



Te Rautaki Whakaora Kea Kea Recovery Strategy 2024–2034



Cover: Kōwhaiwhai used with the kind permission of the artist, Fayne Robinson (Ngāi Tahu, Ngāti Māmoë, Ngāti Apa ki te Rā Tō). For more information about Fayne and his work, please see page 4. Cover photos: Todd Windle, Sarah Webber. Photo this page: Andrew Walmsley

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Te Rautaki Whakaora Kea / Kea Recovery Strategy 2024–2034

ISBN 978-1-7386283-6-0 (online)
ISBN 978-1-7386283-5-3 (print)

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New Zealand

Editing and design: Te Rōpū Ratonga Auaha, Creative Services

May 2024

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Introduction

The manu – kea

The kea (*Nestor notabilis*) is a large endemic, olive–green parrot with striking orange underwings, a long, curved beak and strong powers of flight. Kea have special cultural significance as a taonga (treasure) for Ngāi Tahu and Ngā Iwi o Te Taihū, and were given the name 'kea' to imitate their characteristic greeting call, a long 'kee-ahhh'. The feathers are highly prized by iwi for use in kākahu and korowai (cloaks). Traditionally, the feathers of the orange underwing were a symbol of rangatiranga and enhanced the mana of those who wore them.

Despite being strong fliers, kea spend much of their time on the ground, where they are highly vulnerable to introduced mammalian predators. They dig for food such as plant roots, tubers and insect larvae and scavenge animal carcasses, seeking the high protein and energy that this food source provides.

Kea also nest on the ground. They begin breeding at 3 to 5 years old, almost always establishing their nest below the treeline in natural hollows amongst tree roots, boulders and fallen logs. The male kea provides all of the food to the female during the 4-month nesting period, while the female incubates and feeds the young. Kea form life-long pair bonds and can live for up to 50 years in captivity.

Compared with other birds, and even mammals, kea are considered highly intelligent, inquisitive and adaptable. They are particularly social during their juvenile years, congregating in large groups to feed and socialise, often in alpine areas.

Kea were once distributed throughout both main islands of Aotearoa New Zealand, from the mountains to the sea – ki uta ki tai. Today, they are only found in Te Waipounamu / South Island and are most widespread along the western, central and southernmost slopes of the Kā Tiritiri o te Moana / Southern Alps, where they were considered kaitiaki (guardians) of the mountains by early Māori.

They can be found more sparsely distributed northwards to Golden Bay / Mohua and have become relatively rare or locally extinct across large forested eastern areas within Marlborough, Canterbury and Southland.

Following European arrival, the kea population underwent a major human-induced decline, with up to 150,000 individuals culled under a government bounty scheme prompted by attacks on sheep. Kea were provided full protection in 1986, and their current status is Nationally Endangered, based on an estimated population size of 1,000 to 5,000 adults and ongoing decline.



Photo: Mat Goodman

Cover illustration details

The kōwhaiwhai was designed for the Department of Conservation Te Papa Atawhai to use specifically for kea conservation, such as on signage and for awareness campaign messaging. The kōwhaiwhai was taken from a larger design that was based on the landscape of Te Waipounamu / South Island, such as the Kā Tiritiri o te Moana / Southern Alps. This section was inspired by the mangōpare (hammerhead shark, *Sphyrna zygaena*) symbol, which represents characteristics of the kea, including strength, strong will and a fighting spirit. This is bordered by an intricate design representing raumoa, symbolising the feathers of the manu (bird).

About the artist

The kōwhaiwhai was designed by Fayne Robinson (Ngāi Tahu, Ngāti Māmoē, Ngāti Apa ki te Rā Tō), a carver based in Ōtautahi / Christchurch. Fayne trained at the New Zealand Māori Arts and Crafts Institute, Rotorua. He has worked on whareniui as a master carver, has exhibited both nationally and internationally, and has many public installations. His works are also held in the collections of the Museum of New Zealand Te Papa Tongarewa.

