Our Living Treasure | Tō tātou Koiora Taoka

Otago Regional Council's Biodiversity Strategy 2018

Otago Regional Council

Otago Regional Council

70 Stafford St, Dunedin
0800 474 082
www.orc.govt.nz

FRONT COVER: Sinclair Wetlands **THIS PAGE:** Puerua River Deviation, South Otago

ORC BIODIVERSITY STRATEGY

Otago Regional Council

Vision: Otago is the proud home of thriving ecosystems and rich biodiversity.

Purpose: This strategy identifies how ORC will add value and strategic leadership to the biodiversity initiatives of communities and other organisations in Otago.

GUIDING PRINCIPLES

- Part of everyday life
- Co-led by communities
- Focus on ecosystems
- Coordinated & collaborative

DESIRED OUTCOMES

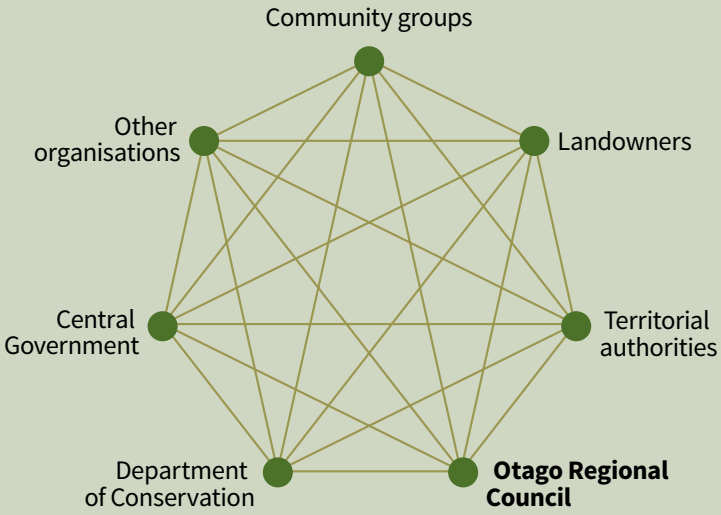
1. All indigenous species and ecosystems that support them are maintained

2. Theatened indigenous species and ecosystems that support them are actively protected and enhanced

3. People are aware and proud of Otago's biodiversity

4. Kāi Tahu's role as kaitiaki is acknowledged and supported

5. Otago's biodiversity adds value to the regional economy



TO ACHIEVE THESE OUTCOMES, ORC WILL:

Collaborate

- Hold a biennial regional biodiversity forum
- Participate in national level initiatives and collaboration to improve biodiversity outcomes
- Partner with city and district councils, Kāi Tahu, DOC, and other organisations
- Administer the ECO Fund

Educate and share information

- Provide information on biodiversity
- Support education programmes
- Develop an online portal for sharing information

Monitor and research

- Undertake research on biodiversity
- Map biodiversity values, protected areas, and planned initiatives
- Undertake surveys on biodiversity outcomes, perceptions and practices
- Identify and report on biodiversity indicators for Otago

Regulate

- Administer the Regional Pest Management Plan
- Ensure regional and district plans provide for good biodiversity outcomes
- Assess and report on the effectiveness of ORC's actions

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OTAGO'S BIODIVERSITY

Vision: Otago is the proud home of thriving ecosystems and rich biodiversity

Biodiversity (or biological diversity) describes the variety of all living things. It includes the range of species, their genetics, and the ecosystems where they live. Biodiversity is essential for the functioning of ecosystems; it helps to sustain all life forms, including human.

Otago is one of the most diverse regions in New Zealand. We are known for our wildlife: from the Orokonui Ecosanctuary in Dunedin, to the albatrosses and yellow-eyed penguins on the Otago Peninsula, to the endangered skinks of Central Otago and cheeky kea of the Southern Alps. Not to mention lizards, birds, galaxiids, plants, and marine species. This diverse ecology contributes to our health, our economy, and our social and cultural wellbeing. Otago's indigenous species are also ngā taoka to Kāi Tahu, and form a strong part of their cultural identity.

Refer to the appendix for a list of the key ecosystems within Otago, the species that live in them, and the threats to them.

CASE STUDY

PEST MANAGEMENT

Pest management is crucial for protecting Otago's biodiversity. The Otago Pest Management Plan provides a framework for how listed pest plants and animals are managed, and includes objectives, means of achieving and monitoring objectives, and rules that are specific to each plant and animal.

