

EUBIONET3

Sustainability requirements on biomass for energy production - Overview of certification systems and legal frameworks

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Outline

- **Project results: Sustainability certification systems in participating countries**
- **Project results: EUBIONET III Stakeholder questionnaire on biomass and bioenergy certification in Europe**
- **Conclusions**

Different criteria for sustainability and certification of biomass and solid, liquid and gaseous biofuels

- Objective of the work:
 - to give a comprehensive overview of the current state of the art of different sustainability criteria and certification systems used in Europe and to evaluate the different criteria used for the sustainability and certification of bioenergy
- Main results:
 - 23 country reports describing certification systems
 - Evaluation report summarizing results from country reports and stakeholder questionnaire



Described systems in the country reports

- Initiatives or systems to guarantee the sustainability of biomass feedstock from forest
- Initiatives or systems to guarantee the sustainability of biomass feedstock from agriculture
- Initiatives or systems to guarantee the sustainability of bioenergy for heat and power
- Initiatives or systems to guarantee the sustainability of biofuels for transportation

Forest certifications

- The highest certification rate has Austria, 100 % , followed by Finland, 95%
- Low certification rates in Greece (0,6), Spain (4,5%), Bulgaria (4,8%) and Italy (7,1%)
- Big differences between the systems: Finland almost only PEFC, the Baltic states only FSC

Results for EU-26

PEFC ha	FSC ha	Forest and other wooded area ha	% certified of the forest area
58 352 825	26 269 446	188 333 000	44,9%

Forest certifications

- Greenhouse gas emissions not covered by the criteria
- Biodiversity issues covered, but without reference date
- No protection of high carbon land

Initiatives or systems to guarantee sustainability of biomass feedstock from agriculture – many approaches (food and non food)

- Many approaches (food and non food)
- Several national labels for organic agriculture
- International voluntary standards for soy, palm oil and sugar cane

- BIODAR
- Demeter
- Svanen
- Bra miljöval
- KRAV
- Ekoagros
- Biomassa- CSQA
- GLOBALGAP
- Öpul
- AMA Biozeichen
- The BIO Austria label
- Debio (2702 farms, 52248 ha)
- "Latvian eco-product" (Latvijas ekoprodukts)
- National food quality scheme
- Agricultura Ecologica
- Eko-keur
- Demeter
- Max Havelaar
- Roundtable initiatives (RSPO, RTRS, BSI)
- UTZ certified
- Bio-Siegel (implementing the EU Regulation 2092/91 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs) (3307 companies)
- Bioland
- Naturland
- Ecoland
- Ecovin
- DLG Certificate "Sustainable Agriculture – Fit for the Future" (Nachhaltige Landwirtschaft- zukunftsfähig)
- Gäa

Biomass feedstock from agriculture

- Only BSI and RTRS with similar criteria as the EU criteria
- Other standards lack on binding thresholds for greenhouse gas emissions and prohibition of using peatlands and other lands with high carbon stock



Bioenergy for heat and power

- Different approaches to support bioenergy promotion: Feed-in-tariffs, investment grants, electricity certificates
- According to the country reports, sustainability requirements in Germany (Biomass Sustainability Ordinance for the Electricity Sector) and in Netherlands (NTA 8080, the sustainability criteria in standard NTA 8080 will be linked to the subsidies for electricity companies in 2010)
- Further initiatives under development: ISO will develop an international standard (ISO 13065) to address sustainability issues linked to bioenergy and Global Bioenergy Partnership (GBEP) is working to develop a set of voluntary criteria and indicators

Bioenergy for heat and power

- NTA 8080 and ISCC with similar criteria for biofuels and –liquids as the RED
- for electricity and heat NTA 8080 has a GHG reduction target of 70% in case of reference of Dutch mixture of electricity or coal shall take place, or at least 50% in case of reference of natural gas.

