



Second-Party Opinion

New Zealand Sovereign Green Bond Framework

Evaluation Summary

Sustainalytics is of the opinion that the New Zealand Sovereign Green Bond Framework is credible and impactful and aligns with the four core components of the Green Bond Principles 2021. This assessment is based on the following:



USE OF PROCEEDS The eligible categories for the use of proceeds – Clean Transport, Energy Efficiency and Renewable Energy, Green Buildings, Living and Natural Resources and Land Use, Terrestrial and Aquatic Biodiversity, Climate Change Adaptation, Sustainable Water and Wastewater Management and Pollution Prevention and Control – are aligned with those recognized by the Green Bond Principles. Sustainalytics considers that investments in the eligible categories are expected to lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDGs 6, 7, 9, 11, 12, 13, 14 and 15.



PROJECT EVALUATION / SELECTION The New Zealand Government (the “Government”) has established a cross-agency Green Bond Committee (GBC).¹ The New Zealand Treasury (the “Treasury”) will conduct the initial evaluation and selection of potential eligible projects against the eligible criteria. The GBC will be responsible for the final endorsement of the eligible projects. The Government has processes in place to identify and mitigate common environmental and social risks associated with the eligible projects. Sustainalytics considers the project selection process to be in line with market practice.



MANAGEMENT OF PROCEEDS The Treasury will be responsible for the allocation of proceeds and will periodically review and adjust the balance of total green bond proceeds allocated to eligible projects. The Government intends to reach full allocation within two financial years following the financial year of issuance. Pending allocation or reallocation, an amount equivalent to the unallocated proceeds will be deposited as cash in the Crown’s Settlement Account with the Reserve Bank of New Zealand. This is in line with market practice.



REPORTING The Government intends to report on the allocation of proceeds on an annual basis and to prepare an impact report two years from issuance and report annually thereafter. Allocation reporting may include the total net green bond proceeds and the amount of unallocated proceeds. In addition, the Government is committed to reporting on relevant impact metrics. Sustainalytics views the Government’s allocation and impact reporting as aligned with market practice.

Evaluation Date August 02, 2022

Issuer Location Wellington, New Zealand

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¹ The Green Bond Committee is chaired by the Treasury and comprises representatives from the New Zealand Debt Management; the Ministry for the Environment; the Ministry of Transport; Waka Kotahi New Zealand Transport Agency; the Ministry of Business, Innovation and Employment; the Ministry for Primary Industries; the Department of Conservation; and an independent member with relevant skills and experience.

Introduction

New Zealand is a country in the South Pacific Ocean with a population of 5.12 million as of 31 March 2022 and GDP of USD 249.99 billion as of 2021. Its capital city is Wellington. New Zealand's key economic sectors include services, manufacturing and primary industries.

The New Zealand Government (the "Government" or the "Issuer") has developed the New Zealand Sovereign Green Bond Framework dated August 2022 (the "Framework") under which it intends to issue green bonds and use the proceeds to finance and refinance, in whole or in part, existing and future government expenditures in the form of capital and operating expenditures and transfer payments to public or private entities² (such as grants, loans, subsidies and contributions), including international transfers. The eligible projects are expected to facilitate the transition to a low-carbon economy in New Zealand and contribute to the climate-related, biodiversity conservation and environmental goals set out by the New Zealand Government.

The Framework defines green eligibility criteria in eight areas:

1. Clean Transport
2. Energy Efficiency and Renewable Energy
3. Green Buildings
4. Living and Natural Resources and Land Use
5. Terrestrial and Aquatic Biodiversity
6. Climate Change Adaptation
7. Sustainable Water and Wastewater Management
8. Pollution Prevention and Control

The New Zealand Government engaged Sustainalytics to review the New Zealand Sovereign Green Bond Framework and provide a Second-Party Opinion on the Framework's environmental credentials and its alignment with the Green Bond Principles 2021 (GBP).³ The Framework will be published in a separate document.⁴

Scope of work and limitations of Sustainalytics' Second-Party Opinion

Sustainalytics' Second-Party Opinion reflects Sustainalytics' independent⁵ opinion on the alignment of the reviewed Framework with current market standards and the extent to which the eligible project categories are credible and impactful.

As part of the Second-Party Opinion, Sustainalytics assessed the following:

- The Framework's alignment with the Green Bond Principles 2021, as administered by ICMA;
- The credibility and anticipated positive impacts of the use of proceeds; and
- The alignment of the issuer's sustainability strategy and performance and sustainability risk management in relation to the use of proceeds.

For the use of proceeds assessment, Sustainalytics relied on its internal taxonomy, version 1.11, which is informed by market practice and Sustainalytics' expertise as an ESG research provider.

As part of this engagement, Sustainalytics held conversations with various members of the New Zealand Government's management team to understand the sustainability impact of their business processes and planned use of proceeds, as well as management of proceeds and reporting aspects of the Framework. The New Zealand Government's representatives have confirmed that: (1) they understand it is the sole responsibility of the New Zealand Government to ensure that the information provided is complete, accurate and up to date; (2) they have provided Sustainalytics with all relevant information; and (3) any provided

² Sustainalytics notes that the New Zealand Government may finance transfers to private entities that would be limited for projects that fall within eligible green categories under the Framework.

³ The Green Bond Principles are administered by the International Capital Market Association and are available at: <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>

⁴ The New Zealand Sovereign Green Bond Framework is available on the New Zealand Government's website at: <https://debtmanagement.treasury.govt.nz/government-securities/green-bonds>

⁵ When operating multiple lines of business that serve a variety of client types, objective research is a cornerstone of Sustainalytics and ensuring analyst independence is paramount to producing objective, actionable research. Sustainalytics has therefore put in place a robust conflict management framework that specifically addresses the need for analyst independence, consistency of process, structural separation of commercial and research (and engagement) teams, data protection and systems separation. Last but not least, analyst compensation is not directly tied to specific commercial outcomes. One of Sustainalytics' hallmarks is integrity, another is transparency.

material information has been duly disclosed in a timely manner. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics' opinion of the Framework and should be read in conjunction with that Framework.

Any update of the present Second-Party Opinion will be conducted according to the agreed engagement conditions between Sustainalytics and the New Zealand Government.

Sustainalytics' Second-Party Opinion, while reflecting on the alignment of the Framework with market standards, is no guarantee of alignment nor warrants any alignment with future versions of relevant market standards. Furthermore, Sustainalytics' Second-Party Opinion addresses the anticipated impacts of eligible projects expected to be financed with bond proceeds but does not measure the actual impact. The measurement and reporting of the impact achieved through projects financed under the Framework is the responsibility of the Framework owner. Upon twenty-four (24) months following the evaluation date set stated herein, the New Zealand Government is encouraged to update the Framework, if necessary, and seek an update to the Second-Party Opinion to ensure ongoing alignment of the Framework with market standards and expectations.

In addition, the Second-Party Opinion opines on the potential allocation of proceeds but does not guarantee the realized allocation of the bond proceeds towards eligible activities.

