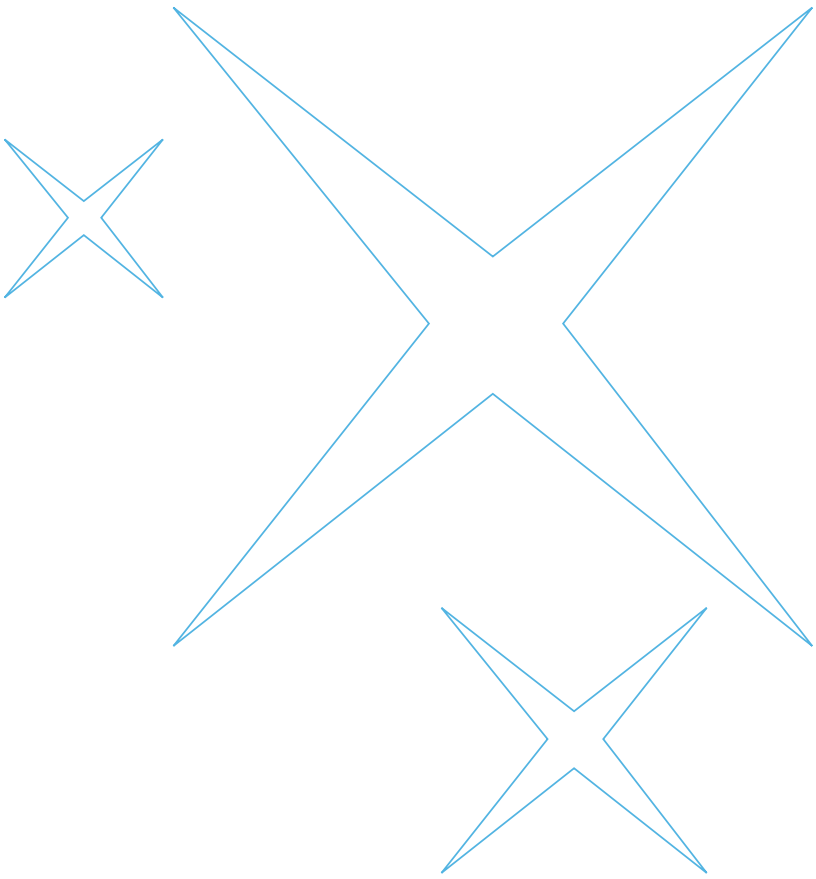
September 2025

Aotearoa New Zealand Sustainable Finance Taxonomy (NZ Taxonomy)

Climate change adaptation and resilience Substantial Contribution criteria, including Agriculture, Forestry and Other Land Use adaptation and resilience whitelist.

Draft for public consultation – September 2025



Acknowledgements

We sincerely thank everyone who has given time and consideration to the development of the first draft of the NZ Taxonomy.

Two working groups have primarily developed this draft of the NZ Taxonomy:

1. Technical Advisory Group (TAG) – this sector-specific group has provided technical inputs to develop the Substantial Contribution criteria for the agricultural and forestry sectors, as well as the activity-specific do no significant harm (DNSH) for these sectors.
2. Technical Experts Group (TEG) – this group is overseeing the development of the entire NZ Taxonomy (all sectors) and have focused on usability, interoperability and ensuring the NZ Taxonomy delivers on its intended purpose.

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29. **Michelle Sands,** General Manager – Strategy & Policy, Horticulture New Zealand
30. **Edwin Massey,** General Manager – Sustainability, New Zealand Winegrowers

Additionally, throughout the process there has been input from and engagement with a wide range of stakeholders, including government officials, research organisations, industry bodies, real economy participants, iwi and Māori organisations, and environmental NGOs.

We also acknowledge and thank these organisations for their input to the draft criteria or for participating in group sessions and one-on-one meetings, providing general feedback or topic-specific insights and technical inputs.

To support this work, CSF engaged the **Climate Bonds Initiative** (CBI) as the technical delivery partner for the NZ Taxonomy development. The Climate Bonds Initiative is an international organisation working to mobilise global capital for climate action. CBI's mission is to help drive down the cost of capital for large-scale climate and infrastructure projects and to support governments seeking increased access to capital markets to meet climate and GHG emission reduction goals. CBI have contributed to the development of almost every sustainable finance taxonomy globally, including the EU, Singapore, Brazil and Australian taxonomies. We thank them for their expertise and guidance.

We also acknowledge Pip Band of **Band Consulting** for providing specialist technical expertise in agriculture and forestry, as well as critical input into the methodological design of the NZ Taxonomy across sectors.

The Centre for Sustainable Finance: Toitū Tahua (CSF) provides coordination and secretariat functions for the development of the NZ Taxonomy. CSF works across the financial system to align financial markets settings and initiatives with long term resilience and prosperity. It is an independently governed, charitable trust.

Ngā mihi nui.

Introduction

The Aotearoa New Zealand Sustainable Finance Taxonomy (NZ Taxonomy) is a framework to support Aotearoa's long-term prosperity and resilience. It provides decision-useful information for financial market participants who want to direct capital into environmentally sustainable activities.

The NZ Taxonomy is a voluntary framework. It defines economic activities which contribute to environmental objectives and defines the criteria those activities must meet to be considered taxonomy-aligned. By providing clear, credible and domestically relevant criteria to identify and classify environmentally sustainable activities, it enables financial market participants to more confidently identify environmentally sustainable investment opportunities, reducing risk and friction.

