

Department of Conservation Climate Change Adaptation Action Plan – action tables 2022–2025

Te Mahere Hātepe Urutau mō te Huringa Āhuarangi a Te Papa Atawhai – he tūtohi mahi 2022–2025

Updated May 2023



Department of
Conservation
Te Papa Atawhai



**Te Kāwanatanga
o Aotearoa**
New Zealand Government

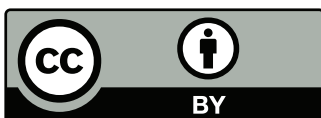
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Background

The climate is changing in Aotearoa New Zealand and will continue to do so for the foreseeable future. These changes are already affecting our natural and built environments. Regardless of our efforts to reduce greenhouse gas concentrations in the atmosphere, we will continue to experience the ongoing effects of climate change.

The Department of Conservation Te Papa Atawhai (DOC) is responsible for managing Aotearoa New Zealand's biodiversity, heritage and visitor experiences on public conservation lands and waters. As the climate changes over the coming decades, adaptation (that is, changing our management to either reduce or become resilient to climate change) will be key to ensuring DOC continues to meet its responsibilities.

To successfully deal with climate change adaptation, we need to be able to understand the impacts of a changing climate and the effectiveness of our management plans, as well as innovate both existing and new tools. This is both in terms of the current state and with respect to future risk.

Adaptation action plan

DOC's **Climate Change Adaption Action Plan** (CCAAP) identified 139 actions for implementation from 2020 to 2025. DOC teams worked through an extensive social process in 2019 to develop the CCAAP, with accountabilities spanning multiple DOC business groups. The CCAAP is DOC's pathway to reducing the risks associated with climate change and increasing our resilience to current and future climate changes. The CCAAP is intended to guide planning, resource prioritisation and operational work and, by doing so, support DOC's high-level strategic goals. Climate change touches all areas of DOC's work, and it is critical that we work as a united team to build resilience to climate change.

The CCAAP aligns with objective 13 of **Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy 2020** (ANZBS), that biodiversity is resilient to the effects of climate change. It also aligns with the three principles of DOC's **Heritage and Visitor Strategy** and is a priority in DOC's integrated strategy for 2022. Implementing the CCAAP is also a goal in the Ministry for the Environment's **National Adaptation Plan** (NAP), which states, 'by 2024 a reporting framework on the implementation of the CCAAP is in place' and 'DOC adaptation work progress against the framework is reported on'.

Since its inception in 2020, many CCAAP actions are in progress or complete. This includes setting up programme management, undertaking climate assessments to support operational recovery following weather events, a coastal inundation risk assessment for all DOC assets, trial dynamic adaptation pathway planning for visitor assets, and detailed analyses of vulnerability of a coastal lagoon and native frog species to climate change.

Review purpose

This review aims to update the actions in the CCAAP so that they are discrete pieces of work of a similar size and achievable within a specified time frame.

Actions to increase understanding are included in the associated science plan as these are considered research. Business-as-usual practices that encompass DOC's wider functions occur alongside the actions in this plan. This includes giving full effect to the principles of Te Tiriti o Waitangi / the Treaty of Waitangi under section 4 of the Conservation Act 1987. This enables whānau, hapū and iwi to exercise their full role as rangatira and kaitiaki of natural and cultural taonga, including in response to climate change.

