

Te Mahere Rima Tau

Te Mahere Rima Tau, the five-year action plan, is written to support Te Kaweka Takohaka mō te Hoiho, the overarching strategy for hoiho conservation. It provides direction and guidance for the four key partners (Te Rūnanga o Ngāi Tahu, Department of Conservation Te Papa Atawhai, Yellow-eyed Penguin Trust Te Tautiaki Hoiho and Fisheries New Zealand Tini a Tangaroa) and other groups and individuals involved in hoiho conservation.

The strategy sets out the strategic priorities to support the health and wellbeing of hoiho across the marine and terrestrial ecosystems they inhabit, reflecting the philosophy of *ki uta ki tai*.

Te Mahere Rima Tau outlines the actions necessary to achieve these strategic priorities, under five overarching themes. It is a working document and will not be formally published, but will be reviewed annually using the implementation process summarised in the figure.

The guiding principles of mātauraka Ngāi Tahu (as set out in Te Kaweka Takohaka mō te Hoiho) will be incorporated across each action of Te Mahere Rima Tau. Working in partnership on issues relating to hoiho; Crown and all other stakeholders will enable whānau, hāpu and iwi to fulfil their kaitiakitaka responsibilities towards hoiho.

Key for Te Mahere Rima Tau

The following table contains the strategic priorities and actions that make up *Te Mahere Rima Tau*. The four key partners have overall responsibility for the delivery of the action plan.

Collaborators: Identifies the partners specifically involved in the implementation of an individual action, the lead partner(s) from the Hoiho Governance Group (HGG) and other key groups that may have a role in that action.

Status: Describes whether an action is ongoing, in progress or complete.

Northern Population: Actions in green text refer to the northern population of hoiho on mainland Aotearoa / New Zealand, Rakiura / Stewart Island and outlier islands.

Southern Population: Actions in brown text refers to the southern population of hoiho on the sub-Antarctic Motu Maha / Auckland Islands and Motu Ihupuku / Campbell Island.

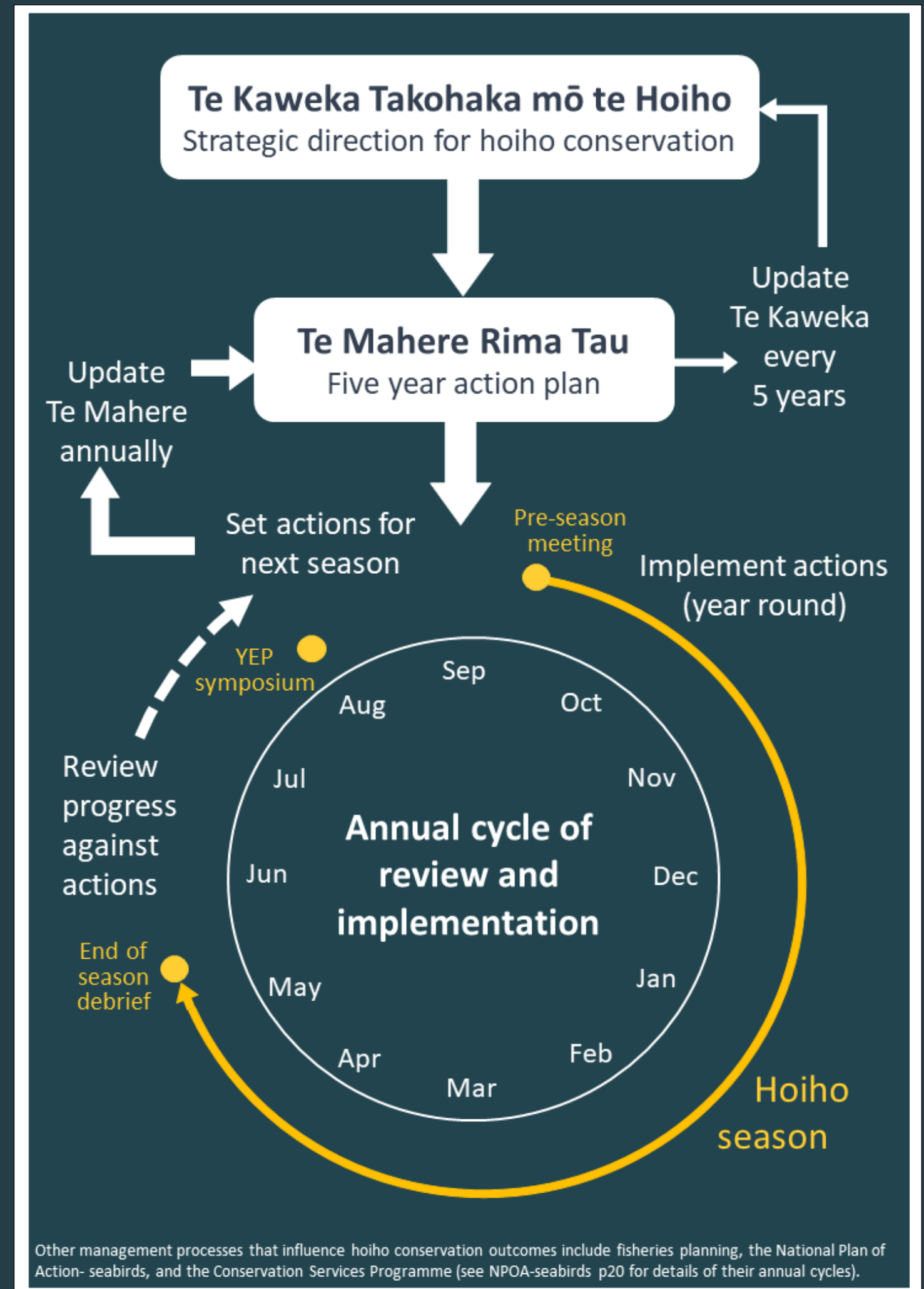
Both populations: Actions in black text refer to both the northern and southern populations.