Taxonomies have the potential to be used as the foundation for the development of sustainability focused financial products, to help identify assets for inclusion in bonds or investment funds, to aid risk assessment or capital allocation decisions, and to support sustainability reporting. Possible use-cases continue to be developed and piloted internationally.

The NZ Taxonomy is at the stage of developing a credible, usable and internationally interoperable framework and criteria for a range of stakeholders. Work on the NZ Taxonomy in 2025 is focused on developing classifications and criteria for agriculture and forestry sector activities that contribute to the goals of climate change mitigation, adaptation and resilience.

Supporting climate transition, adaptation and resilience

The purpose of the NZ Taxonomy is to support financial market participants who wish to mobilise and direct capital flows towards:

- Building a low-emissions, Paris-aligned future;
- Restoring nature; and
- Upholding the rights and interests of Indigenous Peoples of the land.

The NZ Taxonomy has a strong focus on climate **transition activities**. Inclusion of a transition category is intended to facilitate the decarbonisation of industries which are hard-to-abate but are significant for social and economic wellbeing such as steel, cement, aviation, agriculture, etc.

Almost all taxonomies globally include transition concepts in some way, and several taxonomies utilise specific transition categories to distinguish these from green activities, including ASEAN, Australia, and Singapore.

The draft NZ Taxonomy for the agricultural and forestry sectors includes transition activities such as switching to more efficient or electric machinery, purchasing renewable energy generation and storage equipment, planting - including riparian and shelterbelt planting, improving data and monitoring efficiency, adopting new technologies and implementing new management practices. The transition classification has the intent of increasing the visibility and potential finance for credible actions which reduce emissions.

The NZ Taxonomy draft now also includes criteria designed to support **adaptation and resilience on-farm and in-forest.** As New Zealand businesses increasingly experience the impacts of climate change, the NZ Taxonomy can support businesses choosing to undertake activities which increase their adaptive capacity and build resilience.

The NZ Taxonomy is one tool that can be used to support Aotearoa New Zealand's transition to a lower emission, resilient economy. The NZ Taxonomy is not meant to determine or prescribe the future economic mix or transition pathways, but to provide support for stepping-stones on the path to a resilient future.

Why does NZ need its own taxonomy?

Taxonomies are in development in 58 global jurisdictions, and are fast becoming the common language between investors, markets and businesses when it comes to sustainability.

As a small and optional market, it is important that New Zealand meets global customer and market expectations.

To captialise on these opportunities, it is important that the NZ Taxonomy is interoperable with established taxonomies, particularly those of key trading partners.

The NZ Taxonomy's design has benefited from an extensive review of benchmark taxonomies, including the EU, Australian and Singapore, and it is being developed with the support of global taxonomy experts.

Developing a NZ Taxonomy that is methodologically consistent with global efforts - but which includes criteria that are usable and relevant to our domestic context - ensures definitions and performance thresholds are suitable for New Zealand businesses.

NZ Taxonomy alignment

For an activity to be considered taxonomy-aligned, there are three sets of criteria to consider.

- **Substantial Contribution (SC) criteria** – The activity demonstrates it makes a substantial contribution to the environmental objective (i.e. climate change mitigation or adaptation and resilience).
- **Do No Significant Harm (DNSH) criteria** – The activity making this substantial contribution must not cause significant negative impacts on other environmental objectives.
- **Minimum Social Safeguards (MSS)** – Entities seeking NZ Taxonomy alignment should also meet minimum standards for social responsibility, including labour rights, governance and indigenous rights.

For the initial phase of NZ Taxonomy alignment, it is proposed that entities are not required to complete assessments against the DNSH and MSS framework. In future phases (date to be determined), to be considered NZ Taxonomy-aligned, activities must also meet the DNSH and MSS requirements. This obligation will apply to all reporting entities, except for small businesses – defined for this purpose as enterprises with fewer than 20 employees. Entities wanting to use the NZ Taxonomy can, of course, start including all three sets of criteria as early as they wish. Transparency about the criteria being used for assessment of alignment is recommended.

The NZ Taxonomy is a voluntary framework

It provides decision-useful information by setting clear criteria for what effective climate mitigation, adaptation and resilience activities look like.

It is at the discretion of any business owner/operator if they wish to undertake any of these activities. Likewise, it is at the discretion of any financial institution or investor if they wish to use this information in capital allocation decisions.

Governance and development

The NZ Taxonomy is being developed through a robust process established in alignment with leading international efforts in designing local taxonomies. This process includes the involvement of a diverse range of expertise, strong governance, regulatory oversight, transparency, opportunity for public input and safeguards against undue political or industry interference. The process has been as follows:

Project set-up

- Initial scoping and market validation, and a report on design considerations for the NZ Taxonomy.
- Minister of Climate Change directs work to begin on the NZ Taxonomy's climate change mitigation and adaptation & resilience criteria, starting in the agriculture and forestry sectors.
- CSF convened, through an open-EOI process, a Technical Experts Group (TEG) and sector-specific Technical Advisory Group (TAG) of experts to co-design the NZ Taxonomy criteria.
- CSF engaged the Climate Bonds Initiative (CBI) as the technical partners for the development of the NZ Taxonomy. CBI has led the development of sustainable finance taxonomies globally, including in the EU, ASEAN, Brazil and Australia.
- The development work is overseen by the Ministry for the Environment, with quality assurance of the process being provided by the Council of Financial Regulators.

