Achieving Sustainability via Eco-labels? Examining the social and ecological dynamics of the 'Food from Somewhere' Regime.

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Kā Rakahau o Te Ao Tūroa
Centre for Sustainability
Agriculture • Food • Energy • Environment

Today's talk

1. **Background: the Global/Local Binary**
2. Bio-economies & Eco-economies in the middle ground
3. Foods from Somewhere
4. New Zealand and the ARGOS Project
5. Reflecting on Foods from Somewhere: will eco-labels deliver sustainability?

A problematic emerging binary?

The Corporate Industrial Food Regime

versus

Local foods

“The Bad”: Corporate Industrial Food

Following Philip McMichael…

- Global scale,
- Corporate-owned,
- Industrial, intensive production,
- Trading on cheapness,
- Increasingly financialised,
- Global integration,
- Land Grabs.

“The Good”: Local Food

Following Harriet Friedmann:

- Small scale,
- Local, ecologically connected,
- Driven by social movements, local producers, small business, local politics…
- Culturally/socially embedded,
- Trading on ‘qualities’,
- Flourishing…

What is missing from this is an engagement with action in the 'middle ground'

1. In the light of the collapse of the global drive for liberalisation and de-regulation… what about the European model of strategic regulation for agri-environmental outcomes?
2. Terry Marsden's talk engages with the local/regional spatial scale – describing new socio-eco-economic assemblages/regimes.
3. Is there global-scale 'middle ground' action – the Food from Somewhere Regime?

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An unexpected excursion… Hugh attempts to channel Terry!

Sorry that I couldn't make it. Whatever you do, don't let Hugh Campbell loose with my talk!

Sustainable food paradigm

1. New food security and sustainability crisis with combined landscape pressures associated with agricultural intensification, climate change, resource depletion and health and welfare.

2.Need critical understanding of how science, technology, industry, markets, culture and policy regimes are responding to these more fundamental problems.

3. Developing an engaging sustainability science in developing a new food paradigm.

Key parameters

Dimension	Bio-economy	Eco-economy
Ecological modernization	Weak	Strong
Geographical scale	Global, national and regional, increase of scale and miniaturizing as expressions of the de-coupling from local conditions	Regional and local, embedded in local environmental conditions
Economic model	Economic growth	Steady-state, small-scale economy
Time-scale	Short term, speeding up life cycles	Long term
Power	Corporate control	Citizens and consumer networks
Value-adding	Supply chain logistics	Value capture at local and regional level New networks
Science	Reductionism, biological engineering Aimed at interchangeable, composable parts for industrial production	Holistic approach, use of whole products.
Driving forces of regional development	Competition, clustering and socio-technical systems	Multi-functionality, networks and resilience
Environmental goal	Closed loops of energy, waste and minerals and eco-efficiency	Based on ecological conditions and natural processes
Social	No or limited connections with local communities	Embedded in local, social networks
Rural-urban linkages	Connected to metropolitan industries	Connected to rural-urban landscapes and consumer networks
Landscape	Eco-industrial sites, agroparks	Rural, agricultural services and leisure landscapes
Innovation	Knowledge spillovers between firms, technological innovation	Open innovation and ecology based
State influence	Hygienic-bureaucratic control	Facilitate bottom-up developments
Regional policies	Trade freeness, facilitate knowledge exchange & technical innovation, redistribution and congestion.	Multi-functional land-use, facilitate new interfaces, networks and rural-urban linkages

Multi-level perspective on system transitions

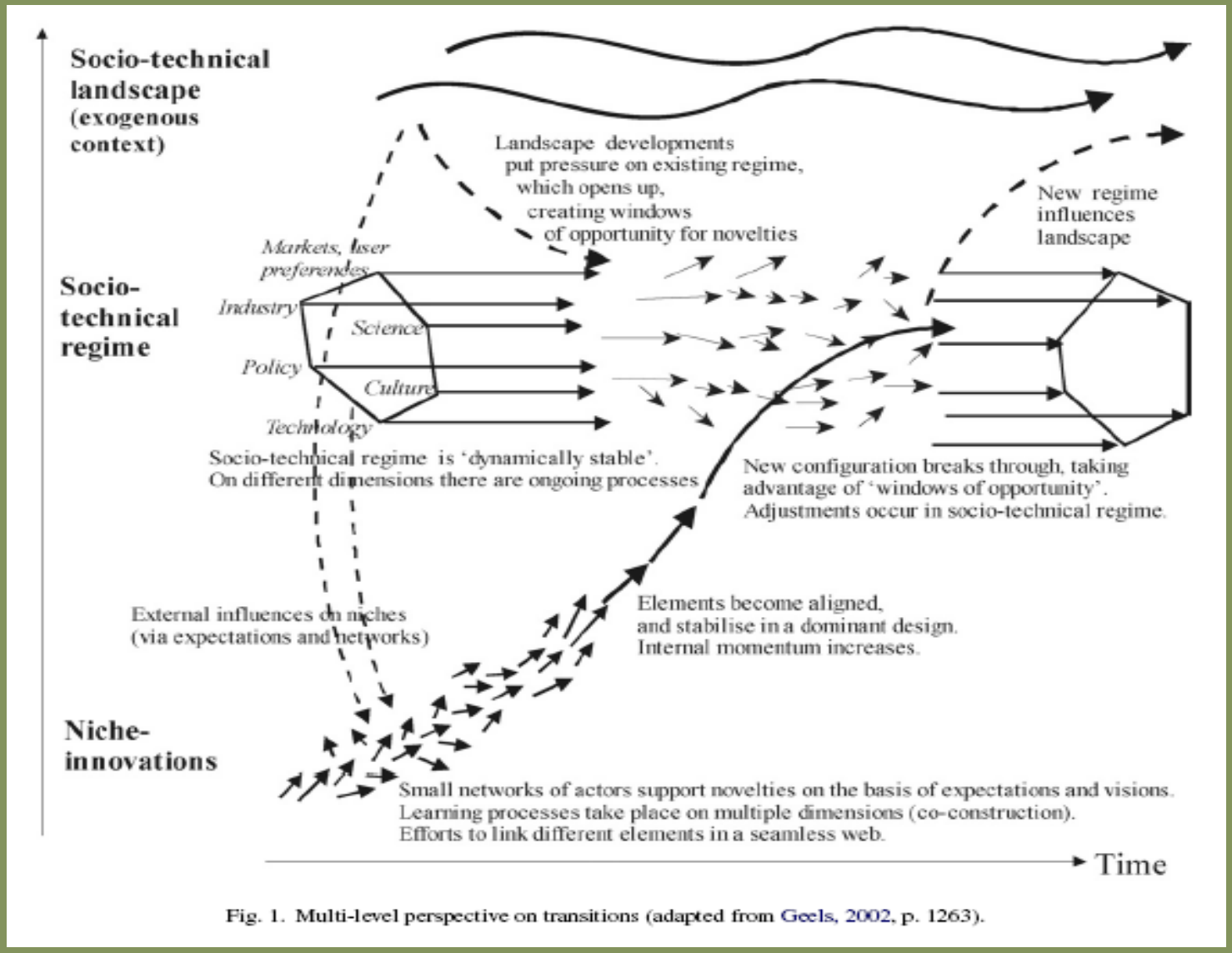
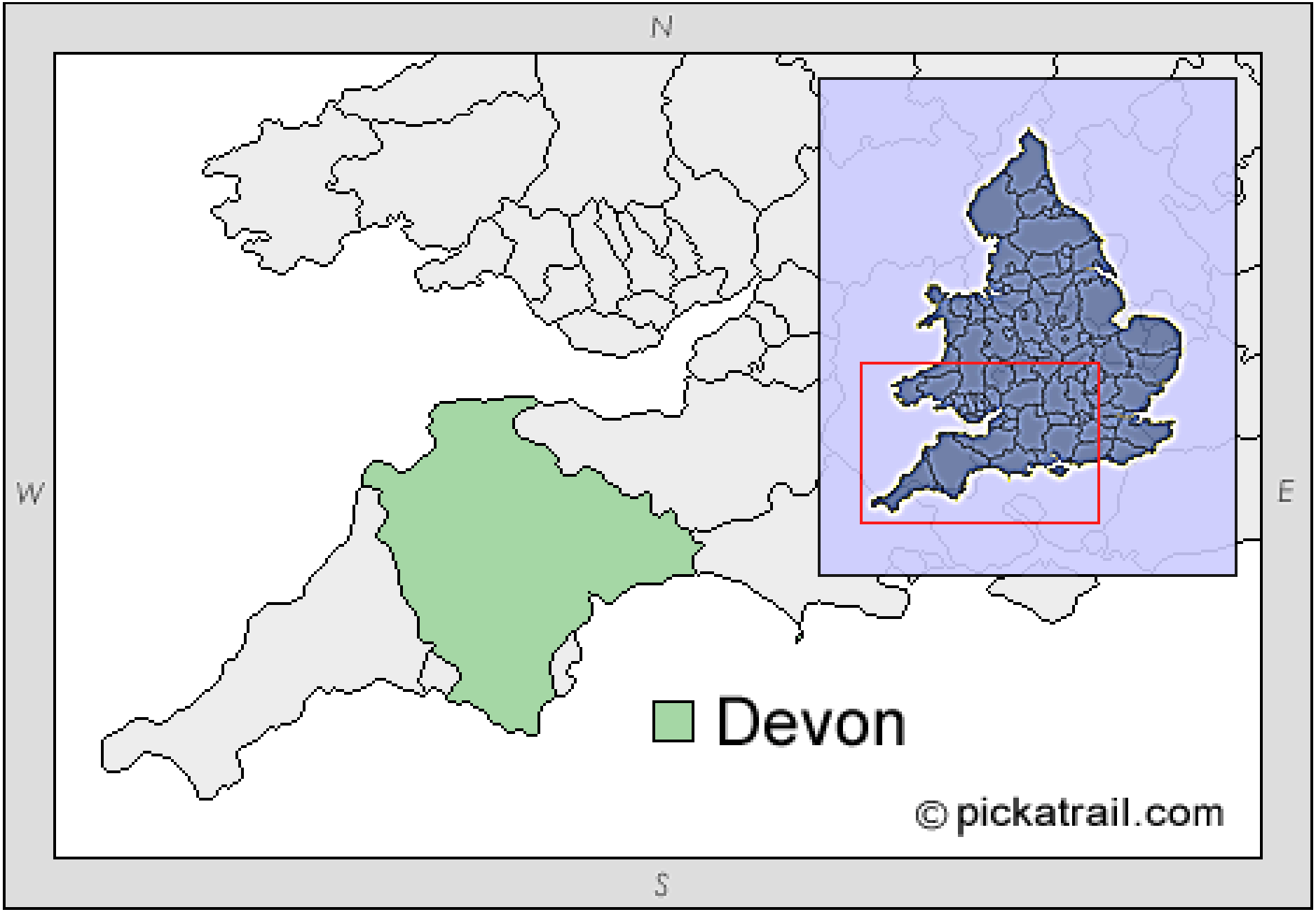