Prioritisation of actions

Essential (E): Necessary to achieve the goals for hoiho over the term of this plan. Highest risk if not carried out within the timeframe and/or at the frequency specified.

High (H): Necessary to achieve long-term goals. To be progressed and ideally completed within the term of this plan, with moderate risk if not carried out within the timeframe and/or at the frequency specified.

Medium (M): Necessary to achieve long-term goals. To be progressed within the term of this plan, but with the least risk if not completed within the timeframe and/or at the frequency specified.



Te Mahere Rima Tau



Te hauorataka, te orakataka me te whakaputaraka
Health, survival and productivity

	Year 1 (July 2019-June 2020)	Year 2 (July 2020-June 2021)	Year 3 (July 2021-June 2022)	Years 4 and 5 (July 2022-June 2024)	Collaborators Who else may be involved & HGG lead(s) in bold	Status Progress on this action
Strategic Priority 1 Intervene and care for sick, injured or underweight hoiho to improve survival and breeding success.	Action 1a Ensure that the rehabilitation system from uplift, through hospital care and rehab to release, is funded and resourced to provide essential care for hoiho on an ongoing basis. (E)				DOC, YEPT, vets and rehab groups	Ongoing
	Action 1b Increase capacity and capability to identify sick, injured or underweight hoiho through an expanded programme of intervention (including Rakiura and sites which currently receive minimal intervention). (E)		Annually implement the intensive management programme. (E)		DOC, YEPT, Kāi tahu, mana whenua, site managers and landowners	In progress
	Action 1c Annually assess the long-term survival and breeding success of birds who have undergone treatment and/or rehabilitation using data provided by all groups involved. (E)				DOC, YEPT, Kāi tahu, vets, rehab groups and researchers	
Strategic Priority 2 Minimise the impact of disease and unexplained mortality events on hoiho.	Action 2a Annually review the diphtheritic stomatitis treatment protocol and provide logistical support and training to ensure its implementation by all who monitor and treat hoiho chicks in the wild. (E)				DOC, YEPT, vets and site managers	Ongoing. Last review: 26-Sep-18
	Action 2b Annually review the avian malaria action plan and provide logistical support to ensure its implementation (including effective control of mosquitoes and treatment of malaria) by appropriate groups. (E)				DOC, YEPT, site managers, vets and rehab groups	Ongoing. Last review: 30-Sep-18
	Action 2c Annually review the unexplained mortality response plan for future events (including examination and testing of birds) and incorporate Kāi Tahu tikaka. (E)				DOC, YEPT, Kāi tahu, vets and rehab groups	Ongoing. Last review: 18-Sep-19
	Action 2d Review hoiho necropsy results to date.(E)		Use results of the review to inform management and research direction. (E)		DOC, YEPT, vets and researchers	In progress
	Action 2e Annually fund and send birds for necropsy to investigate cause of death, summarise necropsy results, and identify and respond to novel diseases as appropriate. (E)				DOC, YEPT, vets, rehab groups and site managers	Ongoing
	Action 2f Commission research to identify the vector(s) of malaria and investigate the mechanisms and dynamics of <i>Plasmodium</i> between mosquitoes, hoiho and other native / non-native birds. (E)				DOC, YEPT, researchers, vets, rehab groups and site managers	In progress
	Action 2g Commission research to characterise the disease status for southern and northern populations of hoiho. (H)			Use results to inform management and research direction. (H)	DOC, YEPT, researchers and vets	In progress
		Action 2h Commission research to investigate potential causes of unexplained mortality events, including examination of correlations between events, and parameters relating to hoiho and the environment. (H)		Use results to inform management and research direction. (H)	DOC, YEPT, researchers and vets	
Strategic Priority 3 Follow appropriate kawa and tikaka for treatment of all hoiho.	Action 3a Develop tikaka / best practice protocol for handling and care of all hoiho for research and management purposes. (E)		Implement the protocol, including as part of the permitting process. (E)		DOC, Kāi tahu, YEPT, vets, rehab groups, researchers and site managers	
	Action 3b Develop a dispensation process to enable fishers to temporarily hold bycaught hoiho for conservation purposes and Kāi Tahu cultural practices. (H)		Implement dispensation process. (H)		Fisheries NZ, DOC and Kāi tahu	In progress
Strategic Priority 4 Investigate and develop additional intervention options to improve breeding success and survival.		Action 4a Complete a full investigation of the range of conservation intervention options available which have the potential to improve breeding success and survival of hoiho. (E)		Develop, prioritise and implement approved options. (E)	DOC, YEPT, Kāi tahu, rehab groups, vets and researchers	


