



REGIONAL WORKSHOP ON PROMOTING SUSTAINABLE BIOFUELS PRODUCTION AND USE IN CENTRAL AND EASTERN EUROPE

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Global Renewable Energy Trends

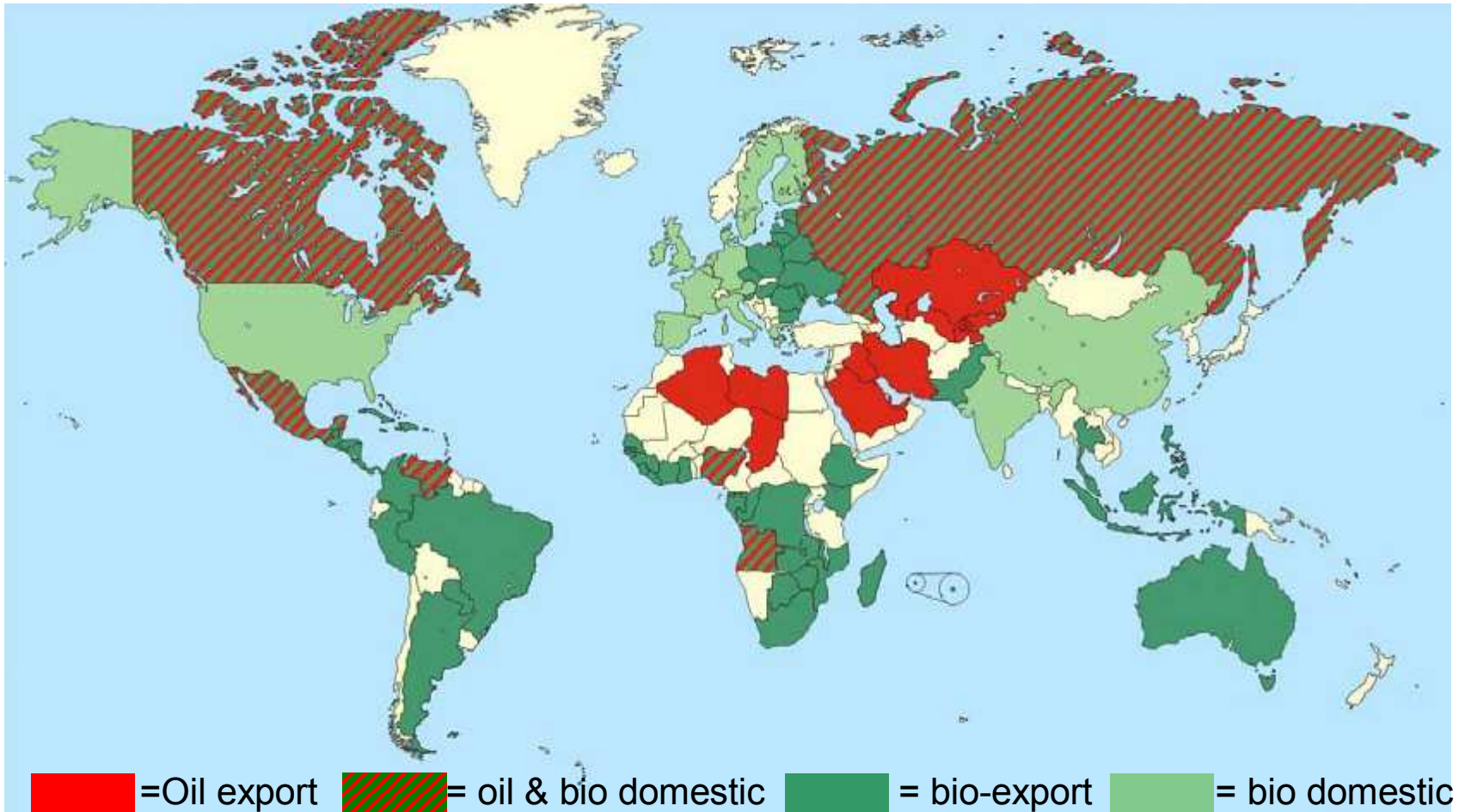
- Renewables account for about 17% of Global Primary Energy (Traditional Biomass 9%, Large Hydro 5.7% and Other Renewables 2%)
- Renewable Power capacity excluding large hydro-power touched 182 GW in 2005
- Investments in New Renewable Capacity touched \$ 70 Billion in 2006
- Fastest growth taking place in the field of liquid Biofuels – Ethanol and Biodiesel

Drivers of Biofuels Development – Global Context

- High and volatile oil prices
- Rising demand (India, China)
- Instability in major oil producing regions
- Higher exploration costs
- Finite nature of global oil resources
- Climate change agenda
- Agriculture and trade policies
- Sustainability issues
- Technological advances and more
- Efficient conversion technologies



Global Pattern 2030



Source: IEA (2005)

EU Biofuels targets in transport

Targets EU

% Biofuels in transport fuels	2005	2 %
	2010	5.75 %
	2015	8 %
	2020	10 %

Targets Germany

% Biofuels in transport fuels	2010	6.75 %
	2015	8 %
	2020	17 %

Conclusion:

