



**Landcare Research**  
Manaaki Whenua

# **THRESHOLDS & LIMITS: HOW DO WE APPROACH THEM**

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# What are we talking about?

- Sustainability...sustainable well-being....
  - *Sustainable wellbeing: where one generation passes on as much of the physical, financial, human, environmental & social capital as inherited in the first place*
- Concept of thresholds, tipping points, regime shifts, etc
  - *point at which a relatively small change in external conditions causes a rapid change*
- Concept of limits
  - *Point or range of conditions beyond which benefits derived from a natural resource are judged unacceptable or insufficient.....enter human values!*



# Some limits confronting us

- Climate
  - Greater extreme weather events
- Water quality
  - Algal blooms, E.coli levels
- Water quantity
  - Declining availability
- Biodiversity
  - Species and habitat losses
    - e.g., less than 1 hectare of lava forest left in Auckland
- Versatile soils
  - Urbanization, food security & affordability
- BUT what is next?



# Defining limits

- Government defined
  - Traditional RMA or central government legal processes (typically consultative processes)
    - e.g., climate change, regional council planning processes
- Community determined via collaborative processes
  - Future approach???
  - e.g., Water quality & water quantity



# Imperative to set limits

## Objective A1

NATIONAL POLICY STATEMENT

Freshwater Management 2011

*Issued by notice in the Gazette on 12 May 2011*

To safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water, in **sustainably managing the use and development of land, and of discharges of contaminants.**

# Land and Water Forum

- Collaborative process
- Key recommendation for freshwater governance is to use collaborative processes
  - Councils will have to explicitly say why collaborative processes for a decision is not used
  - Provide incentives for collaborative process to succeed
    - Environment Court appeals on points of law only (not merit)
    - Hearings are more formal and collaborative process presents their case
  - Fell short of defining national limits ... perhaps resolved with Freshwater Reforms 2013



# Collaborative Processes in NZ

- Not new.....but few
- Research programmes, e.g.,
  - Tasman (Integrated Catchment Management)
  - Waikato (Creating Futures)
  - Canterbury (Old problems, New Solutions & Pastoral 21)
  - Hawke's Bay (Values, Monitoring & Outcomes)
- Renewed focus more recently
  - Water governance conflict
- Land and Water Forum
- Some regions rolling them out for RMA decisions



# Regional Council Processes

Some examples:

- Environment Canterbury
  - Hurunui (qty/quality), Selwyn/Waihora (qty/quality), Pareora (qty), Ashburton/Rakaia (qty/quality), Waiau (qty), Hinds (qty)
- Tamsin District Council
  - Schedule 30: Values for waterways
- Waikato Regional Council
  - Waikato River (qty/quality)
- Hawke's Bay Regional Council
  - Land & Water Strategy, Greater Heretaunga Plan Change, regional biodiversity strategy





# Some Challenges with Collaborative Processes

- Past experiences & conflict
- Representation
- Time to make a decision vs perceived need for haste
- Potential economic impacts
- Allocating limits between individuals
- Designing policy to achieve limits



# Approaches to living within limits

Some insights:

- Look broader
  - Policy synergies
    - e.g., lower minimum flows may be tolerated if more pest control measures are in place to protect native birds
- Understand community perceptions & values
- Trading programmes
  - Provides flexibility
- Phasing implementation



# Still some big question remain...

What evidence do New Zealanders need to decide if their lifestyles are sustainable or not?

Are New Zealanders prepared to live within environmental thresholds & set limits?





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# Many Thanks

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# Still some big question remain...

What evidence do New Zealanders need to decide if their lifestyles are sustainable or not?

Are New Zealanders prepared to live within environmental thresholds?

Will New Zealanders agree to limits for sustainable well-being?

