

Overview of international developments in sustainable biomass production and certification

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Results of IEA Bioenergy Task 40 Deliverable 5

Task 40 workshop on ensuring increasing and sustainable biomass production: the importance for international bioenergy trade

**15th European Biomass Conference & Exhibition, From Research to Market deployment
Berlin, Germany; 7-11 May 2007**

Presentation overview

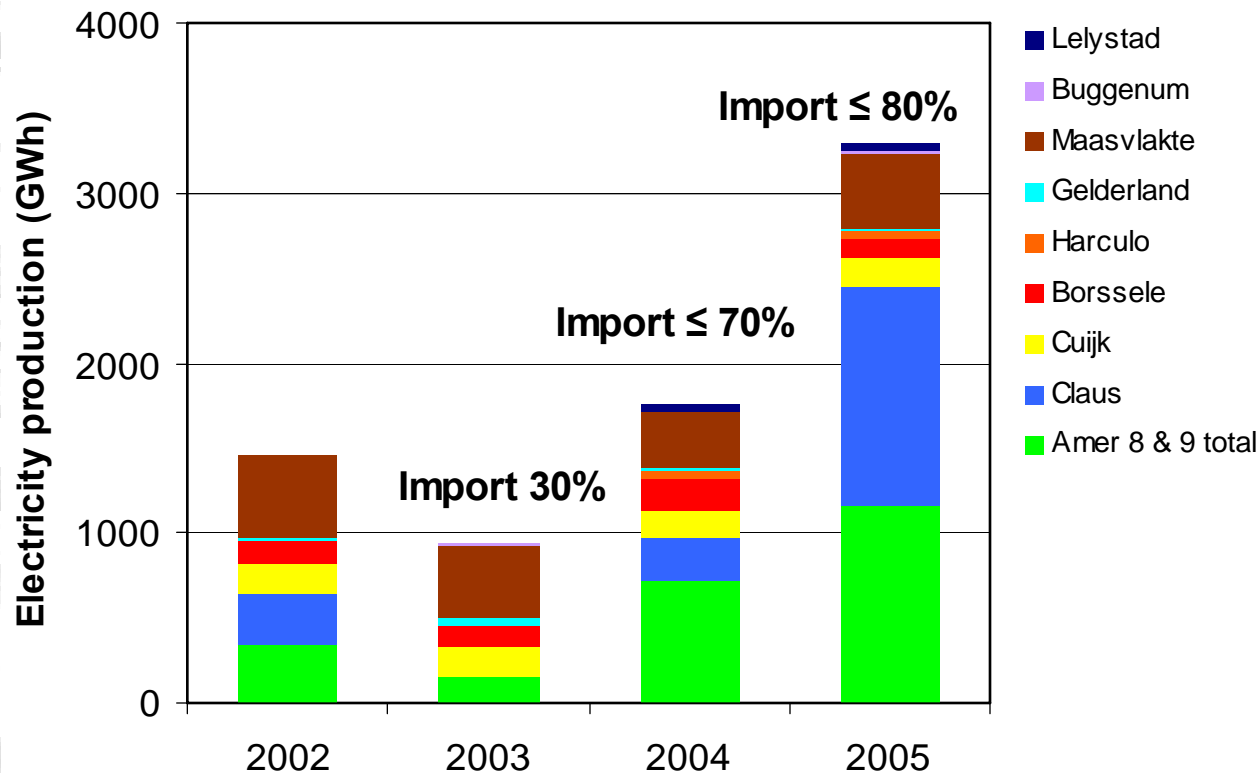
1. Background: the need for sustainability criteria and certification
2. Brief overview of existing certification systems in forestry, agriculture and renewable electricity
3. Overview of current initiatives by private parties, governments and international bodies
4. Barriers and boundary conditions of certification systems for biomass
5. Strategies for implementation
6. Concluding remarks

The background of the slide is a grayscale image of wood chips. In the bottom right corner, there is a horizontal scale bar with the text "5 cm" above it.