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Strategic Priority 5 Ensure monitoring programmes, including cultural monitoring tools, provide quality information to support management decisions.	Action 5a Ensure that knowledge about the status and health of the northern population is complete and robust, by developing and implementing a well-defined annual monitoring and marking programme. (E)				DOC, YEPT, site managers, and researchers	Ongoing
	Action 5b Engage with mana whenua and researchers to develop objectives and a methodology, and commence a full island wide survey of Rakiura and outliers in partnership with Kāi tahu during the hoiho breeding season. (E)		Determine ongoing objectives in partnership with Kāi tahu following completion of surveys. (E)		DOC, YEPT, Kāi tahu, mana whenua, site managers, landowners and researchers	In progress
	Action 5c Provide knowledge about the status and health of the southern population by agreeing objectives and a methodology, and securing funding for a monitoring programme. (E)		Commence a monitoring programme for the southern population. (E)		DOC, YEPT, Kāi tahu and researchers	
	Action 5d Identify and use cultural monitoring tools and approaches for enhancing management of hoiho populations. (H)				Kāi tahu, DOC, YEPT, mana whenua and site managers	



Te Marae o Takaroa

Marine habitat

Strategic Priority 6 Ensure bycatch does not threaten hoiho.	Action 6a Implement and incentivise practices that eliminate bycatch as necessary, particularly from set netting throughout the northern population range. (E)				Fisheries NZ, fishing industry and fishers	Ongoing
	Action 6b Ensure annual observer coverage or electronic monitoring of at least 50% on setnet vessels within hoiho habitat. (E)				Fisheries NZ, DOC, fishing industry and fishers (through CSP process)	Ongoing
	Action 6c Build the positive working relationship as part of the Fisheries Information Group and meet annually to share information and work together to solve bycatch and other fisheries issues. (E)				Fisheries NZ, YEPT, DOC, Kāi tahu, fishers, fishing industry, researchers. Facilitator: Fisheries Inshore NZ	Ongoing
	Action 6d Work with Government agencies to improve the mechanism for providing information on bycaught hoiho to operations staff that monitor hoiho. (E)		Implement the mechanism for providing information on bycaught hoiho to operations staff. (E)		Fisheries NZ, DOC, YEPT, fishing industry and fishers	
	Action 6e Investigate the potential impacts and opportunities of transitioning fisheries from set netting to other methods on fishers, hoiho and other species. (E)		Implement approved mechanism(s) for transitioning fisheries. (E)		Fisheries NZ, DOC, YEPT, Kāi tahu, fishing industry, fishers and researchers	
	Action 6f Update spatially explicit fisheries risk assessment (SEFRA) whenever new information is available to provide reliable and up-to-date estimates of risk. (E)				Fisheries NZ, YEPT and DOC (through AEWG process)	Ongoing. Info provided 8-May-20
	Action 6g Progress proposed mitigation circular to require fishers to remain within 100m of all of their nets (Regulation 58A of the commercial fisheries regulations) for setnet fisheries around Rakiura and offshore islands. (E)		Implement the mitigation measures around Rakiura and offshore islands. (E)		Fisheries NZ, fishing industry and fishers	In progress
			Action 6h Assess the risk of bycatch from inshore trawl fisheries. (H)		Fisheries NZ, DOC, YEPT, fishing industry, fishers and researchers	
		Action 6i Assess whether management measures must be implemented to reduce risk from recreational fisheries. (M)		Fisheries NZ, DOC, YEPT, rec fishers and researchers		
Strategic Priority 7 Protect and support marine habitats and ecosystems that nourish hoiho.	Action 7a Determine which marine protection measures are most appropriate/effective to protect hoiho habitat and food sources. (E)		Promote the implementation of the most appropriate/ effective marine protection measures. (E)		Fisheries NZ, Kāi tahu, DOC, YEPT, fishing industry, mana whenua, researchers	
	Action 7b Commission a marine spatial planning exercise to map biotic and abiotic factors within hoiho habitat. (E)		Use the marine spatial planning data to inform marine protection measures and applications for activities under statutory processes which may adversely affect hoiho. (E)		DOC, YEPT, Fisheries NZ and researchers	In progress
	Action 7c Contribute to national and international policy instruments relating to climate change that will recognise and promote the conservation of hoiho and their habitat. (E)				DOC, YEPT, Kāi tahu and researchers	
	Action 7d Commission research to investigate foraging ecology of hoiho from colonies where little data currently exist. (E)		Use results to inform management and research direction. (E)		DOC, Fisheries NZ, YEPT, Kāi tahu, and researchers	In progress

