The Tyranny of Small Decisions: environmental management of Moreton Bay wetlands

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What is economics?

- Economics is the study of how and what choices are made by individuals, firms and government.
- Why are choices necessary? Because of scarcity.
- When a choice is made, there is an opportunity cost.

Allocation of resources in a competitive market

Allocation of resources – market failure
What is the economic problem with respect to Moreton Bay?

- Degradation and reclamation of wetland areas
- Why:
  - Deterioration of water quality
  - Reclamation of "swamps" to make way for development
- Economic problem: market failure

Environmental problems

- Source of all environmental problems is human exploitation of our environment
- Market failure
  - Public goods nature of environment
  - Unaccounted for externalities (positive and negative)
  - Property rights (common property)
  - Market power
  - Information asymmetries
  - Transaction costs

Economic problem for conservation of wetlands

- The goods and services provided by ecosystems are provided at no direct cost to society as a whole
- Ecosystems are used as a free and open access resource
- Ecosystems are exploited
- Negative externalities impacting on ecosystems are not valued

Ecosystem goods and services provided by wetlands

<table>
<thead>
<tr>
<th>Goods and services provided by ecosystems in coastal zones:</th>
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<tbody>
<tr>
<td>Cycling of waste</td>
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<tr>
<td>Buffer zone reducing erosion</td>
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<tr>
<td>Flood mitigation</td>
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<tr>
<td>Fauna and Flora habitat areas</td>
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<tr>
<td>Amenity value</td>
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<tr>
<td>Recreational services</td>
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<tr>
<td>Maintenance of commercially targeted fisheries</td>
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<td>Nursery habitat areas for fish</td>
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Problem: how can these be valued?

How can economics make a scientific study more meaningful?

End of pipeline information:
- Economic consequences of action or lack of action
- Identify and measure the goods and services provided by ecosystems
- Economic justification for management regimes – economic efficiency
- Economic indicators to monitor impact of change

Evaluation tools used by economists

- CBA
- CEA
- Impact assessment (input-output)
- MCA

These evaluation tools require identification and measurement of ecosystem services
Conclusions

- Economics is about making choices
- Where the environment is impacted by a development decision, the consequences must be considered
- Economics evaluates the economic consequences of action or lack of action – not always in monetary terms