Fig. 1. Multi-level perspective on transitions (adapted from Geels, 2002, p. 1263).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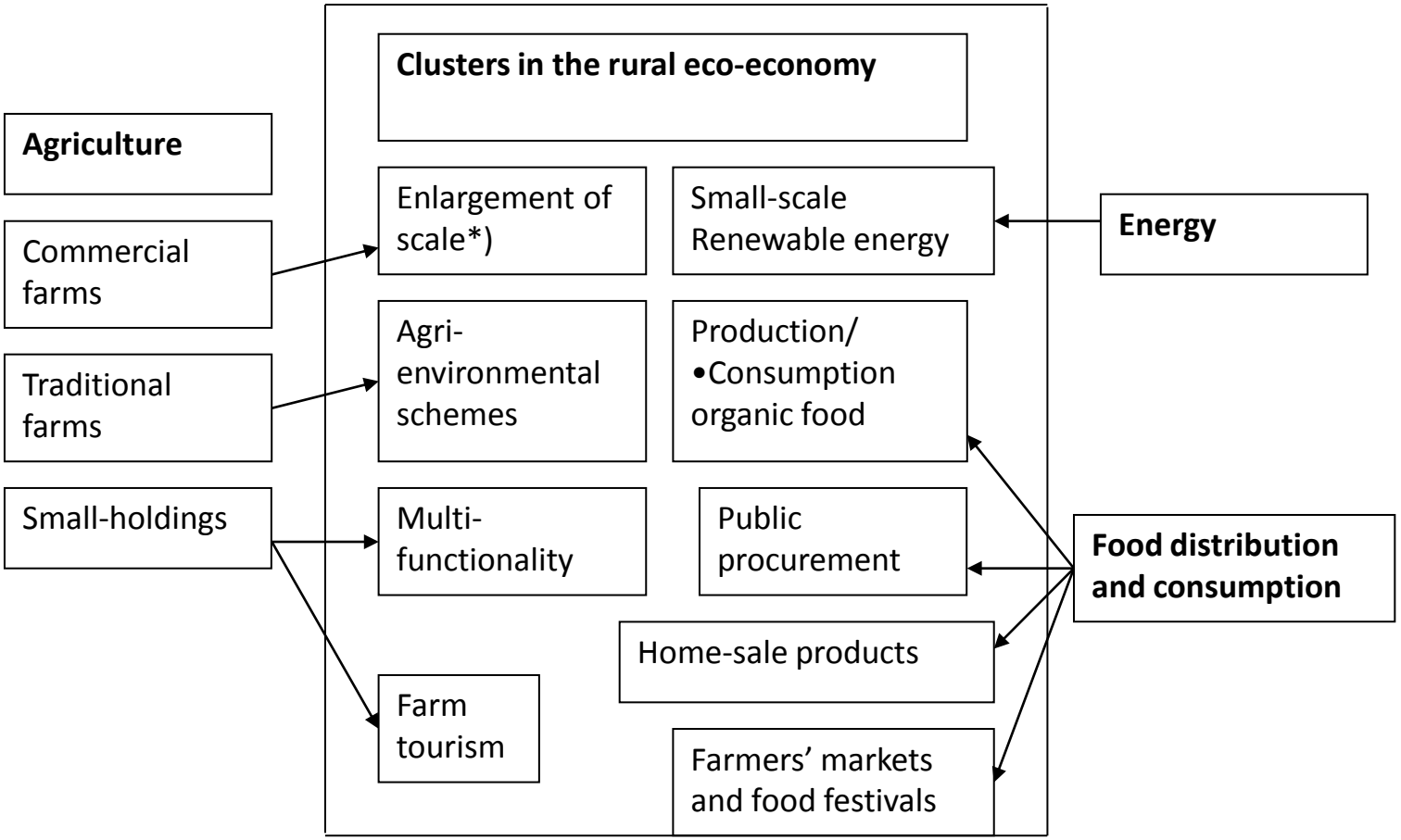
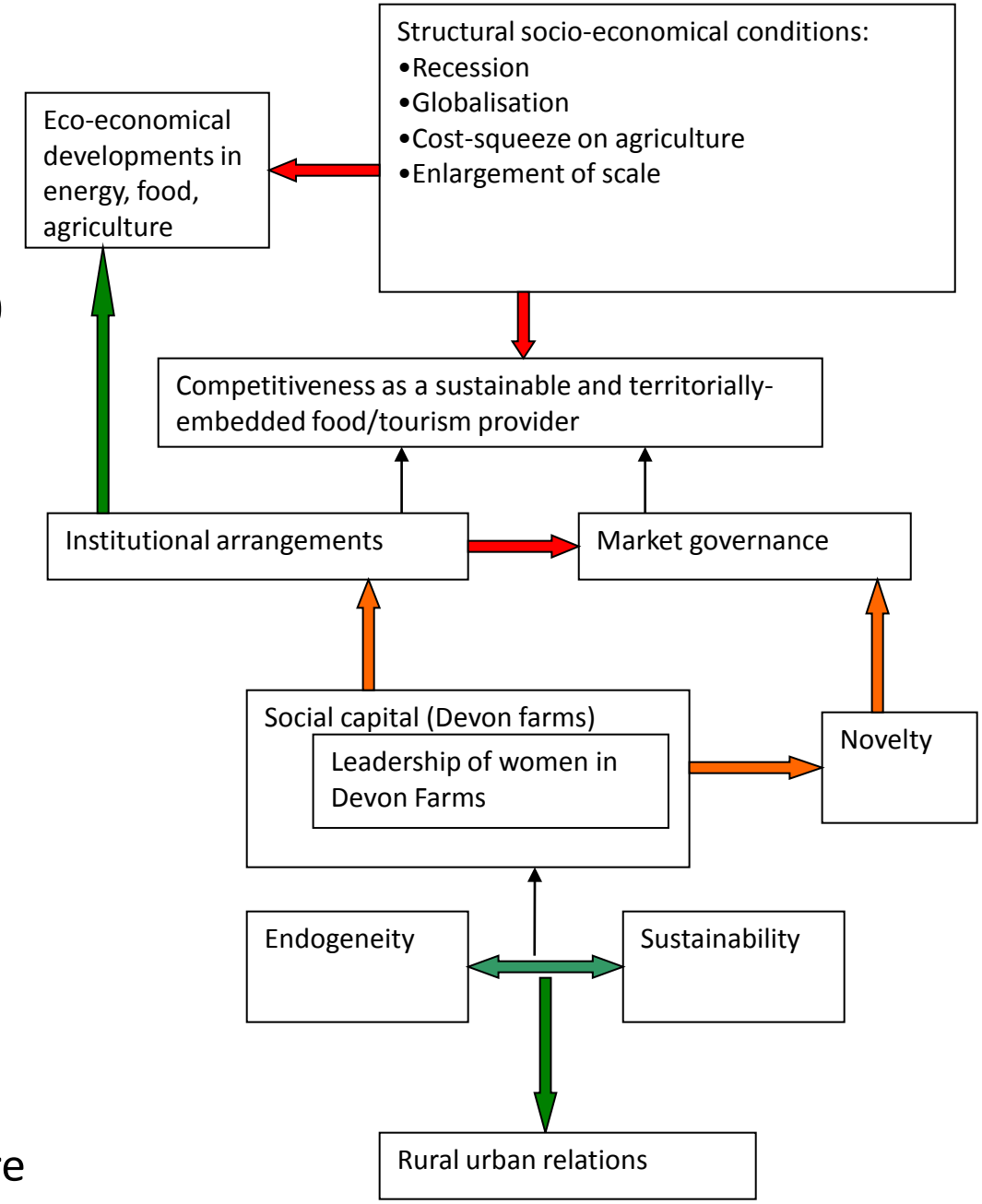
Emerging eco-economical clusters in Devon



Devon:
the adapted rural web



Red = weakened relations
Green = strengthened relations
Orange = challenges for the future

Constraints for the eco-economy

1. the organisational and methodological challenges of scaling-up diverse and place-based initiatives under ‘third nature’ conditions.

2. the variable enabling role of policies and interventions for instilling long-term growth.

3. the variable role of new forms of research and development for social and economic innovation for adaptive change over time and space.

4. The problems of marginalisation and fragmentation.

Excursion over…

Have a great conference everyone!

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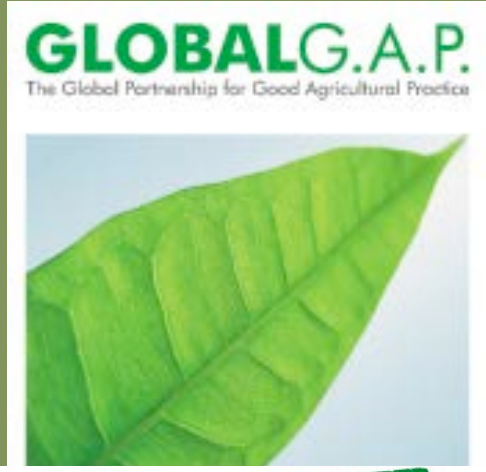
Seeking middle ground: the Food from Somewhere Regime

The Food from Somewhere Regime (or maybe the Food from Someone Regime?).

- Global-scale trade, but often linked to global social movements,
- Backed by large-scale retailers and producer organisations,
- Internationalised audit and certification,
- Harmonising global standards, measures and quality claims around safety, sustainability, worker welfare etc…
- A new world of ‘eco-labels’…. 370+ in Europe (European Environ. Agency, 2010)



What do we need to know about Foods from Somewhere? Are we worried?

- Michael Pollan described the commercial organic industry as the 'Organic Industrial Complex',
- Are eco-labels a 'tick-box' scheme that have no real impact on farmer practices?
- Is it a scam that allows conventional farmers to continue existing practices while eroding the market position of 'real' alternative producers?
- Don't we have to change farmer identities BEFORE they can really change their farm practice?
- Can corporate participants in Food from Somewhere really deliver sustainability outcomes (salvation via Sainsburys?)…
- Do global scale audit and certification schemes have the flexibility to deliver local sustainability outcomes?

Or maybe we are encouraged…?

- Rapid recruitment and strong producer enthusiasm.
- Opening up a space where conventional producers can try something alternative in a culturally ‘safe’ way.
- Introducing into mainstream food commerce some ‘unthinkable’ practices, claims and qualities.
- Operating at a large scale so that technological investment, R & D and political support are more forthcoming?
- And perhaps these new audit schemes DO deliver outcomes down on the farm?