No information provided by Sustainalytics under the present Second-Party Opinion shall be considered as being a statement, representation, warrant or argument, either in favour or against, the truthfulness, reliability or completeness of any facts or statements and related surrounding circumstances that the New Zealand Government has made available to Sustainalytics for the purpose of this Second-Party Opinion.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the New Zealand Sovereign Green Bond Framework

Sustainalytics is of the opinion that the New Zealand Sovereign Green Bond Framework is credible and impactful, and aligns with the four core components of the GBP. Sustainalytics highlights the following elements of the Framework:

- Use of Proceeds:
 - The eligible categories – Clean Transport, Energy Efficiency and Renewable Energy, Green Buildings, Living and Natural Resources and Land Use, Terrestrial and Aquatic Biodiversity, Climate Change Adaptation, Sustainable Water and Wastewater Management, and Pollution Prevention and Control – are aligned with those recognized by the GBP. Sustainalytics notes that green bonds issued under the Framework are expected to advance the New Zealand Government's efforts in low-carbon development and generate positive environmental impact in New Zealand.
 - The New Zealand Government has defined a one-year look-back period for its refinancing activities, which is in line with market practice.
 - Sustainalytics notes that the New Zealand Government may finance transfers to private entities for projects that fall within eligible categories under the Framework. In addition, the New Zealand Government may provide financing towards funds that target co-financing limited to eligible green activities as defined under the Framework. Furthermore, the New Zealand Government has confirmed to Sustainalytics that R&D expenditures will be capped at 10% at a portfolio level under the Framework.
 - Under the Clean Transport category, the Government may finance or refinance expenditures that support the development and deployment of low-carbon mobility projects. Examples of intended expenditures include:
 - Zero-emissions vehicles and low-emissions private passenger and light commercial vehicles, including hybrids with a direct emissions threshold below 75 gCO₂/km.

- The direct purchase of, or support for the purchase of, zero- or low-emission public transit and freight transportation, including: (i) public buses with zero direct emissions or direct emissions below 50 gCO₂ per passenger-kilometre (pkm), and (ii) freight transportation, including freight rail and heavy trucks below the direct emissions threshold of 25 gCO₂ per tonne-kilometre (tkm). The New Zealand Government has confirmed the exclusion of freight transportation where more than 25% of the total freight transported masse comprises fossil fuels. Some of these expenditures may be co-funded through the Low Emissions Transport Fund (LETF).⁶
 - Other eligible expenditures that may be co-funded through the LETF may include the financing of information communications technology (ICT) that improves asset utilization, modal shift and fleet management, such as the use of telematics. Sustainalytics recognizes that infrastructure investments in ICT systems support the optimization of transport use, duration and distance. In many cases, this has the potential to reduce fuel consumption and associated GHG emissions. However, Sustainalytics recommends the Issuer to prioritize financing of projects that facilitate a modal shift to public transit and incentivize the use of low-carbon vehicles and car-sharing schemes.
 - Transportation infrastructure includes bus rapid transit infrastructure,⁷ such as dedicated bus lanes and stations; rail network infrastructure, such as the fully electric City Rail Link⁸ project; electric charging stations; and walking and cycling infrastructure that encourages a shift towards active mobility.
 - Under marine transport, the Government has communicated to Sustainalytics that financing may include supporting technologies for electric ships such as electric outboard motors, as well as R&D towards low-carbon and electric ships. The Government may also finance hybrid ferries compliant with the EEOI/AER Decarbonisation Trajectories aligned with the Climate Bonds Initiative criteria for Shipping.⁹ Sustainalytics classifies the financing of ferries that are powered at least partially by fossil fuels as a transition activity and recognizes that the New Zealand Government's criteria is based on a credible decarbonization trajectory. Sustainalytics recognizes that the financing of less emissions-intensive ferries contributes to a reduction in emissions compared to traditional ocean transport and will reduce the overall transportation-related emissions of New Zealand.
 - Sustainalytics notes that the New Zealand Government has confirmed the exclusion of activities towards the aviation sector.
 - Sustainalytics considers the activities under the Clean Transport category to be aligned with market practice.
- Under the Energy Efficiency and Renewable Energy category, the New Zealand Government may invest in a broad range of projects, components and technologies aimed at promoting energy efficiency across businesses and residential, as well as renewable energy projects, including pumped hydropower storage and geothermal.
- Expenditures could include the provision of co-financing via the Government Investment in Decarbonising Industry (GIDI) Fund,¹⁰ which supports the decarbonization of business operations and industrial processes. Example technologies contemplated under the GIDI Fund may include electric heat pumps, fuel-switching to biofuel or renewable energy, and waste-heat recovery.

⁶ The Low Emissions Transport Fund (LETF) is administered by the Energy Efficiency and Conservation Authority and provides co-funding support for the deployment and adoption of low-emission transport technology and infrastructure to decarbonize the New Zealand transport sector, at:

<https://www.eeca.govt.nz/co-funding/transport-emission-reduction/low-emission-transport-fund>

⁷ In January 2021, the Government announced it's committed to decarbonising the public transport bus fleet. By 2025, the Government will only allow zero-emission public transport buses to be purchased. This commitment targets complete decarbonisation of the public transport bus fleet by 2035.

⁸ The City Rail Link is a 3.45 km twin-tunnel underground fully electric rail link that would allow Auckland's rail network to at least double in capacity, at:

<https://www.cityraillink.co.nz/>

⁹ Climate Bonds Initiative, "Shipping", at:

<https://www.climatebonds.net/files/files/standards/Waterborne%20Transport%20%28Shipping%29/Broc%20CBI->

[Shipping%20Criteria%20Brochure%281%29.pdf](https://www.climatebonds.net/files/files/standards/Waterborne%20Transport%20%28Shipping%29/Broc%20CBI-Shipping%20Criteria%20Brochure%281%29.pdf)

¹⁰ The GIDI Fund focuses on helping business decarbonize their operations through upgrading or replacing processes to make them more energy-

efficient, at: <https://www.eeca.govt.nz/co-funding/industry-decarbonisation/about-the-government-investment-in-decarbonising-industry-fund/>

- The Government has confirmed to Sustainalytics that financing under the GIDI Fund will exclude energy-efficient technologies designed or intended for processes that are inherently carbon intensive, or that are primarily driven or powered by fossil fuels, such as oil or gas-fired boilers, cogeneration and combined heat and power units, as well as production processes in industries that are heavy emitters. Additionally, waste-heat recovery will exclude applications in fossil fuel production and operations. This is in line with market practice.
 - The New Zealand Government may also finance ceiling and underfloor insulation and energy-efficient heating in homes via the Warmer Kiwi Homes programme.¹¹ Where heat pumps are considered, the Government has confirmed that financing will be limited to electric heat pumps and will exclude absorption heat pumps driven by fossil fuels. Under the programme, the Government may also finance subsidies for the installation of efficient wood pellet or log burners in individual households. Sustainalytics is of the opinion that any use of biomass must be certified to ensure sustainable sourcing of the feedstock. However, Sustainalytics notes that the most used feedstock in New Zealand is wood pellets, which are derived from wood processing residues. In addition, the Government has communicated to Sustainalytics that national standards and policies are in place to tackle overlogging issues, with major market wood pellet suppliers following sustainable sourcing practices. Sustainalytics further notes that the responsibility for sustainable sourcing of wood pellets lies with individual households. In view of the above regulations and measures, which provide reasonable assurance of the sustainable sourcing of biomass feedstock, Sustainalytics expects such investments to drive positive environmental outcomes.
 - Geothermal energy projects will be limited to those with a direct emissions threshold below 100g CO₂/kWh.
 - New pumped hydropower storage projects will undergo environmental and social impact assessment by a credible body, which will occur as part of the feasibility stage and/or business case stage of an expenditure. Investment will be limited to those where significant risks or expected negative impacts are identified and avoided, remedied or mitigated. Sustainalytics recognizes the importance of improving energy efficiency and considers activities that increase renewable energy capacity as aligned with market practice.
- Under the Green Buildings category, the New Zealand Government contemplates investments in new non-residential government buildings that have received or are expected to receive the Green Star New Zealand Design and as Built green building certification of 5 stars with an additional NABERSNZ¹² rating of 5 for office buildings. Sustainalytics views the selected certifications as credible and Green Star New Zealand with the additional criteria of NABERSNZ as aligned with market practice.
 - Under the Living and Natural Resources and Land Use category, the Government may finance or refinance projects that support sustainable agriculture, forestry, land restoration and nature-based solutions.
 - Investments related to sustainable agriculture may include those under the Sustainable Food and Fibre Futures (SFF Futures) Fund,¹³ which is aimed at supporting innovation in the food and fibre sector and the shift towards more sustainable agricultural production. Sustainalytics notes that the SFF Futures Fund applies to a wide range of projects across various fund themes from alternative protein fibres, regenerative farming practices and animal husbandry. Upon successful application to the SFF Futures Fund, the New Zealand Government will assess projects across 31 different output categories¹⁴ and has communicated to Sustainalytics that financing will be