Criteria development

- The TEG and the Agriculture/Forestry TAG, comprising 46 members in total, worked to develop draft criteria for activities that make a substantial contribution to climate change mitigation, adaptation and resilience between December 2024 and August 2025.
- Additional technical input was sought from 35 organisations throughout this process. 22 provided substantive contributions.
- Briefings and opportunities for early input were also extended to an additional 74 organisations, including industry bodies and key players in the agriculture and forestry sectors, as well as eNGOs, financial institutions, and Māori organisations.
- The first draft of the NZ Taxonomy climate change mitigation criteria was publicly consulted on from 16 June – 13 July, 2025.
- 48 consultation responses were received by CSF, comprising 29 organisational and 19 individual submissions.
- Feedback was analysed and key issues were considered by the TEG and the Agriculture/Forestry TAG, who made revisions for this second consultation period.

About this consultation

This consultation is to seek wider stakeholder feedback on the draft adaptation and resilience criteria, as well as some key changes made to the climate change mitigation criteria.

Submissions may be made through the online consultation form, or by emailing a document to taxonomy@sustainablefinance.nz. Submissions which answer the consultation questions will be prioritised.

Consultation is open from 22 September – 17 October, 2025.

Please contact taxonomy@sustainablefinance.nz for any questions or assistance.

Contents

Adaptation and resilience substantial contribution criteria

As New Zealand increasingly experiences extreme weather events and the impacts of changing temperatures on ecosystems, the need for businesses to adapt and build resilience is increasing.

Examples of climate change adaptation and resilience (A&R) activities include investment in restoration of diverse native ecosystems, early warning systems, removing or controlling new invasive species and pests, costs associated with emergency preparedness and response, and broader changes to business locations, infrastructure or processes.

The climate change A&R Substantial Contribution (SC) criteria is made up of two sets of criteria.

1. The 'process-based' approach
2. The whitelist

The NZ Taxonomy has included a process-based approach for climate change A&R to reflect the highly contextual nature of appropriate activities/measures to build adaptive capacity and resilience. For this reason, a set menu of activities cannot be established in the way climate change mitigation activities can be detailed. Instead, the process-based approach outlines the steps that must be taken for development of a robust climate change A&R activity. If a business has followed the process, any resulting climate change A&R activity can be considered taxonomy-aligned.

In addition, the NZ Taxonomy also includes a whitelist. This is intended to provide an easier entry point to climate change A&R, by identifying activities/measures that make a substantial contribution, while carrying minimal risk of maladaptation or harm to other social and environmental objectives. The activities/measures on the whitelist are automatically deemed eligible for taxonomy-alignment and do not require a full assessment against the process-based approach criteria.

All climate change A&R activities are classified as green.

Introduction to the process-based approach to climate change adaptation and resilience substantial contribution criteria

What is the 'process-based approach' for climate change adaptation and resilience?

The SC criteria define requirements that an economic activity or measure must meet to be considered as making a substantial contribution to an environmental objective — in this case, climate change A&R.

These criteria outline the approach that must be taken for climate change A&R activities/measures to be aligned with the (NZ Taxonomy).

The NZ Taxonomy adopts a process-based approach for climate change A&R to reflect the highly contextual nature of appropriate activities/measures.

The approach – it is applicable to all sectors covered by the NZ Taxonomy.

How was the 'process-based approach' developed?

The draft approach builds on the EU model and has been adapted by the Technical Experts Group (TEG) and the Agriculture/Forestry Technical Advisory Group (TAG) to ensure relevance to the Aotearoa New Zealand context.

As always, the technical groups aim to balance introducing necessary changes while remaining interoperable with other key jurisdictions' taxonomies.

Why are these criteria important?

The process-based approach provides a structured pathway for proponents to demonstrate NZ Taxonomy-alignment by showing that an activity makes a substantial contribution to climate change A&R. Activities/measures not automatically eligible through the whitelist may use this approach to qualify for taxonomy-alignment.

How to use this document?

For an activity to be considered taxonomy-aligned, there are three sets of criteria to consider.

1. **Substantial Contribution (SC) criteria** – The activity demonstrates it makes a substantial contribution to the environmental objective (i.e., climate change A&R).
2. **Do No Significant Harm (DNSH) criteria** – The activity making this substantial contribution must not cause significant negative impacts on other environmental objectives.
3. **Minimum Social Safeguards (MSS)** – Entities seeking NZ Taxonomy alignment should also meet minimum standards for social responsibility, including labour rights, governance and indigenous rights.

The 'process-based approach' constitutes the Substantial Contribution criteria for the climate change A&R environmental objective.

Taxonomy alignment is voluntary.

For the initial phase of NZ Taxonomy alignment, entities are not required to complete assessments against the DNSH and MSS framework.

In future phases (date to be determined), to be considered NZ Taxonomy-aligned, activities must also meet the DNSH and MSS requirements. This obligation will apply to all reporting entities, except for small businesses – defined for this purpose as enterprises with fewer than 20 employees.

Entities wanting to use the NZ Taxonomy can, of course, start including all three sets of criteria as early as they wish. Transparency about the criteria being used for assessment of alignment is recommended.

