

Te hauorataka, te orakataka me te whakaputaraka / Health, survival and productivity						
	Year 1	Year 2	Year 3	Years 4 and 5	Collaborators	Status
	(July 2019-June 2020)	(July 2020-June 2021)	(July 2021-June 2022)	(July 2022-June 2024)	Who else may be involved & HGG lead(s) in bold	Progress on this action in 2022/23
<b>Strategic Priority 1</b> Intervene and care for sick, injured or underweight hoiho to improve survival and breeding success.	<b>Action 1a</b> 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	Good collaboration between organisations. No overarching funding system. JFN grants are coming to an end, applicants awaiting outcome of DOC Community Fund (several groups). Investigation into business partnership options to fund hoiho mahi (HGG) have stalled. New owners at Penguin Place. New rehab facility up and running on Rakiura.
	<b>Action 1b</b> 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	Extra rangers and capacity at YEPT and Penguin Place retained (JFN). Reduced ranger capacity at DOC Murihiku. Increased monitoring and interventions on Rakiura (supported by Kaitiaki Roopu, RMLT). Minimal monitoring & intervention on Whenua Hou (despite support by WH committee & Kaitiaki Roopu). Visits to Green Island (egg removal, moul monitoring). New Senior Ranger role created to coordinate DOC hoiho operations work.
	<b>Action 1c</b> 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	End of season debrief and reporting (release/survival rate, fosters, fledging). Data collected by all organisations. Student research project investigating impact of rehab for chicks and adults on survival / breeding (Uni of Otago).
<b>Strategic Priority 2</b> Minimise the impact of disease and unexplained mortality events on hoiho.	<b>Action 2a</b> 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	Significant review of chick management protocol with stakeholder feedback; including diphtheria protocol (latest version: Sept 2022). Bacterial culture and antibiotic sensitivity analysis testing (WHD). End of season review meeting with operational groups (19-May-2023).
	<b>Action 2b</b> 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	Significant review of malaria action plan with stakeholder feedback (latest version: Sept 2022). Malaria PCRs conducted on early chick mortalities. Focus on non-pharmacological options (e.g. mosquito proofing, AIL, Bti). End of season review meeting with operational groups (19-May-2023). Malarone pharmacokinetic research underway (WHD).
	<b>Action 2c</b> 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	Review of unexplained mortality response plan planned (UM levels, triggers & requirements, contacts, new Appendix) (latest version: Sept 2019).
	<b>Action 2d</b> Review hoiho necropsy results to date.(E)		Use results of the review to inform management and research direction. (E)		DOC, YEPT, vets and researchers	PhD ongoing reviewing penguin necropsy results using Huia database (Auckland Zoo). Analysis of necropsy data (Huia & hoiho databases) for hoiho multithreat risk assessment project PRO2022-01 (Quantifish).
	<b>Action 2e</b> 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	Contract for hoiho necropsies is ongoing (Wildbase, Massey Uni). Additional chick necropsies completed (Massey Uni). Continued funding of DOC vet coordinator role (analysis of necropsy results & direct work as needed). Collation of mainland chick data (treatment, outcomes etc). Ongoing pathogen discovery postdoc found gyrovirus associated with RDS & picornavirus with DS (Massey Uni). Treatment of chicks at WHD (RDS). Highly pathogenic avian influenza resources shared with operators.
	<b>Action 2f</b> Commission research to identify the vector(s) of malaria and investigate the mechanisms and dynamics of Plasmodium between mosquitoes, hoiho and other native / non-native birds. (E)				DOC, YEPT, researchers, vets, rehab groups and site managers	Completion of papers from PhD on spatial & temporal dynamics of malaria (Uni of Otago). Continued development & funding of a malaria warning system App (Landcare). Analysis of blood to look at Plasmodium species and lineage (qPCR) research is in progress (Massey Uni).
	<b>Action 2g</b> 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

		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	Testing in 2021/22 for 15 marine toxins but no significant results so hard to justify further testing (expensive and won't necessarily find an answer).
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	Significant review of chick management protocol. Overarching tikaka protocol not started (initial discussions about naming birds, social media, handling of dead birds etc).
