

# Sustainability standards and certification for bioenergy from forests: Meta-Analysis from several projects and studies

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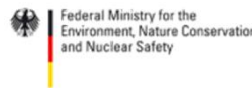
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presented at the workshop “Transatlantic Trade in Wood for Energy: A Dialogue on  
Sustainability Standards and Greenhouse Gas Emissions”





Oct. 23-24, 2013 in Savannah, Georgia (USA)

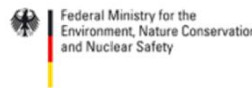
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# Projects & Studies



- Sustainability criteria for **BIOMASS FUTURES** [www.biomassfutures.eu](http://www.biomassfutures.eu)
- Sustainability criteria for **non-food** feedstocks (FP7)  [www.crops2industry.eu](http://www.crops2industry.eu)
- Global Assessments and **Guidelines** for Sustainable Liquid Biofuel Production in **Developing Countries** (FAO/UNEP/UNIDO) for the GEF 
- Joint Workshop series focusing on **extending the RED to forest bioenergy** [www.iinas.org/redex.html](http://www.iinas.org/redex.html)
-  **GBEP Indicators** for Sustainable Bioenergy <http://www.globalbioenergy.org/>
- **Resource-Efficient Bioenergy in EU27** (for EEA, together with Alterra)
- Possibilities of sustainable **wood energy trade** and impacts on **developing countries** (with CENBIO for BMZ/GIZ) 
- Sustainability of certified **wood bioenergy** feedstock supply chains: **Ecological, operational and international policy perspectives**. IEA Bioenergy Task 40 + 43 (ongoing)



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# Related Activities of Partners



- **Review & benchmarking of sustainability schemes by Jinke van Dam**



- **Several articles and analysis of Inge Stupak**



- **IEA Bioenergy TASK 40**  
Sustainable International Bioenergy Trade - Securing Supply and Demand



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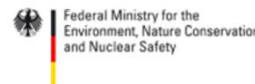
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# Sustainability schemes for woody bioenergy

| Schemes                                | Bioenergy   | Forests  |
|--|---|--|
| <p><b>International activities</b></p> | <ul style="list-style-type: none"> <li>• GBEP</li> <li>• ISO</li> <li>• Voluntary (solid bioenergy) certification schemes (e.g. IWPB)</li> </ul>  | <ul style="list-style-type: none"> <li>• REDD+</li> <li>• (CDM)</li> <li>• International Forest Processes</li> <li>• Voluntary Forest Certification Schemes</li> </ul> |
| <p><b>European Developments</b></p>    | <ul style="list-style-type: none"> <li>• Extension of the RED</li> <li>• (Links to ETS)</li> <li>• CEN</li> <li>• National regulations</li> </ul> | <ul style="list-style-type: none"> <li>• EU TR</li> <li>• Forest Strategy</li> <li>• LBA on European Forests</li> <li>• FLEGT</li> </ul>                               |

Source: own non-exhaustive compilation

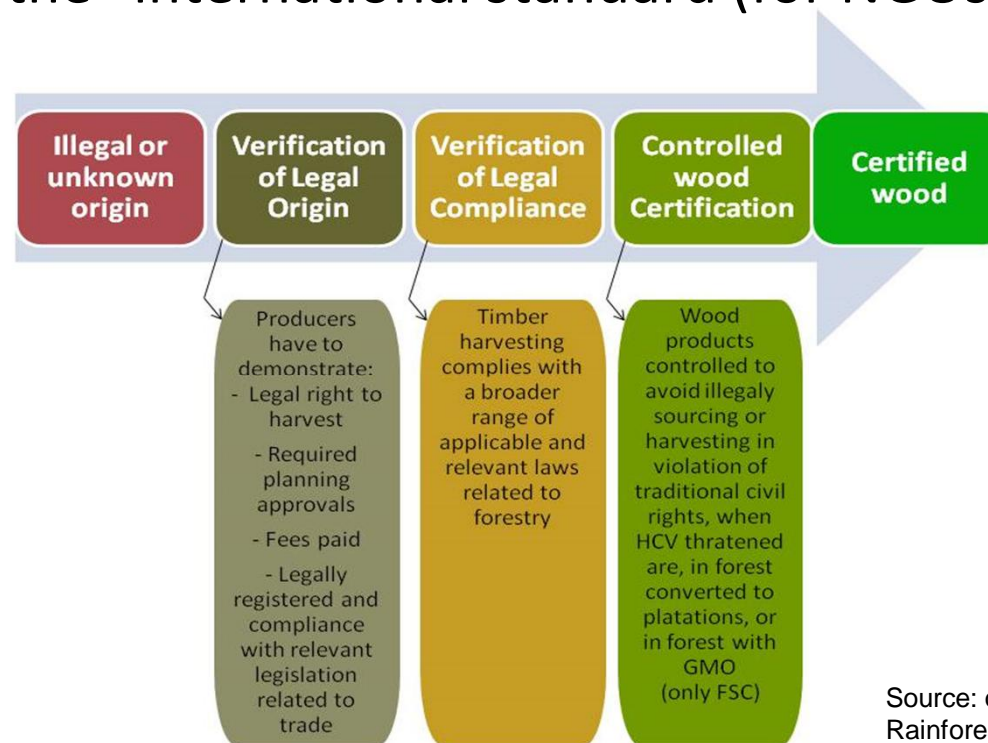
- Regulations in **developing countries**: general legislative readiness poor, low enforcement potential
- Regulations in **developed countries**: capacity to enforce binding and comprehensive criteria



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# Voluntary forest certification

- Holistic approach to SFM but lack GHG accounting
- Main schemes: no mutual recognition
- FSC: “the” international standard (for NGOs...)



