

Annual Report

for the year ended 30 June 2010



**Fiordland
Marine Guardians**
Beneath the Reflections

The Guardians' vision

"That the quality of Fiordland's marine environment and fisheries, including the wider fishery experience, be maintained or improved for future generations to use and enjoy."

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Acknowledgements

Thank you to the following who provided images for this annual report.

MAIN COVER IMAGE: Doubtful Sound sunset, *Paddy Ryan*.

FRONT COVER IMAGES: Diver, *Department of Conservation*; Yellow Zooanthids, *Steve Wing*; Deep Cove and Fur Seal, *Department of Conservation*; Scorpion Fish, *Steve Wing*.

BACK COVER IMAGES: Telescope fish, *Department of Conservation*; Aplysia, *Steve Wing*; Paua, *Lou Hunt, Department of Conservation*; Ecklonia, *Department of Conservation*; Dusky dolphins, *Jennie Brunton, MAF Biosecurity New Zealand*.

INSIDE FRONT COVER : The cruise ship *Sapphire Princess* in Thompson Sound, *Ross Kerr*.

Page 3: Tube Worms, Penguin and Crooked Arm, Doubtful Sound, *Department of Conservation*. PAGE 7: Sea perch and school of Butterfly perch, *Department of Conservation*. PAGE 8: Rock lobster/ Kōura, Holding pots, *Stephen Logie, Ministry of Fisheries*. PAGE 11: Blue cod, *Steve Wing*.

PAGE 13: *Undaria* on a mooring rope in Sunday Cove, *Kath Blakemore, Department of Conservation*. PAGE 14: The Guardians with Hon Dr Nick Smith.

PAGE 14: Acheron Passage, *Stephen Logie, Ministry of Fisheries*. PAGE 17: Lifting cray pot on *Miss Akaroa*, *Stephen Logie, Ministry of Fisheries*.

Chairperson's report

There have been a number of notable events over the last year, and two in particular in the last few months. The first was that in April the Fiordland (Te Moana o Atawhenua) Marine Management Act 2005 turned five years old. The second was the discovery, in Sunday Cove, Breaksea Sound, of the invasive Japanese seaweed, *Undaria*. To me there is a clear link between these events.

The passing of the Act in 2005 led to the establishment of the Fiordland Marine Guardians and a new way of approaching the management of the Fiordland (Te Moana o Atawhenua) Marine Area (FMA). Under the Act, the Guardians and the government agencies with management roles (management agencies) were required to work together and in a more integrated way. One of the concerns identified by the Guardians was the threat of invasion by marine pests, particularly *Undaria*, and the lack of a protection plan or a coordinated response agreed between the management agencies. In other words, if a marine pest was found in Fiordland, who would do what? With the support of the Ministers of the management agencies, this agreement has been developed and, while it is still to be ratified, it has provided a blueprint for recent actions. Even more fundamental, was the identification of the need for regular surveillance of moorings and anchorages to check for any marine pests. This had not occurred until then.

So I venture to say that, without the Act, *Undaria* would now be growing undetected in Fiordland and causing irreparable damage to the ecosystem. The fact that it was discovered and action has been taken, shows how far we have come. Time will tell whether it can be fully eradicated, but because it was found at an early stage the chances are definitely improved.

During the year we received reports on two National Institute of Water and Atmospheric Research (NIWA) surveys of the china shops and some selected deep reefs. The latter survey is one of the first to attempt to ascertain what is below normal diveable depths. The range of life seen below the 40-metre band was surprising; but not so surprising was the number of new species seen. It again shows we still have a lot to learn.

In August we staged an information display at the Southland Boat Show, and the level of interest and awareness was very pleasing. The willingness of people to express opinions and provide ideas is important for the future management of the FMA. With that in mind, the Guardians are using the Act's five-year anniversary as an opportunity to carry out a review of the provisions that were put in place, such as the fishing rules, establishment of marine reserves and biosecurity provisions. Because we recognise that things change and we need to keep the rules relevant to the current situation, later this year we will be asking people for their opinion on these and any other parts of the management regime. I encourage individuals and groups with an interest in Fiordland to begin thinking about things now, ready to have your say when the time comes, so that we can continue to make the vision we have for Fiordland a reality.

Malcolm Lawson

Chairperson



TUBE WORMS



FIORDLAND CRESTED PENGUIN (TAWAKI)

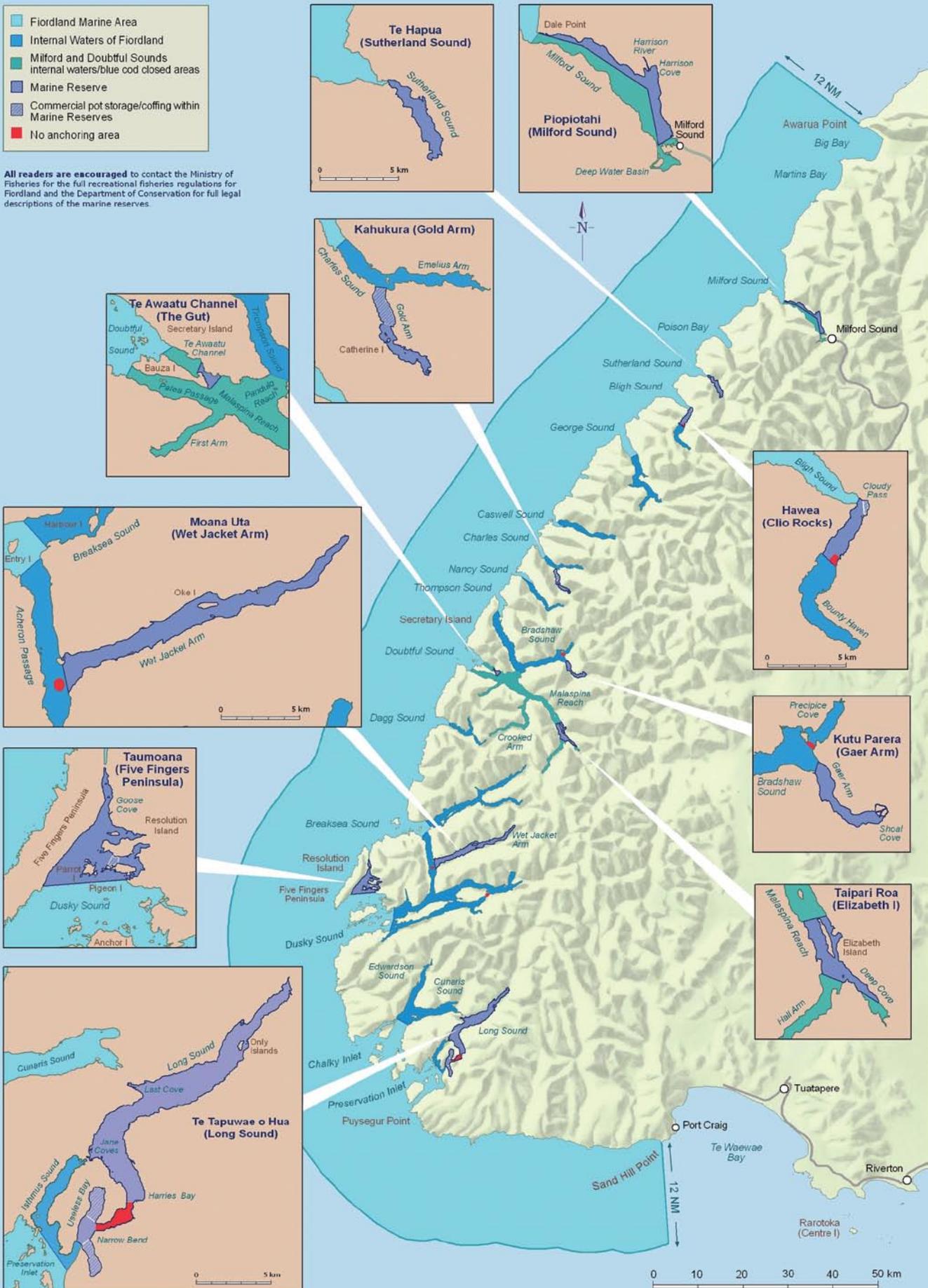


CROOKED ARM, DOUBTFUL SOUND

Fiordland (Te Moana o Atawhenua) Marine Area

- Fiordland Marine Area
- Internal Waters of Fiordland
- Milford and Doubtful Sounds internal waters/blue cod closed areas
- Marine Reserve
- Commercial pot storage/coffing within Marine Reserves
- No anchoring area

All readers are encouraged to contact the Ministry of Fisheries for the full recreational fisheries regulations for Fiordland and the Department of Conservation for full legal descriptions of the marine reserves.



