

Department of Conservation Marine Mammal Action Plan for 2005-2010

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Department of Conservation
Te Papa Atawhai

**Department of Conservation
Marine Mammal Action Plan for 2005–2010**

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Approved by: Regional General Manager, Central. October 2004 (RGM Central has national responsibility for marine mammals)

This plan identifies and prioritises key actions for the Department of Conservation in the conservation, protection and management of marine mammals.

PLEASE NOTE:

This is a strongly structured document.

- You will benefit greatly by taking time to understand how this structuring works, prior to investigating the plans content. (see section 1.4 to 1.11)
- It is also recommended that you clearly understand the prioritising symbols used: ►►, ►, ▲, ⊗. (see page 14)

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Executive Summary

This Marine Mammal Action Plan (MMAP) provides a guide for conservation management of New Zealand's marine mammals by the Department of Conservation over the next five years, and represents an active interpretation of priorities across a broad work area using key strategic documents and directive government policies.

The Department's work takes two general approaches: firstly to protect species, and secondly to manage human interactions and use. These are undertaken with careful regard to the Crown's interests, safety & welfare, understanding & co-operation and quality performance.

Both of the general approaches may be further divided into a range of topics (species and issues) that are arranged in a broad order of priority. For each topic, the Department's key objectives and their necessary actions are listed, and the responsibilities and priority levels are specified for each action.

Overlap between Departmental work and the work of the Conservation Service Programme may exist, but care has been taken not to apportion responsibilities or priorities to this work as it is not the appropriate forum to do so.

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1. Introduction

Marine Mammals take a special place in New Zealand's natural and cultural heritage. Maori have a strong and ancient traditional relationship with marine mammals, having 'ridden on the backs' of Paikea the humpback whale and Tohora the right whale, as they followed the ocean currents between Aotearoa and their ancestral lands. Some of the earliest pakeha immigrants to New Zealand came here to seek adventure and wealth in the whaling and sealing industry.

Today, the New Zealand region remains an internationally important place for marine mammals. Marine mammals are very accessible to the public, they contribute significantly to our tourism industry and we actively seek their international protection on the world stage. New Zealand also sits at the forefront of marine mammal conservation management - especially with tourism and stranding management. New Zealand enjoys a great diversity of marine mammals, with 41 species of cetaceans (whales, dolphins and porpoises) and nine species of pinnipeds (seals) having been recorded in New Zealand waters. The ecology of each species does not need to be detailed in this plan, but may instead be found in a number of publications¹.

¹ Baker, A.N. 1999. Whales and dolphins of NZ and Australia. Victoria Uni., Press, Wellington. 133p.
Dawson, S. 1985 The NZ whale and dolphin digest. Brick Row Publishing, Auckland. 130p.
The Reed Guide of New Zealand Wildlife.

1.1: BACKGROUND GOVERNMENT LEGISLATION AND POLICY

- The **New Zealand Biodiversity Strategy** states the following desired outcomes for coastal and marine biodiversity for the year 2020:
 - New Zealand's natural marine habitats and ecosystems are maintained in a healthy functioning state. Degraded marine habitats are recovering. A full range of marine habitats and ecosystems representative of New Zealand's indigenous marine biodiversity is protected.
 - No human-induced extinctions of marine species within New Zealand's marine environment have occurred. Rare or threatened marine species are adequately protected from harvesting and other human threats, enabling them to recover.
 - Marine biodiversity is appreciated, and any harvesting or marine development is done in an informed, controlled and ecologically sustainable manner.
 - No new undesirable introduced species are established, and threats to indigenous biodiversity from established exotic organisms are being reduced and controlled.

Other relevant documents include:

- The **Conservation Act 1987**, which seeks to promote the conservation of New Zealand's natural and historic resources.
- The **Marine Mammals Protection Act (MMPA) 1978 & Regulations (MMPR) 1992**, which make provision for the protection, conservation, and management of marine mammals within New Zealand and within New Zealand fisheries waters.
- The **Department's Mission Statement**, which is to conserve New Zealand's natural and historic heritage for all to enjoy now and in the future, and its **Statement of Intent 2004-7**.

Protecting and enhancing the environment is among the governments Key Goals. The **Statement of Intent 2004-7** addresses this goal, and important selected aspects are included below:

Departmental Outcome One:

New Zealand's natural and historic heritage entrusted to the Department of Conservation is respected and restored.

Intermediate outcome: Halting the loss of natural heritage in New Zealand's terrestrial, freshwater and marine environments:

Intermediate outcome: Restore and protect threatened species.

Departmental Outcome Two:

People have opportunities to appreciate and benefit from their natural and historic heritage and are involved and connected with conservation.

Intermediate outcome: People and concession impacts on natural heritage are minimised.

Intermediate outcome: People make significant contributions to conservation.

Intermediate outcome: People are aware of conservation issues and support conservation.

1.2: WHY HAVE A MARINE MAMMAL ACTION PLAN?

This MMAP serves to underpin the legislation and policy mentioned above and provides specific outputs with regard to the conservation of marine mammals that the department can systematically work to achieve.

This MMAP will become a significant guiding document for the Department and should:

- Identify priorities for conservation management, according to species, issues and systems and administrative structures;
- Recommend and prioritise conservation actions to remedy the causative factors;
- Recommend priority scientific needs;
- Identify causative factors limiting recovery, or driving decline (including areas of conflict between marine mammals and human populations);
- Recommend priority information collection areas.

The action plan is intended to be primarily for internal DOC use. It is aimed at all levels of the Department, and includes actions from the local level all the way up to the national level. It is intended to be useful to all staff, and to ensure that the work done fits part of the bigger picture for New Zealand's marine mammal conservation. The MMAP aims to stimulate and direct local and national initiatives by DOC staff. It also aims to be as prescriptive as possible.

Marine mammal management depends on the co-operation and involvement of a wide range of external organisations and individuals. The plan also aims to highlight **areas of particular value, with regards to the Department's responsibilities**, that might be taken up by a wide range of people such as Maori, scientists, environmentalists, animal welfare and public health groups, government agencies, commercial interests and local communities.

Marine mammal management sits across a range of the Department's functions, including species management, protected areas & ecosystems, concessions management and community relations. This Action Plan aims to promote greater cooperation between the functional areas in order to ensure that the required actions are effectively implemented. The Plan also identifies work that should not be done.

This plan identifies a large number of desirable actions for the conservation and management of marine mammals. The ability of the Department to resource these actions will depend not only on this plan, but also on the relative priorities of other conservation programmes and the resources that are available. This plan contributes to the Department's consideration of its conservation priorities. It will also form the basis on which future resource bids will be prepared.

This plan will be a dynamic document, reviewed on an ongoing basis, but at least every 5 years, at which time there will be opportunities to assess the Department's performance in achieving the actions, objectives and aims, review the levels of priority, and to add to, delete or change the action statements and content of the plan.

1.3: OBJECTIVES - WHAT IS THE DEPARTMENT WANTING TO ACHIEVE?

The Department is charged under the **Marine Mammals Protection Act (MMPA) 1978** “to make provision for the protection, conservation and management of marine mammals within New Zealand and within New Zealand fisheries waters.” While the Act gives a very general mandate for the protection and management of marine mammals, the Department’s work is focused towards the following two broad aims (with more specific objectives stated for each aim):

- **Species protection.** To actively protect marine mammal species and populations, and allow the recovery of those that are threatened with extinction or that have been depleted or otherwise adversely affected by human activities or unusual natural events.
 - To build understanding of the main biological parameters for all marine mammals, and especially species threatened or affected by past or present human activities;
 - To protect key sites in New Zealand waters that are of significance to marine mammals;
 - To maintain and restore the distribution, abundance and diversity of marine mammals in NZ waters and beyond;
 - To achieve self sustaining populations of all marine mammals throughout their natural range, and avoid extinctions of all marine mammal populations.

- **Management of human interactions and use.** To manage human interactions with marine mammals in order to minimise adverse effects on their survival, welfare and recovery, and to ensure the appropriate management of both living and dead marine mammals.
 - To identify and assess all significant threats to marine mammals (in general and as species, populations and individuals);
 - To address and mitigate human-related threats to the welfare of marine mammals and the viability of their populations and habitats, and to progressively work towards eliminating human-related mortalities of marine mammals;
 - To manage dead and distressed marine mammals, and the holding and taking of marine mammals (including body parts);
 - To address risks and uncertainty when making decisions and to ensure a precautionary approach is taken.

While the two aims are very closely linked, the first aim takes a species-led approach, whereas the second is issues-led. These approaches have been developed in accordance with the way the Department carries out its work.

In achieving these aims, the Department will use effective systems and administrative structures that ensure:

- **The Crown's interests are upheld.** To maintain and represent the Crown's interests in the management of marine mammals (dead and alive).
 - To ensure full compliance with the MMPA 1978 and all related legislation;
 - To ensure that effect is given to the principles of the Treaty of Waitangi;
 - To support and recognise the government's international involvement in the management of marine mammals.
- **All considerations are given to safety and welfare.** To have careful regard when managing marine mammals, to the welfare and safety of marine mammals, the environment and community.
 - To understand and minimise the public health and animal welfare risks.
- **Understanding and co-operation between the department and others is afforded high priority.** To ensure that good decisions are made and work is carried out based on reliable information and robust science that is effectively communicated among all parties.
 - To seek, encourage and acquire new knowledge about marine mammals and their environments;
 - To effectively record and disseminate relevant information and knowledge;
 - To work closely with tangata whenua and key associates, and to inform and involve the New Zealand public.
- **That quality performance is met.** To enable New Zealand to continue to be among the world leaders in marine mammal conservation management.
 - To have effective systems and procedures in place;
 - To ensure continuous improvement and wide adoption of best practice;
 - To provide quality advice and delivery of conservation outputs;
 - To be an effective leader in marine mammal conservation in New Zealand and internationally.

1.4 STRUCTURE OF THIS MMAP

The following three sections list the objectives and actions that are needed to achieve the overall aims of this MMAP. The sections are separated to broadly reflect the aims specified above:

- Species protection (based on a species-led approach);
- Management of human interaction and use (based on an issue-led approach); and
- Effective systems and administrative structures.

Each approach is further divided into topics for each species and issue, and the specific actions needed for each topic are then listed under five main types of work. For each action, a priority level is given and the key responsibility is allocated to ensure that it is undertaken. It is also noted whether or not each action is a new initiative, an expanding one or a continuing one. Please see the simplified example on page 13 and Table 1 (page 14) for a schematic representation of the plan structure.

NOTE: There is a large degree of overlap and the groupings are simply one way of expressing the actions listed in the plan. To allow for this, the actions listed in this report are also held in a spreadsheet format to allow sorting and manipulation of the data for a range of purposes. It is important to note that the MMAP needs to be read as a whole.

1.5 SUPPORTING RESOURCES

- A guide to the priorities is also given on page 14 of this document.
- An Excel spreadsheet version of the plan is located on DME file WGNHO-203453, to facilitate the manipulation and sorting of the action statements (to be completed shortly).
- The Marine Mammals homepage “MAMS” is located on WGNRO-6, and contains many resources useful to the implementation of this plan.

1.6 USING THE PLAN

For a general overview of the Department’s marine mammal priorities and objectives, read:

- The Executive Summary;
- 1.3 Objectives;
- 1.11 Summary of priority species and issues
- The text boxes at the start of each work topic.

Once the spreadsheet version is complete, it will be possible to search the plan by:

* Species; * Issue; * Site/area; * Key responsibility; * Type of work, * Priority.

1.7 FUTURE RESOURCING

Each action has a 'nature of programme' category (e.g. New/Expanding/Ongoing/Reducing) which is a key indicator of future resourcing requirements. It is not however a guide to the likely actual cost of the action.

1.8 CONSERVATION SERVICE PROGRAMME (CSP)

Please Note: CSP is part of the Marine Conservation Unit, and work identified as an MCU priority in this plan may be considered under the Conservation Services Programme. While priorities for CSP are set through a separate strategic and research planning exercise, this action plan will help inform that process.

Table 1: Outline of MMAP Structure:

APPROACH	WORK TOPIC	SUBHEADINGS	TYPE OF WORK/ACTION	ACTION STATEMENTS	(NOTES)
SECTION 2. SPECIES-LED	(2.1-2.18) • General • Hector's dolphin • Southern right whale • NZ sea lion etc	• Key objectives • Previous actions • Actions needed	• Strategy/planning • Management • Science ¹ • Relationships & community • Resourcing ²	Actions listed	• <i>Priority</i> ³ • <i>Responsibility</i> ⁴ • <i>Nature of programme</i> ⁵
SECTION 3. ISSUE-LED	(3.1-3.13) • Fishing • Tourism • Pollution • etc...	• Key objectives • Previous actions • Actions needed	• Strategy/planning • Management • Science ¹ • Relationships & community • Resourcing ²	Actions listed	• <i>Priority</i> ³ • <i>Responsibility</i> ⁴ • <i>Nature of programme</i> ⁵
SECTION 4. SYSTEMS AND ADMIN. STRUCTURES	(4.1-4.9) • Legislation & Policy • Treaty of Waitangi • Internal structures/systems • Information etc	• Key objectives • Previous actions • Actions needed	• Strategy/planning • Management • Science ¹ • Relationships & community • Resourcing ²	Actions listed	• <i>Priority</i> ³ • <i>Responsibility</i> ⁴ • <i>Nature of programme</i> ⁵

1. Science: includes survey, monitoring, research and information management;

2. Resourcing: includes training, internal networks, personnel, equipment and funding;

3. Priority: determined according to importance and urgency as per the table below.

4. Responsibility: This lists the main office or person responsible for ensuring that an action is carried out. However, almost all actions will need involvement (e.g. advice, implementation) from many people within and outside the Department, and many of the tasks may be contracted or delegated out:

Codes used are: **GM'sO** – General Manager Operational (Northern and Southern) **CPD** – Central Processing Division, **MCU** – Marine Conservation Unit,
GM-RDI General Manager – Research, Development & Improvement), **CSP** – Conservation Services Programme; **ERD** – External Relations Division,
MCU (Sci) – Science & Research component of MCU; **AM** – Area Manager; **ISU** – Information Services Unit.
C – Conservator; **Legal** – Legal division of Head Office, **DG** – Director General
HRO – Human Resources & Organisation, **BMD** – Business Management Division,

Note that GM work may be carried out by MCU or the GM sponsor.

5. Nature of programme: New/Expanding/Ongoing/Reducing: This is a key indicator of future resourcing requirements.

NOTE: Please Note: CSP is part of the Marine Conservation Unit, and work identified as an MCU priority in this plan may be considered under the Conservation Services Programme. While priorities for CSP are set through a separate strategic and research planning exercise, this action plan will help inform that process.

1.10 GUIDE TO THE PRIORITY ACTIONS

The following symbols are used in the 'priority actions' statements:

URGENCY		IMPORTANCE	
		(Very)	(Less)
	"Urgency" (Very) Need to be done within 5 years	▶▶	▶
	"Urgency" (Less)	▲	⊗

▶▶ = Actions that are both very important and urgent, and therefore highest priority. Work should be carried out within the first 5 years.

▶ = Actions that are moderately important, but urgent, and take a back seat to ▶▶ actions. The department should aim to initiate them within 5 years and complete within 10 years.

▲ = Actions that are very important but less urgent. They need to be done:

1) as the opportunity arises or in conjunction with other work (at anytime), or

2) initiated within 5 years and completed within 10 years, or

3) if additional resources are provided (e.g. external research opportunities).

For example, work that underpins ongoing high priority work in ▶▶.

E.g. sampling and necropsies of beaked whales.

⊗ = Actions that are potentially useful, but that the department should not undertake in the next 10 years.

1.11 SUMMARY OF PRIORITY SPECIES AND ISSUES

Species-led Actions

PRIORITY 1 SPECIES:

Hector's & Maui's dolphins, Southern right whale (esp. mainland population), NZ sea lion;

PRIORITY 2 SPECIES:

Humpback whale, Southern right whale (sub-Antarctic population), southern elephant seal, Bryde's whale, beaked whales, NZ fur seal, killer whale, sperm whale, pygmy sperm whale, bottlenose dolphin, dusky dolphin, pilot whale.

PRIORITY 3 SPECIES:

other toothed cetaceans, other baleen whales, other seals

Issue-led Actions

PRIORITY 1 ISSUES:

Recreational and commercial fishing, RMA Coastal Development (esp. marine farming), Strandings & Sightings.

PRIORITY 2 ISSUES:

Tourism, Scientific activity, Pollution, Acoustic disturbance, Climate change and natural disturbances, Disease, Whaling industry, Health & Safety, tourism site planning, Marine mammals in captivity.

PRIORITY 3 ISSUES:

Boats and navigation.

ACTION STATEMENTS

2. Species-led Actions

The species groupings addressed in this section are in their approximate order of conservation priority in New Zealand, based on:

- their threatened species ranking using the NZ Threatened Species Classification System;
- the level of impact from human influences;
- the need for active management in order to achieve the Department's aims;
- the need for improved knowledge; and
- their potential for recovery or other conservation benefit.

