

Voluntary Report – Voluntary - Public Distribution

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Report Name: New Zealand Sets Out Plans for Agricultural Emissions Pricing

Country: New Zealand

Post: Wellington

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Report Highlights:

Recently, the New Zealand Primary Sector Climate Action Partnership – He Waka Eke Noa (HWEN) – delivered their recommendations on an alternative agricultural emissions solution to the NZ Emissions Trading Scheme (ETS). In its report, HWEN outlined various recommendations which center around a farm-level split gas levy on emissions. This farm-level split gas levy would separate charges directed at producers for short-lived gas emissions such as methane (CH₄) and long-lived gas such as nitrous oxide (N₂O) and carbon dioxide (CO₂). The final decision on the outcome of these recommendations sits with the Government and is expected to be made in December 2022. Following this, the relevant legislation is planned to be drafted in 2023.

Executive Summary:

Recently, the New Zealand Primary Sector Climate Action Partnership – He Waka Eke Noa (HWEN) – delivered their recommendations on an alternative agricultural emissions solution to the NZ Emissions Trading Scheme (ETS). This report follows the release of the New Zealand Government (NZG) Emissions Reduction Plan, published in May 2022. In its report, HWEN outlined various recommendations which center around a farm-level split gas levy on emissions. This farm-level option was supported by a vast majority of New Zealand farmers when compared with other possible options, including a processor levy or continuation of the ETS. This farm-level split gas levy would separate charges directed at producers for short-lived gas emissions such as methane (CH₄) and long-lived gas such as nitrous oxide (N₂O) and carbon dioxide (CO₂).

Outlined in this paper are recommendations around how the on-farm emissions should be calculated, incentives for mitigation, how to recognize on-farm sequestration, approaches to ensure farmers and indigenous Māori are represented at higher levels in the primary sector, and how the levy revenue is to be used. The Government of New Zealand has been firm on its commitment to price agricultural emissions. The final decision on the outcome of these recommendations sits with the Government and is expected to be made in December 2022. Following this, the relevant legislation is planned to be drafted in 2023.

Background

HWEN is a collaborative partnership between the New Zealand Government and the agricultural and farming sector, with the original goal to equip farmers with knowledge and solutions to make on-farm changes that would result in better climate outcomes. Originally, an emissions pricing mechanism was just one component of that goal. However, because of its impact on farmers, the details of such a pricing mechanism and how it could work has now become the key focal point of interest for the agricultural sector.

HWEN is developing a practical framework to support farmers to measure, manage and reduce agricultural emissions, including: enteric/biogenic methane (CH₄), nitrous oxide (N₂O), and carbon dioxide (CO₂). This includes an approach to recognizing on-farm sequestration and other potential mitigations, and an effective system for pricing agricultural emissions starting in 2025.

HWEN released a draft engagement document in November which put forward two main options for agricultural emissions pricing, a farm-level levy option and a processor levy. The industry groups involved (11 of them) consulted internally on refinements to the document. Following feedback from different engagements with industry groups and farmers, and the release of the Emission Reduction Plan, HWEN presented their recommendations to the Government in June 2022.

Recommendations

Following engagements with farmers and industry groups, the key recommendation in the report was to opt for a split-gas levy recognizing production of short- and long-lived gases at the farm-level. Another previous option which was proposed in the draft engagement document released in November 2021, but not recommended in this report, was a processor-level levy. However, farmers deemed the farm-level option allowed them more control over emissions and actions and that the farm-level levy would be able to recognize and reward farms for best practices. As a result, after much consideration and analysis, HWEN did not recommend a processor-level levy.

1. Farm-level split-gas levy

In the recommendations, HWEN prioritized an approach to separately recognize and price short- and long-lived gases by 2025. However, in the price calculations, there would be recognition for current on-farm sequestration efforts and levy discounts for approved mitigation actions and technologies. The development of these technologies will derive from projects funded by the levy itself. It is also expected that the final emissions pricing and payment would be calculated and completed through a centralized system, in essence through a new levy-funded industry organization.

