

Ministry for Primary Industries
Manatū Ahu Matua



Ministry for the
Environment
Manatū Mō Te Taiao

To: Hon Damien O'Connor, Minister of Agriculture
From: Charlotte Denny, Director Natural Resources Policy, MPI

To: Hon James Shaw, Minister of Climate Change
From: Sara Clarke, Director, Policy Implementation Division, MfE

Farm-level Emissions Reporting

Date	12 May 2023	Reference	MPI: B23-0328 MfE: BRF-3213
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Decision required	Date decision required by
YES <input checked="" type="checkbox"/> / NO <input type="checkbox"/>	16 May 2023

Purpose
<p>This briefing seeks your agreement on a legislative option to progress implementing farm-level emissions reporting.</p> <p>Option One: Develop a system outside of legislation in the short term, including progressing a standardised methodology, starting with voluntary reporting, and not legislating until further decisions are made on the pathway for the pricing system.</p> <p>Option Two: Build on the reporting elements of the framework and policy decisions of the pricing system proposed in April 2023 (DEV-23-SUB-0052; MPI: AM23-0158; MfE: BRF-3043), and progress this in legislation in the short term (alongside pricing of fertiliser).</p> <p>Once we have Ministers direction, we will provide further advice to support public announcements and announcements and progressing cabinet approval.</p>

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Key messages
To deliver farm level emissions reporting, we propose a sequence of legislative and implementation work, starting from voluntary reporting (including a pilot) to mandatory reporting and finally pricing. There are a range of decisions Ministers will need to make regarding the phasing of this work.
Without an agreed pricing mechanism, there is a likelihood that implementation activity in advance of decisions on pricing will need to be reworked.
Officials are seeking Ministers' direction on whether or not they wish to progress directly to a legislated reporting system ahead of decisions on pricing. The options provide trade-offs regarding how strongly government wishes to signal mandatory emissions reporting in the immediate future, and the extent to which the work progressed may or may not align with any future pricing mechanisms.
Once a decision has been made by Ministers on a preferred option, officials will provide more detail on the pathway for implementation, and additional policy decisions needed.

Background

1. Ministers met with the Prime Minister on 13 April to discuss how to progress agricultural emissions pricing. In this meeting, Ministers:
 - a) remained committed to pricing agriculture emissions in the long-term;
 - b) recognised the significant challenge in implementing a farm level pricing system by 1 Jan 2025 (DEV-23-SUB-0052; MPI: AM23-0158; MfE: BRF-3043 refers); and
 - c) signalled a desire to sequence the implementation of farm-level pricing into more deliverable components.
2. Ministers requested advice on setting up farm level emissions reporting ahead of farm level pricing (MfE: BRF-3140, MPI: B23-0285 refers).
3. Ministers agreed to a series of follow up pieces of advice to be provided on components of an alternative policy package, including additional advice on the timeframes and objectives for delivery of farm-level reporting, the scope of reporting, and level of mandating.

Context

4. Officials have been working on the details of an agricultural emissions pricing system, as outlined in the April draft cabinet paper (DEV-23-SUB-0052). This system has tight linkages between the farm level emissions calculation and reporting system, the levy policy framework, and the proposed operating model, agency roles and aspects of farm-level reporting.
5. The Agricultural Emissions Pricing Implementation (AEPI) Unit within MPI has been developing a prototype emissions calculator and methodology based on the national inventory methodology. See **Appendix One** for details and potential linkages.

Current landscape for on farm emissions reporting

6. There is a variety of ways farmers are currently able to calculate their emissions, including through the “Know Your Number programme” via the He Waka Eke Noa Partnership. **Appendix Two** illustrates some of the work the sector has been doing on farm reporting and mitigation action.
7. Many of the calculators have been created for specific sectors to reflect the differences in profiles of emissions for each sector. There are trade-offs in the level of accuracy that can be achieved in a calculator from being sector specific relative to providing one tool that can work for a broad range of enterprises. A standardised approach to emissions reporting would provide a consistent yardstick that calculators would need to meet.

