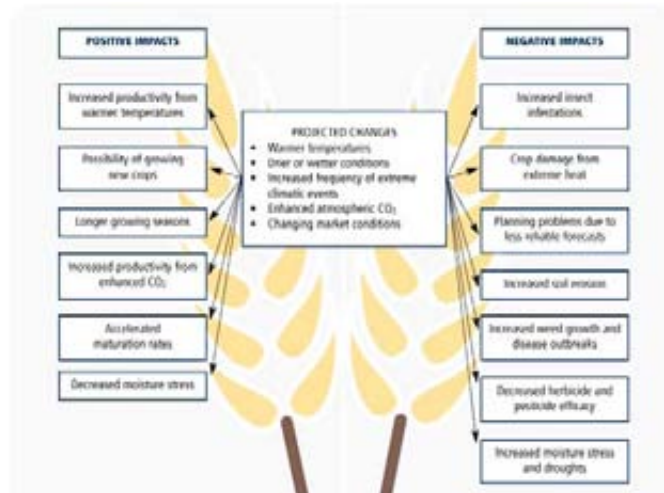


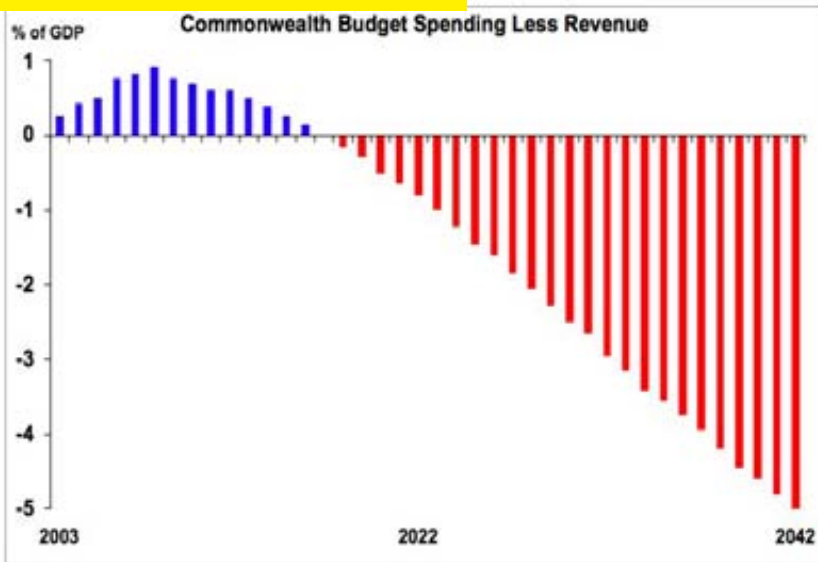
# Adapting to change

## Emerging Opportunities? Climate change & primary industries

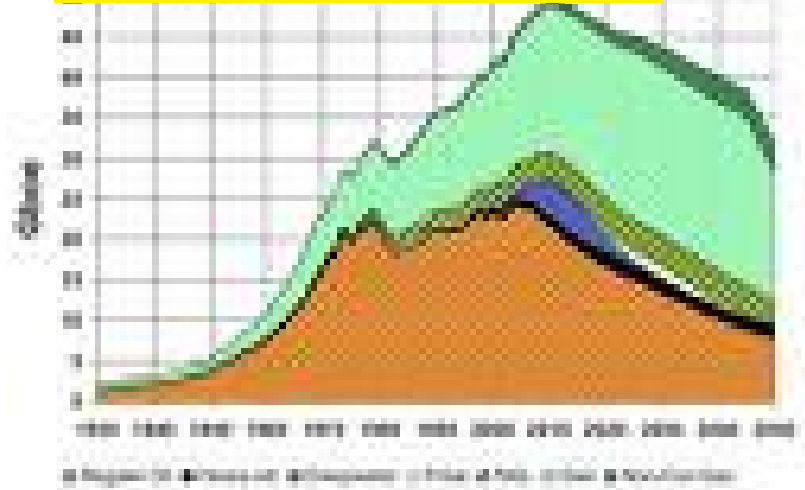


# Climate is one of the challenges

## Ageing and budget



## Peak Oil



## Private cost/social good

*..required to meet a significant portion of the cost of public good conservation programs, .. less public good conservation was occurring than was desirable.*