Adaptation framework and priorities

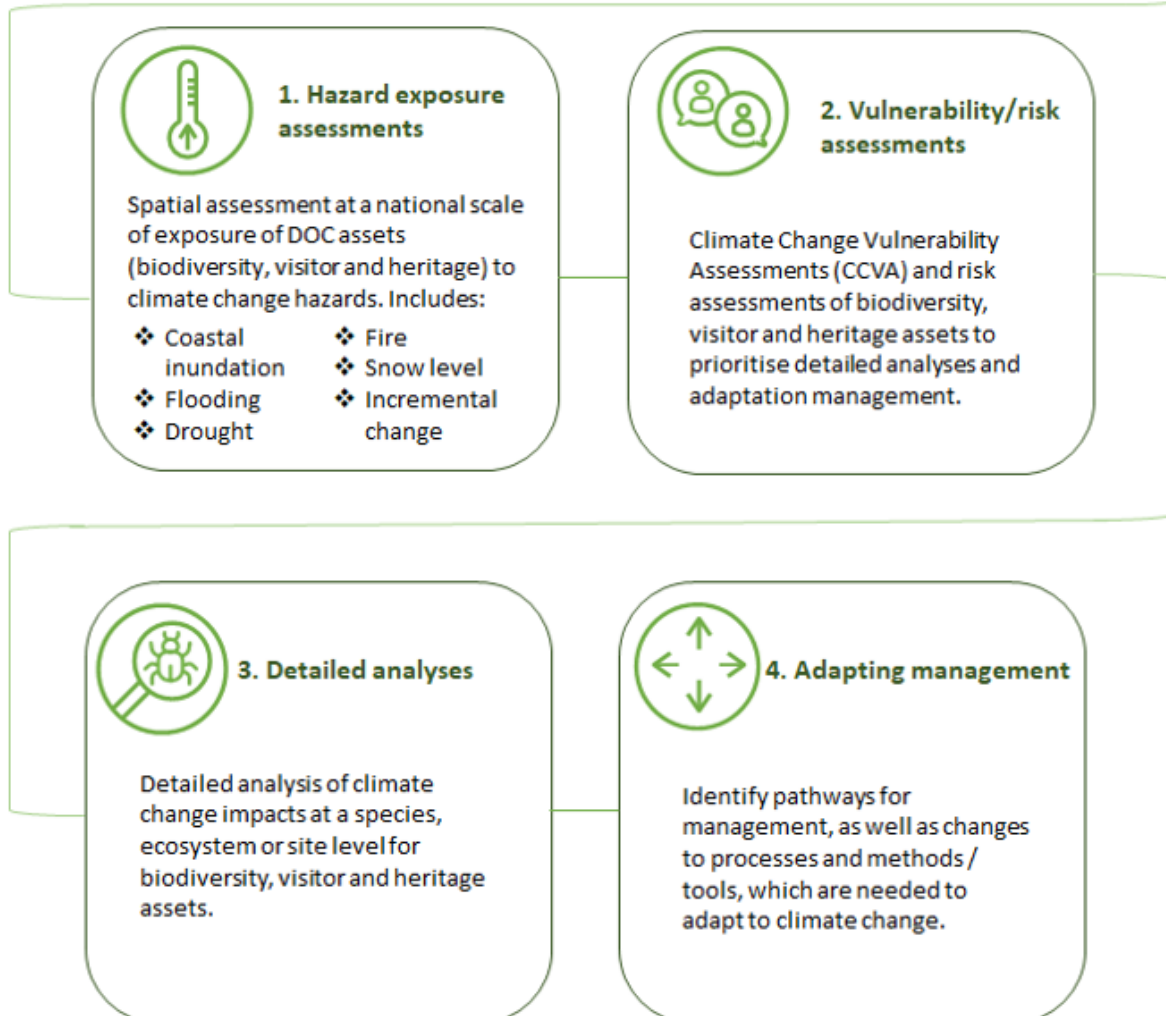
We have provided a framework that sequences the types of actions into the four components needed to achieve climate change adaptation in DOC. These are in ascending order of detail, that is, scaled from greater extent through to greater detail. The components are 1) hazard exposure assessments, 2) vulnerability/risk assessments, 3) detailed analyses and 4) adapting management (see the diagram below). These four components are underpinned by information and knowledge from research and monitoring. In addition, products from all four flow into DOC's business management systems and processes.

There are several priority actions to address climate change adaptation within the framework. This includes a focus on developing guidelines so that climate change vulnerability/risk assessments and adaptation plans can begin to be developed. It also includes working out how to integrate adaptation into existing DOC business management systems and processes, because if management does not change, then it is not adaptation. Another focus is on developing metrics for reporting on climate change impacts and adaptation, as this enables risks to be assessed and management decisions to be made that are based on evidence. The final priority action is investigating climate change impacts where urgent management intervention might be needed.

Five work streams that include all DOC work programmes to ensure plan outcomes are achieved



Central to our work is a programme framework to provide a systems structure to guide DOC's climate change adaptation work. This framework is underpinned by information, monitoring and research.



Climate change adaptation plan framework.

Climate change action tables (updated May 2023)

The following tables outline updated actions for the CCAAP 2022–2025.

The abbreviations for the DOC business groups in the table are as follows: BSA – Biodiversity, System and Aquatic, H&V – Heritage and Visitor, M&E – Monitoring and Evaluation, NP – National Programmes, OS – Operations Support, P&S – Planning and Services, RS – Regulatory Services, TB – Terrestrial Biodiversity.

