Politiques et expériences de l'Australie

Économie et Développement Durable: Une Alliance Réaliste?
Québec

17 et 18 mai 2007

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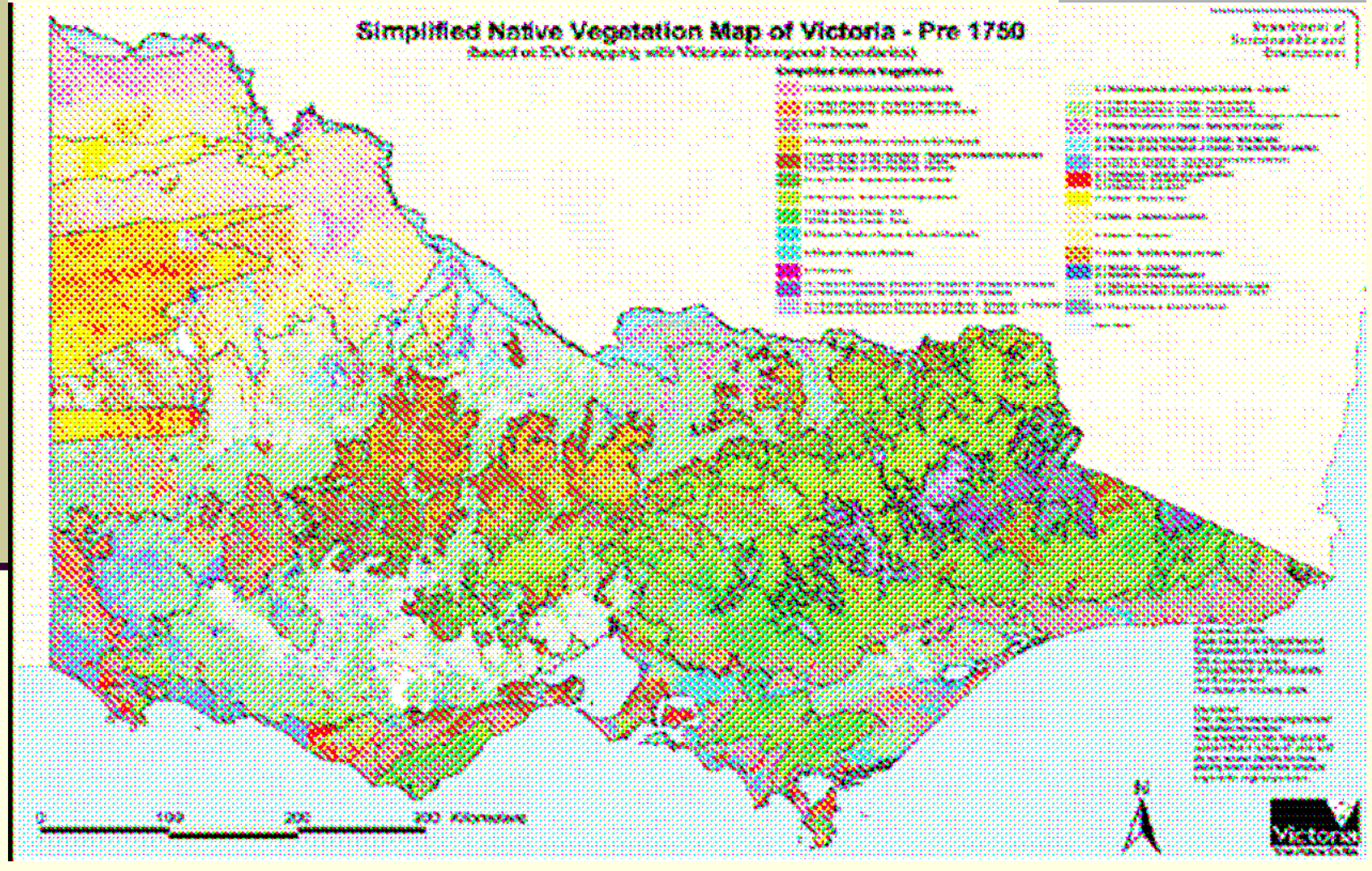
Australia

