

An aerial photograph of a lush green grassy hillside. A dirt road winds through the lower part of the image. In the center, there is a cluster of tall, dark green trees. The background shows a steep hillside with scattered trees and a forested ridge in the distance under a clear sky.

**NZ Grasslands Assn
71st Annual Conference**

**Future Farms,
Future Landscapes**

**Chris Perley
HBRC**

- Where have we come from?
- Where are we now?
- Where are we going?

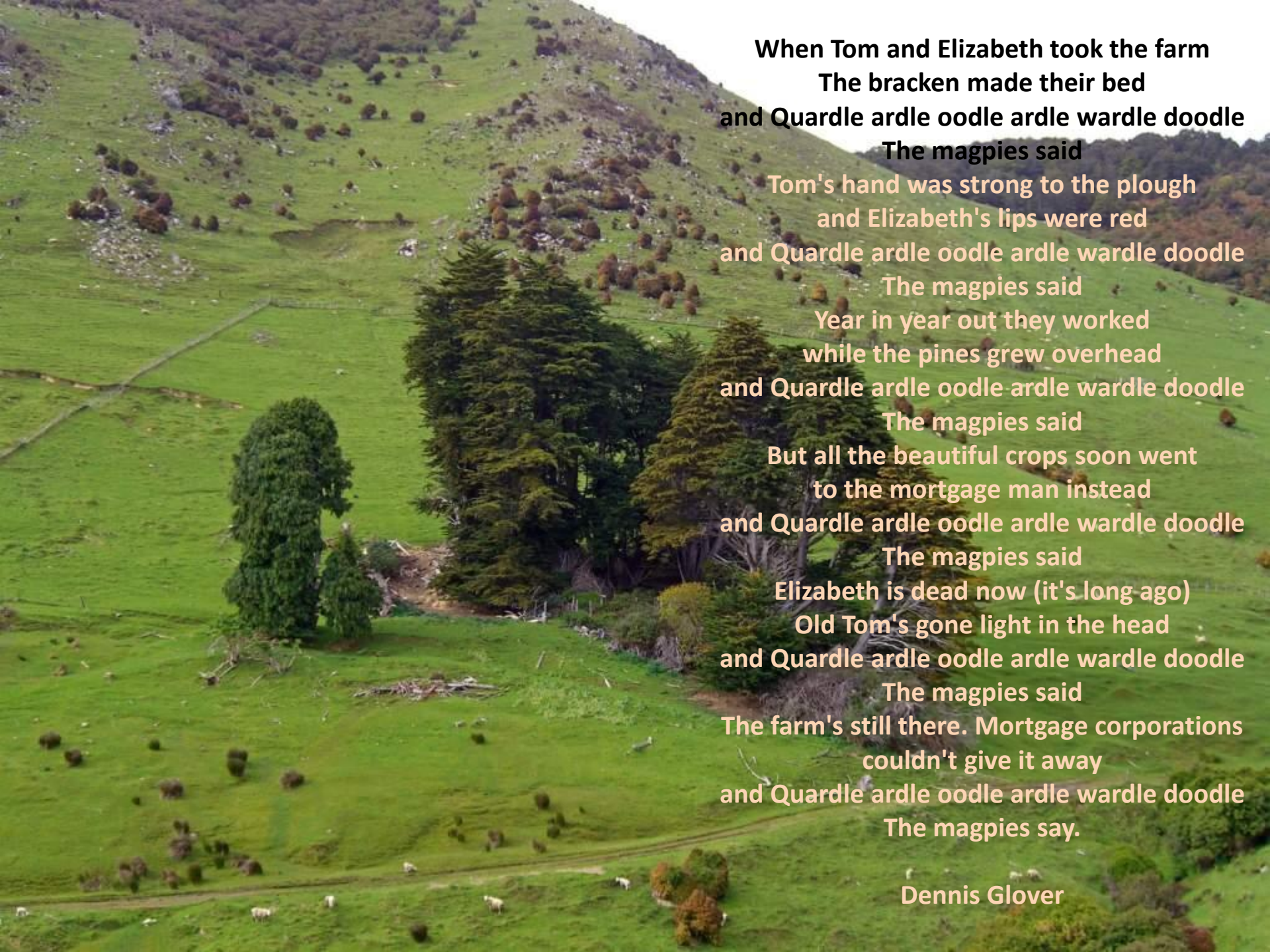
An aerial photograph of a lush green hillside. The terrain is covered in vibrant green grass, with numerous small, dark green trees scattered across the slope. A prominent, large, dark green tree stands in the center-left of the frame. The hillside is dotted with sheep, and a dirt road or path is visible at the bottom. The overall scene is a pastoral landscape.

Where have we come from?

A colonial legacy

**Clear the forest
Feed Mother Britain**

After 1973 – Feed the world



**When Tom and Elizabeth took the farm
The bracken made their bed
and Quardle ardle oodle ardle wardle doodle
The magpies said
Tom's hand was strong to the plough
and Elizabeth's lips were red
and Quardle ardle oodle ardle wardle doodle
The magpies said
Year in year out they worked
while the pines grew overhead
and Quardle ardle oodle ardle wardle doodle
The magpies said
But all the beautiful crops soon went
to the mortgage man instead
and Quardle ardle oodle ardle wardle doodle
The magpies said
Elizabeth is dead now (it's long ago)
Old Tom's gone light in the head
and Quardle ardle oodle ardle wardle doodle
The magpies said
The farm's still there. Mortgage corporations
couldn't give it away
and Quardle ardle oodle ardle wardle doodle
The magpies say.**

Dennis Glover

- Settler Societies
- Some bored surveyor cuts the land into quadrangles that bear no relationship with landform
 - Contrast Sissinghurst (UK Nicolson estate) – functional landscapes relating to centuries of use

Plan of
THE SISSINGHURST CASTLE
E·S·T·A·T·E.

TO BE SOLD BY
Messrs WINSH & SONS.
 JUNE 25TH 1903.



Note: This Plan is to show the position of the Property only, the accuracy in detail is not guaranteed.

WINSH & SONS.
 Surveyors
 CHARROSE.

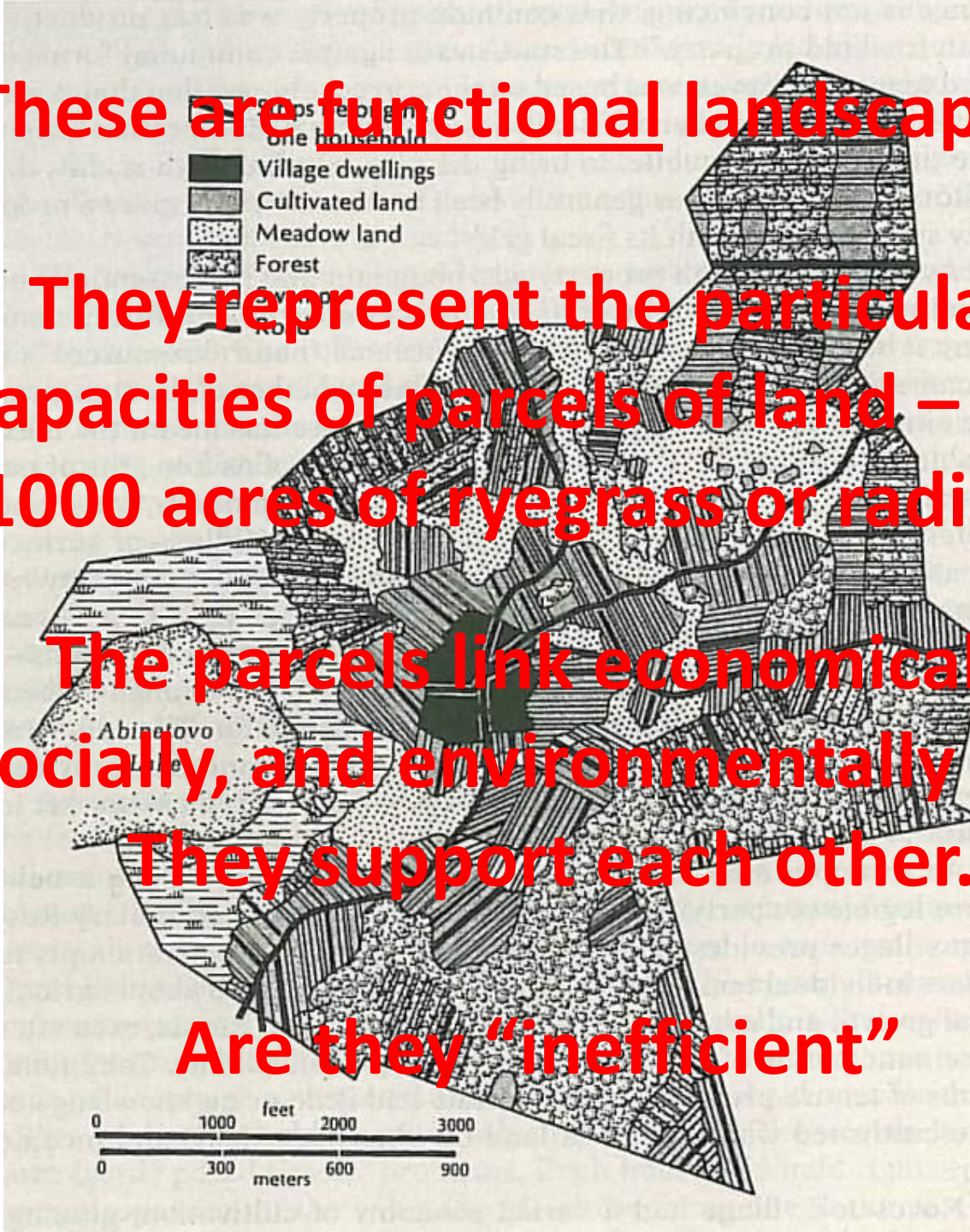
These are functional landscapes

They represent the particular capacities of parcels of land – not 1000 acres of ryegrass or radiata