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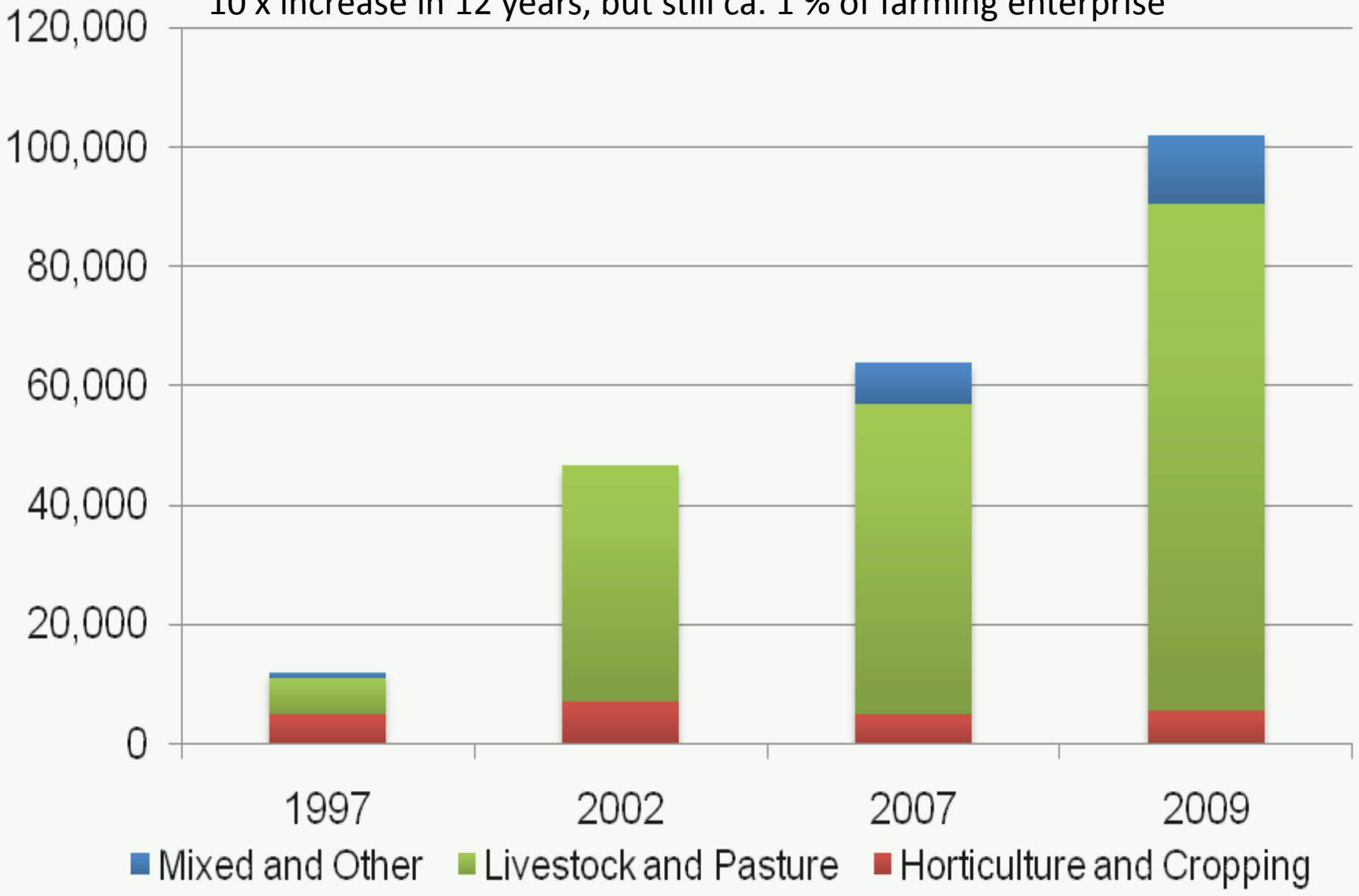
- 62% of national income is derived from primary production
- massively liberalised economy in 1984
- Over 90% of food produced is exported.
- 32% of internationally traded dairy products
- 30% of internationally traded kiwifruit.
- Early entrant into global eco-label schemes.

Land Area under Organic Certification (Hectares)

10 x increase in 12 years, but still ca. 1 % of farming enterprise



Fast uptake of Eco-label/Market Audit Schemes in past 15 years

Industry Sector	by 2006
Horticulture:	• 76% involved in an environmental QA or audit scheme. • 27% are involved in 3-4 such schemes.
Sheep/Beef	• 37% involved • 23% in more than 1 scheme.
EurepGAP (now GlobalGAP)	High uptake in horticulture.
Sustainable Winegrowing	Medium to High uptake in grape production.

The Agriculture Research Group on Sustainability (ARGOS)

www.argos.org.nz

A 9-year project studying sustainability on 107 'real' farms and orchards in New Zealand.

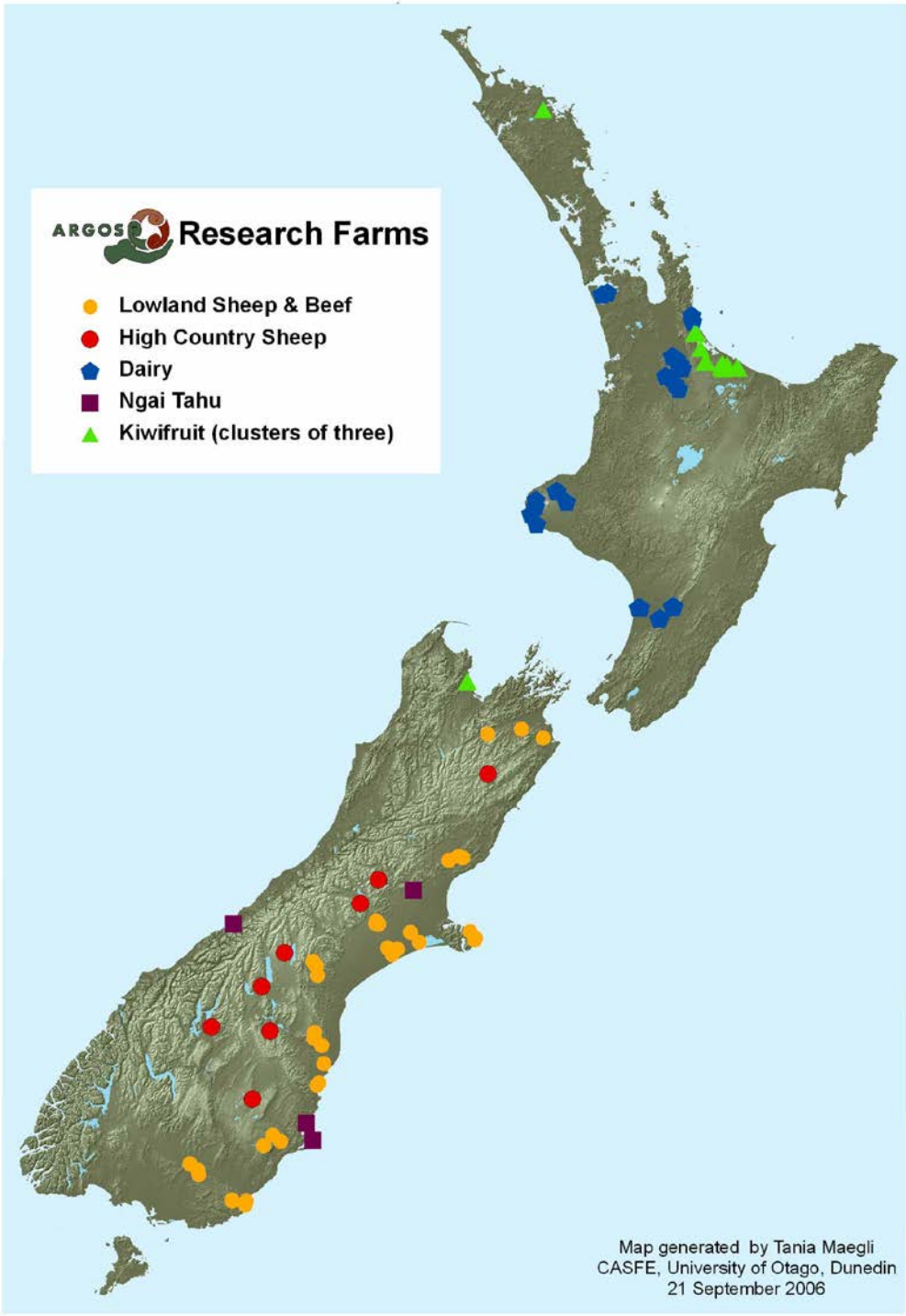
Organic farms matched with conventional and Integrated Management farms in geographically contiguous triplet clusters.

Interdisciplinary – examining social, economic and ecological dimensions of farm change over time.