The report includes the below table on how the farm-level levy would be calculated (Figure 1):

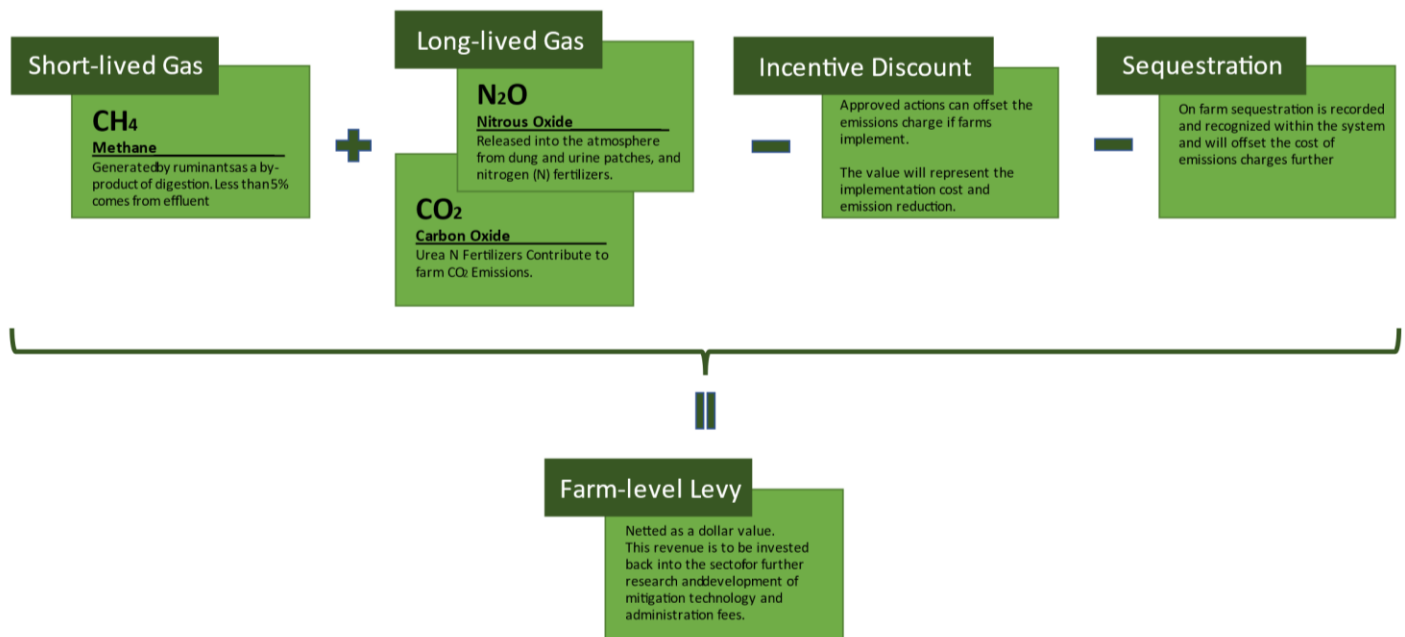


Figure 1: Source: HWEN Recommendations Report

A draft example by FAS/Wellington of how the equation could look when implemented in a farm-based scenario can be found in the appendix.

2. Distribution of Levy Revenue

HWEN recommends that the revenue generated through the levy be invested back into the primary sector and a system oversight board would set the strategy for uses of the levy. The levy would not provide any direct return to the Government, but instead the revenue would be directed in two ways:

- Primarily for research and development to support further emissions reductions and support “lower-emissions food and fibre production”.
- Contribute to the administrative costs of the system.

In consultations farmers have explained that they want to see the administrative costs of the system kept low and have suggested that long-term this levy be integrated into the NZ taxation system.

3. Incentivized Discounts

HWEN reports that during consultations, farmers strongly supported the approach that the revenue for the levy paid be invested into research and development of initiatives and technologies that will contribute to being recognized as approved actions in the central calculation (i.e. mitigation technologies).

