

Latest Development of Sustainability Criteria and Certification of Biomass

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Presentation overview

1. Background: the need for sustainability criteria and certification
2. Brief overview of existing certification systems in forestry, agriculture and renewable electricity
3. Overview of current initiatives
4. Barriers and boundary conditions of certification systems for biomass
5. Strategies for implementation
6. Possible implication for the international trade of woody biomass



Background: the need for sustainability criteria and certification

- Growing bio-energy demand and international supply chains create unique opportunities for biomass producing regions.
- Solid biofuels trading develops in bilateral setting (Canada, Russia, agricultural residues); bio-ethanol entered first phases commodity market trading; “wild west phase”
- Negative side-effects of other fast-growing commodities such as palm oil in Malaysia and Indonesia, or soy cultivation in Argentina
- Overexploitation should be avoided and sustainability criteria implemented



Overview of existing certification systems

Forestry: e.g. FSC, PEFC, FFCS...

- Developed over last 10-15 years
- Coverage: niche-market - >95%, depending on region
- Criteria mainly sustainable production

Agriculture: e.g. EUREPGAP, SAN

- produced in environmental sustainable way
- safer or healthier for the consumer.
- Some following 'fair trade' principles

Green electricity: e.g. EUGENE, Milieukeur, ok-power

- In/exclusion of different biomass types & conversion technologies
- No criteria on biomass production

Initiatives from private parties

Essent: Green Gold Label standard

- Development of GGL started in 2002; 1st certificate in 2004
- Certification and supply chain monitoring program for acceptance of sustainable biofuels (sustainable forest and plantation management, fertilizer use, replanting programs, plant mass balance, cleanliness storage and shipping)
- Executed by independent certifying & inspection company (Control Union) and independent inspection company (Peterson Bulk Logistics)
- Two main sources of biofuels, Forestry and Agriculture; main criteria for GGL are sustainability and traceability



Initiatives from private parties

Electrabel label:

- products from agriculture and forestry and related company branches
- solid organic material from well-managed woods, (public) zones of vegetation or agricultural grounds
- Energy consumption must be reasonable with respect to other references



Developments in BE, UK , NL, EU

Belgium (2 (!) systems operational)

- System in Flanders, based on energy balance & use of fossil energy. Amount of green electricity certificate issued is corrected 'pro rata'
- System in Wallonia based on avoided CO2 emissions, further sustainability proof by forestry certificates (e.g. FSC) and traceable chain management system at the suppliers end

UK

- 'Renewable Transport Fuel Obligation' (RTFO), earliest introduction April 2008
- Main focus on GHG emission reduction, sustainability assurance scheme under development

Developments in BE, UK , NL, EU

Netherlands

- Recent publication of sustainability criteria to be implemented from 2007 onwards
- Possibly most comprehensive set up so far, incl. GHG balance, social, environmental & biodiversity criteria

EU

- Tender for Sustainability criteria and certification systems for biomass production

Viewpoints of NGO's

NGOs in DE & NL make an appeal to assure that increased bio-energy production should not lead to environmental and socio-economic harm, at the same time seizing the opportunities for sustainable development

Common points of attentions from NGO's:

Conversion of land use; depending on spatial distribution & cultivation practices, bioenergy production could lead to **loss of biodiversity** and further **degradation of soils and water bodies**;

- (indirect) **competition** between land use for **food production** and land use for bioenergy production;
- **Land ownership** should be equitable and land-tenure conflicts should be avoided;
- Labour conditions, right of children & human health impacts



International bodies & initiatives

- UN Biofuels Initiative (**UNBI**), initiated by UNCTAD, established to promote the sustainable production and use of biofuels in developing countries, under conditions that can attract foreign and domestic investment
- International Bioenergy Platform (**IBEP**), initiated by FAO, focused on knowledge management and transfer. IBEP will provide expertise and advice for governments and private operators to formulate bioenergy policies and strategies



International bodies & initiatives

- IEA Bioenergy **Task 40** on sustainable international bio-energy trade, workshops and studies on biomass criteria and certification options
- Round tables on sustainable palm oil (**RSPO**) and soy (**RTRS**), multi-stakeholder initiatives focussed on specific product, though not specifically for biomass to energy



Potential barriers and boundary conditions

- some sustainability criteria may actually **conflict with each** other
- **additional costs** of meeting the sustainability criteria (and cost of certification) will have to be evaluated
- Inclusion of too many criteria will may in fact create **new market barriers**
- **Sense of urgency** – international trade is growing fast
- **Monitoring of compliance** crucial, otherwise the “cheaters” may win
- Boundary conditions set by **WTO rules and international treaties**
- With too many initiatives on varies levels, a **danger of fragmentation and incompatible certification systems** exists



Possible strategies for implementation

- **Bottom-up**: small scale, initiatives, possibly voluntary, possibly per biomass/feedstock type
- **Top-down**: a generic framework on EU level, possibly with minimum and additional criteria

Implications for trade in forest products

- Existing forestry certification systems (FSC, PEFC) often are part of biomass certification systems (e.g. GGL, Electrabel label, Dutch & Belgium governmental systems)
- Energy & GHG balances basically required in all proposed systems
- Emphasis on topics of biodiversity, (indirect) land use, competition with food & fodder

Thank you for your attention!

- Final results of this overview study expected by the end of 2006
- The study will be published at www.bioenergytrade.org