



Matrix of Good Management



The Matrix of Good Management: Co-developed science for policy

Dr Melissa Robson – AgResearch/Environment Canterbury

Ken Taylor – Environment Canterbury

LUWQ 2015, Vienna

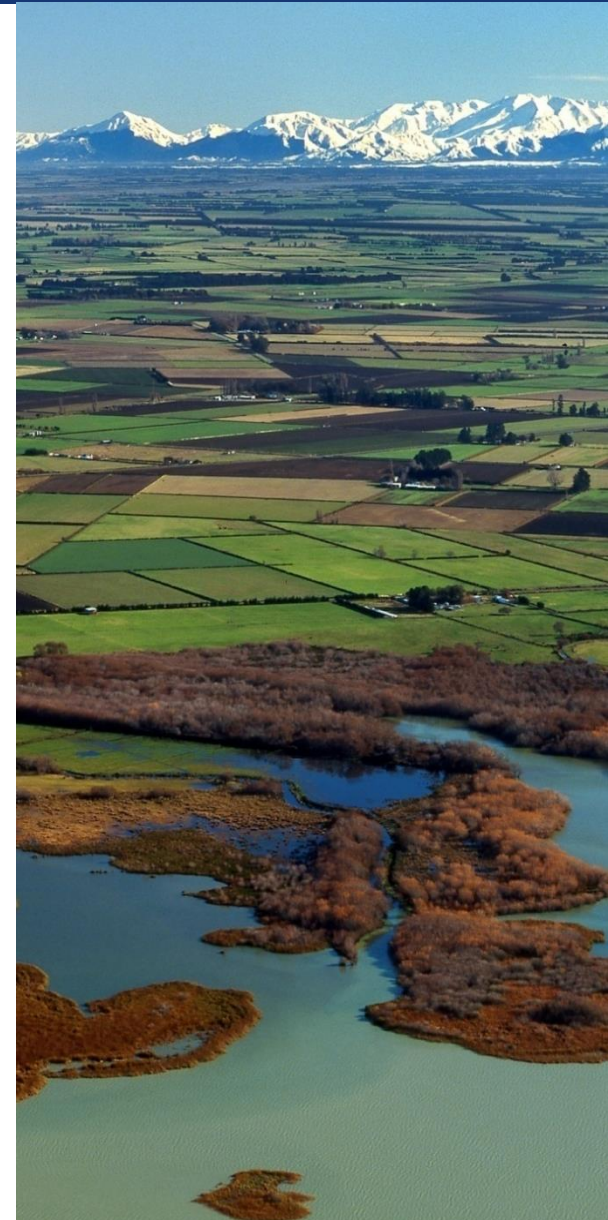
Science for impact: Talk outline

- » Why - Outline the context for the MGM
- » What - Outline what was done
- » How and with whom - Outline who were the project partners and why a co-development approach was taken

- » A few results
- » Benefits and challenges of co-development in developing science for policy

A common dilemma – “Why”

- » New Zealand seeks to both increase economic growth by increasing agricultural production and improve environmental performance.
- » Debate and conflict around the use of water resources (quality and quantity).
- » Desire for farmers to be operating at ‘good management’, but no clear vision of what this means for and between industries or what ‘impact’ good management has



Part of the response: The MGM project – “What”



- » Context of Canterbury Land and Water Regional Plan
- » MGM: Quantifying the typical N and P losses from Canterbury farms managed to agricultural industry-agreed good-management practices (GMP) for use at catchment and farm scale for modelling and regulation
- » Three outputs:
 - » Agricultural-industry-agreed GMP
 - » Matrix of estimate N and P losses for range of farms, soils and climates @ GMP
 - » Methodology for estimating GMP N & P losses for specific farms using OVERSEER™ farm nutrient budgets

The project partners – “with whom”



A co-development approach? - “How”

Co-design and co-production with the project partners

Why did we choose a co-development approach?

