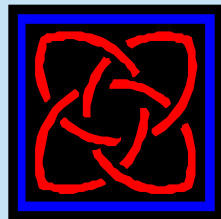


What regenerative agriculture means in a New Zealand context?

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Background

30 years in organic agriculture first as a grower then researcher, extension and consulting

I see myself as a scientist specialising in sustainable ag

Have been involved in the NZ regen movement since its start – and its precursor biological farming and carbon farming

Third author on OLaW RA White and other papers

I am on the core Quorum Sense Whatsapp group (QS=NZ regen organisation)

This is therefore a report from the trenches



What's in a name?

Who knows what quorum sensing is?

That a group of farmers named themselves after a reasonably obscure, technical, microbiological term says quite a lot



Content

Global context

What is regenerative agriculture?

The (r)evolution of agriculture

The ethics and values of agriculture

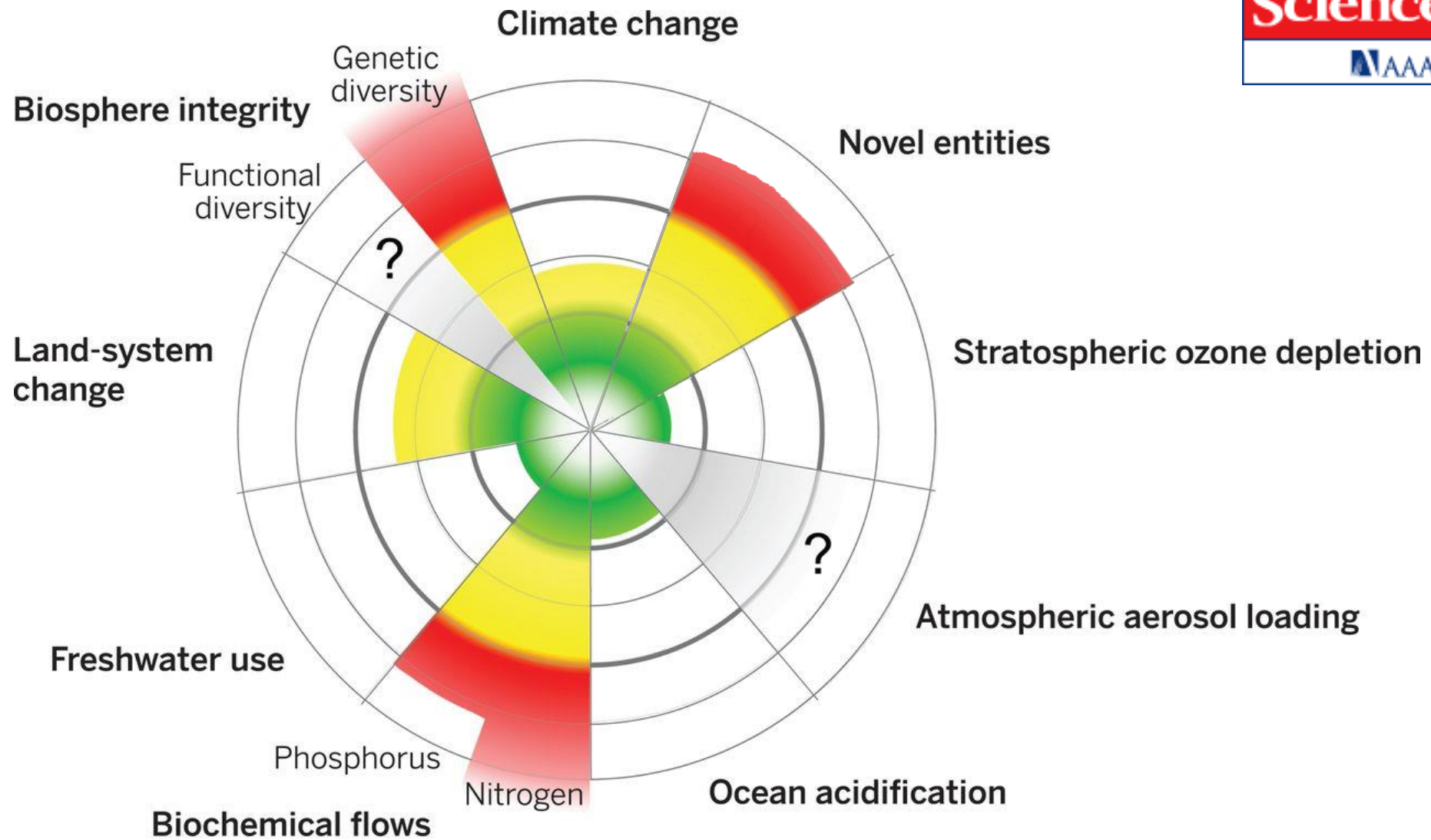


High level context

Global level 'frameworks' that frame the global environmental threats, how to think about farming, how to fix the world and how much time we have to do so.

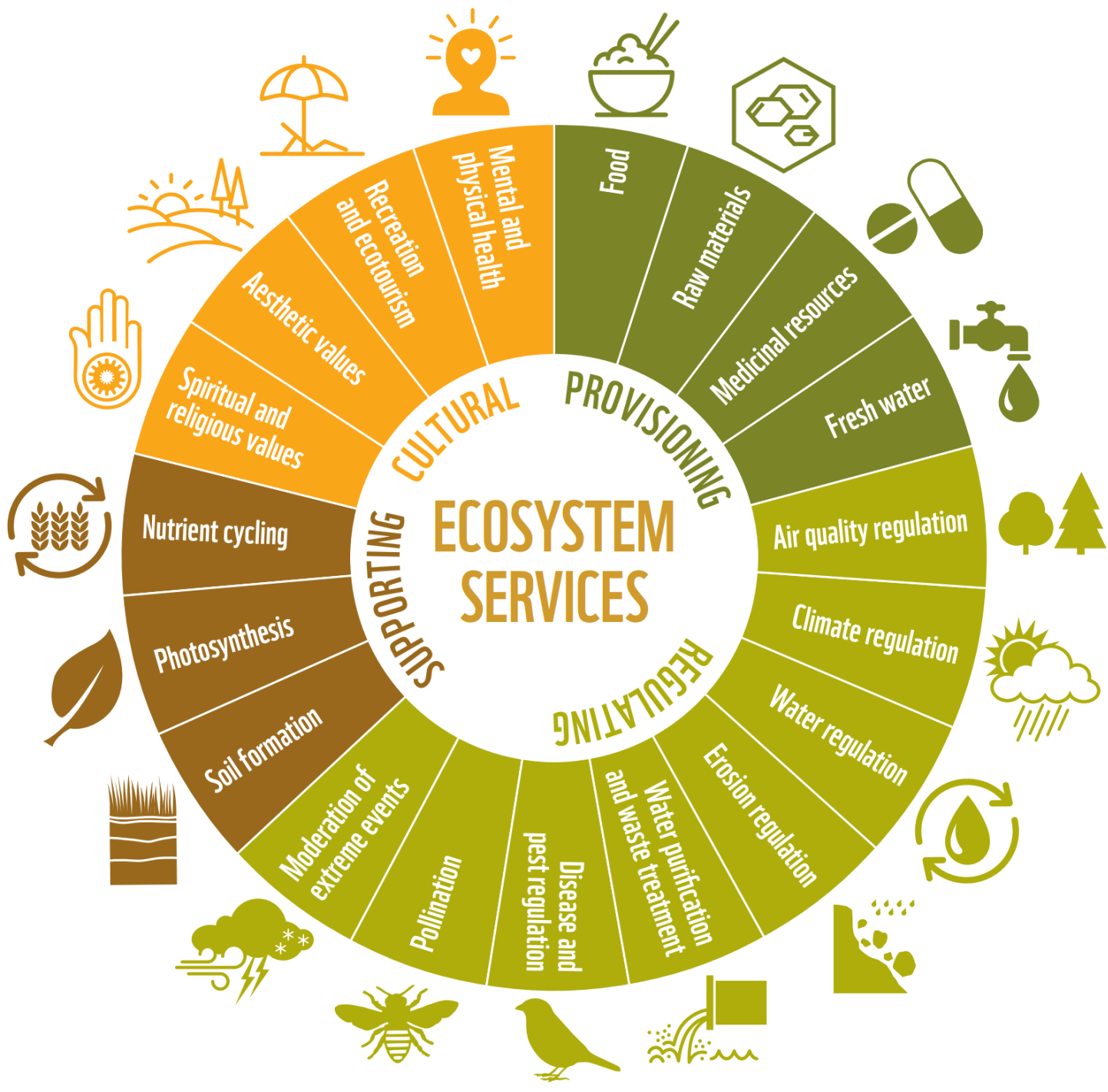
Agriculture is right at the heart and a cause (at the behest of public and politicians) of most global problems.