This document is intended to support technical review and targeted feedback from stakeholders and sector experts. It should be read in conjunction with the following accompanying consultation materials:

- The whitelist of A&R activities/measures; and
- The DNSH framework.

Process-based approach to climate change adaptation and resilience Substantial Contribution criteria

1. This set of criteria provides a process-based approach for the determination of substantial contribution for economic activities under the environmental objective of adaptation and resilience (A&R) of the Aotearoa New Zealand Sustainable Finance Taxonomy (NZ Taxonomy). The criteria serve as a guidance for the user of the Taxonomy or a third party (such a consultant) to structure an A&R process (see **Appendix 1**) and can be used in conjunction with the accompanying spreadsheet of automatically eligible measures (entitled "Whitelist"). The NZ Taxonomy includes two types of substantial contribution to the A&R objective: adapted activities and enabling activities.
2. In order for an economic activity to be considered as **adapted**, the activity has implemented physical and/or non-physical solutions ('adaptation solutions' - please see Definitions) that substantially reduce the most important physical climate risks that are significant to that economic activity.
3. To determine those risks, the physical climate hazards that are significant to the economic activity have been identified from the non-exclusive list in **Appendix 2**, by performing a robust climate hazard, exposure and vulnerability assessment with the following steps:
    a. A screening should be conducted to identify the physical climate hazards, including those from the non-exclusive list in **Appendix 3**, that may affect the performance of the economic activity during its expected lifetime.
    b. Where the economic activity is found to be at risk from one or more physical climate hazards, a climate risk and vulnerability assessment is conducted to assess the significance of these hazards on the economic activity, alongside potential changes in the exposure and vulnerability of the economic activity over the same time horizon.
    c. To undertake point (b) above, it is recommended that the user of the NZ Taxonomy follow the guidance for physical climate risk assessment provided by the Ministry for the Environment (MfE) entitled "A Guide to local climate change risk assessments" ("the Guide" thereafter). The Guide is not mandatory and **Appendix 3** provides further guidance documents and useful links to conduct physical climate risk assessment. Small and medium-sized enterprises (SMEs) are not expected to conduct all the governance and consultation mechanisms described in the Guide, but they should consider it as a reference and follow the principles set out in it.
    d. An assessment of adaptation solutions that can reduce the exposure and/or vulnerability of the economic activity to the identified physical climate hazards. To clarify, the climate risk assessment might not involve a scenario analysis as required under the climate-related disclosure (CRD) regimes, but it should consider a range of potential changes to climate-related hazards and drivers.
        i. To clarify, only the cost of the adaptation solutions is eligible for resilience financing, not the cost of the entire asset or economic activity within which it is implemented. This is because resilience financing is specifically intended to support actions that directly contribute to reducing climate risk. The broader asset or economic activity may have other purposes beyond enhancing resilience, so only the expenses directly related to the adapting measure are considered eligible.
    e. The risk assessment needs to consider the potential range of changes in climate hazards predicted by different climate models for any given emissions scenario, not just the average outcome.
4. The climate risk assessment is proportionate to the scale of the activity and its expected lifespan, such that:
    a. For economic activities with an expected lifespan of less than 10 years, the assessment is performed considering historical climate variability trends and, where possible, decadal climate forecasts at an appropriate spatial and temporal scale.
    b. For all other economic activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future climate scenarios consistent with the expected lifetime of the economic activity, including, at least, 10 to 30-year climate projection scenarios for major investments.

5. The climate projections and assessment of risks should be based on best practice and available guidance and take into account the state-of-the-art science for risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change (IPCC) reports, scientific peer-reviewed publications, and robust and credible models (see Appendix III for examples). It is recommended that the user of the Taxonomy:

    a. Adopt the high emissions scenario SSP3-7.0 as the minimum emissions scenario for climate projections.

    b. Use climate projections from a range of different climate models as a basis for the assessment of the hazards the economic activity might be exposed to. For guidance, the National Institute of Water and Atmospheric Research (NIWA) provides a publicly available and reputable source of downscaled data for climate projections for New Zealand. Specifically, NIWA provides 6 individual model results for any given emissions scenario. Other climate projections of comparable detail that have been documented in the scientific literature can also be used.

    c. Develop a general socio-economic narrative to describe changes in exposure and vulnerability, as well as concurrent pressures from transition risks on the economic activity. For guidance, the External Reporting Board (XRB) provides examples of specific socio-economic scenarios that can inform the narrative.

    d. SMEs may follow a streamlined approach for the process-based approach and are not expected to use either a minimum emissions scenario or a climate scenario for physical climate risk assessment. ClimateWise provides a useful guidance document (containing templates, check-lists and integration of Māori perspectives) on how SMEs can identify and manage climate-related risks, including:

        i. The process for the identification of climate-related risks and opportunities facing the business.

        ii. The methodology for assessing, rating and prioritising the identified risks to understand their significance and focus of the SME's adaptation efforts.

        iii. Guidance on the design of an Adaptation Plan specifically tailored for SMEs.

        iv. The process for reviewing and monitoring the Adaptation Plan.