Potential objectives and benefits from an emissions reporting system

8. The design of the emissions reporting system should ideally be aligned with the objectives and benefits the system is aiming to achieve.
9. Introducing a government endorsed reporting system (mandatory or not) ahead of the pricing system enables an opportunity to look at the design of the system and the extent to which it could achieve multiple objectives. These include:
 - a) Learning which elements work and which need adjusting ahead of introduction of pricing system;
 - b) The development of a central registry and database that collates information on what is happening with emissions on-farm to support national and regional efforts to reduce emissions;
 - c) A standardised approach for emissions calculation and reporting that could, for example, be incorporated into farm environment plans, seeking to align with measures and regulations to improve other environmental outcomes such as freshwater and biodiversity. Alignment with the tax system is another similar objective for the reporting system;
 - d) Provides a standardised process for the industry and private sector to report emissions for a multitude of purposes such as net zero claims; and
 - e) In advance of pricing, a farm-level reporting system could be utilised as a vehicle to incentivise uptake of mitigations (potentially paid for by fertiliser pricing).
10. Officials consider that any emissions reductions from farm reporting alone will be limited. Reductions are likely to increase significantly once emissions are priced. Farmers and growers may be able to identify a range of potential mitigation (practice change, land use change or technologies) opportunities through emissions reporting alone.
11. Integrated farm planning (education and extension), and a financial incentive to reduce emissions will increase likely uptake of mitigations, especially if the action results in trade-offs (such as reduced production, or increased cost/time).

Components of a farm level emissions reporting system

12. A number of components are proposed to deliver a reporting system:
 - a) **Emissions methodology and standards:** A published calculation methodology and standards, including reporting requirements and other components such as emissions factors to support farm level reporting. This will be assured by a group of technical experts from the sector and scientific institutions, and aligned to existing standards (for example, the Agriculture Inventory Model used for New Zealand's international greenhouse gas reporting).
 - b) **Calculation Tool/ User and systems interface:** An exemplar calculation system provided by Government (if agreed) that implements the agreed methodology and standards. This will include the ability for the sector to provide their own calculator tools, and/or interface with the exemplar (decentralised model but may be central calculation of emissions).

- c) **A centralised registry of participants and database of emissions reporting:** that enables registration, submission of emissions 'returns' by participants or their agents, with data stored and used for analytics.

Pathway options for introducing emissions reporting and pricing

13. The implementation of an agricultural emissions reporting and pricing system can be phased. These phases include developing voluntary reporting, designing a reporting system, and implementation of the eventual pricing system. This phasing and more detail on the components is outlined below in Diagram One.
14. To navigate this pathway, strategic and operational policy decisions from Ministers will be needed. The strategic decisions include decisions such as:
 - a) When to undertake the legislation processes?
 - b) What the eventual pricing mechanism will look like and pathway to get there?
 - c) If and when to start mandatory reporting ahead of pricing?
15. The operational policy decisions include aspects such as:
 - a) Activities and emissions that are covered such as inclusion or not of fertiliser.
 - b) Who are participants and how to allow agents to act on their behalf including ability to report collectively?
 - c) The scope of reporting requirements including mitigations and sequestration.
 - d) Which agencies are involved in implementation?
16. Some of these decisions will be sought in future policy briefs and a Cabinet paper seeking approval to the policy detail and are dependent upon the decision made in this brief. This will also be critical for developing the business case.
17. To implement the phases of the emission reporting and pricing system there are two options for Ministers on how to progress in the immediate term. This will influence the drafting of the Cabinet paper seeking agreement on the high-level reporting system.
18. One option is for Ministers to maintain a voluntary system until pricing decisions are made and legislate these together (Option One). If Ministers choose Option One, there is still opportunity to decide next year to introduce mandatory reporting ahead of pricing in the future if pricing decisions are delayed further.
19. The alternative option is that a phase of mandatory reporting could be fast-tracked and included ahead of pricing (linked to Option Two below).
20. Some components of the reporting system can be progressed in the immediate term, building on what we have learnt from the He Waka Eke Noa Partnership process so far. We expect that elements of each of these components will need to be adjusted to a greater or lesser extent depending on final decisions on agriculture pricing.

Option One: Introduce and maintain voluntary reporting system until decisions are made on pricing

21. Officials recommended option is to progressively develop necessary pieces of the reporting architecture outside of legislation, to the extent possible in absence of a decision of pricing. This would be following more of a guidelines / voluntary approach to introducing reporting. Reporting would be legislated and mandated as a bundle with the introduction of eventual pricing system.
22. Under this approach, a government commitment to regulated reporting and pricing would be made, with a series of interim steps in advance of final design. This would include aspects such as setting a standardised methodology for a farm level emissions calculator, and piloting voluntary reporting to test the system.
23. Initial work would focus on aspects that can be adapted once decisions on pricing are made. There is still a likelihood that the system will need to be adapted once decisions on pricing are made.
24. This approach would minimise the risk that the legislation and operating system may need to change to adapt to the pricing system. However, this provides less stringent approach and potentially weaker signal of intentions as the methodology is not legislated straight away.
25. Progression of the eventual legislative pathway would depend on when agreement can be reached on a pricing mechanism. Ministers could still look to introduce mandatory reporting ahead of the pricing system if it is significantly delayed, although as noted above this still risks a need to alter legislation once pricing is legislated.