- To achieve these targets EU and Germany must import biofuels from outside EU
- Sustainability of Biofuels will be crucial for the future international market

Key issues, challenges and risks of biofuels

Environmental Challenges

- Production chain and application should have positive energy and GHG balance
- Sustainable water use and no additional water contamination
- Environmental responsibility and conservation of natural resources and biodiversity
- More rational use of land - minimize soil erosion and degradation
- Minimum environmental emission (CO₂ emissions -zero-carbon)

Socio-Economic Challenges

- Reduce competition and strengthen synergies with food sector/land (product diversification)
- Diminish budgetary burden on oil and gas import for net importers
- Employment creation, income generation, stop exodus to cities
- Rural development, balancing between large and small-scale production
- Production should lead to local and shared prosperity

Technology Challenges

- Identifying appropriate size of plants for specific regions.
- Appropriate technologies for communities and businesses.
- Increasing production efficiency

UNIDO's Biofuels Activities: Objectives

- Increase security of energy supply through diversification of supply and reduce reliance on fossil oil
- Increase access to energy for rural areas for productive uses
- Reduce risks and uncertainties in investments in technologies
- Promote transfer and commercialization of appropriate technologies
- Demonstrate the biofuels value chain
- Stimulate debate and ideas on key issues such as sustainability standards etc.

UNIDO's Biofuels Activities: Draft Strategy

- UNIDO seeks to assist developing countries and countries in transition in realizing the potential benefits of biofuels, especially by linking technology, investment, trade and sustainability issues
- assist to formulate adequate policies and define/adopt recognized sustainability indicators;
- reduce uncertainties regarding investment opportunities;
- provide tailor-made technical assistance programmes;
- strengthen SME capacities to meet international biofuels standards.

For this, UNIDO will work with networks of experts, research institutes, industrial associations, and cooperate with UN partners, multi / bilateral agencies and regional initiatives.

UNIDO's Bioenergy Activities : Global Forum Activities

- **International Conference on Biodiesel in Malaysia (Kuala Lumpur, July 2007)**
- **High-Level AU-Brazil- UNIDO Biofuels Seminar in Africa (Addis Ababa, August 2007)**
- **Regional Workshop on Promoting Sustainable Biofuels Production and Use in Central & Eastern Europe (Croatia, Cavtat-Dubrovnik Nov. 2007)**
- **Energy for Development: The Importance of South-South and North-South Technology Exchange for Promoting Renewable Energy and Energy Efficiency in Senegal (Feb. 2008)**
- **Global Renewable Energy Forum in Brazil, (Mai 2008)**
- **Follow-up of our Seminar : Sub-Regional workshops in Africa, (2008)**

Way forward

Design and implement regional/country action programmes and pilot projects towards:

- Developing appropriate policies, strategies and investment plans to promote biofuels development within a sustainable development framework i.e energy self sufficiency should be priority
- Providing data for sustainability standards for biofuels
- Creating investment vehicles/funds to mobilize resources to invest in national priority biofuels projects
- Mainstreaming use of biofuels in Country Assistance Strategies (PRSPs and CSPs)
- Fostering market-oriented partnerships (governments, private sector, civil society and int. agencies)
- Promoting North-South, North-East, South-South, East-South cooperation and public and private sectors
- Encouraging multi-disciplinary approaches
- Supporting biofuels research and development in Central and Eastern Europe

Workshop's focus:

- **Reviewing the status of biofuels production and use**
- **Sharing experiences and highlighting concerns**
- **Looking into models adopted by leading countries in the region**
- **Providing insight into possible national and regional strategies**
- **Capturing the environmental and economic benefits**
- **Minimizing potential risks**
- **Reviewing regulatory framework to meet the EU requirements and thus to harmonize policy**

Expected outputs

- **Greater awareness among stakeholders on key biofuel-related issues (policies, strategies, mechanisms, value chain, economic, environment and social risk, etc.)**
- **Review of feedstock availability and processing technologies**
- **Update on the ongoing process of sustainability standards, and their role in minimizing the environmental and social risks**
- **Review of regional and international trends and industrial perspectives**
- **Lessons learned from the biofuel production in the EU countries and other regions (Brazil) as well as UNIDO project on Biodiesel Production Promotion in Croatia**
- **Identified needs for technical cooperation of the countries in CEE/NIS region**
- **Recommendations for UNIDO follow up activities (regional and/or country technical cooperation)**

Conclusions

- **Biofuels can play a significant role in economic development CEE/NIS**
- **Adequate policies, strategies, research cooperation, partnerships and technology transfer should be the basis for future biofuels programmes in the CEE/NIS region**
- **Sustainability (GHG-Reduction, Competition with food and local applications, Biodiversity, Environment, Prosperity and Social well being) is critical to its success**
- **Self-sufficiency in energy balance with national, sub-regional, regional and global linkages – primary focus**
- **Potential sources of funds: GEF, EC, country donors, UNIDO (seed money)**

**Thank you
for your attention**

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