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Strategic Priority 7 Protect and support marine habitats and ecosystems that nourish hoiho (continued).	Action 7e Commission research to examine the spatial and temporal patterns in hoiho diet. (E)			Use results to inform management and research direction. (E)	DOC, YEPT , Fisheries NZ, Kāi tahu, and researchers	
	Action 7f Commission research to examine the spatial and temporal patterns of stress in hoiho. (E)			Use results to inform management and research direction. (E)	DOC, YEPT , Kāi tahu, and researchers	In progress
	Action 7g Commission research to examine the physical parameters associated with hoiho habitat, including mapping the seabed. (H)			Use results to inform management and research direction. (H)	DOC, YEPT , Kāi tahu, and researchers	
	Action 7h Advocate for the protection of hoiho and their habitat in statutory processes relating to marine activities which may adversely affect hoiho. This includes applications under the Resource Management Act, Crown Minerals Act and EEZ Act. (H)				DOC, YEPT , Kāi tahu and local authorities	Ongoing
				Action 7i Assess the conservation status of the southern population (using data collected under Action 5c) in relation to environmental and anthropogenic variables, and compare to the northern population. (H)	DOC, YEPT , Kāi tahu, and researchers	
			Action 7j Commission research to analyse the incidences of injuries from marine predators to ensure confidence when assessing the impact of this threat. (M)		DOC, YEPT , vets and researchers	
		Action 7k Commission research to analyse the extent of predation from sea lions using scat and cast samples to ensure confidence when assessing the impact of this threat. (M)		DOC, YEPT and researchers		
Strategic Priority 8 Ensure marine pollution, disturbance and noise do not threaten hoiho.	Action 8a Ensure oil spill response plans include specific hoiho population data and treatment options and engage with the agencies responsible to prepare for emergencies as required. (E)				DOC, YEPT , local authorities, central government and other agencies	Ongoing
	Action 8b Build proactive relationships and collaborate with local and regional government to understand, avoid and mitigate the impacts of marine pollution, disturbance and noise on hoiho. (H)				DOC, YEPT , Kāi tahu, local authorities, central government and researchers	Ongoing
	Action 8c Engage with regional government to promote hoiho conservation and contribute to the development of marine monitoring frameworks. (H)				DOC, YEPT, Kāi tahu , local authorities and researchers	Ongoing
			Action 8d Commission research to identify, characterize and highlight the potential impacts of marine pollutants on hoiho and identify important areas for further work. (H)		DOC, YEPT , Kāi tahu, local authorities, and researchers	
 Te whakaekeka o te takata <i>Human disturbance</i>						
Strategic Priority 9 Reduce the impact of tourism and recreation activities to ensure they do not threaten hoiho.	Action 9a Further investigate mechanisms (e.g. closure / rāhui, controlled access, rangers, fences, signs, tracks) to manage visitors at identified priority hoiho sites. (E)		Implement appropriate mechanisms at priority sites. (E)		DOC, Kāi tahu, YEPT , local authorities, mana whenua, site managers, tourism industry, landowners and researchers	
	Action 9b Move moulting and other at-risk birds from beaches where disturbance is likely to safer areas, as required. (E)				DOC, YEPT , site managers and public	Ongoing
	Action 9c Educate visitors about appropriate tikaka / behaviour and consequences for hoiho and ensure that messaging is consistent. (E)				DOC, Kāi tahu, YEPT , site managers, mana whenua, landowners, tourism industry, local authorities, public and researchers	
	Action 9d Collect information on visitor numbers and pressure points, and assess visitor management mechanisms to inform Action 9a. (H)				DOC, Kāi tahu, YEPT , site managers, landowners, tourism industry, local authorities, public and researchers	