The parcels link economically, socially, and environmentally – i.e.

They support each other.

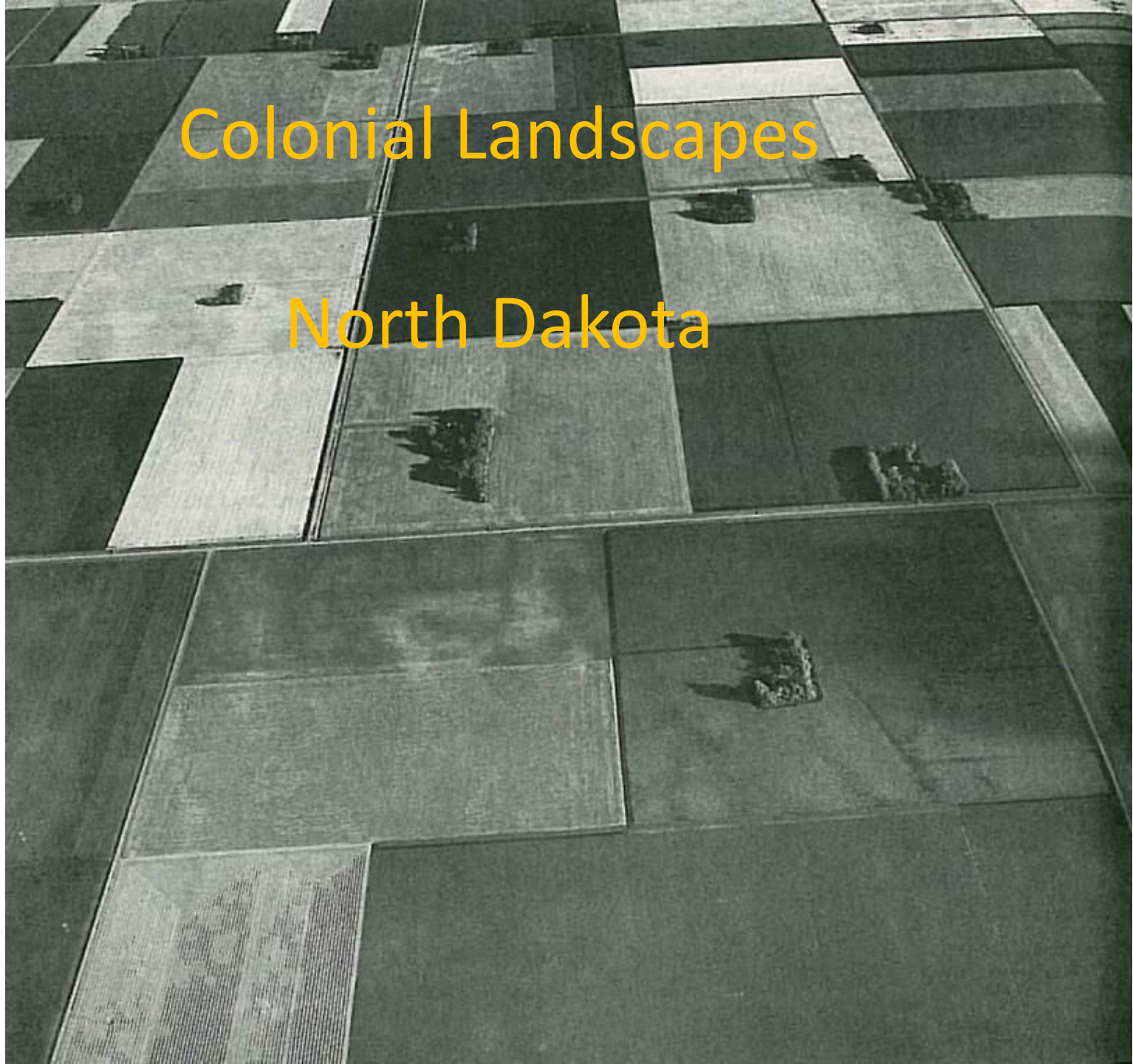
Are they “inefficient”

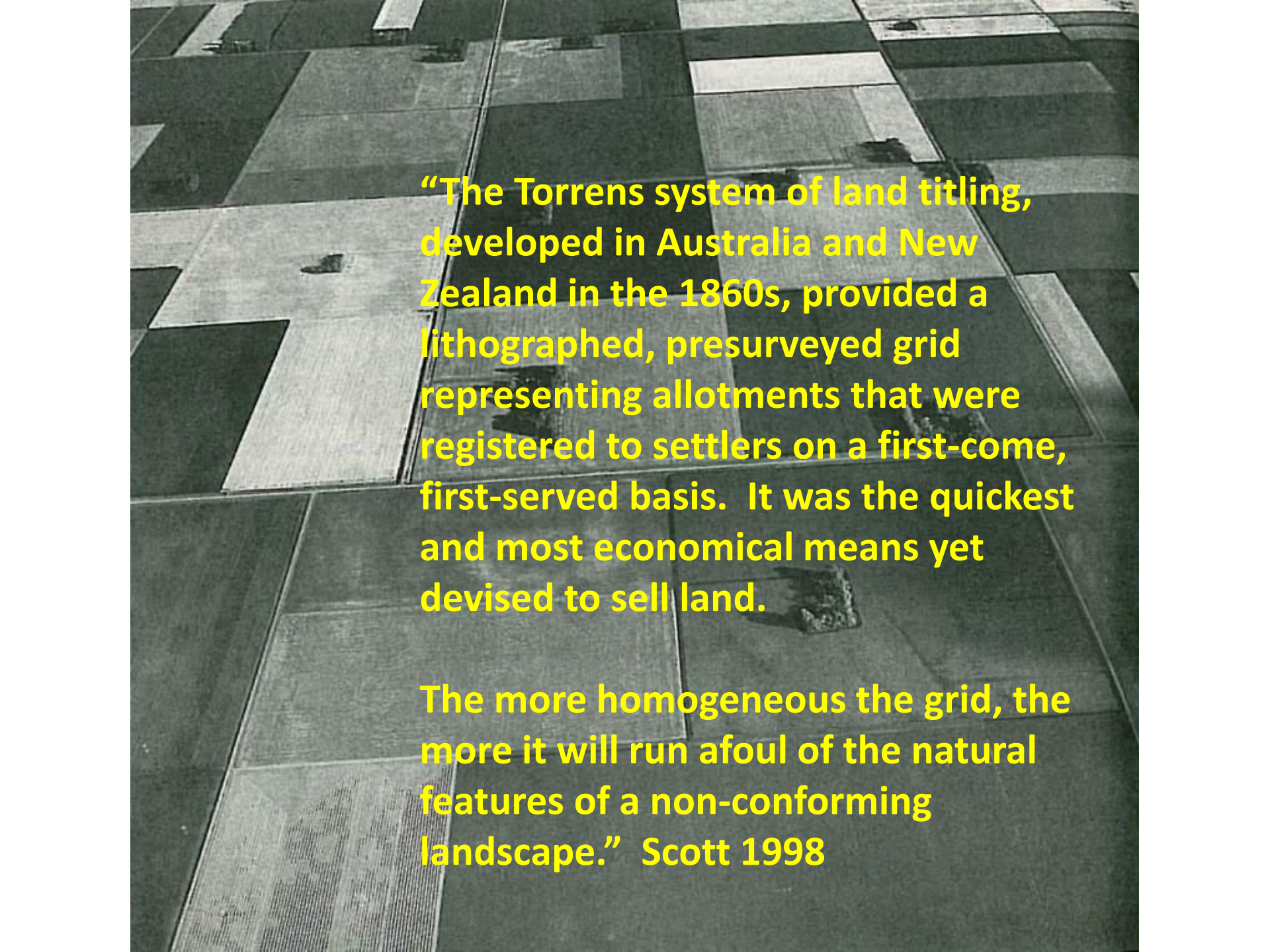


- Settler Societies
- Some bored surveyor cuts the land into quadrangles that bear no relationship with landform
 - Contrast Sissinghurst (UK Nicolson estate) – functional landscapes relating to centuries of use
 - NZ – 1000 of ryegrass or 1000 ha of radiata pine

