

CLIMATE-SMART
Agriculture
20**15**



Global Science Conference

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Le Corum, Montpellier France

Climate Smart Agriculture – from concepts to action

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Practice change requires honesty, modesty
and courage – from academics as well as
from practitioners

*Ring the bells that still can ring
Forget your perfect offering
There is a crack in everything
That's how the light gets in.*



Leonard Cohen 'Anthem'

Two Short Stories

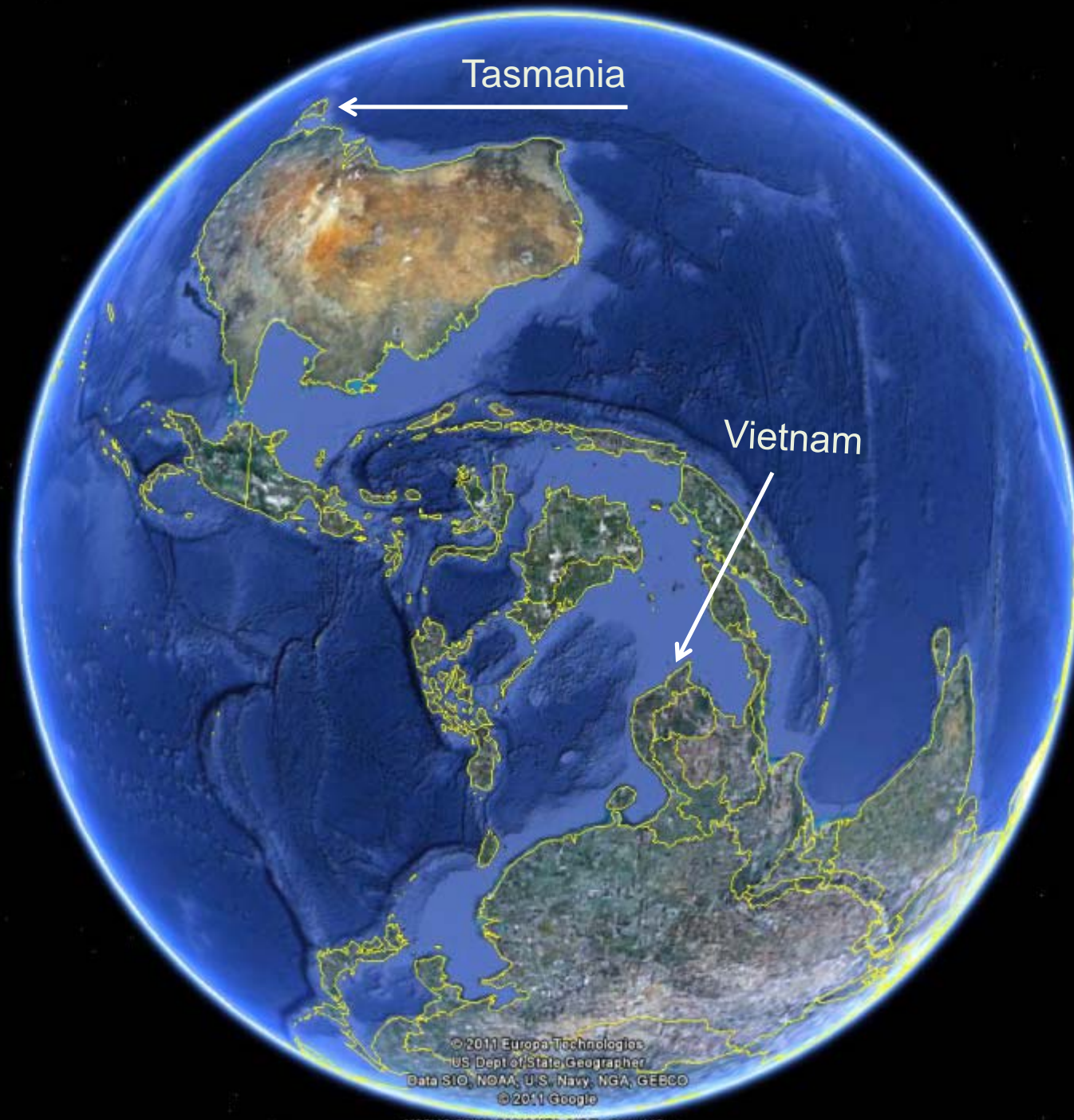
about adaptive capacity, resilience, entrepreneurship and innovation

1) *Farmers and graziers in Tasmania, Australia*



2) *Rice farmers in Vietnam*





Tasmania

Vietnam

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1°39'40.28" N 116°06'53.10" E elev -449 m