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Background: the need for sustainability criteria

- Growing bio-energy demand and international supply chains create unique opportunities for biomass producing regions.
- Example: renewable electricity production in the Netherlands using imported biomass (wood pellets, agro-residues, vegetable oils)



Background: the implications for trade

- Negative side-effects of rapidly expanding commodities such as palm oil in Malaysia and Indonesia, or soy cultivation in Argentina, also ethanol from sugarcane under investigation
- Overexploitation should be avoided and sustainability criteria implemented
- Sustainability criteria will have a direct impact on international bioenergy trade



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

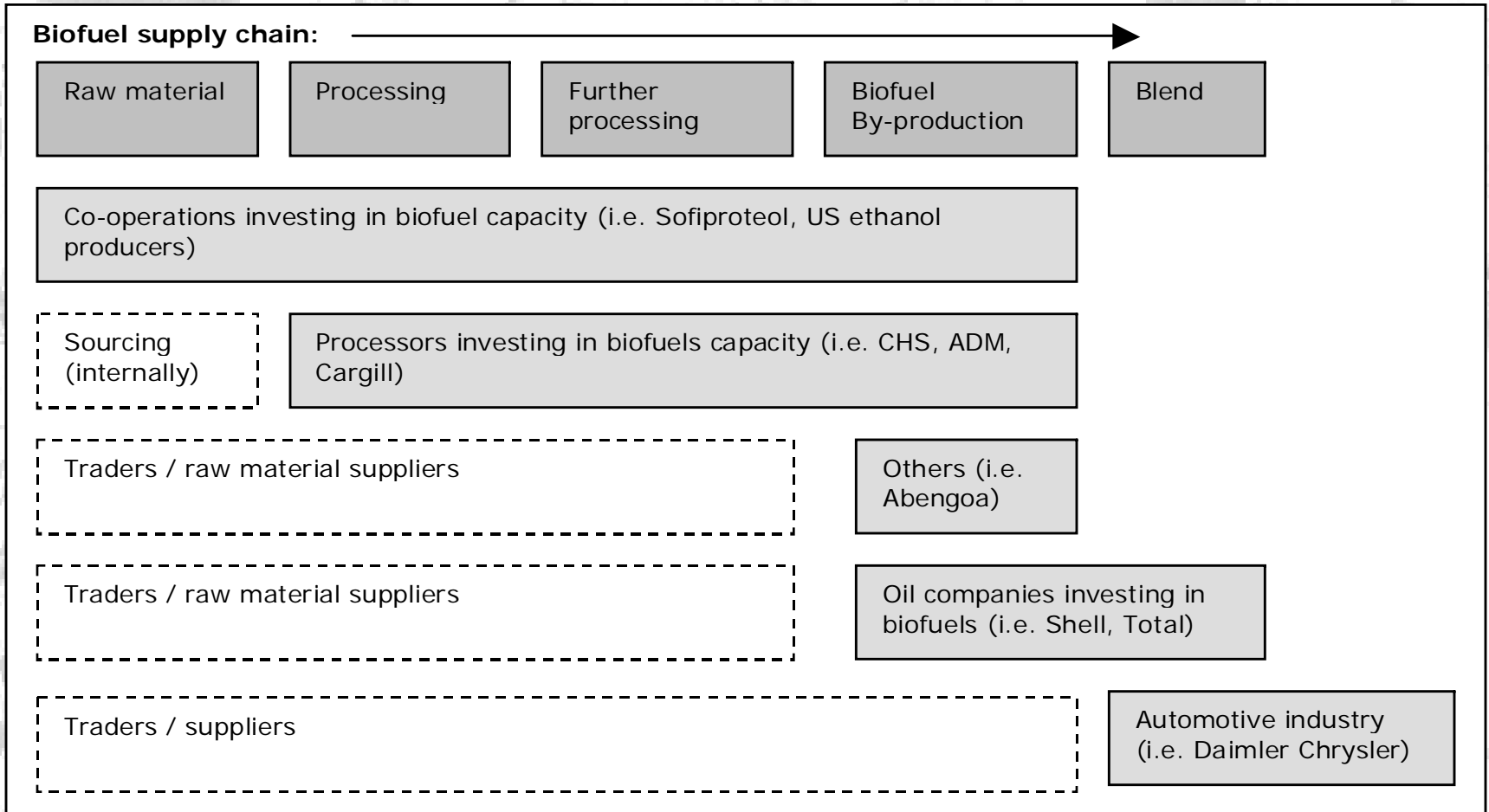
Agriculture: e.g. EUREPGAP, SAN

- 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 so far on biomass production

Different companies with different focus and responsibilities for biomass certification: example of biomass transportation fuels



Initiatives for biomass from private parties

Essent: Green Gold Label standard, sustainability of Palm oil, discussed by Peter-Paul Schouwenberg

Electrabel label for wood pellets, discussed by Yves Ryckmans

A background image showing a pile of light-colored wood chips. A horizontal scale bar is located in the bottom right corner, with the text "5 cm" above it.