Currently technologies that are being investigated as approved actions for the incentive calculation include the following categories:

- Improve production e.g., Urease inhibitors, reduce N-fertilizer usage.
- Reduce total feed eaten e.g., alternative land use, adjust stock policies, retire land.
- Effluent Management e.g., capture methane from effluent ponds and manure stores.
- New and future mitigations e.g., low emissions genetics, feed additives, vaccine, ect.

The implementation of these actions would then contribute to incentivized discounts within the levy calculations. In particular, new and future mitigations that target the reduction of enteric methane would have the largest environmental and financial benefit for the entire program.

For the pricing of the incentive mechanism, it is recommended that it should reflect the opportunity cost of implementing the approved actions, with the sentiment that as the actions become common place the costs will reduce. However, the recommendation from the HWEN report states that the incentives could not exceed the levy i.e., the system would not pay out an incentive which exceeds the levy cost.

4. Sequestration

In the report it states that 99 percent of farmers surveyed support the farm-level levy instead of the ETS and that they hope the system recognizes as much sequestration on-farm as possible. In addition to agroforestry, this sequestration could include:

- Permanent indigenous vegetation
- Riparian (permanent livestock exclusion areas) vegetation
- Cyclical vegetation such as: orchards, livestock shelter (tree lanes), and scattered forests.

The farmer sentiment towards recognizing these types of plantations into the sequestration calculations stems from the fact that under the current ETS there is no recognition of indigenous forestry or riparian plantings.

HWEN also stated that they would also consider the inclusion of other sources of sequestration including wool, tussock grassland, wetlands, and soil carbon. However, the report qualifies that the science of understanding these aspects is not currently advanced enough.

5. Reports and Payment

In the report, it states that farm businesses over a particular scale will be subject to the farm-level levy, and that according to the criteria outlined it would cover an estimated 23,000 farms, or 96 percent of emitters.

Those farmers that are subject to the levy would be able to report and pay in two different ways:

Business owners:

Will have the responsibility for reporting and paying the levy. This simplifies operations with leased land and complex farm environment plans.

Farm Collectives:

Operations have the choice to work together as a collective and report emissions and reduce offset. This would allow for the submission of one report and payment rather than individual reports.



Figure 2: Source: HWEN Recommendations Report

Farmers may also be able to choose to delegate responsibility to a person or entity on their behalf, e.g., farm advisor or accountant.

6. Governance

Although the final decision on levy prices and structure will be decided by the Ministers of Climate Change and Agriculture, HWEN recommends that there should be a systems oversight board, responsible for setting strategy, investment and making recommendations. This board would consist of Māori representatives reporting to a separate independent Māori board, funded by Māori Agribusiness.

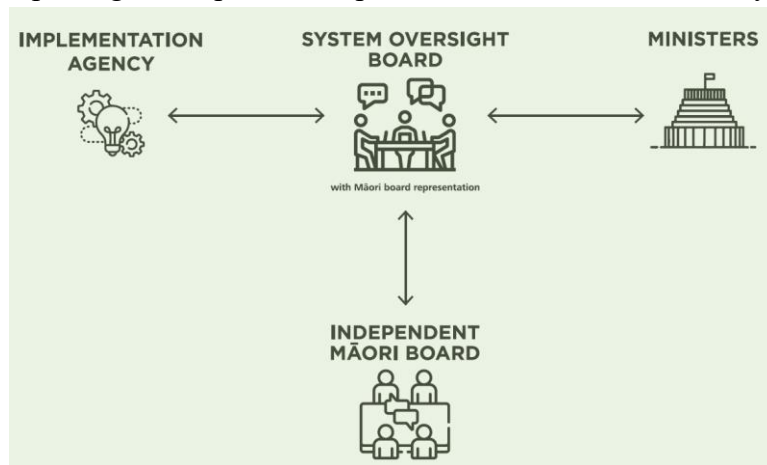


Figure 3: Source: B+LNZ & DNZ

The purpose of the independent Māori board would be to ensure Māori landowners' interests are reflected in the strategy and the use of the levy funds.

