EU-India S&T Cooperation Days
4-6 November 2009 New Delhi
www.euindiacoop.org

Thursday 5 November
EU-India PARTNERING EVENT

Theme: *Sustainable production and management of biological resources from land, forest and aquatic environment*

Tassos Michalopoulos
Prof. Patricia Osseweijer

Delft University of Technology (TUDELFT)
Department of Biotechnology and Society (BTS)
Kluyver Centre of Excellence

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SEVENTH FRAMEWORK PROGRAMME

Kluyver Centre

Sustainable production, Sustainable production, Sustainable production, Sustainable production

Public Private Partnership 2002-2012

- **> 100 MEuro > 150 researchers from**
- **Universities in NL & international industry**

Industrial Platform

DYADIC

HTC HITEXACOAT b.v.

CSK food enrichment

PURAC

DANONE RESEARCH

applikon BIOTECHNOLOGY

Unlimited. DSM

BIRD ENGINEERING

lifewizz

FrieslandCampina

TATE & LYLE
CONSISTENTLY FIRST IN RENEWABLE INGREDIENTS

Nestlé
Good Food, Good Life

Heineken

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SEVENTH FRAMEWORK PROGRAMME

TUDelft - Kluyver Centre

Societal programme

Genomics & Society

3 sub-programmes:

- *Identification of underlying & future issues*
- *Quantification of impact of innovations*
- *Development of pro-active communication strategies*

BTS/Kluyver : 2008/9 Projects

Sustainable Biofuel Development

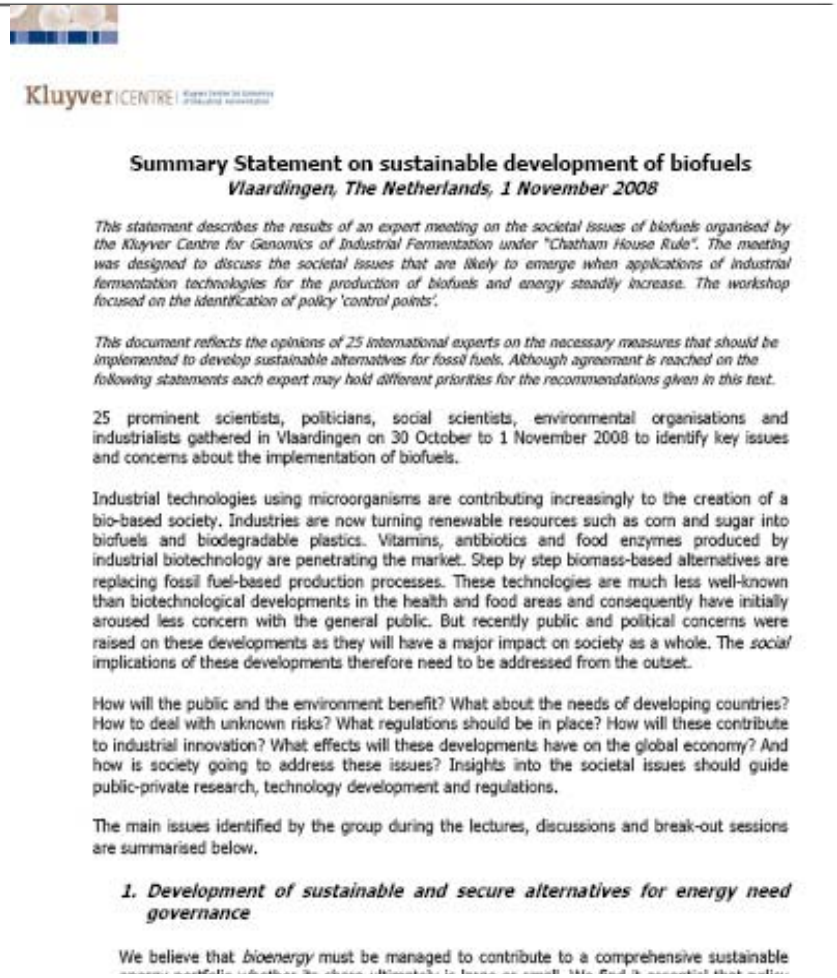
- International stakeholder meeting & public debates
- **Agreed: 10 Policy recommendations for sustainable biofuels to European Parliament**

➢ EuropaBio

➢ Rotterdam Climate Initiative

➢ STOA:

(Science & Technology Options Assessment office, European Parliament)



Kluyver CENTRE

Summary Statement on sustainable development of biofuels

Vlaardingen, The Netherlands, 1 November 2008

This statement describes the results of an expert meeting on the societal issues of biofuels organised by the Kluyver Centre for Genomics of Industrial Fermentation under "Chatham House Rule". The meeting was designed to discuss the societal issues that are likely to emerge when applications of industrial fermentation technologies for the production of biofuels and energy steadily increase. The workshop focused on the identification of policy 'control points'.

This document reflects the opinions of 25 international experts on the necessary measures that should be implemented to develop sustainable alternatives for fossil fuels. Although agreement is reached on the following statements each expert may hold different priorities for the recommendations given in this text.

25 prominent scientists, politicians, social scientists, environmental organisations and industrialists gathered in Vlaardingen on 30 October to 1 November 2008 to identify key issues and concerns about the implementation of biofuels.

Industrial technologies using microorganisms are contributing increasingly to the creation of a bio-based society. Industries are now turning renewable resources such as corn and sugar into biofuels and biodegradable plastics. Vitamins, antibiotics and food enzymes produced by industrial biotechnology are penetrating the market. Step by step biomass-based alternatives are replacing fossil fuel-based production processes. These technologies are much less well-known than biotechnological developments in the health and food areas and consequently have initially aroused less concern with the general public. But recently public and political concerns were raised on these developments as they will have a major impact on society as a whole. The *social* implications of these developments therefore need to be addressed from the outset.