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Strategic Priority 9 Reduce the impact of tourism and recreation activities to ensure they do not threaten hoiho (continued).			Action 9e Commission a site-based analysis of the key risks recreational activities pose to hoiho and methods to alleviate them. (M)	Work with landowners and local government to implement recommendations. (M)	DOC, Kāi tahu, YEPT, local authorities, landowners, site managers, recreation users, public and researchers	
			Action 9f Commission an economic analysis of the value of hoiho to inform decision making. (M)		DOC, YEPT, Kāi tahu, local authorities, and researchers	
Strategic Priority 10 Eliminate mortality from dogs.	Action 10a Work with local government to improve enforcement of bylaws at hoiho sites which are listed as prohibited dog areas and assess whether new sites need to be added. (E)				DOC, YEPT and local authorities	Ongoing
		Action 10b Commission a social scientist to review the effectiveness of advocacy, signage and other tools for reducing dog impacts and design an improved set of tools. (E)	Implement those recommendations. (E)		DOC, YEPT, local authorities, dog owners and researchers	
Strategic Priority 11 Provide opportunities for Kāi Tahu to exercise kaitiakitaka.	Action 11a Identify opportunities for Kāi Tahu to be active kaitiaki in relation to hoiho visitor management and tell the story of hoiho as taonga. (M)				Kāi tahu, DOC, YEPT, mana whenua and tourism industry	Ongoing
Strategic Priority 12 Minimise stress and disturbance from research and management activities.	Action 12a Support disturbance for research and management purposes only where there is direct conservation benefit for hoiho and ensure consistency with Kāi Tahu tikaka and kawa. (H)				DOC, Kāi tahu, YEPT, site managers and researchers	Ongoing



Te nohoka ki te whenua

Terrestrial habitat

Strategic Priority 13 Effectively control mammalian land-based predators at hoiho breeding sites.	Action 13a Support the Maukahuka Project Team goals to eradicate pigs, cats and mice in the Auckland Islands. (E)				DOC and pest control organisations	Ongoing	
	Action 13b Reduce pig numbers at hoiho sites to minimise the impact on hoiho in their northern population range. (E)				DOC, site managers and pest control organisations	Ongoing	
	Action 13c Assess spatial and temporal predator control coverage in mainland hoiho habitat. (E)	Ensure all mainland hoiho sites have effective predator control in place for mustelids and cats. (E)				DOC, YEPT, Kāi tahu, landowners, mana whenua, site managers, pest control organisations and researchers	
	Action 13d Support Predator Free Rakiura goals to eliminate possums, rats, feral cats and hedgehogs. (H)				DOC and pest control organisations	Ongoing	
	Action 13e Leverage funding, technical knowledge and delivery of predator control to increase efficiency through connection with other predator control initiatives. (H)				DOC, YEPT, Kāi tahu, pest control organisations and researchers	Ongoing	
	Action 13f Implement management tools derived from the observations and monitoring by kaitiaki to inform predator control planning and decision-making. (H)				Kāi tahu, DOC, YEPT and mana whenua		
	Action 13g Identify employment opportunities for Kāi Tahu in predator control. (M)				Kāi tahu, DOC and predator control organisations		
Strategic Priority 14 Provide habitat on land that protects hoiho and buffers against natural events and other impacts.			Action 13h Analyse the extent of predation from weka to ensure confidence when assessing the impact of this threat and develop preferred management options. (M)		DOC, YEPT, Kāi tahu, mana whenua, landowners and researchers		
	Action 14a Identify specific areas within hoiho habitat that are at risk from fire, erosion, flooding, sea-level rise and increased temperatures, and identify and implement land-based management tools for buffering these impacts. (E)				DOC, YEPT, Kāi tahu, landowners, site managers and local authorities	Ongoing	
	Action 14b Optimise hoiho habitat to ensure adequate provision of habitat for moulting, nesting, socialising and access, through revegetation and other mechanisms. (H)				DOC, YEPT, Kāi tahu, landowners, mana whenua and site managers	Ongoing	
	Action 14c Ensure important hoiho habitat that is public conservation land prioritises hoiho conservation over other objectives and that the classification of these lands reflects this priority. (H)				DOC, YEPT and Kāi tahu		

