



Agricultural emissions reduction – developing the Agricultural Emissions Pricing System

<i>a) relevant institution/s for each project.</i>
The Ministry for Primary Industries (MPI), Ministry for Environment (MFE) and Inland Revenue Department (IRD) have received funding for the Agricultural Emissions Pricing (AEP) Programme.
<i>(b) Brief summary and timeline of each project and the projects intended outcome.</i>
<p>The Agricultural Emissions Pricing programme has been funded to continue the development of the Government’s recommended agricultural greenhouse gas emissions pricing system.</p> <p>In 2022/23 the programme received funds for essential development work necessary to support and enable decisions on the options for the implementation of the agricultural emissions pricing scheme. The programme received funding in 23/24 to continue the work.</p> <p>A reporting and pricing system is in place along with legislation and regulations which incentivise reductions in agriculture emissions.</p>
<i>(c) Terms of reference/funding scopes developed to date, for organisations who apply for funding under these schemes.</i>
The AEP Programme does not currently include a funding or grant-based scheme.

Agriculture: Accelerating development of greenhouse gas mitigations

<i>a) relevant institution/s for each project.</i>
MPI, in partnership with the New Zealand Agriculture Greenhouse Gas Research Centre (NZAGRC) and AgriZero ^{NZ} this is an industry government joint venture established to drive the commercialisation of mitigation solutions.
<i>(b) Brief summary and timeline of each project and the projects intended outcome.</i>
<p>The programme has been funded to accelerate development and uptake of high impact agricultural mitigation technologies. More specifically, the programme funding is intended to deliver Focus Area Two of the Agriculture Chapter of the Emissions Reduction Plan, and contribute to the following outcomes:</p> <ul style="list-style-type: none"> • Multiple adoptable mitigation solutions are available to farmers to meet legislated emissions reduction targets. • A greater proportion of early-stage research, including mātauranga solutions, is progressing to viable solutions, and these solutions are spread across a range of farm system types. • The emissions reduction effect/impact of all adoptable solutions is included in official greenhouse gas (GHG) inventory figures within 2 years of the solutions being available to purchase & use on-farm.



- The tools and practices developed can be exported and utilised internationally.

The Government has committed to long term funding of the programme recognising the challenge, scale and scope of the R&D required to deliver the tools to farmers. The programme will be delivered through five core sub programmes:

Strengthening Agriculture GHG mitigation R&D – To accelerate the availability and uptake of new mitigations and get mitigations to producers sooner and establishing a new Centre for Climate Action on Agricultural Emissions to drive a step change in research, development and commercialisation of emissions reduction technologies.

Māori led innovation and mātauranga Māori-based approaches - Supporting Māori-led responses to climate change by investing in the Māori primary sector's capability and capacity to test, develop and deliver low emissions and climate resilient solutions.

Ensuring Effective Regulatory pathways - Streamlined path to market through regulatory and greenhouse gas inventory processes, and active support of developers. This is through ensuring relevant regulatory regimes can meet the new demand generated by the accelerated development of mitigations, proactive development of pathways to account for new mitigations, and active and direct engagement with researchers and developers of mitigations.

International Partnerships - Sustaining current targeted funding to the Global Research Alliance on Agricultural Greenhouse Gases (GRA) to continue international cooperation, capability building and investment in research to mitigate and reduce the effect of agricultural greenhouse gas emissions and engage internationally to establish internationally agreed residue limits for inhibitors in food products.

Leadership, Coordination and Monitoring - To ensure effective delivery / implementation of the CERF programme as a whole, in line with the CERF budget initiative, the Agriculture chapter of the first Emissions Reduction Plan and the Biological Emissions Reduction Science and Mātauranga Plan.

(c) Terms of reference/funding scopes developed to date, for organisations who apply for funding under these schemes.

Programme Early Investments

MPI established an early investment process for the first year of the programme. Early investments are those that are made in advance of the AgriZero^{NZ}, the Centre Joint Venture (JV) being operational, and enhancements made to the existing NZAGRC (part of the centre establishment phase).

A robust and transparent decision-making process was used to guide these early investments, until such time as the JV and an enhanced NZAGRC is operational and can establish its own investment framework.

An expressions of interest application process was used by funding requester's applying under the early investment process. An Early Investment Advisory Panel (EIA Panel) was established to help advise MPI decision-makers on early investment applications. This panel was made up of mainly



external industry agribusiness professionals and agricultural and greenhouse gas research subject matter experts.