Background

Vegetation before European settlement



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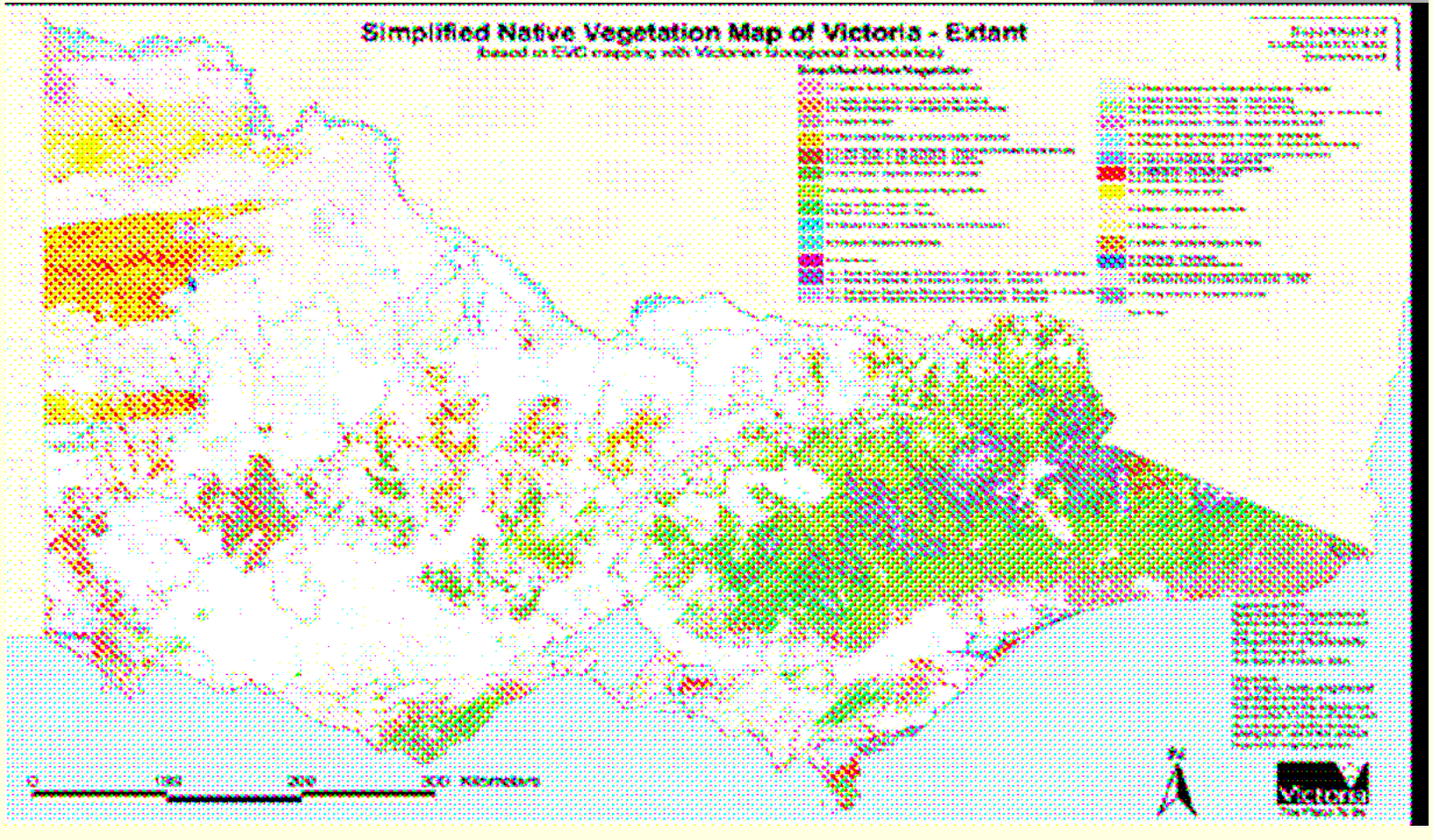


One Sub-Catchment

Impact of landscape change on EG&S

Environmental good/service	Impact on stock (1750....2007)
Stream flow	100%....409%
Saline area (ground water < 0.8m)	5%....13%
Habitat	100%....4%

- Impact depends on: type of intervention; land management; location of intervention
- Joint supply – one change generates a bundle of environmental goods and services (EG&S)

