

# incentives and institutions for environmental policy

*an integration perspective*

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## *incentives and institutions ...*

Five principles for ensuing stewardship payments

- (i) support sustainable resource use and
- (ii) provide good value for public expenditure

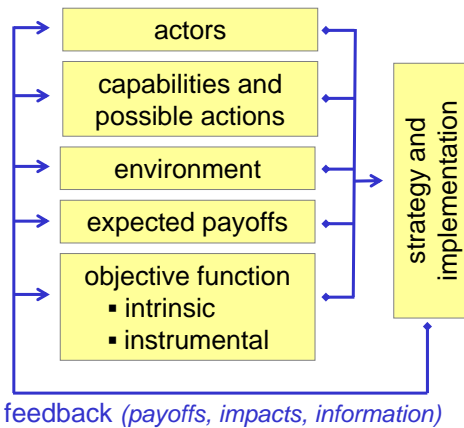
- 1. Implementation based on coherent regional plans**
- 2. Define and build on 'duty of care'**
- 3. Change the rules to prevent net cost activity**
- 4. Recognise diverse motivations**
- 5. Build mutual understanding of the diversity of values and viewpoints**

*... an integration perspective*



## incentives and institutions ...

Evolutionary game theory as an integrative framework:



incentive effects depend on – understanding

- perceptions of cause and effect
- perceived feasible actions and strategies
- expected states of the world

goals

- pre-existing objectives or values
- evolution of objectives, including through changes in norms, information and beliefs

expected payoffs

- expected 'payoffs' from actions and strategies
- expected behaviour of other strategic agents

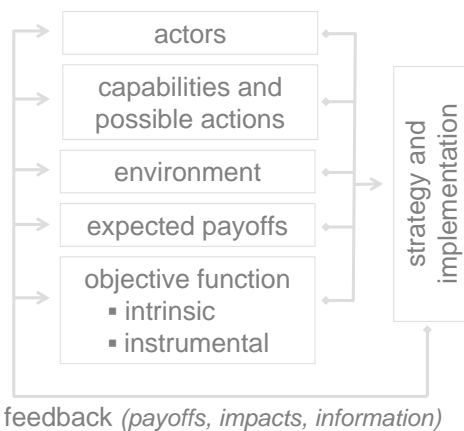
learning

- from experience, observation and communication



## incentives and institutions ...

Evolutionary game theory as an integrative framework:



new information can change attitudes and behaviour

- individuals and organizations learn (where there are incentives to do so)
- public health and awareness campaigns can be effective
- deliberative process can change attitudes

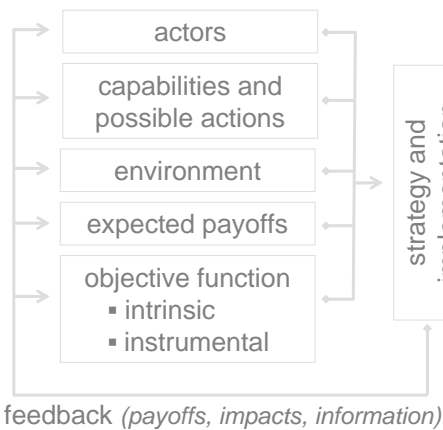
... but people choose to be uninformed

- 'rational ignorance' (?) ... mandatory energy audits find cost savings
- knowledge may imply (unwanted) responsibilities



## *incentives and institutions ...*

Evolutionary game theory as an integrative framework:



### institutional cues are important

- individuals behave as 'self-interested market actors' in market situations
- but become more 'other regarding' where:
  - transactions are not anonymous
  - there is communication between actors
  - actors have multiple types of relationships or engagements

### ... people are imperfect reciprocators

- not pure altruists or egoists



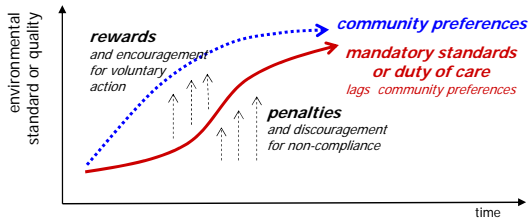
## 1 ...target through *coherent regional plans*

- **Why ecosystem service payments?**
  - ... widespread agreement current environmental outcomes are less than satisfactory
  - ... 'regulatory approaches' require uniform frameworks and effective compliance mechanisms that would be difficult
  - ... resource managers have limited ability to absorb or pass through higher costs that may be associated with conservation
- **Selective action should be targeted on the basis of regional information and priorities**
  - ... integrate across objectives, and across types of knowledge
  - ... improve knowledge base and capacity over time