¹¹ The Warmer Kiwi Homes programme provides grants to eligible homes in New Zealand for ceiling and underfloor insulation as well as improved heaters, at: <https://www.eeca.govt.nz/co-funding/insulation-and-heater-grants/warmer-kiwi-homes-programme/>

¹² About NABERSNZ, "NABERSNZ", at: <https://www.nabersnz.govt.nz/about-nabersnz/>

¹³ Sustainable Food and Fibre Futures, at: <https://www.mpi.govt.nz/funding-rural-support/sustainable-food-fibre-futures/>

¹⁴ The output categories represent the various impacts that projects under the SFF Futures Fund are expected to contribute towards.

limited to expenditures that contribute to 11 of these categories,¹⁵ which are expected to contribute towards GHG emissions reduction, improved soil and water quality, the reduction of soil erosion and chemical usage, as well as the conservation of threatened marine species amongst other positive environmental impact. Sustainalytics notes that the nature of the projects selected for financing are R&D where allocation will be capped at 10% on a portfolio level. The Government has also confirmed that agriculture projects will exclude genetic modifications and where R&D projects involve the use of synthetic fertilizers, such projects will target the reduction of use of such fertilizers. Additionally, the Government has confirmed the exclusion of projects that directly support industrial-scale livestock management of ruminants, and will not be considering investments under the fund themes of “Meat” and “Animal health and welfare” except where projects involve R&D supporting the reduction of methane emissions from animal husbandry and dairy production and improving the sustainability of wool production.

- Forestry projects may include the establishment of native forests by working with farmers and private landowners to plant native tree species, as well as scaling up native seedling production using technology and R&D expenditures to facilitate innovation in seed collection, propagation and forest establishment. The Government may also finance commercial forestry intended to support the supply of woody biomass in New Zealand by planting 10,000 hectares (ha) of short-rotation energy forests and conducting targeted research and development on novel forestry management methods. Sustainalytics recognizes that the commercial forestry project does not rely on third-party certification schemes and will follow the National Environmental Standards for Plantation Forestry,¹⁶ which is guided by New Zealand’s Resource Management Act (see Section 2) and includes regulations to manage adverse effects of forestry activities on the surrounding areas throughout the plantation forestry life cycle. Where the removal of indigenous vegetation is permitted, Sustainalytics considers the NESPF to lack protection for areas of high conservation value or significant natural areas in particular for rare, threatened or endangered indigenous fauna. However, Sustainalytics notes that the 2020 New Zealand Biodiversity Strategy,¹⁷ 2022 Implementation Plan¹⁸ and existing laws and regulations¹⁹ includes significant protection for natural areas. Considering the above measures, which provide reasonable assurance of the protection of areas with high conservation value, Sustainalytics considers financing of commercial forestry projects to be in line with market expectation.
- Regarding land restoration, the Government may finance projects supporting the Hill Country Erosion Programme,²⁰ which includes working with landowners to plant trees and retire or revert land to native vegetation cover in order to treat erosion-prone land. This is in line with market practice.
- Investments supporting nature-based solutions may include a research programme aimed at facilitating the identification of forest sequestration rates that will better inform the Government’s tree planting and afforestation programmes, as well as a programme designed to increase the longevity of harvested wood products and the associated storage of carbon. Sustainalytics considers the New Zealand Government’s financing in support of nature-based solutions to be aligned with market practice.

¹⁵ The categories include (1) Climate change mitigation and prevention, (2) Higher value/lower impact land use, (3) Improved soil quality, (4) Improved waste management, (5) Improved water quality, (6) Managing and coping effectively with the impact of climate change, (7) More efficient water use, (8) Reduced chemical usage where it damages the environment, (9) Reduced emissions, (10) Reduced erosion, (11) Sustainable fish stocks.

¹⁶ New Zealand Legislation, “Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017”, at:

<https://www.legislation.govt.nz/regulation/public/2017/0174/latest/whole.html>

¹⁷ New Zealand Government, Department of Conservation, “New Zealand Biodiversity Action Plan”, at: <https://www.cbd.int/doc/world/nz/nz-nbsap-v2-en.pdf>

¹⁸ New Zealand Government, Department of Conservation, “Te Mana o Te Taiao implementation plan”, at:

<https://www.doc.govt.nz/nature/biodiversity/aotearoa-new-zealand-biodiversity-strategy/te-mana-o-te-taiao-implementation-plan/>

¹⁹ The laws and regulations include Forest Act 1949, Conservation Act 1987, Reserves Act 1977, Native Plants Protection Act 1934, Wildlife Act 1953 and Resource Management Act 1991.

²⁰ New Zealand Forest Service, Hill Country Erosion Programme, at: <https://www.mpi.govt.nz/forestry/funding-tree-planting-research/hill-country-erosion-programme/>

- Under the Terrestrial and Aquatic Biodiversity category, the Government plans to finance the following programmes and activities:
 - Projects related to restoration and protection of freshwater ecosystems. Under this expenditure, the Government plans to invest in Freshwater Improvement Fund projects, which support environmental improvements to lakes, rivers, streams, groundwater and wetlands in New Zealand. The Fund particularly investigates areas of wetland construction and restoration, estuary protection, restoration of fish passage and reduction of sediment eroding from the land.²¹ The Government has confirmed to Sustainalytics that projects will be selected on the basis of an assessment that covers the project details (the project demonstrates a high likelihood of success based on sound technical information or examples of success achieved through comparable projects), project outcomes (including the management of vulnerable waterbodies and environmental benefits) and project delivery (including project costs and co-funding, partnerships and collaboration and capability to successfully deliver the project). Sustainalytics considers the use of proceeds for conservation efforts to be in line with market practice.
 - Projects related to the restoration and protection of New Zealand's natural environment, including the indigenous flora. Under this expenditure, the Government plans to invest in the Wilding Conifer Control Programme,²² which aims to protect native biodiversity, water, and farmland from invasive wilding conifers. Under the programme, various methods are used to control the invasive wilding conifers, such as: (i) hand-pulling or sawing young seedlings, (ii) sawing or chain sawing medium to large trees and (iii) the use of herbicides that are either injected directly into the tree or bark or aerially sprayed over large areas via the Aerial Basal Bark Application method²³ and Aerial Foliar Spray Application method.²⁴ Sustainalytics notes that the New Zealand Government has risk mitigation processes in place associated with the application of herbicides to non-targeted species and areas. These include specific guidelines for helicopter operations to minimize spray drift and facilitate the accurate and precise application of the herbicide as well as guidelines to minimize risk of water contamination through appropriate nozzle selection and use of no-spray buffers. Considering these measures, Sustainalytics expects financing of the Wilding Conifer Control Programme to improve the preservation of the native flora and deliver net positive environmental impact.
 - Projects related to protecting threatened marine species, including Hector and Māui dolphins, which Sustainalytics considers to be in line with market practice.
- Under the Climate Change Adaptation category, the Government may finance, or refinance projects intended to increase the resilience of infrastructure to the impacts of climate change, help regional communities and Māori to make better risk-informed decisions to prepare for and respond to climate change and climate-related disasters, and support other countries to enhance their resilience to climate change. Intended examples of projects include:
 - Local flood protection, mitigation and control schemes under the Infrastructure Reference Group's Climate Resilience Projects.²⁵ The Government has confirmed to Sustainalytics that the financed projects on climate adaptation are in line with the risks and opportunities outlined in the National Climate Change Risk Assessment²⁶ and the

²¹ New Zealand Government, Ministry for the Environment, "Freshwater Improvement Fund", at: <https://environment.govt.nz/what-you-can-do/funding/freshwater-improvement-fund/>