History of the Fiordland Marine Guardians

From the first steps in 1995, the Guardians of Fiordland's Fisheries and Marine Environment embarked on a unique journey. The goal was the protection of the region's marine environment by those who value and use it. It was the genesis of today's Fiordland Marine Guardians (the Guardians). The original group, endowed with first-hand knowledge, experience and a passion for the Fiordland marine environment, developed an integrated management strategy and, with support from the management agencies,¹ saw the Fiordland (Te Moana o Atawhenua) Marine Management Act enacted in 2005. The Guardians are now implementing the management programme.

This process and its outcomes were a remarkable achievement. A variety of groups with very different interests had come together to share their views on how they could protect their own interests, and Fiordland, for the future. The groups included Te Runanga o Ngai Tahu, commercial fishers, recreational fishers, charter boat operators, tourist operators, marine scientists, and environmental and community interest groups.

The original vision adopted in 1995 remains the same for today's Guardians:

That the quality of Fiordland's marine environment and fisheries, including the wider fishery experience, be maintained or improved for future generations to use and enjoy.

A shared vision was a fundamental first step towards merging interests and creating a group that could interact freely and constructively. Sharing information followed, and the value of first-hand knowledge and experience shone through. Gathering information from a wide range of sources also built up the cooperative team spirit.

In 2000, the group invited local government to join, along with representatives of central government agencies, to provide a supportive advisory role. A complementary relationship soon evolved: the Guardians share information the agencies need, and the agencies provide significant support to the Guardians.

Developing the draft conservation strategy in only two years required a significant commitment. The group agreed on solutions for a number of issues. However, when one interest or sector benefited at the cost of another, the Guardians agreed that the advantaged party should give something in return, to help ensure that the greater good of Fiordland took precedence over competing interests. This became known as the 'gifts and gains' philosophy, which underpinned more difficult negotiations. For instance, when the commercial fishers volunteered to withdraw from fishing the inner fiords, recreational fishers volunteered to set stringent fishing rules for these more vulnerable inner areas.

Areas that were biologically diverse were identified as deserving particular care and were designated marine reserves. Other fragile areas were identified as having special qualities and became known as 'china shops'. Some of these areas were deemed to be vulnerable to damage from anchors and were designated no-anchoring areas. For the strategy to succeed in an isolated area such as Fiordland, it was very important that all stakeholders respected the restrictions in these areas, and this meant they needed to support both the process and the philosophy that underpinned it. The Guardians worked with agency staff and encouraged them to look for solutions that crossed the usual boundaries between the different agencies' roles. This approach was new and refreshing, and fundamental to successful integrated management.

By 2003, the Guardians recognised that they needed a way to protect the integrity of the whole package so that the balance of gifts and gains would not be compromised. The Fiordland (Te Moana o Atawhenua) Marine Management Act of 2005 established the Fiordland Marine Guardians, and is the first legislation of its kind for the marine environment in New Zealand. It cements in place a statutory role for a community group to continue to provide oversight and direction.

¹ The management agencies are the Ministry for the Environment, MAF Biosecurity New Zealand, Department of Conservation, Environment Southland and Ministry of Fisheries.

Achievements in 2009–2010

Monitoring projects

The Guardians helped with two monitoring programmes that substantially increased our knowledge of several fiord habitats. NIWA was commissioned to survey the china shops and reefs deeper than diving depths in Dusky and Doubtful Sounds.

China shop survey

During late January and early February 2009, divers surveyed the habitats at 20 china shop sites within the Fiordland (Te Moana o Atawhenua) Marine Area (FMA) using a combination of small-scale photographs and large scale video footage of each area. The research aimed to provide an inventory and describe what lived in the china shops, assess current levels of damage caused by humans, and assess the risk of future human-induced disturbance.

The results confirm that many of the china shops have unique or relatively rare species. Material collected during the survey indicate that of the 34 species of sea squirts found, 21 have not previously been found in New Zealand and may be new to science.

Deep reef survey

During March and April 2009, a selection of deep reefs was sampled using specialised remote equipment. A remote-operated vehicle with video recorded to depths of 140 metres, and an underwater video system that had bait attached recorded fishes attracted to the bait to depths of 200 metres. Many new species were recorded and, below 100 metres depth, a completely new ecosystem was discovered where the reefs were covered with delicate cup corals and tube worms with feathery tentacles. The researchers also discovered a new species of fish. More than 50 per cent of the animals videoed in depths below safe scuba diving could not be identified, even by expert biologists.

Both of these surveys have shown that we have only just begun to understand the unique marine biodiversity of Fiordland.

Presentations to interested groups

Members of the Guardians presented to several groups during the year:

- Malcolm Lawson spoke to the Environmental Studies group at the Southland Institute of Technology
- Alan Key made a presentation to the Marlborough Sounds recreational fishing group, with particular emphasis on the blue cod research programme and its results to date
- Malcolm Lawson presented to the New Zealand Biosecurity Institute Conference, using the Fiordland initiative as an example of how various organisations worked together to identify biosecurity threats, establish a range of proactive measures and respond when an incursion was detected.

User guide

Sales of *Beneath the Reflections – A User's Guide to the Fiordland (Te Moana o Atawhenua) Marine Area* have continued to be steady throughout the year. Retail book shops are also now stocking it and it has become a 'must have' for many people venturing to Fiordland.

More than 500 copies have been sold or distributed since the Guide was launched in October 2008.

Marine reserves advisory committee

The Southland Conservation Board has confirmed the Guardians as the marine reserves advisory committee for the Fiordland marine reserves. While the scope of this role is not prescriptive, it has been agreed that applications for scientific study within marine reserves will be assessed not only on the impact of the activity on that marine reserve, but also the wider benefits that may be gained from the research project.

Southland Boat Show display

In August 2009, the Guardians held a display at the Southland Boat Show. This was an opportunity to speak with members of the public in an informal setting, to provide information on the Guardians, and to receive people's views about what is happening in the area and what they would like to see happening. Interested people were also invited to add their names to the contact database.

The display was located next to stands run by MAF Biosecurity New Zealand (MAFBNZ), the Ministry of Fisheries (MFish) and the Department of Conservation (DOC), which allowed people to gain a full impression of the management of the FMA.

More than 40 copies of the User Guide were sold during the show.

Award received

Fiordland Marine Guardian, Sir Alan Mark, was named Southland's Environmental Achiever at Environment Southland's 2009 Environmental Awards. Sir Alan Mark was referred to as "New Zealand's answer to David Bellamy" and received the award to recognise his contribution to the environment and conservation over the past 40 years.

Appointment to Southland Conservation Board

Fiordland Marine Guardian, Stewart Bull, was appointed to the Southland Conservation Board.



Advice and recommendations given

Navigational aids

The Guardians supported the proposal to install four aids to navigation (2 buoys and 2 structures) in Doubtful, Breaksea and Dusky Sounds. The Guardians recommend the buoy marking Tarapunga Rock, at the entrance to Doubtful Sound, be lit so that it does not become a hazard itself during darkness or periods of reduced visibility.

Marine reserve research permit

Acting as the marine reserves advisory committee, the Guardians considered an application from the University of Otago to remove rock lobsters from the Gaer Arm Marine Reserve. The Guardians questioned whether it was necessary for the research to be conducted within a marine reserve, and whether it would contribute to the overall management of the fishery. The application was put on hold following communication with the University of Otago.