However, this is simply an indicative ranking, and it is the **priorities of the individual action statements** that are of primary importance to the achievement of the overall objectives.

PRIORITY 1 SPECIES:

Hector's & Maui's dolphins, Southern right whale (esp. mainland population), NZ sea lion;

PRIORITY 2 SPECIES:

Humpback whale, Southern right whale (sub-Antarctic population), southern elephant seal, Bryde's whale, beaked whales, NZ fur seal, killer whale, sperm whale, pygmy sperm whale, bottlenose dolphin, dusky dolphin, pilot whale.

PRIORITY 3 SPECIES:

other toothed cetaceans, other baleen whales, other seals

2.1 SPECIES GENERAL

Key Objectives

1. Maintain an overview of marine mammal species management;

Previous conservation actions

1. All marine mammals classified according to conservation status by the New Zealand Threat Classification System (Molloy et al 2002)

ACTIONS NEEDED	
<i>Planning & Strategy</i>	<ol style="list-style-type: none"> 1. Review the threatened species ranking & conservation status of marine mammal species in New Zealand at least every five years (▶ MCU, Ongoing); 2. Establish national policies on captive breeding, holding in captivity, and rehabilitation of marine mammals (▶▶ CPD, New).
<i>Management</i>	<ol style="list-style-type: none"> 3. Develop a Threat Abatement Plan for marine mammals that explains the issues and seeks support/co-operation from the Minister of Conservation to join with agencies that can deliver a difference. Implement the plan. (▶▶ MCU/GM-RDI/C, New). 4. Establish more marine mammal sanctuaries or marine protected areas for the protection of NZ's most significant marine mammal sites (▶▶ GM'sO/GM-RDI/MCU/C, New). 5. Develop a robust information management system (such as BIOWEB) - especially for sightings, strandings and incidents (such as fishing-related mortality, behavioural observations, injuries etc) that links necropsy, photos, indigenous and other information together to properly underpin management and scientific information needs for the conservation of marine mammals (▶▶ GM-RDI/ISU, New). 6. Maintain skilled team of genetic biopsy experts - all species (▶▶ GM-RDI/AM, Ongoing).
<i>Science</i>	<ol style="list-style-type: none"> 7. Produce an overview report on "Effects of ecosystem changes on NZ cetacean populations". Address matters of climate change, coastal occupation, pollution, fishing, navigation & tourism (▲ MCU (Sci), Expanding). 8. Investigate basic biology of marine mammal species in NZ; such as age, fecundity, reproductive rate etc (▲ MCU (Sci), Expanding). 9. Be receptive to and assess new research tools as they become apparent in the context of the New Zealand situation (▲ MCU (Sci), Expanding).
<i>Relationships and community</i>	<ol style="list-style-type: none"> 10. Create and distribute widely a map of significant marine mammal areas and threats (▶▶ GM-RDI/MCU, New).

2.2 HECTOR'S AND MAUI'S DOLPHINS

Cephalorhynchus hectori (subspecies *hectori* & *maui*)

Cephalorhynchus Hectori is New Zealand's only endemic cetacean. It is regarded as nationally vulnerable, with an estimated population of 7400 animals. Maui's dolphin *C. b. maui* is a nationally critical subspecies found in the North Island (about 100 animals survive), and is in many cases the top priority for this species. Distinctive features of the species' population ecology that make it vulnerable to a range of human impacts include low abundance, inshore distribution, restricted home ranges and low reproductive potential. Fishing related mortality is a key issue for the species, and Coastal Development is a further key issue. Seven Maui's dolphins have been found dead recently with the cause of death attributed to set netting

The Department aims to focus management on:

- the recovery of Maui's dolphin;
- protecting population strongholds and genetic linkages;
- reducing fishing-related mortality from recreational and commercial inshore set net and trawl fisheries;
- protecting significant habitats from inappropriate coastal development and aquaculture.

It is intended to do this primarily through public awareness & education, information & science, and legal mechanisms for mitigation and protection.

Key Objectives

1. Ecology. To better understand the population ecology, key habitat requirements and threats of the species.
2. Human impacts. To effectively protect Hector's and Maui's dolphins against any recreational and commercial fisheries-related mortality and other avoidable adverse effects of tourism and other coastal use and development.
3. Species recovery. To facilitate the recovery of the species and ensure that the local and national population dynamics (including the genetic diversity) of the species are maintained and restored to a viable self-sustaining state within its natural range.
4. Science. To clarify the role of different research tools in relation to optimal management of the species within distinct geographical areas.

Previous conservation actions

1. The Banks Peninsula marine mammal sanctuary was established in 1988 primarily to reduce set net mortality of Hector's dolphins in the area;
2. The Marine Mammals Protection Regulations were introduced in 1992 to control marine mammal tourism activities;
3. Set net controls were introduced to the West Coast North Island in 2003 and Canterbury in 2002;
4. Identification of conservation requirements;
5. Assessment of Hector's and Maui's dolphin fishing-related mortality;
6. Use of acoustic deterrents to reduce fishing-related mortality of Hector's and Maui's dolphins;

7. Scientific studies, including:
 - Inshore distribution and abundance estimates (west coast South Island; east coast South Island; west coast North Island);
 - Behavioural ecology and population structure;
 - Life history characteristics of Hector's and Maui's dolphins killed in fishing operations;
 - Survival estimates;
 - Association patterns and group composition;
 - Utilisation of habitat at specific locations (e.g. Porpoise Bay);
 - Impacts of tourism at specific locations (Porpoise Bay);
 - Genetic analysis of North Island and South Island Hector's dolphins to determine relatedness;
 - Use of acoustic porpoise detection devices (POD's) to determine presence of Hector's and Maui's dolphins;
 - Vocalisation profiles and communication strategies;
 - Technique trial to assess the feasibility of satellite tagging for determining individual range;
 - Taxonomy and morphometrics.

8. Recovery of all dead animals into the CSP programme since 1999.

ACTIONS NEEDED

Planning & Strategy

1. Prepare species plans for both Hector's and Maui's dolphins (►► GM-RDI/MCU, New).
Recovery groups will determine the content of the plans, but they should include objectives to:
 - identify priorities for the science and management of this species;
 - raise knowledge of distribution, movements and habitat requirements of the species;
 - raise knowledge of the extent of dolphin/fisheries overlap and all fishing-related mortality effects of set netting and trawling;
 - determine and recommend management measures to reduce fishing-related mortality to near zero;
 - identify areas where marine farming might adversely affect Hector's and Maui's dolphin;
 - assess the biological effects of organic pollutants on Hector's and Maui's dolphins;
 - recommend areas and methods of protecting the species from fishing-related mortality, coastal development and resource use, pollution;
 - minimise effects of tourism on Hector's and Maui's dolphins;
 - recommend reporting requirements for tourism operators;
 - identify science and research priorities;
 - clarify the conservation significance of Hector's/Maui's dolphin taxonomy and genetics;
 - improve marine mammal tourism interpretation and performance;
 - involve tangata whenua in the management of Hector's and Maui's dolphins;
 - define the roles of associates.

2. Consider preparation of Population Management Plans (PMP) for Hector's and Maui's dolphins in accordance with the legal process and the species plans (▶▶ MCU, Ongoing).

Management

3. Determine the conservation management significance of the taxonomic structure and genetic variability of the species (▶ MCU (Sci), Ongoing).
4. Implement recommendations from a species plan and any PMPs (▶▶ GM'sO/C/AM/MCU, New).
5. Characterise threats presented to Hector's and Maui's Dolphins by the full range of fishing and other activities throughout the range of the species (or as an alternative: within NZ's 12 nm Territorial Sea) (▶▶ MCU, Expanding).
6. Seek effective protection and work with MFish e.g. through appropriate mechanisms, which may include marine mammal sanctuaries or Fisheries Act tools, commercial and recreational set net bans to prevent fishing-related mortality of Hector's and Maui's dolphin; or use of alternative fishing practices, especially throughout Maui's dolphin range and in the identified risk areas such as Buller Bay, Greymouth/Hokitika, Te Waewae Bay, Porpoise Bay, Clifford & Cloudy Bays (▶▶ C/MCU, Expanding);
7. Protect against present or future cumulative tourism effects especially at West Coast North Island, Paparoa, Jackson Bay, Akaroa, Lyttelton, Porpoise Bay, Buller Bay. Methods may include restriction/moratoria on issuing of permits, conservative conditions on permits, close liaison with operators, research on effects, robust monitoring and compliance work (▶ C, Ongoing).
8. Determine an acceptable code of practice for Hector's dolphin tourism operators and seek adoption by the industry (▲ GM-RDI, Ongoing).
9. Maintain high level of quality and consistency in responding to mortality/stranding incidents. National stranding SOP and Area Office stranding plans to be maintained. Best practice for mortality/stranding incidents continually reassessed and procedural improvements implemented as identified (▶▶ GM-RDI/AM, Ongoing).
10. Continue exclusion of commercial swimming with Hector's dolphins, except at Banks Peninsula site (▶▶ C, Ongoing).
11. Coordinate with the WWF hotline and researchers to ensure sighting data is accessible (▲ ERD/C, Ongoing).

Science

12. Improve co-ordination of research by DOC, CSP and external research groups (▶▶ GM-RDI/MCU, Expanding).
13. Assess and monitor the range of significant human-related threats to Hector's and Maui's dolphin throughout its range (▲ MCU (Sci)/C, Expanding).
14. Develop and share best practice examples of dolphin survey, research and monitoring techniques (▶▶ MCU (Sci), Ongoing).
15. Increase knowledge of distribution, movements (daily, seasonal & annual), life history parameters, diet and habitat requirements of Hector's and Maui's dolphins. Priority areas are areas where set netting, marine farming and tourist activities occur i.e., Banks Peninsula (initial trial), West Coast North Island, northern West Coast South Island, Porpoise Bay, Te Waewae Bay, Jackson Bay/South Westland and Marlborough (▶▶ MCU (Sci)/C, New).

16. Assess Maui's dolphins on the east coast North Island to determine existence, or population status. Review existing sighting data, seek new sightings, aerial surveys, catalogue and genetic sampling of individuals, and determine science priorities. Assess the potential feasibility of satellite telemetry studies for Maui's dolphins (▶▶ C, New).
17. Maintain a photo ID catalogue of Hector's and Maui's dolphins in areas such as West Coast North Island, East Coast North Island, Southland, South Westland, Clifford Bay to assess population ecology (e.g. movements and linkages) in small isolated populations (▶▶ C, New).
18. Determine any impacts of recreational fishing (or non-commercial fishing) on the species (▶ MCU (Sci)/C/AM, New).
19. Monitor effort and performance of permitted tourism operators (▶ AM, Ongoing).
20. Determine if there are any morphological/behavioural differences between Maui's and Hector's dolphins (▶ MCU (Sci), Ongoing).
21. Assess the biological effects of organic pollutants on the species (▲ MCU (Sci), Ongoing).
22. Analyse the diet and foraging behaviour of Hector's and Maui's dolphins to determine habitat preferences and ecological/trophic linkages of the species (▲ MCU (Sci), Ongoing).
23. Necropsy carcasses to investigate cause of death, incidence of disease and life history parameters; and recovery of skeletons for taxonomic work (▶▶ C, Ongoing).
24. Maintain a 10 year research plan for Maui's dolphins (▶▶ C, Ongoing).

Relationships and community

25. Raise awareness of species as "New Zealand dolphin" while retaining "Maui's dolphin" for the North Island subspecies, and advise staff accordingly (▲ GM'sO/GM-RDI, New).
26. Enhance public awareness of Hector's and Maui's dolphins, especially in local communities (▲ C, Ongoing).

Resourcing

27. Establish expert recovery groups for Hector's and Maui's dolphins (▶▶ GM-RDI/MCU, New).

2.3 SOUTHERN RIGHT WHALE (TOHORA)

Eubalaena australis

Southern right whales *tobora* in the New Zealand region were reduced by the early whaling industry from about 17000 animals to just 1000 today. The New Zealand population is probably isolated from other regional stocks, and is perhaps separated into populations in the subantarctic (about 800-900 animals) and the mainland (about 30-50 animals). It is regarded as nationally endangered in New Zealand but appears to be making a recovery here and is faring variably in other regions. Tohora depend on sheltered coastal waters to breed and nurse their calves, and follow traditional annual migration routes between the Antarctic and their breeding & nursery grounds. Distinctive features of the species' population ecology that make it vulnerable to a range of human impacts include low abundance, seasonal inshore distribution and low reproductive potential. Coastal development is the main issue for the species; for example, aquaculture applications cover about 50 000 hectares of coastal marine area, and some is located in known right whale habitat.

The Department aims to focus management on:

- protecting the recovering subantarctic population from tourism;
- the recovery of the mainland NZ population;
- protecting significant mainland habitats (especially sheltered marine areas and migration routes) from coastal development and aquaculture;

It is intended to do this primarily through public awareness & education, information & science, and legal mechanisms for mitigation and protection.

Key Objectives

1. **Ecology.** To better understand the population ecology, key habitat requirements and threats of the species' New Zealand mainland population.
2. **Human impacts.** To protect southern right whales against avoidable adverse effects of coastal use and development, pollution and boat strike.
3. **Species recovery.** To facilitate a recovery of New Zealand's southern right whale population to viable self-sustaining levels that are comparable to pre-exploitation levels.

Previous conservation actions

1. Establishment of the Auckland Islands marine mammal sanctuary;
2. Marine mammal tourism moratorium in Auckland and Campbell Island;
3. Active support for IWC whaling moratorium and Southern Ocean Whale Sanctuary;
4. Advocacy re marine farm applications & marine farm moratorium;
5. Assessment of southern right whales at the Auckland & Campbell Islands and mainland NZ, including photo ID, genetic sampling and other research;
6. Establishment of national southern right whale biopsy sampling team to sample mainland southern right whales;
7. Nationwide annual publicity for data/sightings/photo collection;
8. Report on historic southern right whale shore based whaling sites information (infers historical inshore whale distributions).

ACTIONS NEEDED

Planning & Strategy

1. Produce a report or full recovery plan on “Management options and priorities to assist the recovery of southern right whales in NZ waters.” (▶▶ GM-RDI, New);
2. Implement recommendations by Dr. N. Patenaude for sub-Antarctic and mainland NZ southern right whale populations (▶▶ GM-RDI/C/AM, Ongoing).
3. Establish formal recognition of threatened species status for southern right whales under the Marine Mammals Protection Act (▶▶ GM-RDI, New).

Management

4. Gather available southern right whale information vital to inform the Aquaculture Management Area (AMA) planning exercise via conservancies (▶▶ MCU (Sci)/GM-RDI/C, Ongoing).
5. Investigate potential human impacts on sub-Antarctic population congregations (tourism, vessels etc) and plan mitigation (tourism moratorium etc). (▲ C, New);
6. All sightings of southern right whales must be documented, and photo ID images and biopsy samples attempted whenever possible (▶▶ GM'sO/C/AM/MCU(Sci), Ongoing).
7. Maintenance of trained marine mammal biopsy network within the Department (▶▶ GM'sO/GM-RDI/C/AM, Ongoing).

Science

8. Determine population structure and trends (numbers, range and distribution, genetic structure, life history parameters, sex & age structure, reproduction, mortality, historic/present/future). Identify further info needs. (▶▶ MCU (Sci), Expanding).
9. Determine range and movements of NZ mainland population to better understand threats - especially from coastal development (▶▶ MCU (Sci), New).
10. Continue to monitor the population ecology of the NZ mainland southern right whale population (▶▶ GM-RDI/C/ MCU (Sci), Expanding).
11. Determine relationships between subantarctic and NZ populations by photo ID and genetic analysis (▶▶ MCU (Sci), Expanding).
12. Report on “The locations and character of coastal sites of potential importance for Southern Right Whales”. Determine key (actual & potential) sites for southern right whales based on historic whaling records, recent sightings, known requirements in NZ and overseas, and estimates of carrying capacity (▶▶ MCU (Sci), Ongoing).
13. Recommend management measures to protect the recovery of southern right whales in NZ, including setting aside potentially important habitat (▶▶ GM-RDI, New).
14. Monitor populations in subantarctics (Auckland and Campbell Islands) when feasible. (▲ GM-RDI/ MCU (Sci), Ongoing).

Relationships and community

15. Develop awareness of southern right whales as a spectacular and threatened feature of the inshore NZ coast, and highlight the potential public benefits of a population recovery (▲ C, Expanding).

16. Develop public awareness of the plight of southern right whales around our coast, and the potential for coastal planning issues to create threats (▶▶ C/AM, Ongoing).
17. Actively encourage the public to report sightings to DOC promptly (▶▶ C/AM, Ongoing).

2.4 NEW ZEALAND SEA LION (RAPOKA)

Phocarctos hookeri

The New Zealand sea lion is New Zealand's only endemic seal. It is regarded as a range restricted threatened species that is recovering from both subsistence harvest (as a food source for early Polynesian settlers) and historic harvest (by the sealing industry), with an estimated population of 11 - 15 000 animals that breed almost solely in the Auckland Islands. There is a Marine Mammal Sanctuary/Marine Reserve around the Auckland Islands extending to 12nms. Distinctive features of the species' population ecology that make it vulnerable to a range of human impacts include its restricted breeding and foraging ranges. Fishing related mortality outside the sanctuary, along with periodic mortality events attributed to disease, are key issues. The establishment of new breeding locations at areas other than the current subantarctic breeding range is a priority for the species.