Colonial Landscapes

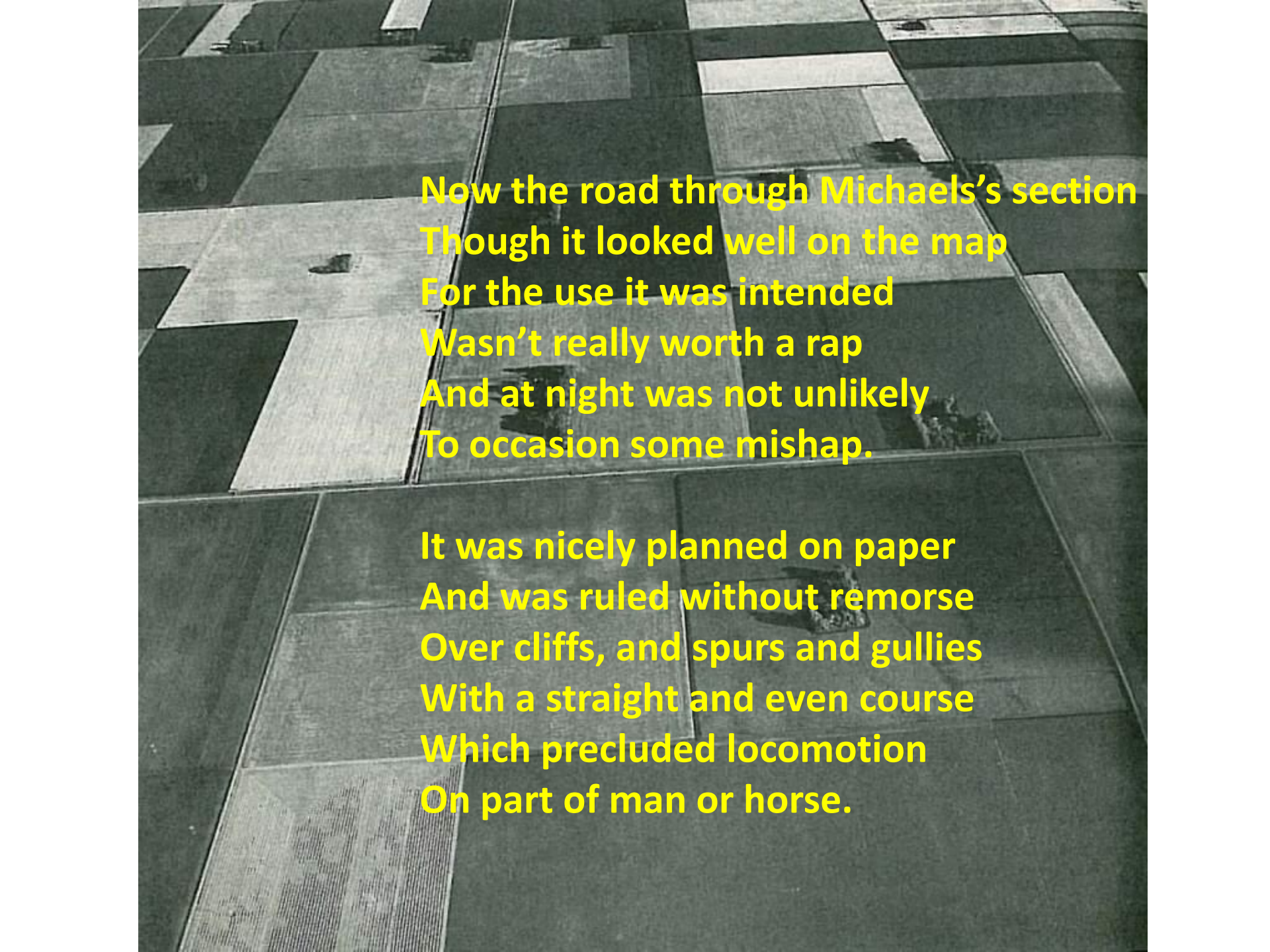
North Dakota



An aerial photograph showing a grid-based land survey system overlaid on a natural landscape. The grid consists of rectangular sections, some of which are shaded in a light gray color, while others are in a darker gray. The grid lines are straight and intersect at right angles, creating a regular pattern of squares and rectangles. The natural landscape is visible in the background, showing irregular shapes and textures that do not conform to the grid. The text is overlaid on the grid in a bright yellow color.

“The Torrens system of land titling, developed in Australia and New Zealand in the 1860s, provided a lithographed, presurveyed grid representing allotments that were registered to settlers on a first-come, first-served basis. It was the quickest and most economical means yet devised to sell land.

The more homogeneous the grid, the more it will run afoul of the natural features of a non-conforming landscape.” Scott 1998

An aerial photograph of a road cutting through a field. The field is divided into rectangular sections, some of which are dark and some are light, suggesting different crops or soil types. The road is a straight line running vertically through the center of the image. The text is overlaid in yellow on the road and the surrounding field.

**Now the road through Michaels's section
Though it looked well on the map
For the use it was intended
Wasn't really worth a rap
And at night was not unlikely
To occasion some mishap.**

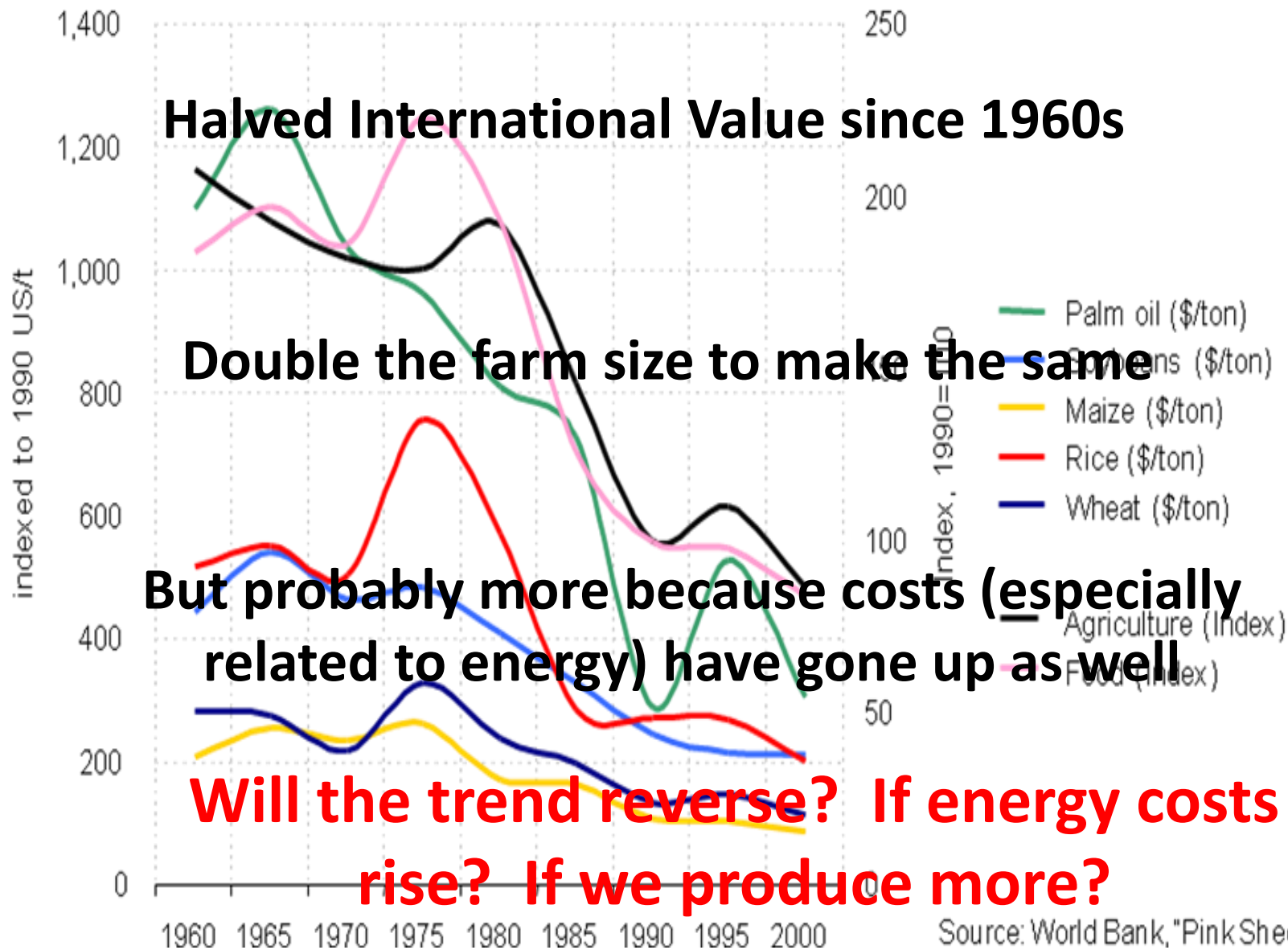
**It was nicely planned on paper
And was ruled without remorse
Over cliffs, and spurs and gullies
With a straight and even course
Which precluded locomotion
On part of man or horse.**