The plan is only part of ORC's response to pest management, which also includes surveillance, community assistance, public education, and funding research both nationally and internationally.

Tomahawk Lagoon, Dunedin

ABOUT THIS STRATEGY

Biodiversity is all around us, from protected reserves through to our backyards and neighbourhoods. We all benefit from it, and we can all play a part in protecting it.

This strategy outlines Otago Regional Council's (ORC) role in protecting the biodiversity that we have inherited, and leaving it in a better state for future generations. It was developed with input from stakeholders and the Otago community.

There are already over 70 organisations and community groups, as well as private landowners and individuals, enhancing our biodiversity and providing opportunities to get involved. A cornerstone of this strategy is to support these groups and foster collaboration and coordination at the regional level. As ORC implements this strategy, we will work closely with Kāi Tahu, the Department of Conservation (DOC), city and district councils, and community groups throughout Otago.

The strategy sets out the biodiversity outcomes ORC wants to achieve, and the actions we will take to reach them.

This strategy is a stepping stone. It will be a living document and evolve as new knowledge is developed, stakeholder collaboration increases, and national legislation is reviewed.

CASE STUDY

TOMAHAWK LAGOON

Tomahawk Lagoon in Dunedin has significant biodiversity and recreational value, however until recently little information existed on its ecological health. ORC has partnered with the University of Otago, Healthy Harbour Watchers, DOC, and a number of local schools to survey the water quality of the upper lagoon to clarify the existing state of the lagoon and establish a strong framework for long-term monitoring.

This project is a good example of an initiative that would be supported through implementing this strategy.

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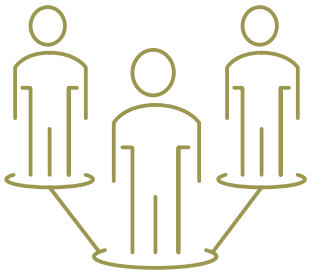
GUIDING PRINCIPLES

Several principles underpin ORC's biodiversity strategy. These will guide decisions as we implement the strategy and help to ensure its success



CO-LED BY COMMUNITIES

Biodiversity projects are led or co-led by local communities with support from councils and organisations

FOCUS ON ECOSYSTEMS

An ecosystems-based approach is taken to effectively manage biodiversity

PART OF EVERYDAY LIFE

People are conscious of and enjoy biodiversity in their everyday lives

COORDINATED & COLLABORATIVE

Key stakeholders take a coordinated and collaborative approach towards enhancing biodiversity outcomes

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KEY ISSUES

Where we are	Where we want to be
The sustainability of indigenous species is at risk from predators and pests.	The impact of pests on indigenous species is actively managed and reduced.
Some unique habitats of flora and fauna have been lost, reduced in size, or degraded through human activities.	The extent and life-supporting capacity of habitat for indigenous species is maintained or enhanced.
There is a risk of gaps and overlaps due to the large number of agencies working in biodiversity throughout Otago. This can result in inefficiencies if not well coordinated and aligned with regional priorities.	ORC leads regional coordination and alignment of biodiversity initiatives across organisations and communities in Otago.
Limited funding constrains the viability and effectiveness of projects.	Biodiversity initiatives are prioritised and key projects are adequately resourced.
Ecosystem services* are not well understood, which can lead to inadequate protection and neglect.	People are aware of ecosystem services and understand how to look after them.
There are information gaps about ecosystems and indigenous biodiversity in Otago. This leads to people doing things without knowing the impact it may have and can limit the effectiveness of biodiversity projects.	Organisations and communities have good information and understanding about Otago's biodiversity.
Climate change is likely to impact on the health and distribution of species. Pests will spread to new areas, habitats will change, and indigenous species may need to migrate.	Potential impacts from climate change are understood and prepared for.