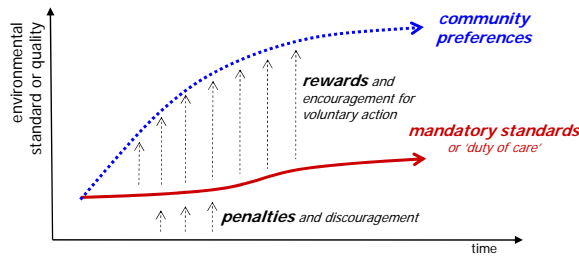


## 2 ...define and build on 'duty of care'

### ➤ defining duty of care is the issue



**polluter pays**  
(favours environment and fiscal 'interests')

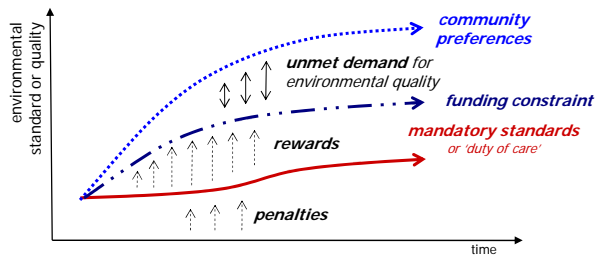


**beneficiaries pays**  
(favours environment and farming 'interests')



## 2 ...define and build on 'duty of care'

### ➤ defining duty of care is the issue



**partial beneficiaries pays**  
(favours current farming and fiscal 'interests')

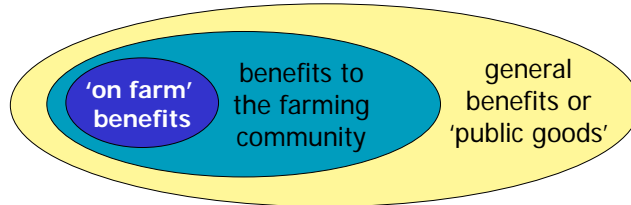
### ➤ Current approaches result in a three way stand-off

... a stable but maladaptive equilibrium



## 2 ...define and build on 'duty of care'

- Back to basics: Who benefits from sustainable land use?



**The Catchment Care Principle**  
**'Each farmer has a responsibility to avoid damaging the long term interests of the farming community'**

... interpreted as a responsibility to help maintain fully functional and productive landscapes



## 2 ...define and build on 'duty of care'

- Back to basics: Who benefits from sustainable land use?

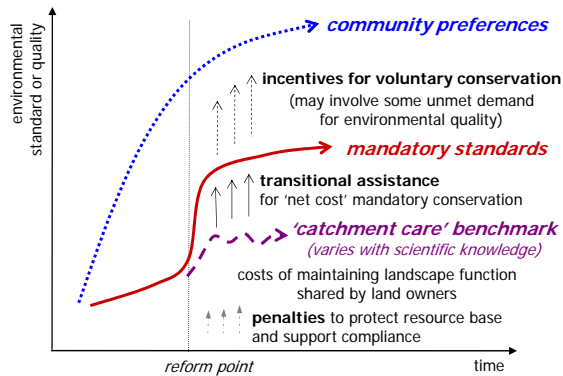


- |                   |  |  |
|-------------------|--|--|
| <i>Vegetation</i> | ❖ salinity prevention<br>❖ water quality<br>❖ soil quality                   | ❖ biodiversity conservation (above net benefit levels) |
| <i>Water</i>      | ❖ maintaining river health<br>❖ regulation of water use to avoid degradation | ❖ recovery of environmental flows<br>❖ ensuring equity |



## 2 ...define and build on 'duty of care'

### Catchment care principle



- **Incentives for voluntary action above standards**
  - Use cost effective strategies and build community support
  - Publicly fund repair
- **Support the transition to higher standards**
  - Assistance to prevent hardship
  - Build information and capacity at farm and regional levels
- **Clarify and enforce standards to prevent degradation**
  - At least protect essential landscape function or ecosystem integrity
  - Higher levels (eg for biodiversity purposes) should be paid for by general community
- **Remove impediments and perverse incentives**

## 3 ...change the rules to prevent net cost activity

### Why incentive payments?

- Provide resources
- Maintain investment security and existing rights
- Community acceptance
- Encourage action beyond minimum standards
- Voluntary – aids compliance
- Allows leverage

### What are the limits?

- Require government funds
- Ignores cost shifting
- Acceptance is conditional ... which community?
- May discourage responsibility
- Partial coverage – may be insufficient or counterproductive
- Leverage requires some private benefit



### 3 ...change the rules to *prevent net cost activity*

- incentives are an important component of coherent policy strategy
  - a) **extension** – support the uptake of commercially attractive and environmentally sustainable management options;
  - b) **payments** – support non-commercial beneficial management practices on private and public land;
  - c) **innovation** – support the development of more commercially attractive land use options providing environmental benefits;
  - d) **regulate** – prohibit ‘net cost’ management practices;
  - e) **invest in improved knowledge and capacity**



