

OUR LAND
AND WATER

Toitū te Whenua,
Toiora te Wai

Latest News *Update*

- DECEMBER -



Ken Taylor - Director
Our Land and Water

Season's Greetings

Meri Kirihimete from Our Land and Water!

With Christmas fast approaching we wanted to get a head start on 2017 to let you know about our exciting plans for next year and what we've been doing since we last spoke. Our first newsletter edition contains information about our contestable funding round opening next

Key Dates

**Contestable Funding round
opens : 1 January 2017**

**Contestable Funding round
closes : 3 March 2017**

**Annual Challenge Symposium :
11-12 April 2017 – RSVP NOW !**

month, the RSVP to our Symposium next year and an article on one of our completed projects, called The Matrix. In our next edition, due out in March, we'll be profiling one of our innovative and resilient land and water use research programmes.

It was a shaky start to the summer season with the earthquake and I spent much of early December working on shift as a Controller in the Christchurch Emergency Coordination Centre with Civil Defence. Scientists have been at the forefront for expert comment about the earthquake, with the difficult job of explaining what, how and why this happened. Trying to answer the questions that no-one else seems to be able to, sounds a lot like the Challenges. Our Challenge Co-ordination Centre has also been a hive of activity since I came onboard eight months ago. Our Land and Water is now well into its operational phase now have more than \$10 million of research underway across some exciting research programmes in our three themes.

We're now in full planning mode for our annual Symposium next year in April. Please remember to save the dates on Tuesday 11 and Wednesday 12 April and come be a part of this in Christchurch. We have some great speakers and an interesting programme. You can even [RSVP now at this link](#). We look forward to seeing you there!

From the team at Our Land and Water we wish you all a very Merry Christmas and a safe and happy holiday.

Ngā Mihi, Ken.

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Learn More

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Contestable Funding Round call for 2017

Our Challenge has a contestable funding round opening on 1 January and closing on 3 March, 2017. The value of remaining funds is around \$750,000 with up to \$400,000 per project available until 30 May 2019. The fund is designed to explore high risk ideas with high impact for the Challenge, and from those who are not currently funded by the Challenge (> 0.15FTE).

After an analysis of our current research portfolio we are especially interested in proposals that explore new primary production and productivity systems or explore how the value chain can incentivise and reward sustainable land use practices, the information is at [this link](#). There will be a further funding call in February 2017 for Māori-centric research with funding up to \$500,000 available.

Our Think-Piece Process

We've designed the think-piece process to allow people to explore an idea and come up with the evidence base for research questions. These questions that may result in additional funding via a traditional RfP, no funding, or be

funded in negotiation with the Our Land and Water Directorate. Two RfPs have been announced in the general areas of Value Chains and Genomics, two other think-piece outputs (Indicators, Data) are proceeding in negotiation with the Directorate. We are committed to involving stakeholders in the direction and delivery of the Indicators work and have embarked on cross-Challenge talks on data management.

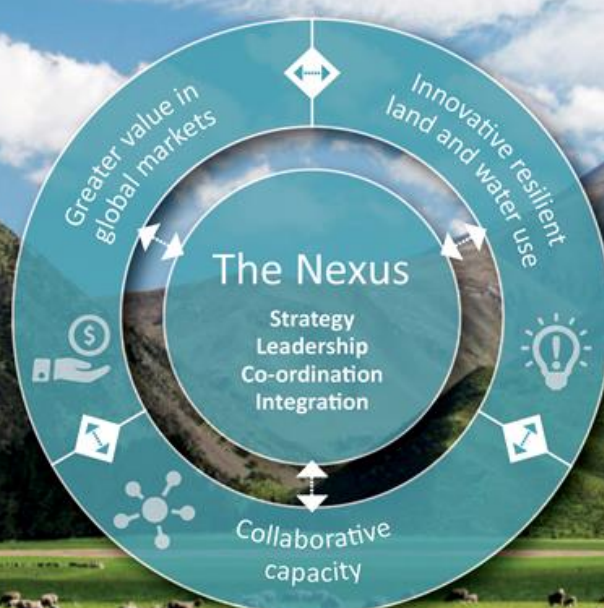
How to align your research with our Challenge

MBIE requires proposals to their Endeavour fund to show alignment to National Science Challenges – where appropriate. We want to help you do this quickly and efficiently. If you feel your work aligns to the Our Land and Water Challenge, please contact us via our e-mail or one of our Theme Leaders.

In addition to this, the Challenge is having discussions with its partners to ensure that projects – predominantly funded out of Strategic Science Investment Funds – are meaningfully aligned, in a way that is measurable and provides benefit to the Challenge and provider.