■ Beyond zone of uncertainty (high risk)
■ In zone of uncertainty (increasing risk)

■ Below boundary (safe)
■ Boundary not yet quantified





Develop a global
partnership for
development



Eradicate extreme
poverty and hunger



Achieve universal
primary education



Ensure environmental
sustainability

2015

MILLENNIUM DEVELOPMENT GOALS



Promote gender
equality and
empower women



Combat HIV/Aids,
malaria and other
diseases



Improve maternal
health

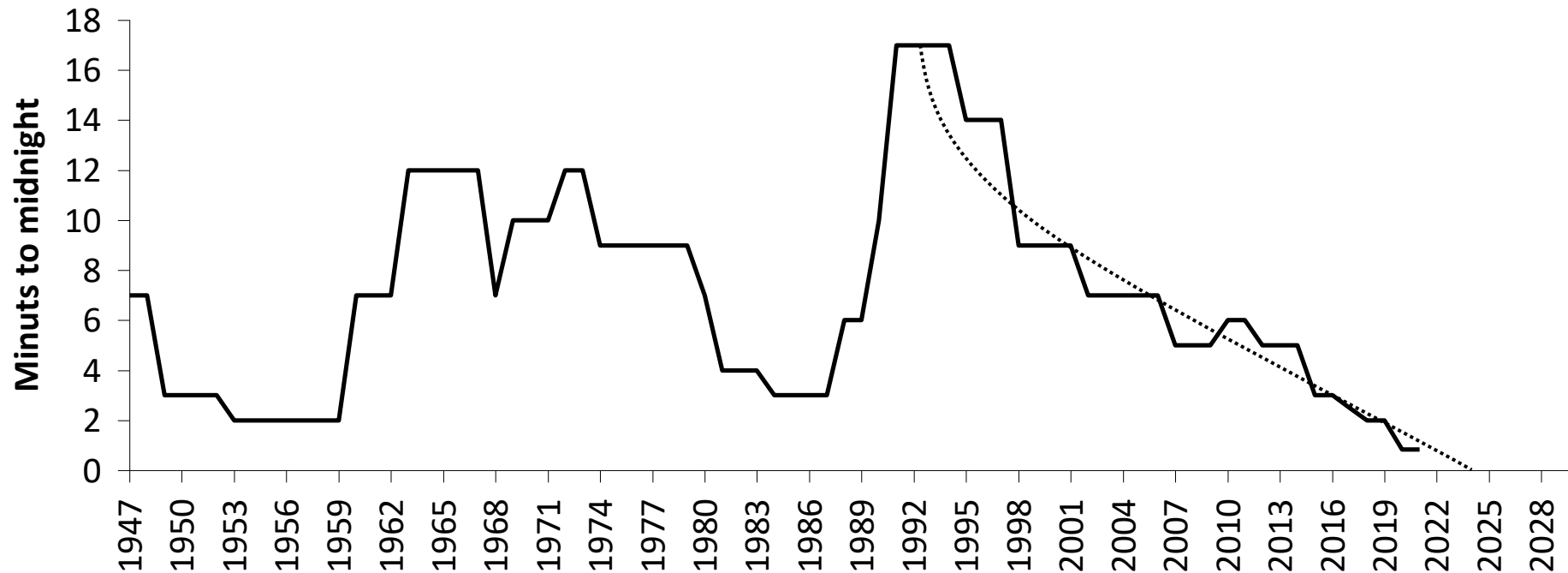


Reduce child mortality

The number of minutes to midnight on the doomsday clock of the Bulletin of the Atomic Scientists



The Doomsday Clock is a symbol that represents the likelihood of a man-made global catastrophe. It is the closest to midnight it has ever been – even in the middle of the cold war.



What is regenerative agriculture?

A bunch of farmers putting their hands up and admitting they are part of the 'problem' and having a crack at doing things better



What is regenerative agriculture?

At a practical / agronomic level RA integrates a number of (very) well established farming techniques

- Conservation agriculture
- Rotations – especially with livestock and cropping
- Min and no-till
- Keeping soil protected – residue management
- Cover cropping



What is regenerative agriculture?

And some more innovative techniques

- ‘Holistic’ grazing management
 - Long residuals
 - Deferred grazing
 - Diverse species pastures
- Use of diverse plant species mixtures
- Biofertilisers and biostimulants



What does RA mean to NZ agriculture?

Farmers wanting to do the right thing

Increased adoption of proven agroecological techniques to boost productivity and reduce environmental impact



What is regenerative agriculture?

It is outcomes focused (cv. input focus of organics)

- Increased social health
- Increased soil health
- Increased biodiversity
- Increased stock health
- Increased profit