²² New Zealand Government, Ministry for Primary Industries, "Wilding conifer control in NZ", at: <https://www.mpi.govt.nz/biosecurity/long-term-biosecurity-management-programmes/wilding-conifers/#:~:text=The%20National%20Wilding%20Conifer%20Control%20Programme%20aims%20to%20prevent%20the,the%20framework%20for%20this%20programme>

²³ New Zealand Government, National Wilding Conifer Control Programme, "Aerial Basal Bark Application (ABBA) Version 2", at: <https://www.wildingpines.nz/assets/Documents/Wilding-Conifers-Good-Practice-ABBA-July-2020.pdf>

²⁴ New Zealand Government, National Wilding Conifer Control Programme, "Aerial Foliar Spray Application (AFSA) Version 4", at: <https://www.wildingpines.nz/assets/Documents/Wilding-Conifers-Good-Practice-AFSA-Mar-2022.pdf>

²⁵ Crown Infrastructure Partners, "Infrastructure Reference Group", at: <https://www.crowninfrastructure.govt.nz/irg/>

²⁶ New Zealand Government, Ministry for the Environment, "First national climate change risk assessment for New Zealand", at: <https://environment.govt.nz/what-government-is-doing/areas-of-work/climate-change/adapting-to-climate-change/first-national-climate-change-risk-assessment-for-new-zealand/>

- National Adaptation Plan.²⁷ The Government may also refinance the existing eligible projects under the Infrastructure Reference Group where the Government has confirmed that the projects have been funded based on a vulnerability assessment and adaptation plan. This is aligned with market practice.
- The Pacific Water Security Programme, which enhances resilience to climate change in Pacific countries by reducing water scarcity. The expenditures will be limited to addressing water scarcity, averting water-related emergency activity, and building resilient system activity such as monitoring and warning systems.²⁸ The Government has confirmed to Sustainalytics that the above projects will be financed based on the countries' national adaptation plans and the modified Notre Dame Global Adaptation Index (ND-GAIN) resilience assessments.²⁹ This is aligned with market practice.
 - Climate projection data tool and climate adaptation information portal to provide the climate data and information of New Zealand which enable New Zealanders and other end-users to appropriately measure climate change risks. This is aligned with market practice.
- Under the Sustainable Water and Wastewater Management category, the Government may finance or refinance projects to improve infrastructure for drinking water, wastewater and stormwater, and to support sustainable water storage facilities and schemes. Intended project examples include the Three Waters Reform Programme, which includes funding to regional and local authorities to invest in improvements to drinking water, wastewater, and stormwater infrastructure. Eligible wastewater treatment facilities will be regional facilities that treat water mainly from households and will exclude the treatment of wastewater from fossil fuel operations. Additional expenditures may include those that fall under the Provincial Growth Fund,³⁰ such as water storage, irrigation infrastructure and water assessment projects to improve the resilience of New Zealand's regions to drought and water shortages. The Government has confirmed to Sustainalytics that the irrigation infrastructure will be water-efficient and may include drip, micro-spray or sprinkler irrigation systems.
 - Under the Pollution Prevention and Control category, the Government may finance or refinance projects that minimize waste through prevention, reduction, reuse, recycling, and recovery of related wasted emissions. The Government may also finance projects to remediate and restore contaminated land. Examples of intended projects include:
 - Waste minimization, recycling and resource recovery initiatives that support waste minimization. Equipment and infrastructure include optical sorting equipment and a resource recovery park that enables sorting, bulking and recovery of construction and demolition waste and other materials for recycling, including wood, green waste³¹, concrete and metals.
 - The Contaminated Sites Remediation Fund, which provides local authorities with funding to remediate contaminated sites that pose a risk to human health and the environment. The Government has confirmed to Sustainalytics that projects that fund applicants who were responsible for the contamination of the land will be excluded from financing under the Framework.
 - Regarding e-waste management, the Government is committed to financing only projects where the recycling company has established a robust waste management process to mitigate risks associated with e-waste recycling. This is aligned with market practice.
 - Projects for plastic recycling will be limited to mechanical recycling. This is aligned with market practice.

²⁷ New Zealand Government, Ministry for the Environment, "Draft national adaptation plan", at: <https://environment.govt.nz/assets/publications/Adapt-and-Thrive-consultation-document.pdf>

²⁸ New Zealand Foreign Affairs & Trade, "Climate Change Programme case studies", at: <https://www.mfat.govt.nz/en/environment/climate-change/supporting-our-region/the-climate-change-programme/climate-change-programme-case-studies/>

²⁹ ND-GAIN is an international resilience assessment that publishes comparative rankings on country assessments, at: <https://gain-new.crc.nd.edu/>. The Government has developed a modified ND-GAIN resilience assessment to incorporate the missing data in the ND-GAIN assessment for New Zealand's Realm countries.

³⁰ New Zealand Government, Regional Economic Development & Investment Unit, "The Provincial Growth Fund", at: <https://www.growregions.govt.nz/established-funds/what-we-have-funded/the-provincial-growth-fund/>

³¹ The Government defines green waste as degradable plant materials such as tree branches, leaves, grass and other vegetation matter.

- The Framework provides exclusionary criteria excluding the financing of exploration and production of fossil fuels, nuclear energy, arms manufacturing and chemical weapons, manufacturing and production of tobacco and recreational cannabis, gambling, and processing of whale meat. Sustainalytics views the exclusionary criteria as strengthening the Framework.
- Project Evaluation and Selection:
 - The New Zealand Government has established a cross-agency Green Bond Committee (GBC), which is chaired by the Treasury and comprises representatives from New Zealand Debt Management; the Ministry for the Environment; the Ministry of Transport; Waka Kotahi New Zealand Transport Agency; the Ministry of Business, Innovation and Employment; the Ministry for Primary Industries; the Department of Conservation; and an independent member with relevant skills and experience. The Treasury will conduct the initial evaluation and selection of potential eligible projects against the eligible criteria. The GBC will be responsible for the final endorsement of the eligible projects.
 - The Treasury incorporates environmental and social risk management as part of the initial evaluation and selection process for potential eligible projects. The Treasury will engage with relevant government agencies to assess projects' significant risks and risk management practices. In addition, large-scale projects are required to undertake a risk profile assessment. Sustainalytics considers these environmental and social risk management systems to be adequate and aligned with market expectation. For additional details see Section 2.
 - Based on cross-agency oversight for project selection, Sustainalytics considers this process to be in line with market practice.
- Management of Proceeds:
 - The New Zealand Treasury will be responsible for the allocation of proceeds and will periodically review and adjust the balance of total green bond proceeds allocated to eligible projects.
 - The Government commits to reach full allocation within two financial years following the financial year of issuance. Pending allocation or reallocation, an amount equivalent to the unallocated proceeds will be deposited as cash in the Crown's Settlement Account with the Reserve Bank of New Zealand.
 - Based on these elements, Sustainalytics considers this process to be in line with market practice.
- Reporting:
 - The Government intends to report on the allocation of proceeds on an annual basis and will prepare an impact report two years from issuance and report annually thereafter. This reporting will be made publicly available on the Treasury and New Zealand Debt Management website.
 - Allocation reporting may include the total net green bond proceeds; an overview of the allocation of the issued green bond(s) to the use of proceeds categories and, where appropriate and possible, to green objectives and specific expenditures; the amount of unallocated proceeds; and any material political, legal, climate-related and environmental risks related to Eligible Expenditures, and actions taken in response.
 - Impact reporting may include the impact of the eligible projects, subject to the available information. The intended metrics may include the annual GHG emissions reduced or avoided (tCO₂e), renewable energy capacity installed (MW), area of land under restoration or receiving treatment (ha), area of freshwater under restoration or receiving treatment (ha), number of flood defences reinforced, number of water assets receiving investment; and number of new waste facilities established.
 - Based on the commitment to both allocation and impact reporting, Sustainalytics considers this process to be in line with market practice.

