

Biofuel sustainability in the EU Renewable Energy Directive

WIREC side meeting

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- III Penalties and verification
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I Scope



- The sustainability criteria apply to:
 - *Biofuels* (liquid and gaseous fuels used in transport)
 - *Other bioliquids* (liquid fuels used in heating and electricity)
- By 2010, the Commission will report on criteria for **other energy uses of biomass**

An aerial, grayscale photograph of a rural landscape. The foreground and middle ground are dominated by a patchwork of agricultural fields, some showing distinct rows of crops. A small town or village is visible in the lower right quadrant, with numerous buildings and a street grid. The background shows more fields and some larger structures, possibly farm buildings or industrial sites. The overall scene depicts a typical agricultural region.

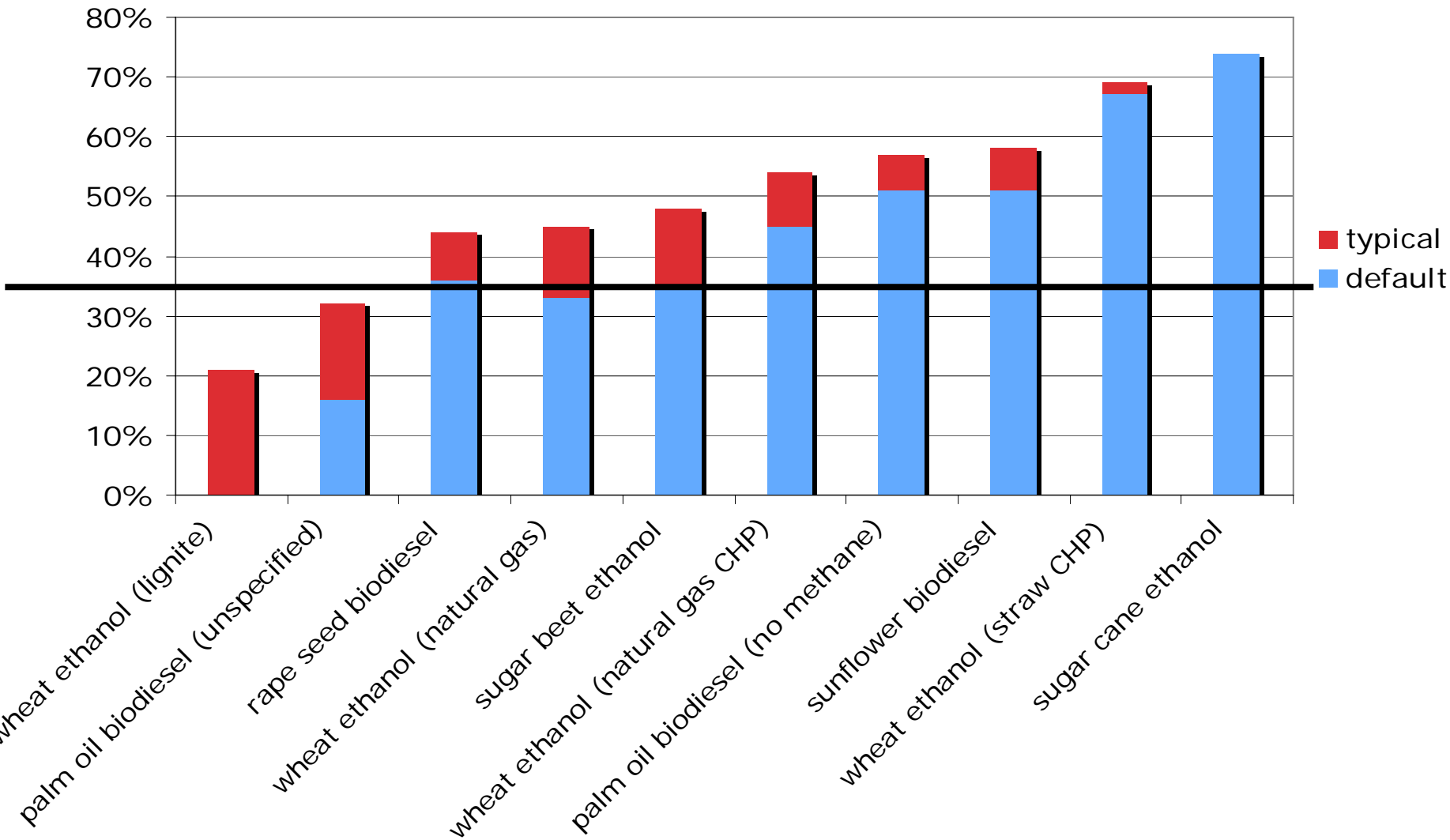
II Sustainability criteria

- greenhouse gas impact
- land use
- environmental requirements for agriculture
- diversification of feedstocks

Greenhouse gas impact

- Minimum requirement for GHG saving, relative to fossil fuel, of at least **35%** (life cycle analysis)
- Biofuel producers can choose to:
 - use **default values** given in the directive; or
 - show **actual values** that are better