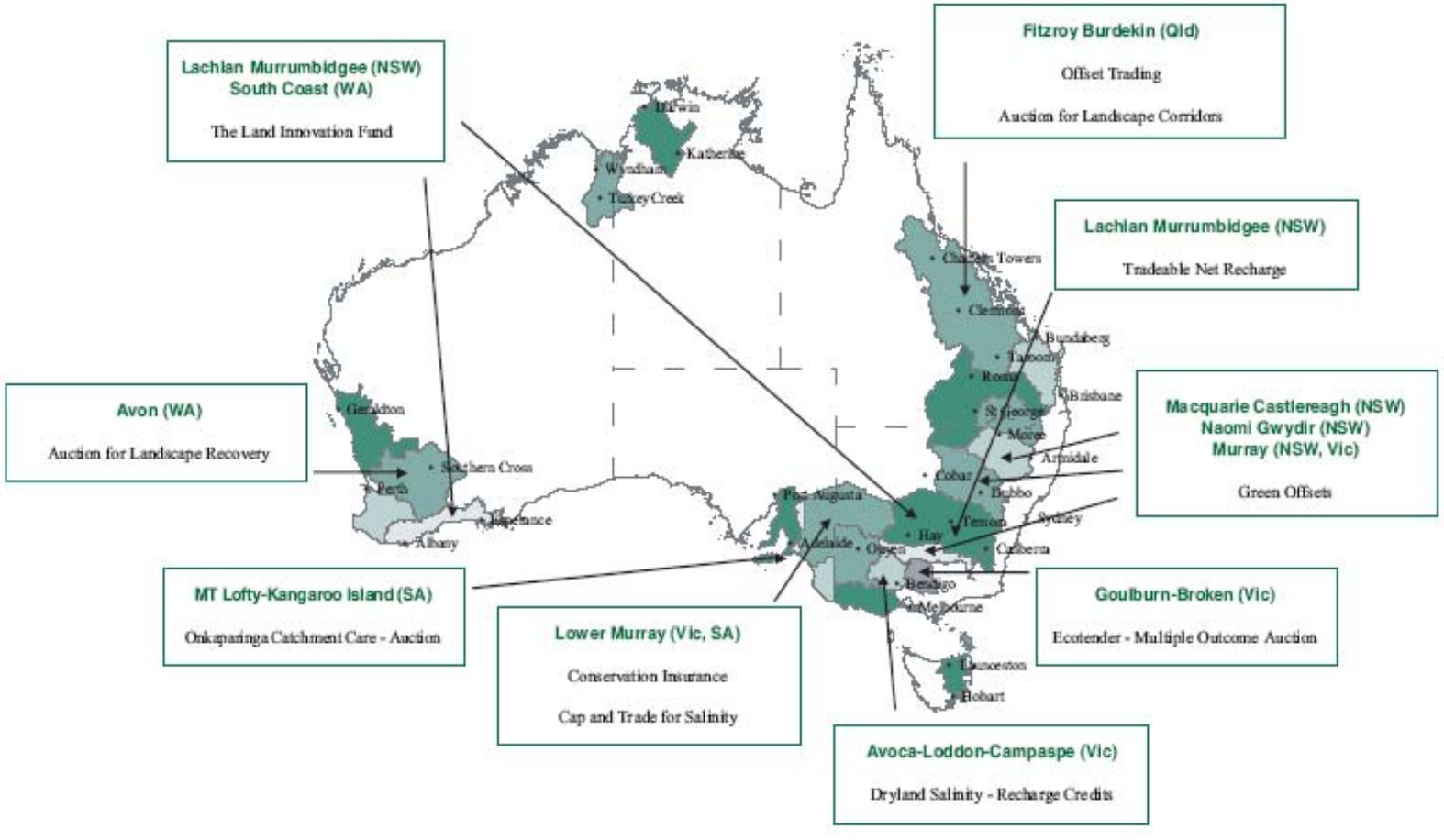
Background

Changing approaches in Australia

- Traditional approaches to the environment
  - Inefficient and ineffective (Australian National Audit Office)
- A "mechanism design" approach
  - Diagnose cause of missing markets/institutions
  - Apply modern microeconomic ideas
  - Test and refine in the laboratory or field
- A national program to build capability
  - Market-based Instruments Pilot Program
- Victoria going for full implementation
  - EG&S from private land
  - $14m program

