



The Biofuels Market: Current Situation and Alternative Scenarios

Simonetta Zarrilli
**United Nations Conference on
Trade and Development - UNCTAD**

Poznan, 11 December 2008



Why a publication on biofuels scenarios?

UNCTAD started working on biofuels in 2005. Since then many events have had an impact on the biofuels sector, but the fundamentals are still there:

- Relatively high and volatile oil prices**
- Quest for enhanced energy security**
- GHG emissions reduction**
- Rural sector renaissance**
- New market openings, especially for developing countries**



Will biofuels be able to keep their promises?

- **It will depend on the policies and strategies put in place by individual countries/regional groupings (e.g., tariffs, mandatory utilization targets, extension of cap and trade systems, IPRs)**

HOWEVER

- **Individual choices may have global impacts →**
- **Each scenario tries to provide insights on global repercussions (economy, trade, energy, environment) of specific policy developments**



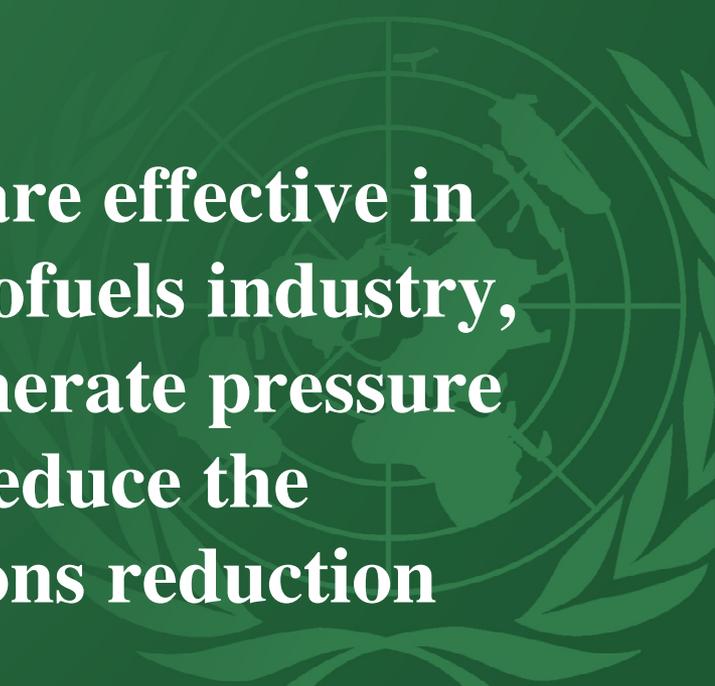


Chapter 1 – Mandatory use of biofuels

- Around 40 countries use or are considering to introduce mandatory use of biofuels
- For almost all countries analyzed there is a gap between potential demand and production capacity

Main message

Blends and utilization targets are effective in creating or expanding the biofuels industry, but their inflexibility can generate pressure on commodities prices and reduce the contribution to GHG emissions reduction

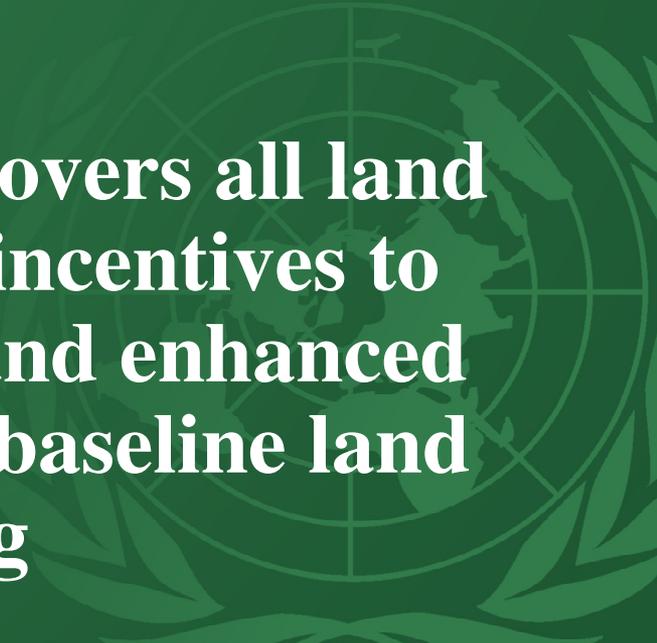


Chapter 2 – Carbon policies

- Carbon policies can generate increased demand for biofuels
- At high level of biofuels demand, no incentive to protect carbon in soils and vegetation → significant CO₂ emissions

Main message

A cap and trade system that covers all land use emissions would create incentives to control land use emissions and enhanced land use sinks; agreeing on baseline land emissions can be challenging





Chapter 3 – Second generation biofuel technologies

- Second generation biofuels are expected to have great potential in terms of energy output and cost of production
- High and volatile oil prices are a powerful driver for second-generation technologies

Main message

Climate policies will make biofuels competitive earlier; restricted or unrestricted trade will determine which countries/regions will become the main biofuels producers; under restricted trade, production will take place in almost all regions but the level of global biofuels production will be lower (lower by 30-40 EJ/year in 2050 and by 70-110 EJ/year in 2100 in comparison to unrestricted trade)



Chapter 4 – Trade opportunities for developing countries

- Developing countries have a larger potential to produce biomass than industrialized countries due to better climate conditions and lower labour costs
- The size of the opportunity for developing countries to export biofuels largely depends on the policies put in place by the main consuming countries

Main message

A strategy of energy independence offers smaller opportunities than a strategy based on pursuing environmental benefits; if the main consuming countries choose to import feedstocks and process them domestically, this would imply a significant forgone opportunity for developing countries to manufacture value-added products



Chapter 5 – Intellectual Property

- The future of biofuels will be characterized by technological complexity. Technologies are being developed in a period when there is increased interest in strengthening IPRs
- These trends may be coupled by business models that follow the approach of the biotechnology industry

Main message

Probably only the most advanced developing countries will be able to forge ahead into second generation technologies; capital intensity could be a driver in concentrating production in fewer countries; FDI is expected in biomass producing regions; all developing countries can make efforts to strengthen their own innovation systems



Chapter 6 – Alternative energy crops -

Jatropha

- If feedstocks, such as jatropha, were to emerge as alternative feedstocks, this outcome would change the pattern of production and export of biofuels
- One way to enhance the production capacity of the agricultural sector is to expand the agronomic knowledge and breeding programmes for crops that can be produced on land not currently allocated to agricultural production

Main message

Several developing countries could become significant players in the biodiesel market; competition for land would decrease; successful expansion of jatropha would not be constrained by land availability, but more by technological and investment factors



THANK YOU

Simonetta.Zarrilli@unctad.org

www.unctad.org/climatechange