He kea ki pae maunga, He keorangi ki pae atamai

This whakataukī was created through a collaborative process between Te Rūnanga o Ngāi Tahu with Paulette Tamati-Elliffe and Fiona Sloan, Tūmai Cassidy (Ngāi Tahu) and the generous advice and expertise of Professor Rangi Mātāmua (Ngāi Tūhoe).

“The whakataukī speaks about when the kea have returned to our mountains in a state of abundance, so too will our ancient knowledge be returned. Kea were traditionally an important mahinga kai. We do not have any traditional whakataukī about kea in our written records. We discussed the lack of knowledge that our people have regarding kea today, which would not have been the case for our tīpuna. We have been denied the opportunity to have that symbiotic relationship with them for generations now, due to the impact of colonisation i.e. the degradation of our environment, the attempt to eradicate kea by those early European settlers and pioneer farmers and the introduction of predators. This whakataukī speaks to our intergenerational aspiration to see flocks of kea return to our whenua in abundance. Only then will we be able to restore our traditional knowledge systems and relationship with kea that our ancestors once enjoyed.”

The literal translation for this whakataukī is “the mountain parrot sits atop of the mountains, and sits atop of the pinnacle of intelligence”.



Photo: Acéla Tarrová

The strategy

Te Rautaki Whakaora Kea / Kea Recovery Strategy sets out the strategic priorities to recover kea throughout their natural range, from the mountains to the sea – ki uta ki tai – and secure their survival. Despite the iconic status of kea and their cultural significance, they continue to decline.

This strategy builds on the kea knowledge review,¹ which identifies the main threats and knowledge gaps to kea recovery. It provides direction and guidance for partners, organisations and groups involved in kea conservation.

¹Weston K, Kemp J, McInnes K, Aley J, Orr-Walker T, Dearlove T, McAulay J, Young L. 2023. Kea (*Nestor notabilis*): a review of ecology, threats, and research gaps for conservation. Wellington: Department of Conservation. Science for Conservation 339.



Kea recovery wānanga – birth of Te Rautaki Whakaora Kea



In August 2023, the Kea Recovery Group came together for their first in-person wānanga (workshop), following establishment of the group in 2022. The purpose of the wānanga was for members of the group to connect amongst kea habitat in the mountains of Arthur's Pass and establish a framework for kea recovery. Two days were spent building a vision, goals and priorities for this taonga, which now comprise Te Rautaki Whakaora Kea.

Left to right: Ben Hodgson (Te Rūnanga o Ngāi Tahu), Terry Greene (Department of Conservation (DOC)), Laura Young (DOC), Jamie McAulay (DOC), Tamsin Orr-Walker (Kea Conservation Trust), Kerry Weston (DOC), Andrea Goodman (DOC/Kea Conservation Trust), Fiona Sloan (Te Rūnanga o Ngāi Tahu), Tracey Dearlove (DOC), Joanne Aley (DOC), Ash Murphy (DOC). Absent: Josh Kemp (DOC), Lydia McLean (DOC/Kea Conservation Trust).

Photo: Department of Conservation



The partnership

Te Rautaki Whakaora Kea has been prepared by Te Rūnanga o Ngāi Tahu, the Department of Conservation Te Papa Atawhai and the Kea Conservation Trust, supported by Ngā Iwi o Te Taihū. It signals a significant step towards the safeguarding of kea for future generations.

The strategy was initiated and crafted during a wānanga held in Arthur's Pass Village, Kā Tiritiri o te Moana / Southern Alps, in the winter of 2023. It marks the inaugural direct partnership between these entities, aiming to foster the survival and recovery of kea across Te Waipounamu / South Island. Representatives from Te Rūnanga o Ngāi Tahu, the Department of Conservation and the Kea Conservation Trust worked together intensively for three days to create a strategy that represents a genuine collaborative effort.

Kea, regarded as a taonga, play a vital role in the partnership between Ngāi Tahu and the Crown. The success of kea recovery is seen as a reflection of the health of this relationship. Te Tiriti o Waitangi / the Treaty of Waitangi provides the basis for partnership and engagement between Māori and the Crown. The strategy is a commitment to uphold the Treaty partnership.