- » Recognised value of collaboration in management of land and water
- » Neither a right answer nor a recipe book
- » It isn't just a science or a policy challenge
- » Emergent technical, policy and political challenges
- » Increase credibility, relevance and legitimacy* of the information produced
- » Agreement, trust and ownership allowing focus on the values discussion, not the underpinning information

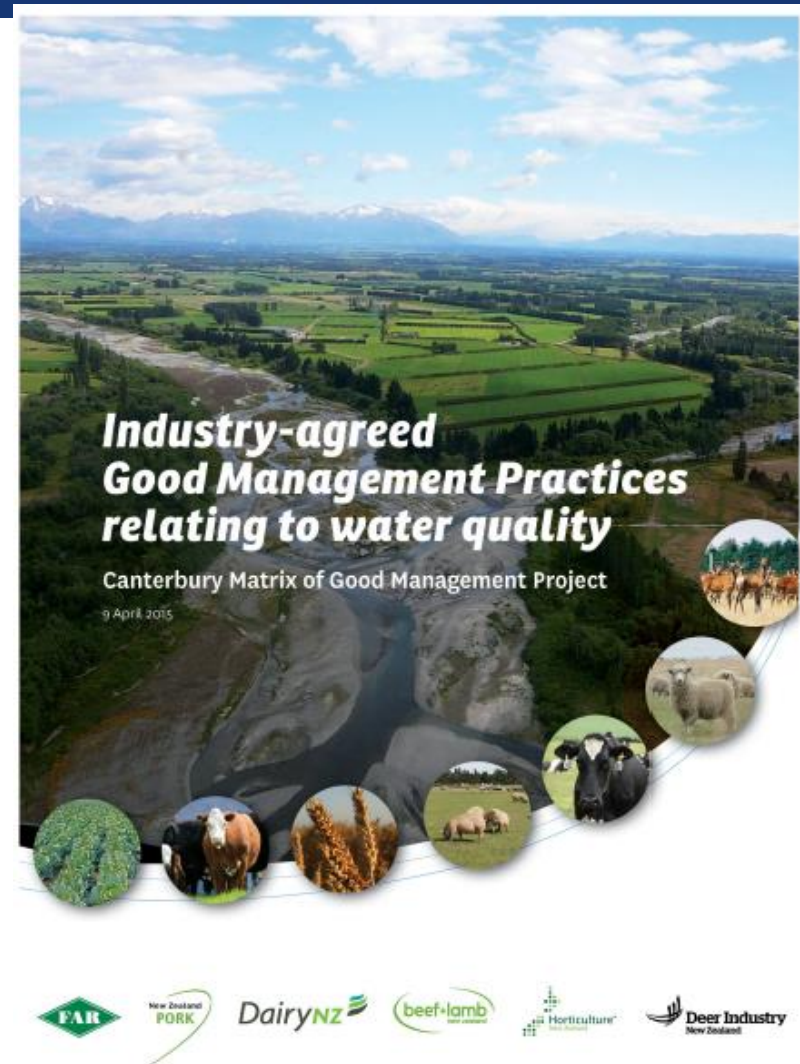
Some project outputs: Industry definitions of GMP

Industry-agreed GMP
– nationally applicable,
covering deer, dairy,
beef and sheep,
outdoor pigs, arable
and horticulture.

Launched in May 2015

Website:

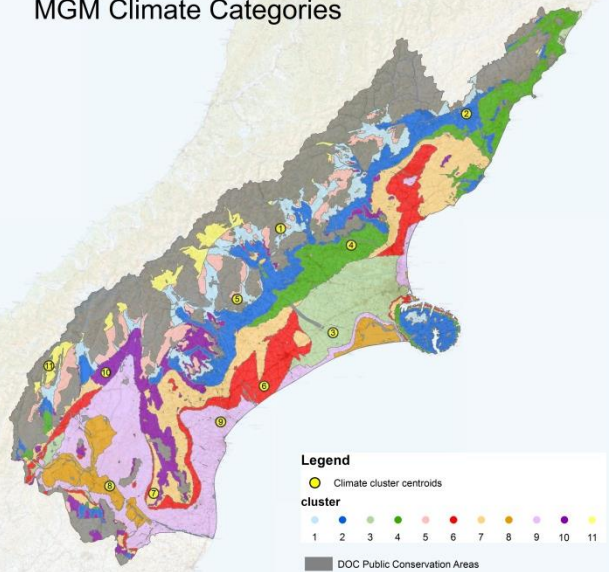
www.ecan.govt.nz/GET-INVOLVED/MGMPROJECT/Pages/matrix-good-management.aspx



