



# Market Based Instruments: An international perspective

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# Outline

- Focussing on NRM
- Current and future action in the US and Europe
- Australian reflections

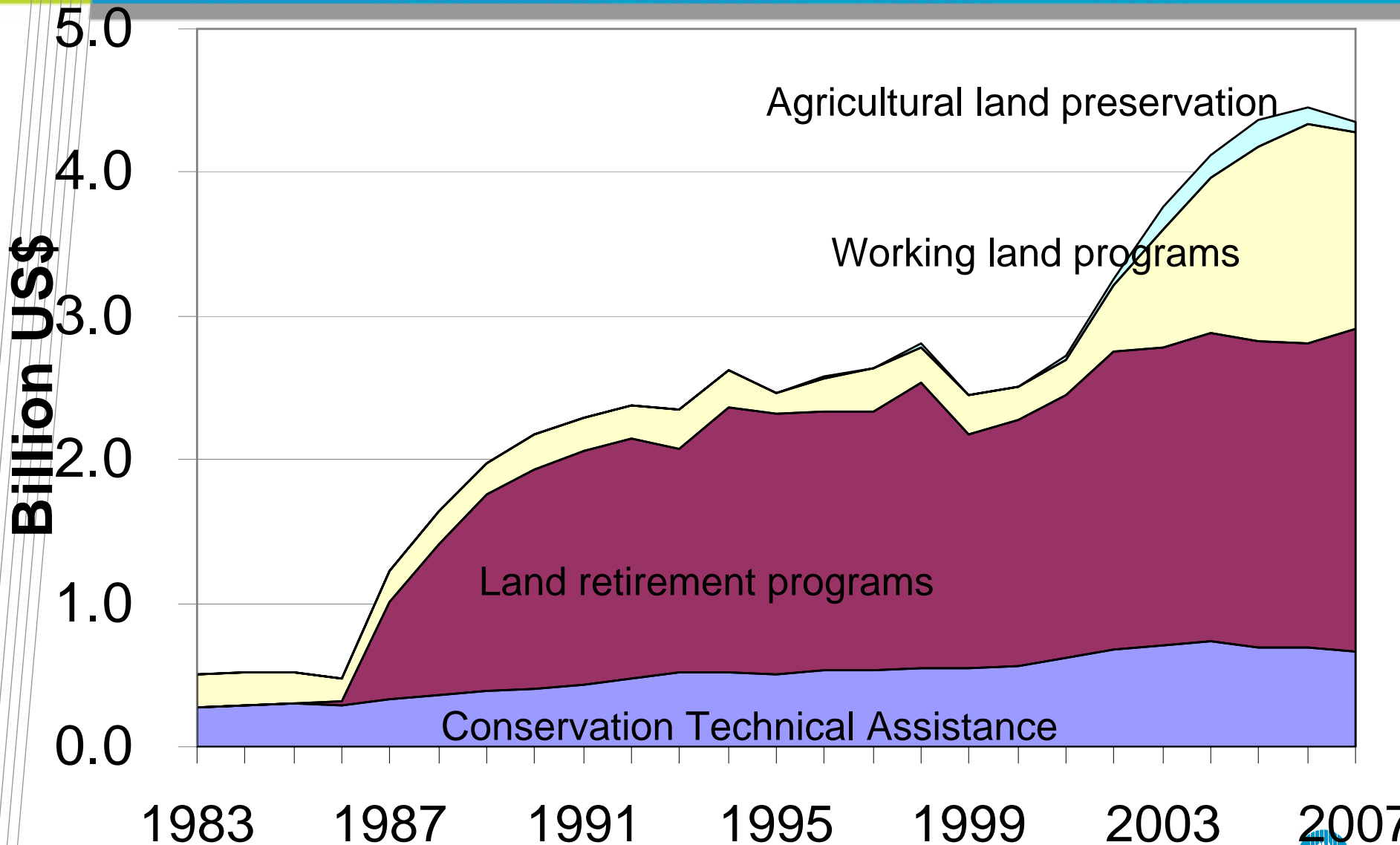
# United States

## Government Programs

Supply generated by market like and market demand



# USDA conservation expenditures 1983-2007 (Source: USDA)



# Land Retirement – Conservation Reserve Program

- Started as an initiative to retire erodible and environmentally sensitive crop and pasture land. Has evolved to include wildlife habitat, air and water quality objectives (since 1996).
- Has a **nationally defined** and applied index for project selection – Environmental Benefit Index
- Competitive with projects ranked based on EBI which includes cost

Contract length	10-15 yrs
Annual payment	>\$US 1 billion
Area under contract	~13.7 million ha's

- CREP for environmentally sensitive land

# Other land retirement

- **Wetlands Reserve Program (USDA)**
  - Voluntary, financial reward to protect and enhance wetlands in exchange of retirement of marginal farm land
  - Competitive in that wetland benefits and costs are considered in eligibility
  - Cost reduction can occur (eg partnerships with conservation organisations)
  - Limited by acreage caps rather than funds