Rock lobster holding pots

During 2008–2009, MFish consulted the public about proposed changes to regulations about rock lobster holding pots in the FMA. The Guardians submitted that the strict interpretation of the legal definition of a 'rock lobster pot' meant that any holding pots used for storing live rock lobsters during a trip had to be included in the three 'catching' pots allowed per boat, and this was not contemplated when the regulations for the FMA were put in place. The Guardians submitted that holding pots needed to be differentiated from catching pots.

Following the MFish consultation, the Fisheries (Southland and Sub-Antarctic Amateur Fishing) Regulations 1991 were amended to include a definition of a rock lobster holding pot as "a pot or cage that is used, or is capable of being used, for holding or storing rock lobster, but excludes any pot or cage that is capable of catching rock lobster".

Further associated amendments have been made to allow for one holding pot per person, or a maximum of two holding pots per boat if two or more persons are on board. Provisions relating to the required markings on buoys also apply.



ROCK LOBSTER/KŌURA

Review of commercial harvest of *Undaria*

During the year, MAFBNZ released an issues and options paper as part of its review of the commercial harvest of the invasive seaweed *Undaria pinnatifida* (*Undaria*). The Guardians' view is that everything practicable should be done to prevent *Undaria* becoming established in Fiordland, and therefore any strategy that would increase the risk of *Undaria* spreading, either naturally or by deliberate means, is not acceptable.

The Guardians also submitted that options that loosened the current controls are inconsistent with Environment Southland's Regional Pest Management Strategy and the Regional Coastal Plan. It was recommended that regional councils have a clear mandate to override any new harvest strategy through regional plans, to allow them not to issue harvest or farming permits in areas alongside those with high natural character, containing diverse and/or fragile natural ecosystems, or habitats with other values, such as tourism.

Resource consents

The Guardians responded to a number of resource consent applications during the year, including:

DOC aerial 1080 poison drop

DOC proposed an aerial 1080 poison drop to control possums over a large area of southern Fiordland, including the coastal area in the Waitutu vicinity. The original proposal included a 20-metre buffer zone to reduce the inadvertent spillover of poison baits into the coastal marine area. The Guardians supported submissions from the commercial fishing industry that the buffer zone be increased. Following submissions, DOC agreed to increase the buffer zone to 50 metres and to use trickle feed buckets in the coastal area to further reduce the chance of spillover.

Indian Island restoration project – pest control

The Fiordland Conservation Trust, in conjunction with Fiordland Ecology Holidays, Ultimate Hikes and DOC, is carrying out a project to restore Indian Island in Dusky Sound to allow the reintroduction of endangered species. A precursor to this is the removal of all pests. DOC sought the support of the Guardians in its proposal to use *brodifacoum* poison to control rats and mice.

Following an assessment of environmental effects, and having been satisfied that the effect of the poison if it entered the marine environment was minimal, the Guardians supported the project.

Mooring application by Thomas Horne

The Guardians opposed the application of Thomas Horne to site a mooring on the northeast side of Deep Cove, in the vicinity of the Helena Anchorage. This was the first such application for a mooring in this area.

The Guardians submitted that the application did not comply with the policies of the Regional Coastal Plan which recommend all moorings and structures be limited to the west side of Deep Cove. The Guardians also submitted that Helena Falls is one of the iconic features of the area, and moorings and any boats attached to them would negatively impact on the visual amenity of the area.

The Guardians further submitted that they did not want to be unnecessarily obstructive to boat owners and recommended that a review of moorings and structures on the west side of Deep Cove be done to find out if a solution could be achieved.

The Consents Committee declined the application and accepted the recommendation that a review of existing moorings and structures be carried out. This will occur over the coming year.

University of Otago – sediment traps

The Guardians supported the application from Dr Candida Savage for consent to site 12 moorings within Doubtful and Thompson Sounds to which sediment traps will be attached for a limited period.

Island Escape cruises

A new application for consent to operate the charter vessel MV Island Passage continued to be a concern. This vessel is larger than other charter vessels in the Fiordland area. The original consent application was withdrawn and replaced with one containing different provisions. However, concerns remained regarding the safe operation of the vessel in anchorages and in periods of bad weather, and its impact on other vessels.

Meridian Energy Limited

During March 2009, Meridian Energy Limited made a formal application to Environment Southland for consents to draw more water from the Waiau catchment for the Manapouri Power Station, which would result in an increased discharge into Deep Cove, Doubtful Sound, through the tailrace tunnel. The consents would enable the company to increase electricity generation when high water levels in Lake Manapouri were available due to high rainfalls.

The company sought consent to allow an increase in the maximum discharge volume from the current 510 cubic metres per second (cumecs), up to a set point of 550 cumecs.

While neither supporting nor opposing the application, the Guardians' submission focused on three areas for the Hearing Panel to consider.

- Biological effects on the marine environment: The Guardians questioned whether the increase in fresh water would further impact on the ecosystems in Doubtful Sound and push the existing low salinity layer further down the Fiord.
- Effects on the bottlenose dolphin population: The Doubtful Sound population has been in decline since 2002 and, while it is likely that this is caused by a number of factors rather than a single cause, the impact of fresh water on newly born calves has been raised. The Guardians' view was that a precautionary approach be taken and the consent granted only if the Hearing Panel was satisfied that the increased discharge would not have a negative effect on the population.
- Effects on other users, particularly kayakers: An increased discharge increases the potential for currents and eddies to create a safety risk to users of the Deep Cove area.

Environment Southland recently released the decision of the Hearing Panel on the application. The Hearing Panel identified that the effects on the bottlenose dolphin population and on other users were among five particular elements that required consideration as potential adverse effects. It accepted that the environmental impact of the extra discharge would have effects that were minor, or less than minor, and that the physically dynamic nature of Doubtful Sound and its associated weather conditions would mask the effects of the increased discharge.

The consent has been granted for 21 years, as have associated consents for water levels in Lake Manapouri, Lake Te Anau and the Waiau River, with conditions attached.

Consent conditions dealing with the concerns of the Guardians and others include that Meridian Energy Limited:

- establish a multi-party bottlenose dolphin monitoring and research programme
- erect warning signs in the Deep Cove area and implement an alarm system to provide warnings of discharge changes
- implement an additional environmental monitoring programme, including Deep Cove and Doubtful Sound.

The Guardians are satisfied that the Hearing Panel took note and considered their submission and acknowledged the concerns raised.

Blue cod management plan

Milford and Doubtful Sounds have been closed to amateur fishing for blue cod since 2005, following recommendations from both MFish and the Guardians.

Since then a research monitoring programme has been in place, and the original two-year closure was extended to allow enough data to be gathered to inform decisions and be incorporated into a long-term management plan.

The research results will be available to inform the review of management measures due later in the year (further details are provided in the section Looking ahead: The next 12 months).

Possible management options include the following.