Alignment with Green Bond Principles 2021

Sustainalytics has determined that the New Zealand Sovereign Green Bond Framework aligns with the four core components of the GBP. For detailed information please refer to Appendix 1: Green Bond/Green Bond Programme External Review Form.

Section 2: Sustainability Strategy of the New Zealand Government

Contribution of the Framework to the New Zealand Government's sustainability strategy

Sustainalytics is of the opinion that the New Zealand Government demonstrates a commitment to sustainability through its sustainability strategy,³² supported by policies and plans such as the Climate Change Response Amendment Act 2019 (Zero Carbon Act), Emissions Reduction Plan, National Adaptation Plan, Reformed Resource Management System and Aotearoa New Zealand Biodiversity Strategy 2020.

In 2019, the New Zealand Government legislated the Zero Carbon Act, which provides a framework for New Zealand in developing climate change policies to support its 2050 net zero target for greenhouse gas emissions.³³ Under its Nationally Determined Contribution (NDC), New Zealand has committed to reducing net emissions by 50% below 2005 gross emissions levels for the period 2021–30.³⁴

In May 2022, the New Zealand Government published its first Emissions Reduction Plan (ERP), which contains strategies, policies and actions to meet the first emissions budget for 2022–25 (290 megatonnes of total CO₂e emissions, representing an annual average of 72.4 megatonnes of CO₂e emissions) and the long-term net zero emissions target by 2050.³⁵ The ERP outlines five key strategies to support the transition to a low-emissions economy: (i) using emissions pricing to incentivize businesses to cut pollution and invest in cleaner technologies; (ii) developing funding and finance systems to provide capital and investment for the transition economy; (iii) building planning and infrastructure systems and processes to accelerate the transition; (iv) reshaping research, science innovation and technology with mission-led Climate Innovation Platforms to drive transformative change; and (v) investing in the circular economy and bio-economy to enhance the use of renewable resources.³⁶ In addition, the ERP identifies key emissions-intensive industries, such as transportation, energy and industry, building and construction, agriculture, forestry, waste, and fluorinated gases, and outlines more than 300 actions that can be taken to reduce sectoral emissions. These actions include increasing access to electric vehicles, phasing out fossil fuels, cutting the amount of waste going to landfills, and lifting the quality of home and commercial construction with the use of sustainable and low-carbon, renewable materials.³⁷ In order to build the foundation for climate adaptation, the New Zealand Government released the draft National Adaptation Plan.³⁸ The plan sets out three focus areas: reforming institutions in order to make them fit for a changing climate; providing data, information and guidance to enable everyone to assess and reduce their own climate risks; and embedding climate resilience across government strategies and policies.

To support climate-related spending on achieving the medium- and long-term targets set in the NDC and the emissions budget, the New Zealand Government has announced the establishment of a Climate Emergency Response Fund totalling NZD 4.5 billion (USD 2.8 billion).³⁹ The first tranche of public investment in climate change mitigation includes NZD 1.3 billion (USD 0.81 billion) in the transport sector, NZD 692 million (USD 430 million) in the energy sector and NZD 380 million (USD 236 million) in the agriculture sector.⁴⁰ In addition, in October 2021 the New Zealand Government committed NZD 1.3 billion (USD 0.81 billion) to helping lower-income countries protect lives, livelihoods and infrastructures from the impact of climate change.⁴¹ At least 50% of the funding will support countries in the Pacific region with their climate change adaptation plans.⁴²

³² New Zealand Government, Ministry for the Environment, "Our Sustainability", at: <https://environment.govt.nz/about-us/our-sustainability/>

³³ New Zealand Legislation, "Climate Change Response (Zero Carbon) Amendment Act 2019", at:

<https://www.legislation.govt.nz/act/public/2019/0061/latest/LMS183736.html>

³⁴ UNFCCC, "NEW ZEALAND Submission under the Paris Agreement New Zealand's first Nationally Determined Contribution", at:

<https://unfccc.int/sites/default/files/NDC/2022-06/New%20Zealand%20NDC%20November%202021.pdf>

³⁵ New Zealand Government, "AOTEAROA NEW ZEALAND'S FIRST EMISSIONS REDUCTION PLAN", at:

<https://environment.govt.nz/assets/publications/Aotearoa-New-Zealands-first-emissions-reduction-plan.pdf>

³⁶ New Zealand Government, "AOTEAROA NEW ZEALAND'S FIRST EMISSIONS REDUCTION PLAN – Executive summary", p.18, at:

<https://environment.govt.nz/assets/publications/Aotearoa-New-Zealands-first-emissions-reduction-plan.pdf>

³⁷ New Zealand Government, "AOTEAROA NEW ZEALAND'S FIRST EMISSIONS REDUCTION PLAN – Executive summary", p.21, at:

<https://environment.govt.nz/assets/publications/Aotearoa-New-Zealands-first-emissions-reduction-plan.pdf>

³⁸ New Zealand Government, Ministry for the Environment, "Draft national adaptation plan", at: <https://environment.govt.nz/assets/publications/Adapt-and-Thrive-consultation-document.pdf>

³⁹ New Zealand Government, "Climate Emergency Response Fund", at: <https://www.beehive.govt.nz/sites/default/files/2022-05/CERF%20investments.pdf>

⁴⁰ Ibid.

⁴¹ New Zealand Government, "New Zealand increases climate aid contribution", at: <https://www.beehive.govt.nz/release/new-zealand-increases-climate-aid-contribution>

⁴² Ibid.

With regard to environmental policy, the New Zealand Government is reforming its resource management system to reduce environmental impact.⁴³ It will introduce three new acts – the Natural and Built Environments Act⁴⁴, the Spatial Planning Act⁴⁵ and the Climate Adaptation Act – to better address the upcoming challenges across resource allocation, land use, indigenous biodiversity, marine environment, freshwater and infrastructure. The Department of Conservation launched Te Mana o te Taiao, the Aotearoa New Zealand Biodiversity Strategy, in August 2020. This strategy sets out a strategic framework for the protection, restoration and sustainable use of biodiversity in New Zealand until 2050.⁴⁶ The strategy outlines five outcomes to be achieved by 2050, including ensuring that ecosystems, indigenous species and their habitats are thriving, and people’s lives through connection with nature are enriched.⁴⁷ In April 2022, the Minister of Conservation launched the Biodiversity Strategy Implementation plan, which lays out the pathway and actions for achieving the aforementioned outcomes, including the identification of significant natural areas for wetlands, terrestrial areas, marine areas and biodiversity restoration.⁴⁸

Sustainalytics is of the opinion that the New Zealand Sovereign Green Bond Framework is aligned with the New Zealand Government’s sustainability strategy, and Sustainalytics considers the New Zealand Government to be well positioned to issue green bonds.

Approach to managing environmental and social risks associated with the projects

Sustainalytics recognizes that the net proceeds from the bonds issued under the Framework will be directed toward eligible projects that are expected to have a positive environmental impact. However, Sustainalytics is aware that such eligible projects could also lead to negative environmental and social outcomes. Some key environmental and social risks possibly associated with the eligible projects could include land use and biodiversity issues associated with large-scale infrastructure development, effluents and waste generated in construction, occupational health and safety, and stakeholder participation.