The original actions from the CCAAP 2020–2025 have been mapped to the new actions (the original actions are bracketed in light grey text at the end of each action). Any action prerequisites are highlighted in bold.

GOVERNANCE ACTIONS		LEAD UNIT	DELIVERY TIME FRAME		
			22/23	23/24	24/25
GOV1	Programme reporting				
GOV1a	Develop a monthly dashboard (Power BI) to report on progress against each action in the CCAAP (ER1a+b).	BSA		✓	
GOV1b	Develop and design indicators/measures using data from national-scale monitoring programmes for reporting on climate change impacts (ER1d, ER2a–d, ER2g).	M&E		✓	
GOV1c	Develop and design indicators/measures using data from management systems (eg programmes of work, Policy, Research, Heritage and Visitor, contaminated sites) for reporting on climate adaptation in DOC's work programmes (TB1b–h, AB1b–f, AB1h, HV1d, G3a–e, G3i, TB1i, ER1e, ER3d, G3j).	M&E		✓	
GOV1d	Develop dashboards (Power BI) to report annually on a) climate change impacts on biodiversity, heritage and visitor (GOV1b) and b) climate adaptation in overall DOC work programmes (GOV1c) (new).	Finance		✓	✓
GOV1e	Update science plan to identify research needs to progress climate change adaptation and reflect the CCAAP 2022–2025 review (ER3a).	BSA		✓	

REGULATORY ACTIONS		LEAD UNIT	DELIVERY TIME FRAME		
			22/23	23/24	24/25
REG1a	Assess which DOC regulatory (eg statutory land management, statutory management planning, permissions, Resource Management Act, compliance) systems and processes include reference to climate change adaptation criteria (eg decision support documents, land reclassification, acquisition or disposal, marine protected areas) and identify system requirements (PPL1b–f, PPL1h, G3g).	RS		✓	✓
REG1b	Implement the recommendations of the DOC regulatory systems and processes assessments (REG1a) to include climate change adaptation criteria/requirements (new).	RS			✓

GUIDELINES & SYSTEMS ACTIONS		LEAD UNIT	DELIVERY TIME FRAME		
			22/23	23/24	24/25
GS1	Guidelines				
GS1a	Produce guidelines on how to undertake a multispecies or ecosystem climate change vulnerability/risk assessment (CCVA) (new).	TB	✓		
GS1b	Produce guidelines on how to do heritage and visitor risk assessments (like CCVA) for multiple infrastructure types (eg huts, bridges) (new).	H&V		✓	
GS1c	Produce guidelines on dynamic adaptive pathway planning (DAPP) for adapting to climate change for native ecosystems and species (ER3c).	BSA	✓		
GS1d	Update guidelines on dynamic adaptive pathway planning (DAPP) for adapting to climate change for heritage, visitor experience and infrastructure. Include considerations of Nature-based Solutions (NbS) for adaptation (ER3c, HV1h).	OS		✓	
GS1e	Produce guidelines for internal use on how to commission cultural impact assessments that consider how Māori cultural practices, knowledge, health, sites of significance and taonga are impacted by climate change and adaptation (TB4f, TB1k, TB2e, AB1j, AB2d, AB4h, HV1g, HV2d, HV4f).	BSA	✓	✓	
GS2	Systems				
GS2a	Assess which parts of the biodiversity systems and processes need to include climate change adaptation criteria (eg threat classification, standard operating procedures (SOPs), management prioritisation) and identify information/system requirements and dependencies for business planning systems and processes (TB3a–e, AB3a–d).	BSA	✓	✓	
GS2b	Assess which parts of the heritage and visitor systems and processes need to include climate change adaptation criteria (eg track/hut service standards, SOPs) and identify information/system requirements and dependencies for business planning system and processes (HV3a–d).	BSA	✓	✓	
GS2c	Implement the recommendations of the biodiversity (GS2a) and heritage and visitor asset (GS2b) assessments to include climate change adaptation criteria/requirements in the business planning systems and processes (new).	Finance			✓
GS3	Hazard exposure assessments and information				
GS3a	Update the NIWA climate and climate change projection data, which are available on DOC GIS for climate change vulnerability/risk assessments and detailed analyses, to new generation CMIP6 projections generated from the most recent IPCC AR6 reporting (ER2e–f).	M&E			✓
GS3b	Undertake spatial hazard exposure assessments at a national scale of DOC biodiversity, heritage and visitor assets in relation to climate change. Includes collating spatial climate information layers with appropriate metadata and user guidelines on DOC systems (HV1b+c, HV1e+f, HV2a–d).	M&E	✓	✓	✓
GS3c	Input information from the biodiversity and heritage, visitor and infrastructure spatial hazard exposure (GS3b) and climate change vulnerability/risk assessments (BIO1a + b, HVI1a–c) into the business planning systems (TB3g, AB3e, HV3e).	Finance		✓	✓