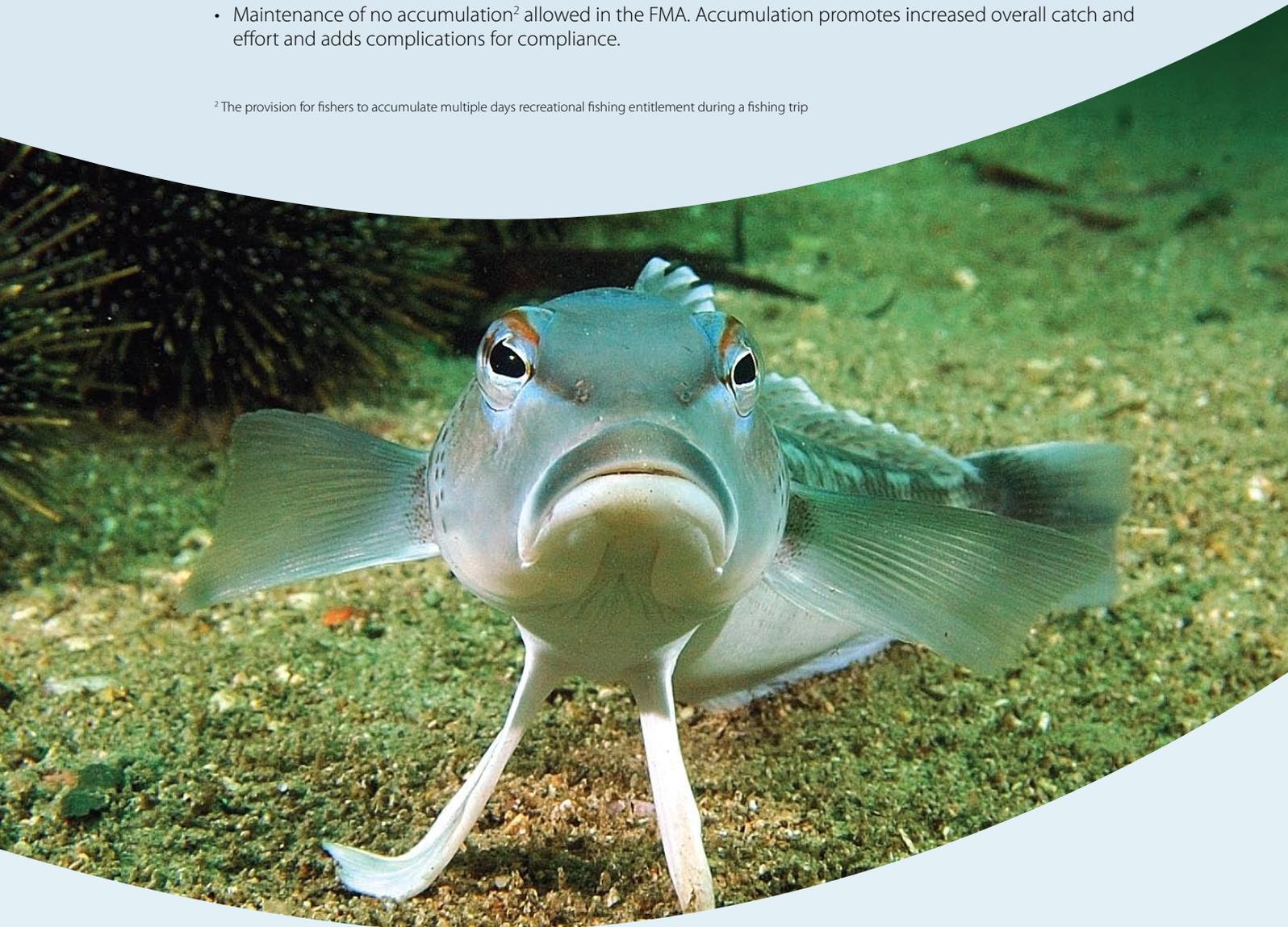
Daily bag limit

- A conservative bag limit that keeps catch rates at levels that maintain populations or allows them to increase.
- Reviewing the offshore bag limit of 20 fish per person per day. Having the same bag limits offshore and in the fiords would be easier for compliance.

Trip accumulation limit

- Maintenance of no accumulation² allowed in the FMA. Accumulation promotes increased overall catch and effort and adds complications for compliance.

² The provision for fishers to accumulate multiple days recreational fishing entitlement during a fishing trip



Size limits

- Size limits allow fish to spawn before being removed from the fishery. The current size limit is 33 centimetres. There is no data to suggest that this should be amended unless there is a move to a slot limit (see below).

Slot limits³

- Size limits protect small fish. However it is widely recognised that, for most fish species, larger females produce more eggs and are therefore the most valuable fish to have in the population. Also, large males should be maintained in the population to maintain the sex ratio that controls the size at sex change. Without the correct sex ratio, females begin to change sex earlier and the average size of females declines as the largest ones change sex.
- Slot limits can be used as a management tool to help ensure that the population's sex ratio remains unskewed and size-at-sex change remains high.
- For fisheries with a small bag limit, a slot limit can help guard against high grading – when a fisher reaches their bag limit and then catches a large fish they may be tempted to discard the dead smaller fish in their catch and retain the larger fish. Slot limits reduce the risk of this happening as large fish cannot be retained.
- Larger fish have a lower mortality if caught and released than small fish. A slot limit in the range of 30–45 or 35–45 centimetres in length would provide additional protection for blue cod populations.
- Fish should not be under 30 centimetres or above 45 centimetres for this measure to achieve its intended biological goal and guard against high grading.

Closed areas

- Evidence from the Marlborough Sounds shows that areas that are permanently closed allow blue cod populations to recover in both the abundance and size of fish. The areas chosen need to be appropriately placed and should not be rotated.

Seasonal closures

- These are generally used to protect fish in populations with predictable feeding or spawning migrations. In some areas they are used to dampen the effects of a large influx of fishers at peak periods. Blue cod do not make predictable seasonal migrations and are easy to catch – so closed seasons should only be used to reduce exposure to the fishery at periods of high fishing effort.
- Potential closure during spawning could be beneficial.

Restricted opening of the fishery

- Restricted openings dampen the 'goldrush' effect which can happen after a closed fishery is reopened, attracting a sudden influx of fishers.

Soft plastic baits

- Soft plastic baits can cause mortality that is not accounted for.
- Stopping the uses of these baits until they are deemed safe will avoid this issue.

Regulating hook numbers per line

- The handling of individual fish is reduced if a fisher only catches one fish at a time.
- Benefits include reducing the mortality of under/over-size fish. Combined with low bag limits, fewer hooks results in a longer fishing day. If multiple hooks are used, it may only take one cast to catch the bag limit, which would reduce the fishing experience.

Promoting good fish handling practices

- Good practices can result in better survival of released fish.
- Informing fishers about the best gear to use will help ensure fish survival.

Fish landed whole

- Landing fish in a whole or gutted state (head, fillets and tail on) should be the only states that fish can be retained. This is important to enable monitoring of compliance with size limits and identification of species for catch limits.

³ Having both an upper (maximum) and lower (minimum) catch size limit

Pest seaweed (*Undaria*) detected in Sunday Cove, Breaksea Sound

In April 2010, a solitary mature plant of the introduced Japanese kelp, *Undaria pinnatifida* (*Undaria*), was found on a barge mooring rope in the remote Sunday Cove, Breaksea Sound. A follow-up survey of Sunday Cove revealed further specimens on nearby barge ropes and the seafloor, although these were not reproductively mature.

During the survey, all plants found were removed and granulated chlorine was applied to the infested area of the seabed and covered with a tarpaulin to try to destroy all plants. During the survey, other frequently used areas were searched, including anchorages, moorings and areas of the seabed in Breaksea, Dagg and Dusky Sounds. This did not reveal any further *Undaria*.

Undaria is a fast-growing seaweed that can spread rapidly, displacing native species with major impacts on marine ecosystems. It could therefore have devastating impacts on the FMA's unique marine environment.

Given the effort by various agencies to protect the area from marine pest species, the discovery of *Undaria* was disappointing. However, the actions being taken by Environment Southland, MAFBNZ and DOC to determine the extent of the infestation and consider appropriate management options are positive.

The discovery of *Undaria* reinforces the need for everyone entering the FMA to take care not to introduce or spread marine pests. It is vital that owners and operators of boats entering Fiordland ensure their vessel hulls are clean and thoroughly antifouled, and that all marine equipment, such as ropes, mooring lines, pots, buoys, fishing and dive gear are clean and dry.



Other activities undertaken by the Guardians

Protocol

The protocol between the Guardians and chief executives of the management agencies has been updated. This protocol is required by the Act and sets out the operating relationship between the parties.

Cruise ship anchorages

The Guardians requested that Environment Southland assess areas suitable for anchoring by smaller-sized cruise vessels. Specific areas need to be identified to avoid anchors being dropped in sensitive areas, damaging the species that live there.

New display material

Display material was completed for the booking office and display area of Fiordland Explorer Charters Ltd.

New banners were produced for use at shows and as a backdrop for presentations.

Visit by the Minister for the Environment

In July 2009, the Guardians hosted the Minister for the Environment, the Hon Dr Nick Smith, aboard the GV Southern Winds. Presentations familiarised the Minister with the management model and provided agencies with the opportunity to give their perspective on how things are working.

The Minister asked the Guardians to assess if greater operating efficiency was possible, as part of the Government's focus on value-for-money. The assessment revealed that the Guardians are now involved in a much wider range of activities than when first established in 2005, while their budget had effectively reduced due to inflation. The Minister was assured that the Guardians would continue to work efficiently within the existing budget.