Our mission

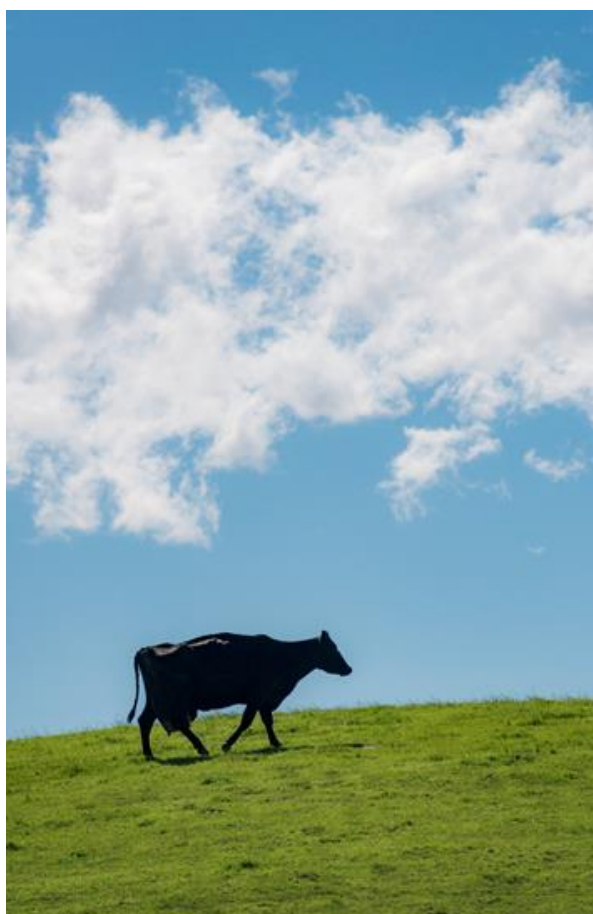
To enhance primary sector production and productivity, while maintaining and improving our land and water quality for future generations.



What is the Matrix?

With a name like The Matrix you could be mistaken in thinking that the Our Land and Water Challenge has stumbled across a simulated reality created by sentient machines that exist to subdue the human population. Not quite! Call me Neo, but what our team has collated and discovered is just as exciting to us.

Our Matrix is a document that includes the use of a total of 650 unique sources of information (494 international and 156 domestic) of academic, industry/sector, regulatory and legislative origin. The work examines solutions where international consumption drivers align with domestic drivers that affect land use change and practice. Analysis of more than 30 drivers for Asia, US and Europe highlighted key differences compared with New Zealand.



Domestically, environmental drivers were found to be the most likely to affect land use change and practice, with social drivers considered to have the least likely effect. Biosecurity, soil quality, water use and quality were the most important domestic environmental drivers, along with agricultural and trade policy.

Internationally, agricultural and trade policy were considered important drivers, especially from the US and Europe. Key environmental drivers included water quality and quantity, air quality, biosecurity and biodiversity, chemical residues, sustainable supply and pasture based production methods. However, likelihood of the various international environmental drivers affecting land use practice and change in New Zealand varied between regions.

Tim Driver, the lead researcher on the project says, "Perhaps one of the most surprising findings of this research is that for many of the drivers examined there is a high level of interconnectivity. "For example, for consumers across most regions, food safety was most important, but the condition of the physical environment is highly associated with food safety – a surprising finding in itself."

Associated modelling showed that a 25% reduction in trade barriers would increase returns to dairy alone by \$1 billion.

Other modelling work carried out as part of the Our Land and Water research assessed changes to New Zealand's physical and trading environment with the potential to change land-use and trade. The analysis covered changes in global and local agricultural production owing to the effects of climate change, increases in global extreme weather events, changes in consumer preferences, and further trade liberalisation. *Continued*

The Matrix continued

The work shows that under a moderate climate change scenario New Zealand experiences almost a 10% drop in producer returns for agriculture, these losses come predominantly from a shift away from pastoral land use. Conversely the occurrence of extreme weather events overseas results in minor benefits for agricultural producers New Zealand as interrupted production overseas creates higher global food prices. These higher prices negatively impact New Zealand consumers.

“We also found that if New Zealand agricultural exports could obtain a 50% premium in key markets, this could result in up to a 5.5 billion (USD) increase in total producer returns, with significant increases in returns for dairy products, and both sheep and beef meat.”

Even a 20% premium could result in over 2 billion (USD) additional returns. Additionally, increased trade liberalisation globally would also have a significant positive impact for agricultural returns, with higher returns of up to 30% for raw milk and up to 20% for beef producers.

The research carried out by AERU at Lincoln University this year has provided the Challenge with insights, the results of which will be used to direct and prioritise future Challenge investment. To view the document please [click here](#).

Save the date

National
SCIENCE
Challenges

Our Land and Water, National Science Challenge, warmly invites you to join us at our annual Symposium.

Tuesday 11th and Wednesday 12th of April 2017

James Stewart Building
Lincoln University
Christchurch

Please email us at ourlandandwater@agresearch.co.nz and we will send you the registration information

For more information about the Challenge visit www.ourlandandwater.nz

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