	Action 3b Develop a dispensation process to enable fishers to temporarily hold bycaught hoiho for conservation purposes and Kāi Tahu cultural practices.		Implement dispensation process. (H)	Fisheries NZ, DOC and Kāi tahu	Dispensation was submitted in 2020/21 to DOC Permissions Planning & Land (stalled process)
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	Continuous improvements to conservation intervention options available. Fostering and egg management further developed as part of chick management protocol (including candling, removal of eggs from Green Is & hatching some in hospital). Experimental chick hatch in hospital reduced DS. Streamlining chick monitoring & treatment of small chicks (increased chick survival rates).
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	New Senior Ranger role created to coordinate DOC hoiho operations monitoring programme. Specific info provided in the monitoring protocol (pre-season meeting). Increased efforts to monitor & mark birds at remote sites (e.g. Green Is, Rakiura).
	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	Ongoing objectives for increased action determined through Kaitiaki roopu following full survey in 2020/21. Continued liaison & involvement of mana whenua (e.g. RMLT at Little Glory, Steep Head, Whenua Hou Committee for Whenua Hou). New Senior ranger role created to coordinate DOC hoiho operations work. Plans & objectives for hoiho season detailed separately for Rakiura and Whenua Hou.
	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	Joint sealion / hoiho monitoring trip to Enderby Island (Dec-Jan). (Feb, cut short due to cyclone response). CSP project proposed for 2023/24 season on Campbell Island to update population estimate, monitor health and investigate foraging.
	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	Not started. (Some initial discussions re MBE proposal & HTG).
<b>Te Marae o Takaroa / Marine habitat</b>					
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	Fisheries Liaison programme officer (trawl and setnet vessels). Ongoing liaison work with fishing industry & fishers resulted in additional voluntary setnet exclusion areas off Rakiura - East of the Neck & Port Pegasus (in addition to existing voluntary closure area around Whenua out to 4 nmi).
	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)	Proposed level of coverage for 2022/23 across hoiho habitat was 50%; actual level was 20% (4 hoiho bycaught in ECSI in 2022/23). Phased rollout of electronic monitoring planned but delayed (prioritised on SI setnet vessels). CSP project proposed (INT2023-02 to identify protected species from camera detections in NZ fisheries).
	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	Continued liaison with fishers, industry, LFRs and Fisheries Liaison officer. Ongoing work with fishing industry & fishers to identify areas requiring protection (based on fisheries/hoiho overlap); resulted in additional voluntary protected areas off Rakiura (East of the Neck & Port Pegasus). Industry continue to monitor voluntary closure around Whenua Hou (4nmi).
	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	Fine scale Geographical Position Reporting on fishing vessels and electronic reporting facilitates this. Daily alerts if protected species are caught (via FNZ). Improved mechanism for reporting marked hoiho in operation.
	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	Special permits for spearfishing of butterfish in effort to reduce setnetting. Supporting setnet fishers to transition to bottom longline.

	<b>Action 6f</b> 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)	Numerous working groups & advice provided to FNZ & contractors to inform AEBR, SEFRA and multi-threat risk assessment project (PRO2022-01). Project (PSB2020-06) to characterise fisheries that overlap with hoiho (NIWA) is underway. Outputs from fisheries project (PSB2020-04) modelling spatial distribution for hoiho were used for the AEBR (Anemone, Quantifish).
	<b>Action 6g</b> 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	Changes to legislation (allow camera deployment on tenders, not just main boat). Continued work with shark setnetters and Fisheries Inshore NZ agree to three voluntary setnet closure areas around Rakiura (existing one around Whenua Hou to 4nmi, and two new areas one East of the Neck & on in Port Pegasus).
		<b>Action 6h</b> Assess the risk of bycatch from inshore trawl fisheries. (H)	Fisheries NZ, DOC, YEPT, fishing industry, fishers and researchers	Observer coverage on trawl vessels as part of Hector's dolphin Threat Management Plan. Electronic monitoring rollout of trawl vessels planned but delayed.
		<b>Action 6i</b> Assess whether management measures must be implemented to reduce risk from recreational fisheries. (M)	Fisheries NZ, DOC, YEPT, rec fishers and researchers	FNZ projects under Seabird Action Plan stalled; workshops planned but COVID impacted.
