Biofuels and indirect land use change

The case for mitigation

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There is significant demand for an alternative to the current ILUC policy proposals

Responses to EC public consultation (October 2010) on how ILUC should be addressed (Qu. 4)

- Take no action
- Take some form of other action
- Encourage the use of some categories of biofuels
- Introducing an ILUC factor
- Discourage the use of some categories of biofuels
- Additional sustainability requirements
- Increasing the minimum GHG threshold

- National governments and public authorities
- Biofuels producers (incl. feedstock producers and blenders)
- NGOs and others (incl. universities, consultancies and food companies)
Engagement with farmers and biofuel producers through a survey and workshops

Europe
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Kuala Lumpur
Malaysian Palm Oil Board
Sime Darby
KLK
Astra Agro
ProForest

London
Renewable Energy Association
Northeast Biofuels
British Sugar
Greenergy
Vireol

Brussels
ePure
European Biodiesel Board
Copa-Cogeca
NFU
CGB
CETIOM

North America
4

Buenos Aires
CARBIO
Ministry of Agriculture
Patagonia
INAI
Maizar
Louis Dreyfus
Aapresid
AGD
Minagri

South America
17

Sao Paulo
UNICA
ABIOVE
ADM
Cosan
Cargill
Copersucar

Africa
2

India
1

Southeast Asia
17
Key messages from our survey of feedstock producers

- Widespread adoption of sustainability schemes for crops
- Adoption of sustainability schemes driven by economic reasons
  - Improve market access
  - Achieve a premium price
- Additional sustainability requirements would only be adopted if there was an economic benefit
- EU biofuels are a relatively niche end-market for commodity crops
There are opportunities to proactively reduce ILUC risk by adopting certain practices:

- Use of co-products
- Yield increases
- Manufacturing efficiencies
- Crop production on abandoned/degraded lands
- Use of wastes/residues as biofuel feedstock
- Intensification of production through systems integration
- Agronomy support
- Next-generation biofuels (from non–food feedstocks)

The challenge for policymakers is to encourage producers to adopt such activities in order to mitigate ILUC.
## Analysis of ILUC policy options

<table>
<thead>
<tr>
<th>Policy option</th>
<th>Encourage the adoption of ILUC mitigation practices?</th>
<th>Improve the GHG performance of biofuels?</th>
<th>Enable mandates to be fulfilled in a cost-effective manner?</th>
<th>Improve investor confidence?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Incentives for ILUC mitigation</strong></td>
<td>Producers gain economic rewards for ILUC mitigation</td>
<td>GHG performance improved, but difficult to quantify</td>
<td>Reduced physical volume demands reduces overall cost</td>
<td>Could indirectly impact existing investments</td>
</tr>
<tr>
<td><strong>Take no further action while continuing to monitor</strong></td>
<td>No change to current situation – no incentives created</td>
<td>No change to current GHG performance</td>
<td>No change to current market economics</td>
<td>Potential uncertainty over future action</td>
</tr>
<tr>
<td><strong>Increase greenhouse gas saving threshold (all biofuels)</strong></td>
<td>No incentives for change 'on the ground'</td>
<td>Direct GHG savings improve – ILUC emissions uncertain</td>
<td>Constraints on feedstock availability could increase costs</td>
<td>Undermines confidence – ‘shifts the goalposts’</td>
</tr>
<tr>
<td><strong>Sustainability requirements (selected biofuels)</strong></td>
<td>Without an incentive criteria will be a compliance burden</td>
<td>If adopted, criteria could drive GHG improvements</td>
<td>Constraints on feedstock availability could increase costs</td>
<td>Existing criteria already considered stretching</td>
</tr>
<tr>
<td><strong>ILUC factor (all biofuels in varying degrees)</strong></td>
<td>No incentives for change 'on the ground'</td>
<td>GHG savings could be offset by volume requirements</td>
<td>Constraints on feedstock availability could increase costs</td>
<td>Dynamic factors create a ‘moving target’</td>
</tr>
</tbody>
</table>
Requirements of an incentive scheme for ILUC mitigation

- Incentive must be based on verified environmental performance
- Need for consistency with existing RED and FQD
- Incentive should be market based – no requirement for government funding
- Beneficiaries of financial value must be the producers
- Mechanism must be transparent and relatively straightforward to implement

The most suitable option is to adapt the existing 29gCO\textsubscript{2}eq/MJ credit mechanism in the RED
How the ILUC carbon credit would work

1. Biofuels producer adopts verified practices that reduce or prevent ILUC

2. A carbon credit is assigned to the biofuel

3. Blenders are motivated to seek ILUC mitigating biofuel as less volume is needed to meet GHG targets

4. With reduced volume requirements, blenders can pay more for ILUC mitigating biofuel

5. Biofuels producers capture additional financial value, encouraging more ILUC mitigation
The ILUC mitigation credit scheme could create significant value for producers

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Value created for ILUC mitigation (US$ billion) in 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>No ILUC mitigation credit</td>
<td>0</td>
</tr>
<tr>
<td>10% of total feedstock qualify for the credit</td>
<td>1.65</td>
</tr>
<tr>
<td>20% of total feedstock qualify for the credit</td>
<td>1.83</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Biofuel type</th>
<th>Biofuel market value US$/litre in 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodiesel without ILUC mitigation credit</td>
<td>1.39</td>
</tr>
<tr>
<td>Biodiesel with the ILUC mitigation credit (10% of total feedstock qualify)</td>
<td>1.80</td>
</tr>
</tbody>
</table>
No ‘silver bullet’, but still the best policy approach with options for implementation

► There are limitations to the carbon credit scheme
  ► Carbon accounting
  ► Some further work needed prior to implementation

► Options in the value of the carbon credit
  ► Use the 29mgCO2eq/MJ value contained in the RED, or
  ► Set two-tiers of credit to allow differentiation between ILUC mitigation practices

► Option to combine the carbon credit with another policy option
  ► Introduce the ILUC mitigation credit
  ► After a period of implementation, introduce additional policy measures if the adoption of ILUC mitigation practices is limited
Summary

► Political legitimacy for biofuels demands a response to ILUC
► There are substantial shortcomings in the formally proposed ILUC policy options
► Incentivising ILUC mitigation is the only policy option that:
  ► Provides a compelling reason for producers to adopt ILUC mitigation measures
  ► Will encourage blenders to proactively use biofuels with a low risk of ILUC
  ► Creates financial value for sustainable agricultural practices
  ► Supports innovation and investment in sustainable biofuels
Thank you

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