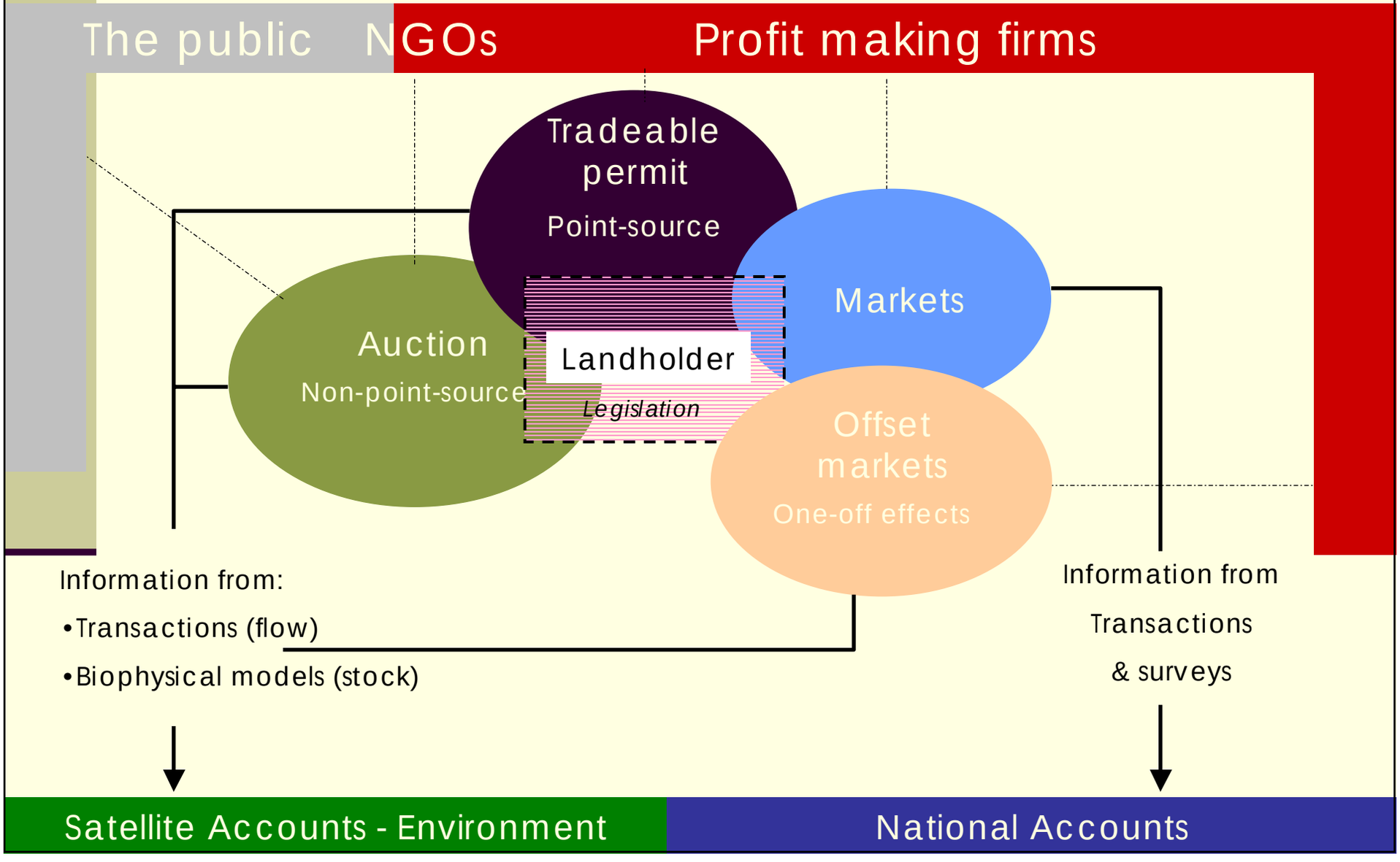
The National Program

MBI Pilots – Round One



The Victorian Program

Design and create the missing institutions



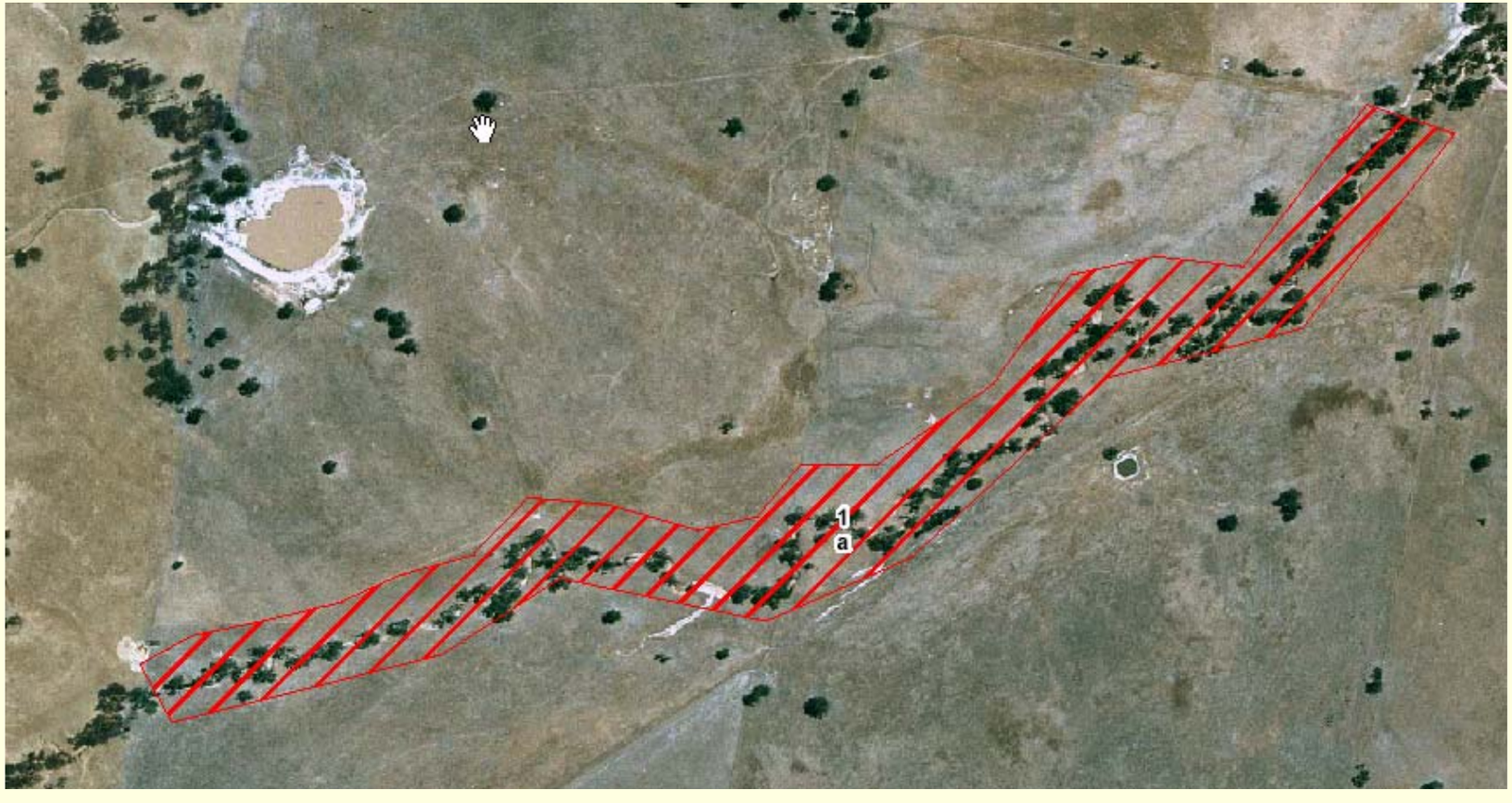
In The Field

The role of new institutions

- Efficient supply of EG&S from private land
  - Avoid subsidies
- Resolve adverse selection
  - Which are the low-cost providers? (harness competition)
    - Science - what are the outcomes?
    - Competition - what are the costs? (landholder)
  - TEP, Auction, Offset market resolve these questions
- Minimise moral hazard
  - Are the landholders supplying contracted outcomes?

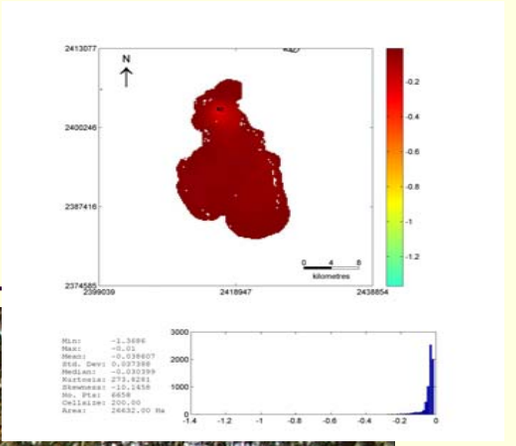
Adverse Selection (Hidden Information)

Is the site low cost or high cost?