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NL proposal: minimum safeguard -> stabilisation-> improvement...

1. **GHG balance** -> Chain performance (30-70%+..), currently made operational)
2. **Land-use/competition with food**: reporting;
3. **Biodiversity** -> reporting/FSC/RSPO;
4. **Welfare** -> Reporting EPI;
5. **Well being** -> ILO, Social accountability standards, etc.
6. **Environment**
 - Waste; law
 - Agrochemicals; law,
 - Soil quality; reporting/monitoring
 - Water quality & quantity; law, reporting/monitoring

Developments in BE & UK, DE, EU

Belgium (2 (!) systems operational), discussed by Yves Ryckmans

UK

- Announced in November 2005 of the 'Renewable Transport Fuel Obligation' (RTFO)
- commence in April 2008, target 2.5% by volume renewable fuels, rising to 5% in 2010/11
- draft methodology for Carbon Reporting under the RTFO (Bauen et al, 2006)
- framework report on sustainability reporting within the RTFO (Dehue et al. 2006), including meta-standard concept (maximum use of existing standards)
- peer review and piloting of the approaches between April and June 2007, reporting requirements will be issued in the autumn 2007, reporting to start in April 2008

Developments in BE, UK, DE, EU

Germany

- German government announced it plans use this provision and to draft such an ordinance for minimum sustainability standards by mid 2007 -> update Uwe Fritsche

EU

- Tender for Sustainability criteria and certification systems for biomass production still pending

Public consultation on the new legislation on the promotion of renewable energy:

- How should a biofuel sustainability system be designed?
- How should overall effects on land use be monitored?
- How should the use of 2nd generation biofuels be encouraged?

Viewpoints of NGO's

NGOs 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

International Bioenergy Platform (**IBEP**), initiated by FAO, focuses on knowledge management and transfer. IBEP will provide expertise and advice for governments and private operators to formulate bioenergy policies and strategies

FAO Forestry Department working on biomass certification in cooperation with IEA Task 31

- Evaluation of principles, criteria and indicators for both biomass from forestry, wood fuel & charcoal production systems
- Review of existing forest certification schemes
- Criteria are developed to cover forest biomass for energy, tested in the field using case studies, start end 2006

International bodies & initiatives

UNEP activities include

- Certification of Biomass Project (with WWF and others)
- Lead development of a collective programme on bioenergy sustainability under the G8's Global Bioenergy Partnership GBEP
- sustainability criteria for production of biomass for liquid biofuels with DaimlerChrysler and other stakeholders

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

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Potential barriers and boundary conditions

- **Sense of urgency** – international trade is growing fast
- But, with too many initiatives on various levels, a **danger of fragmentation and incompatible certification systems** exists – prevent proliferation of standards
- **Stakeholder involvement** in producing countries often neglected, especially smallholders

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Potential barriers and boundary conditions

- Compliance with **WTO rules and international treaties**
- 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 **not enough/soft** criteria will result in “**greenwashing**” (fear of NGO’s)
- Inclusion of **too many** criteria will may in fact create **new market barriers** (fear of industry)
- **Monitoring of compliance** crucial, otherwise the “cheaters” may win (fear of both NGO’s and industry)