- 1800s to late 1900s – clearance of woody vegetation for grass and crop.
- Period of Extensification (first ‘food regime’) – more colonial land in agricultural production to feed growing numbers of European mouths
- Land viewed as ‘producer’, New Zealanders identity as ‘providers’.
- We provided (and still provide) commodities – cheap and lots of it

Cheap and lots of it!

- That's the dominant case whether we are foresters, farmers or fishermen
- And when prices drop they suggest we produce even **more**.
- Is there something wrong with this approach?

Hmmmmmm??



- Woodlands within agricultural lands as ‘ineffective’ areas, functionless except as timber
- Trees are in either large plantations
- Or Preserves
- Engineered landscapes – factories and preserves
- Mordor or The Wilderness (without the Elves)

The Ents on the March

Are they leaving or attacking?



Industrialised
commodity
producers



Multi-functional
landscapes, high
value, resilient,
vibrant
environments,
communities,
economies



People-less
preserves

Resourcism –
economists from
Marx to Friedman

**Agrarianism,
Socio-ecological
systems** - Leopold

Preservationism -
Muir

**For a Prosperous Future what we really
need is High Value Multifunctional
Landscapes, Populated by people like....**

Industrialised
commodity
producers

MORDOR



Multi-functional
landscapes

THE SHIRE



People-less
preserves

**WILDERNESS
- SANS ELVES**



This !!

Merry and Pippin

**Fine, upstanding members of the
Shire**

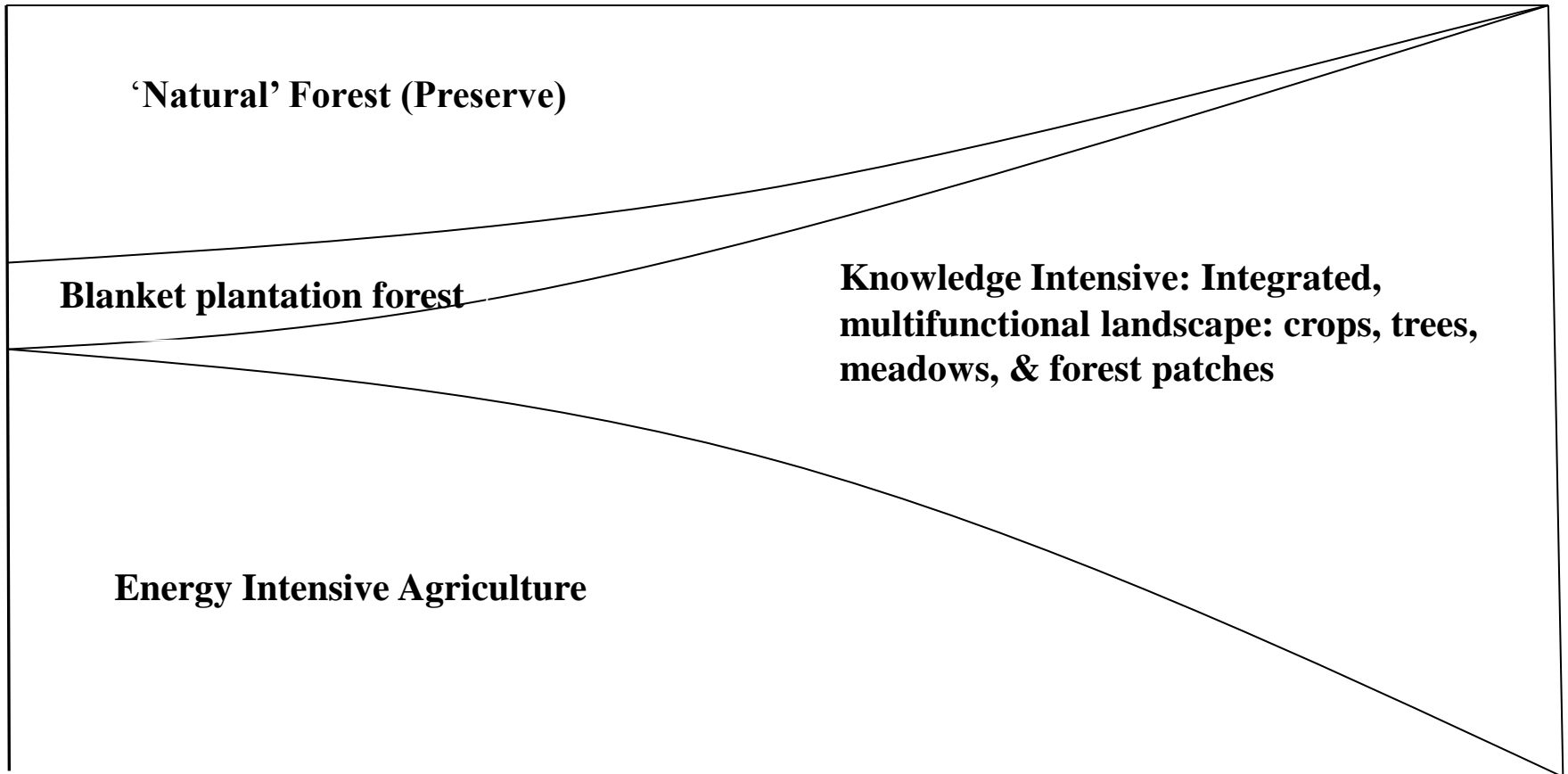
- **Resilience**
- Premise – the future is uncertain and will surprise
- A community and environment with the capacities and functions to:
 - Foresee a threat/opportunity
 - Buffer a shock
 - Visualise & shape a viable future direction
 - Motivate self and others
 - Have the skills to adapt and innovate
- All in the face of future social, biophysical and political shocks

Where does New Zealand sit?

'Modern', fully segregated
landscape

Mosaic

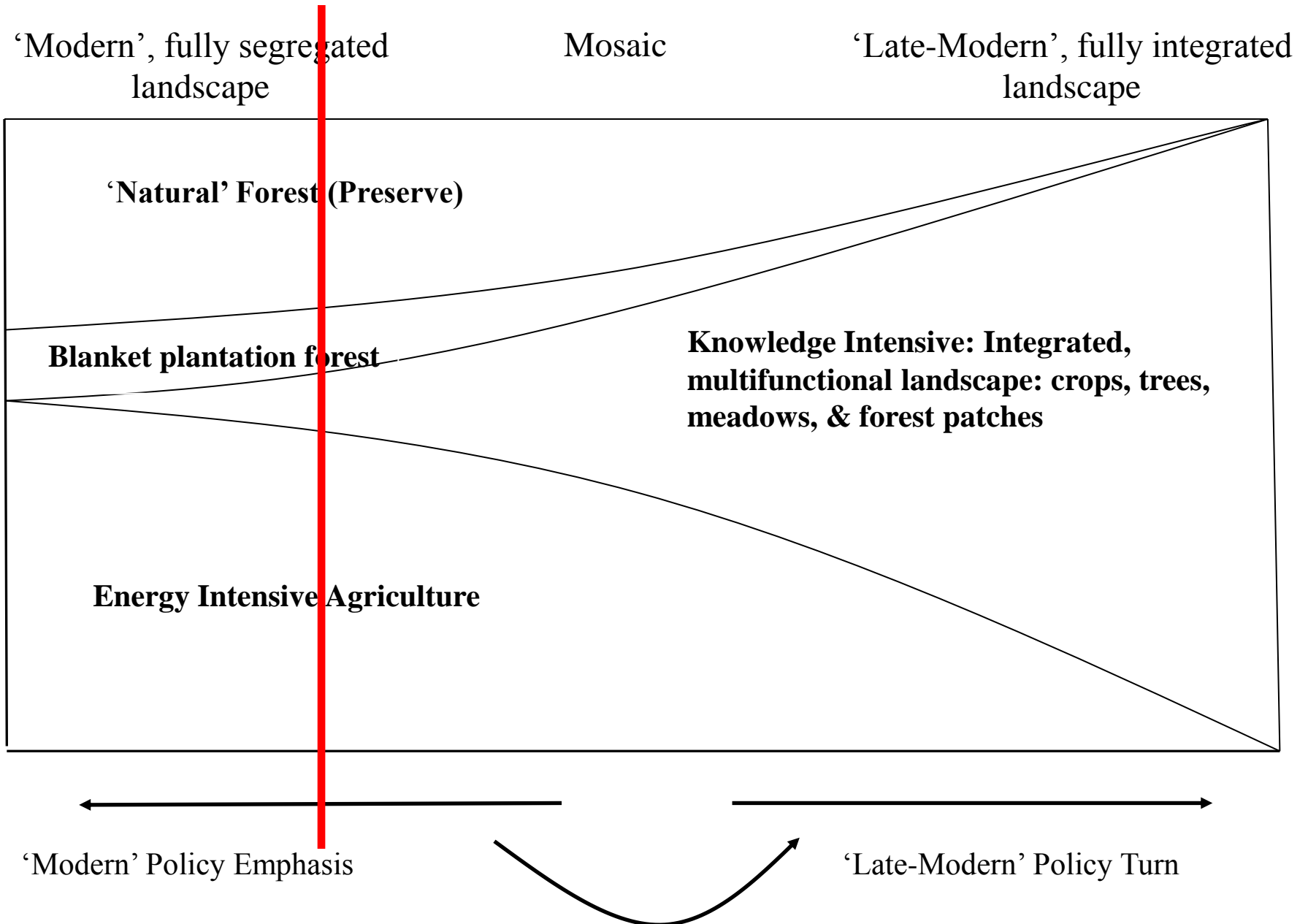
'Late-Modern', fully integrated
landscape