Sustainalytics is of the opinion that the New Zealand Government can manage and mitigate potential risks through implementation of the following:

- To manage land use and biodiversity issues associated with large-scale infrastructure development, New Zealand’s Resource Management Act 1991 (RMA) outlines the framework to avoid, remedy or mitigate any adverse effects of activities on the environment. The Act sets out a series of duties and restrictions relating to the use of, and activities allowed on, land, coastal marine areas, river and lake beds, as well as regulations relating to environmental pollution control, including land, water, soil, noise and air pollution.⁴⁹ Additionally, as a signatory of the international 1992 Convention on Biological Diversity (CBD), New Zealand has established a Biodiversity Strategy 2020 and a 2022 implementation plan, in accordance with the CBD. These represent its long-term national commitment to protecting biodiversity and comprise 18 national targets and key actions mapped to the relevant Aichi Biodiversity Targets.⁵⁰
- Regarding the management of effluents and waste generated in construction, New Zealand’s RMA prohibits the discharge of contaminants and hazardous substances into the environment and places restrictions on the dumping and incineration of waste in coastal marine areas without consent or a permit. Anyone proposing an action requiring consent must conduct an impact assessment of the effects of that proposal and demonstrate that all adverse impacts on the environment are identified with appropriate mitigation measures developed.⁵¹

⁴³ New Zealand Government, Ministry for the Environment, “Overview of the resource management reforms”, at: <https://environment.govt.nz/what-government-is-doing/areas-of-work/rma/resource-management-system-reform/overview/>

⁴⁴ New Zealand Government, Ministry for the Environment, “Exposure draft for the Natural and Built Environments Act released”, at: <https://environment.govt.nz/news/exposure-draft-for-the-natural-and-built-environments-act-released/>

⁴⁵ Local Government New Zealand, “Strategic Planning Act event brief”, at: <https://www.lgnz.co.nz/our-work/our-policy-priorities/housing/strategic-planning-act-event-brief/>

⁴⁶ New Zealand Government, Department of Conservation, “Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy”, at: <https://www.doc.govt.nz/nature/biodiversity/aotearoa-new-zealand-biodiversity-strategy/>

⁴⁷ New Zealand Government, “Te Mana O Te Taiao Aotearoa New Zealand Biodiversity Strategy 2020”, at: <https://www.doc.govt.nz/globalassets/documents/conservation/biodiversity/anzbs-2020.pdf>

⁴⁸ New Zealand Government, “Te Mana O Te Taiao – Aotearoa New Zealand Biodiversity Strategy Implementation Plan”, at: <https://www.doc.govt.nz/globalassets/documents/conservation/biodiversity/anzbs-implementation-plan-2022.pdf>

⁴⁹ New Zealand Legislation, “Resource Management Act 1991”, at: https://www.legislation.govt.nz/act/public/1991/0069/latest/DLM230265.html?search=ts_act_environment+act+1986_resele_25_a&p=1#DLM231904

⁵⁰ New Zealand Government, Department of Conservation, “Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy”, at: <https://www.doc.govt.nz/nature/biodiversity/aotearoa-new-zealand-biodiversity-strategy/>

⁵¹ New Zealand Government, Ministry for the Environment, “New Zealand’s Environmental Legislation” (2021), at: <https://environment.govt.nz/publications/the-state-of-new-zealands-environment-1997/chapter-four-environmental-management/new-zealands-environmental-legislation/>

- New Zealand's Health and Safety at Work Act (2015), which came into effect in 2016, outlines the roles, responsibilities and duties of employers, officers and workers for ensuring health, safety and welfare at the workplace. The Act stipulates requirements for: (i) the design, manufacture, installation, use and handling of equipment, substances and structures; (ii) worker engagement practices, such as establishing a health and safety committee and conducting regular safety meetings; (iii) risk management processes to identify, assess and minimize risks; and (iv) recording, reporting and resolving workplace incidents.⁵²
- Regarding stakeholder participation, community involvement in resource management is embedded within the RMA, where environmental decision-making under the Act is allocated to the communities most closely affected by the use of that resource. Communities that will deal with the impacts and can best understand the environmental issues at stake will decide whether an activity is permitted in any particular location. As such, the government and district and regional authorities are required to identify the environmental risks in their area and develop policy statements and plans, which detail the means for regulating activities in response to environmental threats.⁵³
- Additionally, the New Zealand Government has in place an exclusion list preventing the financing of the exploration and production of fossil fuels, nuclear energy, arms and chemical weapons manufacturing, manufacture and production of tobacco and recreational cannabis, gambling, and processing of whale meat.⁵⁴

Based on these policies, standards and assessments, Sustainalytics is of the opinion that the New Zealand Government has implemented adequate measures and is well positioned to manage and mitigate environmental and social risks commonly associated with the eligible categories.

Section 3: Impact of Use of Proceeds

All eight use of proceeds categories are aligned with those recognized by the GBP. Sustainalytics has focused on the below two where the impact is specifically relevant in the local context.

Importance of Terrestrial and Aquatic biodiversity conservation in New Zealand

New Zealand is a highly biodiverse country, with an estimated 80,000 endemic species including plants, birds, reptiles and invertebrates.^{55,56} This high endemism is largely the result of isolation from other land masses and diverse geography and climate, which allow unique flora and fauna to develop. However, with the arrival of human population combined with land mammals and invasive pests and species, New Zealand's indigenous ecosystems and species are in a state of rapid decline due to habitat loss.⁵⁷ Nearly 40% of Zealand's indigenous plant and bird species and 74% of its indigenous freshwater fish species, face the threat of extinction in the next century.⁵⁸

The Government of New Zealand set up the Convention on Biological Diversity and prepared the Te Mana O Te Taiao – Aotearoa New Zealand Biodiversity Strategy.⁵⁹ This plan sets national biodiversity targets around the areas of conservation lands and water bodies; safeguarding the ecosystem and diversity of indigenous threatened species of flora and fauna; eradicating mammalian predators; implementing control measures for weeds, pests and wilding conifer infestation; protecting freshwater and marine biodiversity; and establishing better management of vulnerable ecosystems.⁶⁰ For example, the Wilding Conifer Control Programme aims

⁵² New Zealand Legislation, "Health and Safety at Work Act 2015", at: <https://www.legislation.govt.nz/act/public/2015/0070/latest/DLM5976660.html>

⁵³ New Zealand Government, Ministry for the Environment, "New Zealand's Environmental Legislation" (2021), at:

<https://environment.govt.nz/publications/the-state-of-new-zealands-environment-1997/chapter-four-environmental-management/new-zealands-environmental-legislation/>

⁵⁴ Based on the New Zealand Sovereign Green Bond Framework.

⁵⁵ New Zealand Government, Ministry for the Environment NZ Govt., 'Guide, New Zealand's Biodiversity', at:

<https://www.environmentguide.org.nz/issues/biodiversity/#:~:text=However%2C%20biodiversity%20decline%20is%20rampant,New%20Zealand's%20indigenous%20plant%20species.>

⁵⁶ Learnz, 'Threats to Biodiversity', at: <https://learnz.org.nz/bioblitz191/bg-standard-f/threats-to-biodiversity>

⁵⁷ New Zealand Government, Ministry for the Environment, 'Why biodiversity matters', at: <https://environment.govt.nz/facts-and-science/biodiversity/why-biodiversity-matters/#:~:text=Current%20state%20of%20New%20Zealand's%20biodiversity,-Our%20use%20of&text=According%20to%20publications%20such%20as,%2C%20frogs%2C%20bats%20and%20birds.>

⁵⁸ New Zealand Government, Ministry for the Environment, 'Guide, New Zealand's Biodiversity', at:

<https://www.environmentguide.org.nz/issues/biodiversity/#:~:text=However%2C%20biodiversity%20decline%20is%20rampant,New%20Zealand's%20indigenous%20plant%20species.>

⁵⁹ New Zealand Government, Department of Conservation, "Te Mana o Te Taiao implementation plan", at:

<https://www.doc.govt.nz/nature/biodiversity/aotearoa-new-zealand-biodiversity-strategy/te-mana-o-te-taiao-implementation-plan/>

⁶⁰ New Zealand Government, Department of Conservation, "New Zealand Biodiversity Action Plan", at: <https://www.cbd.int/doc/world/nz/nz-nbsap-v2-en.pdf>

to protect biodiversity, water and farmland from invasive wilding conifers. The programme works to eradicate wilding pines from designated areas and provides a framework for the management of regrowth for local landowners.⁶¹ Similarly, the Government of New Zealand has set a target to be predator-free by 2050 and plans to eradicate all pests that threaten New Zealand's native birds.⁶²

The National Environmental Standards for Freshwater and the National Policy Statement for Freshwater Management came into force in September 2020, with the goal of protecting natural wetlands.⁶³ The Freshwater Improvement Fund supports projects that aid environmental improvements to New Zealand's lakes, rivers, streams, groundwater and wetlands. The Fund focuses on areas of wetland construction and restoration, estuary protection, restoration of fish passage and reduction of sediment eroding from the land.⁶⁴

Sustainalytics is of the opinion that New Zealand Government's allocation of proceeds is expected to contribute to the efforts in conserving and restoring the country's natural habitats.

