Knowledge We Need To Support A Sustainable Transformation of NZ's Land Based Industries

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Our Land and Water Science Symposium

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PATHWAYS TO SUSTAINABILITY

Starting points

- NZ economy's land-based export sector is hard-wired to produce economic growth on the basis of rising total greenhouse gas emissions and deteriorating freshwater quality
- This path dependency can be changed but we need to design a transition to a different future.

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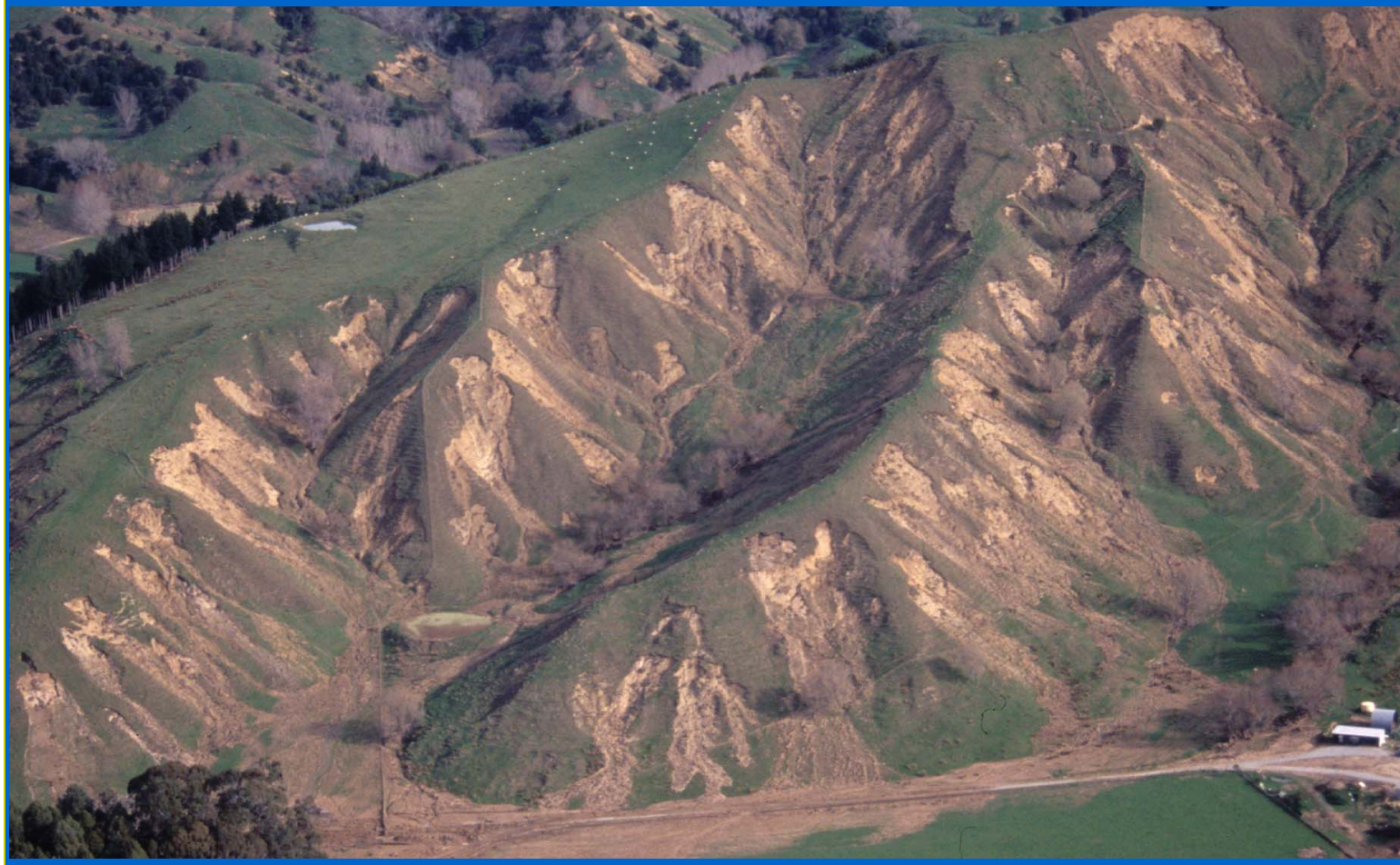
An integrating lens



- Land management choices impact simultaneously on soil, water, biodiversity, landscape, climate m/a
- Consider all impacts together; the costs of managing all externalities; & the resulting EBITs.