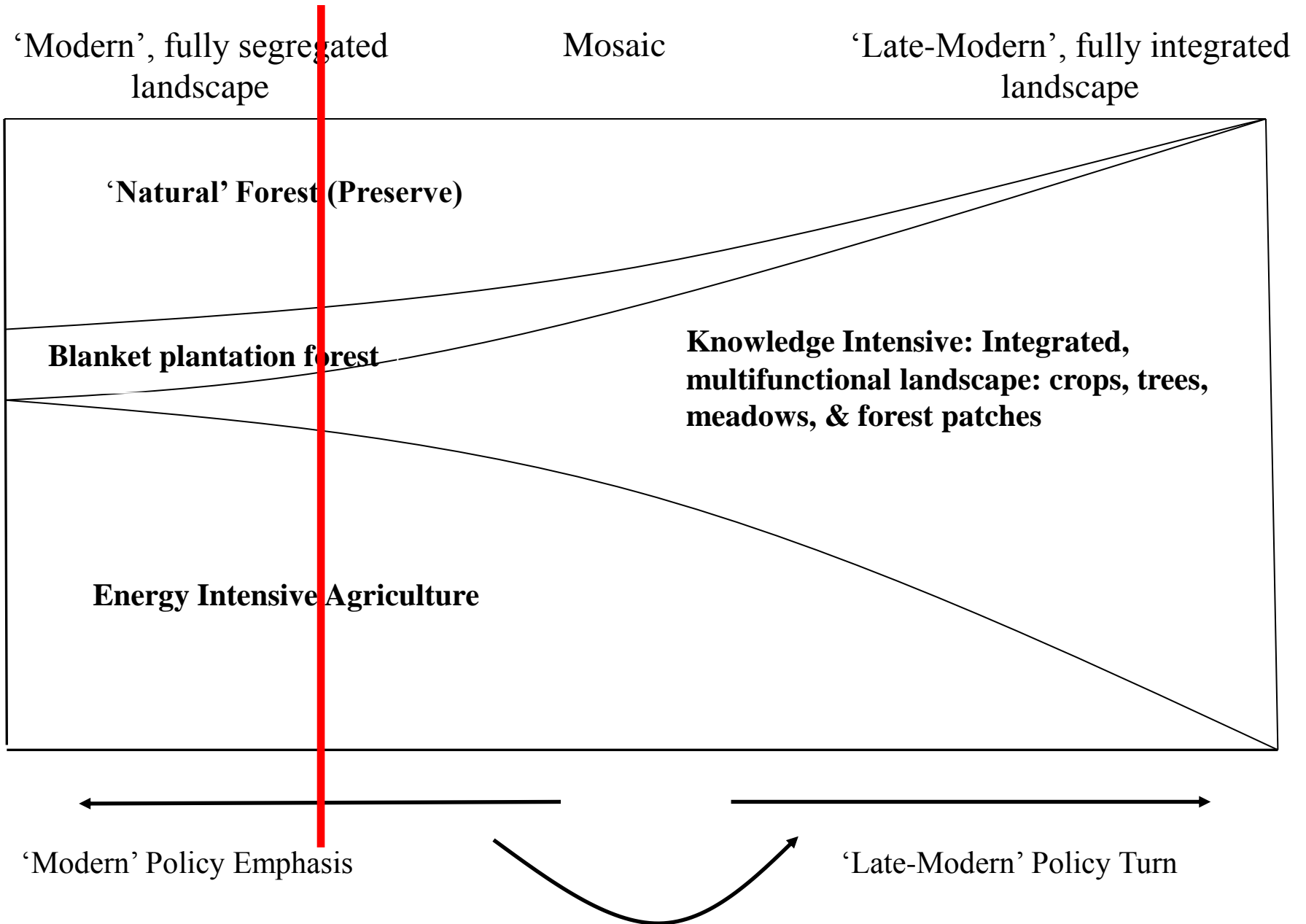
'Modern' Policy Emphasis

'Late-Modern' Policy Turn

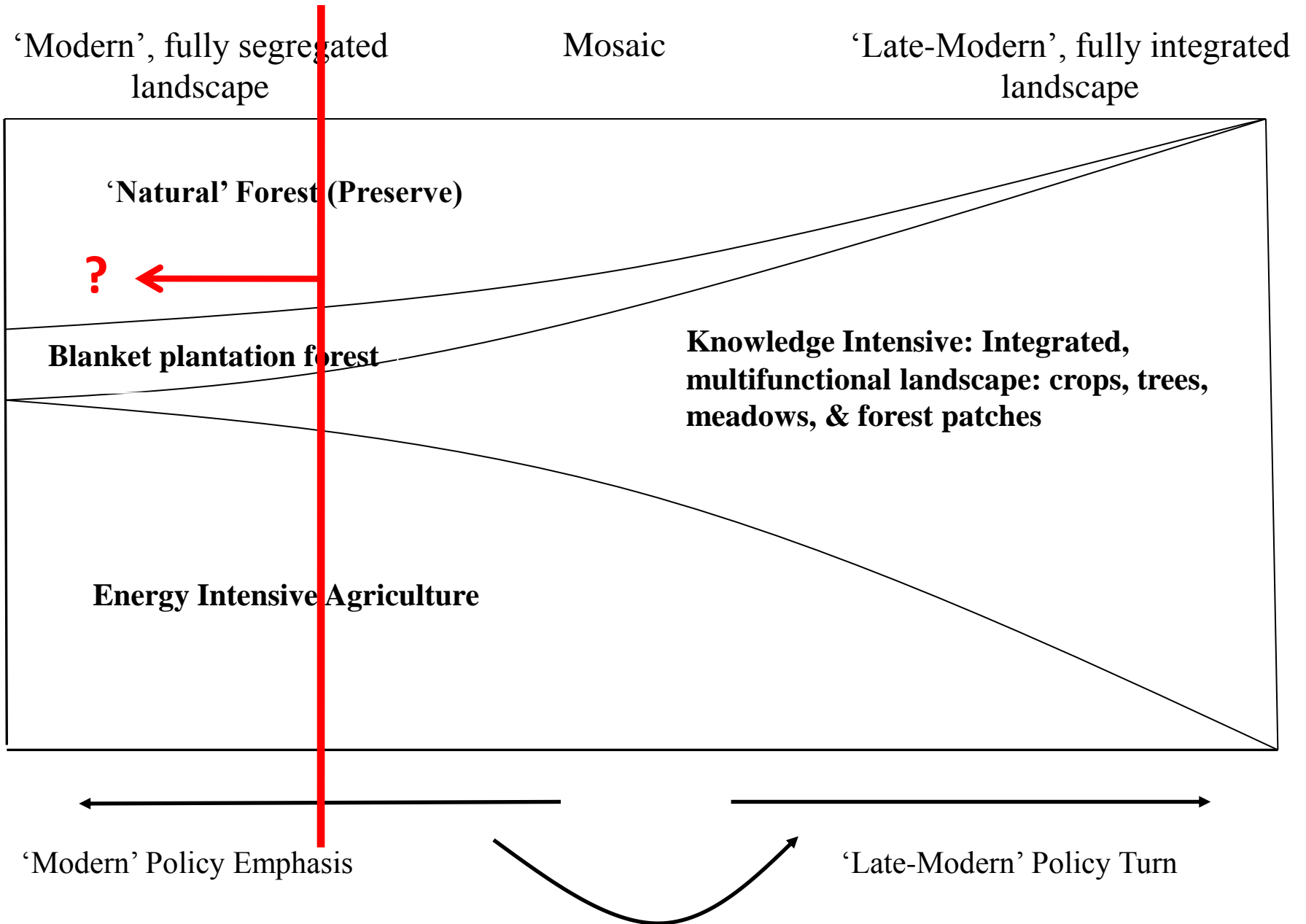
Where does New Zealand sit?