Greenhouse gas savings from important first generation biofuels (lifecycle basis)



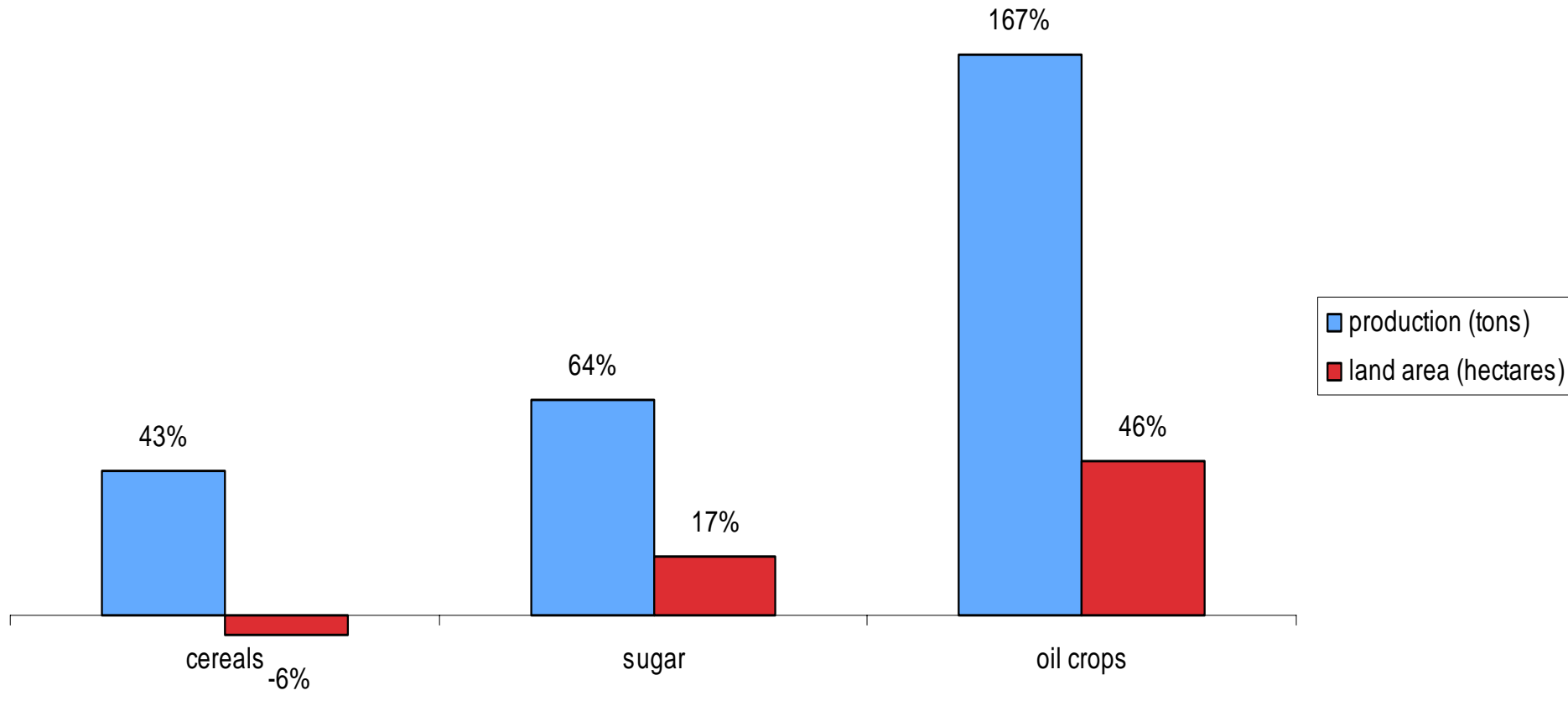
Source: proposed renewable energy directive (data from JEC Consortium)

Land use criteria

- land use change is counted in greenhouse gas calculation
- no conversion of wetland or “continuously forested area”
- no raw material from forest undisturbed by significant human activity or from highly biodiverse grassland
- no raw material from nature protection areas unless compatible with nature protection
- specific disincentive for raw material from EU land liable to high N₂O emissions from cultivation
- specific incentive for crops from “idle lands” and desert