<b>Strategic Priority 7</b> Protect and support marine habitats and ecosystems that nourish hoiho.	<b>Action 7a</b> 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	Provide continued advice for work to identify Significant Natural Areas (ORC/ ES). Ongoing work with fishing industry & fishers to identify areas requiring protection (based on fisheries/hoiho overlap); resulted in additional voluntary protected areas off Rakiura (East of the Neck & Port Pegasus). Ongoing Regional Policy Statement (RPS) work (sets direction for natural resource management). Delayed South East Marine Protection (SEMP) process, still ongoing advice; unlikely to protect hoiho.
	<b>Action 7b</b> 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	Continued work to identify & contribute to Significant Natural Areas planning process with ORC/ ES (NIWA). Papers written up from PhD investigating marine distribution of hoiho and environmental predictors of habitat use (Uni of Otago).
	<b>Action 7c</b> 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	Development of the Government's national climate change adaptation plan is under way.
	<b>Action 7d</b> 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	Tracking of hoiho from Enderby & Campbell Islands during joint hoiho/sea lion trip. Papers written up from PhD investigating marine distribution of hoiho (Uni of Otago). Paper written up from MSc investigating foraging strategies around Rakiura (Uni of Otago). Foraging tracks used to support Multi-threat risk assessment work. Rakiura foraging research work used to designate voluntary setnet exclusion zones. Funding for CSP project proposal to investigate foraging at Steep Head and Little Glory Bay (Rakiura).
	<b>Action 7e</b> 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	Faecal & feather samples collected (Northern population & Southern). PhD research on diet of hoiho underway (Uni of Otago). Stable isotope analysis stalled (Uni of Otago).
	<b>Action 7f</b> 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	Feathers collected from mainland, Rakiura and Enderby & Campbell Island.
	<b>Action 7g</b> 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	Papers written up from PhD investigating marine distribution of hoiho (Uni of Otago). Use of research tools: e.g. Marine Heatwave Tool ( <a href="http://www.moanaproject.org">www.moanaproject.org</a> ), remote sensing imagery (ocean colour) for sedimentation and hoiho cameras to look at habitat where birds are foraging.
	<b>Action 7h</b> 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	Advice provided for various resource consent applications. Ongoing Regional Policy Statement (RPS) work (sets direction for natural resource management). Continued work to identify & contribute to Significant Natural Areas planning process (ORC/ ES).

			<b>Action 7i</b> 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	Not started. Requires significant data from action 5c to progress.	
			<b>Action 7j</b> 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	MVSc research underway on marine predator injuries in hospitalised hoiho (Massey Uni)	
			<b>Action 7k</b> 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	Not started.	
<b>Strategic Priority 8</b> Ensure marine pollution, disturbance and noise do not threaten hoiho.	<b>Action 8a</b> 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	(Latest version of ORC plan: April 2019; latest version of ES plan: Sept 2018)	
	<b>Action 8b</b> 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	Relationship building with DCC wastewater liaison group, CDC and SDC.	
	<b>Action 8c</b> 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	Liaison with biodiversity and marine teams at ORC and ES. Relationship building with DCC wastewater liaison group, CDC and SDC.	
			<b>Action 8d</b> Commission research to identify, characterize and highlight the potential impacts of marine pollutants on hoiho and identify important areas for further work.	DOC, YEPT, Kāi tahu, local authorities, and researchers	Heavy metal testing of hoiho chicks completed (e.g. mercury, selenium).	
<b>Te whakaekeka o te takata / Human disturbance</b>						
<b>Strategic Priority 9</b> Reduce the impact of tourism and recreation activities to ensure they do not threaten hoiho.	<b>Action 9a</b> 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 a	Extended spatial extent closure for Boulder Beach (1 Nov to 28 Feb). Partial closure of western Sandfly Bay (1 Nov to 28 Feb). Continued closure of Tavora (1 Nov to 28 Feb). Track closed temporarily at Curio Bay to protect hoiho. Summer rangers (coastal Otago & Catlins), kaitiaki ranger at Katitiki Pt, volunteers and community groups. Basic design principles for DOC managed hoiho sites. Long-term plan for track re-alignment to avoid hoiho habitat at Sandfly Bay. Additional planting as screening from visitors at Katiki Point.	
	<b>Action 9b</b> Move moulting and other at-risk birds from beaches where disturbance is likely to safer areas, as required. (E)			DOC, YEPT, site managers a	Increased effort to identify moulters (mainland and Rakiura). Relocation of birds effectively delivered by several organisations (on mainland) and some capacity in Rakiura.	