This collaborative strategy is expected to pave the way for Ngāi Tahu to become leaders in the protection and ultimate recovery of kea populations, which will not only benefit the species but enhance the rangatiratanga and kaitiakitanga of Ngāi Tahu. The strategy's details and action plans aim to reflect the essence of the partnership, ensuring that all voices are valued and contribute to the protection of kea.

The Department of Conservation Te Papa Atawhai has responsibilities under the Conservation Act 1987 (section 4), the Wildlife Act 1953 (section 14I) and Ngāi Tahu Claims Settlement Act 1998 (section 288) that guide its actions in relation to kea. Under the Ngāi Tahu Claims Settlement Act 1998, the Crown acknowledges the whakapapa and special association of Ngāi Tahu to kea as a taonga.

The kea recovery structure

Te Rautaki Whakaora Kea is the overarching strategy for kea conservation. The relationship between the strategy and other supporting documents is shown below.

The kea knowledge review² forms the basis of Te Rautaki Whakaora Kea. It pulls together all kea knowledge to date and identifies gaps in knowledge and research that need to be addressed to enable recovery.

The actions required to achieve the strategic priorities are outlined in the Five-year kea action plan.³

Additional supporting documents, such as operational and research plans for specific projects, wildlife survey protocols, and guidance on managing specific issues, set the tikanga for the implementation of recovery actions.

Relationship between Te Rautaki Whakaora Kea and supporting documents

Knowledge review

Review of kea knowledge, research and gaps

Recovery strategy

Strategic direction for kea conservation

Five-year action plan

Actions to achieve the strategic priorities

Tikanga

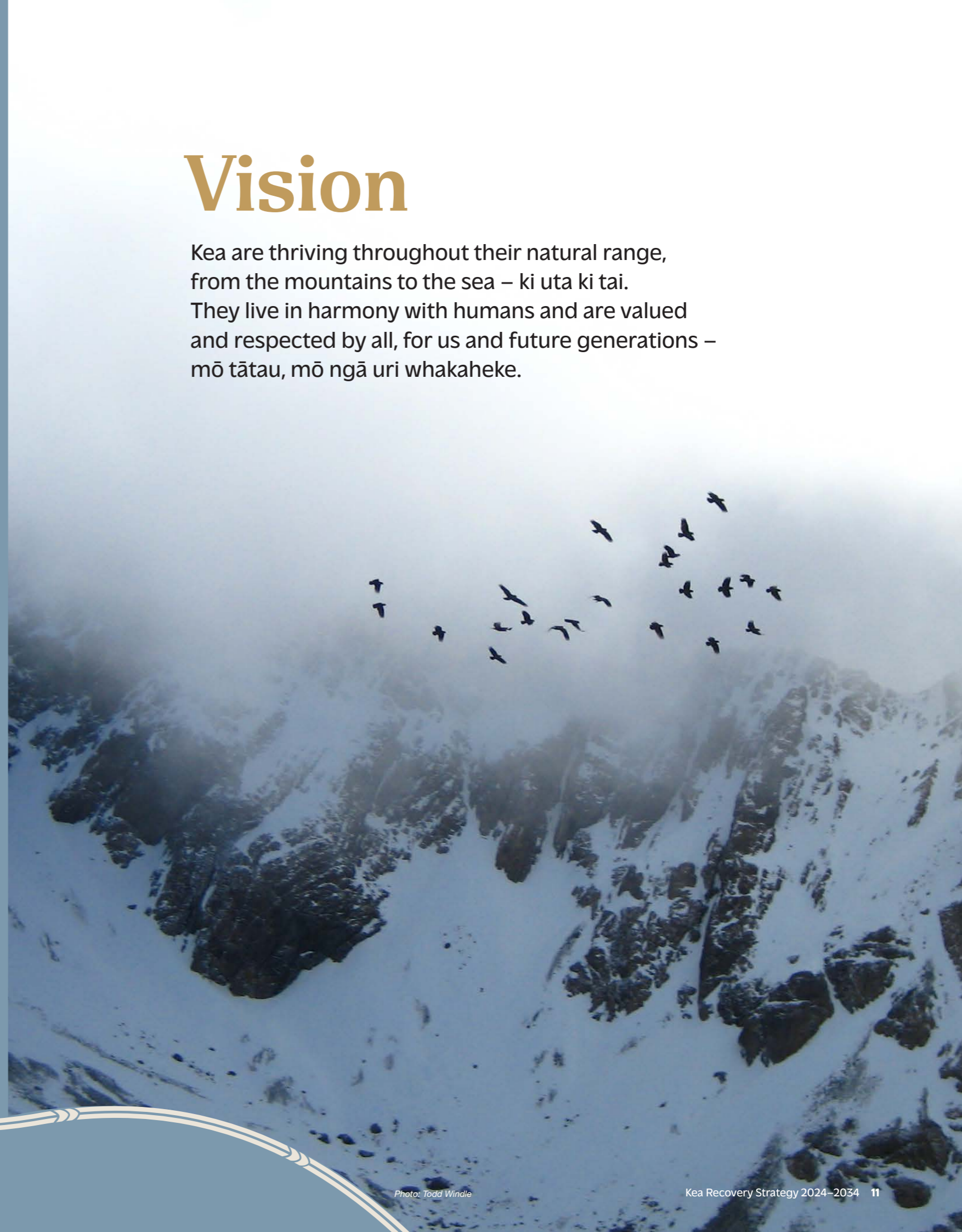
Operational and research plans, guidance and protocols

