



Concluding Remarks and Way Forward

Workshop on Promotion of Sustainable Biofuels production
in Central and Eastern European Counties

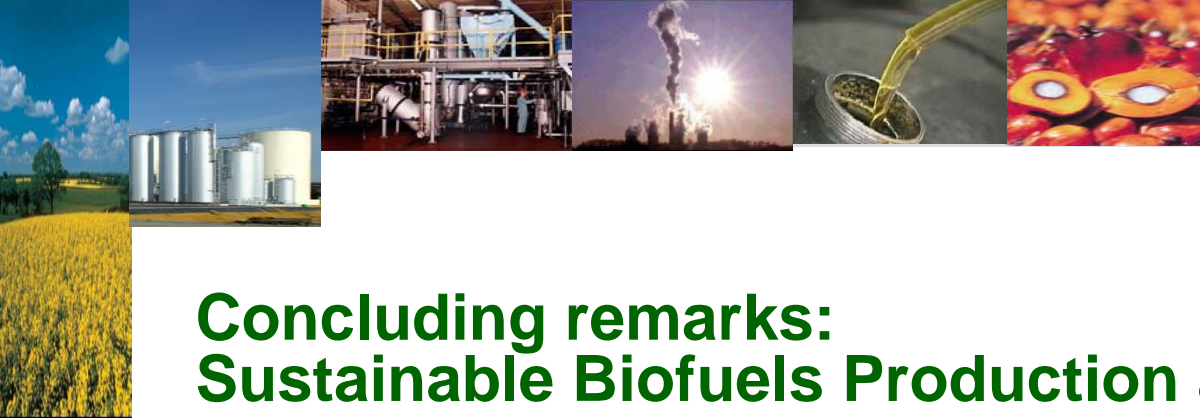
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Issues discussed

- Policy and Mechanisms Promoting Sustainable Biofuels
- Feedstock, Sustainability Issues and LCA Analysis
- Existing and Emerging Process Technologies
- Regional and International Issues – Industrial Perspectives



Concluding remarks: Sustainable Biofuels Production and Use in CEE

- ❑ Policies and Legislative framework
- ❑ Ensuring involvement of all stakeholders
- ❑ Feedstock, sustainability, selection, availability, price...
- ❑ Marketing strategy, segment,..
- ❑ Process technology & quality control
- ❑ Plant site selection
- ❑ Optimum maximum capacity of production
- ❑ ...



Policy Framework & Incentive Mechanisms

Needed to be put in place (based on which drive):

- In order to identify & set targets
- Ensure the financial attractiveness of crop plantations to farmers
- Enabling market creation by, if needed, tax exemption to be competitive with regular diesel
- De-taxation should be designed to direct the market to the segment decided
- Promote private sector participation
-



Ensuring involvement of all stakeholders

All stakeholders relevant for the production and marketing chain should be involved, have common understanding on their respective complementary roles:

- Ministries in charge of Agric, Environment, Energy, Finance...
- Refineries and fuels distributors
- Fuel quality control
- Farmers' Unions
- Private entrepreneurs & banks
-



Feedstock availability, price...

- ❑ Devising a **strategy to ensure availability** & avoid price fluctuations, longer term storage, multi-feedstock technology...
- ❑ Breeders, agric, **researchers, extensions** workers, farmers & unions are important stakeholders to ensure **best practice** leading to selection of best varieties & higher yield
- ❑ Encouraging Private enterprises to participate



Marketing strategy, segment

❑ Determining options:

- Pure 100% for certain market segment (agr. machinery's or city bus fleet)
- Blend in all engines without modifications, does not need separated distribution system

❑ Which segment?

- City transport less harmful emissions
- Lakes & Rivers protection due to fast biodegradability
- Drinking water areas protection due to zero toxicity



Process technology & quality control

Process with highest & guaranteed quality to the standard

- ❑ Ability to process multi-feedstock to accommodate fluctuation of feedstock price by selecting the least expensive
- ❑ Highest efficiency = 100% conversion of oil (the most expensive input) to biodiesel
- ❑ ...



Plant site selection

- ❑ To lower transportation costs of feedstock & products
 - e.g. near water transport facilities for large scale, in vicinity of oil mills, etc.
- ❑ Access to services
- ❑ Local investments laws, taxes, labor market regulations?
- ❑



Optimum maximum capacity of production within the constraints

Unless small scale for own use

- ❑ The larger the capacity the less the production cost unit, thus more profitability or less need for incentives
- ❑ The larger the capacity the less the cost associated with quality control
- ❑ From 10-15,000 t/y it is feasible to invest for installation to purify glycerin up to pharmaceutical level, thus extra income, (however?)
- ❑ Local investments laws, taxes, labor market regulations



Possible next steps

On county level

1. To compile information on the present situation regarding plans and strategies for the use of biofuels
2. A countrywide feasibility study could be undertaken to determine the potential for establishing Biofuels industry value chain



Economic sustainability criteria to establishing viable biofuels value chain

Stakeholders: involvement of all stakeholders, awareness and capacity building on the **multi-sectoral nature** and benefits of the biofuels value chain

Feedstock and Sustainability: As recognized **bottle neck issue**- a clear definition of the feedstock volumes **available** from a secure supply at the lowest possible cost will determine the final **size, process technology & location** of the biodiesel plant; agricultural **Best practice**, policies and **financial** measures to increase **oilseeds** production/availability and to ensure the biodiversity and socio economic impacts

Markets: defining the **target markets** and segments; e.g., whether to go for **100% biodiesel** or **5% blend**, potential **distribution partners** and competitors to allow a successful start up of **market penetration**.



Economic sustainability criteria to establishing viable biofuel value chain

Legislations: based on a **macro economic input-output analysis**, advising on appropriate legal framework and **incentive mechanisms** to allow marketing into well-defined segments; **Harmonization** with the **EU directives**

Advice on Process technology: A plant with a **multi-feedstock** processing capability, **high yield**, proven reliability, and able to produce **quality biodiesel** will allow the market entry strategy to be successfully implemented.

Linking up with **Corporate Social Responsibility** matters.

A typically these are reflected in **country-wide biofuels feasibility study** profiling the present situation, identifying barriers and providing recommendations based on benchmarking with successful references.



Possible next steps

On regional level

1. Exploring regional cooperation and integration on the production of Biofuels
2. Raising the awareness, sharing knowledge and lessons learned through networking and global forum activities



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Thank you for your
attention!

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Possible next steps

Main components of the study could be:

- Feedstock: Supply Analysis
- Present Diesel and/or petrol fuel market
- Scenarios for Future Diesel and/or Petrol Consumption & Potential Biofuels Market Share
- Reviewing agricultural and energy sector present regulation and incentives, if needed, proposing and promoting the development of sustainable value chain
- Accordingly, determining the capacity of production, potential stakeholders
- ...



Outlines

1. Summary/Concluding remarks based on discussed issues
2. Way forward and recommendations