



Ruamahanga Catchment Economic Modelling

Whaitua and Stakeholders' Meeting

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Growing and Protecting New Zealand

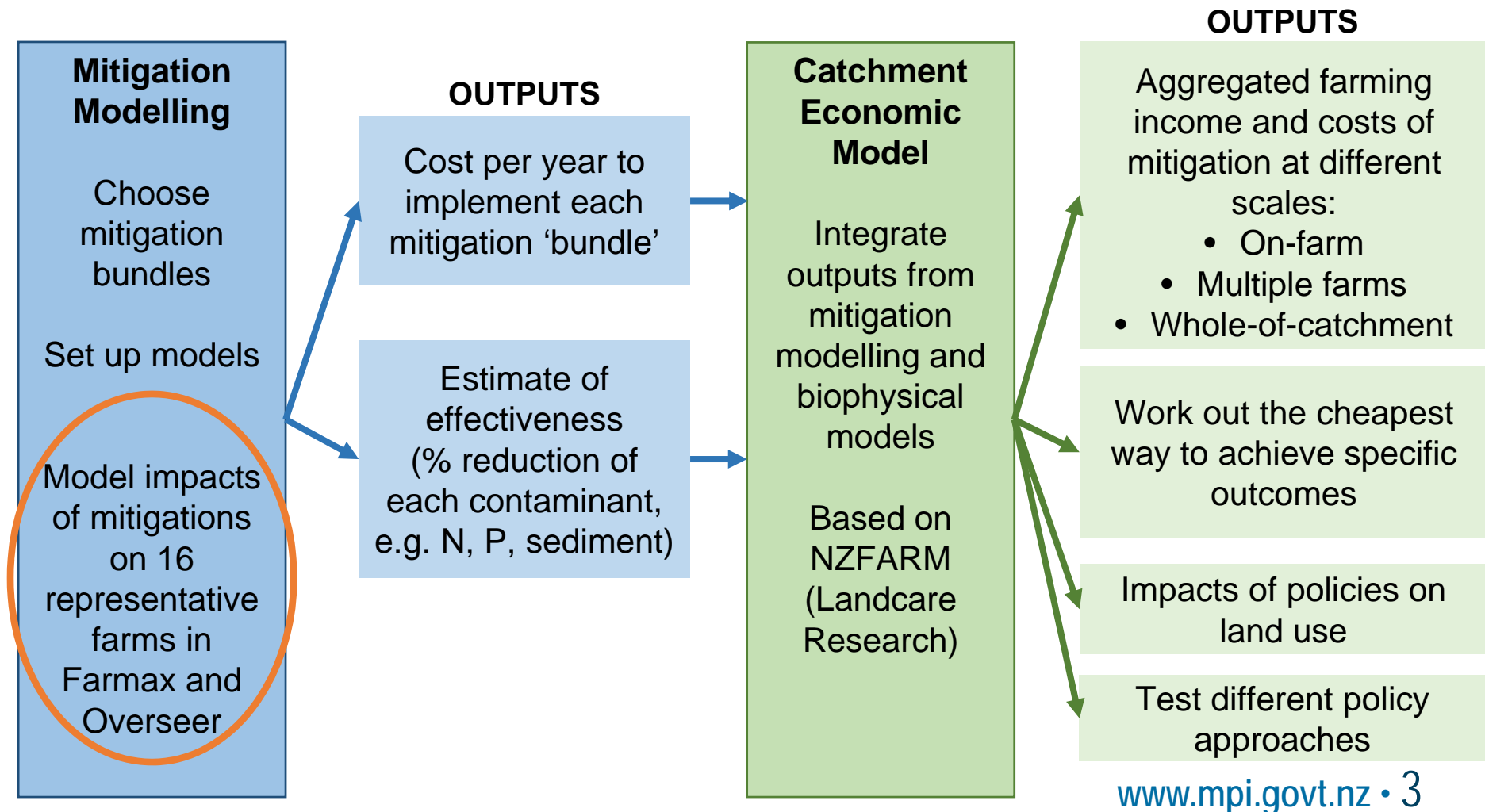


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Update on progress

- Farm-scale modelling is complete
 - Final report now available for review, will be published on MPI website
- Mitigation analysis is well under way, initial modelling is complete.
 - Now refining models and working towards having final results for first batch of scenarios by end of June
- Catchment Economic Model is being developed by Landcare Research (work now underway)
 - Aim to have a functional, successfully tested model ready for Whaitua to use by end of June

The Economic Modelling Process



Key inputs to the Catchment Economic Model

- Baseline contaminant losses (N, P, sediment, pathogens) for each hectare of land within the Ruamahanga catchment
- Modified losses with the use of mitigation measures (both on- and off-farm)
- A combination of mitigation practices that can be applied at the farm level.
- Information about how contaminants are attenuated throughout the freshwater drainage network
- Information about water quantity and reliability attributes

Outputs from the Catchment Economic Model

- Sub-catchment level targets (e.g. what is required to achieve sediment loads of $X\%$ below a baseline)
- Practice-based mitigation (e.g. effects of having $X\%$ of streams fenced)
- Distribution of mean annual loads of contaminants across the Ruamahanga catchment
- Effects of attenuation and variation of stream flow
- Costs and effectiveness of mitigation practices