² Weston K, Kemp J, McInnes K, Aley J, Orr-Walker T, Dearlove T, McAulay J, Young L. 2023. Kea (*Nestor notabilis*): a review of ecology, threats, and research gaps for conservation. Wellington: Department of Conservation. Science for Conservation 339.

³ Kea Recovery Group. 2024. Five-year kea action plan 2024–2029. Unpublished report DOC-7632481. Wellington: Department of Conservation.

Vision

Kea are thriving throughout their natural range, from the mountains to the sea – ki uta ki tai. They live in harmony with humans and are valued and respected by all, for us and future generations – mō tātau, mō ngā uri whakaheke.



Goals

These goals are intended to guide efforts throughout the duration of Te Rautaki Whakaora Kea and ensure we are working collectively towards our vision for kea recovery.

Five-year goals

- Management actions are being implemented to recover kea where they are in greatest decline and thereby maintain their presence across Te Waipounamu / South Island.
- A monitoring programme is under way to assess kea population change and inform effective management.
- Kea are recognised as a taonga and this recognition is contributing to a harmonious co-existence between kea and humans.

Ten-year goals

- Kea numbers are recovering in eastern ecosystems.
- The kea population is resilient, healthy and increasing.
- Humans are living in harmony with kea throughout their natural range.

Guiding principles

Interconnected guiding principles provide the foundation for how we will make decisions to support kea. These principles also apply across each action in the Five-year kea action plan.

Kaitiakitanga Guardianship

We work collectively to protect kea and their natural environment, for the benefit of future generations.

Rangatiratanga Leadership

We will be bold, brave and adaptable in our decisions and actions while displaying a high degree of integrity, professionalism and ethical behaviour.

Kea first Strength, loyalty and a fighting spirit

The interests of kea will be prioritised over other activities.

Ngākaunui Passion and goodwill

We are passionate and enthusiastic about the work ahead.

Mātauranga and tohungatanga Knowledge and expertise

We will grow our knowledge to support evidence-based decision-making. Knowledge and ideas will be pursued that will strengthen and grow the kea population.

Mahi tahi Collaboration

We will work together with the people of Aotearoa New Zealand to secure the survival of kea.

