SUBMISSION ON PRICING AGRICULTURAL EMISSIONS

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Submitter legal name: **Morikaunui Incorporation**

Other identifier Morikau Station

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Our land is farmed on a our own account, as a Sheep & Beef operaton.

The Māori freehold land we own totals 4,576 ha and lease totals 350 ha.

We own no General title land and lease 33 ha.

There is approx 2,500 effective ha carrying around 28,000 Stock units with 1,800 ha of regenerating native bush.

We also have 53 ha of Pre-1990 exotic forest & 44 ha of Post-1989 exotic forest.

About Morikau Station

Situated around 75km from Whanganui on the Whanganui River Road, Morikau Station has been farmed in its current configuration (of owned land) since 1910, the oldest such Maori multiple ownership farm in NZ.

Cost pressures and access to suitably experienced staff are problematic for us now. The imposition of any additional costs is likely to imperial the continued existence of Morikau Station as a viable farming business.

On behalf of our more than 7,500 shareholders, we ask that this Submission be carefully considered in the interests of rural NZ and remote communities in particular.

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About this Submission

There are a number of unique factors that relate to those of us making this Submission, not the least of which is that we all have connections with Māori freehold land, much of it located in the far corners of NZ.

We acknowledge that GHG emissions are an issue in relation to global climate change, needing a response. However, the fundamental imperative is for it to be proportionate if we are to avoid significant societal "collateral damage" at a time when urban areas are already under immence infrastructural pressure!

While we can implement strategies to deal with water quality and other environmental issues and benefit from the resulting improvements, as a 0.17% contributor to global GHG emissions, we can make no difference whatsoever, either for ourselves or anyone else.

If NZ's GHG emissions response was taken to its ultimate principled position, trading with major polluters would cease or be severely curtailed! What stands in the way of such a position is that our three largest trading partners (Australia, China and the USA) are collectively responsible for 250 times NZ's agricultural emissions from their annual coal production alone. This is the context against which NZ's proportionate response needs to be measured.

Looking at the goal of this proposal, we are not convinced that penalising the most emissions efficient producers of dairy and red meat products on the planet is the best way to contribute to reducing GHG emissions. In fact we show in this Submission that our existence in the global marketplace is responsible for reducing GHG emissions. This especially relevant in light of Article 2 - Object in the UNFCCC, (also re-stated in the CCRA 2002), referencing the need to not put food production at risk. This will be examined in detail further on.

Given that we know the concerns other submitters will be voicing, we are going include, alongside our specific Maori concerns, some alternative suggestions and rationale.

About Māori farming

While there are a number of multiple ownership corporate Māori farms (through Māori incorporations or trusts), individual Māori and whānau are also involved in farming on both Māori freehold land ("MFL") as well as General land. Some of the latter was compulsory changed (with 4 or less owners) from MFL after the Māori Affairs Amendment Act 1967. [This was rescinded in 1974 but many owners never converted back to MFL.]

There is approximately 1.5m hectares of MFL of which under 46k ha is Class I or II, 758k ha of Classes III to VI and 697k ha Classes VII and VIII, best described as challenging through to unusable. (See Fig. (i) Appendix I.)

Based on Statistics NZ figures (see Fig. (ii)), in 2018 there was 220k ha of pastoral or cropping MFL being farmed by Māori Authorities. This equates to 2.5% of total farmed land and 2.3% of Stock units. [Neither individual Māori farming nor MFL leased to either Māori and non-Māori farmers is reported.]

The Treaty and its obligation

Article 2 of Te Triti is unambiguous in protecting Māori freehold land in particular by way of the provision including the words "*full exclusive and undisturbed possession of their Lands*".
The fundamental kaupapa of Te Ture Whenua Māori Act 1993 was to prevent any further alienation of Māori freehold land. This has already been ignored by the Crown in its introduction of Pre-1990 forested land status in 2008.
Any restriction that limits MFL owners from making decisions about the use of their land, now or into the future, is by definition alienation.
While there is no reason to think that Māori landowners would not to open to case by case negotiations with the Crown in relation to any climate change related proposal, that has never been proffered nor has any organisation sought or been given a mandate to enter into any agreement with the Crown on their behalf.