Seven Assessment Criteria were used to guide early investment decisions:

1. Sustainable Benefits to New Zealand - will the programme deliver significant short or long-term economic, environmental, social, or cultural benefits to NZ?
2. Case for government funding - will government co-investment reduce programme risks, increase scale, or accelerate benefits to NZ that would not otherwise be achieved?
3. Approach or Methodology - does the approach or methodology make sense, and is fit-for-purpose? Is an appropriate science provider/partner or research organisation involved?
4. Ability to deliver - does the applicant have the appropriate team and capability to deliver the programme workstreams? Are you confident that the target benefits for NZ will be achieved?
5. Budget and co-investment - Is there a suitable level of funding from industry co-investors? Do you have any concerns with the indicative programme budget?
6. Greenhouse gas (GHG) reduction Impact – enable or direct contribution. It should be clear from the proposal where the work sits on the 'pathway to impact' of reducing agricultural GHG emissions. Is it a direct contributor to or enabler of NZ agricultural GHG reduction?
7. Risk identification and mitigation - What are the key risks, issues, or assumptions? Are they adequately addressed in the EOI or Business Case?

The Early Investment Application Process has now ended.

Please visit the following link which outlines the projects that have been publicly announced and funding committed through the early investment programme. This list is updated as investments have been approved by MPI and made public <https://www.ccaae.govt.nz/projects/>.

Increased GHG Inventory Research Fund

The CERF programme provided increased funding for the GHG Inventory Research (GHGIR) fund (\$7 million over four years). This fund aims to improve the reporting of greenhouse gas emissions from agriculture, forestry, and other land use. For more information see <https://www.mpi.govt.nz/funding-rural-support/environment-and-natural-resources/greenhouse-gas-inventory-research-fund/>

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**Agriculture: Supporting producers and Maori entities
to transition to a low emissions future**

<i>a) relevant institution/s for each project.</i>
The project sits within the Agriculture and Investment Services business unit, in the Māori Agribusiness directorate. The Climate and water team within the directorate is leading the project.
<i>(b) Brief summary and timeline of each project and the projects intended outcome.</i>
<p>This initiative ensures farmers, growers and whenua Māori entities (producers) can access support and have the confidence to move to low emissions farm systems. It funds tikanga-based programmes to develop and support long-term low emissions profiles for whenua Māori. The tikanga-based programmes will be designed by Māori, with support from MPI, and supported by rohe-based Māori kaiārahi (pathfinders) to pilot and support implementation for whenua Māori. The initiative started in July 2022 and is scheduled to continue until June 2026 for the four-year budget allocation.</p> <p>The project funds access to credible information and communications to help shift attitudes. It will increase on-the-ground and on-farm activities aimed at helping producers change farm practices and adopt new technologies, including through local producer groups focused on reducing emissions.</p>
<i>(c) Terms of reference/funding scopes developed to date, for organisations who apply for funding under these schemes.</i>
The Terms of reference are still being worked on. Therefore, we cannot provide this information with reference to section 9(2)(g)(i) of the OIA.

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Forestry: Increasing woody biomass supply to replace coal and other carbon intensive fuels and materials

a) relevant institution/s for each project.

The Increase Woody Biomass Supply Programme sits within the Operational Programme Delivery Directorate of the Te Uru Rākau New Zealand Forest Service Branch of MPI. The Programme contains three main workstreams: Planting, Research and Workforce Capacity.

(b) Brief summary and timeline of each project and the projects intended outcome.

Projections show New Zealand will face woody biomass shortages by 2030, because of sharply rising demand as efforts to reduce carbon emissions from fossil fuels pick up pace. This initiative increases biomass supply and stimulates private sector investment to alleviate projected shortages, through Crown planting 10,000ha* of short rotation energy forest, and targeted research and development. The initiative will help transform forestry and wood processing to a high-value, high wage sector.

Main outcomes:

- Will directly reduce emissions by contributing biomass from up to 10,000 ha of new short rotation forests (16 years rotation) to increase the availability of supply of woody biomass for process heat applications which formerly relied on coal.
- A research programme that assists with identifying technologies and strategies to optimise removal and utilisation of woody residue from forests.
- The combined components aim to directly contribute to biomass supply by demonstrating the viability of planting forests for woody biomass and indirectly increase supply, by broadening the evidence base for bioenergy forestry and identifying techniques for the safe and economic recovery of harvest residues.
- A capable and well-trained workforce across all roles supporting the growing, harvesting and processing of woody biomass.

