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Interim Climate Change Committee

BERL ref #4042

GHG costs and benefits on different land classes

– supplementary for Māori and Iwi land

prepared by Dr Ganesh Nana, BERL Chief Economist

FOMA and BERL have been provided with a draft of the paper by AgFirst Manawatū-Whanganui Ltd¹ outlining impacts on farm profitability of several emission mitigation scenarios across a range of land class types. The ICCC has requested we consider this draft and comment on whether “the costs and benefits of the options differ fundamentally for land in Māori and Iwi ownership and why?”

In the first instance, it is important to note that there is a wide range in the classes of land owned by Māori and Iwi. Additionally, these land holdings are of varying parcel sizes, sometimes land-locked with limited transport and/or water access, with varying degrees of management capabilities and governance structures.

Example farm systems

The analysis looked at six example farm systems

- Canterbury dairy farm (239 ha effective), predominantly LUC 3
- Bay of Plenty dairy farm (153 ha effective), LUC 2 and 3
- Taranaki dairy farm (170 ha effective), predominantly LUC 1
- East Coast sheep and beef farm (1,941 ha effective), predominantly LUC 7
- Central North Island sheep and beef farm (1,152 ha effective), predominantly LUC 6
- Otago sheep, beef and deer farm (6,800 ha effective), predominantly LUC 6 and 7

The relevance of these example systems to existing Māori and Iwi land holdings is difficult to generalise. There will undoubtedly be some Māori and Iwi farms that may be similar in some characteristics to these example systems.

¹ Draft Report – GHG costs and benefits on different land classes, 29 March 2019, Erica van Reenen, AgFirst Manawatū-Whanganui Ltd.

However, **at the headline level these examples are unlikely to be widely applicable to Māori and Iwi land.** In particular, nearly 25 per cent (or 269,000 ha) of Māori land is situated in Tairāwhiti, comprising approximately 5,350 separate titles². Consequently, these are of an average size of 50 ha. Clearly, the example East Coast sheep and beef farm with 1,941 ha effective is not that relevant to many of these holdings.

Similarly, the 412,900 ha of Māori land in Aotea over 4,075 titles is of an average size of 101 ha. Again, the Central North Island sheep and beef farm with 1,152 ha effective will not be able to reflect many of the systems in play for the average Māori land holding in the area.

Nevertheless, it is also important not to overplay the importance of the ‘average’. There will, of course, be some Māori land holdings that are of similar characteristics as those of the example farm systems listed.

Mitigation options

The analysis explored the impact of seven mitigation options

- Reduce or remove nitrogen fertiliser
- Lower nitrogen content feed
- Reduce stocking rate: maintain production
- Reduce stocking rate: decrease production
- Convert dairy to beef
- Retire land to forestry/native
- Increase sheep:cattle ratio

Given the above observations around average parcel sizes, emission mitigation that included horticulture options for land use would have been a useful addition to the study, in terms of relevance for Māori.

However, as noted in the draft “In general, as the land type/class became more limiting, the Effective Farm Surplus per ha (EFS/ha) declined both within and between land use. This could suggest that any additional costs imposed on the systems will have a greater influence on land which is ‘harder’ than ‘easier’ land.”

In other words, all else equal, the ‘harder’ the land class the more impact on EFS/ha of an emissions mitigation option. For Maori, this finding is particularly relevant given the relative concentration of Māori and Iwi land holdings in LUC 6 and above.

² Data from Māori Land Court, as reported in Education, Training and Extension Services for Māori Land Owners, FOMA and BERL for ICCC, Poutū-te-rangi 2019.

Interestingly, it is noted that the free allocation methodology “can be used to influence this (i.e. the impact on harder land), as shown by the fact that the majority of sheep and beef scenarios (on harder land types than dairy), achieved a positive benefit to EFS/ha”.

The relevance of this finding to Māori will depend fundamentally on the nature and precise design of the free allocation method.

Summary

It is noted that the emission mitigation options “currently available to New Zealand farmers are limited to farm system changes and land use change”. Consequently, the ability to implement land use change and/or farm system changes drives much of the impact of emission mitigation options.

We note

- Māori land owners have less ability to change land use given the nature of their land holdings (small, fractured, and lower quality), than those reflected in this study.
- Māori land owners have less ability to change farm systems given the combination of management capabilities and diverse governance arrangements, than those reflected in this study.

The above are admittedly generalised statements, and we acknowledge that there will be Māori farms more than able and capable to respond to these emission mitigation options. However, overall these will be the exception.

In addition, challenges around access to finance to develop Māori land is widely known. These challenges will be keenly felt by Māori land owners as they research and assess a variety of options that may be open to them, and then to decide, plan, develop, and implement the chosen options.

These observations confirm to us that the use of these example farms systems would need to be modified considerably to enable information relevant to a wider range of Māori land owners. In particular, including in these farm models specific characteristics of Māori land (e.g. constraints on land size, management, governance, finance) may assist.

Consequently, these observations indicate that advice around the form of policy interventions (whether free allocation method or other) should seek additional information on the impact of emission mitigation options on Māori and Iwi land. **If not, policy interventions that are designed to be relevant for a range of example farms, risk impacting on Māori in an unforeseen (and unintended) manner.**