What is regenerative agriculture

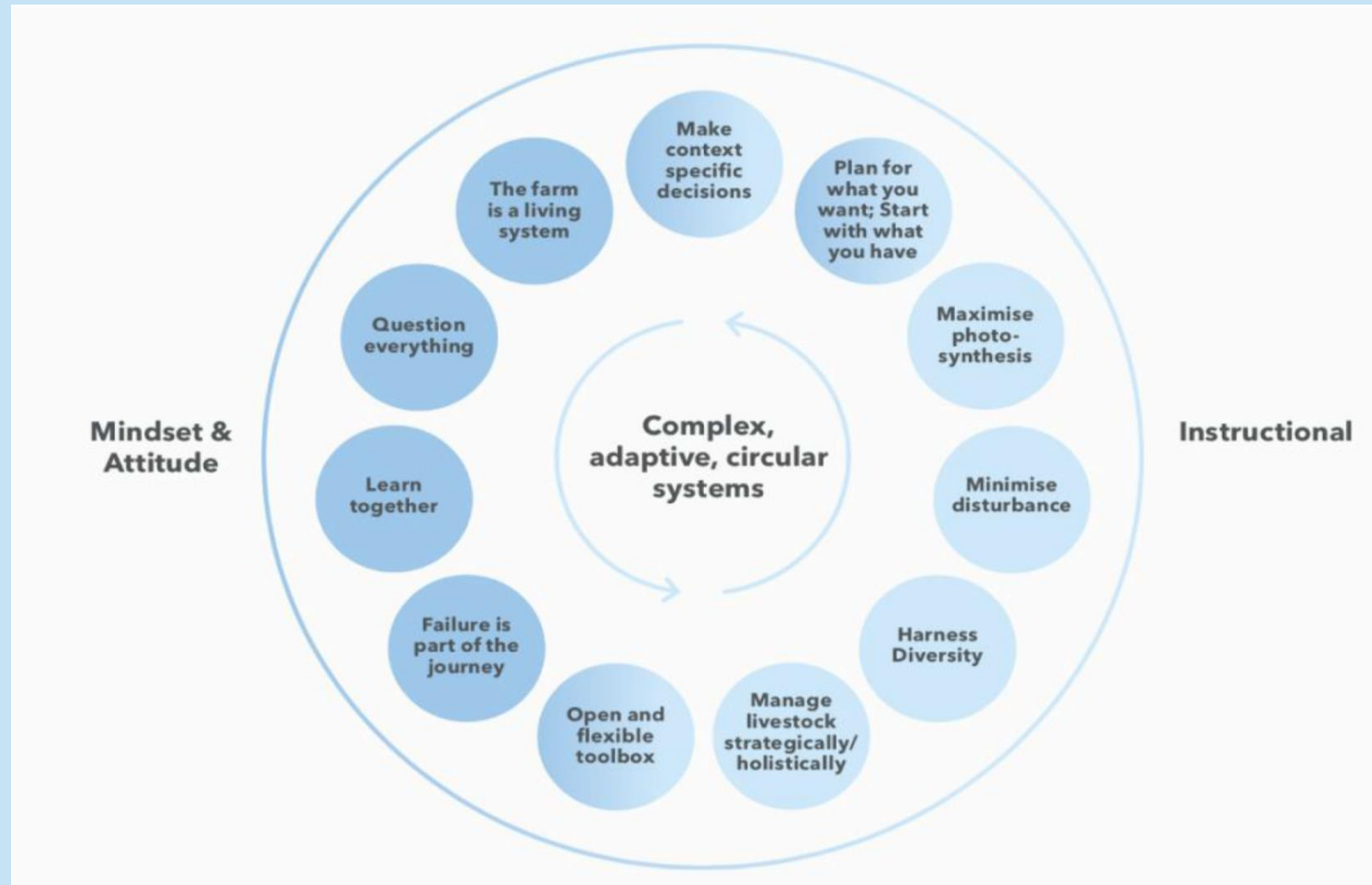
Empowered farmers

- Internet and social media have transformed the ability of like-minded farmers to collaborate
 - A 24/7 fieldday, consultant, friend, colleague and mentor
- A willingness to call out farmers not doing the right thing
- Wanting to push boundaries