BIODIVERSITY ACTIONS		LEAD UNIT	DELIVERY TIME FRAME		
			22/23	23/24	24/25
BIO1	Climate change vulnerability/risk assessments (CCVA)				
BIO1a	Undertake climate change vulnerability assessments to identify terrestrial/aquatic threatened species and ecosystems at risk and prioritise for research and adaptation (TB2c, AB2c).	BSA/TB		✓	✓
BIO1b	Undertake climate change risk assessments to identify terrestrial/aquatic invasive animal pests and weeds that will benefit, increasing the impact on native biodiversity, and prioritise for adaptation (new).	BSA/TB		✓	✓
BIO2	Detailed analyses				
BIO2a	Undertake detailed vulnerability analysis at a species, ecosystem or site level for prioritised terrestrial/aquatic threatened species and ecosystems at risk from climate change (new).	BSA/TB	✓	✓	✓
BIO2b	Undertake detailed risk analysis at a species level for prioritised terrestrial/aquatic invasive animal pests and weeds that will benefit from climate change (new).	BSA/TB	✓	✓	✓
BIO3	Implement adaptation actions				
BIO3a	Develop dynamic adaptive pathway plans for prioritised ecosystems and native species at risk from climate change impacts (TB4b, AB4b).	TB	✓	✓	✓
BIO3b	Develop plans for where/how to manage other pressures (eg weeds, animal pests, pest fish, pathogens, fire, water abstraction) to increase the resilience of ecosystems and species identified as at risk from climate change (TB4d, AB4d).	BSA/TB	✓	✓	✓
BIO3c	Develop translocation plans for the types of native species at risk from climate change (eg species with a single population stronghold) (TB4e, AB4e).	TB		✓	✓
BIO3d	Develop methods to recover ecosystems and species following severe climate change related events (eg restoration following fire) (TB4h, AB4g).	TB		✓	✓
BIO3e	Develop criteria for restoring a site for biodiversity or carbon sequestration purposes to ensure native plant or site resilience to climate change (TB4i).	BSA			✓
BIO3f	Assess the continued effectiveness of biodiversity / pest management tools and techniques considering climate change and what changes are needed (TB1j, AB1g).	BSA/TB		✓	✓

HERITAGE, VISITOR & INFRASTRUCTURE ACTIONS		LEAD UNIT	DELIVERY TIME FRAME		
			22/23	23/24	24/25
HVI1	Climate change vulnerability/risk assessments (CCVA)				
HVI1a	Undertake climate change risk assessments to identify heritage and visitor sites to prioritise for longer-term planning for adaptation (high level) (HV2a-c).	H&V		✓	✓
HVI1b	Undertake climate change risk assessments for infrastructure sites to prioritise for longer-term planning for adaptation (high level) (HV2a-c).	P&S			✓
HVI1c	Undertake climate change risk assessments for contaminated sites on public conservation land to prioritise for longer-term planning for adaptation (high level) (G3j).	NP			✓
HVI2	Detailed analyses				
HVI2a	Undertake detailed risk analysis at a site level for heritage, visitor and infrastructure (eg Routeburn, Heaphy Bridge) identified as at risk from climate change (new).	NP	✓	✓	✓
HVI3	Implement adaptation actions				
HVI3a	Undertake dynamic adaptive pathway planning (DAPP) for prioritised assets and experiences at risk from climate change (HV4b).	P&S	✓	✓	✓
HVI3b	Assess how weather influences visitors' experiences and behaviours using existing social research tools (HV1d).	M&E		✓	
HVI3c	Develop tools for attributing the probability of damage/failure of infrastructure from extreme weather events under climate change (eg rainfall-induced landslides, bridge failure) (new).	H&V		✓	✓
HVI3d	Develop climate change criteria for analysing the viability of reinstating or building new visitor infrastructure at a site (HV4c).	H&V		✓	✓