Recent Trends in Bioenergy Production, Promotion and Use

Victor Mosoti
Development Law Service
FAO Legal Office

22 May 2008

The views are those of the author and do not necessarily reflect those of the FAO
1. What is bioenergy?

Bioenergy’ is “energy generated from biofuels”

‘Biofuels’ are “fuels of renewable and biological origin, including woodfuel, charcoal, livestock manure, biogas, biohydrogen, bioalcohol, microbial biomass, agricultural waste and by-products, and energy crops.”

2. Why bioenergy?

- Drivers of bioenergy policy:
  - Desire for energy security and independence...
  - Lower transportation costs, including military applications
  - Additional market for agricultural commodities
  - Contribution to rural development and job creation
  - Clean fuel, climate change mitigation

- Oil Demand = ~85 mill. barrels/day, US$ 130/barrel
  - Dramatic impact on lifecycle
3. And for developing countries...an opportunity...

**Comparative advantage:**
- more land
- better climate
- greater variety of suitable crops
- lower labor costs

**Reduced oil import bill:**
- Interest in domestic production and use to reduce expenditure on imported oil and to promote rural development

**Export and CDM opportunities:**
- Increased demand by developed countries offers potential export opportunities
- Opportunity for earning (and selling) CDM credits under the Kyoto Protocol
4. Increased Demand...Higher Prices..

Fuel Ethanol Terminal Market Price
(Dollars Per Gallon)

Source: Oxy-Fuel News
5. Increased Demand ... 
Increased Global Output...

World Ethanol Production, 1975–2005

6. Top Ethanol Producers...

<table>
<thead>
<tr>
<th>Country</th>
<th>Production (mil gal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>4,350</td>
</tr>
<tr>
<td>USA</td>
<td>4,300</td>
</tr>
<tr>
<td>China</td>
<td>530</td>
</tr>
<tr>
<td>EU</td>
<td>250</td>
</tr>
<tr>
<td>India</td>
<td>80</td>
</tr>
</tbody>
</table>

Source: Christoph Berg, F. O. Licht
February 2006
7. Increased Demand ... 
Increased Global Output...
8. Policy Challenges

- **Food security concerns due to:**
  - **Price effects:** Clear link between demand for biofuels and effects on global food prices.
  - **Production effect:** Link between demand for biofuels and increased production of biofuel crops instead of other food crops.
  - **Land use effects:** Land for food production is diverted to biofuel crops. Increased demand by foreign investors at concessionary rates.
9. Policy Challenges

- Government promotion and regulation:
  - **Mandates and targets**: This is a common feature of policy responses to bioenergy.
  - **Prices**: Increased commodity prices may be a boon to the farming community.
  - **Incentives for production**: support measures e.g subsidies, tax waivers, improved processing capabilities.
  - **Quality**: Quality assurance schemes, certification schemes, sustainability criteria.
10. Policy Challenges

Trade Implications: *Three key issues:*

- How are/should biofuels be classified for tariff purposes? Are they *agricultural, industrial* or *environmental goods?*
  - Ethanol, HS 22: agricultural product
  - Biodiesel, HS 38: industrial product

- What kind of subsidy disciplines should be applied for biofuels?

- How is consistency of domestic regulatory measures with WTO rules to be determined?
11. FAO’s Work on Bioenergy

Host of the Global Bioenergy Platform (GBEP) secretariat.

Task-Force on Bioenergy: internal interdepartmental. Coordination of in-depth studies on a range of issues.

High Level Conference on Bioenergy, Climate Change and Food Security (Rome, June 2-4).
12. In sum…

- **The bioenergy policy setting** ... policies are highly supportive, highly ambitious, give lots of incentives: only a few developing countries have developed actual formal policy responses to bioenergy. Most of these are heavily focused on mandates, targets and incentives. **Need for comprehensiveness.**

- Due to the almost uniform drivers of bioenergy (high energy prices, etc), countries increasingly acknowledge the **importance of specific support programs.**

- **Need to bear in mind the global context:** costs of production are high, food security implications could be negative, terms of trade are still largely unfavorable for developing countries.