*HOR 2001*

## Second-order interactions eg weeds



# Some relevant innovation

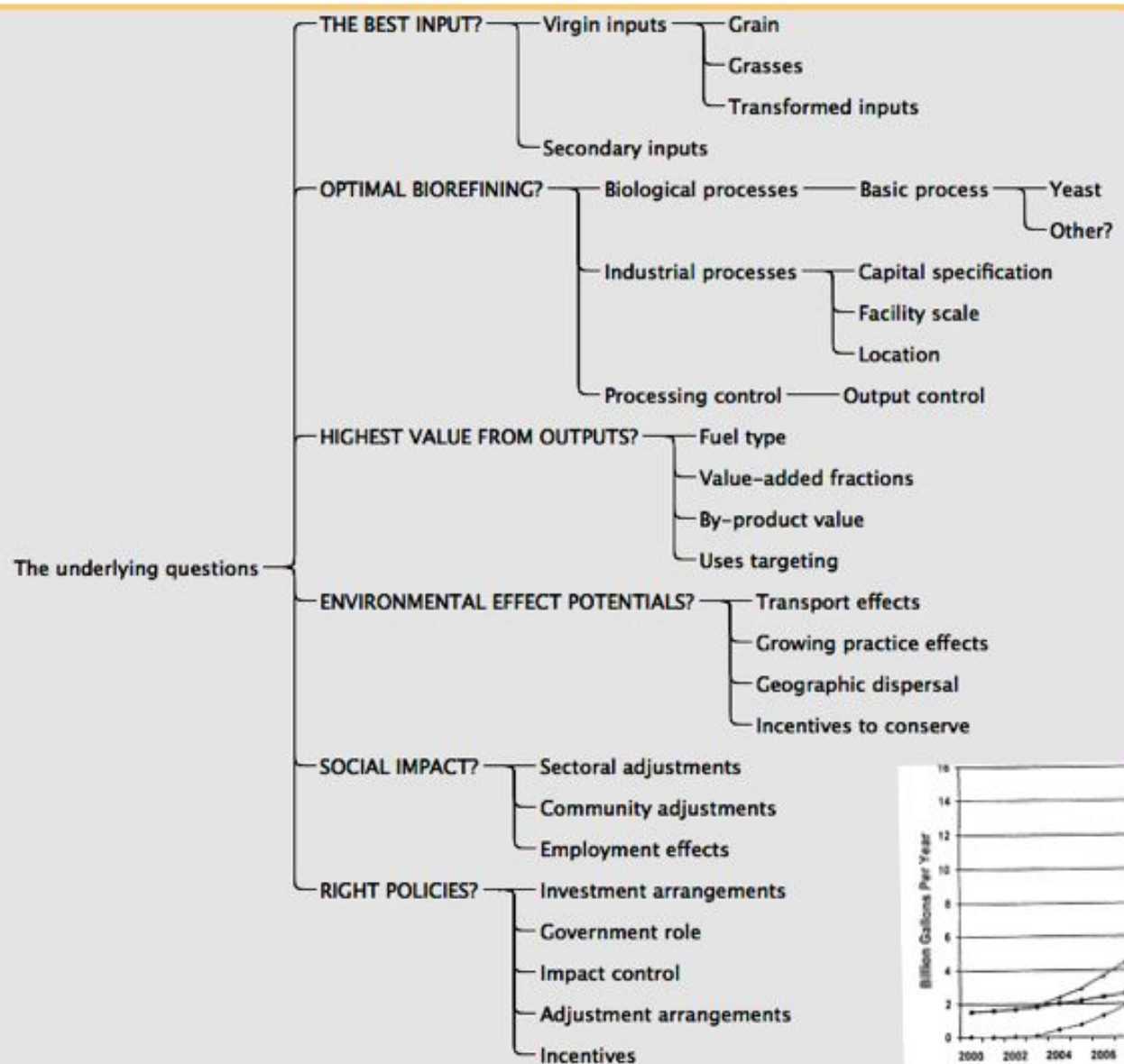
1. Biofuels
2. Carbon strategies in agriculture
3. Management of risks and resilience
4. Climate prediction and response