** Ecosystem services are the benefits we get from healthy ecosystems such as clean air and water, and productive soils*

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VISION & OUTCOMES FOR BIODIVERSITY

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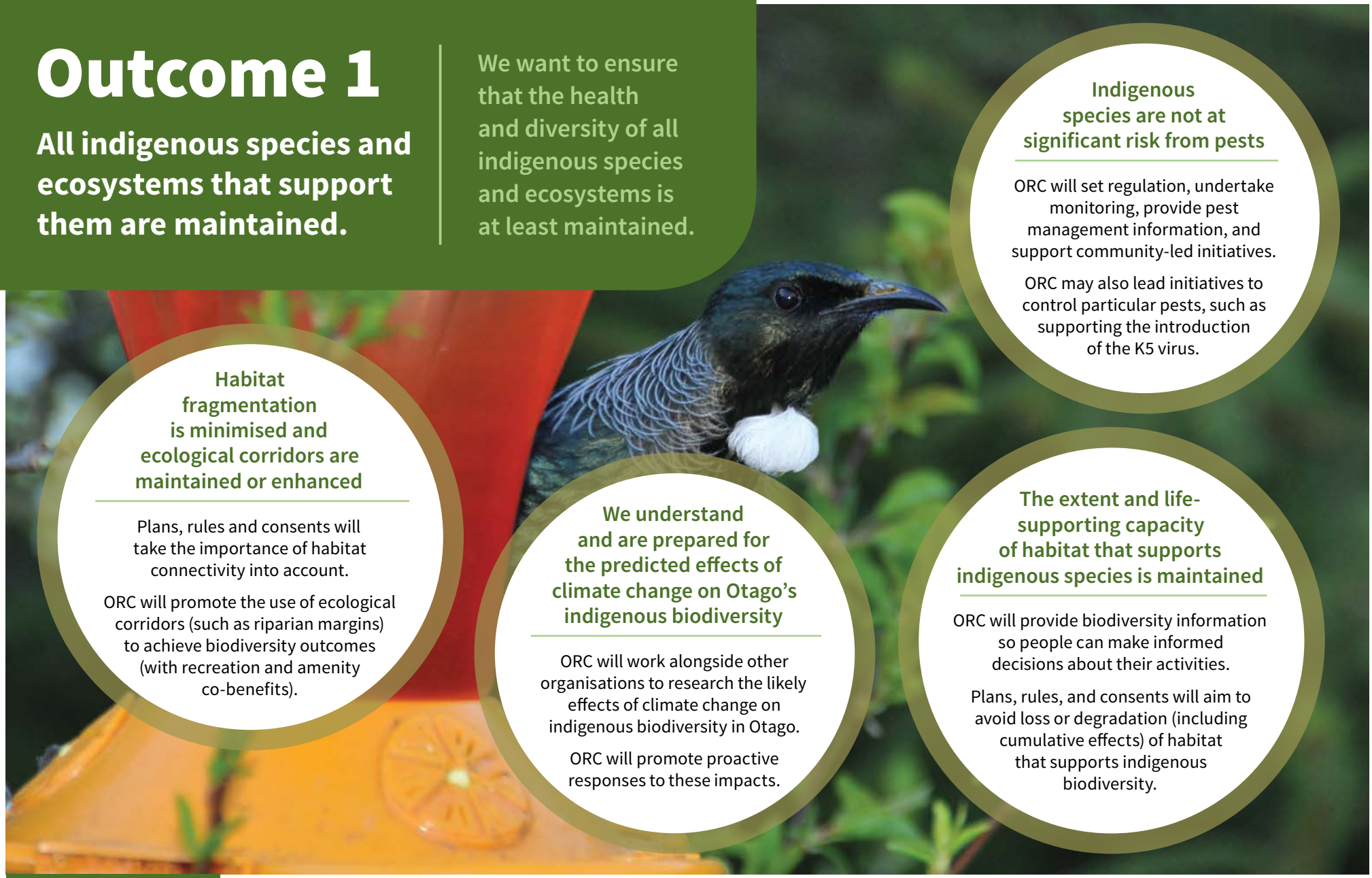
Outcome 1

All indigenous species and ecosystems that support them are maintained.

We want to ensure that the health and diversity of all indigenous species and ecosystems is at least maintained.



Habitat fragmentation is minimised and ecological corridors are maintained or enhanced

Plans, rules and consents will take the importance of habitat connectivity into account.

ORC will promote the use of ecological corridors (such as riparian margins) to achieve biodiversity outcomes (with recreation and amenity co-benefits).

We understand and are prepared for the predicted effects of climate change on Otago's indigenous biodiversity

ORC will work alongside other organisations to research the likely effects of climate change on indigenous biodiversity in Otago.