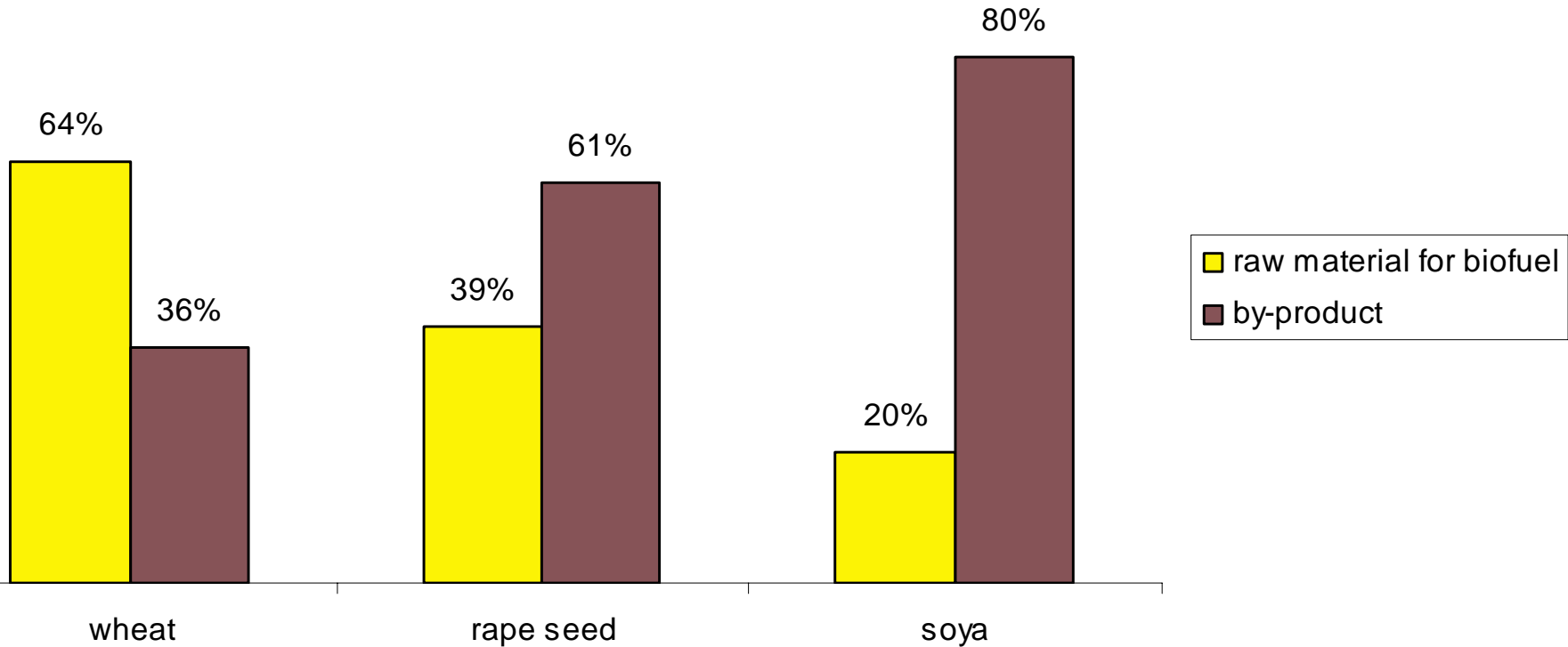
To bear in mind: increased demand for agricultural commodities in general is met mainly through productivity increases, not land use change

Change in production volumes and land use, 1980-2006



To bear in mind: for biofuels in particular, some of the extra demand for land is offset by reduced demand for other agricultural products (replaced by biofuel by-products)

Agricultural crops: ratio (mass) between biofuel raw material and by-product (generally used for animal feed)



Source: Sheffield Hallam University (2004); Technical assistance for various aspects related to the promotion of the use of biofuels in the EU - Eltrop et al. (2007)

Environmental requirements for agriculture (EU only)

- all biofuel production must comply with the “cross compliance” rules already applied under the EU Common Agricultural Policy

Diversification of feedstocks

- double counting for national renewable energy obligations for biofuels from:
 - wastes & residues
 - ligno-cellulosic material and non-food cellulosic material

Single European sustainability scheme

- Member States must apply the criteria laid down in the Directive
- Member States may not lay down criteria that go further (*Art. 15.6*)

III Penalties and verification



Penalties for not fulfilling the criteria:

- Biofuels do not count towards EU targets
- Biofuels may not benefit from tax exemptions etc.
- Biofuels do not count towards national biofuel obligations

Verification:

- The sustainability criteria apply to each consignment of biofuel
- For most consignments, two items of data will be needed:
 - What the biofuel was made from
 - Where the raw material was cultivated
- Operators must track consignments using the “mass balance” method
- Member States have primary responsibility for verification
- The Commission can decide that “certification schemes” comply with the criteria
- If so, all Member States must accept the evidence these schemes provide

IV

Review



Member States report every two years on:

- Developments in the availability and use of biomass resources for energy purposes
- Price and land use effects of biomass use
- Impacts of biofuel production on biodiversity, water resources, water quality and soil quality

Commission reports every two years on:

- Environmental benefits and costs of different biofuels
- Impact of increased demand for biofuels on sustainability
- Impact of EU biofuel policy on the availability of foodstuffs in developing countries and the ability of people in developing countries to afford them
- Impact of increased demand for biomass on biomass-using sectors

Thank you - paul.hodson@ec.europa.eu