All require

Innovation-supporting instruments and institutions



# Thinking differently



## Dimensions:

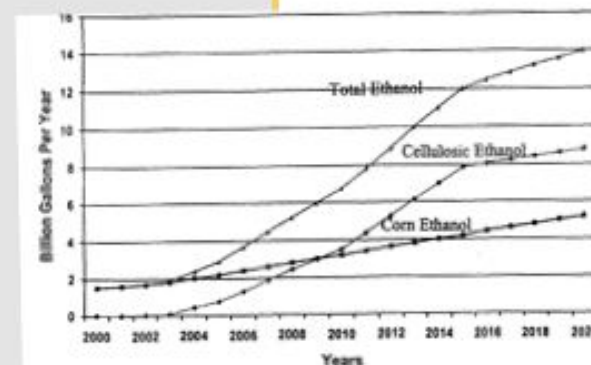
\$ competitiveness

Production efficiency

Social and environmental impact

Industry adjustment

**A TOTAL SYSTEM STRATEGY FOR SUSTAINABLE VALUE?**



# A changing logic for rural policies?

Instrument type	How does the instrument work?	What behaviours are promoted?	Who bears the cost?
Markets	Through market transactions <ul style="list-style-type: none"> <li>The price of scarce resources increases;</li> <li>Consumption is therefore curtailed by choice or inability to pay.</li> </ul>	Market entrepreneurship <ul style="list-style-type: none"> <li>arbitrage or</li> <li>improve resource access or value.</li> </ul>	Consumer of resource bears the cost of consumption
Private Regulation	Through private litigation, <ul style="list-style-type: none"> <li>Harmful effects are compensated for.</li> <li>Harm to third parties is therefore curtailed by the choice to avoid risk.</li> </ul>	Avoidance of third party harm or 'neighbourly' negotiation of interests	Offending user bears costs of avoidance of harm. Affected neighbour may bear costs of unavoided harm. Both bear negotiated costs.
Public Regulation	Through penalisation, <ul style="list-style-type: none"> <li>specified behaviours are made expensive.</li> <li>Consumption is therefore curtailed by choice to avoid risk.</li> </ul>	Compliance, focused on least cost to avoid the risk.	Regulator bears the cost of enforcement. User bears the cost of compliance.
Incentives	Through contract <ul style="list-style-type: none"> <li>Desired behaviours are rewarded;</li> <li>Conserving behaviour is thereby promoted.</li> </ul>	Administrative entrepreneurship <ul style="list-style-type: none"> <li>Win grants</li> <li>Satisfy requirements</li> </ul>	The granting agency plus grant applicants under cost sharing.
Education	Through communication, <ul style="list-style-type: none"> <li>Attitude or knowledge change leading to</li> <li>Conserving behaviour.</li> </ul>	Civic responsibility	Volunteers who adopt the learning.



# New markets

Concepts for private sector funded conservation  
using tax-effective instruments



## Offsets and markets

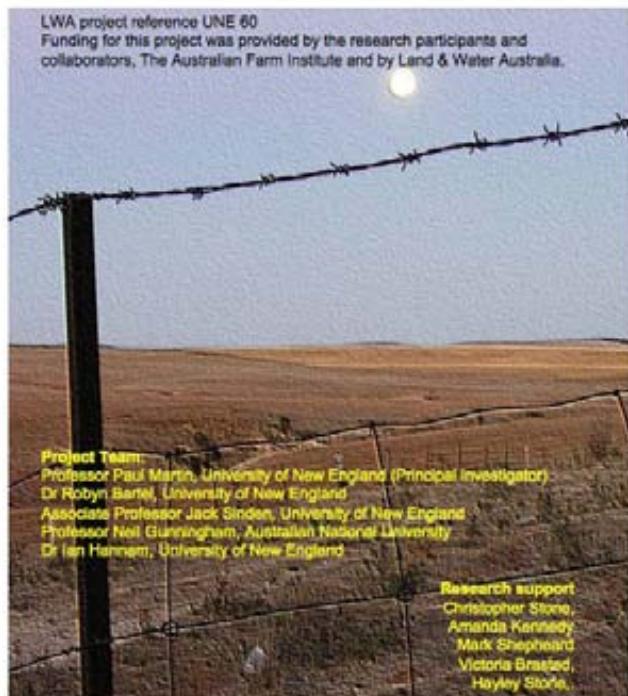
- Carbon
- Salt
- Water (non volume?)
- Biodiversity

## New strategies



# Improved mechanisms

Developing a good regulatory practice model for environmental regulations impacting on farmers



- Streamlining natural resource management
- A more complex mix of instruments
- Real Markets



# Aiming for fairness?

Strategies have distributional effects - winners & losers.

Complexity imposes a distributional cost.

- Aboriginal people
- Some landowners
- Volunteers
- Weak Communities



# Fix the system!

**Institutions**

**Structures**

- Social
- Legal

**Rules**

- Statutory
- Civil
- Contractual
- Social

**People**

**Decisions**

**Transactions**

**Instruments**  
**Communications**  
**Contracts**  
**Physical & funds flow**

**Transformation**

**Innovations**

**Policy resilience**

- Social system**
- Economic system**
- Environmental system**
- Hydrological system**
- Geographic and mineral structure**



# Can we fix it?

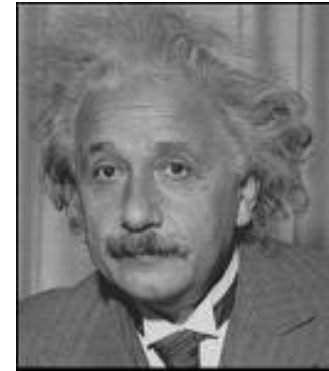


For every complex problem, there is a solution that is simple, neat, and wrong.

Henry Louis Mencken

Insanity: doing the same thing over and over again and expecting different results.

Albert Einstein,



Australian Centre for Agriculture and Law

**Yes we can**

Bob the Builder