6. The adaptation solutions implemented:

    a. Should avoid the risk of maladaptation in order not to adversely affect adaptation efforts and the level of resilience to physical climate hazards of other people, of indigenous biodiversity, habitat connectivity or ecosystem processes, of cultural heritage, of assets, and of other economic activities over time.

    b. Should comply with the Do No Significant Harm criteria of the NZ Taxonomy for the economic activity.

    c. Favour nature-based solutions or rely on blue or green infrastructure to the extent possible.

    d. Consider local, sectoral, regional or national adaptation plans and strategies, including risk assessments of regional district councils, and avoid or explain any material inconsistencies.

    e. Are monitored and measured against activity-specific and pre-defined indicators (see **Appendix 4**) – remedial action is considered where those indicators are not met.

    f. In the context of Aotearoa New Zealand, the identification, assessment, and implementation of climate adaptation measures must recognise the status of Te Tiriti o Waitangi and the role of iwi, hapū and Māori landowners as Tiriti partners and rights-holders. Climate risk assessments and adaptation solutions should incorporate:

        i. Mātauranga Māori (Māori knowledge and values), where appropriate and with consent.

        ii. Relevant iwi and hapū climate strategies, adaptation plans, or governance processes.

        iii. Engagement that reflects tikanga (custom), whakapapa (relational accountability), and mana whakahaere (authority of place).

The user of the Taxonomy should also consider the impact of adaptation measures on Māori land, cultural heritage, and freshwater taonga, and ensure consistency with relevant Treaty settlements, iwi management plans, and statutory acknowledgements.

7. In order for an activity to be considered as an **enabling** activity (see **Appendix 5** for examples), the user of the NZ Taxonomy demonstrates, through an assessment of current and future climate hazards, including uncertainty and based on robust data, that the activity provides a technology, product, service, information, or practice, or promotes their uses with one of the following primary objectives:

    a. Increasing the level of resilience to physical climate hazards of other people, of nature, of cultural heritage, of assets, and of other economic activities.

    b. Contributing to adaptation efforts of other people, of nature, of cultural heritage, of assets, and of other economic activities.

Definitions for the process-based approach to climate change adaptation and resilience Substantial Contribution criteria

Activities

Economic activity (Source: adapted from Eurostat)

An economic activity takes place when resources such as capital goods, labour, manufacturing techniques or intermediary products are combined to produce specific goods or services. Thus, an economic activity is characterised by an input of resources, a production process, and an output of products (goods or services).

An activity as defined here may consist of one simple process (for example weaving) but may also cover a whole range of sub-processes, each mentioned in different categories of the classification system (for example, the manufacturing of a car consists of specific activities such as casting, forging, welding, assembling or painting). If the production process is organised as an integrated series of elementary activities within the same statistical system, the whole combination is regarded as one activity.

The NZ Taxonomy has adopted ANZSIC as its classification system for economic activities.

Adapted activity

Adapted activity means that the activity has undergone a process of adaptation that results in it being able to perform better and be more resilient in a changing climate. A contribution to adaptation occurs via the application of adaptation solutions to an activity.

Enabling activity

Enabling activities enhance the climate resilience of other activities or systems. Those activities are providing, producing, or delivering technologies, products, services, information sets, or practices specifically aimed at reducing climate vulnerability for the adopter or other beneficiaries. A contribution to adaptation may occur from enabling activities that have a primary objective other than climate change adaptation, provided that the enabling activity makes a substantial contribution to climate change adaptation.

Adaptation solutions

Measure (Source: the Climate Bonds Resilience Taxonomy)

A measure is a specific intervention within an asset, activity or entity. For instance, the installation of new equipment within a production facility, adoption of new technologies, practices, or operational changes within the facility.

Adapting measure

An adapting measure refers to a specific action or intervention taken within an activity to make more climate resilient. The term adapting is used instead of adapted because the focus is on whether the measure improves the resilience of the overall activity within which it is implemented.

Enabling measure

An enabling measure refers to a specific intervention implemented within an economic activity with the primary intention to enhance the resilience of one or more other economic activities or systems. Unlike adapting measures, which concentrate on making an activity that has been identified as being at risk from climate change more resilient, enabling measures aim to strengthen the resilience of other interconnected activities or systems.

Adaptation and resilience process (please see Appendix I)

Physical climate risk and vulnerability assessment

A physical climate risk and vulnerability assessment is a process used to identify, analyse, and evaluate the risks of climate change on physical assets, infrastructure, and operations. These assessments help organisations understand how climate-related hazards (please see Appendix II) such as extreme weather events (acute risks) and long-term shifts in climate patterns (chronic risks) could affect their business, property, or investments over time. The assessment forms part of the broader Adaptation and Resilience process.

Maladaptation

Actions that may lead to increased risk of adverse climate-related outcomes, including via indirect increased greenhouse gas (GHG) emissions, increased or shifted vulnerability to climate change, more inequitable outcomes, or diminished welfare, now or in the future. Most often, maladaptation is an unintended consequence.

Hazards

Physical climate-related events or trends (i.e. acute or chronic) that may potentially occur causing negative impacts within the investment's boundaries of assessment – please see Appendix II.

Exposure

The presence within the boundaries of assessment of people, natural systems, and economic or other assets in places and settings that could be adversely affected by hazards.

Vulnerability

The propensity or predisposition of people, natural systems and economic, social, cultural or other assets to be adversely affected and their ability to recover (or not).

