

# Governance challenges to modern STI regimes in Latin America and Europe

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# General objectives

- Understand challenges to modern STI regimes (+ responses)
- Study Latin American countries as an entrance point
  - map the STI regime in various LA countries
  - focus on different sectors
  - compare to European practices and landscapes
- Diagnose development and identify interesting ventures for European practices

Globalizacion de los asuntos cientificos y tecnologicos.  
Efectos positivos como perversos del progreso cientifico y tecnologico.

# Research outline

- Existing STI regimes challenges by «reflexive modernization» (Beck et al., 1994; Beck and Lau, 2005; Delvenne and Rip, forthcoming)
  - based on previous results (PhD thesis on PTA as indications of reflexive modernization)
  - expanding the scope towards Latin America
- Focus on regimes, especially institutions and evolving arrangements

Relocalizacion de los asuntos de CTI a dentro de una dinamica societal.  
Necesidad de un enfoque multidisciplinario.

# Latin American regimes of STI

- Reflexive modernization in Latin America?
- Variety of countries and interesting developments
- Advanced regimes of STI and explicit governance
- Different governance patterns than in Europe

Se trata de democratizar las opciones en CTI, tal como de empoderar los grupos sociales concernidos.

En otros terminos, hay que modular la co-evolucion.

# A multi-level analysis

Societal landscape (macro)



STI regimes (meso)



Institutional and individual practices (micro)

# Agro-biotech in Argentina

- 39 qualitative interviews
- GM market since 1996
- 3rd producer of GM crops; 2nd exportator (soy, corn, cotton)
- 15% of the world GM agro-biotech production (23M ha)
- 19,5M = soy Roundup Ready®
- 200 M liters of Roundup per year

# The soy case study

- Only RR soy, exported (98%) to Europe (flour) and Asia (oil)
- \$20 billions benefits in 10 years
  - 77,4% agricultural sector; 9,2% technological developers; 13,4% government
- « soy dependence »
- Conflict between Governement and countryside (Fraga and Baistrocchi, 2011)

Source: James, 2010  
(ISAAA)

# GM soy «model»

- Technological package: genetic modification for resistance to herbicide, «Roundup», *siembra directa*
- Positive sum?
- Socio-technical controversies: deforestation, move of indigeneous populations, monocultures, HES risks, feed-lots...
- Changes in agriculture, important actors, regulatory framework, intellectual property, sustainability, controversies

# Looking forward

- Biofuels? Animal cloning?
- New agriculture policies? Common MERCOSUR policies?
- Integrating the STI regime (MINCyT, strategic plan, PROCTIS)
- Simplifying the landscape?
- Stimulating S&T investments, local innovation and technology transfer

- Governance of STI challenged by reflexive modernization
- Modern STI regimes in interaction

# Thank you very much!

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