Role of economics for environmental management

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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

Economic problem
- 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

Allocation of resources – market failure

How can economics make a scientific study more meaningful?
- 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.

Ecosystem goods and services

Goods and services provided by ecosystems in coastal zones:
- Cycling of waste
- Buffer zone reducing erosion
- Flood mitigation
- Fauna and Flora habitat areas
- Amenity value
- Recreational services
- Maintenance of commercially targeted fisheries
- Nursery habitat areas for fish

Conclusions

- Economics is about making choices
- Where the environment is used as an open access resource, the production of negative spillover effects must be addressed
- Economics evaluates the economic consequences of action or lack of action