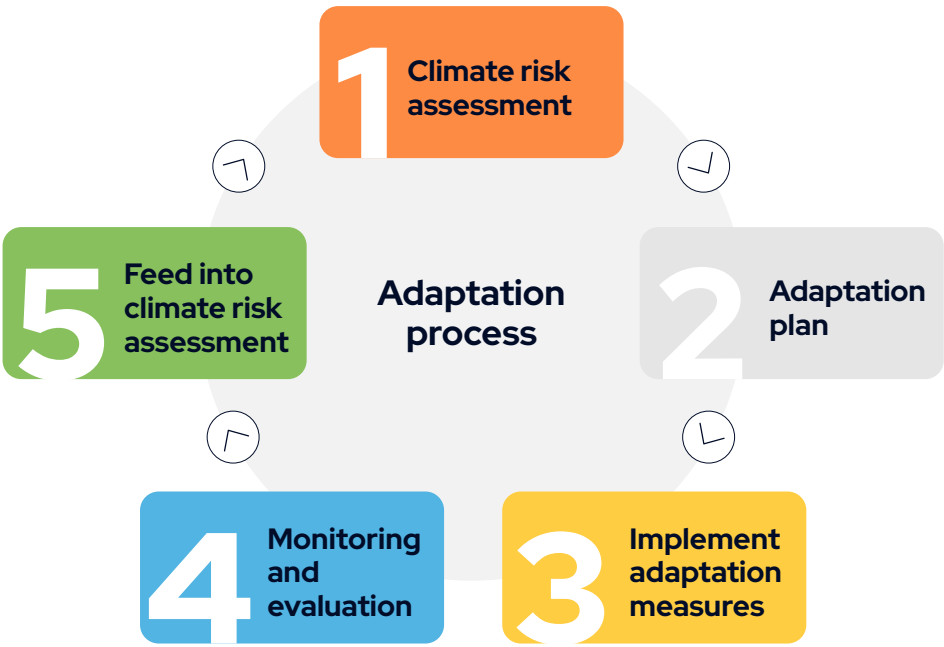
Nature-based solutions (NbS)

Actions aimed at protecting, conserving, restoring, and sustainably managing natural or modified terrestrial, freshwater, coastal, and marine ecosystems, which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits. NbS can include both green and blue infrastructure.

Appendices for the process-based approach to climate change adaptation and resilience Substantial Contribution criteria

Appendix 1 – Adaptation and resilience (A&R) process

1 Climate risk assessment



- Identify potential climate hazards from Appendix II relevant to the activity's location and lifespan.
- Evaluate significance of hazards + exposure + vulnerability.
- Use appropriate climate projections (historical and/or future).

2 Adaptation plan

- Identify A&R solutions to reduce hazard, exposure, or vulnerability.
- Ensure solutions are consistent with best available science.

3 Implement A&R solutions

- Check for maladaptation – ensure solutions do not harm others, lock in risk, or reduce long-term resilience.
- Favour nature-based solutions or rely on blue or green infrastructure to the extent possible.
- Cross-check against local adaptation strategies, iwi/hapū plans, and Te Tiriti obligations.

4 Monitoring and indicators

- Track the performance of solutions using predefined indicators (see **Appendix 4**).

5 Feed into climate assessment

- Plan for corrective actions if targets are not met due to unforeseen factors such as increased vulnerability, reduced capacity or ability to adapt and to mitigate risks such as reduced human and/or financial resources.

Appendix 2 – non-exclusive list of climate hazards

Adapted from the Text of the EU Taxonomy Delegated Act, Appendix A (European Commission, June 2021).

	Temperature-related	Wind-related	Water-related	Solid mass-related
Chronic	Changing temperature (air, freshwater, marine water) including extremes	Changing wind patterns	Changing precipitation patterns and types (rain, hail, snow/ice)	Coastal erosion, inundation and recession
	Heat stress		Precipitation or hydrological variability	Soil degradation
	Temperature variability		Ocean acidification	Soil erosion
	Permafrost thawing		Saline intrusion	Solifluction
	Changing seasonality		Sea level rise	
	Changing distribution of pests and diseases		Water stress	
Acute	Heat wave	Cyclone, hurricane, typhoon	Drought and changes in aridity	Avalanche
	Cold wave/frost	Storm (including extratropical, convective, blizzards, dust and sandstorms)	Heavy precipitation (storm, rain, hail, snow/ice)	Landslide
	Bushfire, grassfire, wildfire	Tornado	Flood (coastal, estuarine, fluvial, pluvial, ground water)	Subsidence
			Storm surges (due to cyclones and non-cyclone East Coast lows)	
			Glacial lake outburst	

Appendix 3 – non-exhaustive list of tools, scenarios and models for physical climate risk assessment

Further guidance to undertake physical climate risks assessment

- Ministry for the Environment (2024), Coastal hazards and climate change guidance
- National Institute of Water and Atmospheric Research, Risk and vulnerability assessments
- Harrington et al. (2025), On the procurement of physical risk assessments for climate-related disclosures: Guidance from a climate science perspective
- The Aotearoa Circle (2023), Agri-sector adaptation roadmap
- External Reporting Board (2023), Staff guidance: Entity scenario development

Scenarios/projections to be used in physical climate risks assessments

- National Institute of Water and Atmospheric Research, Virtual climate station data and products (for current climate variability)
- National Institute of Water and Atmospheric Research, New Zealand climate projections dataset, with detailed projections for individual climate models
- National Institute of Water and Atmospheric Research (2024), Updated national climate projections for New Zealand
- External Reporting Board (2023), Sector-level scenario analysis
- The Aotearoa Circle, Climate scenarios
- Gibson et al. (2025), Downscaled CMIP6 future climate projections for New Zealand: Climatology and extremes