Biofuels for transportation

Initiatives described in the EUBIONET III-report:

- **SEKAB Verified Sustainable Ethanol Initiative (Sweden)**
- **Renewable Transport Fuel Obligation (UK)**
- **The Roundtable on Sustainable Biofuels**

Biofuels for transportation

- RTFO and RSB with similar requirements as the RED
- SEKAB:
 - Reduction of at least 85 % carbon dioxide
 - Only the felling of rain forest is forbidden, other types of land with high carbon stock are not explicitly mentioned
 - No mention of biodiversity

Views of stakeholders on sustainability criteria

Results of EUBIONET III Questionnaire on biomass and bioenergy certification in Europe

Objective of the questionnaire

- Collecting suggestions and possible solutions to come to a harmonized European certification system for bioenergy
- Responses collected from relevant stakeholders in the bioenergy chain with a focus on industry



Response:

- Questionnaire was available online from 1 February to 31 August 2009
- 473 reactions received; 288 of them could be used for further processing
- Responses from 25 European countries
- In addition: response from stakeholders outside Europe (9 different countries)

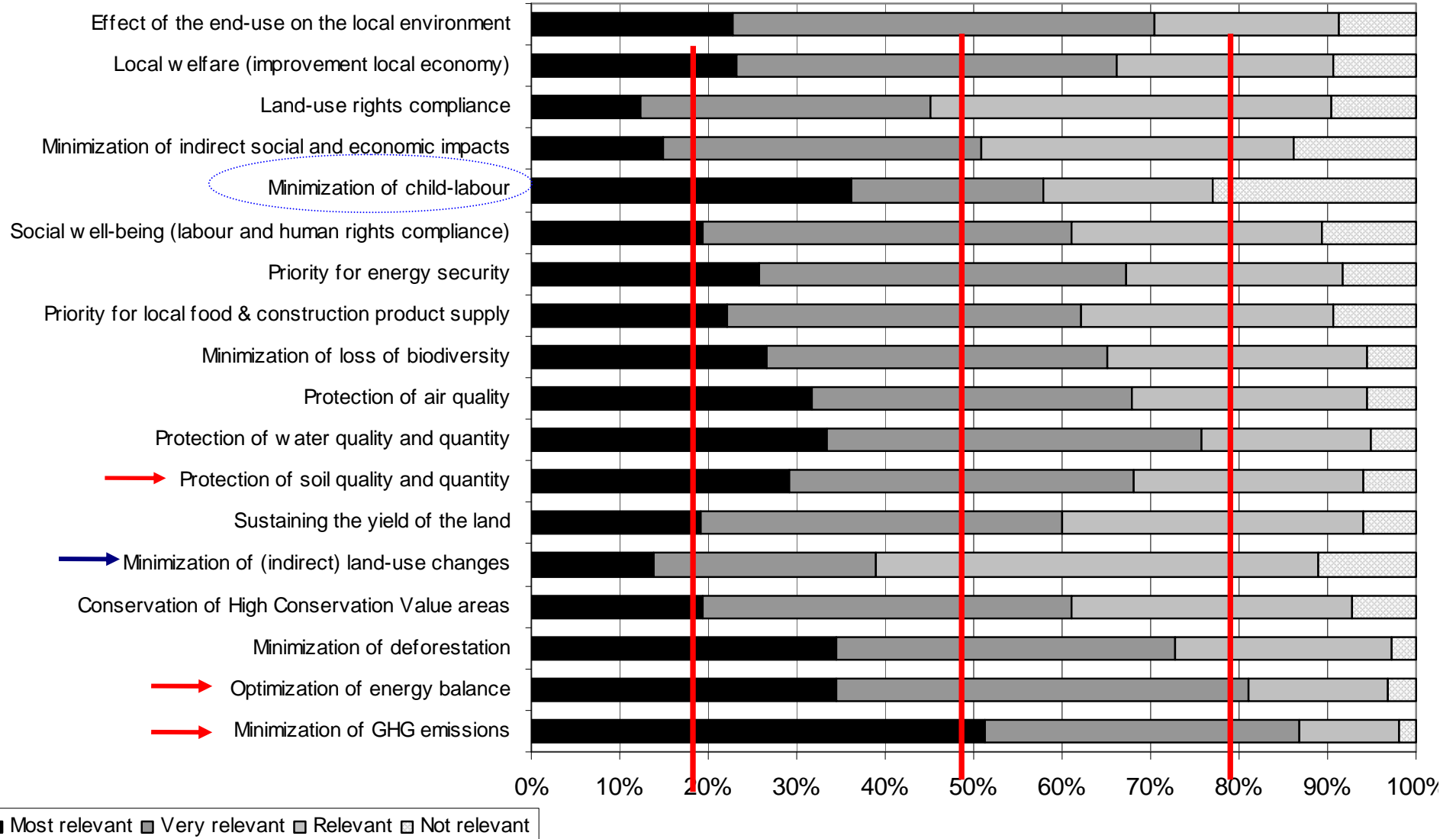
Indication of importance to include sustainability criteria in a European biomass and bioenergy certification system:

Top 3 (all responses):

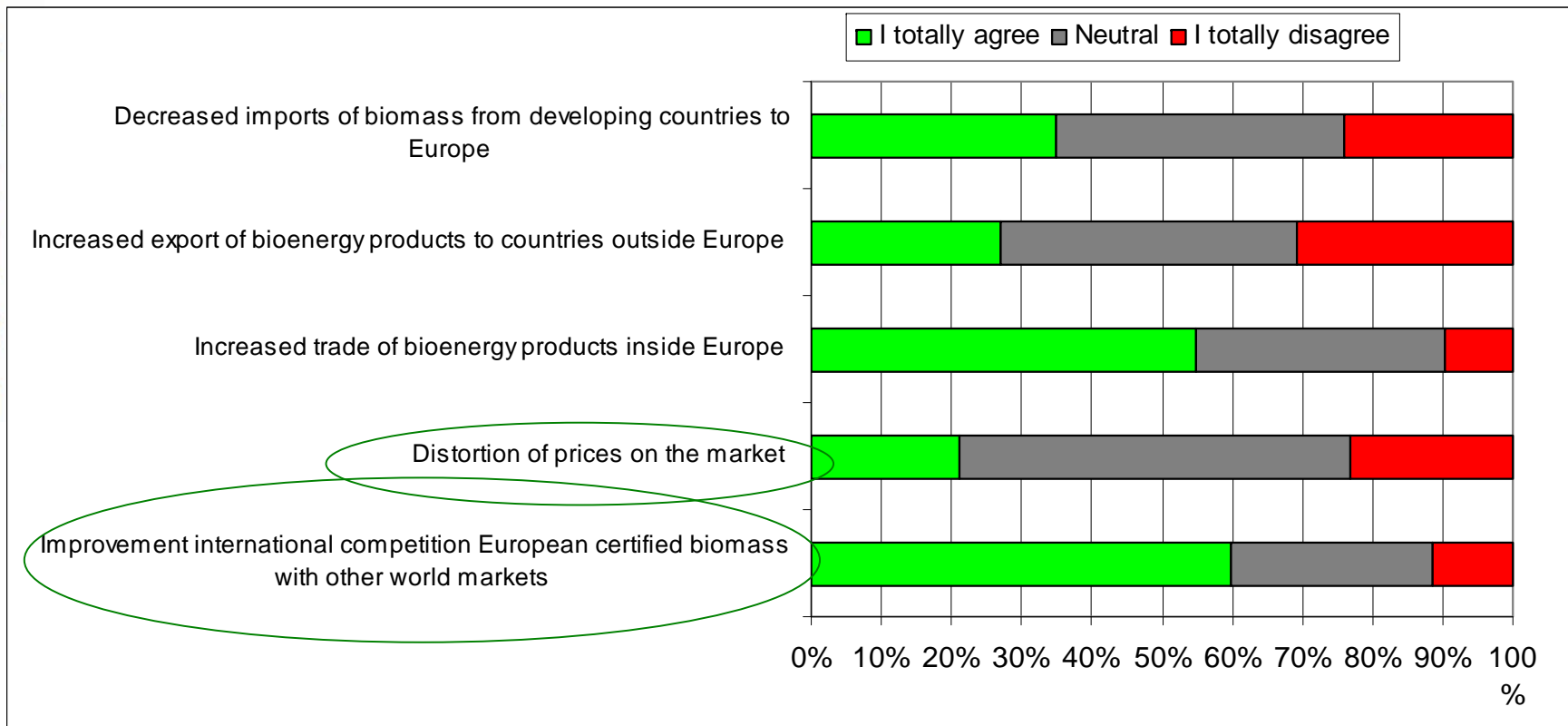
1. GHG emission reduction
2. Optimization of energy balance
3. Water quality and quantity

