

*Land-Cover and Land-Use
Change: New Policy Dimensions*



Tony Janetos

World Resources Institute

Land-Cover and Land-Use Change: New Policy Dimensions



Selected Major Issues

- Food Production and Distribution
- Carbon Sources and Land-Use
- Carbon Sinks and Land-Use
- Management of Ecosystems for Goods & Services
- Preservation of Unique Places

Land-Cover and Land-Use Change: New Policy Dimensions



Food Production and Distribution

- World must roughly double food production in next 40-50 years
- Where will the land come from?
- How can we manage the agricultural land we have more intensively without adverse environmental consequences?

Land-Cover and Land-Use Change: New Policy Dimensions

Carbon Sources and Land-Use

- Land-use change in tropics roughly 20-30% of total anthropogenic flux to atmosphere
- Non-Annex I countries have no formal commitments under Kyoto Protocol
- What are appropriate incentives to reduce this flux without adverse impacts on local livelihoods?

Land-Cover and Land-Use Change: New Policy Dimensions

Carbon Sinks and Land-Use

- Roughly 1-2 GtC per year are taken up by terrestrial ecosystems in north temperate/boreal latitudes
- Are there ways to maintain or enhance this sink?
- Can carbon offset or trading programs result in real gains and revenue streams for other policy goals, e.g. biodiversity conservation?

Land-Cover and Land-Use Change: New Policy Dimensions



Management of Ecosystems for Goods & Services

- Consumption trends for most ecosystem-derived commodities have been rising for several decades
- Can we create appropriate policy mechanisms to sustain those goods for which substitution is difficult?
- Can we create appropriate mechanisms to value non-market services?

Land-Cover and Land-Use Change: New Policy Dimensions

Preservation of Unique Places

- How can diversity of life be valued such that unique places are preserved?
- How can diversity of life and habitats be managed so that local societies benefit?
- Can we finance biodiversity goals through other mechanisms?