Some project outputs: Catchment matrix of losses from representative farms, climate and soil categories

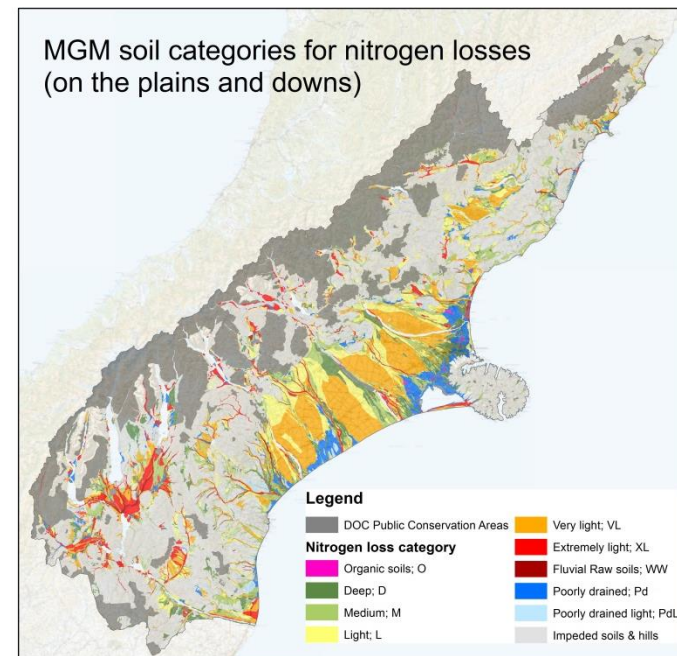
- » Big range of farm types, climates and soils
- » Farm surveys, modelling, statistical analysis and expert input to determine categories

