

OUR LAND
AND WATER

Toitū te Whenua,
Toiora te Wai

Latest News *Update*

- AUGUST 2017 -



Ken Taylor - Director
Our Land and Water

What is most important?

Kia ora koutou katoa

As the well-known Māori proverb states,
“**He aha te mea nui o te ao**

What is the most important thing in the world?
He tangata, he tangata, he tangata

It is the people, it is the people, it is the people”

Key Dates

Vision Mātauranga hui in
Rotorua: **16 August**

Co-conference to the
International Transdisciplinary
Conference 2017: **13 September**

At the heart of the Our Land and Water Challenge mission is a requirement for change, and without capable people, that change won't happen. This means that it is our responsibility to also look at how we can build up and equip our people while we're generating science-backed options for change.

We know that without farmers, young scientists, policy makers and community members knowing the options for change, or incentives to change, or having transition pathways for change, that it won't occur. So how can we as a Challenge help target the capability gaps in land and water science directly where we know they exist? We do so by investing in it. We need to invest our time and money in our people to support science uptake.

We have two new initiatives that we will announce formally in the forthcoming months', both focus on developing and equipping young science leaders with the qualifications and decision-making skills needed in a modern world, and both target major capability gaps in achieving future change. We will elaborate on both these initiatives in the next newsletter, when they are up and running.

In this issue we give you our Chief Scientist update, we discuss more results from our Land Use Suitability programme and we share some of stories that the Challenge has featured in recent media – including our comprehensive feature in the July/August edition of NZ Geographic called, [‘Troubled Waters.’](#)

Ngā mihi, Ken.

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Learn More

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Chief Scientist's Update

EDS and LGNZ Conferences:

Ken Taylor addressed the attendees at the Environmental Defence Society conference *Tipping Points* in Auckland on 10 August about accelerating freshwater limit-setting and Challenge research. Presentations and videos from the conference will be made available on the EDS website from 17 August, visit www.eds.org.nz

The Local Government NZ conference in July was focused on *Creating Pathways to 2050*. Ken presented about transforming our agricultural landscapes and the Challenge, more information is available [here](#).

Māori science and knowledge systems hui

The Challenge commissioned a think-piece to act as part of an evidence base from which more refined questions and a request for research proposals (RfP) can be generated. Massey University has written a think-piece paper titled, "[Enhancing Māori agribusiness through kaitiakitanga tools](#)".

This month we have a Hui taking place at SCION in Rotorua on Wednesday 16 August which will refine the research question, "**What is the unique contribution that Māori science and knowledge systems can make to the attainment of the challenge mission?**"

The Request for Proposal generated from this hui will be sent out in early September with funds available of up to \$500,000 for use up to 30 June 2019.

Transdisciplinary Co-conference

On 13 September Landcare Research in Lincoln will host the New Zealand Co-conference to the International Transdisciplinary Conference in Germany.

Transdisciplinarity and co-innovation are central to the way the Our Land and Water National Science Challenge wants to work with all our stakeholder groups.

To register for free please follow this link: <https://www.eventbrite.com/e/international-transdisciplinarity-conference2017-tickets-33302725348> before 30 August.



Research Programme Update

Our Land Use Suitability System

In our last newsletter we gave an overview of our research programme Land Use Suitability (LUS). The LUS team have recognised a need from our stakeholders (including producers, policy makers and the general public) for an objective system to characterise and balance the potential of land, with environmental goals.

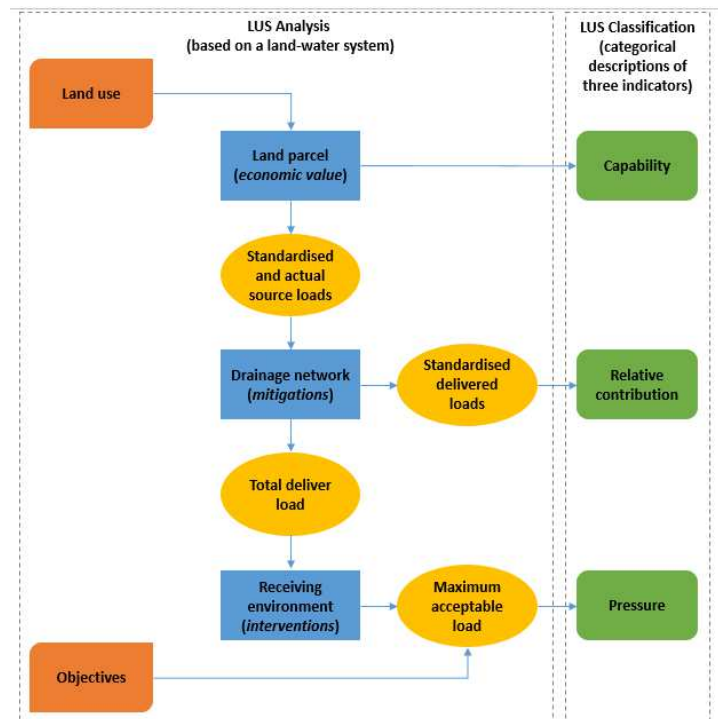
Currently an objective classification system that accounts for primary production, environmental objectives and that makes compromises clear, is elusive. This is where our new classification of land use suitability is necessary.

Chief Scientist Rich McDowell says, “We propose to consider more than just the productive capability and contaminant contribution potential aspect of land to also consider the capacity of the receiving environment to assimilate those contaminants.”

A prospective LWC system consists of three components:

- 1) the potential of individual parcels of land for primary production;
- 1) the contribution of each land parcel to the load of contaminants being delivered to a receiving environment; and
- 2) The pressure that a receiving environment is under from delivered contaminants relative to an acceptable contaminant load

The research team have now also identified a potential range of applications for the LUS classification.



Legend

Orange box = Assumptions/normative decisions

Blue box = Key physical components

Green box = Output

Yellow oval = Key analytical components

McDowell says, “A core application of the LUS classification is to aid in the strategic and objective use of land for multiple stakeholders, be they local farmers, catchment communities or national regulators.”

The National Policy Statement for Freshwater requires regional councils to set water quality objectives by 2025 (and limits to achieve them), but achieving those objectives presents a major challenge. Environmental limits change the way in which a range of stakeholders need to think about land use and the environment.

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The LUS provides a systematic basis for potentially harmonising regulations across regions. If successful, primary sector industry groups, and regional and central government could use the LUS system to assess the constraints imposed by environmental objectives, and to identify areas where future development could be encouraged, or areas where more stringent controls are required.

The LUS system could also be used by banks to assess environmental risks associated with their clients' current or proposed farming operations. Investors could use the LUS as a strategic screening tool to understand the implications of different locations for the productivity and long-term viability of different land uses.

The LUS classification system as proposed in this article can be implemented rapidly, based on readily available models and data. However, it is still under development and testing. There are many components still to include that will increase the scope and utility of the classification system and identify its limitations.

In the media

We currently have a large feature out with New Zealand Geographic in their July-August edition called "[Troubled Waters](#)". The comprehensive feature is about New Zealand's freshwater issues, the associated rhetoric, where our Challenge research fits into the bigger picture and the work our research teams are doing.

In July, Ken Taylor was interviewed by TVNZ Seven Sharp as part of a bigger series of stories about last month's flooding in the South Island. You can view the story [here](#). Ken was also interviewed by TV One News about the \$44 million freshwater announcement for a science perspective on the improvements projects, [watch it here](#).

Remember you can keep in touch with us via e-mail (ourlandandwater@agresearch.co.nz) or by following us on [Facebook](#) and [Twitter](#).