The Department aims to focus management on:

- encouraging the establishment and growth of new breeding sites away from the Auckland Islands;
- reducing fishing-related mortality in the Auckland Islands squid trawl fishery;

It is intended to do this primarily through public awareness & education, information & science, and legal mechanisms for mitigation and protection.

Key Objectives

1. **Ecology** To better understand the biology, population ecology, key habitat requirements, mechanisms for the establishment of new breeding locations and threats to the species in New Zealand waters.
2. **Human impacts.** To protect through controlling/mitigating fisheries-related mortality of NZ sea lions in the Auckland Islands squid fishery, and to actively assist the recovery of the species. To prevent and minimise all other types of negative human impacts. To proactively manage all other human interactions with sea lions (including tourism), primarily through public awareness. In particular, to foster public support of sea lions presence on mainland New Zealand.
3. **Species recovery.** To facilitate and manage the recovery of the species to a self sustaining non-threatened status throughout their natural range. Provide a high level of protection to potential new breeding sites outside the Auckland Islands and maximise the opportunity for the establishment and growth of such breeding sites.

Previous conservation actions

1. Preparation and implementation of a NZ sea lion recovery plan.
2. Establishment of the Auckland Islands Marine Mammal Sanctuary.
3. Management of fisheries related mortality (Ministry of Fisheries Operational Plans for SQU6T 1996 - 2004/05, observer coverage, limits on incidental mortality, implementation of Sea Lion Exclusion Devices (SLEDS).
4. Return and necropsy of sea lions whose deaths are caused by fishing since 1996, to determine life history parameters and cause of death.

5. Research programmes including:
 - Population parameters and vital rates
 - Investigation of diet and foraging behaviour;
 - Cause of death in sea lion pups;
 - Genetic analysis of the subantarctic population to determine diversity;
 - Breeding systems;
 - Review of the historical and modern distribution and abundance.
6. Management programmes including monitoring and minimisation of public & visitor disturbance.

ACTIONS NEEDED	
<i>Planning & Strategy</i>	<ol style="list-style-type: none"> 1. Prepare new sea lion species management plan and related PMP (▶▶ GM-RDI/MCU, New). 2. Prepare a NZ sea lion PMP in accordance with legal process and species management plan (▶▶ MCU, Ongoing).
<i>Management</i>	<ol style="list-style-type: none"> 3. Proactively manage population recovery on NZ mainland. Protection of current mainland breeding and investigation of active population management options (▶▶ GM-RDI/MCU/MCU (Sci)/C, New). 4. Implement species management plan and any PMP recommendations (▶▶ GM'sO/MCU, Expanding). 5. Minimise tourism impacts on sea lions in the Auckland Islands, and Otago and Southland (▶▶ C, New). 6. Continue to seek and establish effective prevention and mitigation methods that reduce fishing-related mortality, and ensure that most recent data is incorporated into all models used to calculate incidental mortality limits (▶▶ MCU, Ongoing). 7. Develop a strategy for the management of sea lions on the mainland including possible sites for re-colonisation (▲ CPD/GM-RDI/ MCU (Sci), New).
<i>Science</i>	<ol style="list-style-type: none"> 8. Establish age-specific parameters and reproductive rates through long-term studies of marked animals for input into management models (▶▶ MCU (Sci)/MCU, Ongoing). 9. Continue population management studies at the Auckland Islands, to support species management decisions. Increase rigour of monitoring of sea lion populations on Figure of Eight Island (▶▶ MCU (Sci) /MCU, Ongoing). 10. Monitor pup production and population trends at Campbell Island every 5 years (▶ MCU (Sci) /MCU, Ongoing). 11. Continue studies of the mainland sea lion population (including Stewart Island) focussing on distribution, abundance, recruitment, immigration, solitary breeding events, predation on other species and effects of tourism (▶▶ MCU (Sci) /C, Ongoing). 12. Survey regularly to establish the extent of sea lion occupancy at Stewart Island, the Snares, and Fiordland; and consolidate information of known sea lion haul-out sites and colonies (similar to the West Coast fur seal colony database). (▲ MCU (Sci) /C, Ongoing)

13. Continue surveillance for disease outbreaks and other catastrophic events, and investigate vectors for such events accordingly (▶▶ MCU (Sci)/C, Ongoing).
14. Examine the role of disease/mortality events on population dynamics (▶▶ MCU (Sci), Ongoing).
15. Assess diet and foraging behaviour to investigate the ecosystem effects of, and competition with, fisheries on sea lions i.e., trophic/foodweb effect, prey depletion (▶▶ MCU (Sci), Ongoing).
16. Return fishing-related carcasses for necropsy to determine cause of death, incidence of disease and life history parameters (▲ MCU (Sci)/MCU, Ongoing).
17. Analyse the genetic structure of the population to determine population structure and diversity (▲ MCU (Sci), Ongoing).
18. Assess efficacy of sea lion exclusion devices and existing marine protection mechanisms (▶▶ MCU (Sci), Ongoing).

Relationships and community

19. Maintain regular liaison with iwi, territorial authorities, private landowners and stakeholders, including MFish and the Squid Fishing Industry, Forest & Bird, and WWF (▲ MCU / C, Ongoing).
20. Improve public awareness of sea lion behaviour and ecology and of common measures to prevent and minimise disturbance including those related to dog control, viewing etiquette and minimum approach distances (▶▶ C, Expanding).
21. Advocacy to prepare for greater future interaction of sea lions with the public and potentially fisheries (including interpretive signage in appropriate areas, information dissemination by tourism operators and the investigation into the temporary closure of key mainland breeding sites, in particular with respect to dog access) (▶ C / AM, Ongoing).

Resourcing

22. Maintain a sea lion species research group (▲ MCU (Sci) /MCU, Ongoing).

2.5 HUMPBACK WHALE (PAIKEA)

Megaptera novaeangliae

Humpback whales *Paieka* in the southern hemisphere were reduced by the whaling industry from about 120 000 animals to just 15 000 today, but is thought to be recovering. It is a threatened migrant in New Zealand waters that is part of a southwest pacific stock (Group V) migrating north through our waters between May and December. Its seasonal inshore distribution makes it vulnerable to a range of human impacts, including tourism and entanglement in fishing gear; for example, there are several recorded instances of humpback whales being entangled in craypot lines.

The Department aims to focus management on:

- Contributing to research and management programmes in the South Pacific;
- Reducing entanglements in fishing gear;

It is intended to do this primarily through public awareness & education, information & science, and legal mechanisms for mitigation and protection.

Key Objectives

1. **Ecology.** To better understand the population ecology, key habitat requirements and threats to the species in NZ waters.
2. **Human impacts.** To protect humpback whales against avoidable adverse effects of coastal use and development, pollution and boat strike.
3. **Species recovery.** To facilitate a recovery of the Group V humpback whale population to viable self-sustaining levels which are comparable to pre-exploitation levels.

Previous Conservation Actions

1. Collation of anecdotal reports to investigate the current status of humpback whales in NZ waters.
2. Collection of photo ID's from humpbacks observed in NZ waters; and collation into a South Pacific catalogue.

ACTIONS NEEDED

Management

1. Develop capacity (techniques, equipment & skills) to manage entanglement incidents (▶▶ Nelson/Marlborough C, Expanding).

Science

2. Continued collection and collation of humpback whale sightings (▶ C, Expanding).
3. Photograph the underside of tail flukes of all humpback whales and compare to catalogues of other populations including the South Pacific catalogue (▲ AM, Expanding).
4. Collection of genetic samples to determine relationship with other stocks (▲ MCU (Sci), New).
5. Document the incidence of entanglement in marine debris and fishing gear (▶▶ C, Expanding).
6. Assess the threat to migrating humpbacks from craypot entanglement, and investigate mitigation options, such as short term temporal closures over high risk periods and sites (▶ MCU (Sci), New).
7. Investigate the distribution (including migration routes) and abundance of humpbacks in New Zealand waters (▲ MCU (Sci) / C, Ongoing).

Relationships and community

8. Encourage the public to report sightings of humpbacks (▲ C, Expanding).
9. International advocacy for humpback conservation (▲ MCU (Sci)/ERD, Ongoing).

2.6 SOUTHERN ELEPHANT SEAL

Mirounga leonina

Southern elephant seals in the southern hemisphere were reduced to low numbers by the early sealing industry. It is a nationally critical threatened species and appears to be continuing to decline throughout the southern hemisphere perhaps due to human-induced climatic influences. Breeding localities occur at Campbell Island and Antipodes Islands.

The Department aims to focus management on:

- Controlling public interactions with elephant seals on mainland New Zealand and all breeding localities;
- Contributing to research and management programmes in the Southern Ocean's breeding colonies;

It is intended to do this primarily through public awareness & education, and information & science.

Key Objectives

1. **Ecology.** To better understand the population ecology, key habitat requirements and threats to the species.
2. **Species recovery.** To understand and rectify the agent(s) causing the decline of the species, with particular reference to the New Zealand region and to restore the population to a viable self-sustaining state that is comparable to historic levels.
3. **Human threats.** To protect elephant seals against avoidable death or injury from threats such as boat strike.

Previous conservation actions

1. Management of individual animals/incidents on mainland NZ.

ACTIONS NEEDED

Management

1. Record the details of any elephant seals around NZ, particularly details of tags and brands into a national database (▲ C, Expanding).
2. Collate information on rogue/habituated southern elephant seals and how to manage them in public areas (▲ C, Expanding).

Science

3. Determine the present distribution and productivity of breeding localities of southern elephant seals in NZ subantarctics - Campbell and Antipodes Islands (▲ MCU (Sci), New).
4. Aerial or ground surveys at Antipodes Island to determine pup production (opportunistically with other programmes) (▲ C/ MCU (Sci), New).
5. Examine the foraging ecology of Southern elephant seals over the Campbell Island plateau in collaboration with the Australian Antarctic Division Scientists (▶ MCU (Sci), New).
6. Contribute to international work to identify and assess the agents of decline of southern elephant seal populations (▲ MCU (Sci), New).

7. Assess the likely historic population status of southern elephant seals in NZ waters (► MCU (Sci), New).
8. Predict the potential for recovery of southern elephant seals from past harvesting in the 19th Century (▲ MCU (Sci), New).
9. Investigate the incidence of boat strike and other human impacts on southern elephant seals (▲ MCU (Sci), New).

***Relationships and
community***

10. Raise public awareness to the issue of boat strike (▲ AM, Ongoing).
11. Increased advocacy about appropriate viewing etiquette and minimum approach distances for elephant seals (▲ AM, New).

2.7 BRYDE'S WHALE

Balaenoptera edeni

Bryde's whale is a nationally critical threatened species that is largely restricted in New Zealand waters to the Hauraki Gulf area (but is secure overseas). Its distribution makes it locally vulnerable to a range of human impacts, including boat strike, tourism and entanglement in fishing gear.

The Department aims to focus management on:

- protecting areas and features of the Hauraki Gulf and other places that are significant for Bryde's whale;
- seeking to reduce Bryde's whale mortalities in the Hauraki Gulf;

It is intended to do this primarily through public awareness & education, information & science, and legal mechanisms for mitigation and protection.

Key Objectives

1. **Ecology.** To better understand the population ecology, key habitat requirements, distribution and threats of the species in New Zealand waters.
2. **Human impacts.** To protect Bryde's whales against avoidable adverse effects of coastal use and development, pollution and boat strike.
3. **Population protection.** To protect areas and features of the Hauraki Gulf and other places that are significant for Bryde's whale and to ensure the protection of that population to a viable self-sustaining state that is comparable to historic levels

Previous conservation actions

1. Aerial surveys of Bryde's whales to determine distribution and abundance.
2. Response of Bryde's whales to tourist and boating activity in the Hauraki Gulf.

ACTIONS NEEDED

Management

1. Manage any human-related impacts on Bryde's whales and adopt measures for their protection (► GM-RDI, New).

Science

2. Determine the population status and trends including distribution and abundance in the Hauraki Gulf (▲ MCU (Sci), Expanding).
3. Determine the incidence of ship strike of Bryde's whales in the Hauraki Gulf and the impact on population dynamics (▲ MCU (Sci)/C, Ongoing).
4. Determine the genetic structure of the NZ population and compare to other stocks (▲ MCU (Sci)/C/AM, New).
5. Conduct necropsies on all dead Bryde's whales to determine cause of death (▲ AM/C, Ongoing).
6. Monitor the impact of tourist activities on Bryde's whales in the Hauraki Gulf (► C/ MCU (Sci), Expanding).

2.8 BEAKED WHALES (HAKURA)

Beaked whales are a poorly known group of species for which the New Zealand region is the global stronghold of diversity, with 13 recorded species. The Museum of New Zealand *Te Papa Tongarewa* has the world's most comprehensive collection of beaked whale skeletons, and new species and taxonomic information continue to be discovered. New Zealand has a role in improving the global knowledge on beaked whales, and recognising the region as an important area for this group of species.

The Department aims to focus management on:

- effective stranding & incident response;

It is intended to do this primarily through public awareness, education and science, and by maintaining preparedness for stranding events.

Key Objectives

1. **Ecology.** To better understand the population ecology, key habitat requirements and threats of beaked whales in New Zealand waters.
2. To take advantage of NZ's status as a very significant area for beaked whales.

Previous conservation actions

1. Contributions of stranded skeletons to the Te Papa Tongarewa (MoNZ) collection.
2. Scientific studies on genetics, skeletal morphology and taxonomy.

ACTIONS NEEDED

Management

1. Full response (including photos and recovery of scientific samples) at all stranding events in accordance with stranding plans (▲ AM, Ongoing)..

Science

1. Document and record all live sightings of beaked whales as comprehensively as possible (▲ AM, Ongoing).
2. Improve general biological understanding of this group - genetics, range/distribution, abundance, taxonomy, threats, habitat & diet requirements (▲ MCU (Sci), Ongoing).

2.9 NZ FUR SEAL (KEKENO)

Arctocephalus forsteri

The New Zealand fur seal is not regarded as a threatened species, and significant numbers occur in the Australian region. Nevertheless, it is recovering from historic harvest by the early sealing industry (estimates suggest from about 1-2 million animals to about 50000 to 100000 today), and is expanding its range northwards. Fisheries-related mortality and the interaction of seals with the public on New Zealand beaches are the main issues for this species.

The Department aims to focus management on:

- reducing fishing-related mortality in the West Coast South Island hoki trawl fishery;
- ensuring appropriate behaviour of people around fur seals on beaches and in seal colonies;

It is intended to do this primarily through public awareness & education, information & science, and legal mechanisms for mitigation and protection.

Key Objectives

1. **Ecology.** To better understand the population ecology, key habitat requirements and threats to the species in New Zealand waters.
2. **Protection and management.** To control/mitigate fishing-related mortality of NZ fur seals in trawl fisheries (including the WCSI hoki and Bounty Island southern blue whiting fisheries).
3. **Colony protection.** To protect established NZ fur seal colonies and expanding populations from inappropriate human disturbance.
4. **Species recovery.** To facilitate and manage the recovery of the species to a viable self-sustaining state in light of historic (pre-sealing) levels.

Previous conservation actions

1. Fisheries (FSL-funded) observer coverage;
2. Incident management;
3. Scientific studies, including:
 - Population monitoring and modelling at three West Coast colonies.
 - Determination of population parameters.
 - Distribution and abundance studies at colonies in Taranaki, Wellington, Nelson/ Marlborough, West Coast South Island, Otago Peninsula, The Catlins, The Snares, Antipodes Island and Bounty Island;
 - Investigation of diet;
 - Causes of pup mortality;
 - Diving, metabolic and foraging behaviour in fur seals;
 - Behaviour at colonies, shore attendance etc.
 - Impacts of tourism at three key sites (Tonga Island, Kaikoura and Banks Peninsula);
 - Taxonomic and genetic analysis to determine diversity and population structure;
 - History of the sealing industry.

4. Recovery and necropsy of tagged fur seals whose deaths are caused by fishing to determine life history parameters and cause of death.
5. Management of seal-watching tourism operations.

ACTIONS NEEDED

Planning & Strategy

1. Develop departmental strategies for protecting and managing NZ fur seal from fisheries/aquaculture interactions and mortality (▶▶ MCU, New).
2. Develop tourism site plans for the main 'public' seal colonies (including Tonga Island, Kaikoura, Cape Foulwind, Cape Palliser, Otago Peninsula) (▲ C, New).
3. Plan for a possible continuing increase in seal numbers in NZ waters (▲ GM-RDI/C/ERD, New).
4. Maintain and enhance current levels of legal protection for NZ fur seals (▲ GM-RDI, Ongoing).

