

LURNZ

A dynamic partial equilibrium model that simulates changes in private rural land use over time and space. LURNZ focuses on four key land uses – dairy, sheep/beef, forestry and scrub.

Issues addressed

- What are the potential impacts of policies designed to alter land-use decisions? In particular the NZETS?
 - How is land use likely to change in New Zealand under different scenarios of price, policy and (potentially) yield?
 - Where will these changes be likely to occur?
 - What would the (production and GHG) impacts of these changes be?
 - How will these changes affect future water quality (linked to CLUES)?
 - How might land use, food production, policy costs and GHG emissions be distributed regionally / nationally / by sector / between Maori and freehold land?
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Key Inputs

- Forecasts of export commodity prices and interest rates
- Carbon price
- Maps of current land use, land quality, land ownership, district boundaries, conservation land
- Indicators of land suitability for different land uses
- Carbon Sequestration tables

Key Outputs

- Forecasted trends in land-use change
 - Maps of land-use, land-use change, grazing intensity, and GHG emissions (incl. GIS compatible)
 - Summary tables by territorial authority and regional council
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Scope and Extent

- Model simulates from 2008 with an annual time step. 1996, 2002-2008 maps exist.
- Standard resolution is 25 hectares (1 grid square = 500 x 500m). Finer 1 hectare resolution has been previously used (1 grid square = 100 x 100m).
- The whole country (except Stewart Island and the Chatham Islands) is modeled.