Submission I
We submit that in the case of Māori freehold land ("MFL") the current proposals for charging for GHG emissions are a breach of Article 2 of Te Triti and of the kaupapa of Te Ture Whenua Māori Act 1993 ("TTWMA") in relation to alienation, (whereby owners would be limited in relation to the use of their land). We therefore seek the removal of MFL farmed by a Maori Authority from the proposed charging regime. General land farmed in conjunction with MFL by a Maori Authority should also be excluded. There should be an option, at their sole discretion and in compliance with the provisions of TTWMA, for owners to approve limiting their future land-use options, by entering into an agreement with the Crown that is mutually beneficial. There should be no complusion.

The anatomy of a global emissions reduction strategy

Given the urgency and importance of reducing/minimising GHG emissions, a reasoned approach would suggest that any action or activity that is undertaken by an IPCC agreement signatory to reduce/minimise emissions reductions would be embraced. At the very least, one would have been confident that a country contributing to minimising GHG emissions would be making this know at every possible level.
For some inexplicable reason, while NZ agriculture's contribution to the GHG emissions debate from low intensity dairy and red meat products has been alluded to, the full benefits seem never to have been analysed.
<u>How is NZ contributing to GHG emissions minimisation?</u>
Based on a reports from Dairyglogal.net in February 2021 and Beef and Lamb released in November 2022, NZ is shown to have the lowest dairy and red meat GHG emissions intensity in the world. In an analysis (See Appendix II, fig.(iii) of the published information, it can be demonstrated that NZ's exports of dairy and red meat products deliver in excess of 30 *(corrected from 10)* million tonne CO_2e of global emissions saving annually.
This means that NZ's greatest contribution to reducing GHG emissions is to increase our exports of low intensity dairy and red meat products. (See Fig. iv in Appendix II for beef example for lowering product intensity.)

Submission II

(i) That the analysis referred to in the previous paragraph be taken into consideration in determining NZ Agriculture's contribution to global GHG emissions. (ii) That the narrative be revised accordingly, pointing out to our international trading partners that our low intensity dairy and red meat products are already major contributors to reduced GHG emissions. (iii) That more work be undertaken to incentivise lower product intensity to build on the world-beating story NZ already has in this space.

Carbon neutral agriculture

In spite of the PM telling US cable show host Stephen Colbert that the NZ beef she took him as a gift earlier in 2022 was Carbon Neutral, this is not possible under current NZ legislation. Naturally occuring methane emissions from the digestive systems of ruminants (mainly sheep and cattle in NZ) can not be mitigated by surrendering carbon credits from forestry sequestration.

This anomoly puts NZ farmers at a serious disadvantage compared with their competitors around the world who do have a mitigation option, should they wish the benefit from it.

The issue we have in NZ is that even though the government has accepted the He Waka Eke Noa argument that methane be considered as a short term gas, considered separately from long term nitrous oxide and carbon dioxide, the mitigation calculations are based on GWP^{100} when they should be based on GWP^{20} for methane. While the factor rises to 84 from 25 (*ie 84 times the global warming potential of CO_2*) the forestry required for a 10% reduction is under 3 ha per 100 ha farmed. (See calculation below.) It should be noted that after 20 years, this sequestered carbon provides ongoing mitigation for emissions over the next 20 years.

Stocking mix		**CH_4/KgDM**			
Sheep	70%	21.0	CH_4 GWP^{20}	84	
Cattle	30%	21.6			
		21.2			
Per hectare		Dry matter intake (DMI/ha)		5000	
Methane emissions:	8.9	mt/ha	Target decrease	10%	
Mitigation req'd	0.89	mt pa	Sequester rate	30	mt/ha pa

This would require approx 3.0 ha of trees per 100 ha farmed.