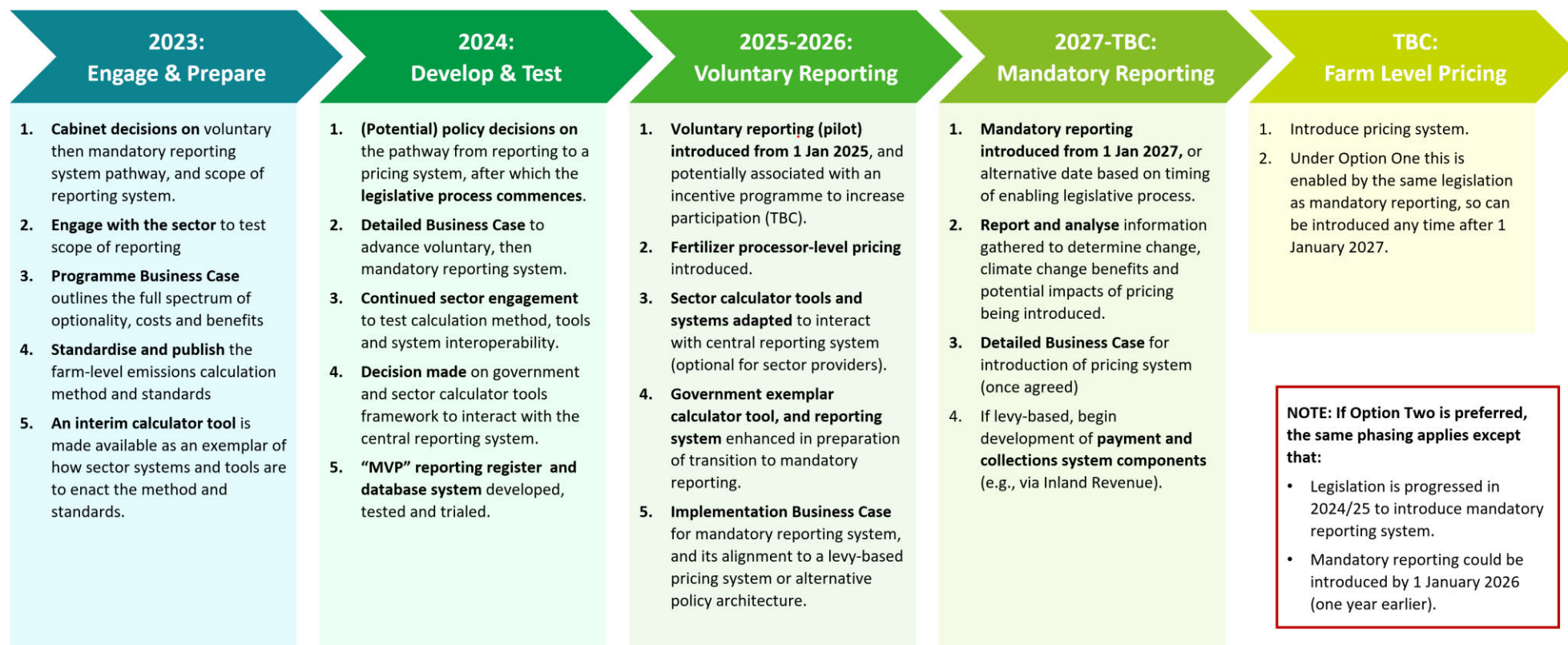
Option Two: Expedite legislation on mandatory reporting system ahead of pricing.

26. The alternative option is to progress mandatory reporting in advance of pricing decisions by progressing legislation following Cabinet decisions this year (most likely as a package with the nitrogen fertiliser levy discussed in B23-0349/BRF-3212).
27. Under this option, an adapted package of the reporting recommendations put forward in DEV-23-SUB-0052 would form the basis of a new cabinet paper and drafting instructions for Parliamentary Council Office. An operational model to support reporting requirements would be set up related to that system design.
28. In the case that decisions on pricing are made in 2024, the legislative process could be adapted to incorporate the full pricing system decisions.
29. If pricing decisions are not made in 2024, and if the final direction of pricing system does not align with this first tranche of legislation, the legislation and operating model would need to be superseded by a design appropriate for those policy decisions.
30. Mandatory reporting under this option could potentially start in 2026 with a phase of voluntary reporting prior to this. If subsequent Cabinet decisions land on a different pricing policy framework, the start date could be later as much of the existing design work would need to be redone.