ORC will promote proactive responses to these impacts.

Indigenous species are not at significant risk from pests

ORC will set regulation, undertake monitoring, provide pest management information, and support community-led initiatives.

ORC may also lead initiatives to control particular pests, such as supporting the introduction of the K5 virus.

The extent and life-supporting capacity of habitat that supports indigenous species is maintained

ORC will provide biodiversity information so people can make informed decisions about their activities.

Plans, rules, and consents will aim to avoid loss or degradation (including cumulative effects) of habitat that supports indigenous biodiversity.

A tui at Macandrew Bay, Dunedin

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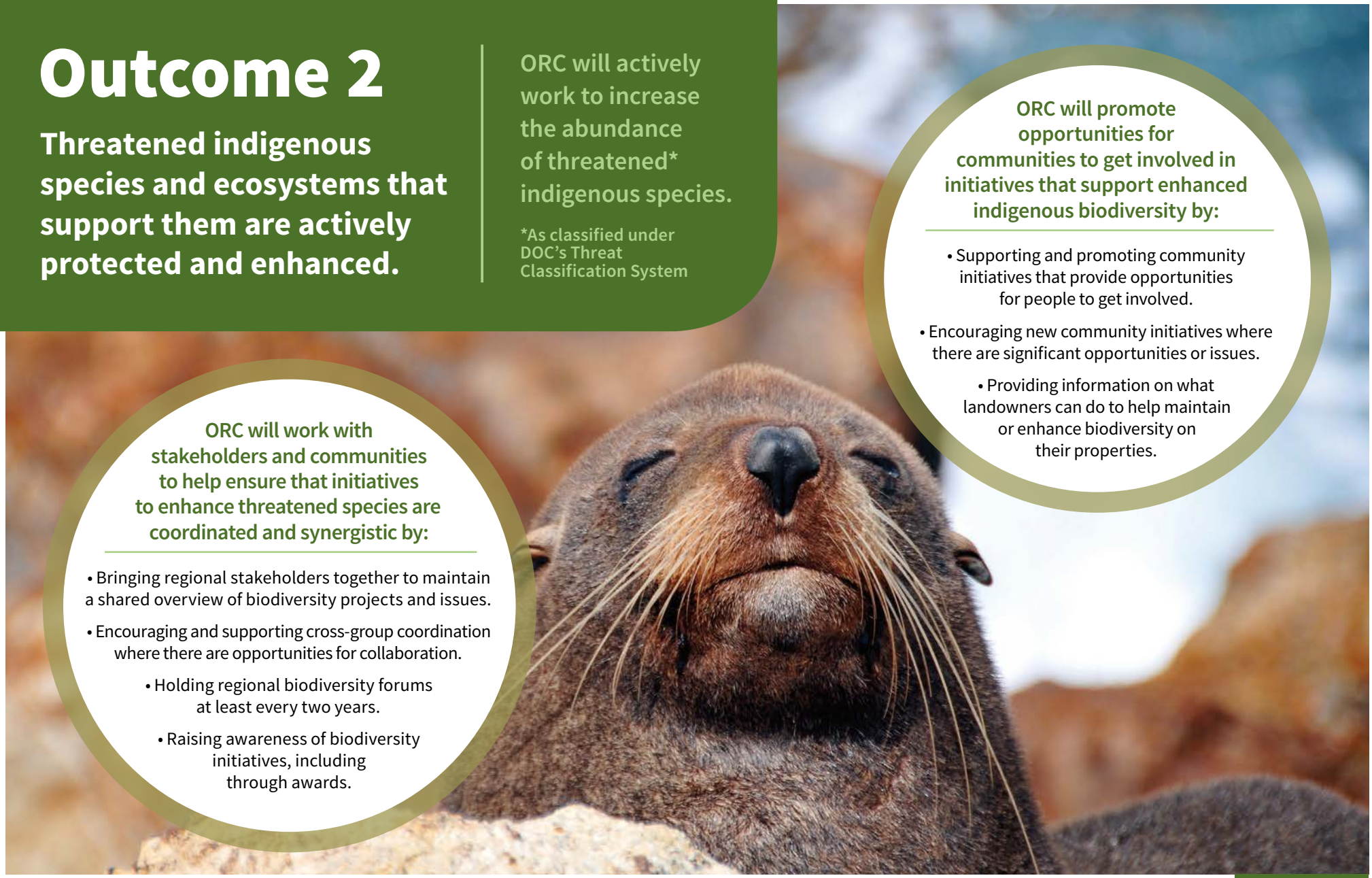
Outcome 2

Threatened indigenous species and ecosystems that support them are actively protected and enhanced.