In The Field

Hidden information - cost



Site visit – visual assessment of habitat

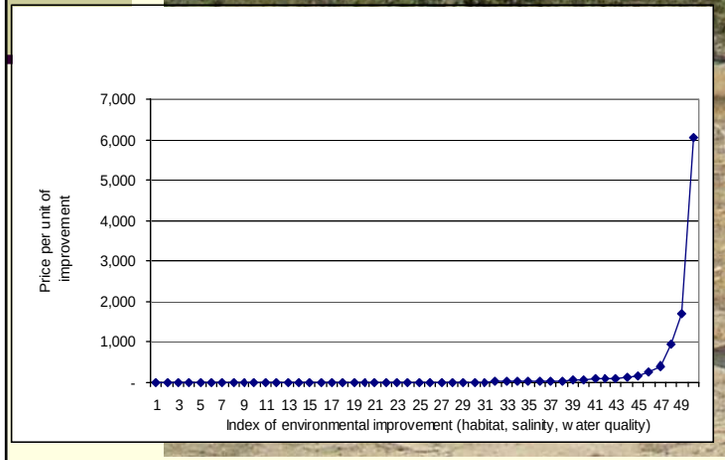
Model – salinity, water quality, carbon, stream flow

How much will I receive when I sell the carbon in TEP market?

What extra would I need to be paid to change land use?

What will other landholders ask for & do I have a good site?