31. Diagram One: Implementation Phases

Implementation Phases

Option One: Combined legislative process introducing mandatory reporting and pricing, with an interim voluntary reporting phase



Implications

On emissions reductions

32. Achieving emissions reductions will be challenging with a phased approach. While reporting will set the foundation for driving emissions changes on farm, relying solely on voluntary mechanisms in the short term to drive emissions reductions will impact the number of farms who choose to participate in the system.
33. With limited incentives to adopt new technologies, and the lack of cost-effective mitigations as many are still in the research stage or several years away from implementation, barriers remain to further emissions reductions without a mandatory pricing system to incentivise change.
34. In the absence of pricing of agricultural emissions, aligning existing agricultural programmes with a standardised calculation and/or reporting methodology has potential to build momentum in this space. Processor led initiatives, such as FAP+ and Synlait's 'Lead with Pride', and sector work on GHG farm emissions planning support farmers both directly and indirectly to measure and manage their emissions. However, these programmes on their own are unlikely to lead to long term emissions reductions and behaviour changes that meet our emissions targets.

For whenua Māori/iwi:

35. Whenua Māori submissions on agriculture emissions pricing have noted that the overall pricing system had a:
 - a) Lack of equitability for Māori and additional barriers to participation;
 - b) Disproportionate impact on Māori, particularly for Māori sheep and beef farmers;
 - c) Limited participation and engagement in the development of policy; and
 - d) Limited engagement and lack of integration of data specific to Māori in analysis and decisions to date.
36. In response to these concerns, policy decisions will be required to mitigate impacts for Whenua Māori and uphold the recognised principles of Te Tiriti. These could include:
 - a) Enabling collective reporting;
 - b) Enabling integration of whole farm planning (including water, biodiversity, etc); and
 - c) Participation within governance of the agricultural emissions system.
37. To better understand how we can support tangata whenua the system needs to:
 - a) Acknowledgement of Māori as kaitiaki;
 - b) Understand the specific impacts on Māori and Whenua Māori; and
 - c) Support Whenua Māori emissions mitigations and reductions including actions, technologies, and transitional support.

38. By maximising opportunities available to inform and engage, the system can enable Māori agri-businesses to respond and transition into a climate responsive system.

Cost of delivering the system

39. Not progressing directly with the proposed farm level emissions pricing system, and instead phasing the introduction with periods of voluntary and mandatory reporting would increase the overall cost of delivery of the system.
40. The overall costs will increase in relation to the number of stages and variation between these stages (for example, from voluntary to mandatory reporting to pricing). This is due to the significant extension of timeframes for programme delivery overall. There is also the cost of adjusting components of the system as policy decisions are made and potentially change the scope and direction of the reporting and pricing systems.
41. Under both options – the key driver of whole-of-life-costs will be around the timing of when (or if) we move to pricing. Disconnecting reporting from pricing is likely to result in an increase in overall programme costs, mainly due to the requirements to develop more complex government emissions registry information which would otherwise may have been completed by Inland Revenue.
42. Further, both options reflect a significant extension of timelines for programme delivery, which may result in:
- a) Increased likelihood of technical debt, requiring re-work as policy evolves;
 - b) Increased overhead costs associated with a longer delivery period; and
 - c) Increased cost escalation over time – reflecting labour cost inflation factors and availability of technical resources.

Estimated future costs of the reporting system

43. At a high-level, the future costs, are likely to be as follows:
- a) Activities in the 2023/24 year will be consistent with and fall within our Budget 2023 bid; and
 - b) If there is a divergence between the voluntary and/or mandatory and/or pricing system requirements, this could result in costs exceeding current estimates. We would outline this in Programme Business Case.

Next steps

44. Once a decision has been made by Ministers on a preferred option, officials will provide more detail on the pathway for implementation, and additional policy decisions needed.

45. Officials also understand Ministers would like further information regarding what would be required to support Cabinet decisions before the upcoming Field Days on the next steps for agricultural emissions pricing.
46. Officials could draft a Cabinet paper seeking agreement to discuss the following four elements with the Food and Fibre Leaders at Field Days:
 - a) Farm level emissions reporting;
 - b) Pricing fertiliser emissions via a processor-level levy;
 - c) Enabling sequestration via an innovation pathway; and
 - d) Deferring the NZ ETS animals-farmer reporting requirements via Order in Council.

