



Using a **CLD** and analogue simulation to **facilitate learning** and identify research opportunities in a public research organisation

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0:00-0:30

Problem Statement



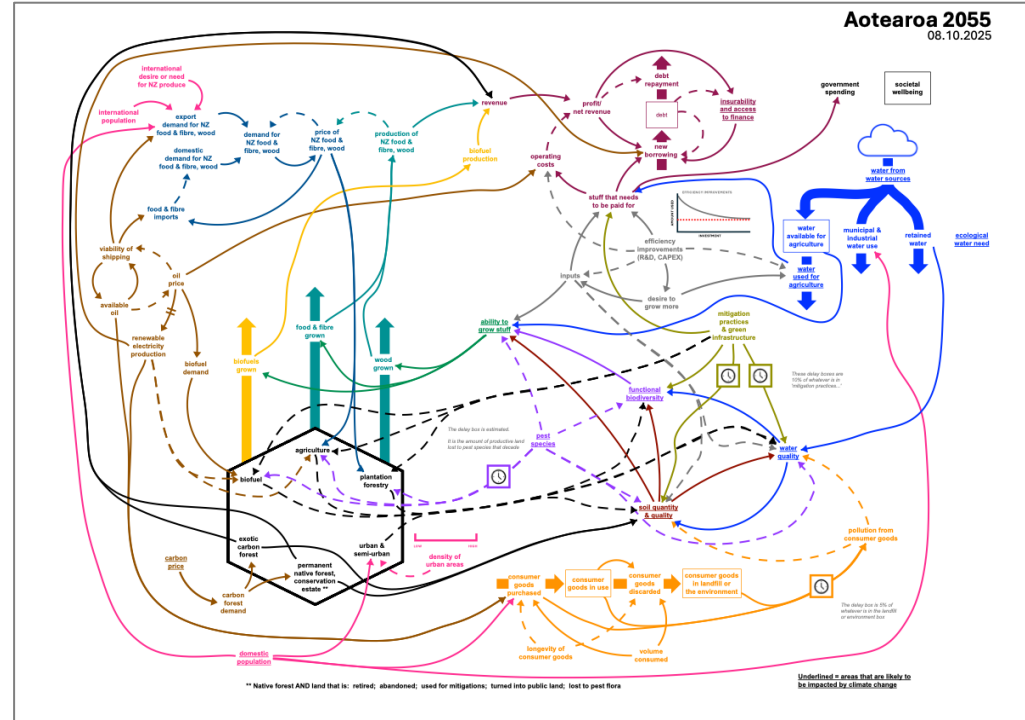
- The Bioeconomy Science Institute (BSI) supports all activities in the bioeconomy.
- Research **tends to focus on the optimisation** of discrete areas of the bioeconomy (e.g. improving water quality or production), rather than the resilience and prosperity of the bioeconomy as a whole.
- Might improving researchers' understanding of a **wider set of interacting complexities** encourage more research on the sustainability of the bioeconomy as a whole?

0:30-2:00

Approach or Dynamic Hypothesis



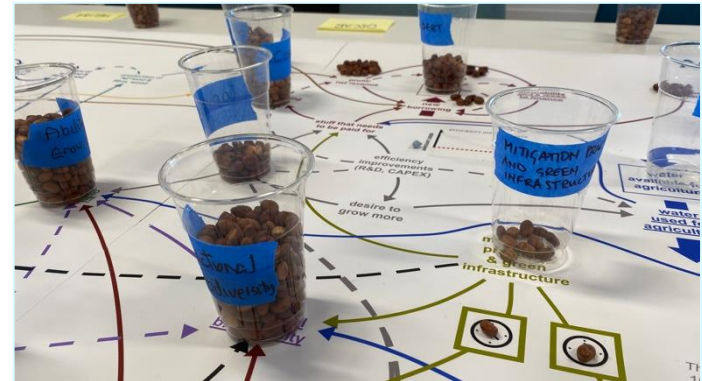
- We **built a CLD** that sought to include as many wider ranging and interacting complexities that affected agriculture as possible.
 - For example: water quality & quantity, biodiversity, biosecurity, fire, food security, soil quantity & quality, emerging contaminants, plastics, climate change, social & economic wellbeing, and the energy that enables it all.
- We developed an **interactive activity based on 'analogue simulation'**. Using the participants as the calculators and tracking relative change in variables, to highlight change over time.



Results



- Three main insights from post-workshop interviews:
 - The activity broadened people's perspectives.
 - The physical *experience* of the activity was important.
 - The activity was perceived to have ongoing usefulness to different audiences and at difference scales.



Conclusions



- **Implications:** There is potential usefulness of systems thinking to help guide research subjects or programmes within a research organisation.
- **Recommendations:** Try to run the activity with different audiences (e.g. researchers vs farmers) at difference scales (e.g. catchment vs region)
- **Questions?**