

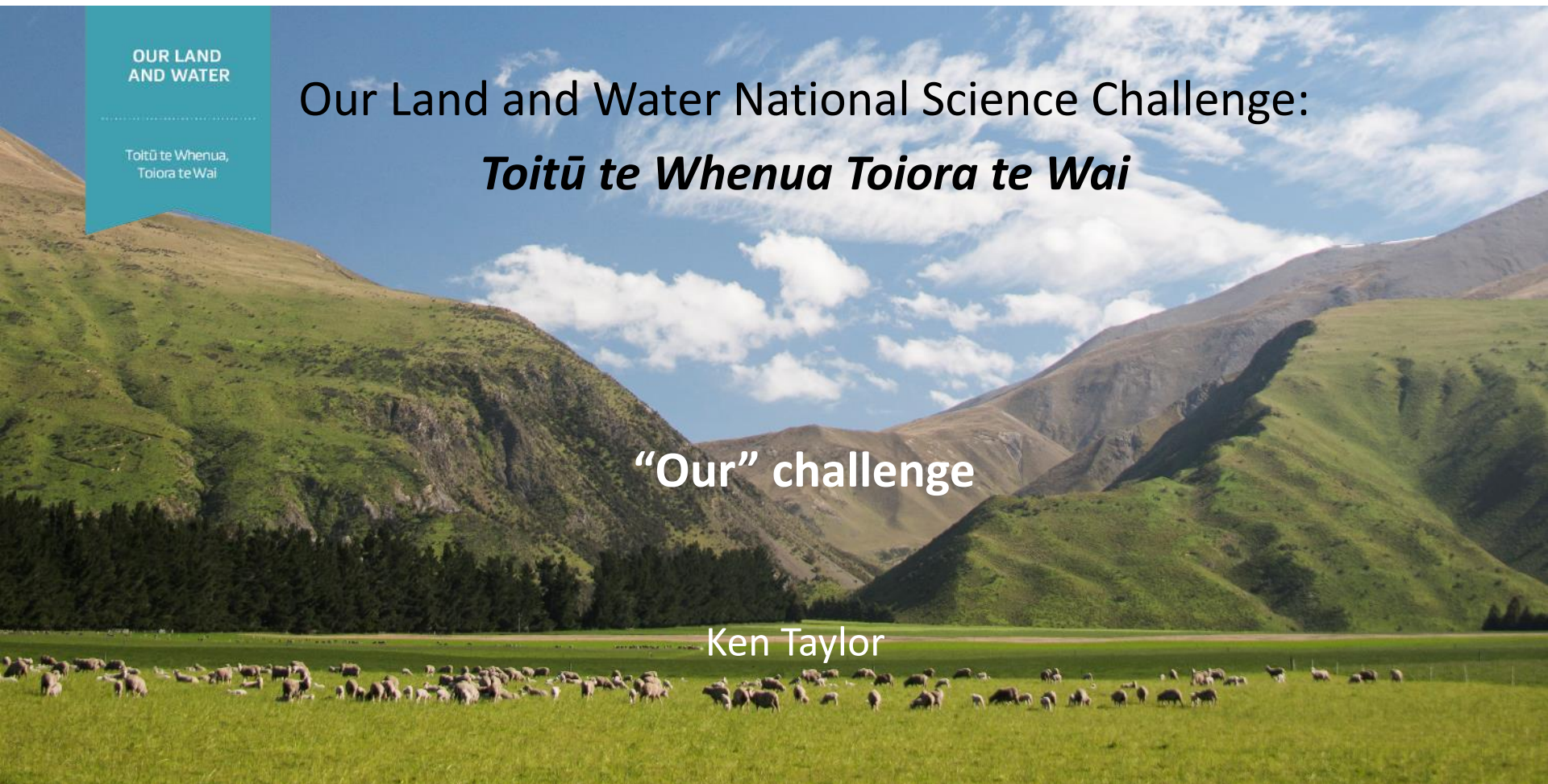
OUR LAND
AND WATER

Toitū te Whenua,
Toiora te Wai

Our Land and Water National Science Challenge: *Toitū te Whenua Toiora te Wai*

“Our” challenge

Ken Taylor



Why a challenge?

