The Roundtable on Sustainable Biofuels

3rd Party Verified Sustainability Certification

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August 1, 2012

Sustainability

- The most popular definition of sustainability can be traced to a 1987 UN conference. It defined sustainable developments as those that "meet present needs without compromising the ability of future generations to meet their needs"(WECD, 1987)

- "Sustainable means using methods, systems and materials that won't deplete resources or harm natural cycles" (Rosenbaum, 1993).

- Sustainability "identifies a concept and attitude in development that looks at a site's natural land, water, and energy resources as integral aspects of the development". (Vieira,1993)

Limitations of a Closed System

- The planet as a closed system
  - Resources that are finite
  - Infinite and Renewable
  - Population stress
  - Land use and displacement
- Sustainability is not just about GHG and climate change alone
  - Quality of life and in some cases survival
  - Allocation, usage and accountability

Who's Impacted?

All industries, nations, and creatures large and small

- Agriculture and marine resources – food production
- Extractive Industries and Energy Production
- Manufacturing – production of goods and services
- Waste and Water management
- Air Quality
- Ecosystems - The world's wild and not so wild spaces
- Human consumption and lifestyle choices

Biofuel Development – the Drivers

Global North

- Climate Change – Reduce GHG emissions
- Secure energy supply (less reliance on unstable energy sources)
- Economic development and job creation

Global South

- Market opportunity and source of foreign exchange
- Job growth and promise of economic development

The Challenges – Unintended Consequences

Some concerns that have been expressed about biomass/biofuels

- **Food security** – displacement of **land** that would otherwise be used for **food production**
- **Deforestation**
- **GHG balance**: net positive or net negative? Carbon payback
- **Water** use
- **Pollution** of air, water and soil
- **Social** welfare issues, **land rights** issues, **worker's rights**

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Biofuel Production

Direct impacts

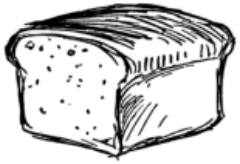
Within the control of the operator

- Food security: direct local impacts, « food vs. fuel »
- Lifecycle GHG emissions
- Direct Land use change
  - Deforestation, biodiversity loss
- Conservation & biodiversity
- Pollution

Indirect impacts

Global, market-driven, outside the boundary of operator control

- Indirect land use change
  - Deforestation, biodiversity loss
- Impacts on commodity markets, food/feed prices and food security



Regulatory Environment

- Regulation, Mandates and Carrots
  - EU Renewable Energy Directive (RED) 2009
  - First market wide sustainability standards
    - Voluntary scheme approval
    - 3rd party verification and certification
  - Certification required for quota credit (Defacto Market Access barrier)
- Quotas and Incentives
  - US RFS and RFS2 (2005, 2007)
  - Pathways and Volume Blending requirements
  - LCA GHG thresholds
  - Tax credits & incentives, RIN eligibility and Trading System

Why Certification is important

Is it a ticket for market entry?

Or, does voluntary certification serve a higher purpose?

- Regulation can only be part of the answer
- Voluntary certification schemes play an important role
- Certification which uses 3rd party verification ensures not only credibility but also accountability

More than a ticket

- Certification contributes to strong business practices
  - You can't manage what you don't measure
    - Effective management systems and a strong understanding of your business practices enables businesses to effectively measure performance.
    - Measuring and monitoring the sources and deployment of business resources leads to more efficiency
  - Awareness of social and environmental impacts leads to stronger and healthier communities

A healthier environment, strong communities and secure supply chains lead to stronger businesses.

About the RSB

- Founded in 2007 as a multi-stakeholder initiative to develop sustainability criteria for bioenergy – Based in Lausanne, Switzerland hosted by the Swiss Federal Institute of Technology (EPFL)
- Over 120 organizations in 30 countries including members of the public, private and non-profit sectors.
- Objective to examine sustainability issues facing biofuels, and promote best practices to mitigate negative impacts, and incent positive ones.
- Resulted in the 12 Principles and Criteria that form the core of the Standard.
- The RSB Standard was among the first recognized voluntary certification schemes under European Energy Directive (RED)

The RSB Services Foundation

Mission:

To provide a framework and organization to facilitate the global adoption of the RSB standard including the certification process and oversight of licensing and use of the trademark.

- Non-profit 501(C)3 formed October 2011
- Launched in January 2012
- Location: McLean, VA
- Staff based in the USA, Europe and Asia

The Core Principles

- Three-legged stool of sustainability – people, planet, performance
- Twelve “Principles”
- Social and environmental accountability
- Economic viability for the operator
- Tools to better understand and run their business.

People	Planet	Performance
Socially responsible business practices	Climate change mitigation	Improved efficiency and productivity
Fair wages, safe working conditions	Water & soil conservation	Good practices for long term viability
Land rights, local food security	Responsible waste management	Continuous improvement

RSB P&C's and Supporting Practical Tools

- Principle 1: **Legality**
- Principle 2: **Planning, Monitoring & Continuous Improvement** → Guidelines on ESIA and Stakeholder Engagement
- Principle 3: **Greenhouse Gas Emissions** → Methodology for GHG Calculation & RSB Tool
- Principle 4: **Human & Labor Rights**
- Principle 5: **Rural & Social Development**
- Principle 6: **Local Food Security** → Guidelines on Food Security Assessment
- Principle 7: **Conservation** → Guidelines on Conservation Assessment
- Principle 8: **Soil** → Guidelines on Soil Assessment
- Principle 9: **Water** → Guidelines on Water Assessment
- Principle 10: **Air**
- Principle 11: **Use of Technology, Inputs, & Management of Waste**
- Principle 12: **Land Rights** → Guidelines on Land Rights Assessment

RSB Tool incorporates global GHG calculators for various international regulations

Ensuring Sustainability

The RSB System:

1. Screen for impacts – engage stakeholders & experts
2. Mitigate / Improve
3. Continuous improvement
4. Traceability and chain of custody tracking
   - Product segregation
   - Mass balance Accounting
   - Identity preserved
5. Tools and support

- Addresses **Direct Impacts** within the boundary & control of the operator

Active Certifications

- Upcoming US Certifications
  - Three UCO biodiesel plants, a R-Diesel/biojet plant, a cellulosic ethanol plant, a canola-based biodiesel plant and a fuel distributor.
- North and South America
  - Rolling out a Canadian canola adaptation in July 2012
  - Two Jatropha plantations in Latin America
  - Sugarcane ethanol plant in South America
- First Certification issued in January 2012 to a wheat residue ethanol plant in AU.
- Why are they doing it?
  - PR opportunity with environmental community
  - California grant gave credit for it
  - Market Access
  - Strong relationships with aviation biofuels stakeholders and US military

Value of RSB Certification

- Demonstrates sustainability issues are proactively addressed.
- Suggestive of a **positive corporate culture**.
- Inoculation against regulatory risk.
- Endorsement from environmental groups **mitigates reputational risks**, and **improves shareholder credibility**.
- Strong support from the **aviation sector** and **US military**

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