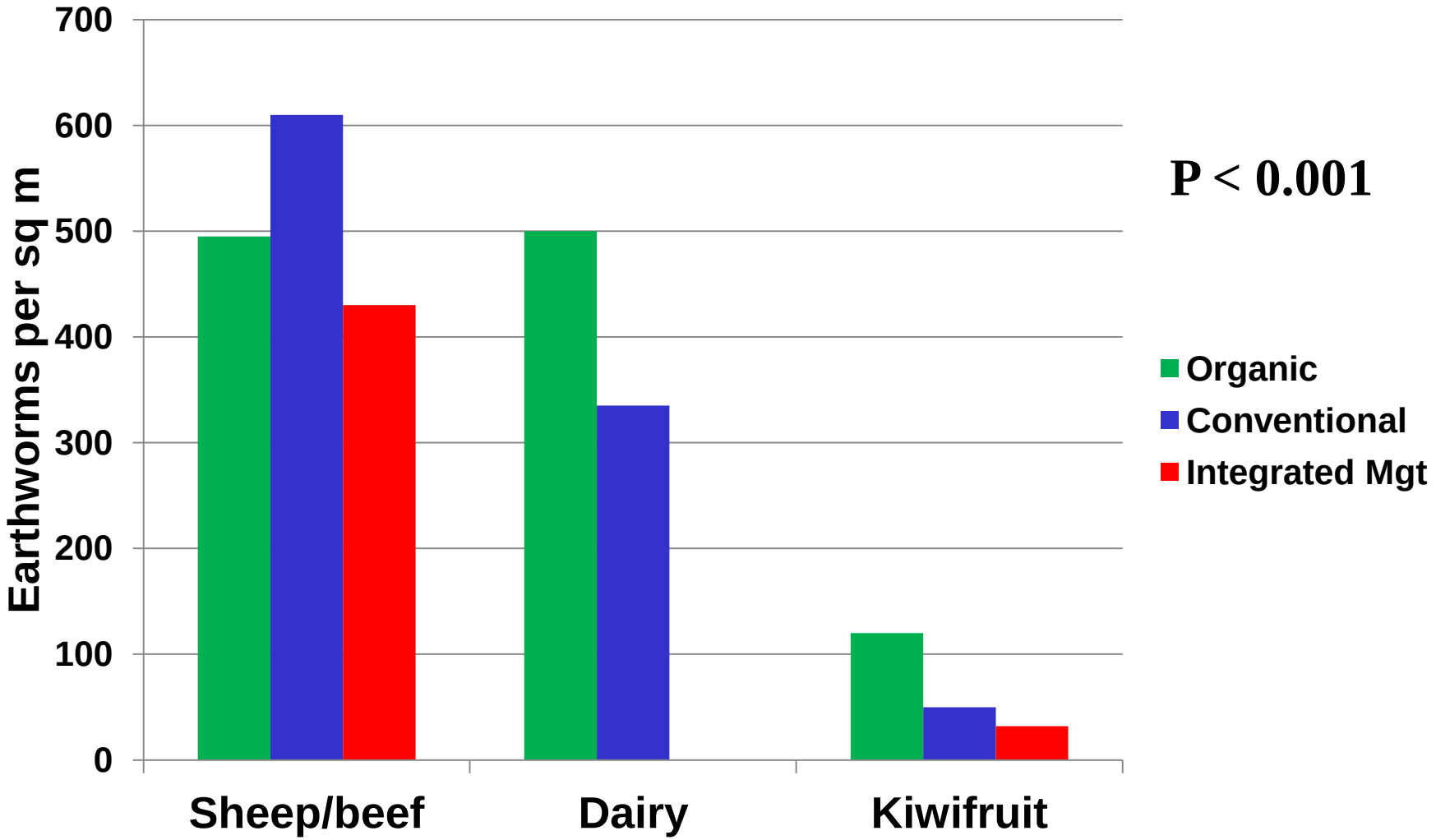
ARGOS

- Sheep/beef
- Kiwifruit
- High Country pastoral
- Dairy
- Maori land holdings

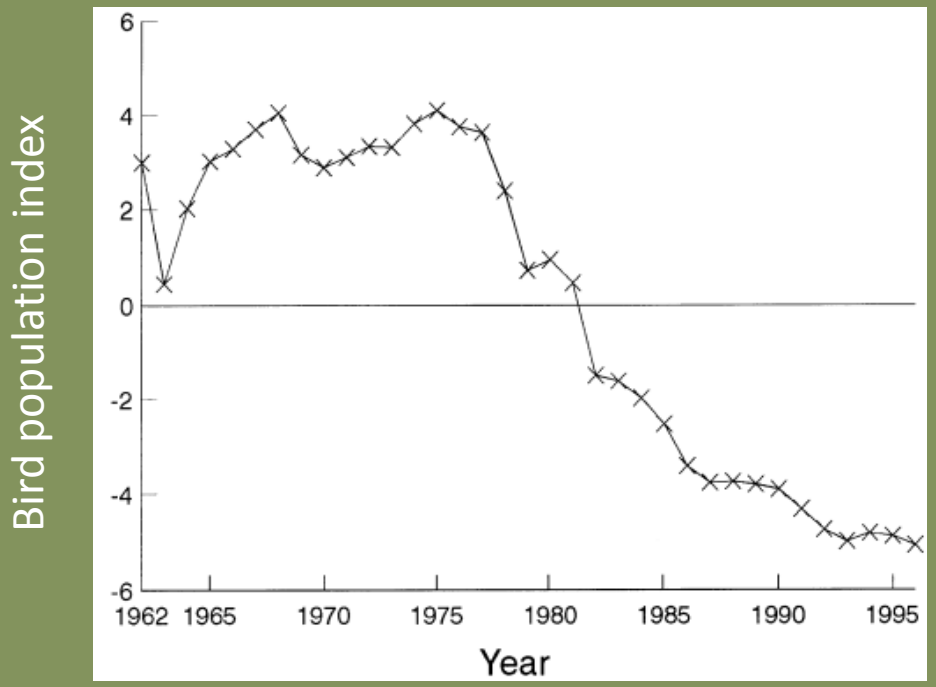
- Total: 107 farms

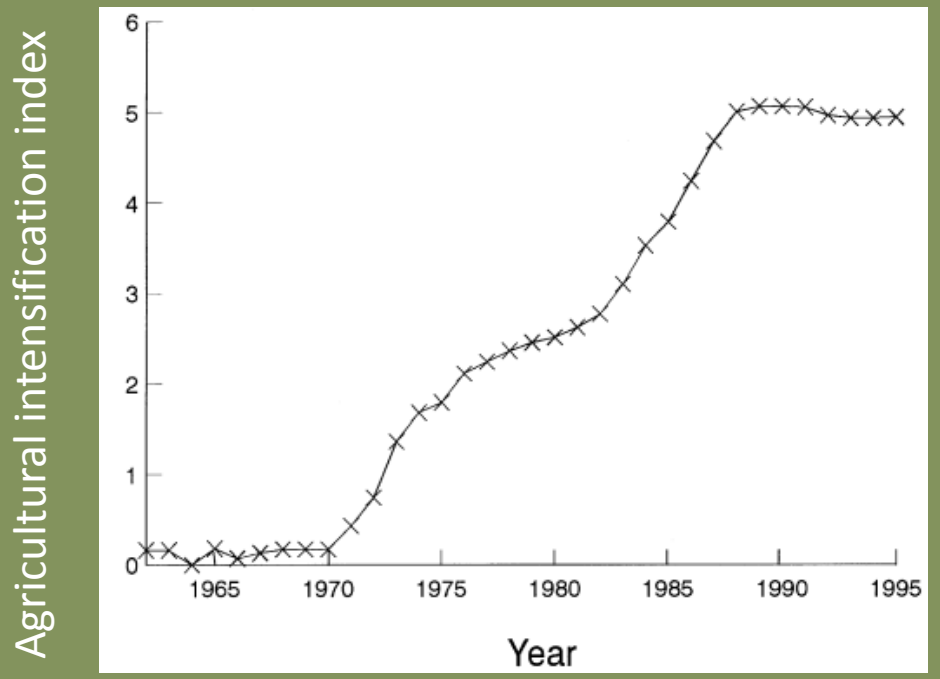


Earthworms: a prime example of ‘agricultural biodiversity’