Management

5. Continue to develop effective methods to reduce fishing-related mortality of fur seals in offshore trawl fisheries (▶▶ MCU/MCU (Sci), Expanding).
6. Maintain a "Minimum Intervention" policy for dealing with fur seal incidents, as per the stranding contingency plan SOP (▶▶ C/AM, Ongoing).
7. Continue to develop opportunities for visitors to experience seals safely, while minimising disturbance (▲ C, Ongoing).
8. Investigate options to manage the interaction of fur seals with seabird burrows on the Titi Islands (▶ AM, New).
9. Examine and respond to the management implications of the reported genetic variation in NZ fur seals (▲ MCU (Sci), New).
10. Develop national standards for approach distances to individual seals, haul-outs and breeding colonies for the public and tour operators (▲ GM-RDI/C, New).
11. Minimise and monitor the effects of tourism on fur seal colonies, including Sugarloaf Island, Kaikoura, Tonga Island (▲ C, Ongoing).
12. Minimise and monitor the interactions between fur seals and salmon farms (▲ AM, Ongoing).

Science

13. Undertake a national census / estimate of NZ fur seal numbers (▶ MCU (Sci)/C, New).
14. Assess the population dynamics of fur seals nationwide, including trends in abundance, distribution and annual pup production (▶ MCU (Sci)/C, Expanding).
15. Assess the extent, patterns and impacts of fur seal mortality from fishing, aquaculture and entanglement in marine debris (▶ MCU/ MCU (Sci), New).
16. Assess the diet and foraging behaviour of fur seals to investigate the ecosystem effects of, and competition with, fisheries and sea lions i.e., trophic/foodweb effect, prey depletion (▶ MCU (Sci), Expanding).
17. Establish age-specific parameters and reproductive rates through long-term studies of marked animals for input into management models (▶ MCU (Sci)/MCU, Ongoing).

18. Return fishing-related carcasses for necropsy to determine cause of death, incidence of disease and life history parameters (▲ MCU (Sci)/MCU, Expanding).
19. Analyse genetic structure to determine population structure and genetic diversity (▲ MCU (Sci), Expanding).
20. Continue surveillance for disease outbreaks and other catastrophic events and determine the impact of these mortalities on the population (▶▶ MCU (Sci)/C, Expanding).

Relationships and community

21. Advocacy to prepare for greater future interaction of fur seals with the public and fisheries (include fencing and signage in appropriate areas) (▲ C, Expanding).
22. Maintain protective status of NZ fur seals e.g. respond appropriately to proposals to cull seals (▶ ERD/GM-RDI, Ongoing).
23. Public education to minimise the handling and harassment of seals by public (minimum intervention policy) (▲ GM-RDI/C/AM, Ongoing).
24. Continue to reinforce to public the health risks associated with handling fur seals (▶▶ GM'sO/GM-RDI/C/AM, Ongoing).
25. Maintain good working relationships with salmon farm owners to help manage the interactions between the fur seals and the farm owners (▲ C/AM, Ongoing).
26. Increase public awareness about declining fur seal populations along the west coast South Island; and increasing populations around other areas (▲ C, Ongoing).

2.10 KILLER WHALE

Orcinus orca

Killer whale are classified as a nationally critical threatened species in New Zealand waters (with about 200 animals), but the population appears to be stable and the species is considered secure overseas. No significant human induced mortality is known, but there are possible risks of disturbance and boat strike to the animals by vessels. Stranded killer whales can be successfully refloated.

The Department aims to focus management on:

- seeking to mitigate the disturbance of killer whales by recreational vessels in northern New Zealand;
- Maintaining effective stranding and incident response;

It is intended to do this primarily through public awareness, education & science, and by maintaining preparedness for stranding events.

Key Objectives

1. **Ecology.** To better understand the population ecology, key habitat requirements and threats of killer whales in New Zealand waters.
2. **Threats.** Manage threats in a more general sense.

Previous conservation actions

1. An initial study (including photo ID library) of killer whales in NZ addressing diet, incidence of boat strike, abundance, distribution and population structure.

ACTIONS NEEDED	
Management	<ol style="list-style-type: none"> 1. Manage any human-related threats to killer whales (► GM-RDI, New). 2. Monitor issue of killer whale foraging on long-lines and associated impacts on the population (► MCU (Sci)/GM, New). 3. Maintain records of sightings and photo IDs. Forward copies to killer whale researchers as requested (▲ C/ MCU (Sci)/GM-RDI, New).
Science	<ol style="list-style-type: none"> 4. Assess and monitor all the human-related threats to killer whale (▲ MCU (Sci)/C, New). 5. Continue to record sightings and add to photo ID catalogue (▲ C/AM, Ongoing). 6. Assess the foraging ecology of killer whale and interactions with fisheries (▲ MCU (Sci), Expanding). 7. Undertake an acoustic census (⊗ MCU (Sci), New).
Resourcing	<ol style="list-style-type: none"> 8. Maintain preparedness for refloating live stranded killer whales (▲ C/AM, Ongoing).

2.11 SPERM WHALE (PARAOA)

Physeter macrocephalus

Sperm whales are primarily a migrant species in New Zealand waters but with semi-permanent residence. Kaikoura is New Zealand's key site for the species, where they have become the 'icon' of the country's whale watching industry. The bones from dead sperm whales are of great importance to Maori. Mass live strandings are a rare but challenging event.

The Department aims to focus management on:

- mitigating effects of tourism at Kaikoura;
- effective stranding response and bone allocation;

It is intended to do this primarily through ongoing liaison with Kaikoura Whalewatch and with iwi, museums and scientists, and by maintaining preparedness for stranding events.

Key Objectives

1. **Ecology.** To better understand the population ecology, key habitat requirements and threats to the species in New Zealand waters.
2. **Human impacts.** To protect sperm whales from inappropriate disturbance by tourist activities and the development and use of critical coastal areas.
3. **Species recovery.** To facilitate and manage the recovery of the species in New Zealand waters to a viable self-sustaining state that is comparable to historic (pre-whaling) levels.
4. **Stranding management.** To facilitate the appropriate management of sperm whale stranding events, including the cultural use of materials from dead sperm whales.

Previous conservation actions

1. Management of stranding events and allocation of materials primarily for cultural purposes.
2. Management and monitoring of Kaikoura whale-watching operations.
3. Moratoriums on whale watching permits at Kaikoura (due to expire 2012).
4. Investigation of euthanasia device on stranded sperm whales.

ACTIONS NEEDED	
<i>Planning & Strategy</i>	1. Establish clear policies and guidelines (including permitting) around the use and allocation of marine mammal materials (▶▶ Treaty Issues Group/CPD/ERD/MCU/GM-RDI/C/AM, Ongoing).
<i>Management</i>	<p>2. Careful ongoing management of sperm whale watching in the Kaikoura. (▶ C, Ongoing).</p> <p>3. Consider legal protection options for the Kaikoura whale watching area to protect sperm whales from human impacts and recognise the special significance of the area. Methods might include marine mammal sanctuary, marine reserve, taiapure, mataitai reserve etc (▶ C, Ongoing).</p> <p>4. Manage the noise levels of shipping, seismic surveys and other activities in the Kaikoura area (▲ C, Ongoing).</p> <p>5. Continue to investigate and develop sperm whale euthanasia device (▶▶ GM-RDI, Ongoing).</p>
<i>Science</i>	<p>6. Continue sperm whale monitoring and photo ID work at Kaikoura to monitor trends over time (▲ AM, Ongoing).</p> <p>7. Review sperm whale stranding events in NZ to assist management and inform DOC, iwi and the public (▲ GM-RDI, New).</p> <p>8. Continue to investigate and monitor impacts of tourism on sperm whales (▶ C, Ongoing).</p> <p>9. Investigate the migration patterns of sperm whales around NZ (▲ MCU (Sci), New).</p> <p>10. Undertake genetic biopsy sampling to determine stock structure and relatedness of sperm whales in NZ (▲ MCU (Sci), New).</p>
<i>Relationships and community</i>	11. Continue good relationship with iwi in regard to assisting with retrieval of sperm whale bone from stranded animals (▲ C/AM, Ongoing).
<i>Resourcing</i>	12. Develop & maintain full CIMS capacity to deal with a mass stranding of sperm whales, based in the East Coast/Hawkes Bay Conservancy (▶ C, Expanding).

2.12 PYGMY SPERM WHALE

Kogia breviceps

Pygmy sperm whales are poorly known species in New Zealand waters, but are secure overseas. East Coast/Hawke Bay is New Zealand's key area for the species, where stranding events are quite common. There are no known causes of human-related mortality.

The Department aims to focus management on:

- effective stranding responses;

It is intended to do this primarily by maintaining preparedness for stranding events.

Key Objectives

1. **Ecology.** To better understand the population ecology, key habitat requirements and threats to the species in New Zealand waters.
2. **Population protection.** To protect areas which are significant for pygmy sperm whales and to ensure the protection of that population in a viable self-sustaining state.
3. **Stranding management.** Manage pygmy sperm whale stranding events primarily for conservation of the significant area on East Coast North Island.

Previous conservation actions

1. Study on the life history parameters (reproductive status, age, diet and morphometrics) of pygmy sperm whales stranded around NZ.
2. Genetic analysis of pygmy sperm whales in the Southern Hemisphere (NZ, South Africa).

ACTIONS NEEDED

Management

1. Determine threats and management issues in the East Coast/Hawkes Bay area, and adopt measures for the protection of this area as a breeding site (► C, New).

Science

2. Assess the use and significance of the East Coast/Hawkes Bay area for pygmy sperm whales (▲ C, New).
3. Assess the population structure (probably by genetic analysis) of pygmy sperm whales in NZ, and their relationships to populations outside the NZ region (▲ C, New).
4. Investigate the causes of frequent pygmy sperm whales stranding events (▲ C, Ongoing).
5. Assess the population ecology, life history parameter, population numbers and foraging ranges of pygmy sperm whales (▲ MCU (Sci), Ongoing)
6. Determine the possible impacts of aquaculture operations on pygmy sperm whales (▲ C, Ongoing).

2.13 BOTTLENOSE DOLPHIN

Tursiops truncatus

Bottlenose dolphins are regarded as not threatened in New Zealand, and are secure overseas. They are a focus for dolphin watching in the Bay of Islands and Fiordland areas. There are no known causes of human-related mortality. Stranded bottlenose dolphins can be successfully refloated.

The Department aims to focus management on:

- mitigating impacts of tourism in the Bay of Islands and Fiordland

It is intended to do this primarily through science and ongoing liaison with tourism operators.

Key Objectives

1. **Ecology** To better understand the population ecology, key habitat requirements and threats to the species in New Zealand waters.
2. **Human impacts.** To protect bottlenose dolphins from inappropriate disturbance by tourist activities and the development and use of critical coastal areas.

Previous conservation actions

1. Assessment of impacts of tourist activities on bottlenose dolphins in Fiordland and Bay of Islands.
2. Monitoring population ecology and behaviour of bottlenose dolphins in Fiordland and Bay of Islands through photo ID.

ACTIONS NEEDED

Management

1. Protect against present or future cumulative effects of tourism especially at Bay of Islands and Fiordland. Methods include restriction/moratoria on issuing of permits, conservative conditions on permits, close liaison with operators, education & codes of practice, research on effects, robust monitoring and compliance work (▶ C, Ongoing).
2. Work with industry to develop local codes of practice for tourism operators based on best practice, and seek their adoption (▲ C, Ongoing).
3. Enable sightings and photo IDs to be entered into a national database (▲ GM-RDI, New).

Science

4. Continue population ecology studies to monitor status and trends (▲ MCU (Sci), Ongoing).
5. Continue to monitor the impacts of tourism and improve enforcement operations (▶▶ C, Expanding).
6. Investigate taxonomic and genetic status to confirm stock structure (▲ MCU (Sci)/C, Expanding).

***Relationships and
community***

7. Raise public and tourism operators' awareness about boating etiquette around bottlenose dolphins especially in Bay of Islands and Fiordland to minimise risk of boat strike and harassment (▶▶ ERD/C, Expanding)
8. Assess and improve educational and environmental interpretation on tourism boats (▲ C, Expanding).

2.14 DUSKY DOLPHIN

Lagenorhynchus obscurus

Dusky dolphins are regarded as not threatened in New Zealand, and are secure overseas. They are a focus for dolphin watching in Kaikoura. There is anecdotal & circumstantial evidence for set net fishing-related mortality on this species and marine farming impacts at Admiralty Bay.

The Department aims to focus management on:

- mitigating impacts of tourism at Kaikoura;
- Seeking to mitigate effects of coastal development on significant sites including Admiralty Bay;

It is intended to do this primarily through science, advocacy and ongoing liaison with tourism operators.

Key Objectives

1. **Ecology.** To better understand the population ecology, key habitat requirements and threats to the species in New Zealand waters.
2. **Human impacts.** To protect dusky dolphins from inappropriate disturbance by tourist & fishing activities, and the development and use of critical coastal areas.

Previous conservation actions

1. Scientific studies including genetics, diet, life history, distribution and acoustics.
2. Advocacy for protection of key areas through RMA processes.
3. Assessment of impacts of marine farms on dusky dolphins in Admiralty Bay.
4. Assessment of impacts of tourist activities on dusky dolphins in Kaikoura.

Actions needed

ACTIONS NEEDED	
Management	<ol style="list-style-type: none"> 1. Seek the protection of dusky dolphins and their habitat requirements in Admiralty Bay (▶▶ C, Expanding). 2. Determine the potential threats and risks to the population from marine farming, commercial fishing and other impacts in New Zealand (▶▶ MCU (Sci)/C, Expanding).
Science	<ol style="list-style-type: none"> 3. Assess the ecology (distribution, movements, foraging behaviour, habitat use etc) of dusky dolphins in Admiralty Bay (▶▶ MCU (Sci)/C, Expanding). 4. Assess the impacts of marine farms on dusky dolphin populations, particularly in Admiralty Bay and Marlborough Sounds (▶▶ MCU (Sci)/C, Expanding). 5. Assess the impacts of tourism on dusky dolphins at Kaikoura and Marlborough Sounds (▶ C, Ongoing). 6. Determine the diet and foraging behaviour of dusky dolphins, particularly the importance of commercial & inshore fish in their diet (▲ C, New).

2.15 PILOT WHALE

Globicephala melas/macrorhynchus

Pilot whales are a poorly known migrant species in New Zealand waters. There are occasionally implicated in mass stranding events in some areas (e.g. Northland, Golden Bay, Stewart Island, Chatham Islands). Live stranded pilot whales can successfully be refloated. No significant human induced mortality is known.

The Department aims to focus management on:

- Effective mass stranding response;

It is intended to do this primarily through education & science, and by maintaining preparedness for stranding events.

Key Objectives

1. **Ecology.** To better understand the population ecology, key habitat requirements and threats to the species in New Zealand waters.
2. **Stranding management.** To manage pilot whale stranding events safely, effectively and humanely.

Previous conservation actions

1. Developed stranding SOP response to mass stranding events.
2. New Zealand has been identified as world leaders in mass stranding management.

ACTIONS NEEDED	
Management	1. Maintain procedures to optimise the resources used during stranding events (▲ GM-RDI/C/AM, Ongoing).
Science	<ol style="list-style-type: none"> 2. Continue to encourage investigations into the causes and prevention of mass strandings of pilot whales (▲ GM-RDI/C/AM, Ongoing). 3. Develop tagging or marking techniques of live stranded pilot whales to determine survival rate of refloated animals, and residency of pods, etc (▶ MCU (Sci)/AM, New). 4. Investigate the incidence of morbillivirus infection in stranded pilot whales; and determine management options for disease transmission (▶ MCU (Sci), New). 5. Encourage genetic analysis of stranded pilot whales (▲ MCU (Sci), New).
Relationships and community	6. Ensure that communities near known hotspots for mass stranding events have adequate information and expectations for future events (▲ C/AM, Ongoing).
Resourcing	7. Maintain mass stranding management capability at key stranding sites such as Mahia, Northland, Farewell Spit, Southland (▲ C/AM, Ongoing).

2.16 OTHER TOOTHED CETACEANS

This includes the following species: rough-toothed dolphin, spotted dolphin, striped dolphin, common dolphin, hourglass dolphin, southern right whale dolphin, Risso's dolphin, melon-headed whale, false killer whale, dwarf sperm whale, spectacled porpoise. These species have a variety of conservation statuses, but there are generally few known conservation or management issues.

The Department aims to focus management on:

- Effective general public awareness, advocacy and stranding response;

It is intended to do this primarily through education & science, and by maintaining preparedness for stranding events.

Key Objectives

1. **Ecology.** To better understand the population ecology, key habitat requirements and threats to toothed cetaceans in New Zealand waters.

Previous conservation actions

Most information available to date comes from stranding records and overseas/international studies of the various species.

1. Assessment of impacts of tourist activity on common dolphins in Bay of Islands.
2. Study of population ecology of common dolphins in Bay of Plenty, through photo ID.
3. Necropsy of stranded and human-related dead animals to investigate incidence of disease and cause of death.

ACTIONS NEEDED

Science

1. Continue to record sightings and stranding events in accordance with the National Stranding Contingency Plan SOP (▲ C/AM, Ongoing).
2. Continue studies on disease investigation and cause of death of stranded animals (▲ MCU (Sci), Ongoing).
3. Assess the impacts of developing marine farm operations on common dolphins (► MCU (Sci)/C, New).
4. Further investigate the impacts of tourism on common dolphins (► MCU (Sci)/C, New).