Tools/data to be used in physical climate risks assessments

- Climate Analytics, Climate impact explorer
- Ministry for the Environment (2024), Climate projections summary dashboard
- National Institute of Water and Atmospheric Research, Climate change adaptation toolbox
- National Institute of Water and Atmospheric Research, Extreme coastal flood maps for Aotearoa New Zealand
- Natural Hazards Commission, Natural hazards portal
- Land Information New Zealand (2024), Key datasets for resilience and climate change
- Building Performance (2024), Weather files for Aotearoa New Zealand

Additional references

- Food and Agriculture Organization (2017), Tracking adaptation in agricultural sectors: Climate change adaptation indicators
- Adaptation and Resilience Investor Collaborative (2024), Adaptation & resilience impact: A measurement framework for investors
- International Capital Market Association (2024), Adaptation & resilience impact: A measurement framework for investors
- Ranger and Bernhofen (2024), Aligning finance with adaptation and resilience goals: Targets and metrics for financial institutions

Appendix 4 – examples of A&R indicators

- Deutsche Gesellschaft für Internationale Zusammenarbeit (2014), Repository of adaptation indicators: Real case examples from national Monitoring and Evaluation Systems
- Global Impact Investing Network, IRIS+ system
- United Nations Environment Programme, Land use finance impact hub

Appendix 5 – examples of enabling activities

Creation of data-sharing platforms and interfaces for data input-output	Data
Restoration of diverse native ecosystems to reduce monoculture vulnerability and support ecological resistance	Ecological
Wetland restoration and construction: Re-establishing and creating wetlands for flood attenuation, water purification, and biodiversity habitat	Ecological
Indigenous riparian restoration: Planting appropriate local native species along waterways to stabilise banks, reduce erosion, shade streams to mitigate heat stress for aquatic life, and create habitat corridors	Ecological
Indigenous afforestation for erosion control: Establishing or maintaining permanent native forest cover on highly erodible land to stabilise slopes, reduce sedimentation into rivers, and provide biodiversity co-benefits	Ecological

Introduction to the whitelist of climate change adaptation and resilience measures for agriculture and forestry

What is the 'whitelist' for climate change adaptation and resilience?

The whitelist is intended to provide an easier entry point, by identifying climate change adaptation and resilience (A&R) activities/measures that carry minimal risk of maladaptation or harm to other social and environmental objectives.

Activities/measures on this whitelist are automatically deemed eligible and do not require a full assessment against the process-based approach criteria.

It is not an exhaustive list of all possible climate change A&R solutions – only a carefully selected subset is included in the whitelist to reflect its low-risk, high-confidence nature.

These activities/measures are specific to agriculture and forestry, although some may be relevant to other sectors. Whitelists for other sectors within the NZ Taxonomy are yet to be developed.

How was the whitelist developed?

Building on the foundational work of the Climate Bonds Initiative, the Technical Experts Group (TEG) and the Agriculture/Forestry Technical Advisory Group (TAG) assessed the relevance of these activities/measures within the Aotearoa New Zealand context – some activities/measures were removed, others were amended to suit local conditions, and a few were combined to improve usability.

The technical groups also identified and added additional practices commonly used by New Zealand farmers and foresters that meaningfully contribute to climate change A&R outcomes, while presenting minimal risk of maladaptation or environmental/social harm.

Why is the whitelist important?

The whitelist makes it easier for smaller entities taking meaningful climate A&R actions to achieve taxonomy-alignment, without the administrative burden of demonstrating compliance with the full process-based approach.

How to use this document?

In general, for an activity to be considered taxonomy-aligned, there are three sets of criteria to consider.

- **Substantial Contribution (SC) criteria** – The activity demonstrates it makes a substantial contribution to the environmental objective (i.e. climate change A&R).
- **Do No Significant Harm (DNSH) criteria** – The activity making this substantial contribution must not cause significant negative impacts on other environmental objectives.
- **Minimum Social Safeguards (MSS)** – Entities seeking NZ Taxonomy alignment should also meet minimum standards for social responsibility, including labour rights, governance and indigenous rights.

The whitelist constitutes an alternative to SC criteria for the climate change A&R environmental objective. If an activity is aligned under the whitelist, it is not necessary to demonstrate alignment with the DNSH criteria. It still may be necessary for an entity to demonstrate adherence to the MSS.

For the initial phase of NZ Taxonomy alignment, entities are not required to complete assessments against the MSS framework.

In future phases (date to be determined), to be considered NZ Taxonomy-aligned, activities must also meet the MSS requirements. This obligation will apply to all reporting entities, except for small businesses – defined for this purpose as enterprises with fewer than 20 employees.

Entities wanting to use the NZ Taxonomy can, of course, start including all three sets of criteria as early as they wish. Transparency about the criteria being used for assessment of alignment is recommended.

Taxonomy alignment is voluntary.

This document is intended to support technical review and targeted feedback from stakeholders and sector experts. It should be read in conjunction with the following accompanying consultation materials:

- The process-based approach to climate change A&R substantial contribution criteria; and
- The DNSH framework.

Whitelist of climate change adaptation and resilience measures for agriculture and forestry

The following whitelist outlines investments that are automatically eligible under the NZ Taxonomy for adaptation and resilience (A&R) agriculture and forestry sectors.