Te whakarahinga rawatanga o ngā hua pūnaha rauropi Maximisation of ecosystem benefits

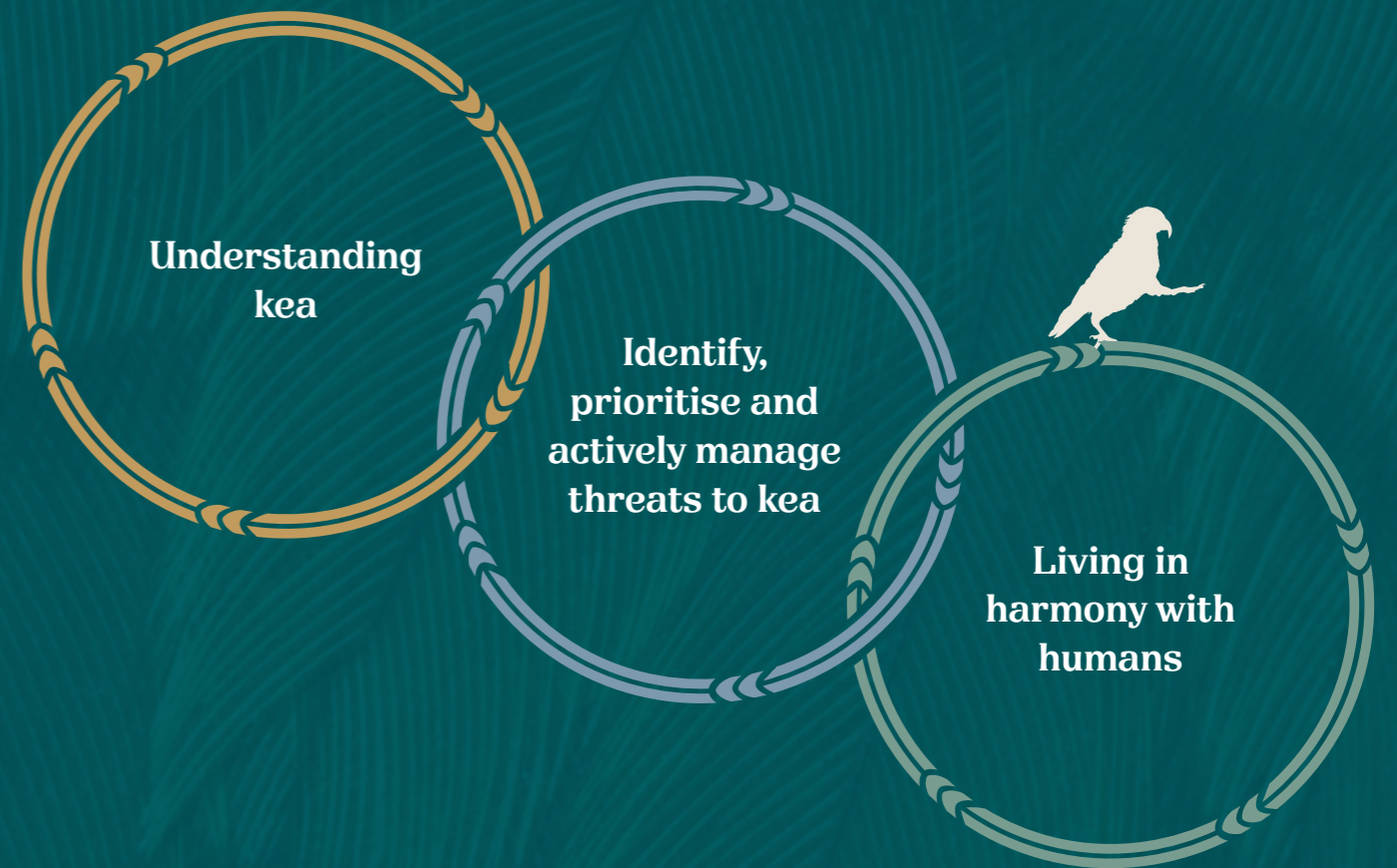
The recovery of kea will, wherever possible, guide work to gain maximum benefits for the wider ecosystem.