7. Timelines

Following the submission of the recommendations in the report, the Ministers for Climate Change and Agriculture will consult with HWEN before taking a decision to the Cabinet by December 2022. Following this the final decision would be used to create legislation which would need to be passed in Parliament (Note: A Government election next year is anticipated to slow the process down slightly). While this legislation process is being conducted, in parallel a pilot program would be scoped, designed, and implemented before 2025.

Following any legislation being passed, HWEN is forecasting to implement a simplified transitional farm-level levy system in 2025, transitioning to a full farm-level levy in 2027. Key features would include:

- Mandatory reporting of 2024/25 emissions and pricing the following Financial Year (2025/26).
- Other sequestration backdated once full sequestration measurements and recognition is in place from 2027
- Incentive discounts for approval actions on-farm by implementation of the first farm-level levy
- Working towards the full farm-level levy being stand alone or run through the taxation system.

A table of the expected timelines in the report is as follows:

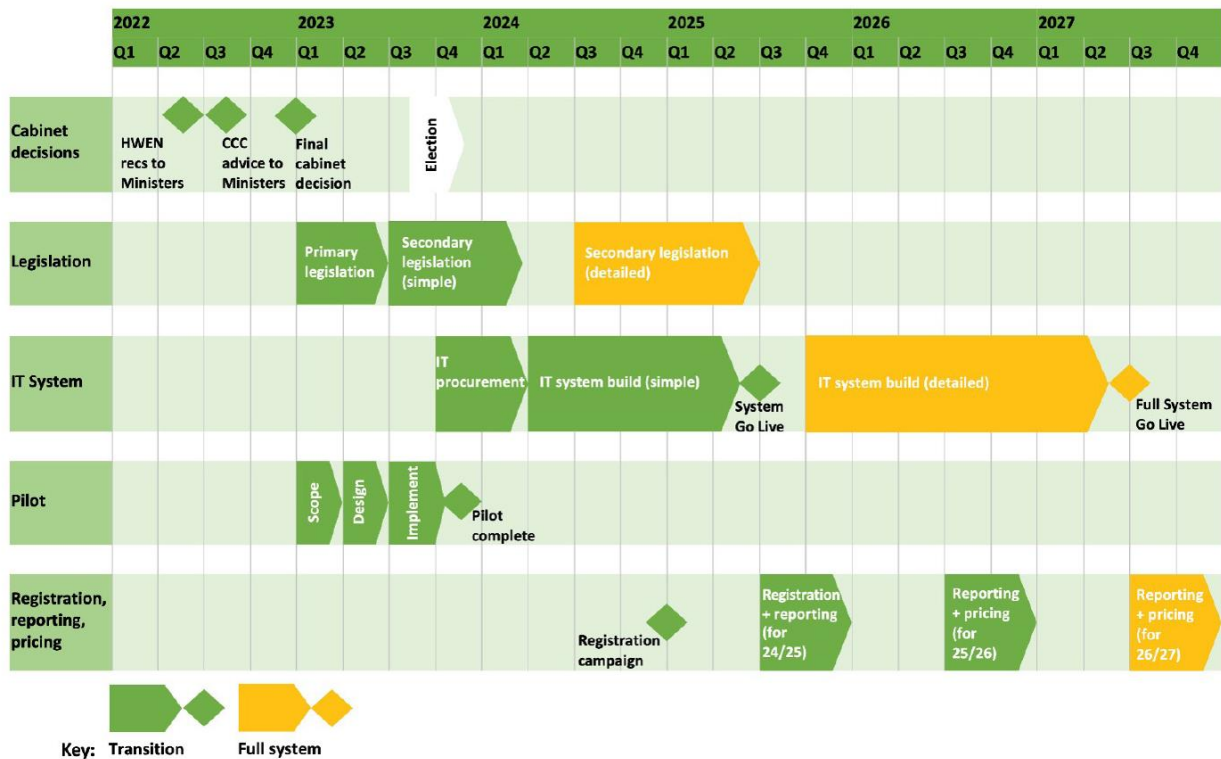


Figure 4: Timeline to Getting Started, Source: HWEN Recommendations Report

8. Impact

The HWEN report also lays out the possible impact of the levy. As NZ dairy and livestock farms are all unique in their operations, the true impact of the levy, when modelled in over 300 actual farm scenarios, showed substantial variability. Expectations are that red meat operations (sheep, beef, and deer) will face a greater impact to profitability than dairy farming under the same levy rates. This could realistically result in a significant number of farms exiting red meat systems for alternative lower-methane-emitting land uses.