How will the public and the environment benefit? What about the needs of developing countries? How to deal with unknown risks? What regulations should be in place? How will these contribute to industrial innovation? What effects will these developments have on the global economy? And how is society going to address these issues? Insights into the societal issues should guide public-private research, technology development and regulations.

The main issues identified by the group during the lectures, discussions and break-out sessions are summarised below.

1. ***Development of sustainable and secure alternatives for energy need governance***

We believe that *bioenergy* must be managed to contribute to a comprehensive sustainable

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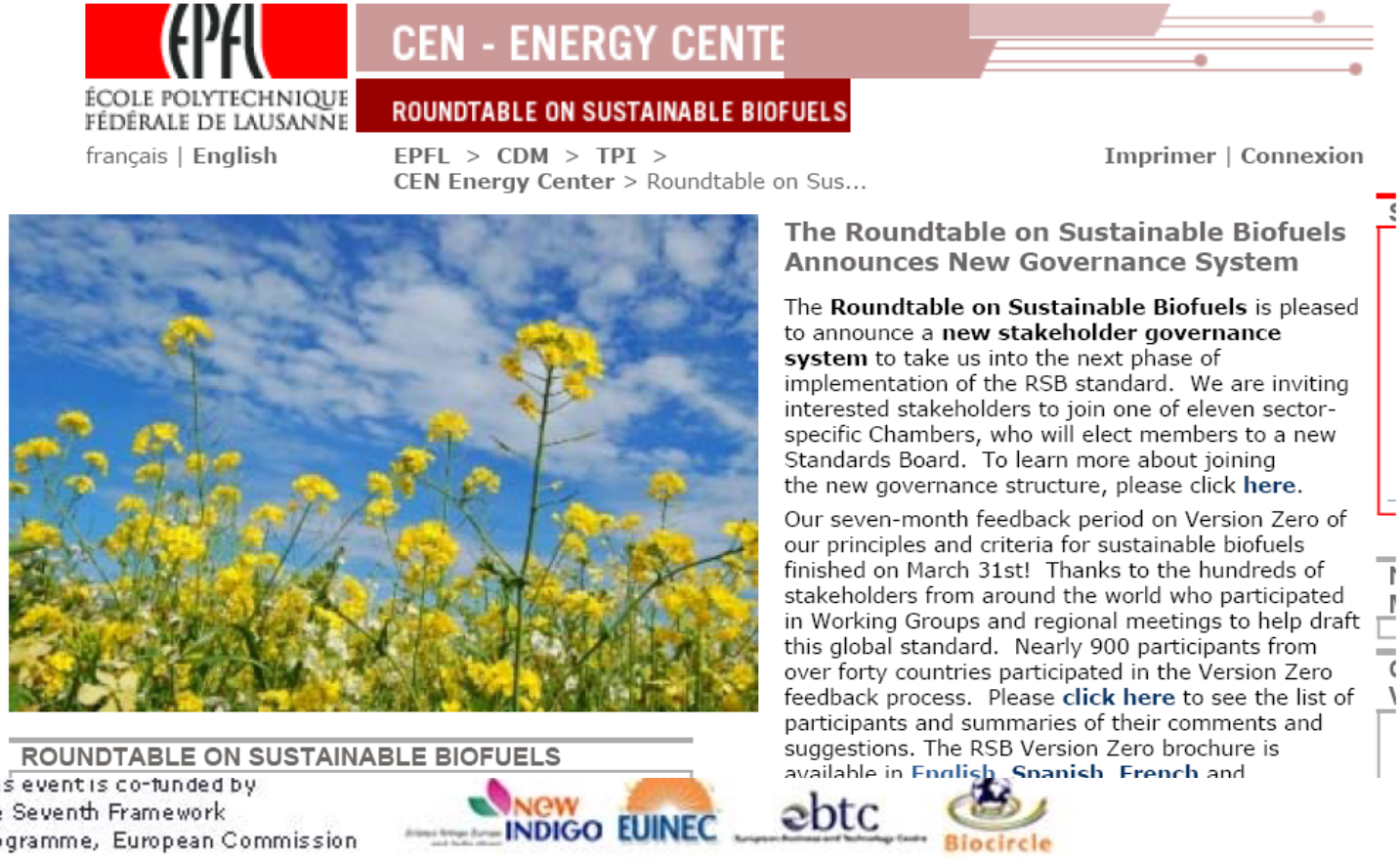
BTS/Kluyver : 2008/9 Projects

- Input report to Lausanne Roundtable (RSB) towards a Global Sustainable Biofuel Standard



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PROJECT IDEA

Sustainable EU agriculture criteria, GM crops:

1. Benefit to society
2. Economics and prosperity
3. Health and welfare
4. Local and general food supply
5. Cultural heritage
6. Freedom of choice
7. Safety
8. Biodiversity
9. Environmental quality

(Cogem report Socio-economic aspects of GMOs CGM/090929-01, 2009)

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PROJECT IDEA

- Criteria are meant for EU production

However,

- Globalized socioeconomic impact
- *Possible* Guideline/Template/Example for a future agricultural sustainability framework in India?

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Research Issue

Sustainable development & environmental protection

Societal implications of considered EU sustainability criteria on key food actors and rural livelihoods. (*choice of scope required*)

India & Europe :

Socio-economically optimal

culture-dependent, measurable indicators

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PARTNER SOUGHT

Sustainable production, Sustainable production, Sustainable production, Sustainable production

- Analysis of socio-economic impact in rural settings in India, stakeholder relations, public perceptions and innovation management

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Thank you!

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