Results

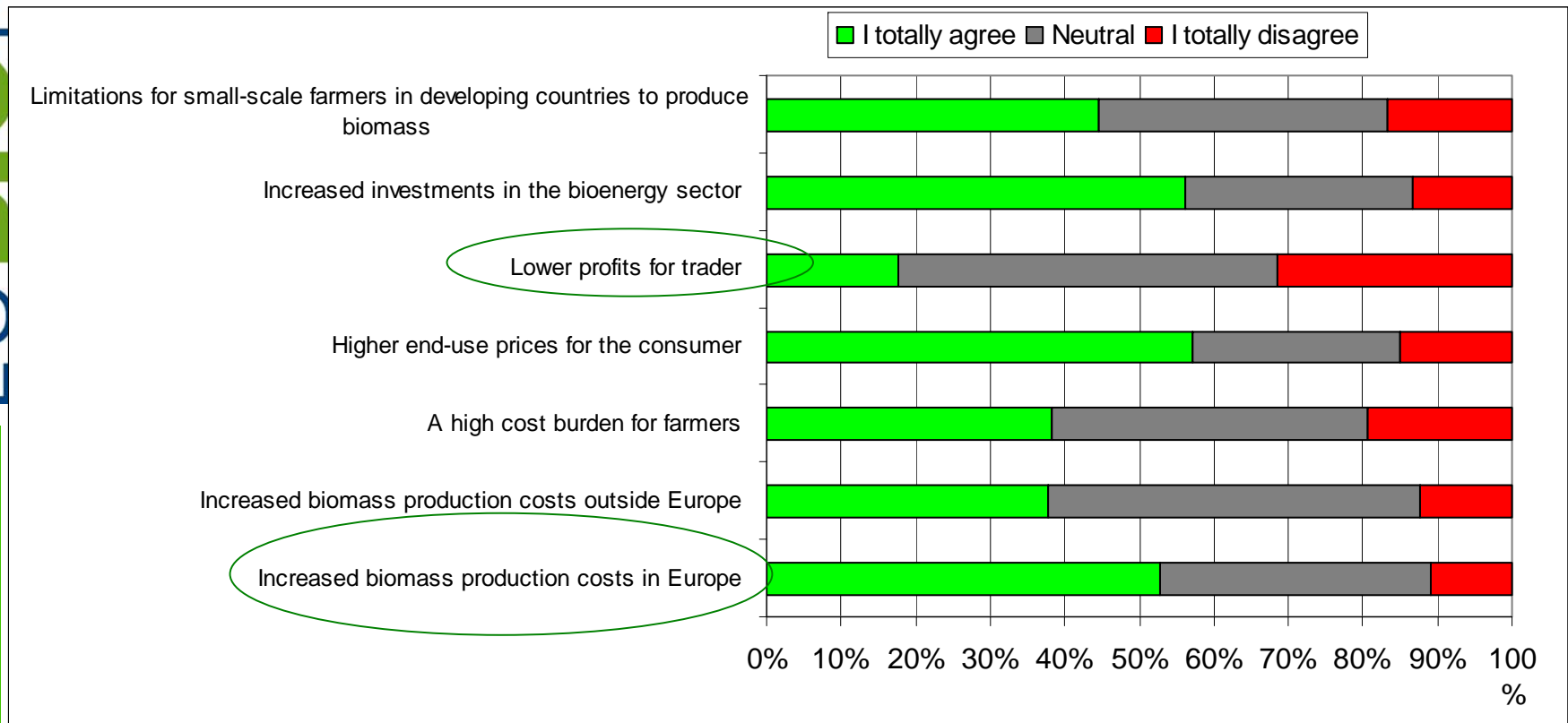
All countries



TRADE: A biomass and bioenergy certification system will contribute to.....