	<b>Action 9c</b> 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	Advocacy by summer rangers, Kaitiaki ranger, and volunteers; minimal presence at Curio Bay. Education and advocacy via press releases and social media (several groups). Ongoing work to ensure consistency of messaging. Social Science PhD underway on dog interactions, visitor messaging and its impact (Uni of Otago). Report completed including analysis of outreach needs to address tourism impacts (NOAA). Dunedin Destination management plan includes specific action to educate about wildlife and consistency of messaging between operators.	
	<b>Action 9d</b> 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	Visitor counters collecting data (Katiki, Sandfly, Curio Bay, Okia). Visitor numbers were up following reduction during covid. Reports from Summer rangers. DOC compliance App - incidents recording and compliance (MyCLE and CLE works). Report completed analysing outreach needs to address tourism impacts (NOAA).	
			<b>Action 9e</b> 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	No change to CDC vehicles on beaches legislation despite submissions.
			<b>Action 9f</b> Commission an economic analysis of the value of hoiho to inform decision making. (M)		DOC, YEPT, Kāi tahu, local authorities, and researchers	Not started (action does not sit well with current management priorities).
	<b>Action 10a</b> 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	DOC compliance App to aid enforcement and improve processes (fining ability).	

Strategic Priority 10 Eliminate mortality from dogs.		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	Revitalisation of <i>Lead the Way</i> Programme (dog interactions on beaches). PhD underway on dog interactions, review of signage / advocacy, and recommendations for messaging, focused on sites in Otago and Catlins (Uni of Otago). Several social media & media releases re dog attacks on beaches.
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	Kaitiaki ranger at Moeraki. Interpretation panel designed by Moeraki runaka installed at Katiki.
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	Managed through Wildlife Act permissions process for research and conservation organisations, case by case evaluation. Operational management through specific protocols and SOPs.
<b>Te nohoka ki te whenua / Terrestrial habitat</b>					
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	Project currently deferred (since additional feasibility trials in 2021/22).
	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	Monthly checks and follow-up undertaken in North Otago. Control at targeted sites as necessary.
	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 orgs and researchers	Collation of trap locations (many organisations) to enable assessment of gaps. Additional trap coverage (e.g. Long Point, Waianakarua Bluffs) and ongoing replacement of traps.
	Action 13d Support Predator Free Rakiura goals to eliminate possums, rats, feral cats and hedgehogs. (H)			DOC and pest control organisations	New Predator Free Rakiura project team onboard, otherwise limited progress.
	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 liaison and cooperation with Predator free Dunedin, PF2050, Halo Project and OPBG. Supporting development of thermal camera technology (Cacophony Ltd and RMLT).
	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	Not started (aside from initial discussions with papatipu runaka).
	Action 13g Identify employment opportunities for Kāi Tahu in predator control. (M)			Kāi tahu, DOC and predator control organisations	Not started (aside from initial discussions with papatipu runaka).
Strategic Priority 14 Provide habitat on land that protects hoiho and buffers against natural events and other impacts.	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	Continuous effort and site based management (e.g. firebreaks, fire plans, stabilising cliffs, ensuring tracks in eroded dunes, planting to reduce run-off, removal of pooled water) (various organisations). For example, specific issues at Sandfly Bay, sand dune erosion at Okia & Otapahi.
	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	Continuous effort and site based management (e.g. tracks for hoiho, nest boxes, shade, flood protection (various organisations). For example: new nestboxes at Pipikaretu and Long Point, Katiki specific issue with poroporo impacting on site, penguin access tracks cut at Waianakarua Bluffs, Okia & Otapahi.
		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	Reclassification of strip as Wildlife Refuge between Katiki and Okahau Point being implemented.
		Action 14d Engage with landowners to ensure that important hoiho habitat has adequate statutory protection. (H)		DOC, YEPT, Kāi tahu and landowners	Initial discussions occurring at specific sites, but slow progress.
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 liaison and discussions with landowners, and fixing fences as required. Otapahi, Tavora, Katiki Point, Long Point all had issues with stock requiring removal or fencing.