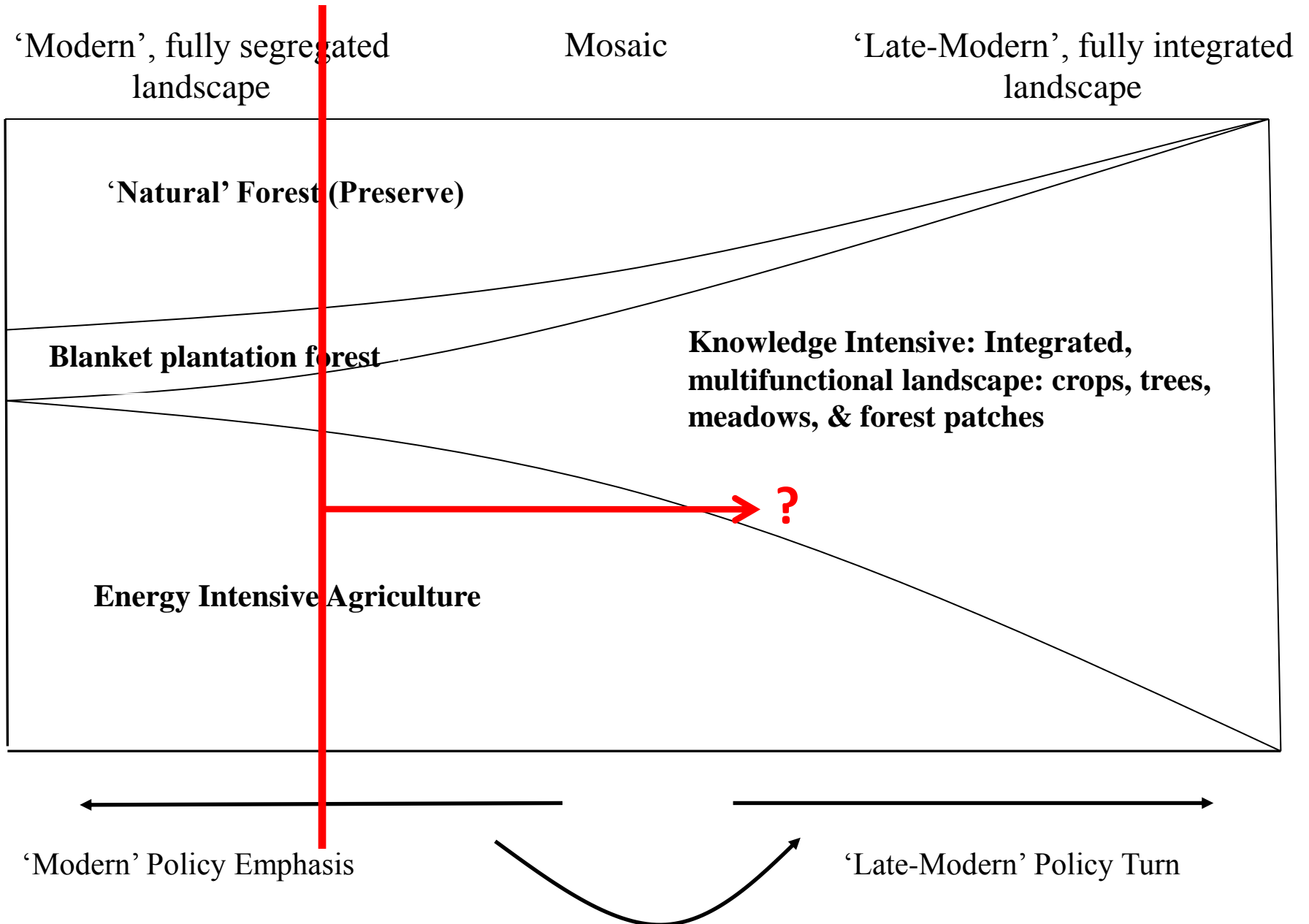
Which direction are we going?



Which direction are we going?



Which direction are we going?



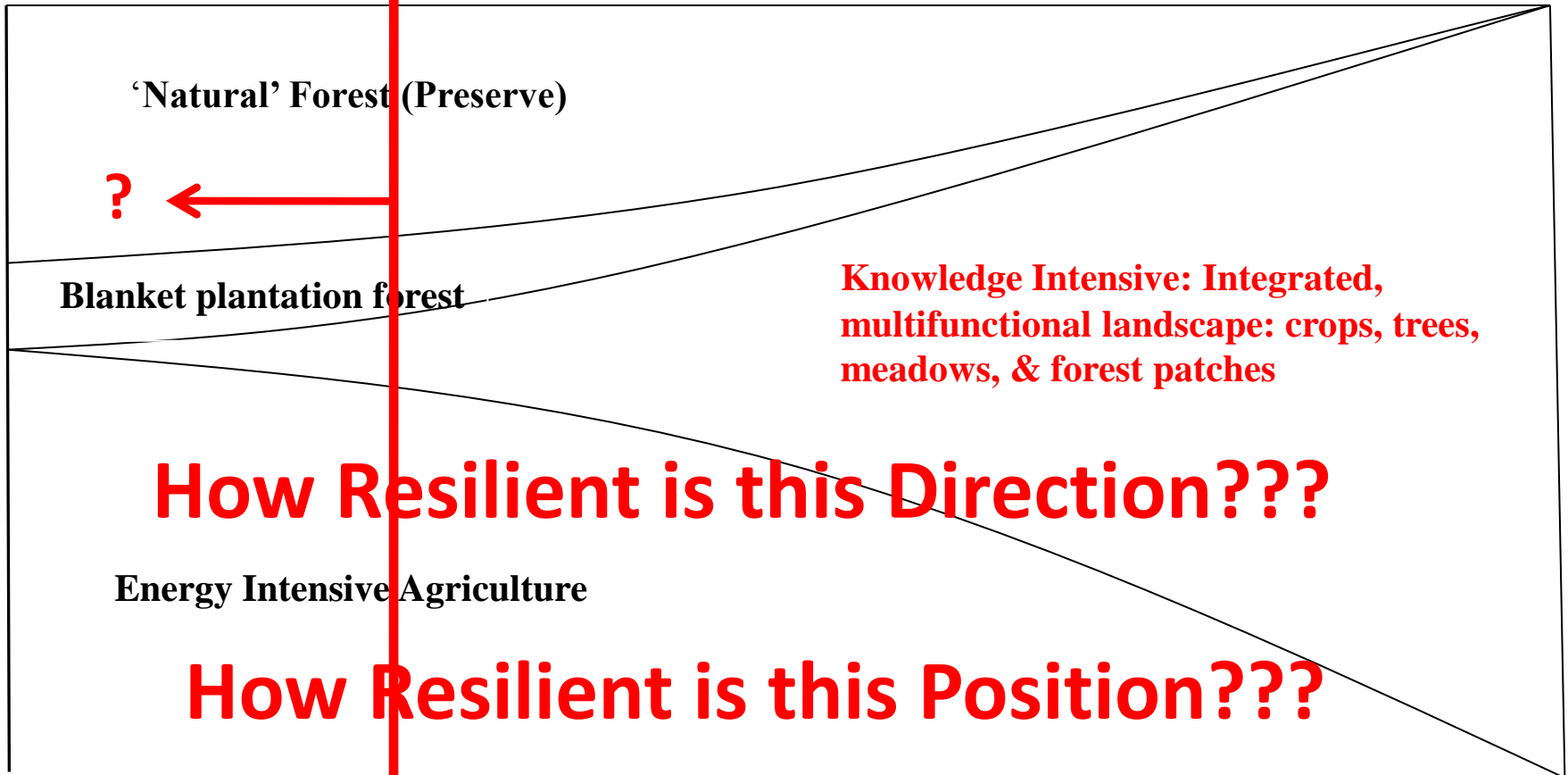
- Industrialisation continues with **Second Food Regime – Intensification**
- Intensification – more output per unit input
- In NZ that measure is per hectare, not per energy input (misleading? – What is the limiting resource?)
- Post WW II – lots of spare bulldozers, agrichemical technology, technical expertise, pilots and surplus Tiger Moths and Avengers
- Post depression and war promotes ethos of development

Which direction were we going post WWII?

