

Science-Policy Forum
“Agricultural expansion is creating wealth for nations; is it also destroying the natural resource base for development?”

Agenda

(April 6, 2011 – Asunción, Paraguay)

April 06

09:00-12:00 Science-Policy Forum

09:00-09:15 Opening ceremony and welcome (Andrés Wehrle, Vice Ministro de Agricultura y Ganadería de Paraguay; Constantino Guefos Kapsalis, Universidad Nacional de Asunción-UNA; and Holm Tiessen, Inter-American Institute for Global Change Research-IAI)

09:15-10:45 Forum Panel (Chair: Fernando Ruiz Toranzo, Asociación Argentina de Consorcios Regionales de Experimentación Agrícola -AACREA)

10 minutes each presentation followed by 1-2 questions = 90 minutes

Presentations:

- 1) Decision makers and producers' vision of agricultural expansion and land use and cover changes in Paraguay (Vice-Minister Andrés Wehrle and Edgar Mayeregger, Ministerio de Agricultura y Ganadería de Paraguay)
- 2) Impacts of agriculture on hydrology (Esteban Jobbágy, Universidad Nacional de San Luis, Universidad de Buenos Aires & CONICET)
- 3) Impacts of agriculture on climate (Hugo Berbery, University of Maryland)
- 4) Wealth creation of agricultural expansion (Tamara von Bernard, Universidad de Buenos Aires)
- 5) Environmental and societal mechanisms and drivers of expansion (Ana Murgida, Universidad de Buenos Aires)
- 6) Climate information for risk management in agriculture (Norman Breuer, University of Miami)
- 7) Land use, biofuels and rural development in the La Plata Basin - Potential land use and cover changes induced by biofuels expansion. Economic analysis of selected counties in São Paulo State (Vicky Ballester, Universidade de São Paulo- Centro de Energia Nuclear na Agricultura)

10:45-11:45 General Debate with the audience

11:45-12:00 Conclusions of the Forum

12:00-14:00 Lunch

IAI Training Institute
“Land Use Change Analysis and Water and Food Security
in the La Plata Basin Region”

Agenda

(April 6-15, 2011 – Asunción, Paraguay)

April 6

14:00-14:10 **Welcome** (Constantino Guefos Kapsalis and Fernando Méndez, Universidad Nacional de Asunción-UNA, and Holm Tiessen, Inter-American Institute for Global Change Research-IAI)

14:10-14:20 **Introduction of participants** (all)

14:20-16:10 **Conceptual Framework** (Chair: Walter Baethgen, International Research Institute for Climate and Society – IRI)

Presentations (20 minutes each + 5 minutes questions)

14:20-14:45 Human appropriation of natural resources and environmental and socio-economic consequences (Holm Tiessen, IAI)

14:45-15:10 Processes and interactions in natural and agricultural ecosystem: land use, climate and biogeochemical cycles (Esteban Jobbágy, Universidad Nacional de San Luis, Universidad de Buenos Aires & CONICET)

15:10-16:10 Definitions of ecosystem structure, functions, goods and services (Vicky Ballester, Universidade de São Paulo- Centro de Energia Nuclear na Agricultura)

Concepts of land cover and land use (Vicky Ballester, Universidade de São Paulo- Centro de Energia Nuclear na Agricultura)

-Land cover, land use and change

-Natural and human drivers of land cover and land use change (climate and geomorphology; natural and human induced disturbances; food, fiber, and energy demands: deforestation and the expansion of agricultural ecosystems; water demands

-irrigation, water use)

Historical overview of population growth and increase of land conversion into agricultural areas for food production, industrialization and urbanization (Vicky Ballester, Universidade de São Paulo- Centro de Energia Nuclear na Agricultura)

16:10-16:40 General discussion

16:40-17:00 Coffee break

17:00-18:00 IAI-IDRC project “Landuse change, biofuels and rural development in the La Plata Basin”- examples from the La Plata Basin, and consequences of land cover and land use change on water cycle, agricultural expansion, food security and socio economic development (Esteban Jobbágy, Universidad Nacional de San Luis, Universidad de Buenos Aires & CONICET, and Vicky Ballester, Universidade de São Paulo- Centro de Energia Nuclear na Agricultura) & Questions and Discussion

April 7

Land use change: effects on climate, hydrology, nutrients cycles, food security and rural development

08:30-09:30 Presentation I: Land use, hydrology and carbon balances and climate change in the La Plata Basin (Esteban Jobbágy, Universidad Nacional de San Luis, Universidad de Buenos Aires & CONICET and Gervasio Piñeiro, Universidad de Buenos Aires)

09:30-10:00 Questions and discussion

10:00-10:30 Coffee break

10:30-11:30 Presentation II: Climate change and crop production: impacts and adaptation options (María Isabel Travasso, Instituto Nacional de Tecnología Agropecuaria-INTA)

11:30-12:00 Questions and discussion

12:00-12:30 General debate (Presentations I and II)

12:30-14:00 Lunch

14:00-15:00 Presentation III: Global Environmental Change & Food Systems: Approaches for Engendering Interdisciplinary Food Security Research at the Regional Level (Mike Brklacich, Carleton University - co-presentation by John Ingram, Global Environmental Change and Food Systems - GECAFS Program, Oxford University)

15:00-15:30 Questions and discussion

15:30-16:00 Coffee break

16:00-17:00 Presentation IV: Uncertainty, vulnerability and adaptation: Agrarian production and climate change in the semi-arid zone of Argentina (Ana Murgida, University of Buenos Aires)

17:00-17:30 Questions and discussion

17:30-18:00 General debate (Presentations III and IV)