	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	(Advice provided for latest version of strategies: ORC and ES 2019)
	Action 15c Identify priority sites and implement wild browser control. (M)			DOC, YEPT, Kāi tahu, local authorities, pest control organisations, landowners and site managers	Site by site implementation of control. Possum control (including via PF2050, PF Dunedin, OPBG, Halo Project; e.g. at Okia). Improved and coordinated rabbit control occurring (ORC). Goat control undertaken at Waianakarua Bluffs.
<b>Ka mahi tahi / Working together</b>					

<b>Strategic Priority 16</b> Prioritise and support resourcing of hoiho conservation	<b>Action 16a</b> Develop strategies to enable resourcing to deliver the actions in this plan. (E)	DOC, YEPT, Kāi tahu and Fisheries NZ	Limited funding available and applied for by operators (e.g. DOC Community Fund). Conservation Services Programme funding and Mountains to Sea / DOC Biodiversity for some hoiho related actions. research. Investigation into business partnership options to fund hoiho mahi (HGG) have stalled.
	<b>Action 16b</b> 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	HGG advocating to move to more sustainable funding (e.g. business partnership) have stalled.
<b>Strategic Priority 17</b> Support the delivery of hoiho conservation through effective communication and collaboration strategies	<b>Action 17a</b> 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	Operational mechanisms include: pre-/post-season meetings, regular email updates, annual YEP symposium. Kaitiaki roopu committees and Whenua Hou committee. Other comms through working groups (e.g. fisheries info group, disease, AEWG) and spatial advisory groups (e.g. Okia, Long Point, Te Rere).
	<b>Action 17b</b> Maintain and improve effective collaboration with local and regional government to deliver hoiho conservation. (H)	DOC, YEPT, Kāi tahu and local government	Ongoing support of Regional Policy Statement (RPS) work (sets direction for natural resource management). Continued advice and contributions to Significant Natural Areas planning process (ORC/ ES). Liaison with ORC biodiversity & marine teams.
<b>Strategic Priority 18</b> Ensure Kāi Tahu is engaged in decision-making from the flax roots to governance	<b>Action 18a</b> 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 liaison at various levels: Crown Treaty partnership, HGG/ HTG partnership, Kaitiaki roopu, Whenua Hou Committee, RMLT, Papatipu runaka (e.g. kaitiaki ranger at Moeraki, iwi rep for WH monitoring trips, succession planning at Moeraki).
	<b>Action 18b</b> 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	Guidance through Te Kaweka and Te Mahere.
	<b>Action 18c</b> Ensure Kāi Tahu engagement occurs when DOC enters into partnerships with other parties. (H)	DOC and Kāi tahu	Ongoing relationship building - Crown Treaty partnership.
	<b>Action 18d</b> 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	Building Kaitiaki roopu and Whenua Hou committee relationships, Moeraki kaitiaki ranger, ongoing RMLT liaison, mana whenua monitoring opportunities (Whenua Hou), succession planning for Moeraki.
<b>Strategic Priority 19</b> Ensure research is strategic, well-coordinated and includes Mātauranga Māori perspectives	<b>Action 19a</b> Establish and maintain a process to identify and coordinate research and disseminate research outcomes. (E)	DOC, YEPT, Kāi tahu, mana whenua and researchers	Coordination and identification through Te Mahere. Dissemination at Annual YEP Symposium, Oamaru Penguin Symposium & through DOC updates. Improved management of disease projects through vet coordinator.
	<b>Action 19b</b> Support and invest in Mātauranga Māori based research and management. (H)	Kāi tahu, DOC, YEPT, mana whenua and researchers	Investment opportunities not found.
	<b>Action 19c</b> Support opportunities for Kāi Tahu whānau, hapū and iwi to undertake research. (M)	Kāi tahu, DOC, YEPT, mana whenua and researchers	Opportunities not found.
<b>Strategic Priority 20</b> Ensure accurate, usable and accessible data contributes to hoiho conservation.	<b>Action 20a</b> 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	Permit conditions set on a case by case process. Data standard in monitoring protocol shared at pre-season meeting. Data collection to shared platforms (e.g. googledocs & hoiho database) (several organisations).
	<b>Action 20b</b> 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	FNZ project (PSB2020-05) to groom hoiho database is complete. Hoiho data working group established to improve datahandling and storage. Improved sharing of fisheries bycatch data. Data sharing through google drive and hoiho database. Diseases monitored by vet coordinator.