This figure would be just over 20 ha per 100 ha farmed for regenerating natives, sequestering at a rate of 4.4 mt /ha pa.

Submission III

That the question of methane mitigation be considered as a matter of urgency to give farmers the option of having their carbon footprint characterised at zero, in the absence of the digestive systems of ruminants ceasing to emit methane. In addition, consideration needs to be given to recognising the sequestration from regenerating natives, especially where feral animal access has been curtailed or eliminated through fencing and/or poisoning.

The economic consequences of imposing extra costs on agriculture

NZ farming is under more cost pressure than probably at any time in its history. To date that has been matched by near record high commodity prices but that seems about to change. The factors causing this pressure include the residual affects of COVID and the Ukrainian war. The Chinese insistence that it can beat COVID with continuing lock-downs is causing huge disruptions in our biggest dairy and sheep meat market. The resulting unrest in the country is not helping what is already a dire situation.

On the domestic front, no-one seems to have understood the significance of overseas visitors to staffing key sectors of the economy so we have huge labour shortages, not to mention a resurgence of COVID cases, causing carnage. This includes the meat processors, with reports (Nov 15, 2022) of stock having to be returned to farms because of a lack of staff to process it.

We then have the spectre of climate change and its weather impacts, from devastating out-of-season frosts wiping out next seasons kiwifruit in some areas to serious rain events causing floods, fences losses from slips and bridge and crossing washouts. Not to mention impacting the performance of the stock.

Among the headwinds going forward are our energy transitioning requirements by 2050 with nearly 65% of current energy provided by fossil fuels (petrol, diesel, fuel oil, coal and gas) with just 24% from electricity.

Not only will 30 years be insufficient time to increase electricity generation capacity, transmission and distribution make it highly unlikely to be achievable. Even if it is attempted, the cost of electricity will be getting close, if not to, $1 per Kwhr. Not only is that unaffordable for households, it kills any economic justification for Electric Vehicles, even before Road User charges are levied (for ACC, traffic policing and the roading infrastructure), a reality that is quietly ignored.

Many of these issues are going to hit rural NZ very hard with many communities simply becoming unviable. Urban areas can't even provide the necessary affordable housing for their current populations, let along cater for the inevitable "collateral damage" accelerated by this ill-conceived proposal to charge farmers for the biogenic emissions from their farmed animals.

Those likely to be most at risk from this proposal are going to be rural Māori, many of whom are struggling already. If one looks at the cars in many of these communities, the chances are that they have been purchased in the $2,000 to $5,000 price range. An EV battery starts at $8 to $10,000.

The economic consequences of imposing extra costs on agriculture (Cont'd)

At the macro level, NZ's prosperity has come from its pastoral farming.
Notwithstanding the earlier comments about NZ contribution to GHG emissions minimisation, there is no way of significant methane emissions reductions without reducing the quantity of pasture dry matter consumed by sheep and cattle. Dry matter consumption equals weight gain equals export revenue.
This proposal will not only impact farmers, it will have significant consequences on the whole economy, for no reason other than being seen to be "taking the lead" based on a flawed narrative about the role on NZ biogenic emissions on the planet. To repeat an earlier statement, every1 kg of GHG emissions producing our current mix and dairy and red meat products benefits the planet by 1.52kg.

Submission IV

Finally, we respectively submit that the proposal to charge for biogenic emissions be abandoned, with a significant re-think as to how we can best contribute in the meaningful way to reducing GHG emissions.