Source: own compilation based on Rainforest Alliance – Smartwood Program



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# Benchmarking of the sustainability schemes for woody bioenergy

| Origin of the approach  |   | Energy                        |   |                                      | Forest |  |
|-------------------------|---|-------------------------------|---|--------------------------------------|--------|--|
|                         |   | RED (biofuels and bioliquids) | RED possible extension to solid biomass | Industry approach (SBP, former IWPB) | EU TR  | Voluntary forest certification schemes |
| Environmental criteria  | Definition of “no-go” areas (for biodiversity or carbon conservation) | Green                         | Green                                   | Green                                | Yellow | Green                                  |
|                         | GHG emissions reductions  | Green                         | Green                                   | Green                                | Red    | Red                                    |
|                         | Sustainable Forest Management   | Red                           | Yellow                                  | Yellow                               | Yellow | (Some adaptation might be needed)      |
| Socio-economic criteria |   | Red                           | Red                                     | Yellow                               | Yellow | Yellow                                 |

Source: own non-exhaustive compilation



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# Assessment of Sustainability Schemes for Woody Bioenergy

- **None of the existing** schemes covers all aspects of sustainability
- Various schemes with **different objectives**
- **Effectiveness** of schemes is variable, many overlaps
- Many stakeholders ask for **binding criteria**
- EU expected to release proposal for sustainability criteria for solid and gaseous bioenergy (2014?)

## REDEX (EU RED Extension)

- **German-funded study**
- Proposal for criteria and indicators to **extend** the RED sustainability criteria to **woody biomass**
- **Joint Workshops (2011-2013)** with JRC and Member States (DE, NL, SE) see [www.iinas.org/redex.html](http://www.iinas.org/redex.html)
- **Outcome document (updated June 2013)**
- Current work is on C balance of forest bioenergy (with JRC, EEA), workshop Dec. 2013 in Copenhagen



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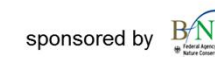
# Overview of REDEX proposal

- Forest bioenergy: focus on additional thinnings and **residue extraction**
- Set composed of 3 key criteria and 15 indicators
  - **C1 Protecting Biodiversity** (7 indicators)
  - **C2 Sustainable Forest Management** (7 indicators)
  - **C3 Net GHG Reduction** (1 indicator)
- [www.iinas.org/tl\\_files/iinas/downloads/Joint\\_WS\\_Outcome\\_Paper\\_2012.pdf](http://www.iinas.org/tl_files/iinas/downloads/Joint_WS_Outcome_Paper_2012.pdf)

## Sustainability Criteria and Indicators for Solid Bioenergy from Forests

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# IEA Bioenergy Intertask Study

- **Sustainability of certified solid wood bioenergy feedstock supply chains: Ecological, operational and international policy perspectives (ongoing)**
- Aims to provide background information on operational and scientific aspects of sustainability criteria in CA, EU, US and RU
- **First results early 2014**
- <http://www.bioenergytrade.org/downloads/iea-sust-study-overview-2013.pdf>



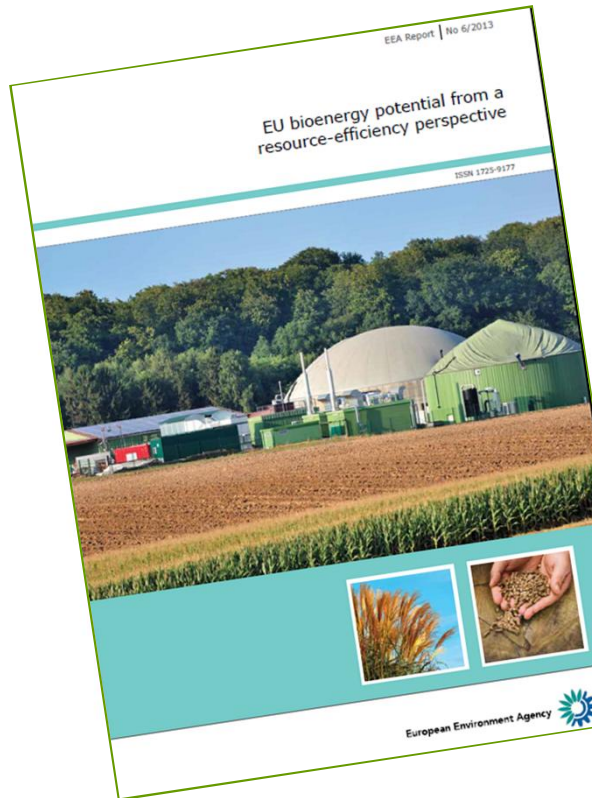
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# More information



**IINAS**  
International Institute  
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**Possibilities of sustainable woody energy trade and impacts on developing countries**

Final Report for GIZ

prepared by

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CENBIO (Centro Nacional de Referência em Biomassa)

Darmstadt, Madrid, Sao Paulo, October 2013

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**Outcome Paper:**  
**Sustainability Criteria and Indicators for Solid Bioenergy from Forests**

based on the  
**Joint Workshops on Extending the RED Sustainability Requirements to Solid Bioenergy**

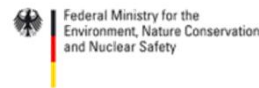
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