Meetings

Five meetings involving Guardians and management agencies were held during the year. Further details are in Appendix 2.

Newsletters

Three newsletters were sent out during the year to the 425 people on the Guardians' contact database.



THE GUARDIANS WITH HON DR NICK SMITH (CENTRE)



ACHERON PASSAGE

Looking ahead: The next 12 months

Website design

The design of the Guardians' website will be updated to make it easier to navigate and provide more relevant information. Websites are now one of the most important sources of information and it is therefore necessary to improve the site to encourage more visitors.

DVD production

The Communications Subcommittee is investigating the development of an educational DVD for use at boat shows or as part of presentations. It is proposed the DVD will incorporate the history of the Guardians and the Fiordland initiative, and explain the current role and aims. Each management agency will include a section to explain its role and responsibilities.

Review of the rules governing the Fiordland (Te Moana o Atawhenua) Marine Area

The Guardians recognise the need to ensure that the rules governing the management of the FMA are kept current and relevant. The existing rules are a result of the *Fiordland Marine Conservation Strategy* developed by the original Guardians of Fiordland's Fisheries and Marine Environment. As part of the five-year anniversary of the Act, people will be invited to submit on aspects of the management regime and any changes that may be needed.

As part of the review of the rules and consultation, a comprehensive management plan will be developed for the blue cod fishery, including the currently closed Doubtful and Milford Sounds fisheries (see the *Blue Cod Management Plan* section for further details).

It is intended that consultation will take place in November 2010, and will involve public meetings in Invercargill and Te Anau. Several reports will be published to help guide decision-making, including:

- Doubtful and Milford Sounds blue cod monitoring programme results
- biological monitoring of the Fiordland Marine Area, including the marine reserves
- the Fiordland Marine Area User Study
- the 2010 Ministerial review of the Fiordland (Te Moana o Atawhenua) Marine Management Act 2005.

Meeting with Minister – outcome of review

A requirement of the Fiordland (Te Moana o Atawhenua) Marine Management Act 2005 is that the Minister for the Environment carry out a review after five years to determine the effectiveness of the Act and its influence on the management of the FMA. This review has been commissioned by the Minister and will be completed by October 2010, following interviews with a full range of users and stakeholders. After the Minister has received the report, the Guardians intend to meet with him to discuss the findings.

Otago Boat Show

The biennial Otago Boat Show is scheduled for 29–31 October 2010 and the Guardians are planning a stand. The show provides an important forum for the Guardians to make contact with 'boaties' from the Otago region, as was done in Southland. Otago represents the second highest proportion of boaties visiting Fiordland by province.

Visit by Minister of Fisheries

The Guardians have invited the Minister of Fisheries, the Hon Phil Heatley, to accompany them on a trip into the FMA during 2010. In 2005, the Minister was a member of the Fisheries and Other Sea-related Legislation Select Committee that considered the Fiordland (Te Moana o Atawhenua) Marine Management Bill. Since then he has maintained an interest in the development and functions of the integrated management model established by the Act.

Receipt of survey results

During the coming year the Guardians will receive the reports from two monitoring projects underway to repeat surveys from 2007 and 2008:

- biological monitoring of the Fiordland Marine Area, including the marine reserves – University of Otago
- the Fiordland Marine Area user study – Lindis Consulting.

The results of these surveys will provide the Guardians and management agencies with an indication of any changes since the original baseline surveys.

Appendix 1: The Act – its purpose and function

The Fiordland (Te Moana o Atawhenua) Marine Management Act 2005

Section 3: Purpose of the Act

In recognition of the Fiordland (Te Moana o Atawhenua) Marine Area's local, national, and international importance, unique marine environment, distinctive biological diversity, and outstanding landscape and cultural heritage, this Act –

- (a) establishes the Fiordland (Te Moana o Atawhenua) Marine Area and 8 marine reserves in that area;
- (b) implements measures to assist in the preservation; protection, and sustainable management of the marine environment and biological diversity of the Fiordland (Te Moana o Atawhenua) Marine Area;
- (c) establishes the Fiordland Marine Guardians to provide advice on fisheries management, biosecurity, sustainable management, and marine preservation and protection;
- (d) facilitates and promotes cooperation between the Guardians and management agencies, to assist in achieving the integrated management of the Fiordland (Te Moana o Atawhenua) Marine Area;
- (e) acknowledges the importance of kaitiakitanga.

Section 13: Functions of Guardians

(1) The functions of the Guardians are –

- (a) to advise and make recommendations to management agencies and Ministers who exercise functions under the enactments listed in Schedule 13, to achieve the purpose of this Act, including, but not limited to, –
 - (i) advice and recommendations on the effectiveness of the management measures in the Fiordland (Te Moana o Atawhenua) Marine Area;
 - (ii) advice and recommendations on activities occurring outside of the Fiordland (Te Moana o Atawhenua) Marine Area if those activities impact, or are likely to impact, on the Fiordland (Te Moana o Atawhenua) Marine Area;
 - (iii) advice and recommendations on likely threats to the Fiordland (Te Moana o Atawhenua) Marine Area.
- (b) to facilitate and promote the integrated management of the Fiordland (Te Moana o Atawhenua) Marine Area;
- (c) to obtain, share, and monitor information on the state of the Fiordland (Te Moana o Atawhenua) Marine Area;
- (d) to assist management agencies to –
 - (i) prepare and disseminate information about the Fiordland (Te Moana o Atawhenua) Marine Area, including educational information;
 - (ii) monitor the state of the marine environment and biological diversity in the Fiordland (Te Moana o Atawhenua) Marine Area;
 - (iii) plan for the enforcement of, and compliance with, the management of the Fiordland (Te Moana o Atawhenua) Marine Area.
- (e) to conduct any reviews instituted under section 25 that they –
 - (i) are invited by the Minister to conduct; and
 - (ii) agree to conduct.
- (f) to perform any other functions given to them under this or any other Act.

(2) Advice and recommendations under subsection (1)(a) may be given on the Guardians' own initiative or at the request of –

- (a) a management agency; or
- (b) the Minister; or
- (c) the Minister for Biosecurity; or
- (d) the Minister of Fisheries; or
- (e) the Minister of Conservation.