2.17 OTHER BALEEN WHALES

This includes the following species: blue whale, fin whale, sei whale, minke whale, pygmy blue whale, pygmy right whale. These species are generally migrant species in NZ waters, with few known conservation or management issues.

The Department aims to focus management on:

- Effective general public awareness, advocacy and stranding response;

It is intended to do this primarily through education & science, and by maintaining preparedness for stranding events.

Key Objectives

1. **Ecology.** To better understand the population ecology, key habitat requirements and threats to baleen whales in New Zealand waters.
2. **Species recovery.** To facilitate a recovery of New Zealand's baleen whale populations to viable self-sustaining levels in light of pre-exploitation levels.

Previous conservation actions

Most information available to date is from opportunistic stranding and sighting records and overseas/ international studies of the various species.

ACTIONS NEEDED	
Planning & Strategy	1. Provide support for the NZ government's position via the IWC for the protection of baleen whales from commercial and scientific whaling (▶ ERD, Ongoing).
Management	2. Continue to develop methods to enable effective euthanasia of large baleen whales (▲ MCU (Sci), Ongoing).
Science	3. Continue to record incidental sightings and stranding events in accordance with the National Stranding Contingency Plan SOP (▶ AM, Ongoing). 4. Assess the occurrence of blue, fin, sei and pygmy right whales in NZ waters (▲ MCU (Sci), New). 5. Necropsy stranded blue, fin, sei and pygmy right whale carcasses, particularly to assess cause of death e.g. ship strike (▲ AM, New). 6. Identify migration pathways and patterns of migrating baleen whales (▲ MCU (Sci), Ongoing).
Relationships and community	7. Encourage the public and associates to report all sightings in detail as per the departments sighting form (▲ AM, Ongoing).

2.18 OTHER SEALS

This includes the following species: leopard seal, sub-Antarctic fur seal, Antarctic fur seal, Weddel seal, Ross seal and Crabeater seal. These species are vagrant and migrant species in NZ waters, with few known conservation or management issues.

The Department aims to focus management on:

- Effective general public awareness, advocacy and incident response;

It is intended to do this primarily through education & science, and by maintaining preparedness for incidents.

Key Objectives

1. **Ecology.** To better understand the population ecology, key habitat requirements and threats to seals in New Zealand waters.

Previous conservation actions

1. Collation of information from individual sightings and stranding events.
2. Rehabilitation of beachcast sub-Antarctic fur seals.
3. Necropsy of beachcast or human-related dead specimens.

ACTIONS NEEDED	
Management	1. Determine methods to minimise harassment of seals ashore (► GM-RDI/C/AM, Expanding).
Science	2. Continue to record sightings and stranding events in accordance with the National Stranding Plan SOP (▲ C/AM, Ongoing). 3. Continue to undertake necropsies to investigate cause of death and incidence of disease (▲ GM-RDI/MCU (Sci), Ongoing).
Relationships and community	4. Increase public awareness about seals and appropriate etiquette for viewing them (▲ ERD/C, Ongoing). 5. Maintain the department's policy of 'Minimum Intervention' with regards to all seal species (►► C/AM, Ongoing).

3. Issue-led Actions

The issue groupings addressed below are in their approximate order of priority for conservation action in New Zealand, based on:

- the range and conservation status of the species that they affect,
- the level of impact they cause to the species populations,
- the numbers of animals affected,
- the need for active protection and management,
- the need for improved knowledge, and
- the potential for improved protection and management, threat mitigation or other conservation achievement.

However, this is simply an indicative ranking, and it is the **priorities of the individual action statements** that are of primary importance to the achievement of the overall objectives.

PRIORITY 1 SPECIES:

Recreational and commercial fishing, RMA Coastal Development (esp. marine farming), Strandings & Sightings.

PRIORITY 2 SPECIES:

Tourism, Scientific activity, Pollution, Acoustic disturbance, Climate change and natural disturbances, Disease, Whaling industry, Health & Safety, tourism site planning, Marine mammals in captivity.

PRIORITY 3 SPECIES:

Boats and navigation.

3.1 FISHING

Fishing inevitably interacts with marine mammals in a variety of ways. Most obviously, some species are killed by drowning in nets and other fishing gear.

Potential interactions include:

- mortalities caused by incidental capture in nets and hooked lines;
- entanglement and ingestion of marine debris;
- ecosystem effects (e.g. competition for food, occupation and disturbance of habitat);
- the ‘irritation’ and disruption that the presence and behaviour of seals can cause around fishing boats and marine farms.

Key Objectives

1. **Mortality assessment.** To monitor and assess the magnitude and significance of marine mammal fishing-related mortality in New Zealand waters.
2. **Mortality minimisation.** To prevent, mitigate and minimise marine mammal fishing-related mortality, taking a precautionary approach to conserving species where information is sparse or lacking.

Previous conservation actions

1. Input made to the Ministry of Fisheries (MFish) sustainability rounds.
2. Establishment of Conservation Services Programme (CSP).
3. Inclusion of fishing-related mortality provisions in the Fisheries Act 1996 and Marine Mammal Protection Act 1978.
4. CSP programmes to investigate marine mammal and fishing interactions.
5. Seasonal or complete closure of some areas to set net fishing (i.e., west coast North Island, east coast South Island).
6. Progress towards the development of effective exclusion devices and mitigation measures to reduce fishing-related mortality.

ACTIONS NEEDED

Planning & Strategy

1. Complete Management Plans (Species Management Plans and Population Management Plans etc) for Hector’s/Maui’s dolphin and NZ sea lion (▶▶ MCU, Expanding).
2. Seek and support reduction and mitigation of fishing-related mortality of fur seals in trawl fisheries (▶▶ MCU, Expanding).

Management

3. Seek and support guidelines and promote best practices for fisheries with regard to the protection and management of marine mammals (▶▶ MCU, Ongoing).
4. Continue to investigate options for addressing and mitigating fishing-related mortality in fisheries, including marine mammal sanctuaries, closed seasons/ areas, Maximum Allowable Level of Fishing Related Mortality (MALFIRM), and alternative fishing practices and mitigation devices such as pingers, Marine Mammal Exclusion Devices (MMEDs), Sea Lion Exclusion Devices (SLEDs) etc (▶▶ MCU, Ongoing).

5. Review the use of recreational set net fishing techniques in NZ waters and their interaction with marine mammals (▶▶ CPD/GM-RDI, New).
6. Seek and support precautionary measures to prevent fishing-related mortality (▶▶ GM-RDI, Expanding).
7. Seek and implement restrictions on fishing activity in areas that marine mammals utilise for breeding and nursing (▶▶ GM-RDI, New).

Science

8. Develop procedures for the thorough documentation of reported fishing-related deaths, to contribute to an understanding of when and why the incident occurred (▶▶ MCU, New).
9. Continue to return for necropsy dead marine mammals (Note: for fur seals killed in fishing gear, only those that are tagged need be returned) that are suspected to have died as a result of fishing or other human activities, to investigate cause of death, incidence of disease and life history parameters (▶▶ MCU/AM, Ongoing).
10. Produce annual status and summary reports of the known interactions between marine mammals and fisheries (▶▶ MCU (Sci)/MCU, New).
11. Determine the impact that fishing has on prey availability for marine mammals and the associated impacts on population dynamics (▶ MCU (Sci)/MCU, New).
12. Establish or improve monitoring of set net and trawl fisheries to enable statistically robust estimates of fishing-related marine mammal mortality in NZ (▶▶ MCU, Ongoing). This might include observer coverage, video observance and reporting requirements. Particularly in the following fisheries:
 - Hoki trawl (NZ fur seal, dusky dolphin, pilot whale);
 - Bounty southern blue whiting trawl (NZ fur seal, sea lion, leopard seal);
 - Ling long-line fisheries (pilot whale);
 - Auckland Island squid trawl (NZ sea lion, fur seal);
 - All inshore set net and trawl fisheries except NE North Island, Stewart Island and Fiordland (Hector's dolphin);
 - Scampi trawl fishery (NZ sea lion);
 - Big Eye Tuna fishery (NZ fur seal, bottlenose dolphin);
 - Jack Mackerel fishery (common dolphin);

Relationships and community

13. Take measures to raise the levels of reporting of human-related marine mammal deaths by those responsible for the deaths (▶▶ GM-RDI/C/AM/MCU, Expanding).
14. Work with the fishing & aquaculture industries to investigate proposals to mitigate the 'nuisance effects' of NZ fur seals in wild fisheries and fish farms (▶ MCU (Sci)/MCU, New).
15. Maintain regular internal networks and liaison within and between DOC and MFish, in order to develop agreed government approach to preventing and minimising fishing-related marine mammal mortality (▶▶ MCU, Expanding).
16. Develop MCU/CSP working relationships with MFish and stakeholders in order to address matters relating to protected species fishing-related mortality (▶▶ MCU, Ongoing).
17. Provide support to the industry with regard to mitigation measures to reduce fishing-related mortality (▶▶ MCU, Ongoing).

18. Develop public awareness material about fishing-related mortality, including photographic databases and annual reports (▶▶ ERD/C, Ongoing).
19. Promote or organise beach clean ups to remove discarded or lost fishing debris to reduce the risk of entanglement (▲ C/AM, Ongoing).
20. Improve relationships between Area and Conservancy DOC staff and fishers (▲ ERD/C/AM/MCU, Ongoing).
21. Raise awareness of fishers to the impacts caused by fishing on marine mammals and potential prevention and mitigation measures. A focus for this should include recreational set net fishing (▶ ERD/MCU/C/AM, Ongoing).

3.2 COASTAL DEVELOPMENT AND RMA

This section includes all matters relating to the allocation and occupation of coastal space (including marine farming and port development). Coastal marine mammal species (some of which are recovering from historic depletion) are of particular relevance, including Hector's dolphins, dusky dolphins, southern right whales and New Zealand fur seals.

Key Objectives

1. **Improve Understanding.** To improve understanding of the potential effects of coastal development on marine mammals and their habitats.
2. **Assessment of effects.** To monitor and assess the magnitude and significance of the effects of coastal development on marine mammals in New Zealand waters.
3. **Mitigation & avoidance of effects.** To mitigate and avoid adverse effects of coastal development on the conservation of marine mammals, taking a precautionary approach to conserving species where information is sparse or lacking.

Previous conservation actions

1. AMA and planning requirements for marine farming.
2. Advocacy for protection of Hector's and Maui's dolphin and dusky dolphin habitat from effects of marine farms and port developments, including submissions on specific RMA applications (eg, Clifford Bay, Admiralty Bay, Banks Peninsula/Pegasus Bay, Jackson Bay).
3. Preliminary assessments of the potential effects of marine farms on Hector's dolphins, dusky dolphins, southern right whales and other coastal cetaceans (eg Slooten et al. 2001; Neale 2001; Markowitz, Harlin and Wursig 2002).
4. Biological science on cetaceans.
5. Establishment of marine mammal sanctuaries.
6. Development of seal-proof salmon cages by industry (NZ King Salmon Ltd), in preference to translocating troublesome seals.

ACTIONS NEEDED

Planning & Strategy

1. Take a precautionary approach within RMA and other statutory processes such as AMA (Aquaculture Management Areas) identification to seek appropriate conservation management of marine mammals where information is limited (▶▶ GM-RDI/C, New).
2. Consider preparing a Population Management Plan to address marine farming effects on southern right whales (▶▶ MCU/MCU (Sci), Expanding).

Management

3. Maintain an active & consistent involvement in RMA processes (including NZCPS review, AMAs, RCPs, consent hearings) using the best available information, to ensure the consideration of the effects of coastal development on marine mammals and their significant habitats are incorporated (▶▶ GM-RDI/C, New).

4. Scope the current and future extent and effects of marine farming on the conservation of marine mammals i.e., location, status, structure, impacts (▶▶ GM-RDI, New).
5. Investigate the extent of ship strikes on large cetaceans near ports (especially Auckland) and advocate for mitigating options (▶▶ C, Expanding).
6. Work with MFish to ensure consideration of marine mammals through the aquaculture review and marine farm permitting processes (▶▶ GM-RDI, New).
7. Develop capacity (techniques, equipment & skills) to manage marine mammal entanglement incidents (▶▶ Nelson C/GM-RDI, Expanding).

Science

8. Assess the actual and potential effects of marine farms (in- and off-shore) on Hector's dolphins, dusky dolphins, southern right, Bryde's, humpback whales and other coastal species on the recovery of historical depletion (▶▶ MCU (Sci), New).
9. Actively seek information about significant sites and habitat characteristics for marine mammals (▶▶ MCU (Sci), Expanding).
10. Determine means by which the effects of coastal developments can be avoided or mitigated, and advocate for these measures to be taken (▶▶ MCU/C, Expanding).

Relationships and community

11. Actively disseminate information to raise understanding by the public, iwi and others (including territorial authorities) about significant marine mammal sites, and any current and potential effects of coastal developments (including marine farming) on marine mammals in NZ. Such information may be included in any threat abatement planning material (▶▶ ERD/MCU/C/AM, New).
12. Work proactively with the marine farming industry to address immediate and potential impacts from marine farms - especially on protected species. (▶▶ MCU/C/AM, Ongoing).

Resourcing

13. Improve the Department's understanding of and capacity to deal effectively and urgently with the potential conservation threats from marine farming (▶▶ ERD, GM-RDI, Expanding).
14. Aim to effectively address the responsibilities and research costs among government and non-government agencies to investigate and manage the effects of marine farm operations on marine mammals and their habitats. This includes an increased involvement by the aquaculture industry in strategic research on the effects of marine farming on cetaceans (▶▶ GM-RDI/MCU, Expanding)

3.3 STRANDING EVENTS, INCIDENTS, SIGHTINGS AND BIOLOGICAL/CULTURAL MATERIALS

Stranding events, sightings and other marine mammal incidents are reported regularly throughout New Zealand: for example there were 87 stranding incidents reported from the year of April 2002 to March 2003. Responding to such events provides opportunities to deal with distressed animals, and gain information about species and their management issues. They can also generate significant public interest and involvement.

The Department aims to focus management on:

- Effective response to stranding events;
- Optimising responses for the benefit of (in order of priority): animal welfare, species conservation, Maori culture, science and education;

It is intended to do this primarily through preparedness for and commitment to effective incident responses, and by strengthening relationships with iwi and interested parties.

Key Objectives

1. **Effective response.** To respond to marine mammal stranding events and incidents efficiently and effectively in accordance with best practice.
2. **Optimise use.** To optimise the use of dead marine mammals for the benefit and purpose of (in order of priority): species conservation, cultural & traditional Maori use, scientific & educational use, animal welfare and commercial use.
3. **Information management.** To develop a quality procedural and information management system for marine mammal stranding events, sightings and incidents.

Previous conservation actions

1. Marine mammal stranding events and incidents are responded to in accordance with Marine Mammal Stranding Plans that have been produced for all DOC Areas, under the guidance of a National Stranding Plan SOP.
2. Cultural and scientific materials have been allocated or otherwise disposed of in accordance with the Marine Mammal Protection Act, but with little explicit national guidance.
3. Examination of some stranded animals to determine cause of death and incidence of disease.
4. Creation and distribution of a sighting form, and collection of completed forms by MCU (Sci).
5. Commencement of a southern right whale sighting/reporting programme.

ACTIONS NEEDED

Planning & Strategy

1. Review the National Stranding Plan SOP and Area Stranding Plans at least 2-yearly (▶▶ GM-RDI, Ongoing) and specifically to ensure:
 - Implementation of the CIMS framework;
 - the collection of all required biological samples, documentation and photographs;
 - safe operational practices;
 - Consideration of allocation priorities on the basis of statutory requirements (in the interests of conservation, protection and management, and with regard to the Treaty principles) (▲ AM, Ongoing);
 - best practice for euthanasia (especially of large whales) & rescue;
 - documentation and response to all marine mammal sightings unless known to be not unusual. Priorities are: southern right whales, humpback whales, Hector's dolphins, Maui's dolphins, beaked whales, pygmy sperm whales, aggregations of whales (3 or more), NZ sea lions (▶▶ AM, Ongoing);
 - appropriate tagging or marking of stranded whales and dolphins to determine survival rate of re-floated animals (▲ C, New);
2. Review each area stranding plan at least 2-yearly, to ensure plans are up-to-date and compliant with the National Stranding Plan SOP (▶▶ AM, Ongoing).
3. Include a section on large whale euthanasia in the Stranding Contingency Plan SOP (▲ GM-RDI, Ongoing).
4. Incorporate stranding response into the CIMS framework nationwide (▶ GM-RDI/C/A, Ongoing).
5. Ensure coordinated and efficient sampling procedures for all species through the Stranding Contingency Plan SOP (▶▶ GM-RDI, Ongoing).
6. Amend the legislation to better allow for holding marine mammal bones (▶ GM-RDI, New).
7. Review intellectual property rights issues with regard to samples, data and access to information and materials by other scientists and iwi (▶ GM-RDI, New).