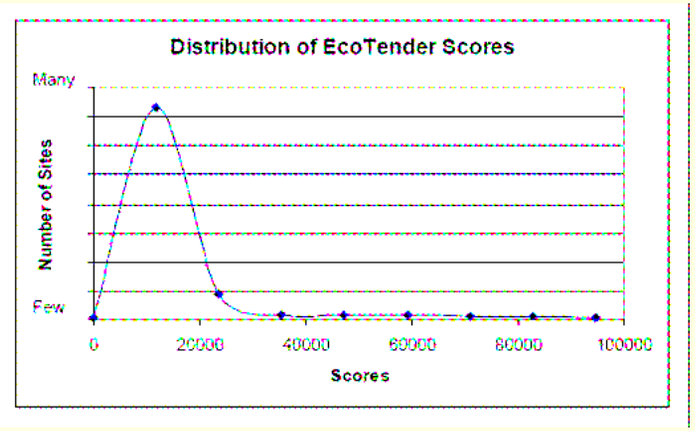
Submit bid



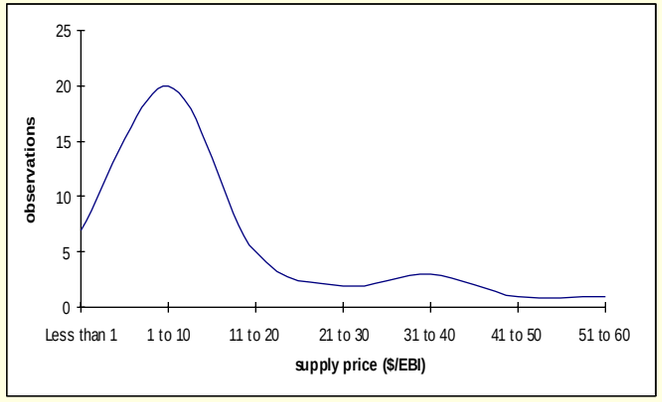
Results

Everyone is different

Heterogeneous environmental impacts

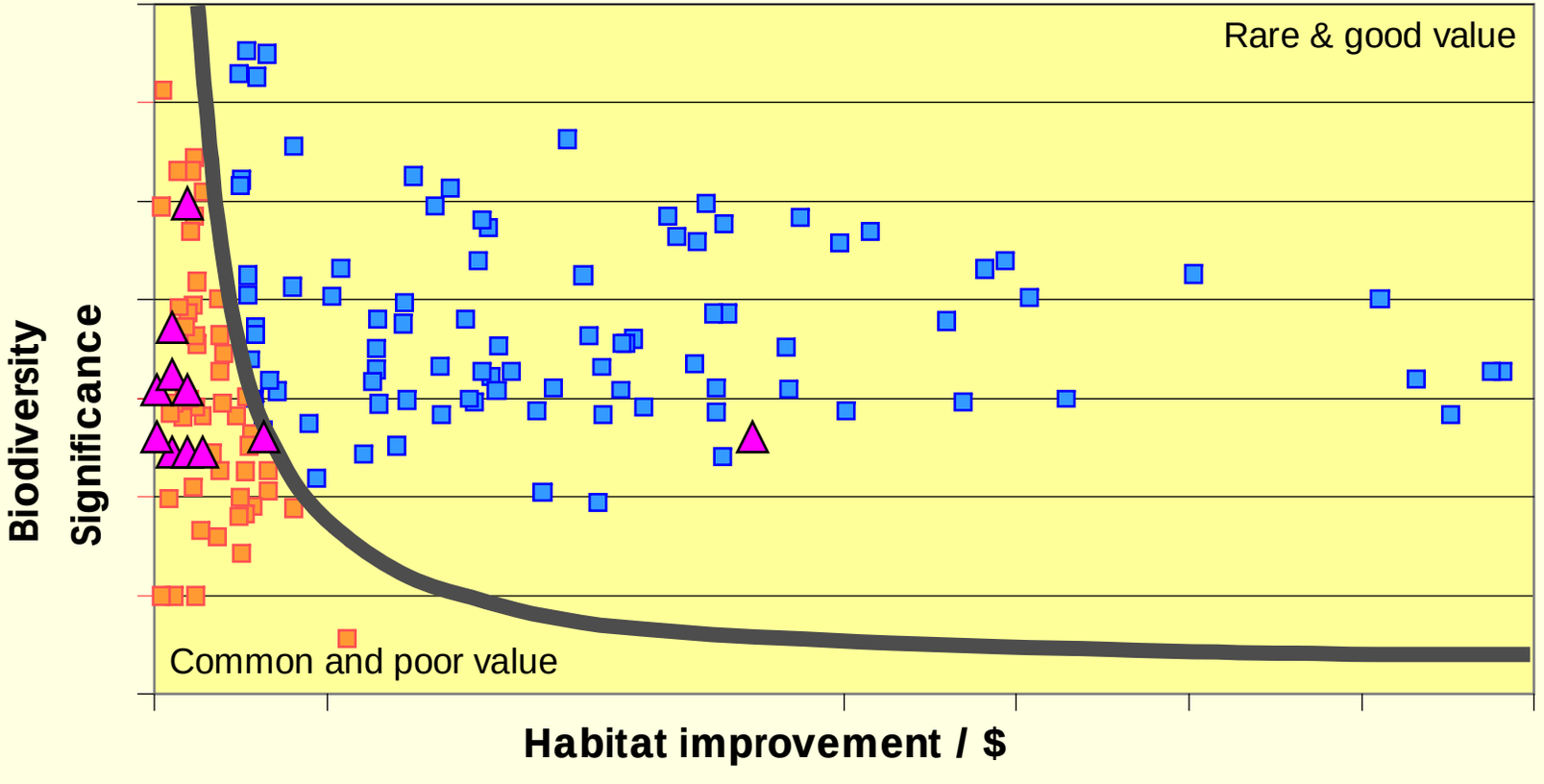


Heterogeneous agents



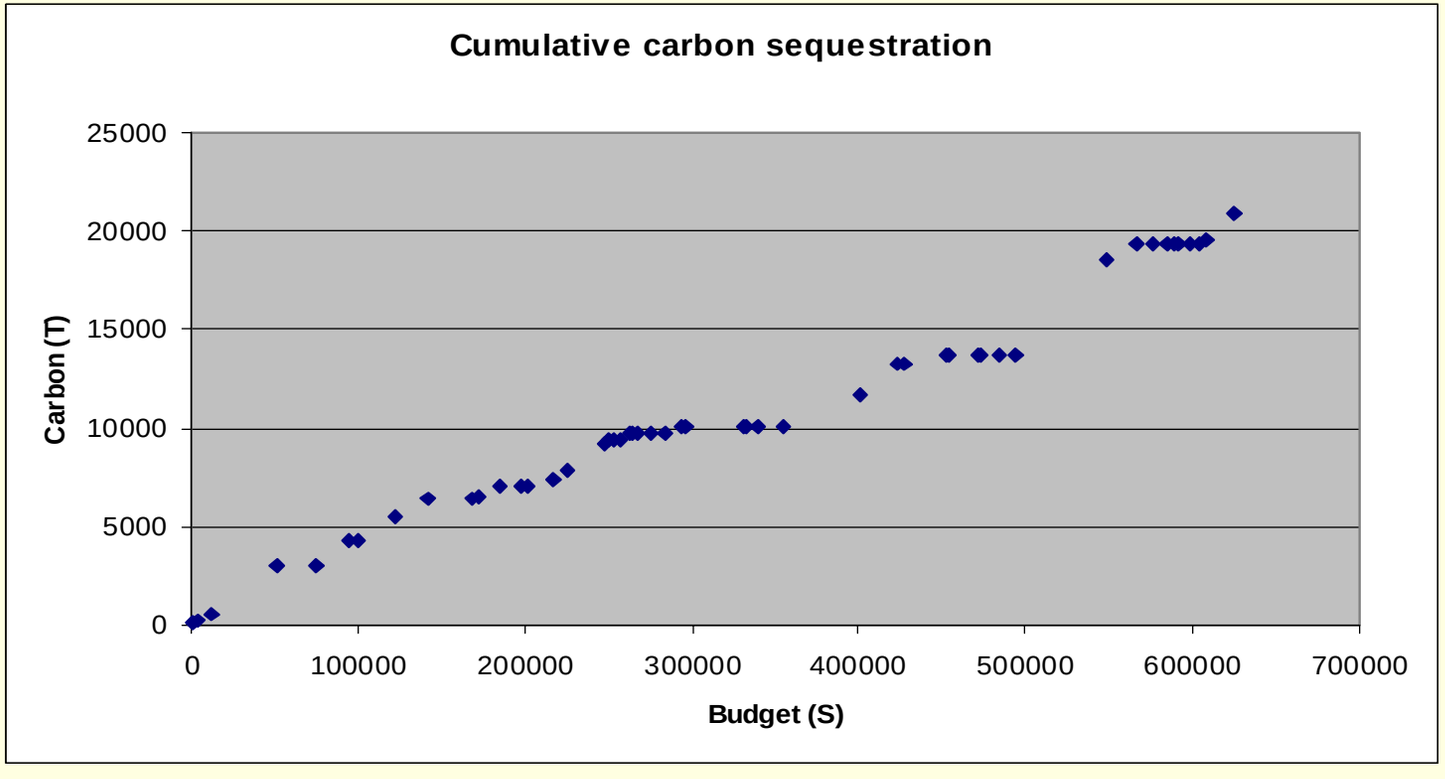
Results

Information makes a big difference



Results

Carbon market reduces public funding

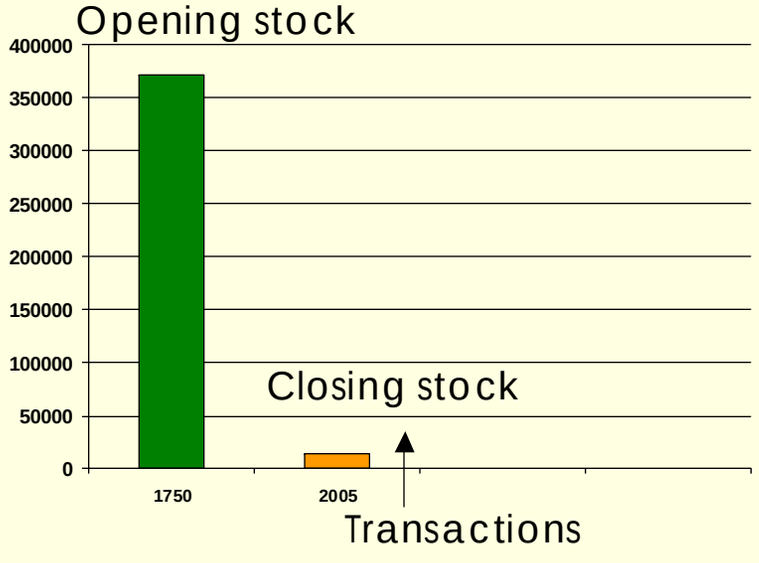


Price Carbon	$0/t	$6/t	$12/t	$20/t
Saving to public	0%	13%	26%	44%

Results

Environmental accounts

Land Account: Terrestrial habitat



Land Account: Stream flow

Results

Key observations

- Improved cost-effectiveness
  - 30% improvement over random allocation of contracts
  - 7 times over fixed-price grants (BushTender)
- Transparent
  - 37 units of habitat or 1 of dryland salinity
  - 4.5 units of water quality or 1 dryland salinity
  - 8.7 units of habitat or 1 of water quality
- Accountable
  - A property right/contract behind each investment
    - Monitored with incentive payments
- Ready engagement
  - Landholders like individual contract and bidding process
- Environmental Accounts
  - Transactions based approach (System of National Accounts)

Conclusions

The big picture

- Ideas matter
  - Diagnose, frame and design new institutions
- New institutions need to be developed
  - Mechanism design methodology
  - It's all about information and clever incentives
- Bring the environment into the economic system
  - Economic efficiency
  - Transparency
  - Governance and probity
  - National Accounts
- Broad application
  - Intellectual arbitrage