'Modern', fully segregated landscape

Mosaic

'Late-Modern', fully integrated landscape



'Natural' Forest (Preserve)

?

Blanket plantation forest

Knowledge Intensive: Integrated, multifunctional landscape: crops, trees, meadows, & forest patches

How Resilient is this Direction???

Energy Intensive Agriculture

How Resilient is this Position???

'Modern' Policy Emphasis

'Late-Modern' Policy Turn

- **And Now?**
- Increased energy inputs,
- Specialisation & homogenisation, loss of free ecosystem functions (free services – animal health, pollination, beneficial biodiversity, soil fertility, shelter & shade)

People in Des Moines Iowa leave their sterile city
to commune with nature.

They drive through an even more sterile
landscape on their way to the parks upstate.

Is there something wrong with this picture?



A photograph of a rural landscape. In the foreground, a flock of sheep is grazing in a lush green field. A wire fence runs across the lower part of the image. In the middle ground, a row of tall, slender trees with dense green foliage stands in a line. The background shows a rolling green hill under a clear blue sky. The text "Free Functions" is overlaid in the center of the image.

Free Functions

Paul Grant – Kakapuaka, South Otago

There's only one thing wrong with this picture

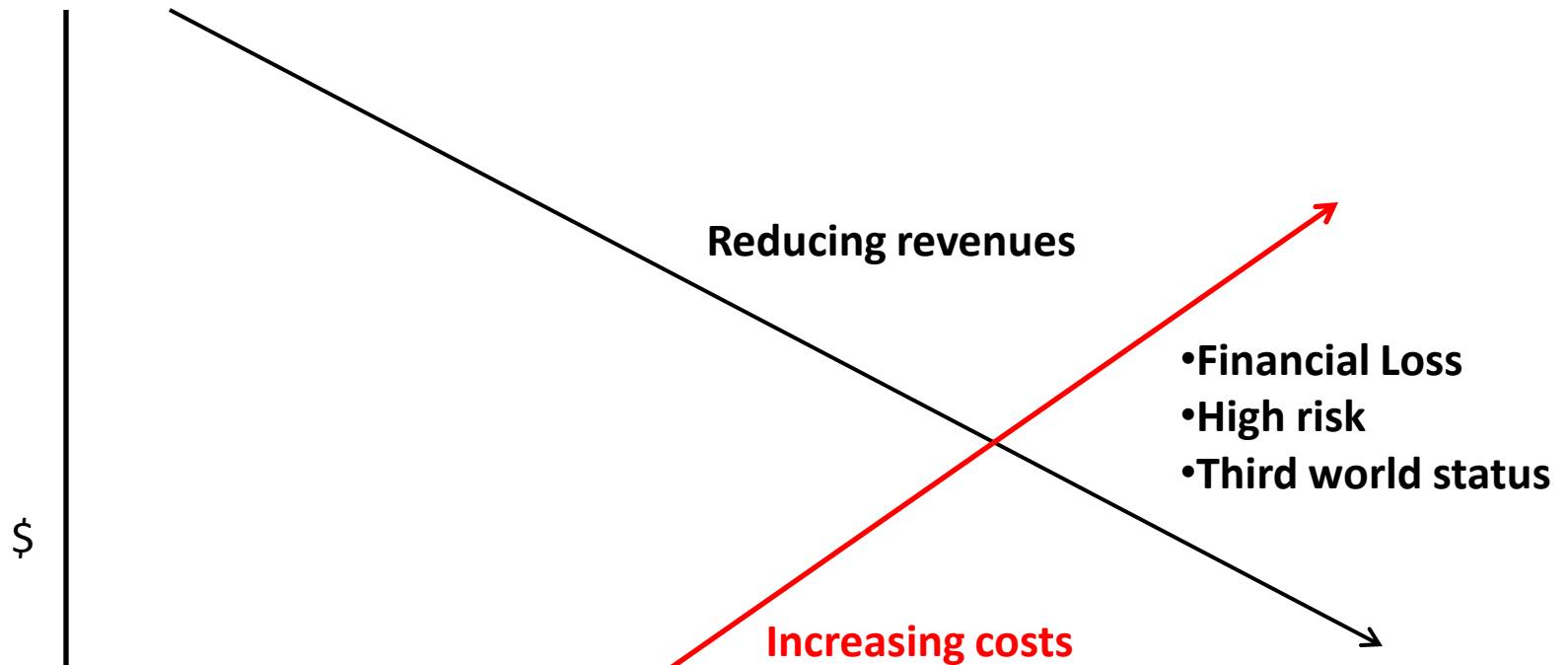


- **And Now?**
- Increased energy inputs,
- Specialisation & homogenisation, loss of free ecosystem functions (free services – animal health, pollination, beneficial biodiversity, soil fertility, shelter & shade)
- Larger scale enterprises,
- The loss of alternatives & options (less resilience),
- Real price reduction,
- We spend research on a penny of production gain while we lose a dollar in **market position loss**
- Emphasis on cost-efficiency has resulted in energy **inefficiency**, and energy costs are rising
- And the least cost producer is very seldom the richest

The Recipe for disaster?

- International price trends are down
- The substitution of free ecological services and functions has led to a dependency on continued high-energy
- So what if energy costs rise?
- We'll want our free functions back
- And our economic options that we get from diversity
- And energy-dependent inputs are rising
 - FAO chief – “100 % incr. in fertiliser costs in one year to mid 2008; 70% in seed.”
 - Meat & Wool NZ “Fert, lime & seeds +30% in yr to March 2008; fuel +23.5%. Super has increased another 85% in just three months

The Recipe for disaster?



And this is the very real future for Radiata Pine as well.

Growing something cheap may work for a while when energy costs are low, but it sets up the least resilient future

The Future: Lower Input, Higher Value Alternative

- Emerging Third & Fourth ‘food regimes’ – away from commodity, back to traceable value
- Replacing “Energy intensity” with “Knowledge intensity” (Renewing husbandry – W. Berry)
- Get as much or more value **and production** out, but by using our system design skills, not our bulldozers.

Low Input, High Value Alternative - General principles

- **Emphasise strategy first** – the bigger picture; don't get bogged down with the singular, the technical, the tactical
- **Build back free functions and services** in the farmscape & wider landscape (Sigginghurst, not Iowa)
- **Design** to diversity pattern and practice – woodlands, trees, wetlands, integrated practices, building soil C, within & among-patch heterogeneity, utilising site properties
- **Go for resilience and option** in an uncertain future, not an industrial landscape that is 'efficient' today, but a complete failure tomorrow
- **Changing & building values and 'knowledge systems'** – innovate, enthuse, motivate
- **Go for Market Position** – without position, the buyer will take any efficiency gain (the Third World and Settler Society curse)

An appalling landscape.