Recommendations

47. It is recommended that you:

a) EITHER

Direct officials to draft Cabinet paper based on progressing the reporting system outside of legislation until decisions made on pricing system, with option to introduce mandatory reporting if pricing decisions delayed (Option One).

YES / NO / NOTED

OR

Direct officials to draft Cabinet paper based on seeking instructions to draft legislation for mandatory farm level reporting ahead of the pricing mechanism (Option Two).

YES / NO / NOTED

b) **Note** the development of a Programme Business Case in conjunction with the August Cabinet Paper that will seek decisions on initial funding approval.

YES / NO / NOTED

c) **Agree** to forward this briefing to the Prime Minister.

YES / NO / NOTED

9(2)(a)



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Minister of Agriculture

/ / 2023

Hon James Shaw
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/ / 2023

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Appendix One: Current emissions reporting activity

1. In the current system proposed by officials, as outline in the April draft cabinet paper (DEV-23-SUB-0052), there are tight linkages between the proposed farm level emissions calculation and reporting system, the levy policy framework, and the proposed operating model and agency roles.
2. The focus of the framework was to implement a low levy rate and mitigation incentives to drive emissions reduction. Table 1 below outlines of where the draft Cabinet paper landed for components related to reporting. These components were landed on to align with the pricing system as designed. While some aspects may still be relevant and appropriate, it is expected that these would need to be reviewed and adjusted depending on the eventual agriculture pricing system.
3. The Agricultural Emissions Pricing Implementation Unit (AEPIU) has been developing a prototype emissions calculation method and calculation system based on the National Inventory methodology but adapted to the farm inputs and definitions used by accountants to complete stock reconciliations within the tax system. The prototype has been completed for beef cattle and is now working through sheep and dairy.
4. The next step is to test its scientific validity, work through calculation options, and identify data standardization and system integration opportunities. Due to these departures from the existing national inventory model and the critical role of the methodology within the emissions levy system, we have been planning to obtain a high level of assurance. To do this, the next step is to form a working group comprised of scientific and technical expertise across the sector to test its scientific validity, work through calculation options, and identify data standardization and system integration opportunities.
5. This prototype system will be capable of assessing and reporting emissions across the sector, for many farm types and farm systems. In contrast, many of the current sector calculators are for only one part of the sector and for limited types and management approaches.
6. The AEPIU are developing a programme level plan and business case, with sub-level plans being developed as part of developing future path scenarios.

Table. 1: Landing zone of the April Cabinet paper on the key aspects of implementation

Reporting requirements	April Cabinet paper – key aspects
Objectives	<p>The overall purpose of the proposed pricing system is to achieve emissions reductions in line with New Zealand's domestic and international climate change targets and emissions budgets.</p> <p>The proposed framework is designed to have low levy rates and mitigation incentives to drive emissions reduction. This system has tight linkages between the proposed farm level emissions reporting system, the levy policy framework, and the proposed operating model and agency roles.</p>
Point of obligation	<p>GST-registered business owner responsible for emissions pricing scheme regardless of land ownership</p> <p>Lessees can access sequestration on their leased land with permission.</p>
Implementation Agencies	<p>MPI, MfE and Inland Revenue would have specified functions, roles and responsibilities within the systems governance and/or operational functions.</p>
Thresholds	<p>Farming operations having:</p> <ul style="list-style-type: none"> • 550 stock units (inclusive of sheep, cattle and deer calculated on a weighted annual average basis); or • 50 dairy cattle; or • Applying more than 40 tonnes of nitrogen through fertiliser annually. • These are estimated to cover 23,000 farmers and growers responsible for about 96% of agriculture emissions.
Delegation	<p>The proposal allowed for the delegation of reporting and payment functions to an agent, however, the business owners still maintain responsible for reporting and levy obligations.</p> <p>Delegating reporting and payment functions to an agent increases assurance of accuracy, as farmers and growers already have the data necessary for reporting.</p>
Collectives	<p>Collective registration, reporting and payment would be enabled from 2025.</p>
Reporting requirements	<p>Reporting on an annual basis. As farmers have different financial year ends, the paper proposed flexible year reporting to allow participants to align the emissions reporting year to the farm end of financial year and other farm reporting timings.</p> <p>Annual livestock reconciliations are used by farmers and their accountants to calculate income and company tax. These reconciliations would form the basis on the emissions calculation method for livestock.</p> <p>Receipts from fertiliser companies would form the basis for calculating emissions from nitrogen fertiliser. This means, for a simple emissions reporting method, relatively little additional information needs to be supplied by farmers and this information is already subject to record keeping requirements under the Tax Administration Act and professional standards on the part of accountants.</p> <p>Farmers and growers who meet the threshold for participation in the system will need to register providing the following core information:</p> <ul style="list-style-type: none"> • GST number;