Appendix I

Fig. (i) **Classes of Māori freeehold land**

https://mfl.zerocarbon.co.nz/?menu=Analyses&start=on

Analysis of Māori freehold land by class

(from the PWC report February 2013, based on information provided by MPI)

Current status	Tier 1	Tier 2	Tier 3	CLASS MIX
Land classes ?				
Class I & II	45,452			3.0%
Class III & IV	181,809	60,603		16.2%
Class VI	75,754	439,370		34.3%
Class VII		106,052	363,620	31.3%
Class VIII			227,261	15.2%
				100.0%
Selected	303,015	606,025	590,881	1,499,921
Classes 1 - 6 - performing well		303,015	20.2%	20.2%
Classes 3 - 6 - under-performing		606,025	40.4%	60.6%
Classes 7 & 8 - little potential		590,881	39.4%	100.0%

Fig. (ii) **Māori versus Non-Māori farming**

https://maori.nzagri.com/?start=Summary

SUMMARY OF AGRICULTURAL 2018 GHG EMISSIONS

Farming enterprises	Stock units 000	Land 000 ha	Methane Gg CO_2e	N_2O Gg CO_2e	Fertiliser CO_2e	CO_2e Gg
Māori*	1978.8	220.2	652	101	45	798
Non-Māori	84542.6	8540.3	28662	4943	3512	37117
ALL	86521.4	8760.5	29314	5044	3557	37915
Māori*		Kg of CO_2e	/hectare		3626 kg	
			Implied DMI		5588 kgDM/ha	
Contribution						
Māori*	2.3%	2.5%	2.2%	2.0%	1.3%	2.1%
Non-Māori	97.7%	97.5%	97.8%	98.0%	98.7%	97.9%
ALL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Non-Māori	97.7%	97.5%	97.8%	98.0%	98.7%	97.9%
ALL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Appendix II

Fig. (iii) **Global GHG emissions benefits by product**

https://benefit.nzagri.com/?menu=Summary

Summary of emissions benefits from NZ exports

See detailed analyses

(Derived from the analyses above)			Factors	Close	View
Dairy	10.3	m mt of CO_2e	0.63	◉ <<	○ >>
Lamb	12.6	m mt of CO_2e	2.68	◉ <<	○ >>
Beef	7.2	m mt of CO_2e	0.75	◉ <<	○ >>
	30.1	m mt of CO_2e	1.52	*(weighted)*	

Conclusion

The above analysis shows that for every 1kg of GHG emissions attributable to NZ agriculture, global emissions benefit by 1.52 kg from countries importing product from NZ rather than domestic production or imports from another source.

Contrary to the long espoused narrative that NZ's pastoral farming is a major contributor to the planet's GHG emissions, the opposite is the case (*unless this is a Vegan agenda masquerading as GHG emissions concerns)*!

The presence of NZ in the global marketplace, supplying its low intensity dairy, lamb and beef products, is responsible for a saving of 30.1m tonnes per year in emissions compared with others supplying those markets. This equates to 76.0% of total NZ On-farm GHG emissions.

Fig. (iv) **Better pastures: Intensity down, Gross CH_4 up.**

https://intensity.nzagri.com/

KgLw Start	Lwg pd (max 2kg)	End KgLw	= KgCw	Days	Tot MjME	MjME pd	KgDM pd	Total Kg CH_4	Lwg/ha pa	Kg CO_2e = KgCw
Beef regime 1		**Assume:** Yield	52%	MjME	8.5	/kgDM	DMI pa/ha	4000		
200	0.90	600	312	444	39724	89	10.5	100.9	342	8.09
Beef regime 2		**Assume:** Yield	52%	MjME	11.0	/kgDM	DMI pa/ha	6000		
200	1.75	600	312	229	30552	134	12.2	60.0	864	4.81
Annualised CH4 emissions are 82.9 & 95.8kg (2073 & 2395kg CO2e) respectively.										
Regime 2 - methane emissions intensity benefit (per KgCw) = 40.6%										
Regime 2 - annualised production benefits (Lwg/ha pa) = 252.4%										
Regime 2 MjME benefit = 194.1%								Annual CH_4/ha, (based on DMI) = 150.0%		