ORC will actively work to increase the abundance of threatened* indigenous species.

*As classified under DOC's Threat Classification System



ORC will work with stakeholders and communities to help ensure that initiatives to enhance threatened species are coordinated and synergistic by:

- Bringing regional stakeholders together to maintain a shared overview of biodiversity projects and issues.
- Encouraging and supporting cross-group coordination where there are opportunities for collaboration.
- Holding regional biodiversity forums at least every two years.
- Raising awareness of biodiversity initiatives, including through awards.

ORC will promote opportunities for communities to get involved in initiatives that support enhanced indigenous biodiversity by:

- Supporting and promoting community initiatives that provide opportunities for people to get involved.
- Encouraging new community initiatives where there are significant opportunities or issues.
- Providing information on what landowners can do to help maintain or enhance biodiversity on their properties.

A seal at Aramoana

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Outcome 3

People are aware and proud of Otago's biodiversity.

People and communities are aware of and enthusiastic about biodiversity in their neighbourhoods and districts, and this contributes to their sense of place and identity.

Organisations and communities have good information and understanding of Otago's biodiversity.

ORC will facilitate the sharing of information, data, and understanding between organisations and communities.

Biodiversity contributes to Otago's reputation and sense of place.

ORC will:

- Promote and assist with school programmes, including Enviroschools.
- Promote opportunities to interact with local biodiversity, such as native bushwalks or community gardens.

Whareakeake beach

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Outcome 4

Kāi Tahu's role as kaitiaki is acknowledged and supported

All people in Otago understand the cultural significance of indigenous species to Kāi Tahu and support their role as Kaitiaki.

Mahika kai and taoka species are enhanced.

ORC will:

- Include a focus on enhancing mahika kai and taoka species into biodiversity management.
- Incorporate the importance of mahika kai and taoka species into regulatory processes, monitoring and research.

The importance of mahika kai and taoka species to Kāi Tahu is widely understood

ORC will promote the importance of these taoka species, including by assisting relevant school programmes, e.g. Enviroschools.

Kāi Tahu are ORC's Treaty partner in biodiversity management

ORC will work with Kāi Tahu as our Treaty partner in regional initiatives and incorporate tikaka (traditional Māori practices) into biodiversity management.