April 8

Land use and climate change in natural and agricultural ecosystems

08:30-9:30 Presentation I: Agent based modeling as a complement for analytical methods, to analyze relationships and feedbacks among different stakeholders (agents) and the environment (Guillermo Podestá, University of Miami/ Rosenstiel School of Marine and Atmospheric Science and Federico Bert, Universidad de Buenos Aires)

09:30-10:00 Questions and discussion

10:00-10:30 Coffee break

10:30-11:30 Presentation II: Managing landscapes - opportunities in developing markets (Tamara von Bernard, Universidad de Buenos Aires)

11:30-12:00 Questions and discussion

12:00-12:30 General debate (Presentations I and II)

12:30-14:00 Lunch

14:00-15:00 Presentation III: How to improve communication and collaboration between the scientific community and decision makers (farmers, policy makers)? Perspective on the possible conflicts and synergies between production and ecosystem services/environment and the main scientific challenges of agriculture in different regions/contexts including the Pampas, the Chaco and the irrigated valleys of the Andes (Fernando Ruiz Toranzo, AACREA)

15:00-15:30 Questions and discussion

15:30-16:00 Coffee break

16:00-17:00 Presentation IV: Land use effects on the water balance and climate of large areas - regional climate models (Hugo Berbery, University of Maryland)

17:00-17:30 Questions and discussion

17:30-18:00 General debate (Presentations III and IV)

April 9

Free

April 10 and 11

Field trip to Las Colonias Unidas (municipalities of Hohenau, Obligado and Bella Vista) in Southern Paraguay

Field trip coordinators: Clyde Fraise, University of Florida; Norman Breuer, University of Miami; Alicia Eisenkolbl, Universidad Catolica de Paraguay; and Julian Baez, Universidad Catolica de Asuncion, Paraguay

See field trip program: Visit to Cuenca Capiibary, Cooperativa Colonias Unidas and to Ruinas Jesuitas de Trinidad

April 12

Quantifying and analyzing land use and land cover change & Land cover and land use change and governance – environmental management, public policy and law

08:30-10:30 Question oriented exercises I: Mapping and quantifying land use and land cover change (GIS) (Vicky Ballester, Universidade de São Paulo- Centro de Energia Nuclear na Agricultura)

10:30-11:00 Coffee Break

11:00-12:30 Question oriented exercises I continues (Vicky Ballester, Universidade de São Paulo- Centro de Energia Nuclear na Agricultura)

12:30-14:00 Lunch

14:00-15:00 Presentation I: Weather analysis and prediction of the National Meteorological Center of the Meteorology and Hydrology Directorate of Paraguay (Jorge Sánchez, Dirección Nacional de Meteorología e Hidrología de Paraguay)

15:00-15:30 Questions and discussion

15:30-16:00 Coffee Break

16:00-17:00 Presentation II: Enhancing participatory resource management and planning with integrated models of land-use/land-cover change and ecological processes (Moira Zellner, University of Illinois)

17:00-17:30 Questions and discussion

17:30-18:00 General debate (Presentations I and II)

Environmental management video (BBC)

April 13

Land use and land cover change and water resources analysis & Working Groups/Policy Briefs Development

08:30-09:30 Presentation I: The productivity of irrigated areas as a function of water availability and vulnerability under global change - Land use and land cover change and water security (Nicolas Bambach, University of California)

09:30-10:00 Questions and discussion

10:00-10:30 Coffee Break

10:30-11:30 Presentation II: Remote sensing tools for water cycling studies (Roxana Aragón, Universidad de Buenos Aires)

11:30-12:00 Questions and discussion

12:00-12:30 General debate (Presentations I and II)

12:30-14:00 Lunch

14:00-18:00 Briefs development

Working Group 1: From agricultural land use to integrative landscape management: lessons learned (facilitators: Guillermo Podestá, University of Miami; Moira Zellner, University of Illinois and Federico Bert, Universidad de Buenos Aires)

Working Group 2: Which research findings allow us to prepare here-and-now assessments of patterns and trends in land use, social development and climate in the La Plata basin? What linkages are already observed (and can be scientifically assessed) of land use to current-day climate variability? Can risk and vulnerabilities be evaluated? Can we analyze trends in the above points that allow future projections of adaptation and mitigation? (facilitator: Vicky Ballester, Universidade de São Paulo- Centro de Energia Nuclear na Agricultura)

April 14

Socio-economic data and land use and land cover change analysis – Agent Based Models & Working Groups/Policy Briefs Development

8:30 - 10:30 - Question oriented exercises II: Socio-economic data and land use and land cover change analysis – Agent Based Models (Federico Bert, Universidad de Buenos Aires and Guillermo Podestá, University of Miami)

10:30-11:00 Coffee Break

11:00-12:30 Discussion on the methods and tools of the Agent Based Models – Feedback to evaluate and improve the models (Federico Bert, Universidad de Buenos Aires and Guillermo Podestá, University of Miami)

12:30-14:00 Lunch

14:00-15:00 Plenary presentation of main points of working groups 1 & 2 and general debate

15:00-15:30 Coffee break

15:30-18:00 Working groups continue and briefs writing

April 15

Policy Briefs presentation, discussion and conclusions

09:00- 12:00 Briefs presentation and discussion - Working groups 1 and 2

12:00-12:30 Conclusions (Vicky Ballester, Universidade de São Paulo- Centro de Energia Nuclear na Agricultura; Guillermo Podestá, University of Miami; Moira Zellner, University of Illinois; Federico Bert, Universidad de Buenos Aires and Marcella Ohira, IAI)

12:30-13:00 Training Institute evaluation (Marcella Ohira, IAI)

13:00 Closing remarks and Adjourn (Fernando Méndez, UNA and Marcella Ohira, IAI)