*Original initiative was intended to plant 10,000ha, however this was subsequently revised to 5,000ha following Ministerial direction.

Timeline

	2022/23	2023/24	2024/25	2025/26
Planting 10,000ha	<ul style="list-style-type: none"> • Confirm investment framework. • Milestone: Develop promotion approach. • Identify potential partners, 	<ul style="list-style-type: none"> • Identify and contract land. • Commence land preparation and forest planning. Possibility for some initial planting. 	<ul style="list-style-type: none"> • Continue land acquisition. • Continue land preparation activity. • Ramp up planting programme. • By Q3 3,500ha contracted 	<ul style="list-style-type: none"> • Complete land acquisition. • Continue land preparation and planting (continuing in outyears). • By Q3 10,000ha contracted



	begin discussions.	<ul style="list-style-type: none"> 500ha contracted and report back to Ministers on Phase Two funding. 		
Research	<ul style="list-style-type: none"> Agree Research programme. Research Plan developed and finalised. Begin to commission research. 	<ul style="list-style-type: none"> Initial Research delivered and outcomes received. Review research plan. Publish research findings. 	<ul style="list-style-type: none"> Research delivered. Review research plan. Publish research findings. 	<ul style="list-style-type: none"> Research delivered. Publish research findings.
Workforce	<ul style="list-style-type: none"> Draft Workforce Plan. Planning on sector initiatives from the Workforce Plan. 	<ul style="list-style-type: none"> Design of initiatives to support workforce development. 	<ul style="list-style-type: none"> Implementation of initiatives to support workforce development. 	<ul style="list-style-type: none"> Evaluation of initiatives. Further roll out of successful workforce initiatives.

(c) Terms of reference/funding scopes developed to date, for organisations who apply for funding under these schemes.

The planting workstream does not include a funding or grant-based scheme. Crown Forestry does however have high level search parameters it is using to identify land suitable for planting. This includes land that must be owned by the party looking to enter a joint venture; it must be in one of the high priority areas (Otago, Canterbury, or Southland), it must be well connected to road networks and ideally have at least 200 plantable hectares.

A MPI Forestry Science and Research Panel is used for the procurement of the forestry research. This is using a standard competitive market process and is managed through commercial contracts. The panel covers a wide range of forestry related research capabilities informed by the research programmes.



Forestry: Maximising carbon storage, increasing natural sequestration to achieve New Zealand's future carbon goals

a) relevant institution/s for each project.

This programme is led by Te Uru Rākau – New Zealand Forest Service within MPI. The programme is part of a joint agency budget bid between MPI, MfE and Department of Conservation (DOC) in the Maximising Carbon Sequestration initiative, to maximise natural carbon sequestration:

- Maximising Forest Carbon – Te Uru Rākau – New Zealand Forest Service
- Maximising Carbon in Mineral Soils – Ministry for the Environment
- Maximising Carbon in Native Systems – Department of Conservation
- Wood Processing Growth Fund (WPGF) – Te Uru Rākau – New Zealand Forest Service

(b) Brief summary and timeline of each project and the projects intended outcome.

The Maximising Forest Carbon includes:

- A four-year (2022 to 2026) research, science, and policy programme to improve our current knowledge of carbon dynamics and the impact of forest management activities on carbon stocks.
- A fund to catalyse and accelerate investment from the private sector into new long-lived wood processing equivalent to one million cubic metres of annual log input capacity. The WPGF is divided into two distinct funding streams:
 - a. The 'Catalyst' programme, co-funding investment-enabling activities (such as business cases, feasibility studies) ongoing until 2026/27, with additional funding approved for outyears; and
 - b. The 'Accelerator' programme delivering debt and equity for capital co-investment alongside private capital, to be provided in three distinct funding rounds during 2023 – 2026.

Main outcomes

- To identify improved methods for measuring forest carbon sequestration that increase accuracies and efficiencies for landowners and forest managers and for our national accounts reporting.
- To understand the link between improved forest management activities and additional carbon sequestration.
- To increase our confidence in the alignment between the Emissions Trading Scheme (ETS) and the 'crediting' of forests against our climate change targets.
- To catalyse and accelerate investment from the private sector into new long-lived wood processing equivalent to one million cubic metres of annual log input capacity.



