

Executive Summary

He Waka Eke Noa Recommendations for pricing agricultural emissions

31 May 2022

This summarises the report *Recommendations for pricing agricultural emissions* presented to Ministers by He Waka Eke Noa, the Primary Sector Climate Action Partnership, in May 2022. You can find the full report and supporting documents at www.hewakaekenoa.nz.

He Waka Eke Noa – the Primary Sector Climate Action Partnership was formed in 2019 to design a practical, credible, and effective system for reducing emissions at farm level, as an alternative to government policy to bring agriculture into the New Zealand Emissions Trading Scheme (NZ ETS).

The Partners acknowledge change is required to encourage the transition to lower-emissions, more environmentally

sustainable farming systems. The primary sector sees that consumers are increasingly demanding products with a low environmental impact.

Many farmers and growers are already taking action to reduce the environmental footprint of their businesses, and it is important that they are supported on their journey to lower-emissions farming in a fair and equitable way.

What He Waka Eke Noa is aiming to achieve

He Waka Eke Noa is developing a practical framework to support farmers to measure, manage and reduce agricultural emissions; recognise, maintain, or increase integrated sequestration on farms; and adapt to a changing climate.

Farmers and growers are using the tools and guidance provided through the He Waka Eke Noa framework, with 61% knowing their numbers (i.e., calculating their emissions

at farm level) and 21% having a written plan (i.e., recording actions to reduce or offset emissions in their farm plan) by the end of 2021. The Partnership is working towards 100% of farmers knowing their numbers by 31 December 2022, and 100% of farmers having a written plan by 1 January 2025³. This level of knowledge of on-farm emissions is world-leading.

Recommending a practical, credible, and effective farm-level pricing system

This report outlines recommendations from the primary sector and Māori agribusiness Partners (the Partners) for a farm-level pricing system as part of a broader framework to encourage emissions reductions. Ministry for the Environment (MfE) and Ministry for Primary Industries (MPI) officials have worked in good faith to provide advice and support to sector and iwi/ Māori partners on the development of an effective, workable agricultural emissions pricing system.

The Government will now consider the Partnership's advice alongside advice from the Climate Change Commission, before making decisions later this year on how agricultural

emissions are to be priced from 2025. Ministers will be supported by MfE and MPI officials during this process, which is why the government agencies are not signatories to the final report and are not able at this stage to endorse or not endorse its recommendations.

The Partners considered a range of options for an alternative pricing system to the NZ ETS. Following a robust policy and consultation process, the Partners recommend a **farm-level split-gas levy**. Its key features are:

- Farms calculate their short- and long-lived gas emissions through a single centralised calculator (or

³ For more information, see He Waka Eke Noa Milestone update and six-month progress report <https://hewakaekenoa.nz/wp-content/uploads/2022/03/He-Waka-Eke-Noa-Six-Month-Progress-Report-March-2022.pdf>

through existing tools and software that are linked to the centralised calculator).

- Calculated on-farm emissions determine the levy cost rather than the use of national averages.
- Recognition of reduced emissions from on-farm efficiencies and mitigations as they become available.
- Incentives are provided for uptake of actions (practices and technologies) to reduce emissions.
- A split-gas approach applies different levy rates to short- and long-lived gas emissions.
- On-farm sequestration is recognised, which could offset the cost of the emissions levy.
- Levy revenue is invested in research, development, and extension (providing technical advice and information) including a dedicated fund for Māori landowners.
- A System Oversight Board with expertise and representation from the primary sector, will work closely with an Independent Māori Board to provide recommendations on levy rates and prices, and set the strategy for use of levy revenue.

The Partners consider the recommended system to be a practical, credible, and more effective alternative to pricing agricultural emissions via the NZ ETS.

Levy rates need to be as low as possible while still achieving the objectives of reducing emissions, increasing integrated sequestration, and minimising impacts on primary sector production and profitability. This includes providing for investment in research and development into new mitigations technologies and funding for extension to support uptake of actions to reduce emissions.

The Partners have worked hard to provide a unified view on a pricing system, including collaboration and compromise across varied interests in a diverse primary sector and government Partners, the Ministry for Primary Industries (MPI) and the Ministry for the Environment (MfE). Te Aukaha, led by the Federation of Māori Authorities, provides input from a Māori farmer and grower perspective into the Partnership to ensure support of the land-management aspirations of Māori farmers.

The recommendations represent the best option to create incentives and opportunities to reduce emissions while aligning with legislative requirements for a price on agricultural emissions and maintaining the viability of the primary sector, and vibrancy of rural communities.

What we heard from farmers and growers

The Partners engaged extensively with farmers and growers, as well as others including rural professionals, during February and March 2022.

The Partners heard that farmers want a transparent, accessible, and integrated system for pricing agricultural emissions that ensures the primary sector remains productive, profitable, and internationally competitive.

Of the options consulted on, there was a strong preference for a farm-level pricing system to give farmers control and autonomy over their farm business and emissions profile and recognition for their actions on farm. Farmers acknowledged the size of the challenge to get a farm-level system established and operational by 2025.