Management

8. Continue to respond to all stranding events as per the Area Stranding Plans, including recording and sampling (▶▶ AM, Ongoing).
9. Optimise use of biological material and information from stranding events. Prioritise access to stranding materials on the basis of statutory requirements (in the interests of conservation, protection and management, and with regard to the Treaty principles) (▲ AM, Ongoing).
10. Refine large whale euthanasia techniques and utilise best practice as needed (▲ GM-RDI, Ongoing).
11. Develop national guidelines and best practice examples (possibly an SOP if appropriate) for cultural materials allocation and recommended permit conditions (▲ GM-RDI, New).
12. Develop a national standard for biological sampling of marine mammals (▶ GM-RDI, New).
13. Establish a clear, pragmatic, decision making process when deciding whether to euthanase or refloat live stranded marine mammals (▲ GM-RDI, New).

14. Increase feedback and availability of information from stranding materials by developing protocols/MoUs with external researchers, and coordinated information systems (e.g. BioWeb) (▶▶ GM-RDI/MCU (Sci), Ongoing).

Science

15. Continue to encourage investigations into the causes and prevention of mass stranding events (▶ C, Ongoing).
16. Develop & adopt appropriate tagging or marking of stranded whales and dolphins to determine survival rate of refloated animals (▲ C, New).
17. Evaluate the effectiveness/humane aspects of refloating or euthanasia (▶ GM-RDI, Ongoing).
18. Continue to collate and record strandings and sighting information and reporting of findings (▶▶ AM, Ongoing).
19. Develop a controlled reporting system for all strandings, sightings and incidents (▶▶ GM-RDI, Expanding).
20. Combine all stranding, sighting, incident, necropsy & collection information into a national incident database that is easily accessible (e.g. via Bioweb), with involvement of iwi and others as appropriate (▶▶ GM-RDI, Ongoing).
21. Establish and maintain a centralised, secure & accessible tissue/organ collection and database for all marine mammal samples. Likely locations for such a bank are Auckland University, Victoria University, Massey University or Museum of New Zealand *Te Papa Tongarewa* (▶▶ GM-RDI, New).
22. Continue to recognise science as an important use of marine mammal biological materials (▲ GM-RDI, Ongoing).
23. Record all sightings of marine mammals, unless known to be not unusual. Priorities are: southern right whales, humpback whales, Hector's dolphins, beaked whales, pygmy sperm whales, aggregations of whales (3 or more), NZ sea lions (▶▶ AM, Ongoing).
24. Establish and maintain a centralised database for all marine mammal stranding and sightings & other events (such as fishing related incidental mortalities), particularly:
- all species with identifiable individuals: southern right whales, humpback, sperm, killer whales, Hector's dolphin, Maui's dolphins, bottlenose, common and dusky dolphins;
 - all cetacean sightings (with a few exceptions of some common occurrences);
 - all stranding documentation photos (especially Hector's and Maui's dolphins, and southern right whales) (▶▶ GM-RDI, Expanding);
25. Compose annual summaries of stranding events and sightings from around New Zealand and send out to staff (▲ GM-RDI, Expanding).
26. Determine the likelihood of harmful disease outbreaks in marine mammal populations and assess the risks to species or populations (▲ MCU (Sci), Ongoing).
27. Continue to gather baseline information on endemic diseases in NZ marine mammals through necropsy of stranded animals (▶ C, Ongoing).

Relationships and community

28. Facilitate access by iwi to cultural materials as per departmental policies, stranding contingency plans and best practice (▶▶ AM, Ongoing).
29. Maintain & develop relationships with Iwi, Te Papa and external researchers for allocation of research and cultural samples and information (▶▶ AM, Ongoing).
30. Allow access by scientific and educational organisations to materials after conservation and iwi/Treaty priorities have been met (▲ AM, Ongoing).
31. Stranding guidelines written for volunteers that comply with health & safety and other requirements- insurance (cf. fire response), iwi involvement. (▶ GM-RDI, New).
32. Undertake a basic necropsy workshop to train key staff in the necropsy technique, and assist with networking between DOC staff, iwi and external research groups (▲ AM, Ongoing).
33. Encourage wider reporting and recording of cetacean sightings by the public, volunteers, associates, government employees and maritime companies, through public awareness programmes (▶ MCU (Sci)/C, Expanding).

Resourcing

34. Ensure that all Areas are adequately equipped and trained for prompt response to stranding incidents (▶▶ AM, Ongoing).
35. Develop NZQA unit standards for stranding response work (similar to fire response training system), and seek widespread training of staff (iwi, associates & volunteers?) to these standards (▲ GM-RDI, New).
36. Improve staff accomplishment of standard procedures contained in the National Stranding Plan SOP, e.g. recording and sampling (▶ C, Ongoing).

3.4 TOURISM

Tourism - cumulative impacts on threatened species and disruption to individuals, public education, permit & regulation compliance.

Key Objectives

1. **Quality industry.** To allow and promote the development of a quality marine mammal tourism industry ways consistent with the Marine Mammal Protection Regulations (MMPR) 1992.
2. **Fulfil legal requirements.** Administer marine mammal permits in accordance with the MMPR 1992.

Previous conservation actions

1. Development of MMP Regulations 1992 and permitting process.
2. Commercial Marine Mammal Tourism Permitting SOP.
3. Moratorium on issuing further whale and dolphin watching permits in Kaikoura.
4. Moratorium on viewing of southern right whales in the sub-Antarctic.
5. Compliance monitoring.
6. Research on effects of marine mammal watching, and adoption of recommendations into permits and operations.
7. Cost recovery systems to fund (in part or in whole):
 - permit processing, monitoring and compliance;
 - scientific studies on the effects of tourism operations on marine mammals; and
 - workshops and other means to disseminate information to permittees.

ACTIONS NEEDED

Planning & Strategy

1. Develop and finalise marine mammal tourism site plans for all key marine mammal tourism sites (especially) Kaikoura, West Coast North Island, Buller, Catlins, Fiordland, Canterbury, Auckland and Bay of Islands) to ensure whole of site long term planning for protection of marine mammals and management of tourist activities and interaction (▶▶ C, Ongoing).
2. Seek a review of the MMP Regulations 1992 as per the drafted recommendations (▲ GM-RDI/Legal, Ongoing).
3. Develop SOP/guidelines for marine mammal permit monitoring to achieve national comparability and overview of the industry, and to ensure compliance with individual permit conditions (▲ GM-RDI, New).
4. Develop SOP/guidelines for cost recovery and the use of revenue from marine mammal permits, to achieve national consistency and fairness among the industry (▶ GM-RDI, New).

Management

5. Improve CLE procedures to reduce harassment by tourist activities on marine mammals (▶▶ C, Expanding).
6. Evaluate the use of moratoriums or capping the number of permits in some areas of high tourist activity including Fiordland, Banks Peninsula, Porpoise bay, Bay of Islands, Hauraki Gulf etc (▶ C, Ongoing).

	<ul style="list-style-type: none"> 7. Ensure consideration of marine mammal impacts in Conservation Act concessions e.g. 4WD, helicopters (▲ C, Ongoing). 8. All conservancies to implement the Permissions Database to manage marine mammal tourism permitting (▶▶ C, Ongoing).
Science	<ul style="list-style-type: none"> 9. Develop consistent 'minimum-level' recording systems for whale watch and dolphin tour operators, and require all operators to use them (▲ MCU (Sci), Expanding). 10. Continue with research studies monitoring the impacts of tourism on marine mammals at key sites (▶ MCU (Sci)/C, Ongoing).
Relationships and community	<ul style="list-style-type: none"> 11. Enhance the conservation benefits of marine mammal permits by improving interpretation by operators and minimising impacts (▶ C, Ongoing). 12. Monitor and report on marine mammal permits in accordance with the SOP (▶ C, Ongoing). 13. Monitor all marine mammal tourist operations to the recommended standard (▶ C, Expanding). 14. Maintain regular contact and foster close working relationships with marine mammal tourist operators/ permittees, especially in development of site plans (▶ C/AM, Expanding). 15. Promote the establishment of a quality focussed industry body for DOC to work with in developing standards and quality practices at a national level (▶ MCU/C, New).
Resourcing	<ul style="list-style-type: none"> 16. Investigate use of NZQA unit standards for marine mammal tourism operators (▶ HRO, New). 17. Increased funding for costs associated with a greater number of permit applications and tourism issues (▶ GM'sO/GM-RDI/BMD, New). 18. Establish greater resourcing for CLE procedures (▶ GM'sO/GM-RDI/BMD, New).

3.5 SCIENTIFIC ACTIVITY

There is often a perceived conflict between scientific demands for marine mammal samples and the demands of iwi Maori. In many instances, this is being resolved to the satisfaction of all parties through dialogue and an appreciation of the parties' varied perspectives.

Key Objectives

1. To foster science that contributes to the conservation and management of marine mammals.
2. To ensure that marine mammal science is consistent with legislation and considers other conservation management objectives.
3. To secure information from scientific activity and make it publicly available.

Previous conservation actions

1. Cooperative relationships have been developed with several research organisations, and permits have been issued for a range of science activities. Some of these arrangements are reflected in marine mammal stranding plans.
2. Marine mammal science in NZ is published and used in a variety of ways, including regular summary reports to the IWC.

ACTIONS NEEDED	
<i>Planning & Strategy</i>	<ol style="list-style-type: none"> 1. Revision of the Marine Mammal Research Permitting SOP every 2 years (▶ GM-RDI, Ongoing). 2. Consider including scientific permits in the Permissions Database (▶ GM-RDI, New). 3. The investigation and development of a national tissue archive and protocols to hold and manage access to tissue samples (mainly genetic samples), and manage future issues such as iwi concerns (▶▶ GM-RDI, New). 4. Investigate additional science funding options (such as FORST), and/or, actively engage with groups that may seek to source outside funding for projects that align with MMAP priorities (▶▶ MCU/MCU (Sci), New).
<i>Management</i>	<ol style="list-style-type: none"> 5. Encourage researchers to focus on projects that have a high priority for the department (i.e. aligned to this MMAP), by promoting the projects and offering support (financial and operational) to these projects (▶▶ GM-RDI, Expanding).
<i>Science</i>	<ol style="list-style-type: none"> 6. Ensure that all raw data and analyses gathered under all marine mammal permits are provided to the Department and stored in a secure, accessible and useful retrieval system / database (▶ MCU (Sci), New).
<i>Relationships and community</i>	<ol style="list-style-type: none"> 7. Improved networks between research groups and DOC that close the reporting loops (typically a permit condition) to return information to underpin relationships, management and understandings (▶▶ GM-RDI/C/AM, Ongoing).

8. Develop memoranda of understanding with the major research institutions and associates, including Universities, Te Papa and CRI's (NIWA, ESR and Landcare), especially for the taking, holding and use of marine mammal parts. The MOUs will outline DOC's procedures for who samples will go to, how they will be stored and managed, long-term storage, cataloguing and cross referencing, information security, intellectual property rights, Maori and Treaty of Waitangi considerations, funding for storage and analysis of samples, Crown and legal responsibilities/ issues, to ensure that all samples of similar type are stored and analysed in a consistent manner. In order to utilise current expertise, marine mammal parts that are allocated for scientific purposes should generally be distributed in the following way:
 - Whole animals - Unless done in the field by DOC staff or other authorised persons, Massey University undertakes necropsies (including all Hector's and Maui's dolphins) and acts as the central distribution point for biological samples derived from these;
 - Bones, skulls and skeletons - Te Papa;
 - Internal organs - Massey University;
 - Disease samples - Massey University/National Centre for Disease Investigation;
 - Blubber samples;
 - Skin samples - Auckland University;
 - Stomach contents - Auckland University (Maui's dolphins only), others to Otago university;
 - These recipients will be expected to analyse and provide long-term storage for all samples received, or should promptly notify the Department if that is not possible (► MCU (Sci), Expanding);
9. Ensure all researchers operate under marine mammal permits if required (► C/ MCU (Sci) / MCU, Ongoing).
10. Develop media protocols between DOC and research groups to ensure consistent appropriate support in media statements (► ERD / MCU (Sci), New)
11. Develop internal DOC staff science skills (► MCU (Sci)/GM'sO/GM-RDI/C/AM, Ongoing)
12. Investigate sponsorship support for science priorities and volunteer schemes (► ERD/C, New).

3.6 POLLUTION

Marine pollution can cause significant yet generally avoidable effects on marine mammals, including mortality and reduced productivity. Marine debris has been shown to cause injuries and mortalities to individual animals, while it is possible that industrial and agricultural chemical contaminants can reduce and disrupt the reproductive potential of some coastal species. Pollution is often derived from identifiable sources (e.g. sewage or runoff etc.), and it is often easiest to reduce pollution at their sources.

Discharges can also attract marine mammals into hazardous and disruptive situations (e.g. the attraction of fur seals to fisheries waste discharged by fishing boats).

The Department aims to focus management on:

- Advocating for the reduction of pollution, sewage and marine debris entering the marine environment.

Key Objectives

1. To monitor and assess the incidence and significance of pollutants affecting marine mammals in NZ.
2. To minimise pollution and the impacts on marine mammals.
3. To advocate for the elimination of untreated sewage discharge into NZ waters

Previous conservation actions

1. Analysis of organic contaminants in New Zealand marine mammals.
2. Life history parameters and PCBs in stranded long-finned pilot whales.
3. Contributions to the MSA NZ Oil Spill response strategy.
4. National, regional and site (Tier 1, 2 & 3) oil spill response plans.

ACTIONS NEEDED

Planning & Strategy

1. Ongoing contributions to NZ Oil Spill Strategy and regional oil spill response plans (▲ GM-RDI, Ongoing).
2. Develop an SOP for DOC involvement in oil spill response. (NB. DOC is not legally obliged to assist responses, but often has useful expertise and resources) (◆ GM-RDI, New).

Management

3. Seek to control the discharge of untreated sewage and the use of contaminants and their subsequent release into the marine environment (◆ CPD/GM'sO/MCU/C/AM, New).
4. Contribute resources (equipment, personnel, advice) to oil spill incidents as specified in response plans (▲ GM'sO/GM-RDI, Ongoing).
5. Support anti-pollution/clean-up initiatives by regional councils, resource users and others (▲ C/ERD, New).

- Science**
6. Determine the incidence of marine mammal entanglement in marine debris (▶▶ MCU (Sci), New).
 7. Identify types and origin of marine debris that contribute to marine mammal mortality. Assess their relative significance and seek reductions in the disposal of these wastes into the sea (▶▶ MCU (Sci), New).
 8. Monitor the levels, and where possible biological impacts, of pollutants/sewage on marine mammal reproduction, survival and health. Ensure that samples are archived for long term trend analysis (▶ GM-RDI/MCU (Sci), Expanding).
 9. Undertake RMA and coastal planning work to eliminate and minimise pollution from marine farm and coastal operations (▶▶ GM/C, New).
 10. Investigate impact of ballast discharge and develop policy to manage (⊗ MCU (Sci)/GM-RDI, New).

Relationships and community

11. Liaise with the Maritime Safety Authority (MSA) and regional councils regarding oil spill planning and response (▲ GM-RDI, Ongoing).
12. Increase advocacy about the potential impacts of, and how to minimise marine pollution (▲ GM-RDI/ERD, Expanding).
13. Inform the community of marine pollution and entanglement events affecting marine mammals (▶ ERD / MCU / AM, Ongoing)
14. Organise beach clean ups to remove marine debris and reduce risk of entanglement (▲ C/AM, Expanding).

3.7 ACOUSTIC DISTURBANCE/UNDERWATER NOISE

Many marine mammals are very dependant on and sensitive to sound in the marine environment. Acoustic disturbances have been implicated in mortalities of marine mammals overseas, and identified as a potential threat to marine mammals in New Zealand. Such disturbances may arise from:

- seismic (geological) surveys;
- project installation and decommissioning associated with petroleum acquisition;
- boating activity;
- ports and coastal developments;
- devices designed to repel marine mammals (e.g. seal-scaring devices);

The Department aims to focus management on:

- Identifying and evaluating the potential threats to marine mammals from marine acoustic activity;
- Protecting marine mammals from inappropriate acoustic disturbance;

Key Objectives

1. To monitor the impacts of acoustic disturbance on marine mammals.

Previous conservation actions

1. Compilation of a list of recommended Code of Conduct for Seismic operators.
2. Compilation of observer log sheets for recording interactions/observations of marine mammals during acoustic disturbance.
3. Instigation of appropriate observer coverage on seismic vessels to monitor impact on marine mammals.
4. Consultation with seismic operators.

