

ABRUPT GRASS-WOODLAND TRANSITIONS: DETERMINANTS AND CONSEQUENCES FOR ECOSYSTEM SERVICES

Punta del Este, Uruguay
16-19 December 2012



Outline

- Introductions
- SARAS
- Conceptual framework
- Schedule
- Products

Introductions

- Where are you coming from?
- What is the expertise that you are bringing to this workshop?
- Board members please identify yourself



SARA(S)²

South American Institute for
Resilience and Sustainability Studies

- Focusses on resilience and sustainability
- Focusses on South America
 - Large social and environmental contrasts in South America
 - History of turbulent change and transformation in social and environmental realms
 - A rich artistic understanding of transformation
 - Strong link of people to natural resources and the environment
- Combines the arts and science



SARA(S)²

South American Institute for
Resilience and Sustainability Studies

- **Most Recent Activities**
- **2011-Impacts of climate, fisheries and governance in Latin American shellfishes**
- **2010-Freshwater Futures for South America**



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COMPONENTES DEL PROYECTO
**CENTRO DE INVESTIGACIÓN
PARQUE DE FLORA NATIVA
CENTRO COMUNITARIO POLICLÍNICO**



FUNDACIÓN SARAS
INSTITUCIONES ASOCIADAS

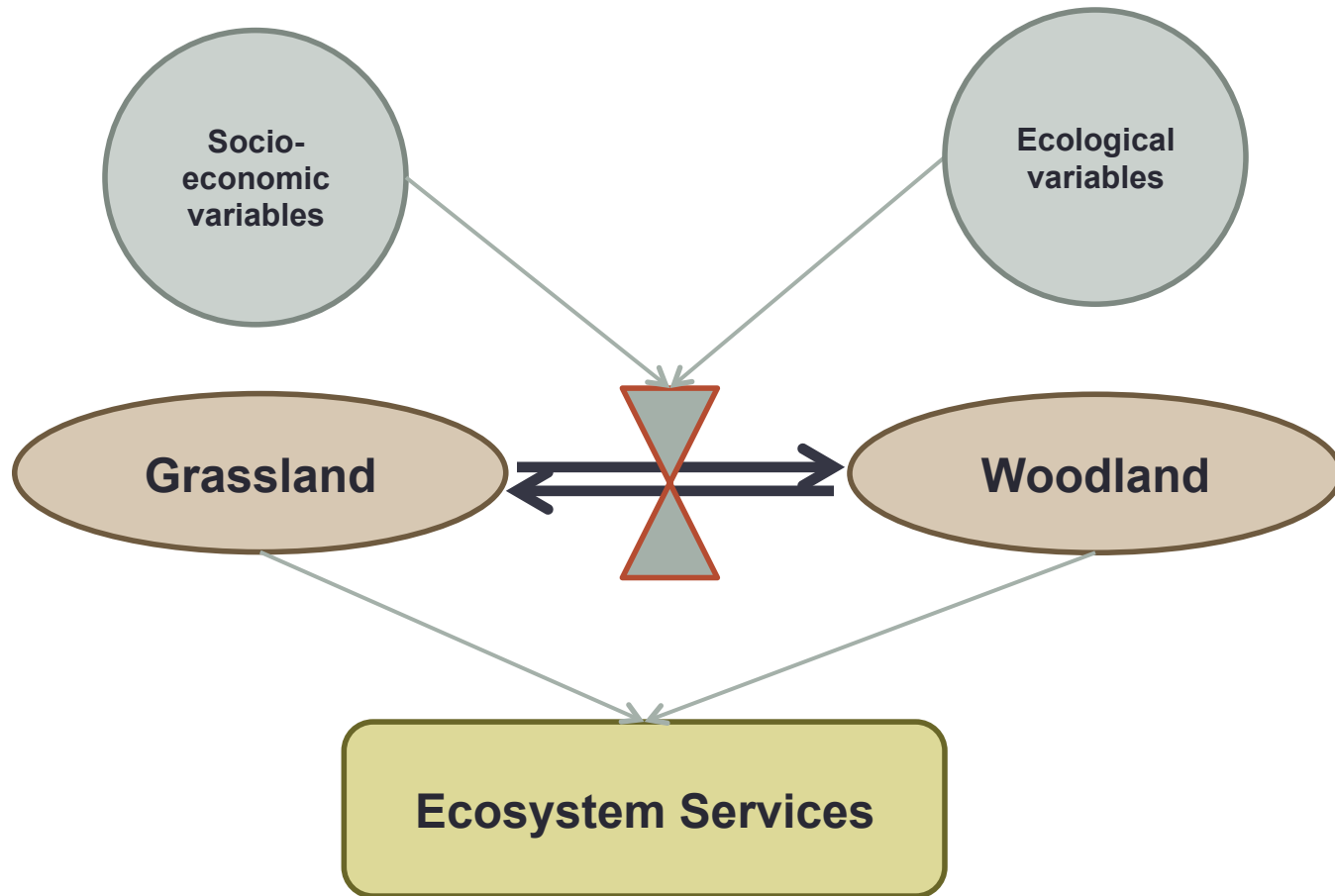


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Conceptual Framework



Objective

- **The objective of this workshop is to synthesize our current understanding of grass-woodland transitions, its socio-ecological determinants and the consequences for the provisioning of ecosystem services.**