**This could be much improved if it was all ryegrass
or radiata.**

**If we wanted clean water, pheasants and horse
treks, we'd go to Tuscany**

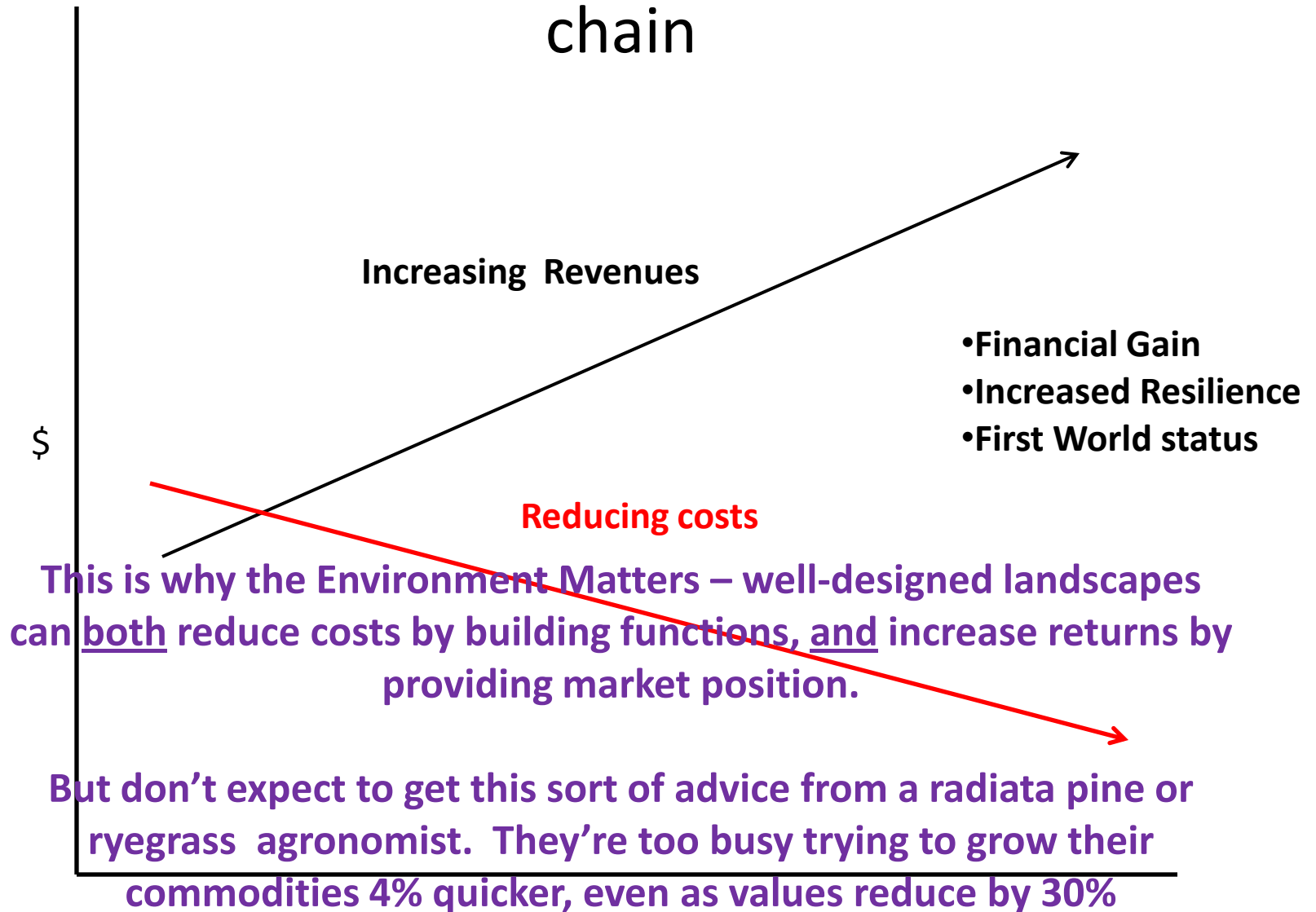


Another appalling landscape

Despite best efforts, horse trekking still occurs, though we're getting on top of the pheasant problem



The Recipe for Success? – High Value Heterogeneity, long domestic value chain



Opportunities with High Value Multi-function

- A considerably more valuable landscape across economic, cultural and environmental domains (win-win-wins)
- Lengthening the value-added chain **up to the farm**, away from scale and homogeneity for cheapness).
- Building function can lead to **reduction** in agricultural costs and risks; and an increase in productivity – output per input
- Potential for an increase in value **and** production when multiple values are banked – e.g. wild food, recreational slaughter of pheasants and quail.

Opportunities with High Value Multi-function

- Diversity of meso & microsite (terroir – microsites with meaning, e.g. Coleraine, Gimblett Gravels [almost ended up a shingle pit], Grand Cru wines)
- Better quality produce with potential shifting from commodity to iconic status –improved market condition (price maker, not taker)
- Lengthening the value-added chain **down to the craftsmen and artisans**. Cultural experience that attracts people who don't care if we charge them 50 times the value of the raw materials, so positioned à la Italian Armani, not Pakistani shoes
- Or we could just sell them the leather, and polish their shoes really cheaply..... then we'll be rich

A man with dark hair, wearing a brown and maroon striped sweater and dark trousers, is sitting on a brick ledge. He is looking down at a pair of dark brown leather shoes he is holding. To his right, an open wooden box contains various shoe care supplies, including brushes and a black cloth. Another pair of dark brown leather shoes is on the ground next to the box. In the foreground, a pair of black flat shoes is on the ground. The background shows a brick wall, a tree trunk, and a person wearing a brown and white shawl. The text "Yeah, right" is overlaid in yellow on the man's sweater.

Yeah, right

What's the Opportunity?

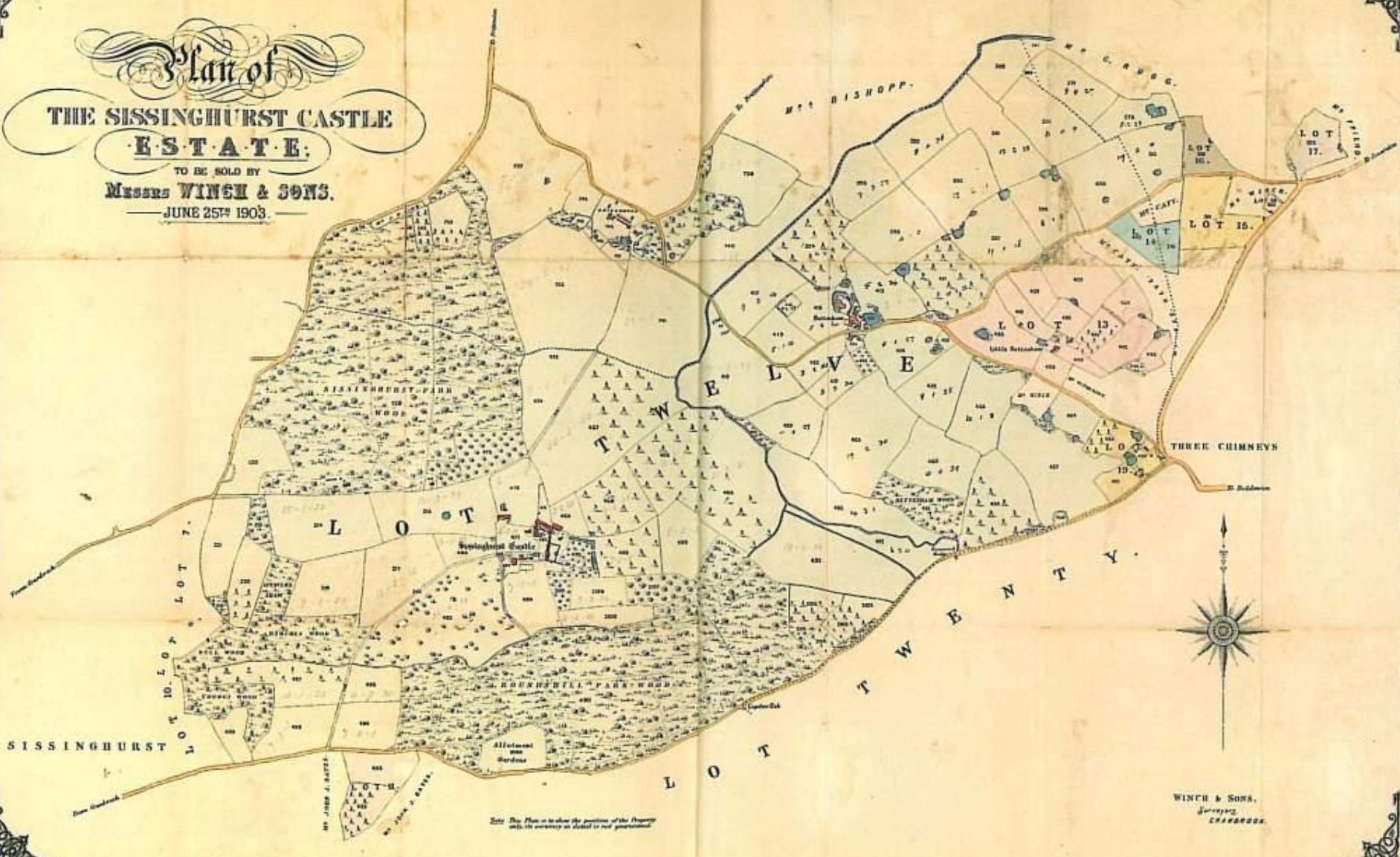
What's the Threat?

More viable, more resilient farms and rural communities, with values feeding off other values across social, economic & environmental domains, with integrated knowledge systems focusing on how to create and integrate values (functions, services, capacities & qualities) and enduring cultural institutions. (Model - Tuscany)

Or, we could just keep energy-intensive productivism – with its race to the bottom of social, environmental and economics standards with the other third world commodity thinkers, encouraging narrow technocrats to focus on increasing commodity output or the size of their commercial or political dominion. (Model - The Ukraine, or Indonesia)

Plan of
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WINSH & SONS,
Surveyors,
CHAMBRIDGE.

Thank you