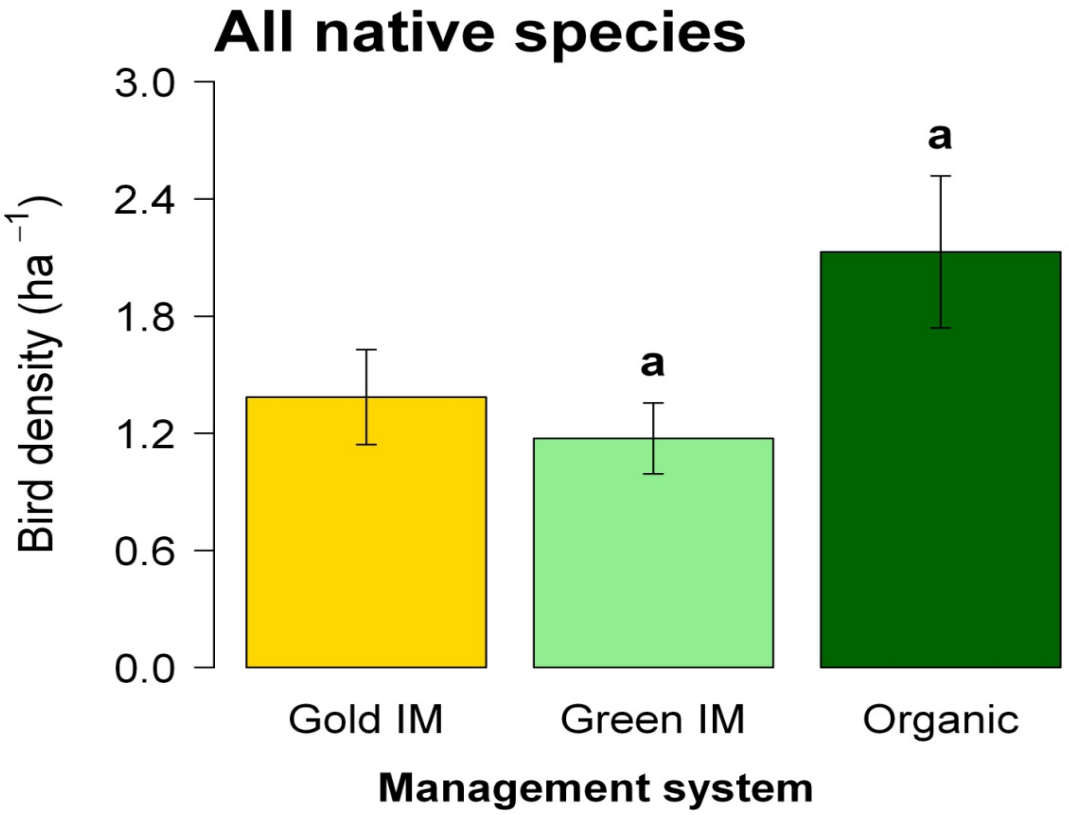


Birds as ecological indicators eg. impacts of intensification on birds in Europe



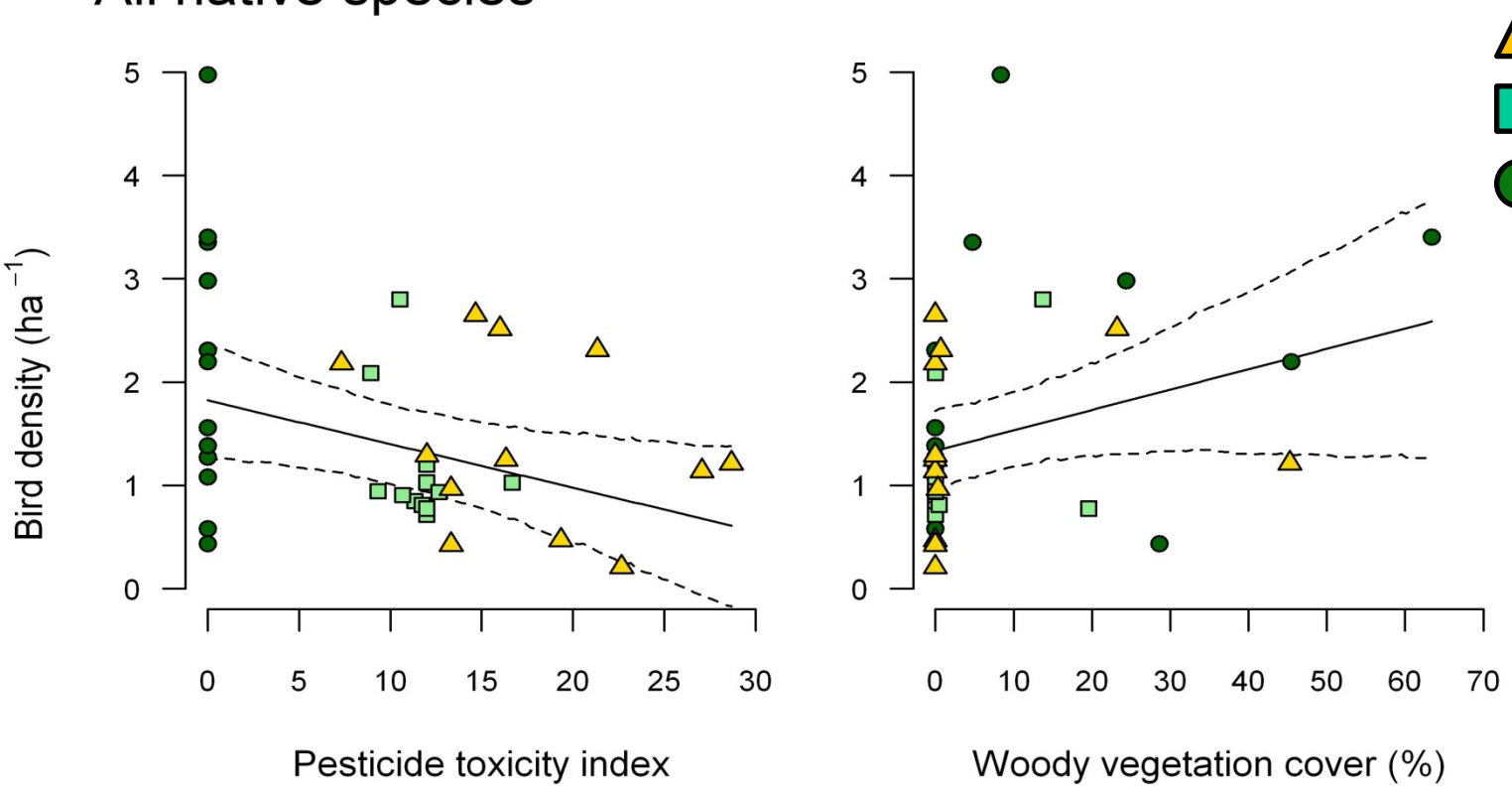


Chamberlain et al. 2000 J. Appl. Ecol. 37: 771-778



MacLeod et al. Journal Appl. Ecol. 2012

All native species



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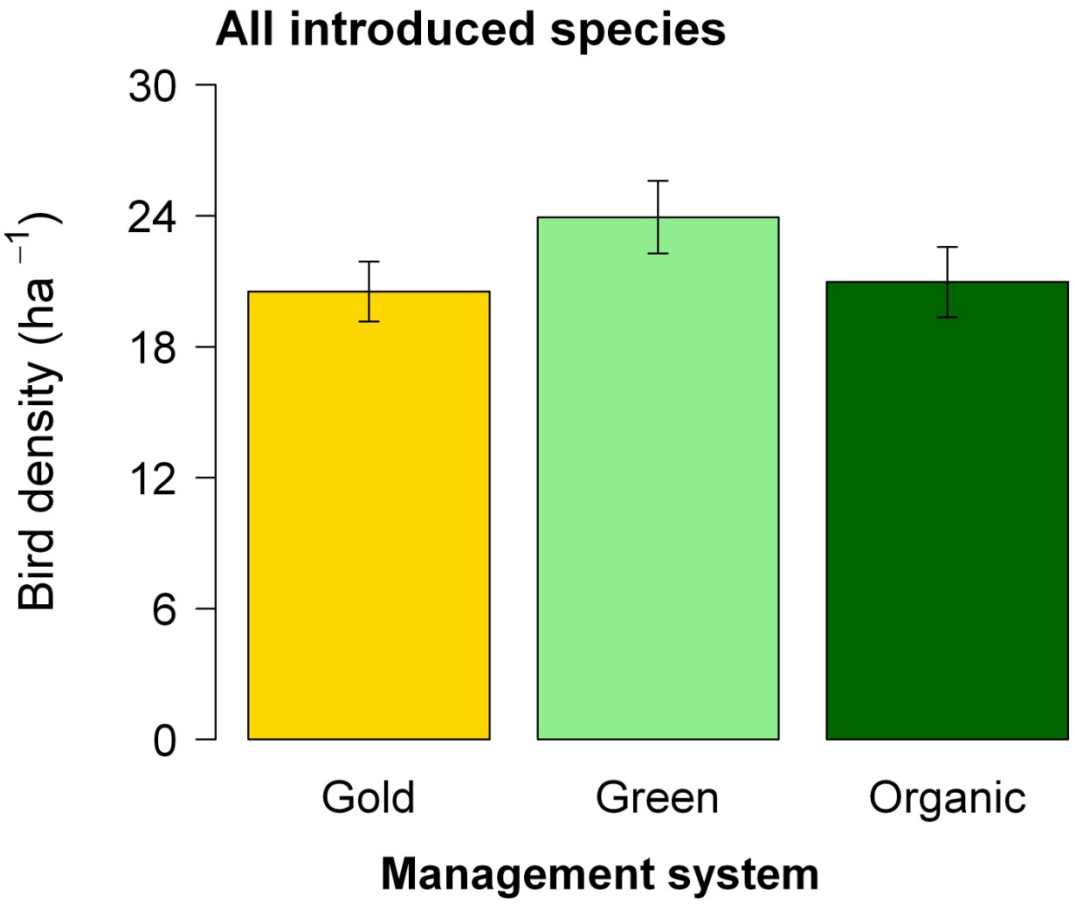
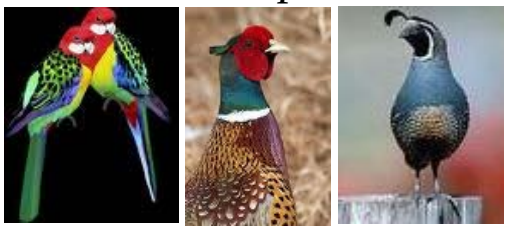


Insectivorous passerines

Granivorous passerines

Gamebirds & parrots



No evidence of management system effects
or woody vegetation or pesticide effects

MacLeod et al. Journal Appl. Ecol. 2012

ARGOS

Sustainability indicators

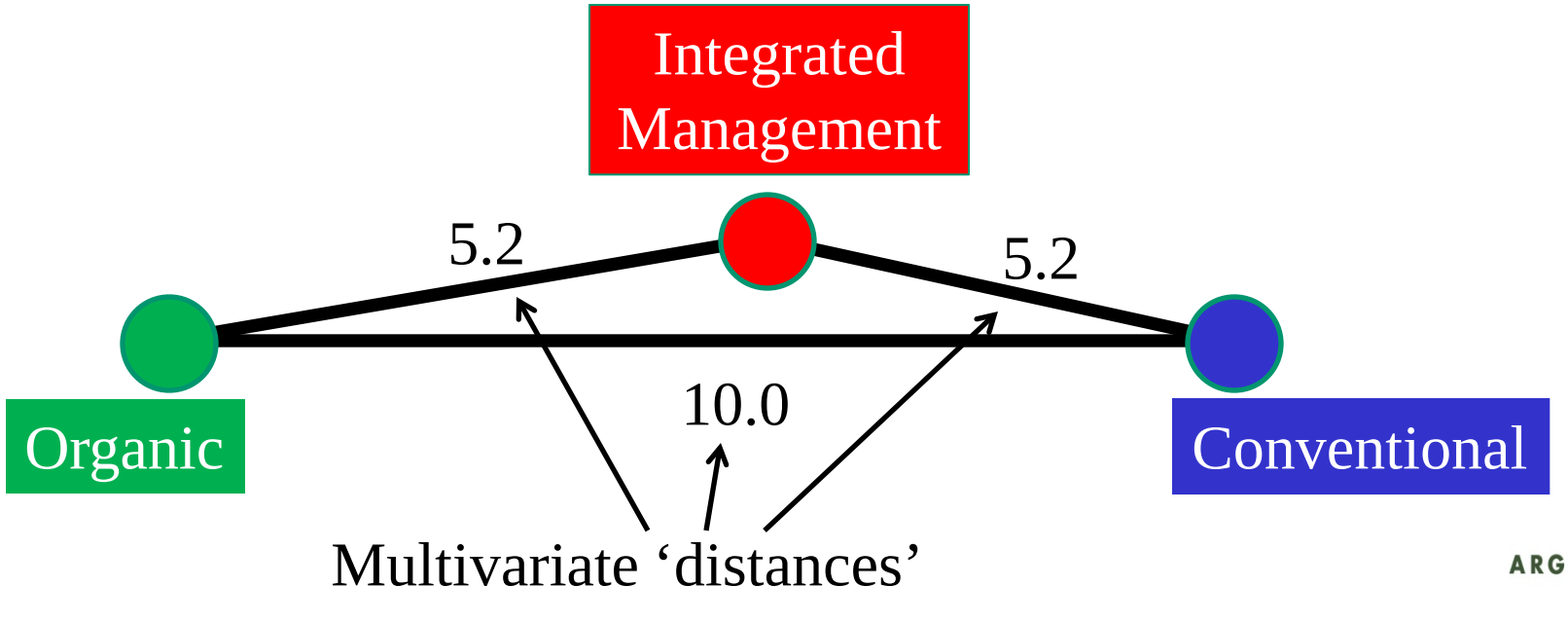
- Often differ between audit systems (reject null hypothesis 25-65% of time depending on intensity)
- The size of the differences are still small
- … but they could be made much larger by ecologically targeted interventions … prescriptions of audits are very blunt and low level
- We need to understand causation within agri-systems before QA systems can be better targeted
- Significant local elements of ecosystems behave differently

Are organic practitioners different from the others? (Hunt et al. 2009)

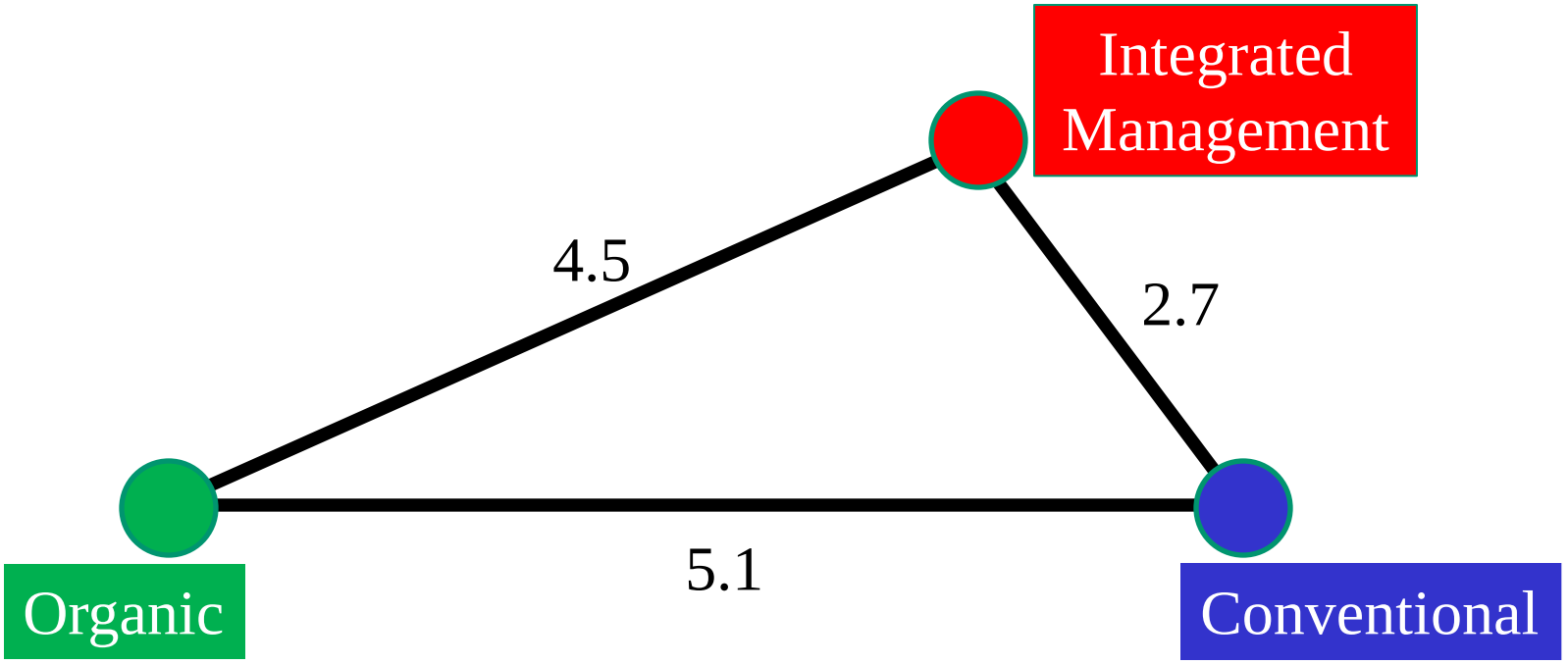
Index	Non-organic	Organic	t-Test significance
Economic Focus	+0.07	-0.15	0.034
Social Breadth of View	-0.17	+0.37	0.000
Environmental Breadth of View	-0.16	+0.35	0.000
Innovation likelihood	-0.21	+0.45	0.000