MGM Climate Categories

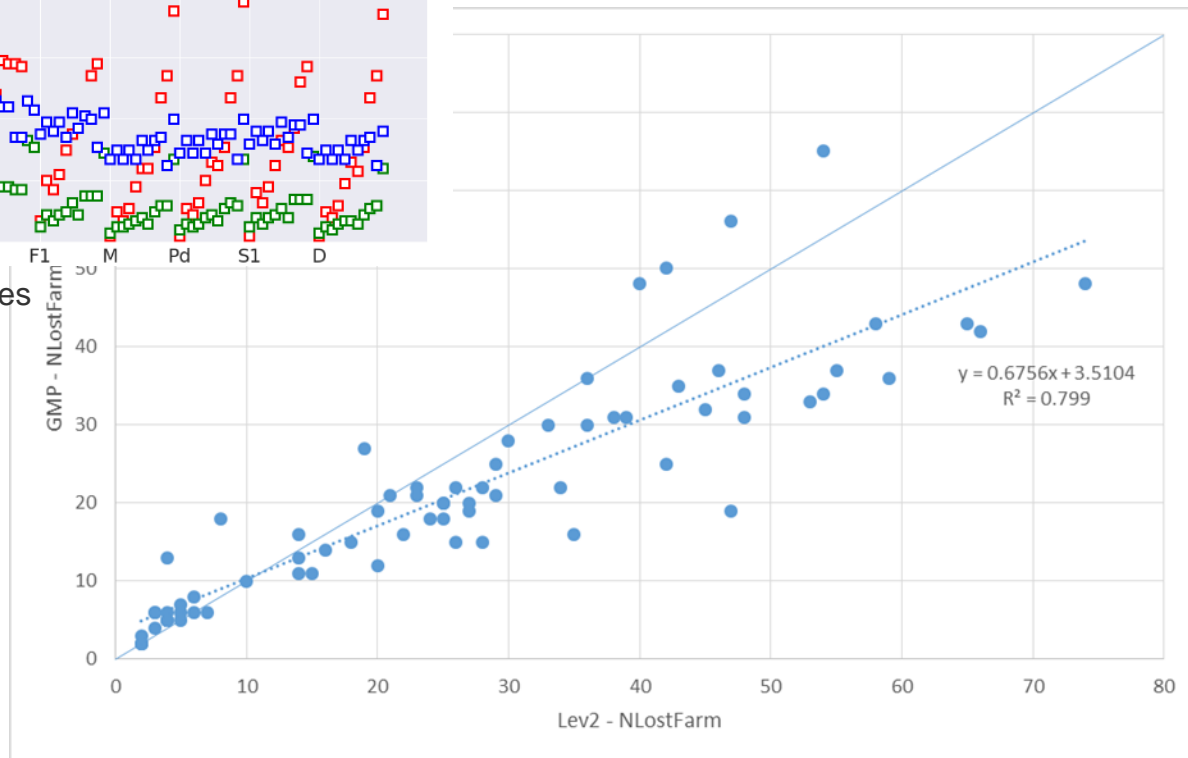
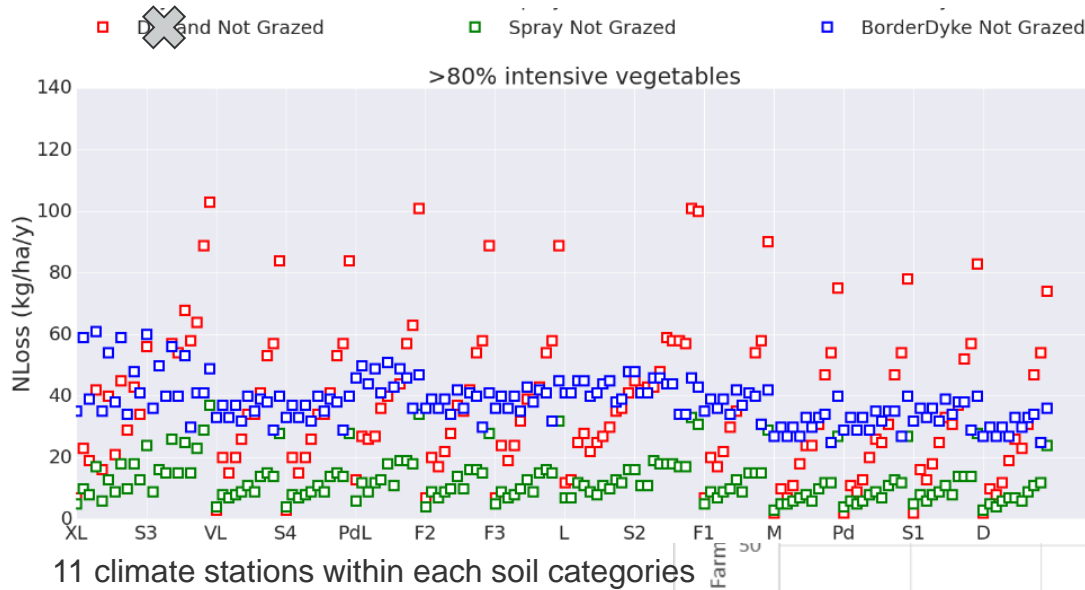


- » Tension between size of matrix and range of values in each category
- » Model all plausible representative farms x soil x climate class

MGM soil categories for nitrogen losses (on the plains and downs)



Some results from the matrix and the farm scale GMP methodology



Benefits and challenges of co-development of science for 'high-stakes' policy

Benefits of co-development are clear: mandate, acceptance, credibility, transparency, relevance, impact.

However, there are challenges with co-development of science for policy that need to be managed to realise the benefits:

- » Politicisation of science
- » Trust and commitment



Matrix of Good Management



Melissa.robson@agresearch.co.nz