ACTIONS NEEDED	
<i>Planning & Strategy</i>	1. Produce a national Code of Practice for monitoring the impacts of seismic surveys on marine mammals in NZ (▲ GM-RDI/MCU, New).
<i>Management</i>	<ol style="list-style-type: none"> 2. Seek the management of navigation and underwater sound to within the determined limits (▲ GM-RDI, New). 3. Establish an observer program on vessels that are undertaking seismic activities to monitor impact on marine mammals and oversee procedures (▶▶ C, Expanding). 4. Develop guidelines on acceptable underwater noise levels for tourist operators etc (▲ GM-RDI, New). 5. Maintain a national Code of Conduct with the Petrochemical Exploration Association of New Zealand on minimising the impacts of seismic surveys on marine mammals to be regularly updated as new information comes to hand (▶▶ MCU, Ongoing)

- Science**
6. Conduct a literature review on the impacts of acoustic disturbance on marine mammals (▲ MCU (Sci), New).
 7. Determine acceptable underwater noise levels for marine mammals in (a) general areas of the NZ coastline (b) known 'haunts' of each species (▲ MCU (Sci), New).
 8. Determine the types of activities that have the greatest potential to cause adverse effects --vessel noise, seismic testing etc (▲ MCU (Sci), New).
 9. Monitor incidents of acoustic disturbance overseas (▲ MCU (Sci)/MCU, Expanding).
 10. Determine the current level of acoustic disturbance in coastal waters around NZ (▶ MCU (Sci), New).
 11. Continue to conduct necropsies on stranded marine mammals and investigate for any evidence of auditory damage if seismic testing occurred around the time of stranding (▲ MCU (Sci), New).

3.8 CLIMATE CHANGE AND NATURAL DISTURBANCES

Climatic change and natural disturbances (e.g. disease outbreaks) have been implicated in the population changes of a range of marine mammal populations in New Zealand waters, including NZ sea lions, NZ fur seals and elephant seals. It is important to ensure that such changes are understood, in the context of their relevance and interactions with human-induced changes.

The Department aims to focus management on:

- Monitoring and assessing changes in select marine mammal populations
- Proactively identifying, assessing and where appropriate responding to the natural and human agents of change in marine mammal populations.

Key Objectives

1. **Improve knowledge.** To better understand the effects of climate change and natural disturbances on marine mammal populations.
2. **Advocacy, mitigation and management.** To mitigate the effects of climate change and disturbances on marine mammal populations, and to use the acquired knowledge to inform and influence the management of such events.

Previous conservation actions

1. Assessment of marine mammal disease outbreaks within and outside New Zealand.
2. Documentation of marine mammal incidents and baseline information on distribution, pathology, etc.
3. Government programmes of climate change monitoring & management.

ACTIONS NEEDED

Science

1. Determine the effects of natural climate variability and human-induced climate change on marine mammal populations (▲ MCU (Sci), Ongoing).
2. Document natural disturbances that are shown or considered to have effects on marine mammal populations (▶ MCU (Sci), Ongoing).
3. Develop baseline information on marine mammal diseases & pathology (▶ MCU (Sci), Ongoing).
4. Monitor any impacts of climate patterns on distribution and abundance (▲ C, New).

3.9 WHALING & SEALING INDUSTRY

The historic whaling industry significantly depleted some species to less than 1% of their original abundance. Southern right, humpback, bryde's and other baleen whales; sperm and pilot whales, fur seal, sea lion and elephant seal were all extensively harvested and remain well below their potential abundance.

The Department aims to focus management on:

- Raising awareness of the present depleted state of New Zealand's marine mammal fauna;
- Protection of marine mammals from commercial harvesting;

Key Objectives

1. Assess and publicise the effects of the historic whaling industry on present-day whale populations.
2. Protect marine mammals from modern day whaling/sealing operations.

Previous conservation actions

1. Cessation of whaling in NZ waters.
2. Published report on the archaeology of NZ shore-based whaling stations.
3. Published report on the history of the NZ sealing industry.

ACTIONS NEEDED	
<i>Management</i>	<ol style="list-style-type: none"> 1. Assess and document the historic abundance, distribution and structure of whale populations in NZ. Determine the recovery potential for previously harvested species (► MCU (Sci), New). 2. Undertake population studies on species that have been, and are being, exploited to determine recovery and impacts (► MCU (Sci), Expanding).
<i>Relationships and community</i>	<ol style="list-style-type: none"> 3. Raise awareness of the history and current state of the marine mammal populations in NZ and further a field (► ERD/C, Expanding).

3.10 HEALTH & SAFETY

Marine mammal work carries with it significant potential health and safety risks. Particular matters to consider include disease/pathogen transfer, body fluid contamination, sharp tools, stressful situations, large animals, and difficult marine environments.

The Department aims to focus management on:

- Identification and mitigation of hazards in accordance with the Health and Safety in Employment Act 1992;
- Controlling and generally minimising direct contact with marine mammals by DOC staff and others;

Key Objectives

1. To ensure that all work undertaken by the Department complies with Health and Safety requirements.
2. To understand and manage the health and safety implications of marine mammal work by or under the jurisdiction of the Department.

Previous conservation actions

1. The Marine Mammal Stranding Contingency Plan SOP includes matters relating to health and safety.
2. HSE requirements demand that each Conservancy/Area plan for and implement measures to avoid or mitigate health and safety risks. Task sheets and hazard databases identify significant risks.

ACTIONS NEEDED	
<i>Planning & Strategy</i>	1. Develop standard procedures/ best practice for mitigating the risk of disease transfer in all operations, including stranding response, handling and working with live animals beyond those in the stranding plans (► GM-RDI, New).
<i>Management</i>	2. Assess and mitigate the health risks to people handling and engaging with marine mammals. Include mitigation measures in all Stranding Contingency Plans, hazard management systems and other operational documents, and provide links to best practice examples on the MAMS site (►► GM-RDI, Expanding). 3. Ensure all DOC staff and volunteers working with marine mammals are adequately informed about disease transfer and that staff are trained in managing the risks (►► GM'sO/GM-RDI, Expanding).
<i>Science</i>	4. Continue to investigate the incidence of disease in marine mammals and transmission risks to other animals and people, through the support of local research and the collation of international literature on this topic (▲ MCU (Sci), Ongoing).
<i>Relationships and community</i>	5. Improved advocacy to encourage the public to leave marine mammals alone because of the disease risk (▲ C, Ongoing).

3.11 SITE PLANNING AND PROTECTION/MANAGEMENT AREAS

Management of discrete sites or areas is an important way to achieve the Department's objectives. Included in this are legal mechanisms such as the establishment of marine mammal sanctuaries, fisheries area restrictions, Aquaculture Management Areas (AMAs), Conservation Management Strategies and marine protected areas.

Marine mammal tourism site plans are a non-legislative means being developed for several places where marine mammal tourism is at significant levels. Marine mammal site plans are an extension of this, but are intended to give a holistic approach, addressing a wider range of marine mammal issues than just tourism. Depending on each case, these plans could be internal documents to guide DOC staff, or public documents used to engage or inform external parties.

The Department aims to focus management on:

- Seeking the establishment of legal protection and management areas to enhance marine mammal protection and management in key locations;
- Developing site plans that give strategic direction to the management of marine mammals in specific areas;

Key Objectives

1. To develop marine mammal site plans in areas of NZ where an integrated approach to marine mammal management is appropriate.

Previous conservation actions

1. Draft tourism site plans for Banks Peninsula and other areas have been developed;
2. Marine mammal sanctuaries at Banks Peninsula and Auckland Islands;
3. Commercial set net ban established to 4nmi on the West Coast of the North Island.

Actions needed

ACTIONS NEEDED

Planning & Strategy

1. Develop a national framework/ guideline for Marine Mammal Site Planning (► GM-RDI, New).
2. Pilot marine mammal site plans for each of the following sites (►► C, Expanding):
 - Banks Peninsula Marine Mammal Sanctuary: tourism, fishing-related mortality, sanctuary management, resource management and marine farms, pollution, Hector's dolphin habitat and fur seal colonies, education, research, commercial and recreational boat traffic;
 - Kaikoura: concentration of many species (great whales, dusky dolphins, NZ fur seal), tourism, science, education. Consider World Heritage Area, Marine Mammal Sanctuary etc;
 - West Coast North Island: Maui's dolphin, fishing-related mortality, tourism, pollution;
 - Northern West Coast of the South Island: fishing-related mortality, tourism, Hector's dolphin habitat and fur seal colonies, science, education;

3. Expand the pilots to other sites if deemed suitable, including (► C, New):
 - Bay of Islands (bottlenose dolphins, other visiting cetaceans, tourism, navigation);
 - Hauraki Gulf (Bryde's whale, killer whales, bottlenose dolphins);
 - Fiordland (bottlenose dolphins, tourism, boat strike);
 - Auckland Islands (southern right whale, NZ sea lion, fishing-related mortality, tourism);
 - Catlins/Otago Peninsula (sea lions, Hector's dolphin, fur seals);
 - Hawke Bay -- (pygmy sperm whale, southern right whale, Hector's dolphin);
 - North East North Island - killer whales, bottlenose dolphins;
 - Admiralty Bay - dusky dolphins;
4. Consider options for legally protecting marine mammals and their environments through the prioritisation and development of proposals for new Marine Mammal Sanctuaries, World Heritage Areas and other area management approaches in some of the above sites (►► GM-RDI/C, Expanding).

3.12 MARINE MAMMALS IN CAPTIVITY

The keeping of marine mammals in captivity is able to be authorised by the issuing of a permit. However, the Department considers that the keeping of indigenous marine mammals for the purposes of public display is not consistent with the long-term interests of these species, or with public policy guidance. On occasion, it may be appropriate to hold marine mammals for the purposes of animal welfare or species conservation.

The Department aims to focus management on:

- Managing permits and applications in order to progressively phase out the holding of indigenous marine mammals for display;

It is intended to do this primarily through public awareness & education, information & science, and legal mechanisms for mitigation and protection.

Key Objectives

1. To progressively phase out where possible the keeping of marine mammals (especially cetaceans) in captivity.

Previous conservation actions

1. Permitting the holding of marine mammals.
2. International review of standards.

ACTIONS NEEDED	
Planning & Strategy	1. Establish national policies or legislation on captive breeding, holding in captivity, and rehabilitation of marine mammals (including NZ fur seals) (▶▶ CPD/GM-RDI/Legal, New).
Management	2. To progressively phase out as appropriate, permits for marine mammals to be held in captivity for the purpose of public viewing (▶▶ CPD/GM-RDI, Ongoing). 3. Consider amending the Marine Mammals Protection Act or Regulations to reflect management goals (▶▶ GM-RDI/CPD/Legal, New).
Science	4. Monitor the standards and operations of existing captive institutions (e.g. Napier Marineland, Auckland Zoo) (▲ GM-RDI/C, Expanding).

3.13 BOATS AND NAVIGATION

Boat strike has been known to cause the deaths of marine mammals, including the threatened Bryde's whale in the Hauraki Gulf and Hector's dolphin in Akaroa. The extent of this problem is poorly known, and solutions are not always easily found.

The Department aims to focus management on:

- Effective reporting and recording of incidents;
- Seeking to ensure sensible navigation of recreational boats and commercial shipping operators in areas where boat strike is likely;

It is intended to do this primarily through public awareness & education, information & science, and legal mechanisms for mitigation and protection.

Key Objectives

1. To assess and minimise the risk of boat strikes on marine mammals.

Previous conservation actions

1. Development of Marine Mammal Protection Regulations that recommend appropriate boating behaviour around marine mammals.
2. Public awareness initiatives such as Seaweek to advocate for sensible boating.
3. Education of Maritime Police officers

ACTIONS NEEDED	
<i>Planning & Strategy</i>	1. Develop national policy with respect to reducing incidental deaths of marine mammals by large ships (► GM-RDI/MCU, New).
<i>Management</i>	2. Continuing education of Marine Police Officers in key locations (▲ C, Expanding). 3. Implement special boating restrictions for critical habitats where boat traffic poses a problem - such as Hector's dolphin calving areas (►► C, New).
<i>Science</i>	4. Assess the incidence of boat strike on marine mammals and the impacts it has on populations. Collate all known reports to allow on-going monitoring (▲ GM-RDI/MCU (Sci)/C, New). 5. Investigate deterrents, planning (such as shipping lanes) and management options to mitigate ship strikes (► C, New). 6. Investigate the impact of shipping lanes on migration routes and patterns of large whales (▲ MCU (Sci), New).
<i>Relationships and community</i>	7. Educate public about risk of boat strike, and promote careful recreational boating practices around marine mammals (▲ C/AM/ERD, Ongoing). 8. Engage with shipping industry to discuss mitigation of boat strike on large whales (► C, Expanding).

4. Systems and Administrative Structures

4.1 NATIONAL LEGISLATION & GOVERNMENT POLICY

Marine mammal management is governed by a range of legislation and government policy, including:

- a. Marine Mammals Protection Act 1978;
- b. Fisheries Act 1996;
- c. Marine Mammals Protection Regulations 1992;
- d. NZ Biodiversity Strategy;

These documents aim to give guidance for the conservation management of marine mammals. It is important that they continue to reflect the evolving knowledge, human interactions, public opinion and government priorities relating to marine mammals.

The Department aims to focus on:

- Providing quality and timely advice to government on strategic marine mammal issues.

Key Objectives

1. To maintain national guidance and provide consistency and certainty for the conservation management of marine mammals.
2. Maximise legal protection for marine mammals in New Zealand.

Previous conservation actions

1. Development and reviews of legislation.
2. Species threatened status classification.

ACTIONS NEEDED

Planning & Strategy

1. Maximise opportunities to positively influence adequate resourcing of key actions in this marine mammal action plan (▶▶ GM'sO/GM-RDI/MCU/BMD, New).
2. Seek a review of the Marine Mammal Protection Regulations 1992 as per the drafted recommendations (▲ GM-RDI/Legal, Ongoing).
3. Review current management tools for a range of issues including:
 - Taking (including holding) of materials from dead marine mammals for cultural, scientific and other purposes (▶▶ Legal/GM-RDI/CPD, New);
 - Holding of marine mammals in captivity (▲ Legal, GM-RDI, CPD, Ongoing);
 - Safeguarding the ecosystem and ecological requirements for marine mammal species (▶▶ Legal, Ongoing);
4. Maintain and review current legal framework, departmental policy and interagency management of fisheries interactions and fishing-related mortality to ensure effective protection of marine mammals - e.g. Population Management Plans etc (▶▶ MCU/CPD, New).

5. Ensure that the legislative objective of protecting, conserving and managing marine mammals is adequately recognised within the NZ Oceans Policy (▶▶ CPD, New).
6. Consider developing this internally focused action plan into a formal NZ Marine Mammal Action Plan and consult widely on such a Plan should this be considered worthwhile to further conservation, protection and management of marine mammals in New Zealand (▶▶ CPD/MCU, New).

4.2 TREATY OF WAITANGI

The Department is obliged to have regard to the principles of the Treaty of Waitangi. Maori have a long and important tradition with marine mammals, and often have a close interest in all aspects of their management.

The Department aims to focus on:

- facilitating the active and early consultation and involvement of Maori in marine mammal management;
- recognising the strong connection with marine mammals and the traditional rights of Maori;

Key Objectives

1. To give effect to the principles of the Treaty of Waitangi within the Department's responsibilities under the Marine Mammals Protection Act 1978..

Previous conservation actions

1. Development of local protocols with iwi groups for consultation, procedures, and involvement in management of marine mammals (▶▶ Treaty Issues Group/CPD/MCU/GM'sO/GM-RDI/C/AM, Ongoing).

ACTIONS NEEDED	
<i>Planning & Strategy</i>	<ol style="list-style-type: none"> 1. Develop national policy and guidelines for involving Maori in the management of stranding events and allocation of cultural materials from marine mammals as far as possible (▶▶ Treaty Issues Group/CPD/MCU/GM-RDI/C/AM, Ongoing). 2. Establish clear policies and guidelines (including permitting) around the use and allocation of marine mammal materials (▶▶ Treaty Issues Group/CPD/ERD/MCU/GM-RDI/C/AM, Ongoing). 3. Seek development of Government policy on human consumption of beached marine mammals by tangata whenua, to address human health issues consistent with NZ's international approach (▲ CPD, New).
<i>Management</i>	<ol style="list-style-type: none"> 4. Develop and implement protocols (as required or requested) that are consistent with national guidelines, for the involvement of tangata whenua in the management of marine mammals, including stranding events and cultural material allocations (▶▶ GM-RDI/GM'sO/C/AM, Ongoing). 5. Integrate tangata whenua protocols into departmental standard operational plans for marine mammal stranding events (▶▶ GM-RDI/C/AM, Ongoing).
<i>Science</i>	<ol style="list-style-type: none"> 6. Provide for the incorporation of matauranga Maori (traditional science/knowledge) in the management of marine mammals (▶▶ GM-RDI/C/AM, Ongoing).

4.3 INTERNAL STRUCTURES & SYSTEMS

Marine mammal work is done by a wide range of sections within the Department. Some of the main sections and their respective roles are:

- Marine Conservation Unit (MCU);
 - Marine Mammals, Fisheries and RMA staff: promote best practice and continuous improvement in the Department's work, and advise on conservation management at the national level;
 - Conservation Services Programme (CSP): are located within the MCU, and are guided primarily by the provisions of the Conservation Act, Fisheries Act and Marine Mammals Protection Act;
- Conservation Policy Division (CPD): Develop national policy guidance for the Department's work;
- External Relations Division (ERD): involved in international advocacy and lead the Department's involvement in the International Whaling Commission;
- Information services Unit (ISU): provide national advice and direction in marine mammal science, and undertake or administer contracts for specific marine mammal scientific work;
- Conservancies: provide specialist expertise and advice to sustain operational management of marine mammals within conservancies;
- Areas: implement operational duties in accordance with national and conservancy priorities;

The Department aims to focus on:

- maintaining systems and resources that support the Department's marine mammal objectives;
- maintaining good communication and coordination within the Department.;

Key Objectives

1. To ensure quality, effectiveness, consistency and efficiency in marine mammal management by the Department throughout New Zealand.