2012 – a fresh look at our science



The National Science Challenges

A Better Start E Tipu e Rea <small>Launched 19 February 2016</small>	Ageing Well Kia eke kairangi ki te taikaumātuatanga <small>Launched 4 March 2015</small>	Building Better Homes, Towns and Cities Ko ngā wā kāinga hei whakamāhorahora <small>Launched 5 May 2016</small>
Healthier Lives He Oranga Hauora <small>Launched 4 December 2015</small>	High-Value Nutrition Ko Ngā Kai Whai Painga <small>Launched 1 April 2014</small>	New Zealand's Biological Heritage Ngā Koiora Tuku Iho <small>Launched 29 August 2014</small>
Our Land and Water Toitū te Whenua, Toiora te Wai <small>Launched 26 January 2016</small>	Resilience to Nature's Challenges Kia manawaroa - Ngā Ākina o Te Ao Tūroa <small>Launched 30 June 2015</small>	Science for Technological Innovation Kia kotahi mai - Te Ao Pūtaiao me Te Ao Hangarau <small>Launched 16 September 2015</small>
Sustainable Seas Ko ngā moana whakauka <small>Launched 4 September 2014</small>	The Deep South Te Kōmata o Te Tonga <small>Launched 5 August 2014</small>	

“The 11 National Science Challenges focus science investment on **issues that matter to all New Zealanders**. The National Science Challenges are **cross-disciplinary** programmes designed to tackle the **biggest science-based challenges New Zealand has**. They provide **an opportunity for collaboration** between researchers from universities and other academic institutions, Crown Research Institutes, businesses and non-government organisations to create **sustainable and long-term** research plans and activities.”

The National Science Challenges

- 10 year funding
- New money (\$233M) plus CRI core funding (\$640M)
- **Mission led** investment
- Aligned funding
- **Partnerships = “Best teams”**
- “Additionality”
- Quality + impact = **“Transformational”**
- Transdisciplinarity
- Idea generation
- **Narrative**
- Co-innovation/co-design

What's our mission?

“To enhance primary sector production and productivity while maintaining and improving our land and water quality for future generations”



So who are our partners?

(i) Our family of researchers

OUR LAND
AND WATER

Taitū te Whenua,
Tolara te Wai



So who are our partners?

(ii) Our communities of interest

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Toitū te Whenua,
Toliora te Wai



And just what do we mean by transformation?

agresearch
āta mātai, mātai whetū

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Our Land and Water National Science Challenge launched

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January 26, 2016

Enhancing New Zealand's economic performance while protecting our environment is the aim of the new National Science Challenge, Our Land and Water – Te Whenua, Toiora te Wai.

The Challenge, the largest of its kind, has been officially launched by Science and Innovation Minister Steven Joyce in Wellington tonight [26th January]. It is hosted by AgResearch and will bring together researchers from all seven Crown Research Institutes and seven universities. Funding for the Challenge is nearly \$100 million over 10 years. This will be supported by a total of \$130 million from the Crown Research Institutes.

"A truly auspicious day," says Dr Paul Ross, the interim chair of the Challenge. "The nation's economic future has never been more urgent to us. Research solutions to enhance productivity whilst protecting and improving the environmental issues on which farming, as well as society, depend."

He says researchers have worked closely with farmers, growers and foresters, environmental managers and Māori to co-develop the Challenge's objectives. The Challenge has four research themes: Innovative, resilient land and water use; Collaborative value in rural markets; and Operating at the Nexus.

The Challenge is hosted by AgResearch, and its research partners are University of Auckland, ESR, GNS, Landcare Research, Lincoln University, Lincoln University, Massey University, NIWA, Plant & Food Research, Scion, and University of Waikato.

"The Challenge has been influenced by and will build on the good work already done by the Land and Water Forum. We have close links with several of the other challenges, in particular Biological Heritage which focuses on our native biodiversity, biosecurity, and resilience to climate change. Together we will be working to accelerate science for the betterment of our land and water and the next generation of New Zealanders."

Dr Ross also announced the first two official Challenge appointments: Ken Taylor as permanent Challenge director and Professor

PEOPLE
Dr. Richard McDowell
Chief Scientist - National Science Challenge

COLLABORATORS
The University of Auckland
ESR
Landcare Research
Lincoln University
Massey University
NIWA
Plant & Food Research
Scion
The University of Waikato

FUNDERS
Ministry of Business, Innovation and Employment

RELATED STORIES

“The launch marks, in Winston Churchill’s words, the end of the beginning. The way ahead and the opportunity for transformational science for the benefit of all of us is very exciting,” says Dr Richardson.

To the academic it might look like this...