Appendix 2: Meetings – dates and times

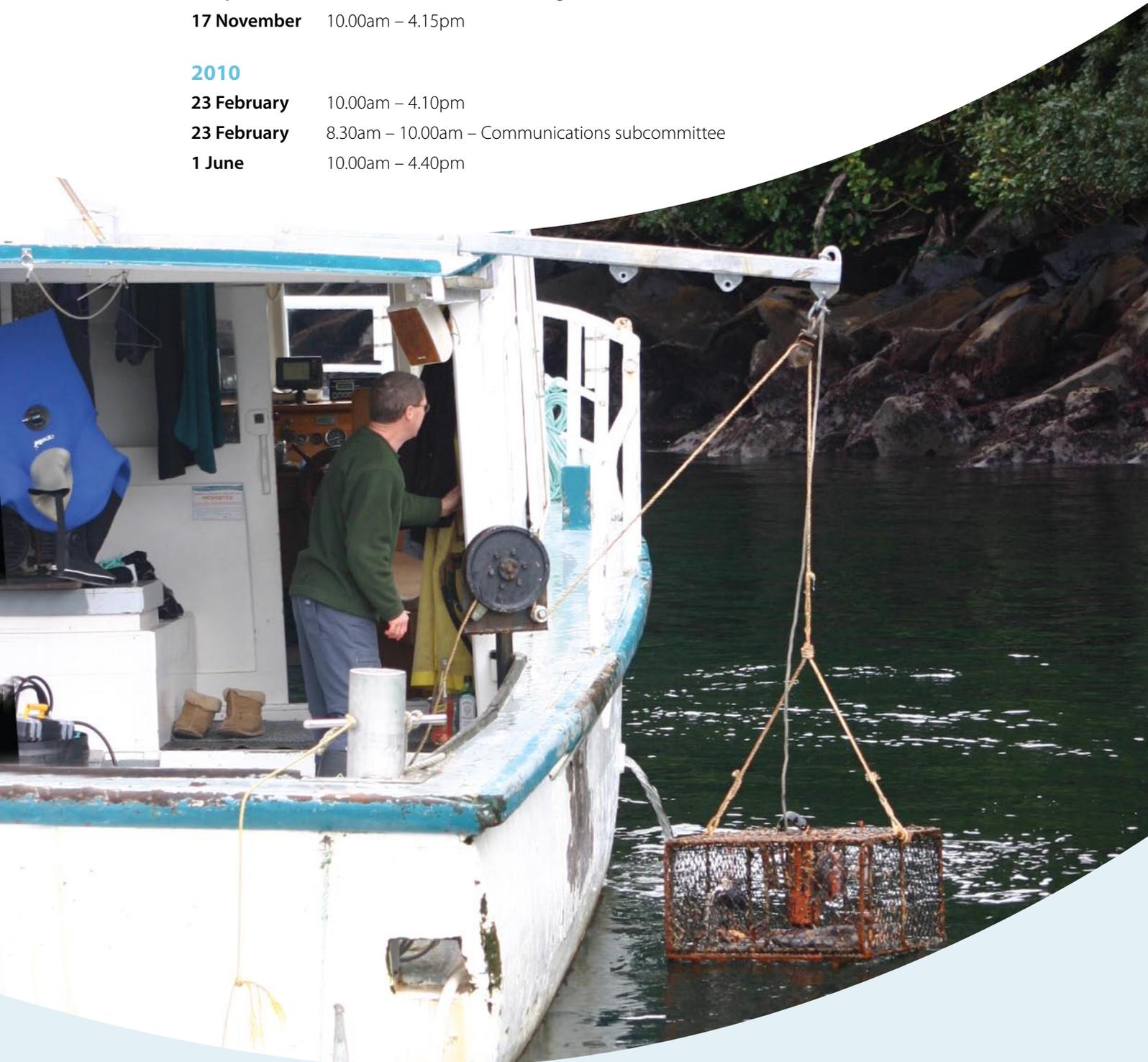
In accordance with Section 20 of the Fiordland (Te Moana o Atawhenua) Marine Management Act 2005, details of meetings held during the year are as follows:

2009

10 July	10.00am – 4.45pm
8 September	10.00am – 4.10pm
8 September	8.30am – 10.00am – Monitoring subcommittee
17 November	10.00am – 4.15pm

2010

23 February	10.00am – 4.10pm
23 February	8.30am – 10.00am – Communications subcommittee
1 June	10.00am – 4.40pm



Appendix 3: Agency reports



Ministry for the Environment

Role

The Ministry for the Environment (MfE) administers the Fiordland (Te Moana o Atawhenua) Marine Management Act 2005 (the Act) and is responsible for coordinating the Fiordland (Te Moana o Atawhenua) Marine Area Communications Plan. MfE provides administrative and secretariat support to the Guardians, and ensures the Minister's obligations under the Act are met.

Achievements

A major event for the Ministry was the visit of the Minister for the Environment, Hon Dr Nick Smith, to Te Anau in July 2009. The Minister spent a day in Doubtful Sound with the Guardians, agency staff and the Department of Conservation's Southland Conservator, learning more about the management of the FMA. The visit provided an opportunity to illustrate the very special nature of Fiordland. It also provided an occasion to discuss the management activities under way, and the scheduled ministerial review. Thanks to all those who made the visit a success, particularly DOC for making the GV Southern Winds available for the day in Doubtful Sound.

The ministerial review noted above is required under the Act, and will gauge the effectiveness of the current management regime in achieving the Act's intentions. Preparations for the review took more than a year. In April 2010, a consultant was engaged to undertake the review on behalf of the Minister and will interview the Guardians, management agencies and a range of stakeholders. While not all stakeholders will have an opportunity to take part, all major user groups have been approached and members interviewed. A report of the review's findings is expected to be published in late 2010. Thanks to everyone who has been interviewed as part of the review – your time and contribution is much appreciated.

An important role for the Ministry is as co-lead for communications activities for the Guardians (in conjunction with Environment Southland). Activities in the past year include the Guardians' presence at the Southland Boat Show in August 2009, promotion of the user's guide to the FMA (Beneath the Reflections) and ongoing management of the Guardians' website (www.fmg.org.nz). The newsletters prepared by the Guardians' secretary, remain popular, with the mailing list expanding to more than 425 interested parties. The newsletter provides updates on management activities in Fiordland, notices to users of the FMA and upcoming events for the Guardians.

Looking ahead

The Ministry looks forward to receiving the findings of the ministerial review. The report is expected to be finalised in October 2010, and will be discussed in a meeting with the Minister towards the end of the year. The report is likely to identify successes, along with opportunities for change and improvement.

The Ministry is working with the Guardians to investigate the development of a promotional and educational DVD. It is proposed the DVD will be a multi-purpose communication device. As such, it will have content that can be used at public events, as well as more detailed educational content for schools and other interested groups. Topics will include the unique attributes of the Fiordland marine environment, the establishment of the Guardians, how current management works and advice for anyone planning a visit to the FMA.



Ministry of Fisheries

The Ministry of Fisheries' (MFish) goal is New Zealanders maximising benefits from the use of fisheries within environmental limits. This year, MFish staff from fisheries management, science and field operations worked collaboratively as part of the Guardians and agencies team to help ensure this goal is met in the FMA.

Achievements

MFish continued to be actively involved with the Guardians and management agencies. This year, the focus has been on looking forward to the review of the effectiveness of the management of the FMA. Alongside this, the Guardians and management agencies have been considering whether any aspects of the existing fisheries management regime for Fiordland need to be reviewed.

Management of the recreational blue cod fishery continued to be a key issue, especially with the internal waters of both Milford and Doubtful Sounds closed to recreational blue cod fishing since mid-2005. During the year, MFish, the Guardians and the other agencies discussed possible options for managing blue cod in Milford and Doubtful Sound's. To help inform discussions, research monitoring of the blue cod populations in Milford and Doubtful Sounds continued. This work has been ongoing since the summer of 2005–2006.

In addition to the blue cod monitoring, work began on a preliminary study to see if otoliths (fish ear bones) could provide information on where blue cod have been during their lifetimes and, hopefully, provide evidence of where fish in their juvenile state originate from. This is important to determine the extent of colonisation and population spill-over from the outside coast. So far the research suggests the blue cod stocks inside the steep-walled fiords are highly territorial and rarely move any great distance, including little movement from one side of a fiord to the other. If the otolith results are promising, this could lead to further study of the Milford and Doubtful Sounds blue cod populations, and eventually to better information for managing blue cod stocks inside the fiords. Results of this work are expected later in 2010.

Throughout the past year, MFish has continued its role as lead agency for the delivery of the FMA integrated compliance plan. The plan was developed back in 2005 and now five years on, it is scheduled for review as the agencies look to re-evaluate the original objectives and give consideration to future strategies moving forward. In the early days, following the formation of the FMA, much of the compliance effort was placed on fisher education. It is pleasing to look back and see the results of that early effort, with inspections since 2005 revealing a steady decrease in detected fisheries offending.

In April 2010, personnel from MFish, DOC, Environment Southland and MAFBNZ teamed up to carry out a five-day multi-agency patrol of the FMA using the DOC GV Southern Winds. While it was disappointing that *Undaria* was detected in Sunday Cove, Breaksea Sound, during this trip, it was pleasing to note that with good numbers of inspections carried out, fishing activity compliance levels were extremely high.

Looking ahead

MFish will soon introduce new inshore finfish and shellfish plans. These will lead to the development of annual operational plans, for which the Guardians will likely provide valuable input. The review of the effectiveness of the management of the FMA will provide an opportunity for the Guardians to recommend refinements to existing fisheries management rules for Fiordland.



Department of Conservation

The Department of Conservation (DOC) is responsible for leading the implementation of a plan to monitor the state of the marine environment and biological diversity in the Fiordland (Te Moana o Atawhenua) Marine Area. This plan is implemented with involvement and collaboration between all the key agencies managing the FMA, and direct input from the Fiordland Marine Guardians. The Department is also responsible for managing Fiordland's 10 marine reserves.