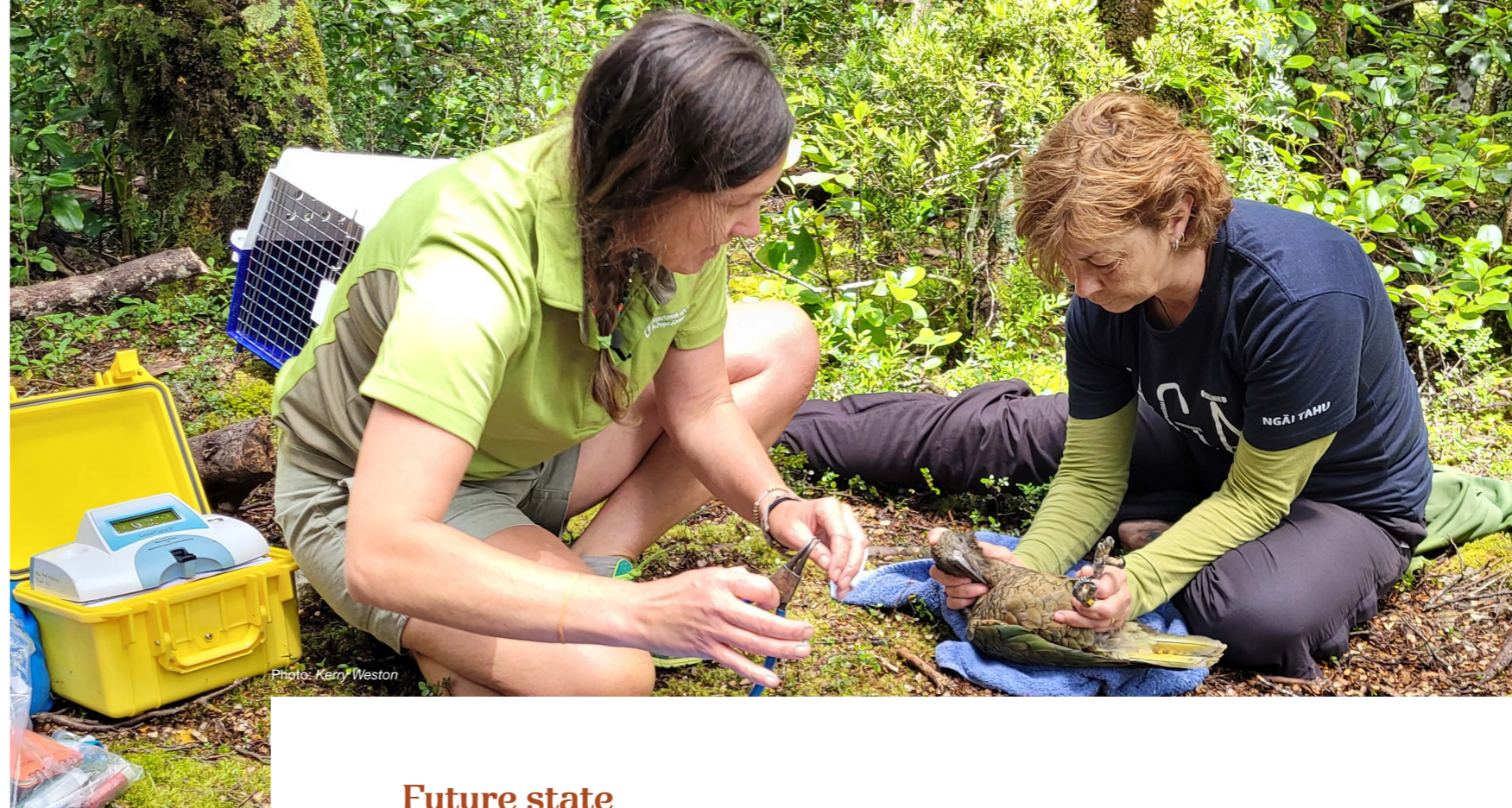


Strategic priorities

This section outlines the strategic priorities to address the gap between where we are now (current state) and where we would like to be (future state). The section is divided into three overarching themes: understanding kea; identifying, prioritising and actively managing threats to kea; living in harmony with humans.