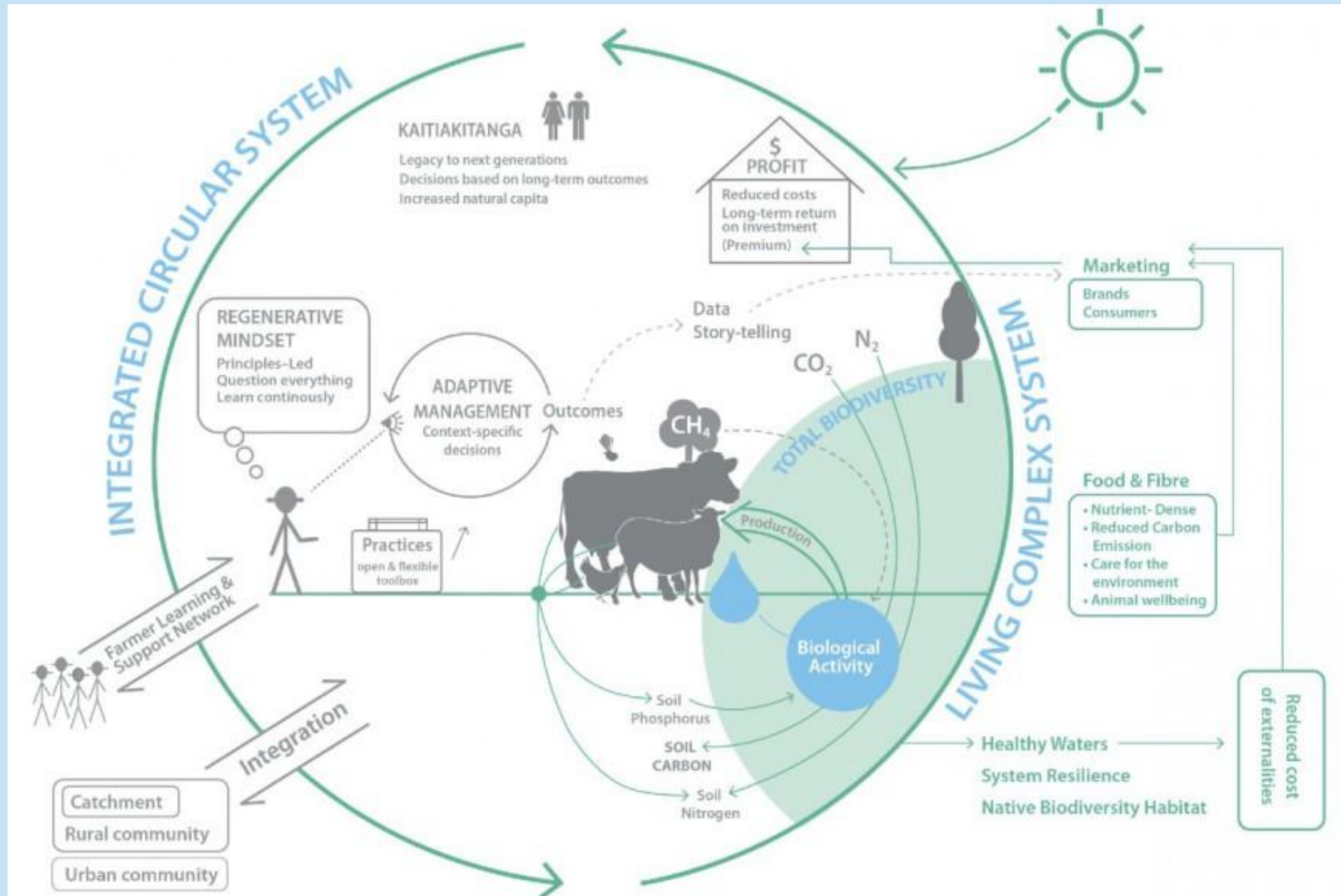


What is regenerative agriculture?

Most importantly it is a mindset



Viewing the farm as a complex adaptive system



What does RA mean to NZ agriculture?

Farmers addressing environmental challenges

Giving farmers more tools and social support



What is regenerative agriculture?

It's a symptom – of the (r)evolution from intensive agriculture to agroecology



The growth of agroecology and the alt-ags

It feels like a tipping point has been reached in agriculture

- A Lighter Touch – hort + arable pesticide reduction
- Pesticide resistance – Herbicide Resistance MBIE
- Bioprotection Aotearoa
- EU Farm to Fork strategy – based on agroecology
- UN (FAO, IPPC, UNEP, IPBES, etc.) UK Food Farming and Countryside Commission, IPES-Food, WWF, et. al. all point to agroecology as the future of farming



What does regenerative agriculture mean in a NZ context?

It's a **symptom** of the global shift from intensive agriculture to agroecology

- Regen ag is 'just' another form of agroecology
- Agroecology aligns with NZ's transition from commodities to high value food stories
- A Lighter Touch – loads of agroecology
- Herbicide resistant weeds – answer is agroecology

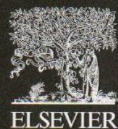
RA is therefore one path for farmers to transform into agroecology





Agriculture's **Ethical Horizon**

Third Edition



Robert L. Zimdahl

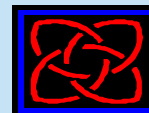
Agriculture's ethics and values

Rekindles the debate about the values and ethics that underpin ALL agricultures

- Ecocentric?
- Biocentric?
- Anthropocentric?
- Egocentric?

How **ought** we undertake agriculture and agricultural science?

- The biggest un-debated and unanswered question there is in agriculture



Conclusions

It feels like we are on the cusp of the transition from intensive agriculture to agroecology

Regenerative agriculture is a symptom of the transition to and a path to agroecology

Regenerative agriculture is NZ farmers owning up and trying to do the right thing

We need to urgently debate the ethical foundation of agriculture and agricultural science