Farmers supported split-gas pricing, the investment of revenue into research and development and the recognition of sequestration from on-farm vegetation, especially types not recognised in the NZ ETS.

Farmers raised concerns for the future of the primary sector, including the impact on the financial viability of some farm

systems and other businesses along the supply chain, the social impact on rural communities, generational farming, and mental wellbeing.

Farmers expressed the importance of remaining internationally competitive and taking care to avoid emissions leakage (shifting production to less emissions-efficient producers offshore).

The key issues raised by Māori agribusiness, landowners, and managers⁴ were the impact on business viability and inadequate resourcing and funding. They also highlighted the importance of Te Tiriti o Waitangi being the foundation for any regulatory and/or policy development, and that it is time for a system reset that recognises the interconnectedness of Te Taiao. Of the options presented, the majority preferred a farm-level pricing system.

For further information on the feedback received, the [He Waka Eke Noa Feedback summary report](#) can be found on the He Waka Eke Noa website.

⁴ In feedback received by the Federation of Māori Authorities (FOMA).

How this meets the criteria

The Partners have worked to design a system that is:

- Effective – reduces agricultural emissions in total and per unit of product and maintains a profitable primary sector
- Practical – clear and simple system that minimises administration costs
- Credible – scientifically robust (includes mātauranga Māori) and transparent
- Integrated – aligns with wider primary sector and government objectives and activities
- Equitable – recognises early adopters and has 'equitable' impacts across the primary sector.

There are some decisions in the design of the system that require trade-offs between these criteria. These trade-offs are discussed in the relevant sections of the report. Overall, Partners consider the recommended system to best meet these criteria in light of those trade-offs.

In addition to these criteria, giving effect to Te Tiriti o Waitangi, which includes Te Tiriti principles of partnership and active protection, must be considered in the system design and pricing system.

What this will achieve

The Partners recognise that creating incentives and opportunities to reduce on-farm emissions requires a broader approach and framework than just focusing on a system for pricing emissions. He Waka Eke Noa is developing a framework that includes guidance, support, and tools to help farmers and growers measure their emissions and make informed decisions on actions to reduce or manage emissions. Any emissions management approach must also support farmers' and growers' resilience to changing market drivers and climate conditions.

Government legislated emissions reduction targets:

- CH₄ emissions to reduce by 10% below 2017 levels by 2030, and by 24 – 47% by 2050.
- N₂O and CO₂ to reduce to net zero by 2050

The targets are out of scope for He Waka Eke Noa, industry partners will be engaging with the Government on targets outside of He Waka Eke Noa.

This framework, including an appropriate pricing system, is expected to lead to an estimated reduction in methane emissions of between 4 and 5.5%, depending on the availability of technology options. Alongside reductions that will occur as part of business as usual and via the waste

sector, this would achieve methane emission reductions in line with the 10% reduction target in legislation.

He Waka Eke Noa modelling estimates that by 2030, agricultural emissions of methane (CH₄) will reduce by 4.4% and nitrous oxide (N₂O) by 2.9% under existing government policies (e.g. National Policy Statement for Freshwater, and Forestry in the NZ ETS) and market and economic drivers⁵. It is anticipated that the waste sector could achieve a reduction in total biogenic methane of at least 1.7% by 2030⁶.

Prices have yet to be set for emissions pricing within He Waka Eke Noa but current scenario modelling estimated that if a farm-level split-gas levy was applied to agricultural emissions along with incentives for actions to reduce emissions then an additional 4 – 5.5% reduction in gross methane emissions, and 2.9 – 3.2% in gross nitrous oxide emissions between now and 2030 is achievable (over and above the baseline achieved by other environmental policies)⁷. These emissions reductions come from a combination of within-farm land-use change, practice change and technology uptake. As discussed in Section 10: Impacts and insights, it is possible the emissions reductions could be higher at the prices modelled.

⁵ Resource Economics, 2022, [Pricing agricultural GHG emissions: sectoral impacts and cost benefit analysis](#).

⁶ Climate Change Commission, 2021, <https://ccc-production-media.s3.ap-southeast-2.amazonaws.com/public/Evidence-21/Evidence-CH-12-Long-term-scenarios-to-meet-the-2050-target.pdf> (see 'headwinds' scenario)

⁷ Resource Economics, 2022, [Pricing agricultural GHG emissions: sectoral impacts and cost-benefit analysis](#).

Table 1: Estimated gross emissions reductions achieved through existing policies, waste and farm-level levy by 2030

	Farm-level Levy and revenue recycling	Existing policies	Waste sector	Total
CH ₄	4 – 5.5%	4.4%	1.7%	10.1 – 11.6%
N ₂ O	2.9 – 3.2%	2.9%		5.8 – 6.1%

What the impact is estimated to be

Until the actual price is set, the Partnership modelling is based on prices that are estimates of what could be required to meet the primary sector’s assumed contributions to emissions reductions targets. The Partners are not recommending the use of these prices in future, rather the price settings will be recommended by the System Oversight Board based on a range of factors more comprehensive than those used in the modelling.