Multidimensional scaling:

is IM intermediate between organics and conventional? [Dr Lesley Hunt]

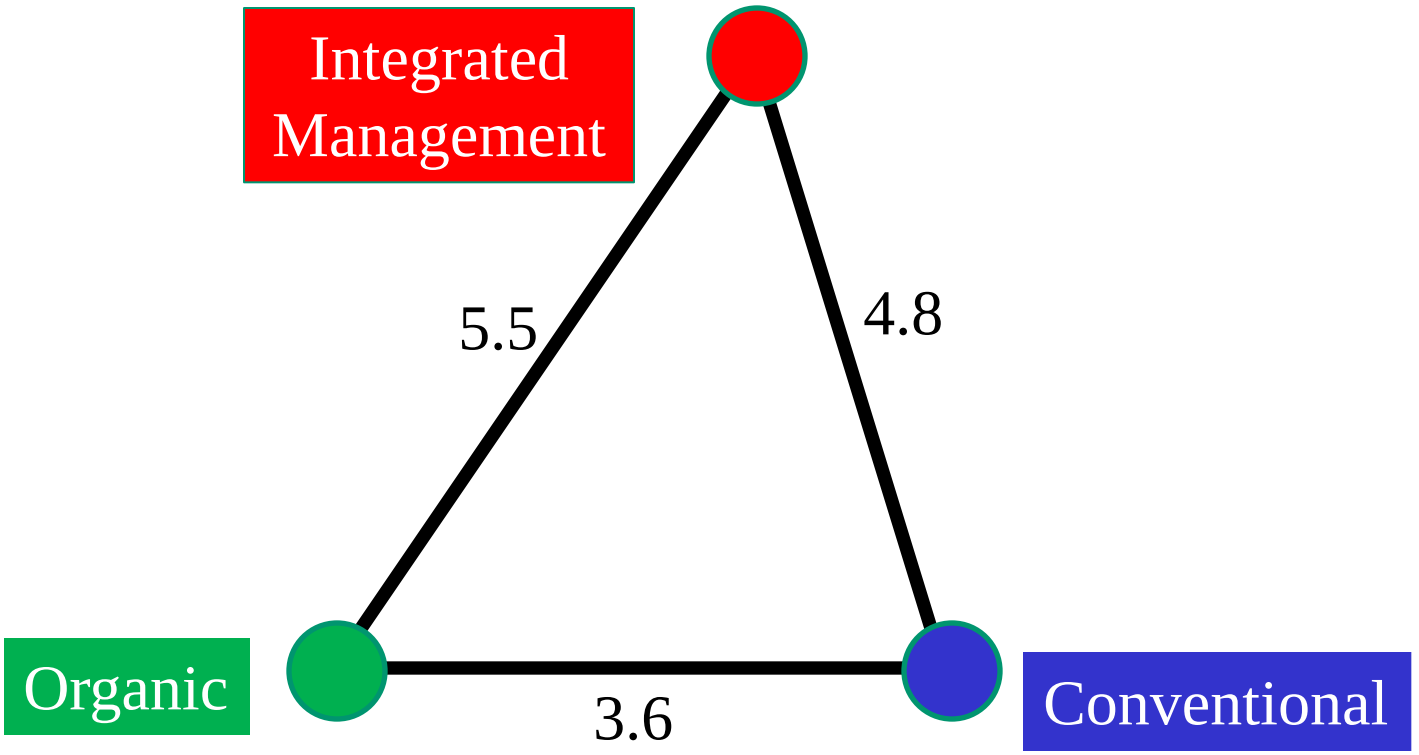


Productivism orientation (9 questions) [Fairweather, Hunt et al. 2009]

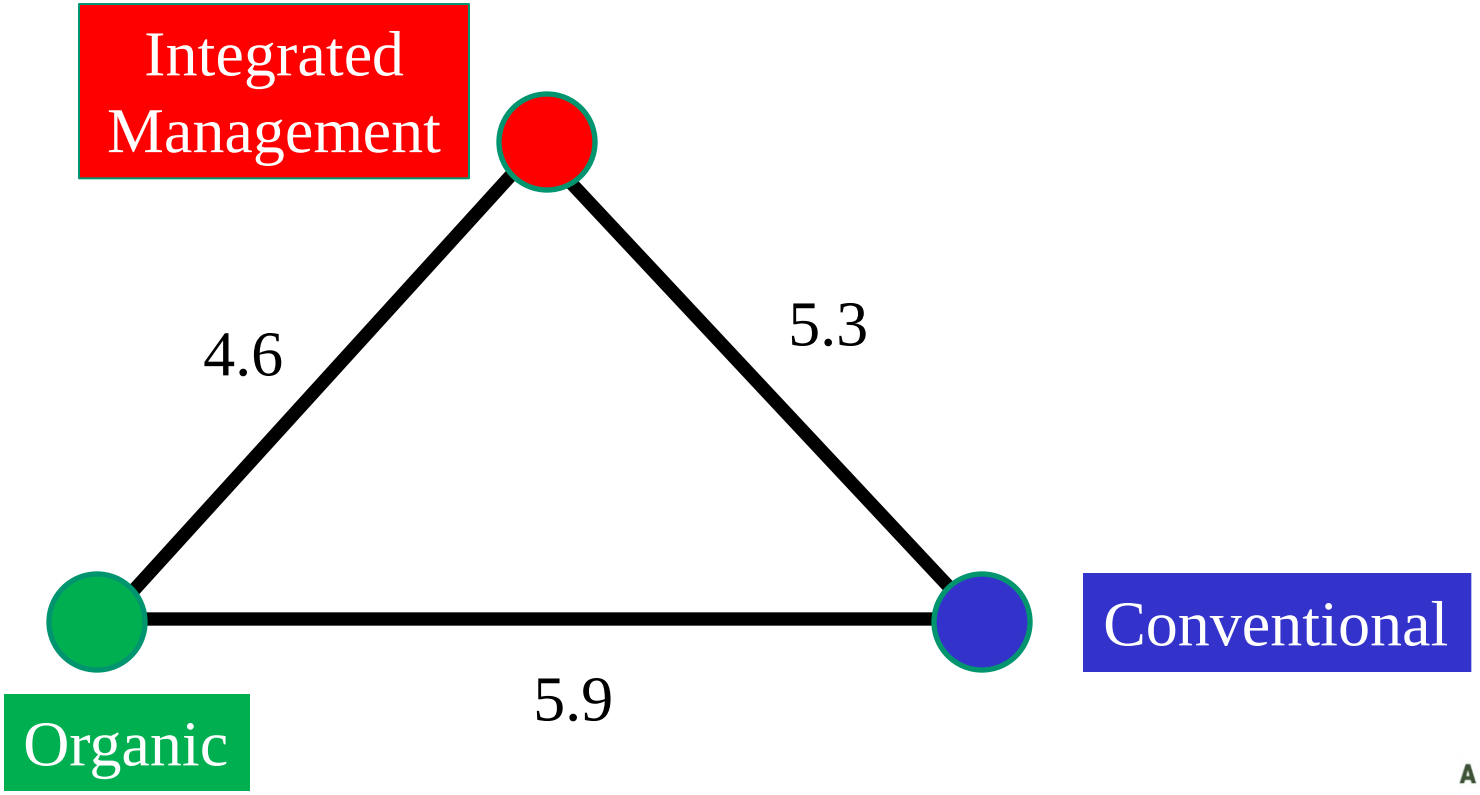


Financial orientation (11 qns)

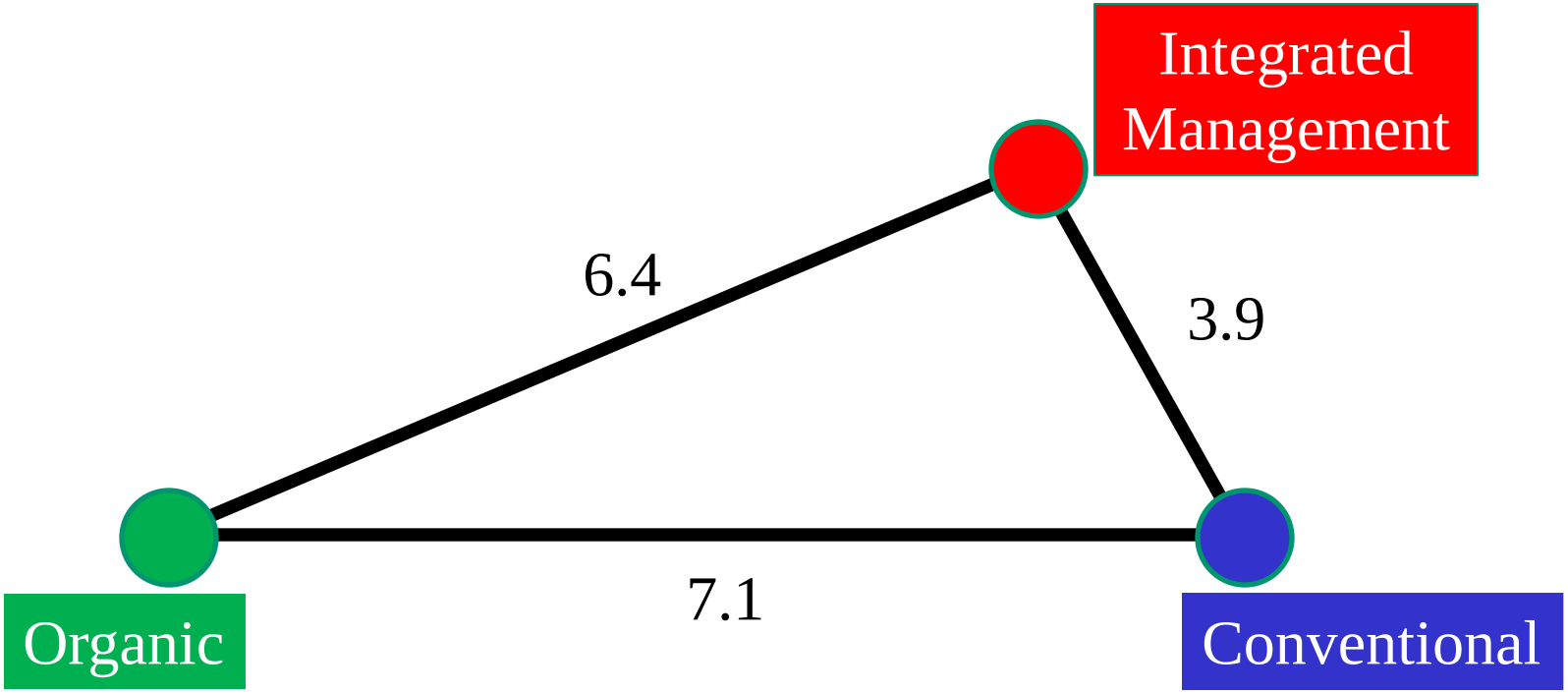
[Fairweather, Hunt et al. 2009]



Social orientation (14 questions)



Environmental orientation (17 questions)



So, ‘audit/certification’ systems were influential, but…

Other differences emerged among our groups of growers that were equally interesting:

- Interesting differences *within* the Conventional panel (influence of *identity/subjectivity)*

Fairweather, et al. (2009). 'Are conventional farmers conventional? Analysis of the environmental orientation of conventional New Zealand farmers. *Rural Sociology* 74(3): 430-454.