Understanding kea



Current state

While research over past decades has contributed to a broad understanding of kea, substantial gaps in knowledge still exist, particularly regarding population trends and abundance, habitat use and movement ecology. In part, this reflects the sparse distribution of kea over a range of habitats, their mobility, social structure and variable conspicuousness. The development and application of new tools to understand these aspects of kea ecology are urgently required.

Kea productivity appears to vary across different sites and at different times. Predation by introduced mammalian carnivores is the major source of this variation, but other factors also influence productivity, including food availability and habitat, lead poisoning and sex ratio, although these are not well understood.

Current research and monitoring are not strategically aligned among the various groups and organisations working with kea, and the data collected are not well managed or used. A lack of knowledge also exists on kea demographic parameters in parts of Te Waipounamu / South Island, with limited data available to inform management decisions.

Knowledge of early Māori traditions, myths, sightings and interactions with kea are also limited. This mātauranga must be revived and restored, to increase our understanding of kea ecology.

Future state

The status and population trends of kea throughout their natural range are well understood and management interventions are based on this knowledge.

New tools and approaches to monitor kea populations and their movements across the landscape are being applied. A fuller understanding of kea ecology has been gained, with mātauranga providing an ongoing contribution to this understanding. This knowledge is accessible to all and is informing robust management decisions.

Kea researchers and conservation managers are working together to fill knowledge gaps. Research and management are strategically aligned with recovery goals and the goals of Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy 2020.⁴

⁴ Department of Conservation. 2020. Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy 2020. Wellington: Department of Conservation.



Understanding kea – strategic priorities

1. Improve understanding of the current state of the kea population.
2. Ensure monitoring provides quality information to support management decisions.
3. Ensure accurate, useable and accessible data contribute to kea conservation.
4. Develop new mātauranga Māori approaches to help understand kea.

Identifying, prioritising and actively managing threats to kea



Photo: Department of Conservation

Current state

Kea face complex threats associated with the ongoing impacts of introduced predators and the risks resulting from the birds' tendency to interact with human resources and infrastructure. The relative and interactive effects of these threats are only partially understood.

Field research has demonstrated that predator control can improve both the productivity and survivorship of kea. However, landscape-scale predator control is carried out over less than half of the current range of kea and is particularly lacking in habitat east of Kā Tiritiri o te Moana / Southern Alps. This stems from a lack of understanding of predator-prey dynamics within dry, fragmented eastern ecosystems and an absence of effective approaches to target all predators of kea, including feral cats, on an appropriate scale.

Despite the overall benefits of predator control, some kea continue to be inadvertently killed during predator control operations. This is due to a lack of kea-safe predator control tools, particularly for targeting larger carnivores.

Lead, a toxic heavy metal, is still widespread throughout kea habitat. Knowledge gaps remain regarding the relative impact of different lead sources, such as ammunition and building materials.

The potential effects of climate change on kea are not well understood and knowledge of how to mitigate them is lacking.

Future state

The relative impacts of threats to kea are well understood, including how these threats vary across the landscape and over time.

We have the knowledge and tools to safely and effectively control the main predators of kea at an appropriate scale. Predators are monitored and actively managed such that kea are flourishing throughout Te Waipounamu / South Island. Kea population response to management is well measured and is showing that management actions are effective.

The main sources of lead for kea are known and have been eliminated from kea habitat across Te Waipounamu / South Island. Ongoing health monitoring is showing that the incidence of lead toxicity in kea is zero. Disease surveillance is a routine component of these health checks to ensure early detection of any new and potentially harmful diseases.



Threats to kea – strategic priorities

5. Understand the relative impacts of the main threats to kea and prioritise conservation actions to achieve the greatest gains for the kea population.
6. Effectively control introduced predators to maintain kea presence throughout Te Waipounamu / South Island.
7. Encourage the development of kea-safe predator control tools.
8. Eliminate lead poisoning.
9. Identify and monitor potential negative impacts of climate change on kea and mitigate these where possible.