When models were run on the impact on production, it was estimated that total dairy production would fall by 1.4 percent and meat production to fall by 0.1 percent. HWEN have highlighted that if the system settings to the levy calculations do not adequately consider risks to farmer profitability and international competitiveness, it could have significant impacts on the viability of New Zealand's agricultural sector.

A copy of the document can be found here: [Recommendations for pricing agricultural emissions](#)

Appendix: Draft Scenario of Farm-Level Levy

FAS/Wellington has created the following draft scenario to provide an example of what a potential farm-level levy for a 330-hectare dairy operation could be.

Assumptions for the emissions are derived from OverseerFM, one of the recommended decision-making software packages for the calculation of on-farm emissions. The prices used were derived from B+LNZ [summary analysis](#) modelling approach.

Key assumptions used:

- Short-lived gas (CH₄):
 - 2,600 kg/ha/year
 - Priced at \$0.11 per kg

- Long-lived gas (N₂O and CO₂):
 - N₂O = 910kg/ha CO₂e/year
 - 965kg/ha CO₂/year
 - Priced at \$4.25 per ton

- Incentive Discount:
 - Switch to methane-reduced genetics = \$15 per genetic straw additional cost
 - An estimated 20 percent reduction on enteric methane (less 500kg/ha/year)

- Sequestration:
 - 20ha of productive forestry, sequestering 20t/CO₂e/ha/year
 - 10ha of riparian/native plantations, sequestering 7t/CO₂e/ha/year
 - Priced at \$85 per ton