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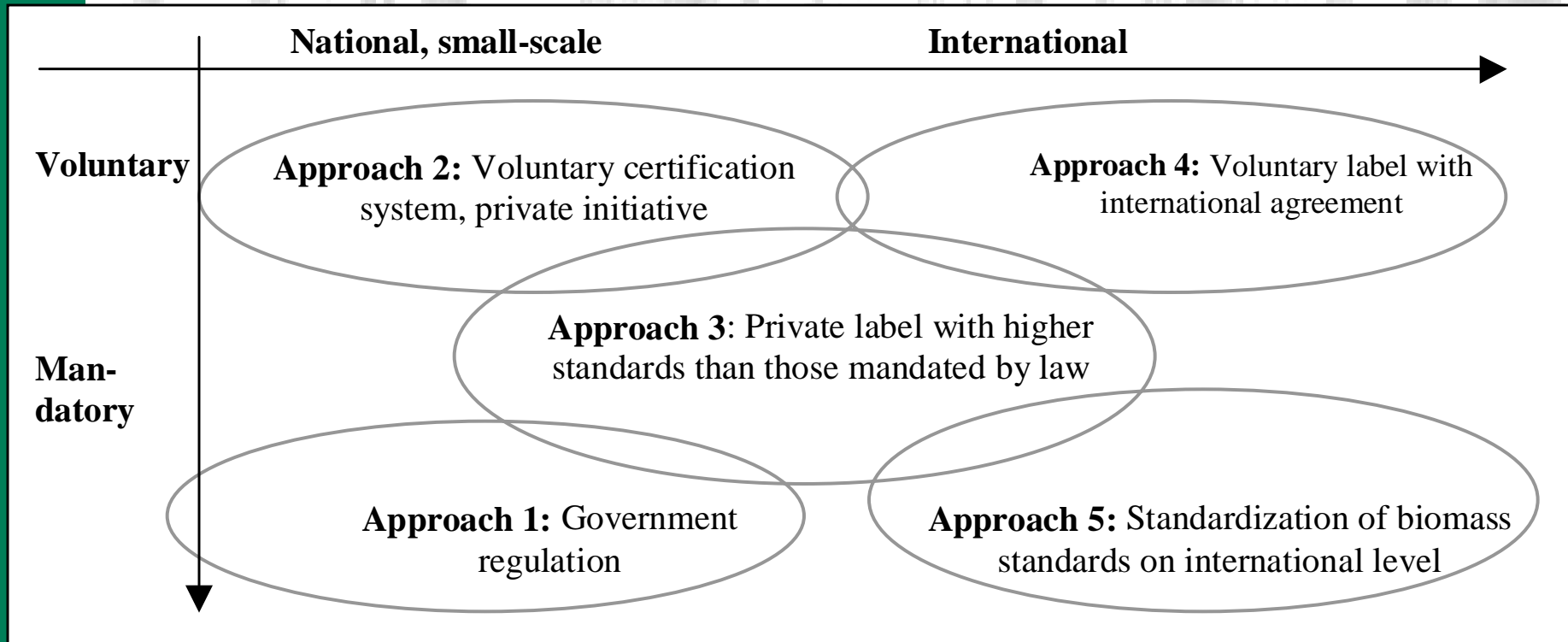


Mandatory certification not the only option

Several policy tools/strategies to pursue the sustainability:

- **Certification**: Only biomass that is certified according to criteria derived from sustainability principles is allowed to be imported
- **Product-Land Combinations**: Only biomass from regions that comply with sustainability principles allowed for import
Government decides which products/regions are eligible for government support
- **Regionalization**: In this strategy, Europe utilizes its own biomass resources before importing biomass from developing countries
- **Self-regulation**: code-of practice defined by parties involved in production and trade

Possible strategies for implementation



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Concluding remarks (1/2)

- Currently, initiatives are growing like mushrooms; risk of 'proliferation of standards' -> better international coordination between initiatives required to improve coherence and efficiency in the development of biomass certification systems
- Lack operational indicators & verifiers-> gradual development of certification systems with learning (through pilot studies and research) and expansion over time, linked to the development of advanced methodologies can provide valuable experience, and further improve the feasibility and reliability of biomass certification systems



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Concluding remarks (2/2)

- First time that governments actually try to set 'sustainability criteria' for a commodity! -> Implications for food products, fodder, materials etc.
- Varying degree of concern: palm oil / soy bean oil most debated, while many agricultural residues and wood pellets are approved by (almost) all stakeholders
- Many methodological issues remain to be resolved, e.g. impacts on food security and biodiversity

Thank you for your attention!

- Preliminary results of this overview study available at:
www.bioenergytrade.org
- Publication in a special IEA Bioenergy Task 40 issue of Biomass & Bioenergy in 2007, currently under review

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