Living in harmony with humans



Photo: Kerry Weston

Current state

While kea are fully protected and have special cultural significance to Ngāi Tahu and Ngā Iwi o Te Taihū, they are not safe from public interference and persecution. Conflict with humans continues, largely due to the inquisitive and explorative behaviour of kea. The mindset that kea are 'troublesome' and an 'alpine' species prevails, and this creates an intolerance towards the presence of kea throughout their natural range, from the mountains to the sea – ki uta ki tai. Kea often congregate to investigate novel objects in their environment or to scavenge on food sources associated with humans and their property. Well-researched tools and approaches to mitigate kea damage to property are lacking and members of the public continue to take matters into their own hands, often unsuccessfully and illegally, to the detriment of kea.

Kea also continue to be found dead or injured at sites of human activity as a result of accidents, such as vehicle strikes, electrocution and interactions with foreign objects.

When people, particularly visitors, seek to interact with kea, their behaviour, such as direct feeding of the birds, places the kea at risk. The messaging around the negative effects of such behaviour is inconsistent, and potential avenues for education and advocacy, through tourism and institutions holding kea in captivity, are not being used to their full potential.

Future state

Improved advocacy and consistent messaging have led to kea being a valued and respected component of Aotearoa New Zealand's endemic biodiversity, safe from persecution. Their natural place from the mountains to the sea – ki uta ki tai – is recognised, and their value and importance to mana whenua is upheld.

Well-researched tools and approaches to mitigate kea damage to property are available and landowners are educated in the use of these tools.

Areas where kea are at high risk of accidental injury and death from human activity have been identified, and members of the public are educated and supported to manage and reduce potential risk. Visitors to kea habitat are educated about their role in protecting kea and they enjoy the birds in a respectful and natural way.

Where kea remain in captivity, their potential for conservation advocacy and research is realised and they are cared for according to the highest standards of welfare.



Living in harmony with humans – strategic priorities

10. Actively advocate for kea, to encourage positive co-existence throughout their range.
11. Mitigate human-induced injury and death to kea.
12. Reduce feeding of wild kea.
13. Ensure kea in captivity are actively managed to maximise their welfare, conservation advocacy and research potential for the benefit of wild kea.



Photo: Kerry Weston

Implementation

Five-year action plan

The actions required to achieve the strategic priorities and deliver our goals for kea are outlined in the Five-year kea action plan.⁵ Goals in the action plan will be reviewed annually and progress against them assessed. After five years, the action plan will be reviewed fully, unless significant events warrant an earlier review.

Accountability

A kea governance framework has been established to provide accountability for and oversight of the success of Te Rautaki Whakaora Kea.

The Kea Governance Group is accountable for ensuring the implementation of the agreed recovery priorities and actions and will broker and advocate for additional resources to support this work.

Funding

Resourcing for current kea conservation programmes comes from the Department of Conservation and other non-governmental organisations and groups. An objective of Te Rautaki Whakaora Kea is to ensure improved collaboration between interested parties and advocacy for additional resources to enable improved outcomes for kea.

Tikanga

Additional supporting documents, in the form of operational guidance and protocols, will set the tikanga for managing the implementation of specific actions, as required.



Acknowledgements

We acknowledge the significant mahi of a range of individuals, researchers, groups and organisations that have contributed to the conservation of kea. Many have dedicated countless hours and resources to protect this taonga, not least the Kea Conservation Trust and its supporters. We acknowledge all of those whose passion, skills and dedication have got us to this point, we thank you. We also thank the wildlife hospitals and zoos that have provided their expertise to attend to the needs of kea in their care and the wider kea conservation effort. As we build this recovery programme and work to turn things around for kea, we look forward to working with you all, and many others.



⁵ Kea Recovery Group. 2024. Five-year kea action plan 2024–2029. Unpublished report DOC-7632481. Wellington: Department of Conservation.



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