### 3 ...change the rules to *prevent net cost activity*

- incentives are an important component of coherent policy strategy
- dramatically expanding stewardship payments
  - could dramatically improve conservation outcomes
  - is likely to do nothing to improve resource security
  - will not promote innovation unless specific policies are implemented



### 3 ...change the rules to *prevent net cost activity*

- incentives are an important component of coherent policy strategy
- dramatically expanding stewardship payments
  - could dramatically improve conservation outcomes
  - is likely to do nothing to improve resource security
- net cost activity could be prevented through integrated regional NRM governance
  - minimalist regulation to prevent activities that threaten essential ecosystem function
  - complementary public investment in priority goals
  - 'flexibility mechanisms' to promote efficient resource use



### *incentives and institutions ...*

Five principles for ensuing stewardship payments

- (i) support sustainable resource use and
- (ii) provide good value for public expenditure

1. Implementation based on coherent regional plans
2. Define and build on 'duty of care'
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4. **Recognise diverse motivations**
5. **Build mutual understanding of the diversity of values and viewpoints**

*... an integration perspective*



## 4 ...recognise diverse motivations

- **Persuasion** – ‘do the right thing’
- **Education and information**
- **Self regulation** – codes and standards
- **Grants** – support for public benefit activities
- **Markets and incentives** – tradeable permits
- **Regulation**

*increasing  
government  
traction or muscle*

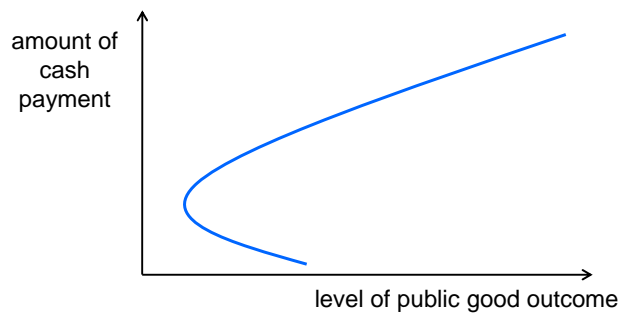


*does not  
always  
increase  
effectiveness*



## 4 ...recognise diverse motivations

- **beware crowding out ‘social motivations’**

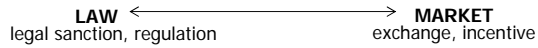


- ‘commodifying’ and paying for an activity can reduce existing non-financial or non-economic motivations



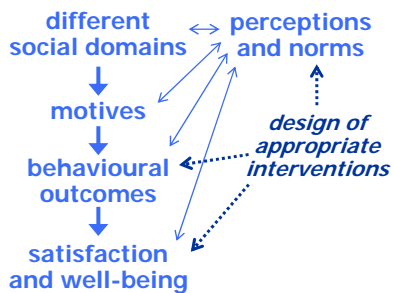
## 4 ...recognise diverse motivations

Most incentive based policy focuses only on financial motivation, and the benefits of flexible policy instruments



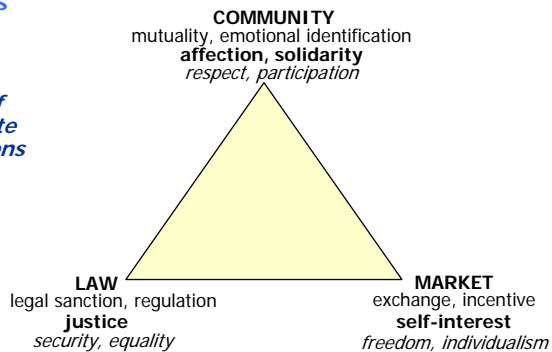
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Key:

**DOMAIN**  
 organising principles  
 motivating virtue  
 central values

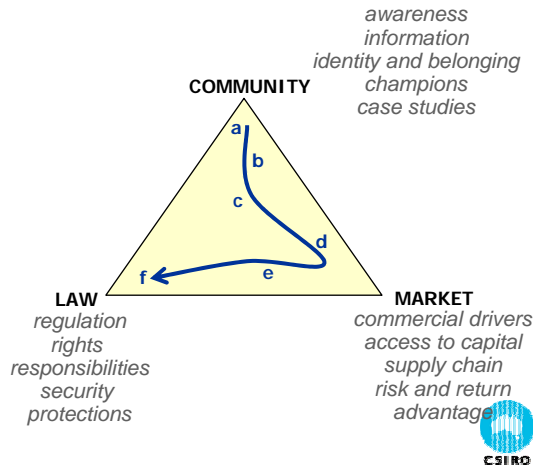


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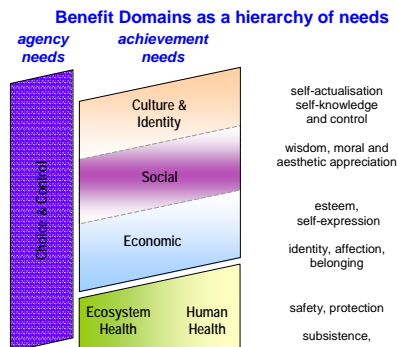
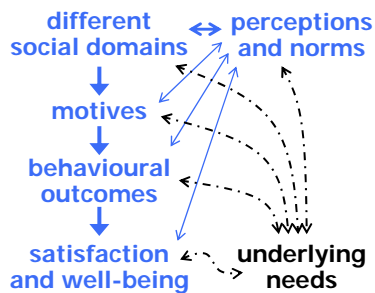
### Choosing policy tools

- a. Persuasion – 'do the right thing'
  - b. Education and information
  - c. Self regulation, codes and standards
  - d. Grants and subsidies
  - e. New markets – tradeable permits
  - f. Regulation
- ???



## 4 ...recognise diverse motivations

Most incentive based policy focuses only on financial motivation, and the benefits of flexible policy instruments



## 4 ...recognise diverse motivations

Effective incentives will be:

- consistent with **constraints**
  - financing and liquidity
  - time and (seasonal) management effort
  - natural resource base
- consistent with **motivations**
  - production income, livelihoods, agency goals
  - resource development and good farming practice
  - enterprise viability and risk management
- consistent with **knowledge and culture**
  - known models
  - skill and equipment requirements
  - manageable types of risk and uncertainty



## 5 ...build mutual understanding

- Social choice involves building coalitions of support across contested values ... no 'representative individual'
- Most policy design and decision support assumes commensurate values (framed along a single spectrum of desired outcomes)
- Lasting resolution of wicked problems assisted by understanding of the diversity of values and motives

... more advanced 'values mapping'

... more investment in engagement across values segments

... more substantive devolution

		← INTERESTS (re. water use) →			
		Industry A	Industry B	Rural people	Urban dweller
↑ WORLD VIEW ↓	Jobs matter most	a%	?	c%	?
	Environmental concern	?	b%	?	?
	'me first' individualists	?	?	?	d%



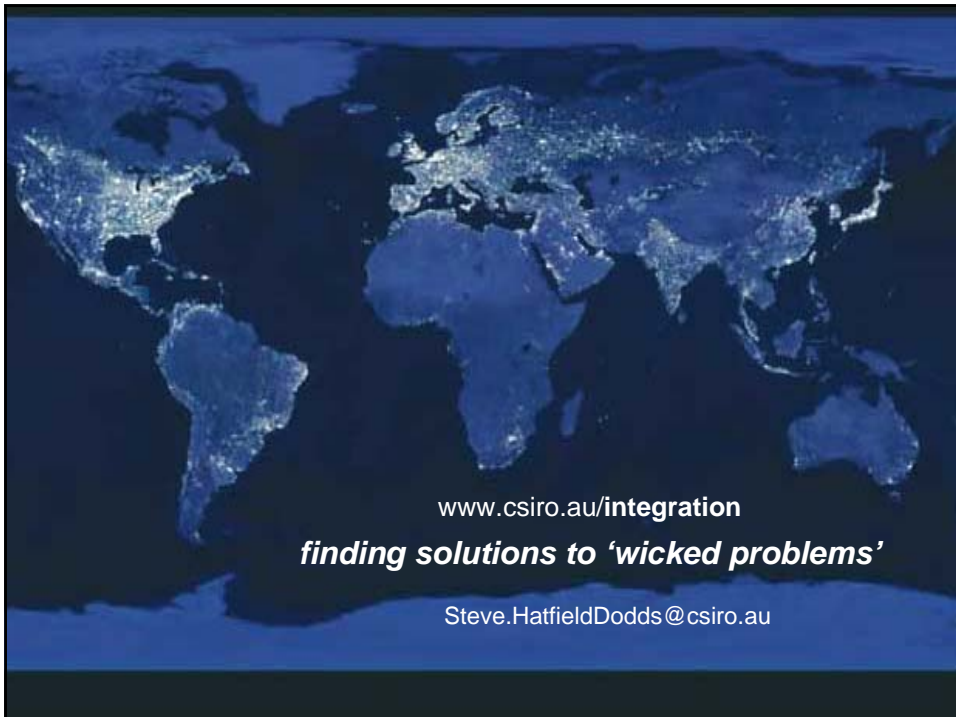
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*finding solutions to 'wicked problems'*

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