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Strategic Priority 14 Provide habitat on land that protects hoiho and buffers against natural events and other impacts (continued).		Action 14d Engage with landowners to ensure that important hoiho habitat has adequate statutory protection. (H)			DOC, YEPT, Kāi tahu and landowners	
Strategic Priority 15 Protect hoiho and habitat from the negative effects of stock and browsers	Action 15a Exclude large stock from hoiho habitat. (E)				DOC, YEPT, Kāi tahu and landowners	Ongoing
	Action 15b Work with regional councils to ensure Regional Pest Management strategies are effective at protecting hoiho habitat. (H)				DOC, YEPT, Kāi tahu and local authorities	
	Action 15c Identify priority sites and implement wild browser control. (M)				DOC, YEPT, Kāi tahu, local authorities, pest control organisations, landowners and site managers	Ongoing
 Ka mahi tahi <i>Working together</i>						
Strategic Priority 16 Prioritise and support resourcing of hoiho conservation	Action 16a Develop strategies to enable resourcing to deliver the actions in this plan. (E)				DOC, YEPT, Kāi tahu and Fisheries NZ	
	Action 16b Advocate to funding agencies the need to recognise and fund all project aspects, including administration and management, and the importance of multi-year funding. (E)				DOC, YEPT, Kāi tahu and Fisheries NZ	
Strategic Priority 17 Support the delivery of hoiho conservation through effective communication and collaboration strategies	Action 17a Maintain and improve mechanisms to support effective communication with everyone involved in hoiho conservation to ensure collaboration. (E)				DOC, YEPT, Kāi tahu, Fisheries NZ and all stakeholders	Ongoing
	Action 17b Maintain and improve effective collaboration with local and regional government to deliver hoiho conservation. (H)				DOC, YEPT, Kāi tahu and local government	
Strategic Priority 18 Ensure Kāi Tahu is engaged in decision-making from the flax roots to governance	Action 18a Ensure Kāi Tahu are involved in planning and decision-making from 'flax roots' to governance. (E)				DOC, Kāi tahu, YEPT, Fisheries NZ and mana whenua	Ongoing
	Action 18b Increase awareness of Kāi Tahu mātauraka and tikaka that guides hoiho management among all practitioners. (H)				DOC, Kāi tahu, YEPT, Fisheries NZ and mana whenua	
	Action 18c Ensure Kāi Tahu engagement occurs when DOC enters into partnerships with other parties. (H)				DOC and Kāi tahu	
	Action 18d Support opportunities that enable Kāi Tahu to reconnect with hoiho in the takiwā, undertake cultural practices and build capacity and capability. This includes training and employment, involvement in research / monitoring and use of cultural management tools. (M)				DOC, Kāi tahu, YEPT and mana whenua	
Strategic Priority 19 Ensure research is strategic, well-coordinated and includes Mātauranga Māori perspectives	Action 19a Establish and maintain a process to identify and coordinate research and disseminate research outcomes. (E)				DOC, YEPT, Kāi tahu, mana whenua and researchers	
	Action 19b Support and invest in Mātauranga Māori based research and management. (H)				Kāi tahu, DOC, YEPT, mana whenua and researchers	
	Action 19c Support opportunities for Kāi Tahu whānau, hapū and iwi to undertake research. (M)				Kāi tahu, DOC, YEPT, mana whenua and researchers	
Strategic Priority 20 Ensure accurate, usable and accessible data contributes to hoiho conservation.	Action 20a Ensure permit conditions set minimum data standards so that all groups are providing consistent accurate data for hoiho conservation. (E)				DOC, YEPT, Kāi tahu, rehab groups, vets, site managers and researchers	Ongoing
	Action 20b Identify and undertake priorities for improvements to the data sets and systems (including accountability for curation) which are managed to support hoiho conservation. (H)				DOC, YEPT, Kāi tahu, Fisheries NZ, rehab groups, vets and researchers	