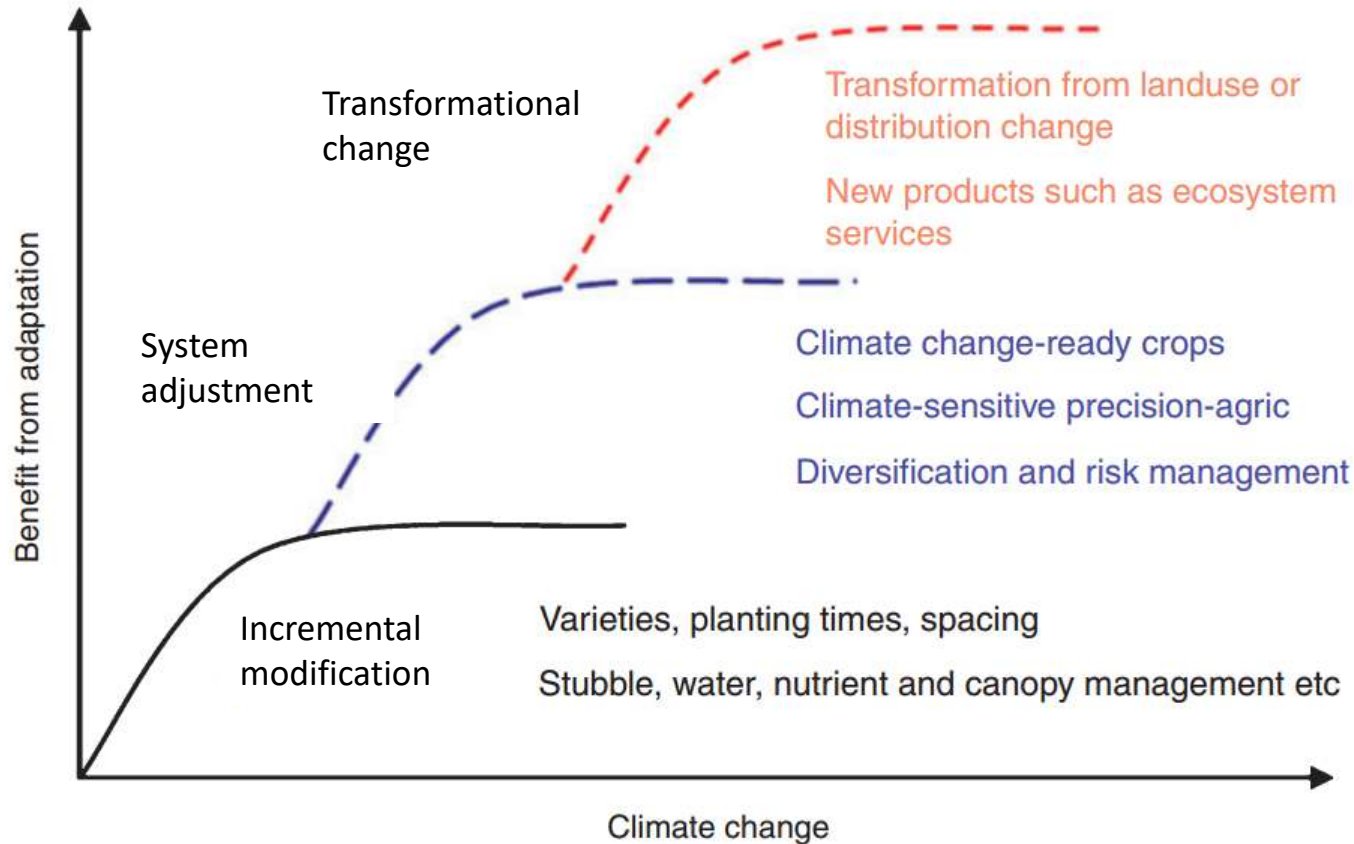


Fig. 1. Levels of adaptation in relation to benefits from adaptation actions and degree of climate change, with illustrative examples (from Howden *et al.* 2010).

And to happen we think it needs these...

- Systemic changes - social, economic and political activity within and beyond the sector
- Address systems change explicitly or inertia prevails
- Strength of linkages between niche experiments and the regime (institutional, regulatory etc)
- Jointly set transformative innovation agendas - public, private and civil society
- Balance of resourcing in favour of transformative innovation by public and private sector
- Strength and character of international innovation linkages
- Strength and character of cross-sectoral linkages (e.g. agriculture, energy and ICT)

Above all, it defines our “story” ...

Achieving our mission requires:

1. Incentives
 - Why do I want/need to change?
2. Options
 - What choices do I have? (and how does our understanding help us recognise/ use new opportunities?)
3. Enablers
 - What processes and tools do I need to make it happen?



National
SCIENCE
Challenges

OUR LAND
AND WATER

Tōitū te Whenua,
Tōiora te Wai