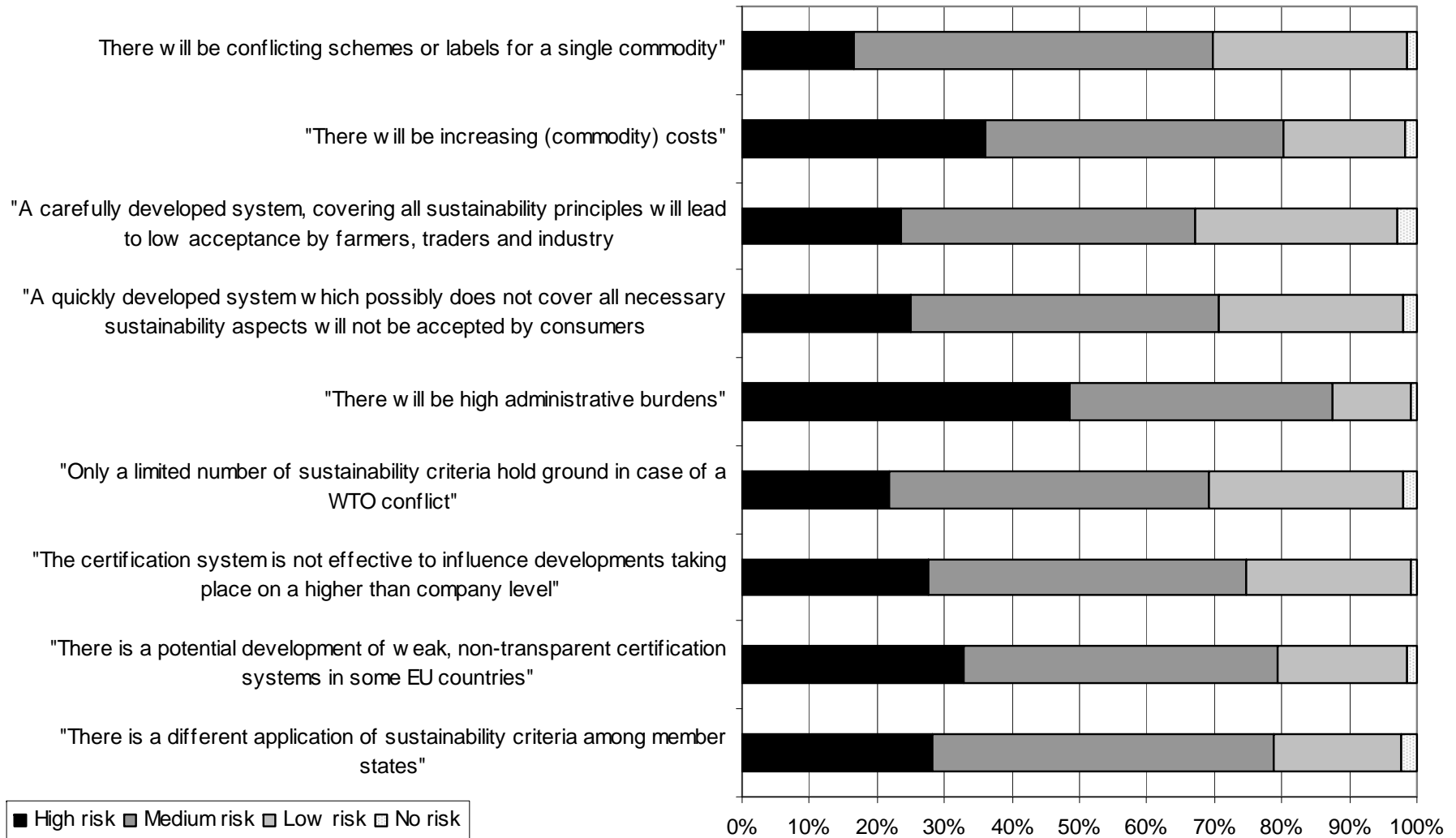
COSTS: A biomass and bioenergy certification system will contribute to.....



Risk areas for the implementation of a biomass and bioenergy certification system in Europe:



ALL COUNTRIES: "There is a risk that....."



Final remarks from the questionnaire:

- Do you think that European certification system is needed?
 - 81% YES (although there are limitations and should be linked to existing systems and declarations)
- Certification increases the credibility of European certified biomass as renewable energy source:
 - 83% YES
- Certification stimulates the discussion about certification of biomass use for other non-food (industrial raw) materials and food applications:
 - 76% YES

Conclusions I

- Based on the country reports the evaluation report contains 44 appendixes, which describe various national and international systems and initiatives to guarantee the sustainability of biomass
- For the market the variety of the certification systems is confusing

Conclusions II

- Respondents of the questionnaire stress the need for a level playing field in the market, meaning that the European sustainability requirements for biomass and bioenergy should be extended to other geographical world regions and to other feedstock and renewable energy sources
- The large variety of geographical areas, crops, residues, production processes and end-uses is seen as key area of attention that limits the development towards a harmonized certification system for sustainable biomass and bioenergy
- Many respondents consider the risk for administrative burdens high
- Most important criterion for the stakeholder in our questionnaire was the criterion on the 'minimization of GHG emissions'

Conclusions III

- There is an interest for including socio-economic criteria in a certification system for biomass and bioenergy
- The aim should be to develop some basic principles which apply for all agriculture and forestry to guarantee a sustainable land use in aim to produce bioenergy
- It could be even considered not only to expand sustainability certification to all bioenergy, but also to all biomass usage