Achievements

Two marine research projects initiated in 2009 were completed over the past year. Both the china shops and deep reefs projects were completed in the 2009–2010 year, after analysis and reporting of the information collected in the field in early 2009. Both projects have provided valuable information on the characteristics of these two types of areas, both of which previously had little recorded information about them.

During the summer of 2010, the field component of two further projects was carried out. Both were repeats of previous baseline surveys carried out soon after the commencement of the Fiordland (Te Moana o Atawhenua) Marine Management Act 2005, and aim to indicate changes that may have occurred due to the new management regime.

The first is the biological monitoring carried out across the FMA on reef fish and rock lobster numbers, as well as other key species, such as black coral, kina and kelp communities. The data from this work is being analysed and will be reported on by the end of 2010. The second project is a social study on people who work in or visit the FMA, and seeks to understand their use of the area, their values and their knowledge of the management regime and the Guardians, amongst other things. Similarly, the information collected for this project is currently being analysed and the report will be available by the end of the year.

Marine biosecurity has been a larger part of DOC's work over the past year. Collaboration with Environment Southland and MAFBNZ to draft a joint agreement for the response to a marine pest incursion in the FMA has been a positive process. The groundwork laid for this as-yet-to-be-completed agreement has been invaluable in managing the response to the find of a single *Undaria* plant in Breaksea Sound. The three agencies, along with the Guardians, are responding jointly, and the benefits of working collaboratively are already evident.

DOC, in conjunction with the Guardians, continues to promote the guidebook, *Beneath the Reflections: A User's Guide to the Fiordland Marine Area*, as the best source of information on visiting the FMA. Along with sales through DOC offices, many new retail outlets have been set up, increasing the exposure of the book. Over the past year, about 250 books have made it into the hands of people that we want to know about the management and special rules of the area.

Looking ahead

Over the coming year, DOC is looking forward to taking part in, and learning the outcomes of, the review of the FMA management regime. The assessment made during this process will be valuable for helping DOC, along with the other agencies and the Guardians, adapt our management, if needed, to ensure the original vision is being achieved. The coming 12 months will also see the installation of the marine reserve markers and poupou at marine reserves currently unmarked. This is another example of the collaboration between the Guardians and government agencies producing positive outcomes for the FMA.



MAF Biosecurity New Zealand

MAF Biosecurity New Zealand (MAFBNZ) is responsible for leading the development and implementation of a biosecurity plan that provides a framework for inter-agency activities to manage marine biosecurity threats to the Fiordland (Te Moana o Atawhenua) Marine Area.

Achievements

Implementation of the risk management Operational Plan recommendations

MAFBNZ contracted the Cawthron Institute to develop a five-year risk management Operational Plan for the FMA, which sets out the recommended activities that MAFBNZ, other relevant agencies and the Guardians could undertake to achieve the goals identified in the strategy. MAFBNZ has worked with the other agencies and Fiordland Marine Guardians to implement planned biosecurity recommendations for the past year, such as the following.

- Reviewing pile wrapping in Bluff harbour: Several wharves and jetties in the inner Bluff harbour area were wrapped in plastic to smother marine pests. The piles were regularly monitored and any wrapping that came loose was either removed completely or repaired. This monitoring showed that that pile wrapping was ineffective as a long-term source population control technique in Bluff; therefore all wrapping has been removed.
- Vessel monitoring: The monitoring programme was reviewed and modified. Moored vessels resident in Bluff and Stewart Island that are known to travel to Fiordland are inspected monthly. These inspections determine general marine growth and antifoul paint condition of vessel hulls, as well as the presence of any marine risk organisms. Any marine risk organisms found are removed by divers at the time, and vessel owners are informed and advised to ensure that their vessel is clean before travelling to the FMA. Young Fishing Ltd is contracted by MAFBNZ to undertake these inspections.
- Joint-agency compliance and surveillance: MAFBNZ took part in the joint-agency compliance and awareness exercise earlier in the year. This was an opportunity to talk to boaties in the area about the importance of marine biosecurity and raise general awareness.
- Communications plan: A Fiordland-specific communications plan has been prepared that provides messages on good boating practices (based on national generic work). A key outcome from the Plan is the revised 'Clean boats – living seas' boaties' guide that was modified for Fiordland marine users.
- Marine pest awareness: MAFBNZ held an agency training and awareness exercise at Environment Southland, primarily to raise awareness of marine pests. There was large council representation, and representatives from DOC and MFish also attended and participated.
- Research: The Cawthron Institute is undertaking research to identify potential treatment methods for mitigating biosecurity risks posed to the FMA from marine equipment, such as anchors, mooring ropes, fishing nets and pots, kayaks, dive equipment and wetsuits. While previous research and experimentation has identified numerous effective tools (eg, acetic acid; heat treatment) that have been successfully used to manage marine invasive species, other more commonly available treatment options have yet to be extensively trialled (eg, hot soapy water).

Joint-agency Marine Biosecurity Response Agreement

To support the risk management Operational Plan, MAFBNZ, DOC and Environment Southland have worked together to develop a joint-agency Marine Biosecurity Response Agreement. The Agreement provides a framework for investigating and responding to new to Fiordland marine risk organisms and is based on the Biosecurity Response System.

All agencies have agreed in principle to the draft Agreement.

Joint-agency response

MAFBNZ is working with DOC and Environment Southland (lead agency) on the detection of *Undaria pinnatifida* in Sunday Cove, Breaksea Sound. The agencies are using the principles of the Agreement and the Biosecurity Response System.

Surveillance

As part of a national marine surveillance programme, MAFBNZ undertakes 6-monthly surveys in 11 locations around New Zealand (including the Port of Bluff and a range of high risk ports and marinas) for 6 specific marine Unwanted Organisms declared under the Biosecurity Act 1993, and other target organisms. This port surveillance work has benefits for the Fiordland programme, such as detecting new-emerging invasive species. No new marine pests have been found in the Port of Bluff over the past year as part of this targeted surveillance programme.

Looking ahead

The primary focus for protecting the FMA is on prevention activities; therefore a staged implementation of the long-term risk management Operational Plan will be a priority for the next year. To achieve the objective of maintaining Fiordland's unique biodiversity, all users of the marine environment need to understand their roles and responsibilities in its protection.

Work will continue with DOC and Environment Southland on the current response to *Undaria* in Sunday Cove. Anything learnt from the current response will be incorporated into the joint-agency Marine Biosecurity Response Agreement.

Further information on Fiordland marine biosecurity can be found on the MAFBNZ website at: <http://www.biosecurity.govt.nz/pests/surv-mgmt/mgmt-partnerships/fiordland>



Environment Southland

Achievements

Biosecurity

Environment Southland biosecurity staff have continued to liaise with the Fiordland Marine Guardians, as well as with agencies, to develop collaborative approaches for dealing with the risks posed by the incursion of marine pests into Fiordland.

There has been ongoing input into the Fiordland Marine Biosecurity Strategic Plan, the Fiordland Marine Biosecurity Risk Management Operational Plan, and the MAFBNZ Response Model to deal with marine pest incursions in Fiordland. A workshop was held in December 2009 to examine Environment Southland's role in, and contribution to, marine biosecurity incursions in Fiordland. The outcomes of this largely supported the draft joint-agency response plan. Environment Southland has also established a Vessel Intentions Register as the result of recommendations made from the Risk Management Operational Plan.

Following the discovery of *Undaria* in Sunday Cove, Breaksea Sound, in April 2010, Environment Southland agreed to lead a joint biosecurity response with DOC and MAFBNZ. This involved a five-day delimiting survey in July 2010. The Council is likely to continue to support further *Undaria* surveillance activity and the development of an action plan to prevent further incursions of *Undaria* and other marine pest species.

Enforcement

Joint agency patrols were undertaken with MFish, MAFBNZ and DOC staff in Fiordland. A key focus during these patrols is compliance with surface water activities, the Coastal Plan, navigation safety bylaws and biosecurity. The sharing of resources and staff helps make compliance monitoring a viable option in the remote fiords.