The modelling found that the indicative prices will have a wide range of impacts given the different types of farm systems. The modelled impact on average farm profit varies from zero up to 7.2%, but there is significant variation across farm systems and some farms may be impacted significantly more than this.

In general, deer, sheep and beef operations will face a greater impact on their bottom line than dairy operations under the same levy rates. In addition to the [Sectoral impacts report](#)⁸, [Beef + Lamb New Zealand analysis](#) of over 300 actual farms indicates a large variation in the impact on farm profit. At the extreme, based on 70 years of Economic Service analysis of farmer behaviour, this would see a significant number of farms exiting meat production. This could result in much higher methane reductions as a result of land-use change than modelled in the Sectoral

impacts report. The conclusion being that more emissions reductions are likely to occur at lower levy prices than modelled.

Current modelling estimates that a farm-level split-gas levy will result in a fall in production of milk of 1.4% and meat of 0.1%. This is the lower of the impacts discussed during consultation. [Analysis](#)⁹ identified that there is an emissions leakage risk for milk, beef and sheep meat associated production decreases. Emissions reductions modelled in the sheep and beef sector in response to the farm-level split-gas levy result almost exclusively from the uptake of mitigation technologies. These affect the emissions intensity of output but do not have any impact on meat production. The largest emission reductions in sheep and beef are from existing policies i.e., land use change to forestry driven by the NZ ETS carbon price. The impacts are discussed further in Section 10: Impacts and insights.

Minimising these impacts requires a careful balancing of the systems settings, in particular levy rates. If the system settings do not adequately take into account risks to farmer profitability and international competitiveness it could have significant impacts on the viability of New Zealand’s agricultural sector.

Recognising Māori rights and interests

The pricing system must consider the unique circumstances, rights and interests of Māori agribusiness, landowners, and landholdings, and recognise the unique land tenure and ownership structures that Māori land authorities operate within as a result of legislation, and the

historical impediments that constrain the development and use of Māori land. This report includes a section from the Federation of Māori Authorities (FOMA) that outlines Māori values and position. FOMA membership represents Māori landowners across Aotearoa.

⁸ Resource Economics, 2022, [Pricing agricultural GHG emissions: sectoral impacts and cost-benefit analysis](#).

⁹ Resource Economics, 2022, [Pricing agricultural GHG emissions: impacts on emissions leakage](#).

What is next?

Government will consider the Partners' recommendations and make a final decision in December 2022.

If the Government agrees to the Partners' recommendations for pricing agricultural emissions, then the relevant legislation will need to be drafted in 2023.

The Partners have identified areas for further work on policy design detail and are committed to progressing this work alongside government while the recommendations are being considered. There is also additional work required to

ensure the farm-level pricing system is fit for purpose for industries not directly represented by the Partnership e.g., pork and poultry.

Partners will continue to work alongside farmers and growers to ensure that all farms in New Zealand have a documented annual total of on-farm greenhouse gas emissions ('know their number') by 31 December 2022. They will also progress towards all farms having a written plan to measure and manage their greenhouse gas emissions ('have a plan') by 1 January 2025.

What He Waka Eke Noa is recommending

How you would measure, manage and reduce on-farm emissions under a farm-level split-gas levy

NOW

Know your numbers, have a plan



Use a greenhouse gas calculator to understand your farm's agricultural emissions.



Identify opportunities and actions relevant to your farm to manage and reduce emissions.

FROM 2025: IF RECOMMENDATIONS ARE ACCEPTED

Register in the system

Who needs to register?

If you're GST registered and annually average over any of the following, you have to register:

- 550 stock units (sheep, cattle, deer and goats)
- 50 dairy cattle
- 700 swine*
- 50,000 poultry*
- 40 tonnes of synthetic nitrogen fertiliser use.

**subject to further work*

Who is responsible?

Business owners (with approval from landowners for sequestration, if required).

You can register as:



Individual farm



Supported individual farm (reporting delegated e.g. to accountant or processor)



Collective of farms

Calculate your emissions



Enter your farm data to calculate your emissions via the central standardised emissions calculator.



Get your farm's emissions numbers for methane (in kgs) and long-lived gases (in kgs of CO₂e).

The lower your emissions numbers, the lower your levy cost.

Inputs into setting levy rates

Further reduce your emissions and levy costs

You'll get recognition for:

Incentivised actions

such as using eligible technologies and practices that deliver measurable emissions reductions (e.g. low methane sheep genetics and urease inhibitors)

Maintained and increased sequestration

such as areas of eligible vegetation, including existing or new natives, riparian plantings, and some exotics (e.g. shelter belts)



The more incentivised actions and sequestration on your farm, the lower your levy cost.

Inputs on eligible incentives

See the levy at work



Your levy will be invested into agricultural sector emissions research and technology development.

Remaining funds will cover system costs.

There will be a separate fund to support the specific needs of Māori landowners.

Sets strategy and directs investment

ONGOING

Our climate change commitment



Lowering emissions will decrease your levy and show our sector is committed to playing our part in addressing climate change.

A PARTNERSHIP APPROACH A System Oversight Board, with primary sector and Māori agribusiness representatives

He Waka Eke Noa
Primary Sector Climate Action Partnership