



SEP • 19-21th • 2011  
Campinas, Sao Paulo, Brazil

CNPq

Workshop on  
Quantifying and Managing Land Use Effects of Bioenergy

# The Three Pillars to Operationalizing Biofuels Sustainability Standards in Agricultural and Forest Landscapes

*Jody M. Endres - Senior Regulatory Associate and Adjunct Professor of Environmental Law, The University of Illinois Energy Biosciences Institute*

*Bruno B. Perosa - PhD Candidate EESP-FGV; 2010/11 Fulbright Scholar at University of Illinois*



# 3 pillars

## **Pillar 1**

- Methodologies to assess biofuels sustainability

## **Pillar 2**

- **Socioenvironmental Governance Mechanisms**

## **Pillar 3**

- **International Harmonization of Standards**

# Socioenvironmental Governance

- Sustainability – intrinsic and extrinsic qualities (not verifiable)
- Credence attributes – “only if you can prove” (additional costs)
- **How will this information be accessed and transmitted?**
  - **Private Voluntary Certification**
    - 3<sup>rd</sup> party certification – operationality vs. stringency
    - Challenge to cover indirect effects
    - Seek for legitimacy – conformation strategies
  - **Public Regulation**
    - Challenge to implement regulation (cost, operational capacity)
    - Problems with international laws (WTO)
  - **Private-Public Governance Mix**
    - Meta-standard approach
    - Accreditation of biofuels specific standards

# Private Voluntary Certification

- **Roundtable Sustainable Biofuels (RSB)**
  - Non-Feedstock specific
  - Comply local law or go beyond (which is more stringent)
  - Farmers, refiners, retailers, academia, governments and NGOs
  - 2011 – launched certification system (challenges to apply)
    - Regional diversity (especially for social criteria)
    - Diversity of feedstock and conversion processes
- **Better sugar initiative (BSI - Bonsucro)**
  - Feedstock-specific – sugarcane products
  - WWF, UNICA, Coca-Cola, Raízen, BP, Toyota
  - Operational advantages – one feedstock and few processes
  - Raízen (Shell-Cosan) Mill certified in 2010
  - UNICA support to implement on affiliated mills
  - First potential large-scale certification for sugar-cane ethanol

# National regulation of Biofuels Sustainability

- **Brazil**

- No biofuels-specific sustainability regulations (end users)
- No specific environmental and labor law applied on biomass production (enforcement issues)
- Agro-ecological zoning plan (2009) – Not enforced against individual land owners, except for loan restrictions
- Public-private voluntary initiatives:
  - UNICA-Sao Paulo State Green protocol – burning and good practices
  - National Commitment for the Improvement of Labor Conditions in Sugarcane Production (2009) – 30 practices beyond legal obligation
- Note the important role of private initiatives in light of enforcement issues, particularly to access foreign markets

# National regulation of Biofuels Sustainability

## United States

- **Renewable Fuel Standard – RFS2 (2007)**
  - Mandates - categories for GHG emissions reduction (FASOM/FAPRI for ILUC)
  - Assumes cross-compliance with all other environmental laws and regulations
  - EPA triennial report on environmental impacts of domestic production
- **California Low Carbon Fuel Standard – LCFS (2009)**
  - Focus on GHG emissions (GTAP for ILUC) – recommend good practices
  - Requirements encompass all fuels, unlike RFS
- **Private Standard Development**
  - The Council for Sustainable Biomass Production (CSBP)
    - Provisional standard finalized June 2011 for biomass producers
    - Final standard issued May 2012 for both producers and consumers
  - 3 rounds of field testing water, biodiversity, soil, labor and GHG
    - Focusing on whether existing tools can be used, at least in part
    - GHG Task Force to study how to integrate with existing direct emissions models (e.g., GREET) - no consideration at present of ILUC
  - Observers include US DOE, US EPA and USDA (also partially funds)

# European Union Regulation

## Renewable Energy Directive – RED (finalized 2009)

- Mandates and emissions reduction targets (EU and Member States)
- Production Incentives - Cross-compliance with agricultural and plant health laws enumerated in Annex II of the CAP and the CAP's requirement of Good Agricultural and Environmental Condition (GAEC)
- The Commission must report by 2012 and every 2 years thereafter on Member State protection of soil, water, and air, and in protecting lands that cannot be converted
- European Commission - Private Standards accreditation (2011):
  - 7 standards - BONSUCRO, RSB, ISCC, RTRS, 2BSvs, Abengoa, Greenenergy
- Challenge ahead to align country level regulations with RED
  - Industry complaints that need harmonization because of individual requirements of Member States
- No EU standards for bioelectricity—recommendations to MSs

# International Institutions

- **WTO** - no specific rules for biomass (agricultural and environmental)
  - Limitation to public regulation
    - Low risk – environmental and biodiversity requirements
    - High risk – economic development and social welfare
  - Limitations to private certifications (FSC case)
    - No barriers to other certifications entrance
    - No trade (non-tariff) barriers based on private certifications
    - No country discrimination on the label
- **UNFCCC** – possibility of including sustainability standard in a Post-Kyoto treaty
  - REDD+ role in a climate treaty - negotiations are underway to include "non-carbon" sustainability requirements (especially solid fuels)
- Development of international standards – facilitate acceptance and reduce frictions with international institutions:
  - International (ISO/IEC 65); EU (CEN/TC 335); US (DOE-ANSI)



# Private and Public – Governance Trends

- Different approaches to apply sustainability standards:
  - US not demanding sustainability certification (only for GHG emissions)
    - By now, regulation centralized on public agencies (federal and state)
  - EU already requiring sustainability report (soil, water, biodiversity..)
    - Consider existent private standards from forest and agriculture sector
    - Accreditation of biomass private standards (RSB, BONSUCRO and others)
    - More integrated private-public approach – “cross-fertilization”
- Nonexistence of applicable private standards for indirect effects
  - ILUC – problematic due to geographic scope and complex externalities
  - Division of labor – public on indirect effects; private on direct effects
- Possible approaches to implement international governance:
  - Voluntary certification – beyond legal obligation
  - National regulations – harmonization international standard with local laws
  - International agreement – “minimum sustainability level”
  - Complementary approach – more effective to cover biofuels specificities



SEP • 19-21th • 2011  
Campinas, Sao Paulo, Brazil

CNPEM

## Workshop on Quantifying and Managing Land Use Effects of Bioenergy

**Contact:**  
**[bruno.perosa@fgv.br](mailto:bruno.perosa@fgv.br)**