Importance of Clean Transportation in mitigating climate change in New Zealand

The transport sector produced 47% of CO₂ emissions in New Zealand in 2021,⁶⁵ with GHG emissions from road transport having increased by 90% between 1990 and 2016.⁶⁶ This increase is mainly due to the gradual increase in population, higher dependency on vehicles, lack of integrated public transport networks and lack of policy interventions.⁶⁷

As part of its decarbonization strategy, the New Zealand Government has developed the Emissions Reduction Plan, under which transport forms a key transition sector.⁶⁸ As per the Emissions Reduction Plan released in May 2022, the Government plans to build walking, cycling and public transport infrastructure. This includes walkways and segregated cycleways alongside roads or separate bikeway networks.⁶⁹ Te Ara Tupua is one such project initiated to create a walking and cycling link between Wellington and Lower Hutt. It aims to deliver a safe, efficient and connected route that will increase the number of people who choose to walk or ride between Wellington and the Hutt Valley.

With regard to public transportation, the New Zealand Government has set up an action plan for improving the reach, frequency and quality of public transport and making it more affordable for low-income New Zealanders.⁷⁰ In January 2021, there were around 2,600 public transport buses in operation in New Zealand, fewer than 40 of which were electric.⁷¹ The Government has announced its targets to entirely decarbonize the public transport bus fleet by 2035 and to permit the purchase only of zero-emission public buses from 2025.⁷² As of May 2022, 65% of the main railway network connecting Auckland to Wellington is electrified.⁷³ The Auckland network provides approximately 7.6 million passenger trips annually.⁷⁴ The City Rail Link is a significant infrastructure project to expand the rail network within Auckland and unlock significant capacity in the public transport system. When it is fully operational, approximately 54,000 passengers an hour will use the rail system, resulting in decreased reliance on cars and reduced traffic and air pollution.⁷⁵

⁶¹ Environment Southland, 'Wilding conifer control programme', at: <https://www.es.govt.nz/jobs-for-nature/wilding-conifer-control-programme-mid-dome>

⁶² Stuff, 'Government sets target to make New Zealand 'predator-free' by 2050', at: <https://www.stuff.co.nz/environment/82454116/government-sets-target-to-make-new-zealand-predator-free-by-2050>

⁶³ Lexology, 'Navigating New Zealand's wetland protection regulations', at: <https://www.lexology.com/library/detail.aspx?g=3903a2d1-65a8-486e-a9de-27651902d10f>

⁶⁴ New Zealand Government, Ministry for the Environment, "Freshwater Improvement Fund", at: <https://environment.govt.nz/what-you-can-do/funding/freshwater-improvement-fund/>

⁶⁵ Beehive, "Govt to rev up reductions in transport emissions", at: <https://www.beehive.govt.nz/release/govt-rev-reductions-transport-emissions>

⁶⁶ Research Gate, "Emissions from the road transport sector of New Zealand: key drivers and challenges", at: https://www.researchgate.net/publication/333911354_Emissions_from_the_road_transport_sector_of_New_Zealand_key_drivers_and_challenges

⁶⁷ Ibid.

⁶⁸ New Zealand Government, Ministry for the Environment, "Emission Reduction Plan", at: <https://environment.govt.nz/assets/publications/Files/Emissions-reduction-plan-summary-of-submissions.pdf>

⁶⁹ New Zealand Government, Ministry of Transport, at: <https://www.transport.govt.nz/assets/Uploads/Briefing/briefing-public-transport-walking-cycling.pdf>

⁷⁰ New Zealand Government, Ministry for the Environment, at: <https://environment.govt.nz/publications/aotearoa-new-zealands-first-emissions-reduction-plan/transport/>

⁷¹ New Zealand Government, Ministry of Transport, "Public transport decarbonisation", at: <https://www.transport.govt.nz/area-of-interest/environment-and-climate-change/public-transport-decarbonisation/>

⁷² Ibid.

⁷³ Alpha Rail, "The evolution of railway electrification in New Zealand", at: <https://www.alpharail.co.nz/the-evolution-of-railway-electrification-in-new-zealand/>

⁷⁴ New Zealand Government, Ministry for the Environment, "Fifth National Communication", at: https://unfccc.int/resource/docs/natc/nzl_nc5.pdf

⁷⁵ City Rail Link, at: <https://www.cityrailink.co.nz/>

Sustainalytics is of the opinion that the New Zealand Government's financing of clean transport projects and activities is expected to aid in reducing greenhouse gas emissions and contribute positively to New Zealand's transition to a low-carbon economy.

Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were adopted in September 2015 by the United Nations General Assembly and form part of an agenda for achieving sustainable development by 2030. The bonds issued under the New Zealand Sovereign Green Bond Framework are expected to advance the following SDGs and targets:

Use of Proceeds Category	SDG	SDG target
Clean Transport	11. Sustainable Cities and Communities	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons
Energy Efficiency and Renewable Energy	7. Affordable and Clean Energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix 7.3 By 2030, double the global rate of improvement in energy efficiency
Green Buildings	9. Industry, Innovation and Infrastructure	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities
Living and Natural Resources and Land Use	15. Life on Land	15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally
	12. Responsible Consumption and Production	12.2 By 2030, achieve the sustainable management and efficient use of natural resources
Terrestrial and Aquatic Biodiversity	14. Life below water	14.c Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want
	15. Life on Land	15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems

Climate Change Adaptation	13. Climate Action	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Sustainable Water and Wastewater Management	6. Clean Water and Sanitation	<p>6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally</p> <p>6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity</p>
Pollution Prevention and Control	11 Sustainable Cities and Communities	11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

Conclusion

The New Zealand Government has developed the New Zealand Sovereign Green Bond Framework, under which it may issue green bonds and use the proceeds to finance and refinance government expenditures in a broad range of projects that are expected to facilitate the transition to a low-carbon economy in New Zealand and contribute to the climate-related, biodiversity conservation and environmental goals set out by the Government. Sustainalytics anticipates that the projects funded by the green bond proceeds to provide positive environmental impacts in New Zealand.

The New Zealand Sovereign Green Bond Framework outlines a process by which proceeds will be tracked, allocated and managed, and commitments have been made for reporting on the allocation and impact of the use of proceeds. Furthermore, Sustainalytics believes that the New Zealand Sovereign Green Bond Framework is aligned with the overall sustainability strategy of the New Zealand Government and that the green use of proceeds categories will contribute to the advancement of UN Sustainable Development Goals 6, 7, 9, 11, 12, 13, 14 and 15. Additionally, Sustainalytics is of the opinion that New Zealand Government has adequate measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible projects funded by the proceeds.

Based on the above, Sustainalytics is confident that New Zealand Government is well positioned to issue green bonds and that the New Zealand Sovereign Green Bond Framework is robust, transparent and in alignment with the four core components of the Green Bond Principles 2021.