- Strong differences between Integrated Management in Sheep/Beef versus Kiwifruit (influence of *Industry Culture*)

Campbell et al. (2012) The social practice of sustainability under audit discipline: initial insights from the ARGOS project in New Zealand. *Journal of Rural Studies*, 28(1): 129-141.

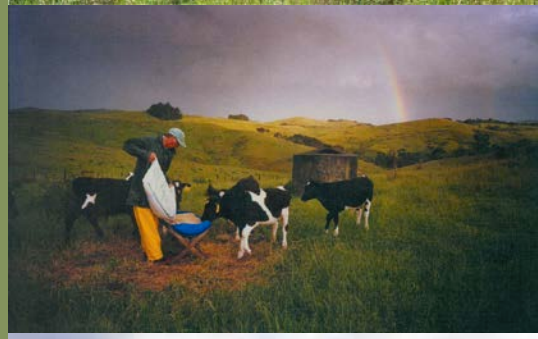
Interrogating the Social Results

- Strongly rejecting the ‘social identity’ model of explaining sustainable agricultural practice.
- Much prior social science has been structured around the assumption that ‘attitude precedes behaviour’ or ‘identity precedes action’. (eg. ACAP analysis by Beus and Dunlap).
- ARGOS social data show important patterns of difference, but they are not strongly associated with coherent ‘identities’ of the producers.

From Organic ‘identity’ to ‘social practices of sustainability’.

- However… it was clear that there were bodies of social practice that were influencing farm practice and outcomes.
- The social dynamics are important for the outcomes, but HOW do we explain them?
- The key bodies of social practice were being co-constituted by three main forces: individual identity/subjectivity + audit system (eco-label) + wider industry culture.



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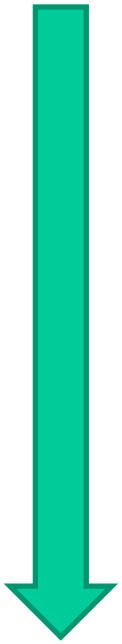
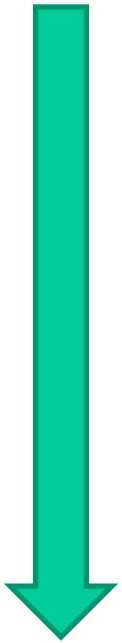
Adding value to eco-label brands

Passive, Simple, Untargeted

Maintain organic input rules





Active Targeted

Add ‘IM’ protocols to organic ‘rule book’

Animal welfare

Fair farm labour and occupational health

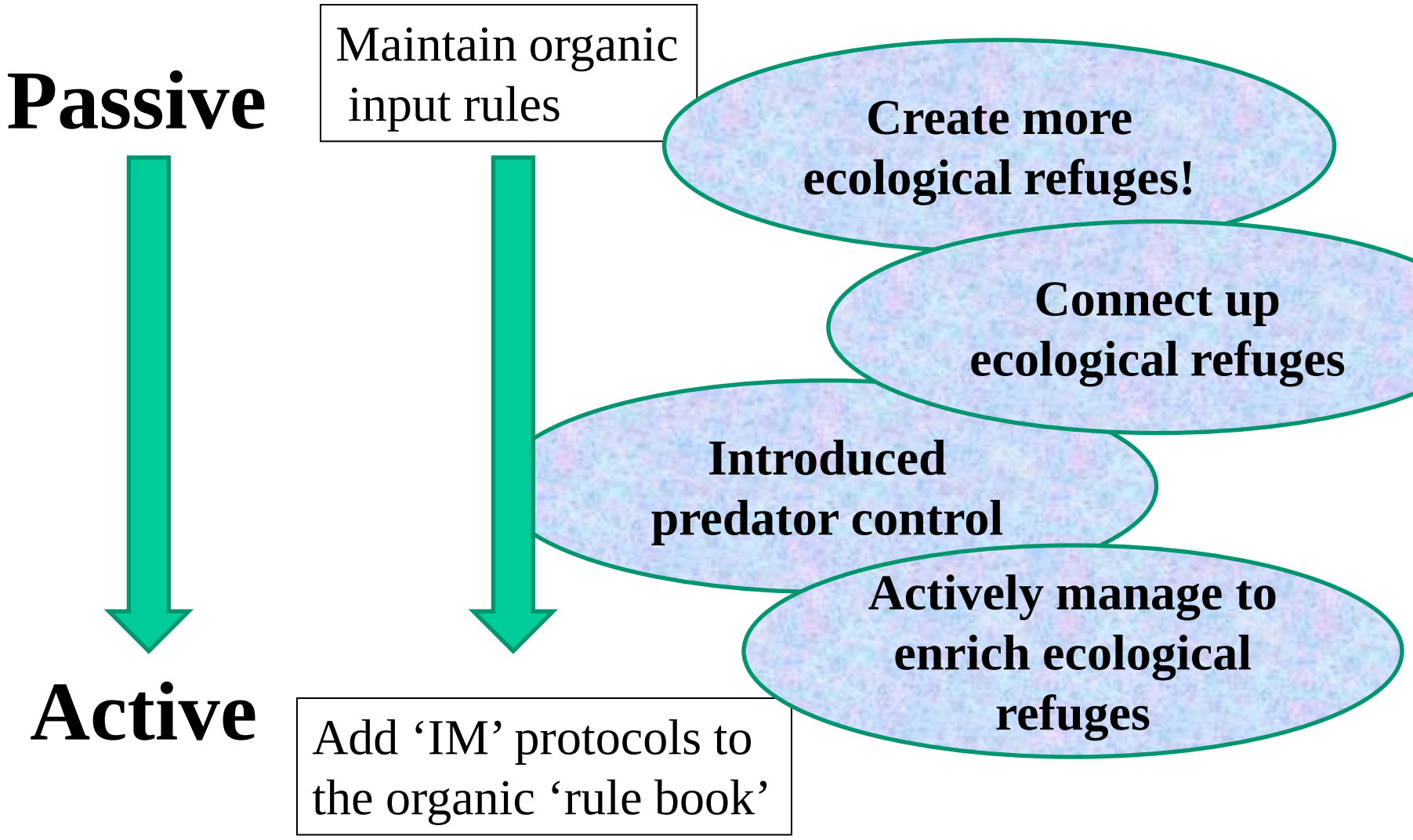
Monitoring and eco-verification

Active whole farm planning

Minimum till

IPM protocols:
Trigger points, Thresholds, monitoring

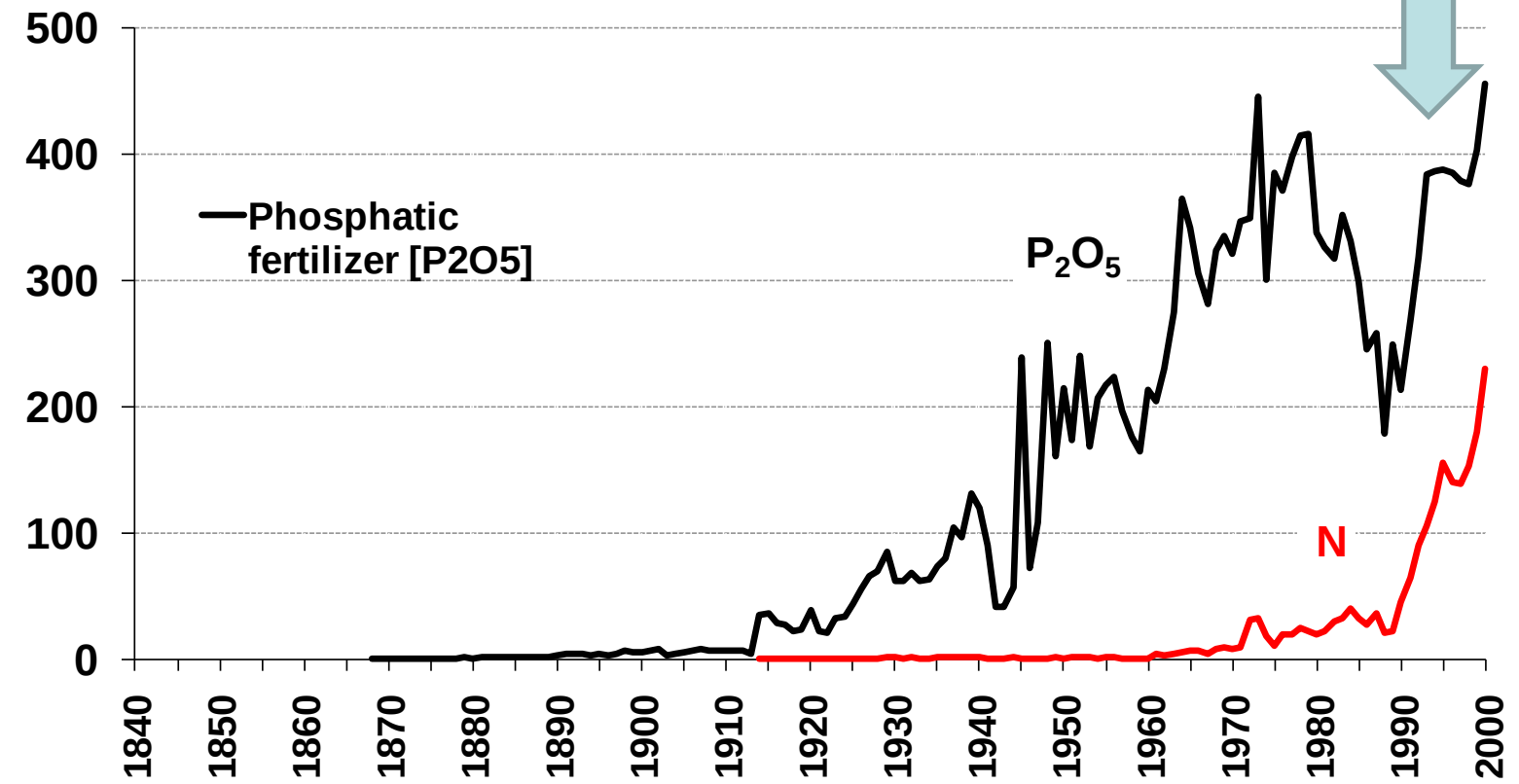
Adding value to eco-label brands



Phosphatic and Nitrogenous Fertilizer Consumption

(Gradwohl unpubl.)