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Four kinds of knowledge

- A wider range and novelty of approaches to land use and land-based industries; incl Te Ao Maori
- Knowledge which enables better alignment of public, individual and agribusiness entity choices
- Which explores how to govern, regulate, achieve accountability for impacts, get incentives right
- Which enables design of learn-as-we-go transitions that can achieve wide buy-in, & happen.

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Ruminant livestock sector's challenges

- Over large areas, farm profitability depends on exemption from environmental accountability, and/or the polluter-pays principle
- Results: erosion of social licence and disruption by emerging, low-impact, higher health foods
- We need some mix of diversification into lower-impact land uses, and transformation of the livestock business model itself.

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Forest sector's challenges

- Our planted forests struggle to be competitive at current land values & policy settings
- ETS does not help, except for permanent forests; and then only as a one-off
- Wood could become valuable to replace steel, cement & fuel in this zero-carbon century
- But this raises social licence issues. Gene editing? Community fit? Ownership?

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Science of better transitions

- Identify desired, sustainable outcomes, and back-cast from these to create pathways
- Learning, experimentation and collaboration at multiple levels, to identify strategies and actions
- Research focus not just on natural resources, ecosystems, business systems – but also on social, economic, & governance mechanisms
- Understand how to restore agency…

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Regenerative agriculture

- Close the carbon, nitrogen & phosphorus cycles
- Sustain NZ's valued landscapes & biodiversity
- Enable & test access to premium markets
- Demonstrate whether & how this approach can achieve financial viability.

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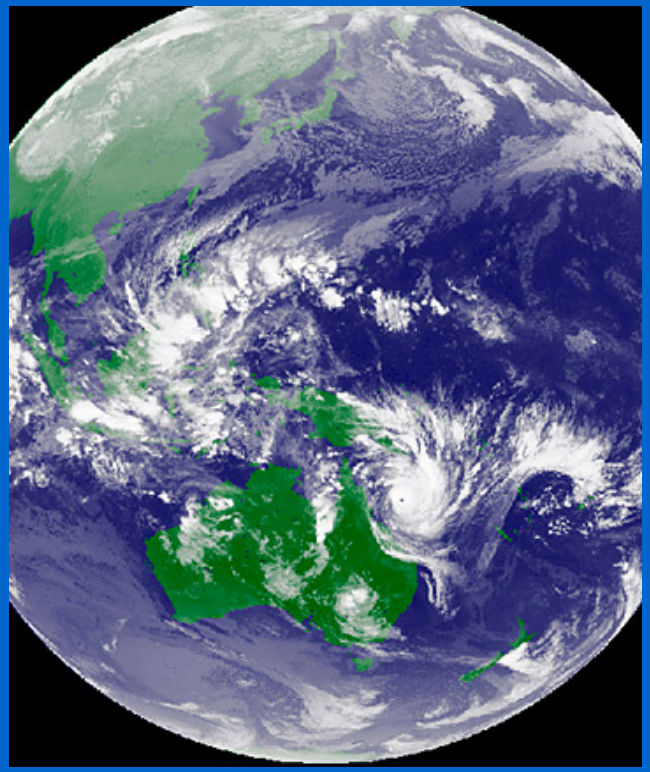
Priority focus areas - 1



- Better understanding the global context & its impact on NZ:
  - Meta-analysis of land sector climate mitigation pathways
  - How to better manage globalised economic & financial drivers of land use in NZ
  - Model the resilience of NZ systems to global crises.

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Priority focus areas - 2

- Better mechanisms for national and local learning, governance and accountability
- Especially: designing, trialling and enabling a place-based, community-centric methodology for engagement, learning, accountability and systems change over time.

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Priority focus areas - 3

- Expanding the potential & diversity of low-leakage land uses: forestry & wood, horticulture, regenerative agriculture of all kinds; mixed land uses which integrate conservation, recreation, and tourism in agricultural landscapes.
- Emphasis on providing info on opportunities at regional level, to support community processes.

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Thank you!

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