	<ul style="list-style-type: none">• NZ Business number;• Official business name; and• Type of business entity.
Compliance, Audit and Verification, Monitoring and Enforcement	<p>A cost-effective compliance and enforcement regime modelled after the NZ ETS, Synthetic GHG levy and the tax system was proposed.</p> <ul style="list-style-type: none">• A self-assessment approach where levy payers are responsible for complying with their obligations and are assumed to be in compliance until evidence emerges to the contrary;• A combination of government and third-party verification processes;• Criminal offences for serious non-compliance and infringement offences for minor non-compliance;• Penalties to deter non-compliance with the core obligations or reporting and payment;• Processes for amending returns and appealing decisions; and• Proposed that MPI be responsible for ensuring levy payers comply with their obligations and take any appropriate enforcement action.

Appendix Two: Current landscape for on farm emissions reporting

7. There is a variety of ways farmers are currently able to calculate their emissions. The Know Your Number programme has been implemented by the He Waka Eke Noa Partnership to help farmers understand and manage their greenhouse gas numbers. Under this programme eleven GHG calculator tools were endorsed as meeting the Partnership minimum requirements ¹. The criteria for assessment of the calculators are as follows:
 - 7.1 Use of emission factors sourced from the National Inventory, or another valid source (e.g., international default values).
 - 7.2 Minimum set of required inputs:
 - 7.2.1 Livestock numbers (by species) either using monthly values or for simple tools a weighted annual average; and
 - 7.2.2 Amount of synthetic nitrogen fertiliser.
 - 7.3 Have a logical and internally consistent model structure and set of equations which reference appropriate sources of key parameters, algorithms, and data inputs.
 - 7.4 Use peer-reviewed research to accompany any methods for mitigation or sequestration of emissions. For mitigations and sequestration, the peer-reviewed research must be relevant to New Zealand farming systems.
8. A report found that different models would sometimes result in different emissions reported due to differences in methodology.
9. The He Waka Eke Noa Partnership and some sector actors have been working on farm reporting and mitigation action based on farm reporting and planning.
10. Many of the calculators have been created for specific sectors to reflect the differences in profiles of emissions for each sector. There are trade-offs in the level of accuracy that can be achieved in a calculator from being sector specific relative to providing one tool that can work for a broad range of enterprises.
11. The Partnership's latest progress report (March 2023) notes 81% of farms held a documented annual total of on-farm greenhouse gas emissions as of 31st December 2022, short of the 100% legislated target. Difficulties with extension service delivery,

¹ Reports on the calculator assessments lie on the He Waka Eke Noa website: e.g., <https://hewakaekenoa.nz/wp-content/uploads/2022/09/Updated-Review-of-Models-Calculating-Farm-Level-GHG-Emissions-Sep-2022.pdf>

adverse weather events and reliance on voluntary mechanisms have hindered the achievement of the 100% milestone.

12. Processors, in responding to market demands, have the potential to play a significant role in incentivizing and supporting farmers to reduce emissions.
 - 12.1 Fonterra farmers have been calculating emissions profiles for their farms since 2020 as part of the Farm Environment Report. Fonterra also reports on Scope Three (farm level) emissions as part of their Environmental Data reporting. This is calculated based on total company milk production, rather than consolidating individual farm level data.
 - 12.2 Synlait's 'Lead with Pride' scheme is a voluntary scheme that pays a premium for carrying out particular actions across a range of social and environmental areas. Farmers are incentivised to introduce multiple actions to reduce emissions. This is primarily focused on achieving improvements in emissions intensity.
 - 12.3 In the red meat sector, the New Zealand Farm Assurance Programme (NZFAP) includes emissions reporting and management in the FAP+ system, which is the higher level of assurance. This aligns with some individual company actions such as Silver Fern Farms introduction of net zero beef. Given many participants in the red meat supply chain have little direct contact with processor there is less of a direct market push for reporting and action as there is in the dairy sector.