World Academy of Science, Engineering and Technology International Journal of Agricultural and Biosystems Engineering Vol:15, No:12, 2021

Maori Primary Industries Responses to Climate Change and Freshwater Policy Reforms in Aotearoa New Zealand

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Abstract: The introduction of the Climate Change Response (Zero Carbon) Amendment Act (2019) and the National Policy Statement for Freshwater Management (2020) both contain underpinning statements that refer to the principles of the Treaty of Waitangi and cultural concepts of stewardship and environmental protection. Maori interests in New Zealand's agricultural, forestry, fishing and horticultural sectors are significant. The organizations that manage these investments do so on behalf of extended family groups that hold inherited interests based on genealogical connections (whakapapa) to particular tribal units (iwi and hapu) and areas of land (whenua) and freshwater bodies (wai). This paper draws on the findings of current research programmes funded by the New Zealand Agricultural Greenhouse Gas Research Centre (NZAGRC) and the Our Land & Water National Science Challenge (OLW NSC) to understand the impact of cultural knowledge and imperatives on agricultural GHG and freshwater mitigation and land-use change decisions. In particular, the research outlines mitigation and land-use change scenario decision support frameworks that model changes in emissions profiles (reductions in biogenic methane, nitrous oxide and nutrient emissions to freshwater) of agricultural and forestry production systems along with impacts on key economic indicators and socio-cultural factors. The paper also assesses the effectiveness of newly introduced partnership arrangements between Maori groups/organizations and key government agencies on policy co-design and implementation, and in particular, decisions to adopt mitigation practices and to diversify land use.

Keywords: co-design and implementation of environmental policy, indigenous environmental knowledge, Māori land tenure and agribusiness, mitigation and land use change decision support frameworks

Conference Title: ICAES 2021: International Conference on Agriculture and Environmental Systems

Conference Location : Sydney, Australia **Conference Dates :** December 02-03, 2021