Proponents are able to propose additional investments not included in the whitelist. Proponents should follow the guidance for the process-based approach to A&R.

Investments in the whitelist are subject to a core requirement: **They must make a substantial contribution to climate change A&R. This means each investment must directly support the ability of organisations, communities, ecosystems, or economies to anticipate, prepare for, and respond effectively to the impacts of climate change and/or strengthen long-term resilience in a changing climate, even where the generic description of the investment in the whitelist does not specify this explicitly.**

Note: Proponents who wish to apply an investment to a different hazard not listed as a main climate hazard may provide a justification outlining the alignment.

Row	Investment	Investment type	Sector			Main climate hazards
			Agriculture	Forestry	Other Land Use	
1	Creation of bioclimatic indicator data-sharing platforms and interfaces for data input-output. For example: • design, and establishment of datasets aimed at monitoring temperature and evapotranspiration; maintenance and management of such datasets. • design and establishment of monitoring systems, i.e. temperature, soil moisture and compaction, river flow, wind, fire; maintenance and management of such systems • biodiversity assessments; implement of resulting action plan	Data	Yes	Yes	Yes	Flood damage Storm damage Water stress Heat stress Fire damage
2	Establishment and ongoing costs for GIS systems	Data	Yes	Yes	Yes	Flood damage Storm damage Water stress Fire damage
3	Establishment, Integration, expansion, and ongoing management of early warning systems	Data	Yes	Yes	Yes	Flood damage Storm damage Water stress Fire damage
4	Ongoing costs of if reporting soil information, including but not limited to soil moisture, geology, soil composition, structure and nutrients	Data	Yes	Yes	Yes	Water stress Mass movement damage
5	Ongoing costs of use of remote-sensing for performance data	Data	Yes	Yes	Yes	Storm damage Water stress Heat stress
6	Ongoing costs of use of time-series geospatial information	Data	Yes	Yes	Yes	Storm damage Water stress

Row	Investment	Investment type	Sector			Main climate hazards
			Agriculture	Forestry	Other Land Use	
7	Establishment and ongoing management of data and analytics systems and capacity building that support the effective uptake of insurance solutions, including parametric insurance	Data	Yes	Yes	Yes	Flood damage Storm damage Heat stress Mass movement damage
8	Managing, conserving and restoring native species (plants, animals, invertebrates, fungi, etc.). For example: • establishing ecological corridors for seasonal migration for terrestrial and aquatic species • implementation of natural regeneration and assisted natural regeneration techniques • restoration of diverse native ecosystems to reduce monoculture vulnerability and support ecological resistance	Ecological	Yes	Yes	Yes	Flood damage Storm damage Water stress Fire damage Mass movement damage
9	Ongoing controlling and/or removing invasive species (including pests) that compete or outcompete livestock, crops, or natives for limited water resources. For example: • fencing or exclusion zones for pest management to protect native forests or wetlands • removing invasive species	Ecological	Yes	Yes	Yes	Water stress
10	Restoration of indigenous ecosystems (e.g. wetlands, forests, dunelands), using appropriate native species	Ecological	Yes	Yes	Yes	Mass movement damage
11	Creation of fire breaks and defensible spaces	Ecological	Yes	Yes	Yes	Wildfire damage
12	Implementation of targeted application of biopesticides or low-toxicity pesticides	Ecological	Yes	Yes	Yes	Heat stress Cold stress

Row	Investment	Investment type	Sector			Main climate hazards
			Agriculture	Forestry	Other Land Use	
13	Wetland restoration and construction: Re-establishing and creating wetlands for flood attenuation, water purification, and biodiversity habitat	Ecological	Yes	Yes	Yes	Water stress Heat stress Cold stress
14	Indigenous afforestation – planting appropriate local native species, including for riparian and erosion control. For example: • indigenous afforestation along waterways to stabilise banks, reduce erosion, shade streams to mitigate heat stress for aquatic life, and create habitat corridors; • indigenous afforestation for erosion control – establishing or maintaining permanent native forest cover on highly erodible land to stabilise slopes, reduce sedimentation into rivers, and provide biodiversity co-benefits	Ecological	Yes	Yes	Yes	Water stress Heat stress Cold stress Mass movement damage
15	Alteration of working times	Operations	Yes	Yes	Yes	Flood damage Storm damage Heat stress
16	Development of emergency preparedness and response plan, for example: Implementation of evacuation procedures	Operations	Yes	Yes	Yes	Flood damage Storm damage Fire damage
17	Implementation of worker health and safety measures, for example Alteration of working times	Operations	Yes	Yes	Yes	Flood damage Storm damage Fire damage

Row	Investment	Investment type	Sector			Main climate hazards
			Agriculture	Forestry	Other Land Use	
18	Provision of medical supplies	Operations	Yes	Yes	Yes	Flood damage Storm damage Heat stress Mass movement damage
19	Provision of backup power systems for critical food processing operations	Operations	Yes	No	No	Flood damage Storm damage Fire damage
20	Installation of automated water control systems	Operations	Yes	Yes	Yes	Water stress Heat stress
21	Implementation of agri-ecological practices for water conservation	Operations	Yes	No	No	Water stress Heat stress
22	Implementation of on-farm/forestry biosecurity infrastructure (e.g. wash stations, buffer zones, monitoring equipment)	Operations	Yes	Yes	Yes	Heat stress Cold stress