New Zealand Longfin Eel

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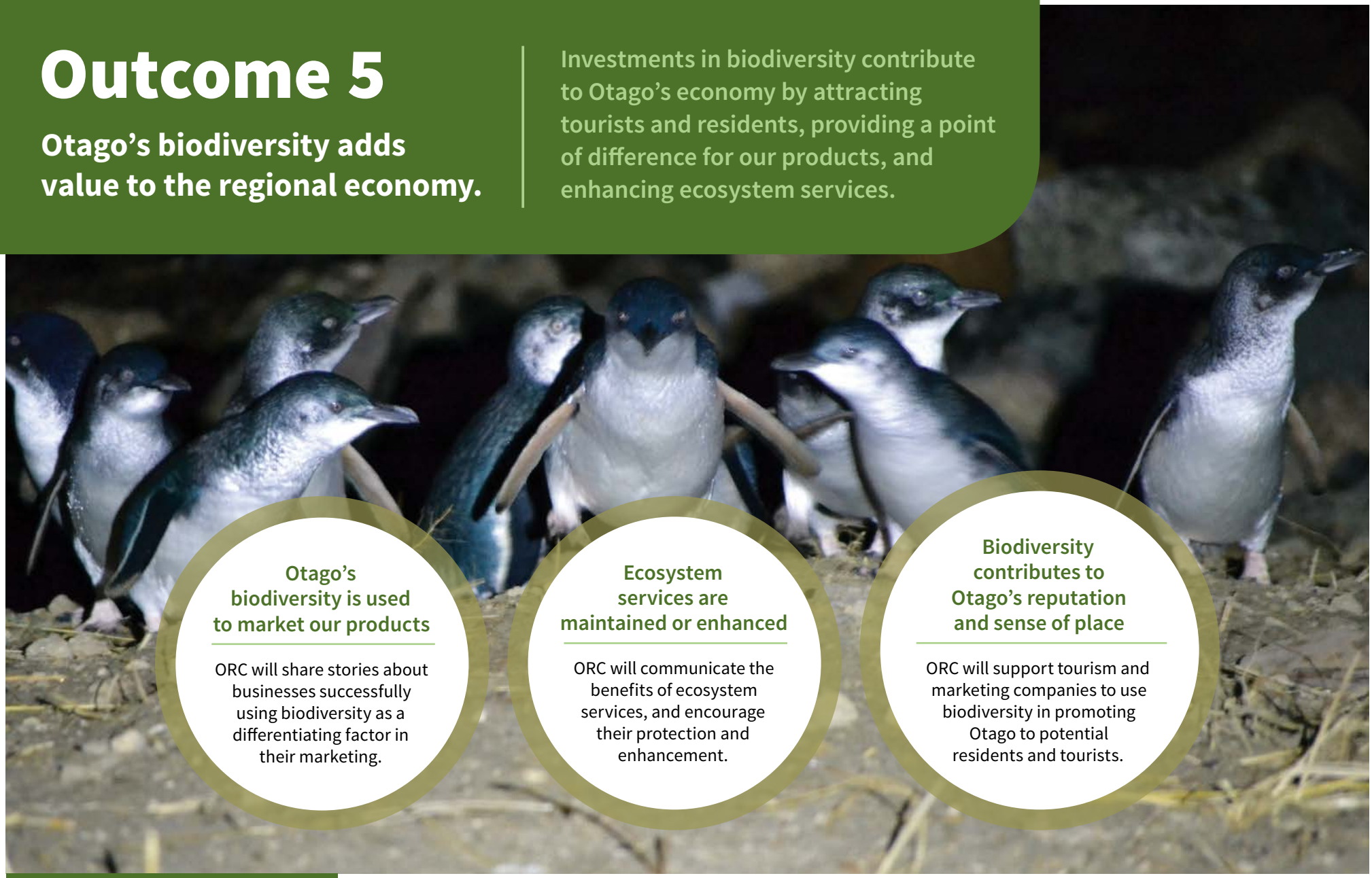
Outcome 5

Otago's biodiversity adds value to the regional economy.

Investments in biodiversity contribute to Otago's economy by attracting tourists and residents, providing a point of difference for our products, and enhancing ecosystem services.



Otago's biodiversity is used to market our products

ORC will share stories about businesses successfully using biodiversity as a differentiating factor in their marketing.

Ecosystem services are maintained or enhanced

ORC will communicate the benefits of ecosystem services, and encourage their protection and enhancement.

Biodiversity contributes to Otago's reputation and sense of place

ORC will support tourism and marketing companies to use biodiversity in promoting Otago to potential residents and tourists.

Little blue penguins, Oamaru | PHOTO: PAUL SORRELL

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A royal albatross

WHAT DOES ORC PROPOSE TO DO?

This is a high-level plan that ORC will add to and refine as the strategy is implemented.

Leadership and Collaboration	TASKS TIME
Hold a regional biodiversity forum to discuss regional priorities, activities, and opportunities, and to celebrate success	**Every two years**
Partner with city and district councils, Kāi Tahu, DOC, Fish and Game, and other organisations on key projects	**Project basis**
Establish a regional biodiversity liaison group and Technical Working Party to align and co-ordinate biodiversity projects	**Within two years**
Administer the ECO Fund - an ORC fund that supports groups working to achieve good environmental outcomes	**Ongoing**
Support community groups by promoting their work and providing expert advice and connections	**Ongoing**
Employ a biodiversity coordinator to act as a central point of contact and drive strategy implementation	**Within one year**
Participate in national level initiatives and collaboration to improve biodiversity outcomes	**Ongoing**

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Education and Information Sharing

TASKS	TIME
Provide information on biodiversity management to individuals, other organisations, and communities, including on good management practices for indigenous biodiversity and the importance of ecosystem services	**Ongoing**
Support region-wide education programmes, including Enviroschools	**Ongoing**
Develop and maintain an online portal to: · Share information and resources on biodiversity · Provide a forum for discussions within and between communities	**Ongoing**