Schedule at a Glance

DAY 1	DAY 2	Day 3	Day 4
	Talks Drivers	Talks Consequences	Wrapping up
Talks: Intro	Working Groups	Working Groups	Public Conference

Schedule

- **Day 1 Sunday December 16th**
 - Plenary talks: Workshop vision and structure
 - - 13:00 Lunch and check in
 - 15:00 Welcome and introduction of the conceptual framework and expected outcomes (Osvaldo Sala)
 - 15:30 New global dynamics of transitions (Carl Folke)
 - 15:45 Critical transitions (Marten Scheffer).
 - 16:15 Exercise (Frances Westley)
 - 17:00 Transitions from the artistic view point (Laurie Beth Clark)
 - 17:30 Art interaction (Claudia Anselmi)

Schedule

- Day 2 Monday December 17th Drivers of social-ecological transitions in grasslands and woodlands
 - 8:30 Spatial transitions in the grassland-woodland continuum (Milena Holmgren, Wageningen University)
 - 9:00 Paleorecord of grass-woody plant transitions (Hugo Inda, Universidad de la República)
 - 9:30 Grass-woodland transitions in subtropical and tropical environments (Bill Hoffmann, North Carolina State University)
 - 10:00 The theory of grass- woodland transitions (Pablo Marquet, Pontificia Universidad Católica de Chile)
 - **10:30 Coffee break**
 - 11:00 Presentation by artist María Buenaventura (Bogotá, Colombia)
 - 11:30 Fire dynamics as a control of grass-woodland transitions (John Blair, Kansas State University)
 - 12:00 Economic determinants and consequences of afforestation: Principles and empirical evidence (Fred Cabbage, North Carolina State University)
 - 12:30 Role of cultural and ethical dimensions in ecological transitions (Ricardo Rozzi, Universidad de Magallanes and University of North Texas)

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Schedule

- **Day 2 Monday December 17th Drivers of social-ecological transitions in grasslands and woodlands**
 - 13:00 Lunch
 - 14:00 Working groups-analytic, creative and pragmatic approaches
 - 16:00 Coffee break
 - 16:30 Working Groups continuation
 - 18:30 Walk and informal interaction
 - 20:30 Dinner

Schedule

- **Day 3 Tuesday December 18th Consequences of socio-ecological transitions in grasslands and woodlands**
 - 8:30 Environmental impact of shrub eradication in the US rangelands (W.K. Lauenroth, University of Wyoming)
 - 9:00 Woody-plant encroachment consequences on the carbon cycle (Steve Archer, University of Arizona).
 - 9:30 Ecological consequences of shrub encroachment (Fernando Maestre, Universidad Rey Juan Carlos, Spain)
 - 10:00 Presentation by artist Eloisa Oliva (Córdoba, Argentina)
 - **10:30 Coffee Break**
 - 11:00 Biotic invasions as drivers of the grass-woodland transition (Laura Yahdjian, University of Buenos Aires)
 - 11:30 Biogeochemical consequences of woody-plant encroachment (Indy Burke, University of Wyoming)
 - 12:00 Water and carbon costs and benefits of afforestation (Rob Jackson, Duke University)
 - 12:30 Social marketing of an ecological idea (Milena Holmgren & Frances Westley)

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Schedule

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Schedule

- **Day 4 Wednesday December 19th**
 - 8:00 Post workshop vision
 - 8:15 Working groups
 - Post-workshop networks 1
 - Post-workshop networks 2
 - 10:00 Coffee break
 - 10:30 Final Plenary
 - Outlines of publications
 - Post workshop networks
 - Future activities and deadlines
 - 12:00 Lunch
 - 14:00 Departures

Public conference

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- **III Ciclo de conferencias anuales**
- **Futuros sustentables para los pastizales y los bosques en América Latina**
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- 13:30 Progresos en SARAS Marten Scheffer
- 13:45 Transiciones bosque-pastizal y sus consecuencias en los servicios de los ecosistemas Osvaldo Sala (Universidad del Estado de Arizona, USA; SARAS)
- 14:15 Expansión de bosques secos en eventos del Niño: la experiencia sudamericana Milena Holmgren (Universidad de Wageningen, Holanda)
- 14:45 Costos y beneficios de la plantación de bosques en sistemas de pastizal, Gervasio Piñeiro (Universidad de Buenos Aires, Argentina)
- 15:15 Clima de Cambios (Néstor Mazzeo, UdeLAR-SARAS)
- 15:30 Espacio-tiempo: el bosque en las manos, Claudia Anselmi (Uruguay)
- 16:00 Intercambio con el público
- 16:30 Cierre con autoridades nacionales, departamentales y universitarias
- 17:15 Cocktail
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Products

- Publications
 - Philosophical Transactions of the Royal Society B
 - <http://sala.lab.asu.edu/saras-meeting/>
 - One synthetic article summarizing major findings of the conference
- Conference Statement
- Art-science products
- Networks
- Future activities

Ideas for synthetic paper

- Title Grass-wood-grass transitions: Drivers and consequences
- Magnitude of the issue
- Are the drivers for the grass-woodland transition similar to drivers of the woodland-grass transition?
- Hysteresis?
- Are the magnitude of those two transitions similar?
- Geographic location?
- Consequences for stakeholders
- The future of these transitions
- Policy needs?