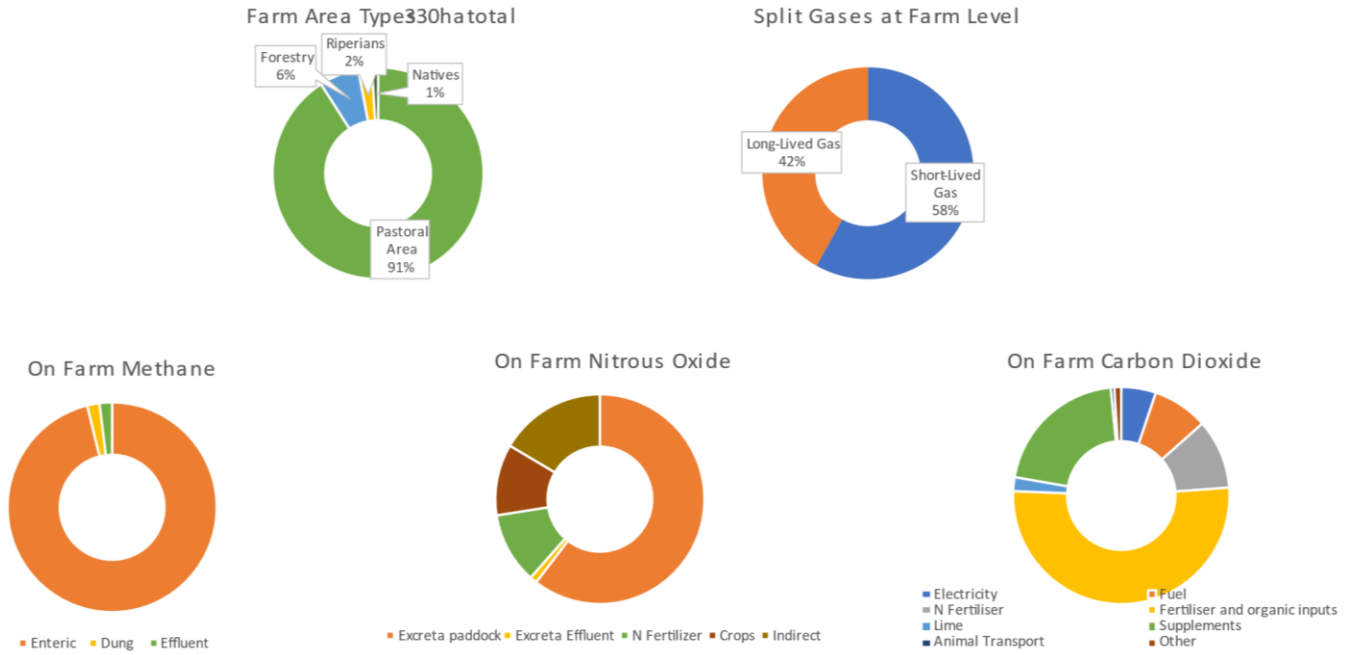


Figure 5: Source: OverseerFM

Resulting in the following calculation (figure 6):

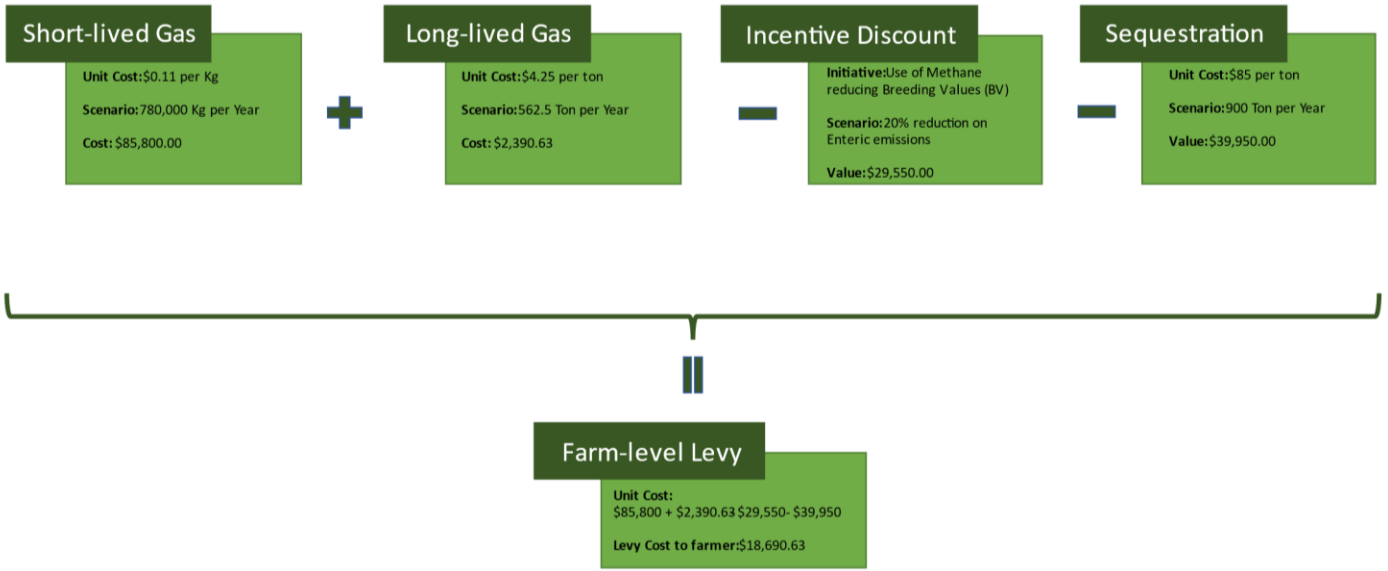


Figure 6: FAS/Wellington Example Farm-Level Levy Calculated

Under this scenario, the calculated farm-level levy would be NZ \$18,690.63 per year (\$11,700 USD) or \$56.64 per hectare for this farm (**Note:** This scenario is just an example and actual pricing could be significantly different).

Attachments:

No Attachments.