Natural Resource Conservation  
Service

# Working lands - EQIP

- Began in 1997 allocates incentives to promote enviro stewardship on working land. For the management of nutrients, manure, irrigation, pests and wildlife habitat
- Federal funds allocated to the states based on national priorities then allocated to landholders against priorities (sometimes through counties)
- Funds allocated based on set actions and then cost
- Payment is based on cost share – usually limited to up to 75% of cost of conservation practice (% is not negotiable)

# Issues

## With the CRP

- May not be targeting the highest value areas:
  - Only 17% of the most erodible cropland is enrolled (Hodge and Reader 2007).
- Tradeoffs between objectives
- No incentive for coordination of conservation
- Areas listed in the scheme are gross, does not reflect slippage
- Some concern over contracts that are ending when feed and bio fuel prices are VERY high
- Some debate over accountability of purchasing (Enviro Effects Assessment)



Google images

# Issues with other government purchase programs

- Strong farmer and Congress objection to programs that favour one group over another.
- 2002 Farm Bill eliminated buy down option – where farmers could bid down the cost share percentage. Issues of inequity
- But with tighter budgets, competitive approaches may make a come back (USDA)



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# Supply generated by market like demand

## From regulation

- Mitigation banking (over 100 wetland mitigation banks established)
  - Motivated by Section 404 Clean Water Act 1972
- Conservation banking (eg habitat offsets)
  - Motivated by Endangered Species Act 1973
  - Creates a value for endangered species habitat
- TDRs, PDRs
  - Usually motivated by zoning and planning regulations



[Wetlandmitigationbanking.org](http://Wetlandmitigationbanking.org)

# Supply generated by market demand

## Private generated demand

- Small markets to conservation if owner can exclude others (eg hunting or recreational demand).
- Philanthropic covenant and purchase. Eg The Nature Conservancy & Ducks Unlimited
- Conservation through acquisition, easements and revolving lands.
  - Purchase land when landholder is not interested in an easement
  - Purchase easements
  - Revolving fund (purchase, restore, covenant and resell)

# Europe at a glance

## United Kingdom

- Environment programs began as an effort to offset impact of agricultural intensification support.
- Up to 2007, stewardship through many schemes including country side stewardship.
- Recently introduced the Environmental Stewardship Scheme:
  1. Schemes to reduce agriculture intensity - Entry Level Scheme (ELS) for farmers new to conservation
    - Legally binding agreements to management actions
    - Paid flat rate £/ha/yr
  2. Organic level stewardship
  3. Higher level stewardship - Schemes with objectives for environmental gain
    - 10-20yr contracts
    - Paid flat rate £/ha/yr
    - Competitive based on weightings on actions in regions
    - Concern about net gain

# European future directions

- Many community initiated collective and cooperative schemes (hedgerow planting in Denmark, Enviro co-ops in Denmark)
- Focus on removing perverse incentives (more so than instrument design)
- Where tenders are considered focus on results rather than inputs
- Research into splitting payments for inputs and outcome

# Australian reflections

## Australia the leader

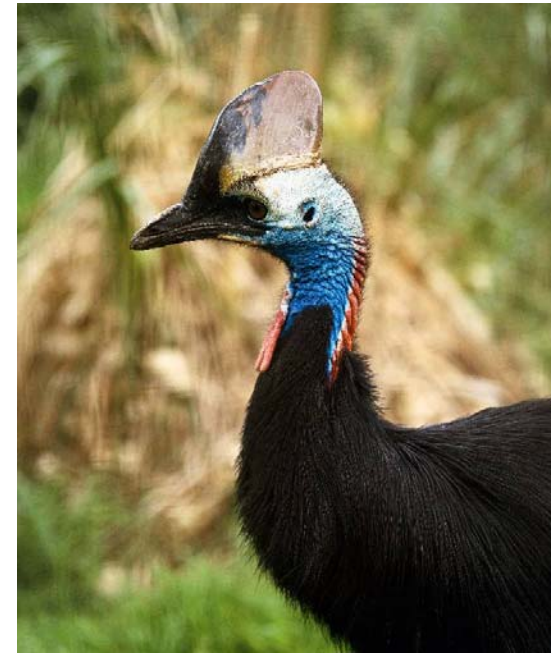
- Much more focus on auction design to maximise benefits (auction design for outcomes, connectivity, multiple benefits)
- Regional capacity to implement these schemes
- Landcare has means that Australian landholders are probably more environmentally aware (Pannell)

## Lessons for Australia

- Mitigation markets and private sector engagement (large scale and strategic private investment)
- Collectives and cooperatives

# Thank you..

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## Markets, Incentives and Institutions Team:

- Incentive and other policy selection and design
- Competitive tenders for NRM
- Offset design
- Behavioural economics