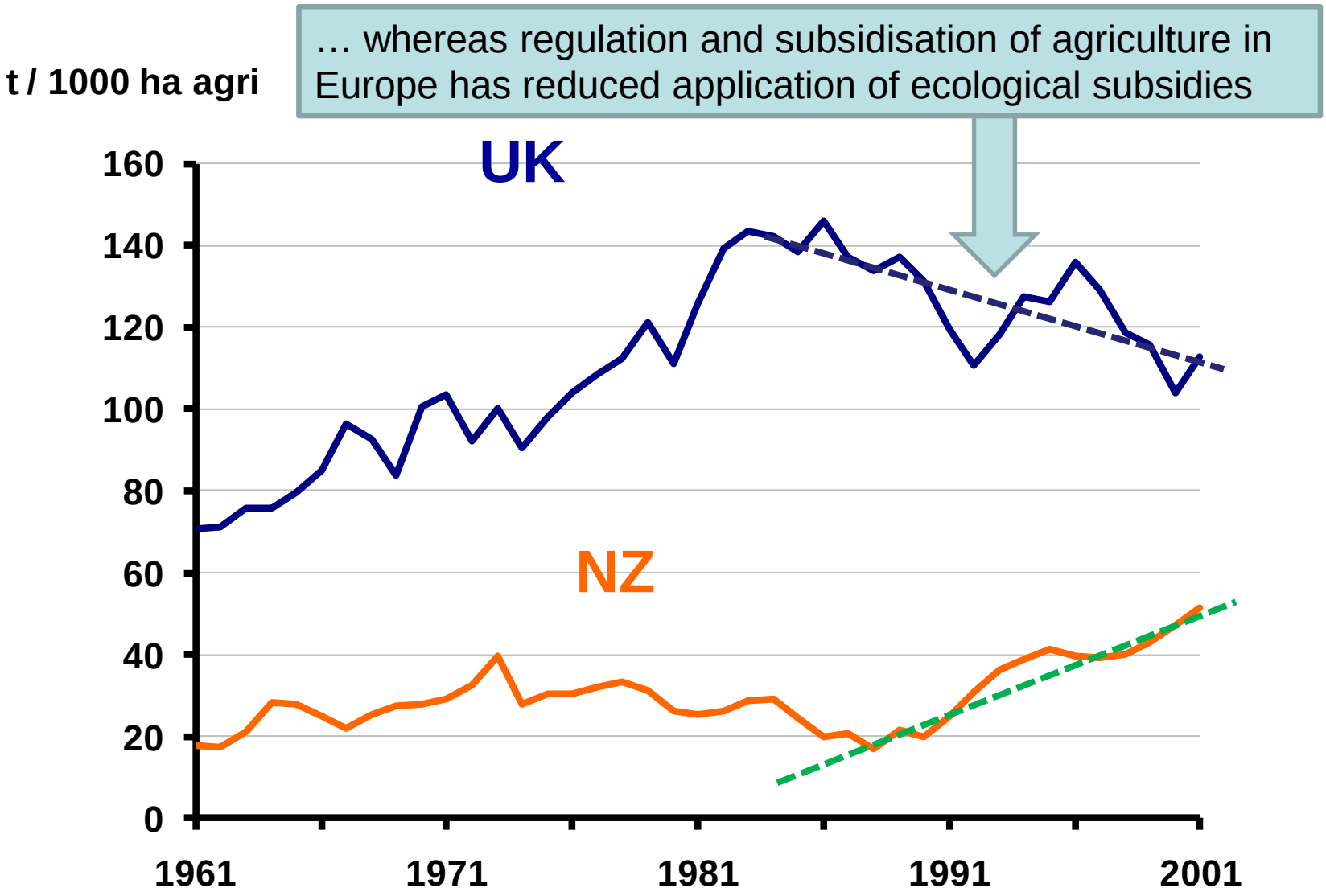
Audits and eco-labels have failed to stop rapid escalation of application of ecological subsidies in NZ



Source: Statistics New Zealand (1870-1920), Monthly Abstract of Statistics (1921-1960), FAO (1961-2000)

Total Fertilizer Consumption 1961-2001

(Gradwohl unpubl.)



Datasource :FAO

Do audits/certification systems make a difference?

- Yes, but in combination with multiple other dynamics.
- Equally important to move beyond ‘identity’ studies to uncover those bodies of social, farming and ecological practice which have a disproportionate influence on sustainable outcomes.

Returning to our questions about Food from Somewhere…

Q. Are eco-labels a ‘tick-box’ scheme that have no real impact on farmer practices?

A. No, they clearly do have an impact (but in combination with other dynamics as well).

Q. Is it a scam that allows conventional farmers to continue existing practices while eroding the market position of ‘real’ alternative producers?

A. No, the on-farm practices and outcomes do change.

Q. Don’t we have to change farmer identities BEFORE they can really change their farm practice?

A. Emphatically NO. There are multiple ways to create conditions that improve and enable the social practices of sustainability.

Q. Can corporate participants in Food from Somewhere really deliver sustainability outcomes (salvation via Sainsburys?)…

A. Actually, yes. What Zespri has achieved is impressive.

Q. Do they lead to rapid recruitment and strong producer enthusiasm?

A. In some cases – more so for Integrated than Organic.

Q. Do these eco-label schemes open up a space where conventional producers can try something alternative in a culturally ‘safe’ way?

A. Emphatically yes for Integrated. Less so for organic.

Q. Are these introducing into mainstream food commerce some ‘unthinkable’ practices, claims and qualities?

A. The Kiwifruit case shows that ‘radical’ ideas about environmental management have become absorbed into the ‘new normal’ for most producers.

Q. Do these provide benefits of scale so that technological investment, R & D and political support are more forthcoming?

A. Yes, but…

Q. Do global scale audit and certification schemes have the flexibility to deliver local sustainability outcomes?

A. Not as much as we would like.

Conclusion1: Evaluating the Food from Somewhere Regime….

- Somewhere in between the two (binary) poles of corporate industrial food and local foods…
- Not really living up to the worst fears about these kinds of food systems.
- Creating new spaces and dynamics where things can happen.
- Moderately influential in changing social practices and ecological outcomes…
- But not dramatically transformative … yet!

Conclusion 2

The keynote question for the conference to consider:

Is '*moderately influential in changing social practices and ecological outcomes… but not dramatically transformative*' going to be enough?

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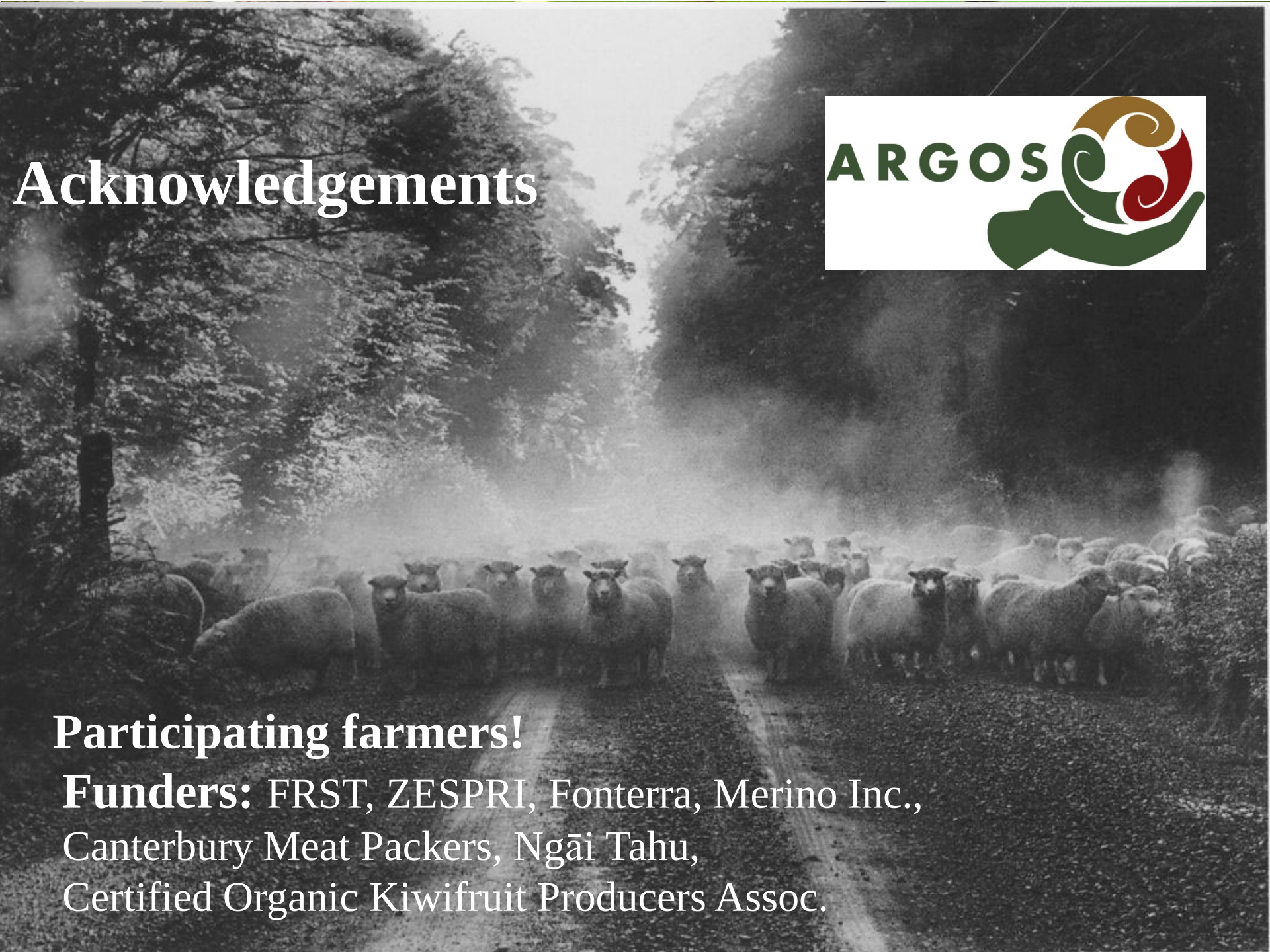

Participating farmers!

Funders: FRST, ZESPRI, Fonterra, Merino Inc., Canterbury Meat Packers, Ngāi Tahu, Certified Organic Kiwifruit Producers Assoc.