be self sustaining before they are included as a sub-population. Populations held in captive institutions or grown in nurseries or gardens are not considered to be within the definition of sub-population, unless they are the only remaining individuals of the taxon".

10. Definition of mortality

The current definition of "human-induced mortality" is "the death of any marine species that can be attributed directly or indirectly to any human activity."

The current definition of "fishing-related mortality" is "the accidental death or incidental death of any protected species that occurs in the course of fishing." This definition is currently thought by DOC to embrace both direct mortality that results from interactions with fishing equipment such as trawl nets and warps, longlines or setnets and indirect mortality which may occur where fishing depletes food availability, modifies habitat important for all or part of the life cycle of the species, or modifies the behaviour of the species in question.

DOC seeks to exclude indirect mortalities from the definitions, for the purpose of population management planning by:

- redefining fishing-related mortality as direct mortality, being all mortalities resulting from interaction with fishing gear or fishing operations, including those specimens not recovered during fishing; and

- redefining human-related mortality as the death of any marine species that can be attributed directly to any human activity.

EDS recognises that it is not feasible to set a maximum level of indirect fishing-related mortality due to uncertainty in setting a meaningful level and the difficulty in evaluating whether the level has been achieved. Therefore EDS do not oppose restricting the definition of fishing-related mortality to direct mortality for the purpose of MALFiRMS. However it is imperative that indirect mortality is able to be taken into account in setting the maximum level of (direct) fishing mortality as significant indirect mortality will require a more conservative approach to the MALFiRM.

Further, as stated earlier in this submission, there must be a mechanism to address indirect fisheries impacts under a PMP. A MALFiRM will not be appropriate for all species (e.g. for the Maui's dolphin the MALFiRM would be zero) and for many species, such as the New Zealand sea lion, a MALFiRM will only be part of a bundle of measures required to achieve species recovery. For a number of species a MALFiRM will be inadequate in achieving species recovery if not coupled with other measures such as population monitoring, restrictions on fishing methods, and the protection of various habitats, ensuring the availability of food sources etc.

Indirect mortality from fisheries and other human activities is a cause of mortality that should not be ignored. There should be a provision in the legislation for indirect human and fisheries mortalities to be assessed and recommendations made to respond to them using a broad range of measures. These recommendations may not be directly enforceable but could be recognised in the range of ways suggested in section 4 above.

This approach would ensure the most effective measures to achieve species recovery are recommended, and does not limit the management tools to MALFiRMS.

11. Risk Assessment

The legislation provides for an assessment of the degree of risk caused by fishing-related mortality and other human-induced sources of mortality to the species. DOC considers that the legislation should provide greater guidance on when it is appropriate to apply a PMP to a species.

DOC suggests a PMP might be considered as an appropriate management tool if a substantial component of known human induced impacts comes from commercial fishing. DOC suggests replacing section 14F(1)(c) of the Wildlife Act and section 3E(1)(c) of the Marine Mammals Protection Act with an assessment of direct fishing-related impacts in relation to known, direct human-induced impacts.

EDS reiterates its view (stated in section 7) that a PMP should be available to both threatened and non-threatened species. Both direct and indirect causes of mortality should be assessed in a risk assessment and the application of PMP should not be restricted to addressing only the direct fishing related impacts on a species.

The provisions should be flexible so that PMPs are able to respond to the range of threats that any species might face. This approach will also allow PMPs to be adapted in the future to respond to new information.

12. Migratory and straddling stocks

In the case of species ranging outside New Zealand fisheries waters, the current approach is that the MALFiRM set is to be based on fair and equitable consideration of the proportion that the estimated

fishing-related mortality sustained in NZ fisheries waters bears to the total estimated fishing-related mortality of the species in all waters (including outside NZ fisheries waters).

DOC considers it unlikely that it will have the information to adequately quantify impacts outside New Zealand waters. DOC suggests that where information is not available to quantify fishing impacts inside and outside New Zealand fisheries waters, the MALFiRM will be set based on the proportion of time the species spends in New Zealand waters.

EDS queries whether the amount of time a species spends in New Zealand fishing waters is the only factor that should be taken into account in establishing a fair and equitable apportionment of MALFiRM. For example the level of fishing effort within New Zealand fisheries waters and outside New Zealand Fisheries waters would also appear to be a relevant consideration for a fair and equitable apportionment.