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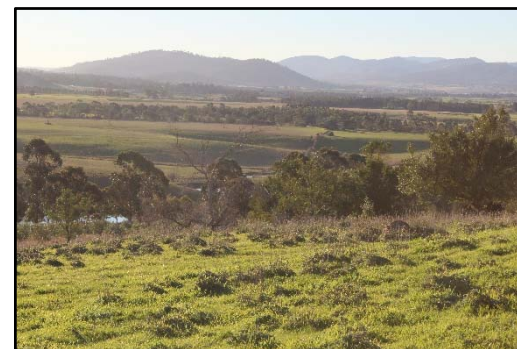
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Two Short Stories

1) *Farmers and graziers in Tasmania, Australia*

From dryland production to irrigation: Tasmania in transition

- potential access to secure irrigation water (1.5% of Australia's productive land mass and 13% of all fresh water reserves)
- very favourable crop & pasture production environment
- strong demand for dairy products at good prices
- 2011/12 dairy production increase = 8%



Two Short Stories

1) *Farmers and graziers in Tasmania, Australia*

From dryland production to irrigation:
Tasmania in transition

- Government and industry investment in irrigation infrastructure so far: more than \$500 Million
- Conversion of dryland crop and pastures in full swing; 2011/12 dairy production increase = 8%
- A fundamental change for Tasmania's productive landscapes and rural communities



Two Short Stories

2) Rice farmers in Phu Tho Province Vietnam

- Endless rice paddies, some of them less than the average living room in size
- Tiny, distinct patches of rice owned individually and worked by hand
- Nutrient deficiencies (particularly N) often obvious
- Labour intensive and generally inefficient



Rice farmers in Phu Tho Province Vietnam



Rice farmers inspecting
their collectively managed
rice field

Rice farmers in Phu Tho Province Vietnam

**A new industrial
complex under
development**



Two Short Stories

2) Rice farmers in Phu Tho Province Vietnam

- A private farmer initiative creating scale by combining their individual paddies into a 20ha uniform, collectively managed field
- Employing external contractors and advisors for all major operations and decisions
- Supplementing farm income via employment outside the agricultural sector



The power of disruption

Innovation - either technological or social - is always disruptive. It changes the way things are.

Entrepreneurship: the ability to cause and instigate disruptions that lead to better outcomes; 'adaptive capacity' in action

Innovation: the ability to recognise and incorporate such changed practices successfully into existing businesses; bears many of the hallmarks of 'resilience'.



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Innovation: the ability to recognise and incorporate such changed practices successfully into existing businesses; bears many of the hallmarks of 'resilience'.

N.B. A google scholar search on 'adaptation, climate change, agriculture' yielded 843,000 results, the term 'resilience' resulted in over 1.1 million hits.



The power of disruption

Tasmania

Just like in any society, the ability to be innovative and entrepreneurial differs greatly within the Tasmanian farming community.

Within the dairy industry many farmers show a tremendous capacity for embracing new opportunities – some more successfully than others.

Their adaptive capacity is evident in their willingness to invest, adopt new technology and move to new areas previously dominated by extensive agricultural practices.

They all remain dairy farmers and are a very resilient lot!



The power of disruption

Vietnam

The Vietnamese women are clearly innovative and entrepreneurial.

Their adaptive capacity and resilience is evident in their willingness to cooperate, adopt new technology and seek alternative, additional employment outside the agricultural sector.

Many of them are now part-time farmers and 'shareholders'. A large part of their income is generated off-farm.

The label 'smallholder farmer' might no longer applies.



The forces of innovation

Smallholder farming is a business, just like any other business.

Our academic concepts (*'Adaptive Capacity'* and *'Resilience'*) must be reconciled with the language of business such as *'Innovation'* and *'Entrepreneurism'*.

We could start by

- considering a stronger focus on functional Public-Private Partnerships (PPPs) – and not only in developed economies;
- moving away from an exclusive focus on production and
- improving the equity and transparency of our agricultural value chains.



The forces of innovation

We also need to ask:

- can smallholder farming provide a way out of poverty?
- or do we need to overcome poverty by moving away from a sometimes romantic and patronising notion of 'smallholder farming'?

Clearly the life and income of small farmers can be improved through R&D. The evidence is around us, but ...



The forces of innovation

... are there any examples where smallholder farming has led to real prosperity?

And are there any examples where countries have developed their economies based on smallholder farming?

These are key questions for a conference like this to consider and discuss.

If we really want overcome poverty AND stand up for agriculture as a pillar of our economies we need to look at the whole system and not just a subset – the system is always bigger than we think!



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