Timeline				
	2022/23	2023/24	2024/25	2025/26
Research and Science	<ul style="list-style-type: none"> Agreed to the Science Plan. Establish a science procurement panel. Gather existing research and science. Determine research priorities. 	<ul style="list-style-type: none"> Collect data from priority sites and forest types. Test alternative carbon measurement methodologies. 	<ul style="list-style-type: none"> Collect data on the effects of a range of forest management activities. 	<ul style="list-style-type: none"> Determine if change in carbon can be measured due to forest management activities.
Policy and Incentives	<ul style="list-style-type: none"> Progress development of regulations for new and updated yield tables. 	<ul style="list-style-type: none"> Understand the barriers and opportunities for P90 Forests. Identify potential incentives and interventions for P90 forests. Assess alternative options for carbon measurement methodologies. 	<ul style="list-style-type: none"> Progress development of regulations for new and updated yield tables. Determine if active management of forests can improve carbon sequestration. 	<ul style="list-style-type: none"> Implementation of regulations for new and updated yield tables.
Carbon Measurement Technology	<ul style="list-style-type: none"> Undertake trial of remote sensing technology for measuring carbon in forests. 	<ul style="list-style-type: none"> Assess ability for remote sensing technology to be used in the Emissions Trading Scheme. 	<ul style="list-style-type: none"> If viable, establish an implementation plan for alternative methods of measuring carbon sequestration. 	<ul style="list-style-type: none"> Implementation.



<p>Investment in wood processing</p>	<ul style="list-style-type: none"> • Establish the fund. 	<ul style="list-style-type: none"> • Run round 1 and 2 of capital funding through the Accelerator. • Fund feasibility studies and business cases through the Catalyst. 	<ul style="list-style-type: none"> • Run round 3 of capital funding through the Accelerator. • Fund feasibility studies and business cases through the Catalyst. • Evaluate progress and report back to Cabinet. 	<ul style="list-style-type: none"> • Fund feasibility studies and business cases through the Catalyst.
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(c) Terms of reference/funding scopes developed to date, for organisations who apply for funding under these schemes.

The programme includes a funding / grant-based scheme, the Wood Processing Growth Fund (WPGF). The investment framework was agreed by Cabinet in April 2023.

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Forestry: Establishing native forests at scale to develop long-term carbon sinks and improve biodiversity

a) relevant institution/s for each project.

The Native Afforestation Programme sits within the Operational Programme Delivery Directorate at Te Uru Rākau - New Zealand Forest Service (TUR-NZFS) branch of MPI. The programme contains workstreams within other directorates at TUR-NZFS, and within the Policy and Trade department at MPI.

(b) Brief summary and timeline of each project and the projects intended outcome.

The Native Afforestation Programme was funded to remove barriers for native afforestation by increasing propagation capacity, using automated technology to scale up native seedling production and reduce costs, facilitates innovation in seed collection, propagation and forest establishment including restoration through focused research. Develop a long-term national strategy and action plan to grow native forests, in partnership with rural landowners, iwi/Māori, foresters, communities and the private sector.

The intended outcome of this initiative is to increase establishment of native forests at scale, to develop long-term carbon sinks and improve biodiversity.

CERF funding for the Native Afforestation initiative was provided for 4 years, with the following progress indicators being progressed:

- Development of investment options to remove barriers to native afforestation by March 2024.
- Delivery of research and science projects as per the research plan by June 2026, with commissioned of projects currently being undertaken.
- Development of a current state, future state, and implementation plan to address barriers in the nursery sector by June 2024. Implementation of these plans will occur in the remaining years of the programme.
- Development of a long-term strategy and action plan for native afforestation by June 2024.
- Development of a Māori-crown partnership and engagement strategy by December 2023, with implementation to occur in the remaining years of the programme.

(c) Terms of reference/funding scopes developed to date, for organisations who apply for funding under these schemes.

The Native Afforestation Programme does not currently include a funding or grant-based scheme. We therefore do not have any terms of reference or funding scopes for organisations to apply for funding.

A MPI Forestry Science and Research Panel is used for the procurement of the forestry research. This is using a standard competitive market process and is managed through commercial contracts. The panel covers a wide range of forestry related research capabilities informed by the research programmes.