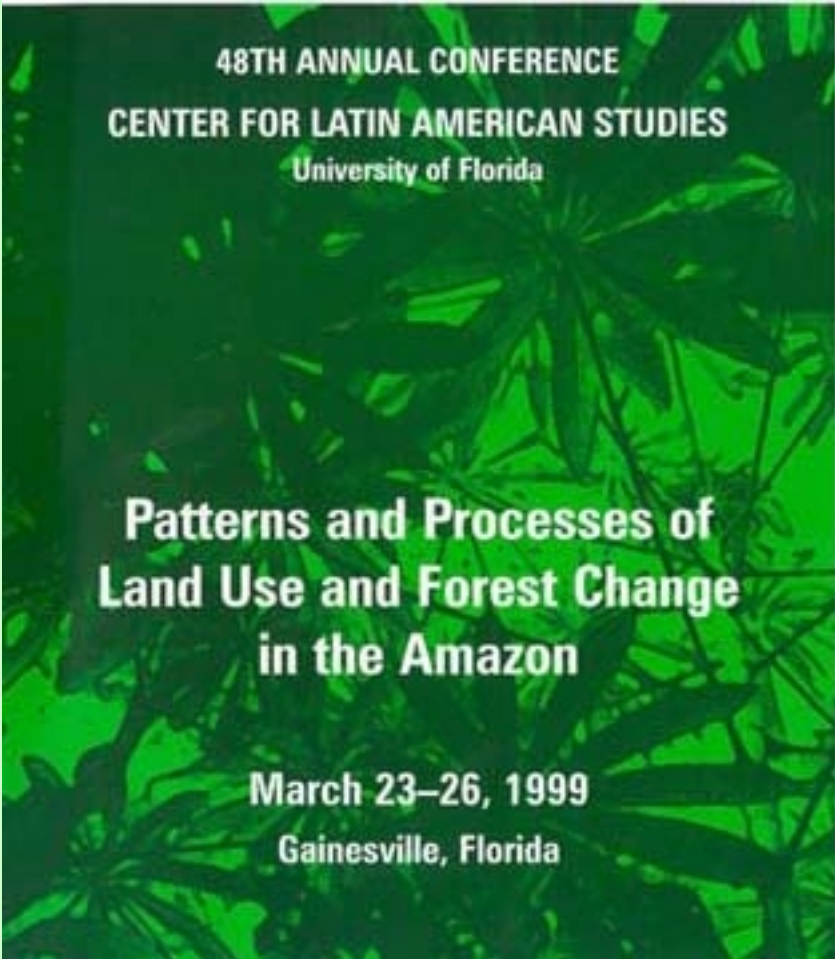




48TH ANNUAL CONFERENCE
CENTER FOR LATIN AMERICAN STUDIES
University of Florida

**Patterns and Processes of
Land Use and Forest Change
in the Amazon**

March 23–26, 1999
Gainesville, Florida



The program will provide a forum for a constructive dialogue between specialists in the analysis of satellite data, researchers who focus on the processes that drive land use decisions, and scholars and practitioners engaged in community-based mapping efforts.

Presentations of state-of-the-art research findings will contribute to environmental policy and global change research.

For registration information visit
<http://www.latam.ufl.edu/conference99.html>
or call (352) 392-6548

Patterns and Processes of Land Use and Forest Change in the Amazon

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- NASA project at UF
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- Conservation and Development Forum (CDF) at UF

Patterns and Processes of Land Use and Forest Change in the Amazon

Objective: Promote a dialogue between
research communities that focus on:

1. Remote sensing
2. Land use decision-making
3. Participatory community mapping

Keynote Address and Special Presentations

- Carlos Nobre, INPE (Brazil)
“Regional and Global Impacts of Land Use Change in Amazonia”
- Steven Sanderson, Emory
“Land Use and Cover Change: Past and Future”
- Diane Wickland, NASA
“NASA and the LUCC Agenda”

Handouts

1. List of Participants
2. Abstracts of Papers and Presentations

<http://www.latam.ufl.edu/conference99.html>

Final Session

- Open-ended discussion among participants from the three communities

Final Session: Recommendations

- More fully integrate social sciences
- Broaden scope to include:
 1. Policy makers; policy analysts
 2. Conservation and wildlife ecologists
 3. Forestry and agricultural scientists
 4. Communities living in Amazonia
- Advance conceptual underpinnings of the LUCC agenda

Conceptual Framework: Amazon Forest Change

**Resource
Allocation
Decisions**
(by Household
or Firm)

Land Use

Forest Outcomes:

- Undisturbed
- Harvested of non-timber products
- Selectively logged
- Cleared for:
 - Annual crops
 - Perennial crops
 - Pasture
 - Mining
- Regrowth due to:
 - Managed fallow
 - Abandonment

Proximate Socio-Economic Drivers

(Local scale)

- Cost of inputs, transportation, labor
- Commodity prices
- Local markets

Decisions

**Land
Use**

**Forest
Outcomes**

Proximate Bio-Physical Drivers

(Local scale/farm site)

- Soil Fertility
- Hydrology
- Geomorphology
- Pests
- Pathogens
- Microclimate

Intermediate Socio-Economic Drivers

(National/Regional Scale)

- Cost of inputs, transport, labor
- Commodity Prices
- Colonization Policies
- National/regional markets

Proximate Socio-Economic Drivers

Decisions

Proximate Bio-Physical Drivers

Intermediate Bio-Physical Drivers

(Landscape)

