

Summary of “Biodiversity and Globalization”, Geoffrey Heal (2002)

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Biodiversity loss is a global problem

Biodiversity loss is caused by:

- Habitat destruction and species extinction
- Population growth
- Climate change

These are global problems, but not problems of globalization.

Therefore, global solutions are required

- In fact, further globalization is needed to solve biodiversity loss
- Willingness to pay for conservation is housed in rich countries
- Biodiversity “hot spots” are housed in poor countries
- Institutions need to be developed to transfer between rich and poor.

Biodiversity as a commodity

- Biodiversity provides important services:
- Enhances ecosystem productivity and resilience
- Provides insurance against agricultural pest attacks
- Provides valuable genetic knowledge (for crop breeding, medicine, technological innovations, pollution control)

Market and biodiversity

Can some of this value be captured by markets? Three possibilities:

- Ecotourism: South America and Africa
- Carbon sequestration: we have discussed this issue in detail
- Conservation and development: amenity values of open space, consumer WTP for ecologically friendly products

Global markets and public goods

- Contributions to productivity, insurance against pathogens, and accumulation of knowledge are all non-rival (but not non-excludable, not), and are therefore public goods
- We all learn in our standard theory classes that public goods will be underprovided in a free-market setting.
- However, market mechanism have been used to control “public bads”.

Three examples of bundled public/private goods:

- Spring Island in SC: developed developed the land at a lower level of density to capture amenity values that lead to higher sales prices
- Eco-certified lumber
- Security

Bundling public goods and social optimality

Heal argues that if private and public goods are “bundled” (sold together), the public goods can be efficiently provided by the market if:

- The developer own the exclusive right to develop (monopoly supplier)
- Price discrimination is possible (charging buyers different prices according to their willingness to pay)
- Utility functions are concave and cost functions convex

Criticisms regarding globalization and the environment

- Globalization means moving to countries with lower environmental standards
 - Evidence is not there that firm move for that reason
 - Pollution is not the cause of biodiversity loss
- Globalization leads to incentives to clear land for agriculture or logging
 - He thinks land clearing is for domestic consumption (incorrect)
 - Logging pressure could be a problem (correct)

Conclusions

More globalization is needed, in terms of establishing markets for conservation

Comments

- Nunes et al. argue convincingly that only a small part of the value of biodiversity can be captured by markets.
- Will the market preserve all critical species and habitats? (evidence for more endangered species support for more charismatic species, ecotourism may leave out less climatically or aesthetically attractive places)

More comments:

- Work on spatial externalities calls Heal's conclusions about the optimality of bundled public/private amenities into question. (especially concave utility functions)
- All that said, the point that markets for conservation need to be established is a good and very important one.