The patrols were also used as an opportunity to educate boaties in Fiordland about some of the changes to the navigation safety bylaws that came into effect in July 2009, that require everyone on board a vessel less than six metres long to wear a life jacket.

From time-to-time Environment Southland staff conduct other monitoring activities, such as the three-yearly inspections of structures in the coastal marine area. Structures checked by staff are primarily wharves, jetties, moorings and consented discharge points into the FMA.

Three incidents were reported by members of the public during the year – two were illegal surface water activities, and one was a small oil slick in Milford Sound (see below). Checks were also made into some non-consented moorings, and vessels taking charters into Fiordland that were not consented for this activity. The prosecution for a non-consented surface water activity in the Fiordland area during 2008 is still before the courts, and is now expected to be resolved by the end of 2010.

Oil spill response

Environment Southland was involved in two Fiordland oil spill responses in the 2009–2010 year. The first was in Milford Sound on 13 January 2010, when a pilot reported a slick approximately 100 metres x 2 metres in the vicinity of Deepwater Basin. Environment Southland response staff monitored the slick over 24 hours, and it dissipated quickly in that time. It was not attributed to any particular vessel.

The second response occurred in Preservation Inlet on 23–24 May 2010, when the fishing vessel *Victor Hugo*, sank after hitting Whale Rock. Environment Southland initiated an oil spill response, including helicopter reconnaissance, but there was no evidence of any release of fuel or oil. When it sank, the *Victor Hugo* was more than five nautical miles from the Long Sound marine reserve and about two nautical miles from the Awash Rock no-anchoring area.

Resource consents

The Guardians are considered to be affected parties for any resource consent applications for the FMA, and provide advice. Recently there have been applications for 11 temporary moorings for scientific research by the University of Otago, renewal of commercial surface water activities by Deep Cove Charters (currently under appeal) and Mitre Peak Cruises. An application for a mooring at Deep Cove was declined. The Guardians consider the applications and report back to Environment Southland on the issues, or make a submission on the application, attending pre-hearing meetings and hearings, depending on the nature and extent of the proposed activities.

Moorings and anchorage areas

The Guardians are helping identify suitable anchorages that can be used by cruise ships or the larger tourist launches without compromising the values of the FMA. There has been some preliminary investigation into this in the 2009–2010 year, and the project is funded to continue in 2010–2011, using staff and equipment provided by Environment Southland, DOC and NIWA.

Aids to navigation

A preliminary diving survey led to a full survey of four areas identified as requiring new aids to navigation (AtoN). The new AtoN are proposed for Tarapunga Rock, Doubtful Sound, the northern entrance to Breaksea Sound, Paget Passage and Cascade Cove in Dusky Sound, and should be in place before the end of September 2010.

The installation of these AtoN required a coastal permit and the Guardians submitted on this application, advising they had no concerns provided the mark on Tarapunga Rock is lit to ensure it does not become a hazard at night.

Navigation safety bylaws

New bylaws were promulgated from 1 July 2009, and include no-anchoring provisions that arose from the Fiordland Marine Management Act 2005, and the subsequent amendments to the Southland Regional Coastal Plan. These no-anchoring provisions reinforce the Plan provisions and underline the need to protect these areas.

Looking ahead

Environment Southland will continue to work with the Guardians and management agencies, providing a local perspective in managing the coastal waters of the FMA. Environment Southland has agreed to undertake an examination of moorings and anchorages in the Deep Cove Area with the encouragement of the Fiordland Marine Guardians, and will continue to support the Guardians in the areas mentioned previously.

Appendix 4: Guardians' biographies



Stewart Bull

Stewart Bull has extensive knowledge of customary uses of Fiordland, particularly customary fishing. He is the chair of the Oraka-Aparima Runanga and is the Oraka-Aparima Runanga representative on the Board of Te Runanga o Ngai Tahu. Stewart is a Tangata Tiaki, appointed by the Minister of Fisheries, recognising particular expertise in local customary fishing management and resource issues, and is the Oraka-Aparima Runanga representative on the Customary Fisheries Advisory Group. He has been a member of the Guardians of Fiordland since their inception.



Jerry Excell

Jerry Excell is a commercial rock lobster fisherman operating out of Deep Cove. He is the director of a family fishing and quota owning company. Jerry has fished for more than 12 years in Fiordland and is heavily involved in the CRA8 rock lobster fishery as a member of the CRA8 Management Committee Inc board (the southern commercial rock lobster industry organisation). He is also involved in research projects through the collection and provision of data relating to the rock lobster fishery.



Ken Grange

Ken Grange, a pre-eminent marine scientist, is the Regional Manager of NIWA Nelson. He has a broad understanding of general marine science and, in particular, the Fiordland marine environment. Ken was the first to describe scientifically the unique marine environment of Fiordland and is an internationally recognised expert on black coral. He is a member of a number of societies, institutions and committees, including the New Zealand Marine Sciences Society and the Royal Society of New Zealand.



Alan Key

Alan Key has fished recreationally in Fiordland for the last 28 years. He is a long-term recreational fishing representative and is a current or past member of the Southland Sports Fishing Club, the Ministry of Fisheries South Marine Recreational Fisheries Advisory Committee, the Southern Blue Cod Advisory Committee, the Foveaux Straits Oyster Management Group and the Southland Marine Recreational Fishers Association. Alan has been a member of the Guardians of Fiordland since their inception and was involved in the Paterson Inlet Marine Reserve working group.



Malcolm Lawson

Malcolm Lawson is the Chief Executive of the CRA8 Management Committee Inc. He is heavily involved in commercial fisheries management in Fiordland. He is also involved with the Otago Rock Lobster Industry Association and is a member of the New Zealand Rock Lobster Industry Council. Malcolm sits on the ministerial advisory group for rock lobster and is also a company director. Malcolm has previously worked for MFish. He is the chairperson of the Fiordland Marine Guardians.



Sir Alan Mark

Sir Alan Mark is an Emeritus Professor of botany at the University of Otago. He has been heavily involved in conservation management for 30 years and is highly respected in this field. Sir Alan has been a long-term member of many conservation organisations, including the Royal New Zealand Forest and Bird Protection Society, the Royal Society of New Zealand and the New Zealand Ecological Society. He was chair of the Guardians of Lakes Manapouri and Te Anau for its first 26 years, and has been a member of the New Zealand Conservation Authority. He has been a member of the Guardians of Fiordland since 2001.



Anne McDermott

Anne has significant experience of the area, having dived, fished and tramped in Fiordland for 20 years. She has dived in the fiords more than 350 times (in Preservation, Chalky, Dusky, Breaksea, Doubtful, Nancy, Charles and Caswell Sounds), giving her firsthand experience of the Fiordland marine environment. Anne and her husband own a boat and she has many contacts among the Southland recreational fishing, boating and diving sectors.



Mark Peychers

Mark has three decades of firsthand experience of the Fiordland marine environment, including 28 years as a commercial fisher. He was an original member of the Guardians of Fiordland's Fisheries. Since retiring four years ago, Mark has worked as a relief skipper for Fiordland Ecology Holidays and Mitre Peak Cruises. He now skippers on DOC's vessel in Fiordland. Through his work in Fiordland, Mark has built up positive relationships with DOC, MFish, and Environment Southland. He is a shareholding director of Fiordland Lobster Company Limited and is actively involved with fisheries management in the Fiordland area, as well as other areas of New Zealand. Mark was involved in the implementation of the first two marine reserves for the Fiordland area.

BENEATH THE REFLECTIONS

A User's Guide to the Fiordland
(Te Moana o Atawhenua)
Marine Area



This **fully water-proof** 'one-stop shop' guide will help you get the most out of your visit to Fiordland.

It contains information on:

- how the Fiordland Marine Area was established
- the history and physical and biological environment of the Fiordland Marine Area
- relevant Fiordland marine regulations
- practical information on visiting the area.

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email: fiordlandvc@doc.govt.nz

DOC's Invercargill Office
Level 7, 33 Don Street, Invercargill



Or online at www.fmg.org.nz





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