Appendix

Appendix 1: Green Bond / Green Bond Programme - External Review Form

Section 1. Basic Information

Issuer name:	New Zealand Government
Green Bond ISIN or Issuer Green Bond Framework Name, if applicable:	New Zealand Sovereign Green Bond Framework
Review provider's name:	Sustainalytics
Completion date of this form:	August 02, 2022

Section 2. Review overview

SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarise the scope of the review.

The review assessed the following elements and confirmed their alignment with the GBP:

- | | |
|------------------------------------------------------------|----------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Use of Proceeds | <input checked="" type="checkbox"/> Process for Project Evaluation and Selection |
| <input checked="" type="checkbox"/> Management of Proceeds | <input checked="" type="checkbox"/> Reporting |

ROLE(S) OF REVIEW PROVIDER

- | | |
|---------------------------------------------------------------------------------|----------------------------------------|
| <input checked="" type="checkbox"/> Consultancy (incl. 2 nd opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification | <input type="checkbox"/> Rating |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

Note: In case of multiple reviews / different providers, please provide separate forms for each review.

EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW (*if applicable*)

Please refer to Evaluation Summary above.

Section 3. Detailed review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

1. USE OF PROCEEDS

Overall comment on section (if applicable):

The eligible categories for the use of proceeds – Clean Transport, Energy Efficiency and Renewable Energy, Green Buildings, Living and Natural Resources and Land Use, Terrestrial and Aquatic Biodiversity, Climate Change Adaptation, Sustainable Water and Wastewater Management and Pollution Prevention and Control – are aligned with those recognized by the Green Bond Principles. Sustainalytics considers that investments in the eligible categories are expected to lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDGs 6, 7, 9, 11, 12, 13, 14 and 15.

Use of proceeds categories as per GBP:

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Renewable energy | <input checked="" type="checkbox"/> Energy efficiency |
| <input checked="" type="checkbox"/> Pollution prevention and control | <input checked="" type="checkbox"/> Environmentally sustainable management of living natural resources and land use |
| <input checked="" type="checkbox"/> Terrestrial and aquatic biodiversity conservation | <input checked="" type="checkbox"/> Clean transportation |
| <input checked="" type="checkbox"/> Sustainable water and wastewater management | <input checked="" type="checkbox"/> Climate change adaptation |
| <input type="checkbox"/> Eco-efficient and/or circular economy adapted products, production technologies and processes | <input checked="" type="checkbox"/> Green buildings |
| <input type="checkbox"/> Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBP | <input type="checkbox"/> Other (please specify): |

If applicable please specify the environmental taxonomy, if other than GBP:

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

The New Zealand Government (the “Government”) has established a cross-agency Green Bond Committee (GBC). The New Zealand Treasury (the “Treasury”) will conduct the initial evaluation and selection of potential eligible projects against the eligible criteria. The GBC will be responsible for the final endorsement of the eligible projects. The Government has processes in place to identify and mitigate common environmental and social risks associated with the eligible projects. Sustainalytics considers the project selection process to be in line with market practice.

Evaluation and selection

- | | |
|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Credentials on the issuer’s environmental sustainability objectives | <input checked="" type="checkbox"/> Documented process to determine that projects fit within defined categories |
| <input checked="" type="checkbox"/> Defined and transparent criteria for projects eligible for Green Bond proceeds | <input checked="" type="checkbox"/> Documented process to identify and manage potential ESG risks associated with the project |

- Summary criteria for project evaluation and selection publicly available Other (*please specify*):

Information on Responsibilities and Accountability

- Evaluation / Selection criteria subject to external advice or verification In-house assessment
- Other (*please specify*):

3. MANAGEMENT OF PROCEEDS

Overall comment on section (*if applicable*):

The Treasury will be responsible for the allocation of proceeds and will periodically review and adjust the balance of total green bond proceeds allocated to eligible projects. The Government intends to reach full allocation within two financial years following the financial year of issuance. Pending allocation or reallocation, an amount equivalent to the unallocated proceeds will be deposited as cash in the Crown's Settlement Account with the Reserve Bank of New Zealand. This is in line with market practice.

Tracking of proceeds:

- Green Bond proceeds segregated or tracked by the issuer in an appropriate manner
- Disclosure of intended types of temporary investment instruments for unallocated proceeds
- Other (*please specify*):

Additional disclosure:

- Allocations to future investments only Allocations to both existing and future investments
- Allocation to individual disbursements Allocation to a portfolio of disbursements
- Disclosure of portfolio balance of unallocated proceeds Other (*please specify*):

4. REPORTING

Overall comment on section (*if applicable*):

The Government intends to report on the allocation of proceeds on an annual basis and to prepare an impact report two years from issuance and report annually thereafter. Allocation reporting may include the total net green bond proceeds and the amount of unallocated proceeds. In addition, the Government is committed to reporting on relevant impact metrics. Sustainalytics views the Government's allocation and impact reporting as aligned with market practice.

Use of proceeds reporting:

- | | |
|--------------------------------------------------------|------------------------------------------------------------------|
| <input type="checkbox"/> Project-by-project | <input checked="" type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other (<i>please specify</i>): |

Information reported:

- | | |
|-----------------------------------------------------------|------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Allocated amounts | <input type="checkbox"/> Green Bond financed share of total investment |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

Frequency:

- | | |
|-----------------------------------------------------------|--------------------------------------|
| <input checked="" type="checkbox"/> Annual | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

Impact reporting:

- | | |
|--------------------------------------------------------|------------------------------------------------------------------|
| <input type="checkbox"/> Project-by-project | <input checked="" type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other (<i>please specify</i>): |

Information reported (expected or ex-post):

- | | |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> GHG Emissions / Savings | <input checked="" type="checkbox"/> Energy Savings |
| <input type="checkbox"/> Decrease in water use | <input type="checkbox"/> Other ESG indicators (<i>please specify</i>):
Length of new or improved train lines, dedicated bus lanes, walking paths or cycle ways (km), renewable energy capacity installed (MW), number of projects benefitted, [PLACEHOLDER GB], area of land under restoration or receiving treatment (ha), reduction in farm nutrient loss and leaching per unit of production, area of freshwater under restoration or receiving treatment (ha), waterways fenced from livestock (km), number of riparian plants planted or length of riparian planting (km), area of wilding conifer control (ha), length of stop-banks reinforced (km), number of flood defences reinforced, number of regions, communities or Māori supported or benefitted, number of water assets receiving investment, length of pipe upgrades (km), number of water treatment plants upgrades, number of new waste facilities established, increased processing capacity (tonnes), number of data collection initiatives funded, area of land where a detailed site investigation has taken place (ha), area of land managed or remediated (ha) |

Frequency

- Annual
 Semi-annual
 Other (please specify):

Means of Disclosure

- Information published in financial report
 Information published in sustainability report
 Information published in ad hoc documents
 Other (please specify): Treasury and the New Zealand Debt Management's website
 Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review):

Where appropriate, please specify name and date of publication in the useful links section.

USEFUL LINKS (e.g. to review provider methodology or credentials, to issuer's documentation, etc.)

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE**Type(s) of Review provided:**

- Consultancy (incl. 2nd opinion)
 Certification
 Verification / Audit
 Rating
 Other (please specify):

Review provider(s):**Date of publication:****ABOUT ROLE(S) OF INDEPENDENT REVIEW PROVIDERS AS DEFINED BY THE GBP**

- i. Second-Party Opinion: An institution with environmental expertise, that is independent from the issuer may issue a Second-Party Opinion. The institution should be independent from the issuer's adviser for its Green Bond framework, or appropriate procedures, such as information barriers, will have been implemented within the institution to ensure the independence of the Second-Party Opinion. It normally entails an assessment of the alignment with the Green Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental features of the type of projects intended for the Use of Proceeds.
- ii. Verification: An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.
- iii. Certification: An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognised external green standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.

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- iv. **Green Bond Scoring/Rating:** An issuer can have its Green Bond, associated Green Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental performance data, the process relative to the GBP, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material environmental risks.

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