Past Conservation Actions

1. Marine Mammal Administration Management System (MAMS) intranet site and the Marine Conservation Unit are the central pivots for DOC's marine mammal network.
2. Development of marine mammal Standard Operating Procedures and network teams.
3. CSP process has been leading fisheries-related mortality issues.

ACTIONS NEEDED

Planning & Strategy

1. Identify SOPs and Codes of Conduct that need development, such as: Marine Mammal permits (filming etc), underwater acoustic/seismic exploration (▶▶ GM-RDI/C/AM, Ongoing).
2. Include provisions for marine mammal conservation management in all CMSs (▶▶ C/AM, Ongoing).
3. Continuous improvement of Marine Mammal Stranding Contingency SOP (▶▶ GM-RDI/C/AM, Ongoing).
4. Review performance reporting measures for the Key Output (▲ BMD/GM-RDI, Ongoing).
5. Develop species plans for Hector's/Maui's dolphins, NZ sea lions and southern right whales (▶▶ GM-RDI, New).
6. Maintain the marine mammal component of the Department's threatened species classification (▲ MCU, Ongoing).
7. Ensure the outcomes of the Marine Mammal Action Plan are reflected in the Department's Statements of Intent and other business planning documents (▶▶ BMD/GM-RDI/C/MCU, Ongoing).

Management

8. Drive best practice within the Department by the development of SOPs, networks, effective management systems and training programmes, and by ensuring adequate resourcing (▶▶ GM-RDI, Ongoing).
9. Develop and maintain MAMS (Marine Mammal Admin Management System) as the central electronic networking tool for the Department's marine mammal functions (▶▶ GM-RDI/MCU, Ongoing).

Science

10. Integrate marine mammal information into an information management system (such as BIOWEB), including stranding events/sightings/incidents (▶▶ GM-RDI, Ongoing).

Relationships and community

11. Better incorporate MAMS networking tool into DOC Intranet (▲ BMD/GM-RDI, Ongoing).

Resourcing & Capability

12. Ensure that the department addresses capacity shortfalls specifically in relation to marine mammal conservation work (▶▶ DG, New).
13. Maintain the biannual national marine mammal workshop for DOC staff (and external) to exchange information and best practice etc (▶▶ GM-RDI, Ongoing).
14. Implement training programmes for staff, including broad training of field staff in stranding and sighting responses, as well as targeted training for specialist staff (▶▶ GM'sO/GM-RDI/C/AM, Ongoing).
15. Incorporate aspects of marine mammal management into the NZQA framework (▶ HRO, New).
16. Reflect Marine Mammal Action Plan outcomes in funding and planning arrangements (▶▶ GM-RDI/BMD, New).
17. Marine Mammal Action Plan to guide current resource allocation by managers within work area (▶▶ All, Ongoing).
18. Raise awareness and understanding of marine mammal issues within the Department. (▲ GM-RDI, Ongoing)

4.4 INFORMATION MANAGEMENT

Information underpins the management of marine mammals and comes from wide-ranging sources, including stranding events, tourism operations, sightings, consultation and scientific study. The Department continues to collate, secure and use relevant information in order to inform management decisions.

The Department aims to focus on:

* obtaining sufficient information, securing it and making it useful and accessible for the purposes of protecting and managing marine mammals;

It is intended to do this mostly through science, publication and database development.

Key Objectives

1. Maximise collection of information to underpin management.
2. Safeguard information resources long-term in a centralised accessible manner.

ACTIONS NEEDED

Management

1. Develop a robust information management system (such as BIOWEB) – especially for sightings, stranding events and incidents (such as fishing-related mortality, behavioural observations, injuries etc) that links necropsy, photos, indigenous and other information together to properly underpin management and scientific information needs for the conservation of marine mammals (▶▶ GM-RDI/ISU, New).
2. Develop the information management system for marine mammals to be accessible to all appropriate users internally (input & reporting), and via extranet users (Te Papa, Iwi etc) to contribute data or access information (▶▶ GM-RDI/ISU, New).
3. Develop the marine mammal information management system to be accessible externally via DOC website (▶ ISU, New).
4. Continuously improve standard information collection techniques (forms and standard operating procedures) to maximise high quality data collection for the marine mammal information management system (▶▶ GM-RDI/ISU, Expanding).
5. Ensure all information required by Area Office Stranding Contingency Plans is entered into the information management system, once created, in a quality manner (▶▶ AM, Ongoing).
6. Develop and maintain a long term, secure, and accessible tissue bank of marine mammal tissue samples, and associated protocols of access and use of material (▶▶ MCU (Sci)/GM-RDI, Ongoing).

Relationships and community

7. Annual publicly available reporting from the information management system - fishing-related mortality, stranding events, International Whaling Commission etc (▲ ERD/ISU, New)

Resourcing & Capability

8. Resourcing for implementation and training in information management system (▶▶ GM-RDI/ISU, New).

4.5 EXTERNAL RELATIONS & KEY ASSOCIATES

The Department's relationships with iwi, other agencies, associates and the public are important for the management of marine mammals. Some of the Department's main associates are:

- Crown agencies, including MFish, Maritime Safety Authority, Museum of New Zealand Te Papa Tongarewa;
- Fishing industry, including Te Ohu Kai Moana, SeaFIC;
- Recreational fishers;
- Science organisations, including universities and NIWA;
- Local communities & local authorities;

The Department aims to focus on:

- strengthening effective relationships and protocols that will enhance the protection and management of marine mammals.

Key Objectives

1. Maintain good communication and participation with community and stakeholders to improve conservation outcomes

Previous conservation actions

1. MOU with Ministry of Fisheries.
2. Contracts with research institutions.
3. Partnership work - such as WWF Maui's dolphin.

ACTIONS NEEDED

Planning & Strategy

1. Develop concise protocols/MoUs for liaison, consultation and information exchange with key stakeholders including (►► MCU/GM-RDI/ISU, New):
 - a. Museum of NZ (Te Papa Tongarewa);
 - b. Massey University;
 - c. Auckland University;
 - d. Otago University;

Relationships and community

2. Attempt to establish agreed management objectives on key marine mammal species that allows the agencies to engage in a clear and efficient manner in areas where management interests overlap (►► MCU, New).
3. Work with MFish in light of the Memorandum of Understanding and with other government agencies, to ensure whole of government objectives for marine mammal protection, conservation and management are achieved. Share information on matters where marine mammals and fisheries management overlap. Clarify statutory responsibilities where necessary (▲ GM-RDI/ISU/MCU /C/AM, Ongoing).
4. Arrange and facilitate marine mammal workshops, training and meetings with DOC, iwi, tourist operators, scientists and others, frequency depending on need (▲ MCU/GM-RDI/C/AM, Ongoing).

5. Manage flow of information between DOC, researchers, Maori and stakeholders - especially information from samples/taonga, for collective benefit. (▲ GM-RDI/ISU, Ongoing).

Resourcing

6. Seek sponsorship and other support for marine mammal conservation, especially Hector's and Maui's dolphins and southern right whales (▲ ERD/MCU/GM-RDI, Ongoing).

4.6 PUBLIC AWARENESS AND EDUCATION

The New Zealand public gives strong support for the conservation of marine mammals, and this is enhanced by effective education to raise awareness of the species and their management issues.

The Department aims to focus on:

- strengthening effective education about marine mammal conservation to the New Zealand public;
- facilitating and enhancing appropriate public involvement with marine mammals, including tourism and stranding responses;

Key Objectives

1. Reflect and foster New Zealand public's commitment to the protection of Marine Mammals in New Zealand, and actively seek to achieve it.
2. To develop support and promote positive action for marine mammal conservation among the New Zealand public and key associates.
3. To ensure effective cooperation between the department and key associates.

Previous conservation actions

1. Community-based initiatives.
2. Development and sharing of educational resources and best practice.

ACTIONS NEEDED

Planning & Strategy

1. Finalise & begin implementation of the Marine Mammal Public awareness plan/strategy (►► ERD, Ongoing).

Management

2. Implement Marine Mammal Public awareness plan/strategy (►► C/AM/ERD, New).

4.7 INTERNATIONAL ISSUES AND IWC

The Department plays an important role in establishing New Zealand's position at the forefront of international marine mammal conservation. It has an active role in the International Whaling Commission (IWC) forum and its scientific committee, and continues to develop important relationships especially with other Pacific nations.

The Department aims to focus on:

- Maintaining strong conservation advocacy in international marine mammal forums, founded on robust scientific information;
- Maintaining relationships with other Pacific and global marine mammal conservation management initiatives;

Key Objectives

1. **Advocacy:** To act as an effective leader in international marine mammal conservation.
2. **Protection:** To seek maximum possible protection for marine mammals in international waters.
3. **Cooperation:** To advance marine mammal conservation by working with international and regional agencies.

Past Conservation Actions

1. NZ government involvement in IWC and its Scientific Committee, including advocacy for a continuation of the international whaling moratorium, removal of inhumane killing methods, creation of whale sanctuaries, and scientific contributions.
2. Presentation of an Annual report to the IWC detailing cetacean research progress in NZ.
3. Scientific cooperation with the South Pacific Regional Environment Programme.
4. Support for and establishment of whale sanctuaries in international waters, particularly the Southern Ocean Whale Sanctuary.
5. Assistance with whale conservation initiatives in Pacific Island communities.
6. Participation in Scientific Committee and Commission of CCAMLR.
7. Support for the UN process through attendance at United Nations Informal Consultation on Protection of the Oceans and Law of the Sea, and through ratification and implementation of UNCLOS.

ACTIONS NEEDED

- | | |
|---|---|
| <i>Planning & Strategy</i> | <ol style="list-style-type: none"> 3. Develop policy on sanctuaries, whaling, marine mammal materials and other IWC issues (▶▶ ERD, Ongoing) 4. Disseminate New Zealand's experience with marine mammal conservation to the international community, by producing reports and presentations and sharing expertise on marine mammal tourism, marine mammal stranding management and fishing-related mortality prevention (▶ MCU / ERD, Ongoing) 5. Where requested and practicable, to participate in international conferences such as the Biennial Meeting of the Marine Mammal Society, the European Cetacean Society and specialist workshops (▶ ERD, Ongoing). 6. Continue active participation in international forums including IWC, UNCLOS, CCAMLR, CMS (▶▶ ERD/ISU, Ongoing). 7. Continue to work with Pacific Island governments, both on a bilateral basis and through SPREP, to advance marine mammal conservation in the South Pacific region (▶ ERD/ISU, Ongoing) |
| <i>Management</i> | <ol style="list-style-type: none"> 8. Promote the establishment of whale sanctuaries and other types of marine protected areas that will provide additional protection for cetaceans, within New Zealand waters, the South Pacific region and those areas of the Southern Ocean of particular interest to New Zealand (▶ ERD, Ongoing). |
| <i>Science</i> | <ol style="list-style-type: none"> 9. Prepare and publish an annual summary of cetacean research for submission to the IWC Scientific Committee (▶▶ ERD/MCU (Sci), Ongoing). 10. Develop programmes to identify the relationships between migratory cetaceans found in NZ waters and other areas in the South Pacific and Southern Oceans regions (e.g. humpbacks, sperm, southern right) (▶ ERD, Ongoing). |
| <i>Relationships and community</i> | <ol style="list-style-type: none"> 11. Provide support for the NZ government's involvement in the IWC and in relation to indigenous whaling (▲ ERD/GM-RDI, Ongoing). 12. Advocate via the IWC for a continuation of the commercial whaling moratorium and promote the use of humane and non-lethal methods for scientific study of marine mammals (▲ ERD/MCU (Sci), Ongoing). 13. Continue to support the implementation of a South Pacific Whale Sanctuary at the IWC (▲ ERD, Ongoing). |

4.8 MARINE MAMMAL PERMITS

The Department is responsible for issuing permits under the Marine Mammals Protection Act and its regulations, to manage the ‘taking’ (e.g. approaching, catching, disturbing, possessing) of live and dead marine mammals, including for the purposes of tourism, science, oceanographic investigation, cultural materials and display. While some such interactions are potentially harmful to marine mammals, conservation benefits may arise through:

- Increased information and knowledge of marine mammals;
- Greater awareness and support for marine mammal conservation by permittees, associates and the public;
- Clear legal requirements of the permittees;

The Department aims to focus on:

- Maximising the conservation benefit of all marine mammal permits;

It is intended to do this by processing and deciding on permit applications, and monitoring and managing all permits in accordance with the legislation, so that they are consistent with the conservation of marine mammals.

Key Objectives

1. To effectively manage permits under the Marine Mammals Protection Act and Regulations.
2. To integrate and optimise the scientific, cultural and other needs for marine mammal materials.

Previous conservation actions

1. Marine Mammals Protection Regulations (1992).
2. Development of Permitting SOPs to guide the permitting processing for tourism and research.
3. Processing of permit applications as required.
4. Development of site based planning exercise for tourism.

Actions needed

ACTIONS NEEDED	
<i>Planning & Strategy</i>	<ol style="list-style-type: none"> 1. Prepare Policy, SOPs & guidelines for the allocation of cultural and scientific materials permits, including recommended standard conditions (▶▶ GM-RDI, Ongoing). 2. Review the Marine Mammal Research Permit SOP to better provide for nationwide permits and reporting on approved permits (▶ GM-RDI, Ongoing).
<i>Management</i>	<ol style="list-style-type: none"> 3. Maintain the national register of permits (e.g. scientific and cultural allocations) as required by s8 Marine Mammals Protection Act (▶▶ GM-RDI, New). 4. Develop a register (either nationally or conservancy-based) of marine mammal materials that are held under issued permits (▶ GM-RDI/C, New).

5. Issue or renew 'blanket' permits (with appropriate conditions in accordance with guidelines) for specified tangata whenua groups and key science agencies (Te Papa Tongarewa, Massey University, Auckland University) to hold marine mammal materials (▶▶ GM-RDI, Ongoing).
6. Development of a complete filming permit guideline (esp. for underwater work with whales) (▲ MCU/GM-RDI, Ongoing).
7. Maintain a pool of permitted experienced NZ camera operators that can be utilised by foreign film crews in preference to permitting international visitors where disturbance may be possible (▶ MCU, Ongoing).

4.9 COMPLIANCE AND LAW ENFORCEMENT (CLE)

While education of the public or relevant persons is often the preferred way to ensure compliance with marine mammal legislation, stronger law enforcement action is sometimes necessary to control adverse effects on marine mammals.

The Department aims to focus on:

- marine mammal permit compliance;
- appropriate behaviour of the public around marine mammals;
- full reporting of human-related deaths of marine mammals;

It is intended to do this by processing and deciding on permit applications, and monitoring and managing all permits in accordance with the legislation, so that they are consistent with the conservation of marine mammals.

Key Objectives

1. **Compliance:** Effective compliance with the Marine Mammal Protection Act and Regulations.
2. **Understanding and Support:** Broad awareness, understanding and support for the legislative provisions relating to marine mammals.

Previous conservation actions

1. Marine Mammals Protection Act (MMPA) 1978 and Regulations 1992.
2. Compliance monitoring and liaison with permittees.
3. Monitoring and CLE work in known 'problem' sites.
4. Observer coverage on commercial fishing boats.

ACTIONS NEEDED	
Planning & Strategy	<ol style="list-style-type: none"> 1. Carry out a national assessment with recommendations to improve compliance with Marine Mammal Protection Act & Regulations, including (► GM-RDI, New): <ul style="list-style-type: none"> - a summary of the tools available & case study examples. - networking structures & responsibilities. - CLE training requirements. - methods for recording and storage of CLE information. - national priorities for action.
Management	<ol style="list-style-type: none"> 2. Ensure staff follow up and document/photograph all suspected offences and unusual events (such as butchery, shooting and entanglements) as it underpins all CSP and recovery work (►► AM, Ongoing). 3. Ensure permits are held by all persons requiring them for tourism, scientific, cultural and other purposes (►► C, Ongoing).
Science	<ol style="list-style-type: none"> 4. Conduct research and monitoring to assess the levels of compliance (e.g. fisheries observer coverage, boating & recreation, permits) (► MCU (Sci)/GM-RDI/MCU, New):

Relationships and community

5. Promote legal compliance by commercial operators, fishers, scientists and the public by using education as the first option and law enforcement as a 'reserve' option (▶▶ AM, Ongoing).
6. Maintain effective compliance monitoring of all permittees, as well as illegal operators, key associate groups and the general public (▶▶ AM, Ongoing).

Resourcing

7. Allow for unanticipated CLE incidents (▶▶ AM, Ongoing).