**Land
Use**

**Forest
Outcomes**



Distant Socio-Economic Drivers

(Global Scale)

- Political Regimes
- Exchange Rates
- Commodity Prices
- Trade Policies
- External Debt
- World Markets

Intermediate Socio-Economic Drivers

Proximate Socio-Economic Drivers

Decisions

Proximate Bio-Physical Drivers

Intermediate Bio-Physical Drivers

**Land
Use**

**Forest
Outcomes**



Distant Socio-Economic Drivers

(Global Scale)

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Intermediate Socio-Economic Drivers

Proximate Socio-Economic Drivers

Decisions

Proximate Bio-Physical Drivers

Intermediate Bio-Physical Drivers

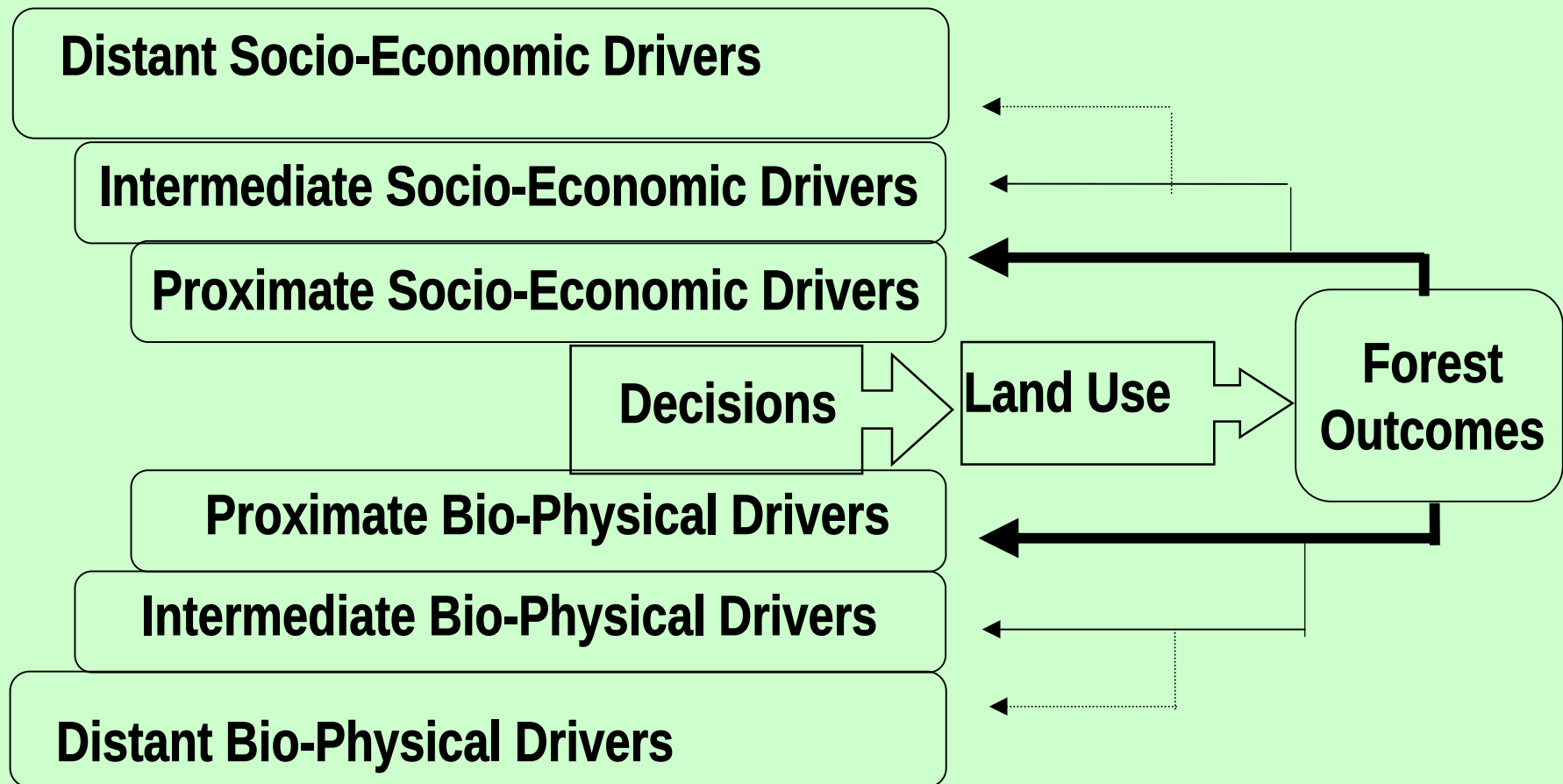
Distant Bio-Physical Drivers

(Global Scale)

- Global Climate Change
- Atmospheric Chemistry

**Land
Use**

**Forest
Outcomes**



Conceptual Challenges

- Conceptualizing complex systems
- Relevance of hierarchy theory
 1. Spatial-temporal scales
 2. Levels of organization
 3. Levels of observation
 4. Levels of explanation
 5. Relationships between levels

Conceptual Challenges:

Final observations

- Hierarchy Theory as an organizing “point of view”
- Testing the applicability of the proposed conceptual framework

Anticipating the Future

- “Scale, scale, scale” D. Skole
- Spatial-temporal “levels” and the relationships between them
- Targeted workshop
 - social sciences
 - remote sensing