Monitoring and Research

TASKS	TIME
Undertake research on key biodiversity matters, including: · Issues with a high biodiversity risk and insufficient information · Regional pest management opportunities · Potential climate change effects and responses	**Project basis**
Develop a spatial plan showing biodiversity outcomes sought, values, protected areas, and planned initiatives	**Within three years**
Undertake residents' surveys on biodiversity outcomes, perceptions and practices	**Every five years**
Identify and report on biodiversity indicators for Otago	**Every five years**

Regulatory

TASKS	TIME
Administer and review the Regional Pest Management Plan	**Ongoing**
Ensure regional and district plans give effect to the biodiversity outcomes sought in the Regional Policy Statement for Otago	**Ongoing**
Manage effects of activities on coastal and freshwater biodiversity through resource consent processes	**Ongoing**

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Mount Watkin

APPENDIX: BIODIVERSITY IN OTAGO

ECOSYSTEM	KEY SPECIES	THREATS
Alpine	Kea, rock wren, alpine flora	Climate change, weeds, predators
Tussock grassland and shrubland	Plants, lizards, birds, invertebrates	Agricultural intensification, mining, predators, burning, wilding conifers
Indigenous forest	Fauna: yellowhead/mohua, bats, kea, rock wren, kakariki, tomtit, brown creeper, rifleman, bellbird, tui Forest types: Beech, kanuka, rimu-miro, rātā-kamahi, matai/totara, cloud forest, volcanic boulder field	Predators, stock browse, habitat loss
Braided Rivers	Wrybill, black-fronted tern, black-billed gull, banded dotterel, black stilt	Introduced mammals, native avian predators (Southern black-backed gull) invasive weeds (lupins)
Drylands	Native grasses, lizards, birds, invertebrates	Intensification of agriculture and horticulture, predators
Limestone ecosystems	Rare plant species	Exotic weeds, stock browse

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ECOSYSTEM	KEY SPECIES	THREATS	
Inland outwash plains (upper Clutha)	Rare plant species, migratory wading birds (e.g. dotterels)	Agricultural intensification, residential development	
Inland saline habitats (salt pans, Lake Sutton)	Indigenous halophytic plant species (inc. salt pan cress), indigenous turf vegetation (Lake Sutton), moths (inc. Paranotoreas fulva)	Agricultural intensification, exotic weeds	
Wetlands	Plant species, wetland birds (inc. bittern, fernbird), fish (inc. galaxiids, long-finned eel, bullies)	Drainage, exotic weeds, predators, nutrient and sediment runoff	
Rivers and lakes	Aquatic plant species, waterfowl, fish (inc. galaxiids, long-finned eel, bullies), invertebrates	Predators (particularly trout), fish passage issues, exotic weeds, habitat loss due to abstraction, nutrient and sediment run-off, wastewater discharges and urban contaminants (heavy metals, petroleum)	
Dunes	Dune forest, marine mammals (NZ sea lion, leopard seal), yellow-eyed penguin	Habitat loss, disturbance	
		SPECIFIC	**GENERAL**
Estuaries	Fish (flatfish, galaxiids, flounder), wading birds (godwits, herons), sea birds, diadromous fish	Infill and drainage, exotic plants, upstream land uses	Sedimentation Excessive nutrients Wastewater discharges Dumping of dredge spoil Rising sea temperatures Invasive species Harvesting of kelp Fishing (particularly trawling and dredging)
River mouths and receiving coastal water	Sea birds (inc. Otago shag, southern blue penguin), Hector's dolphin, squat lobster, fish, waterfowl		
Intertidal/shallow subtidal area	Giant bladder kelp, bull kelp, Hector's dolphin, shellfish (rock lobster, cockle/tuaki, tuatua, horse mussel), worms and crustacea, small red seaweeds, sponges, bryozoans and solitary ascidians.		
Biogenic habitats	Invertebrates, seagrass, juvenile tarakihi, blue cod, and lobsters	Trawling and dredging	
Deep sub-tidal habitats	Brittle stars, sea stars, gastropods, bivalves, shrimps, hermit crabs, bryozoans, sponges, quill worms, whales, fur seals, seabirds (inc. penguins, sooty shearwaters, albatrosses)		

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THIS PAGE: Mou Waho Island, Lake Wanaka **BACK COVER:** Okia Reserve, Otago Peninsula


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