

Biofuel issues in the new legislation on the promotion of renewable energy

Public Consultation Exercise, FINAL

Energy and Transport Directorate-General, European Commission

The World Conservation Union (IUCN) welcomes the Commission's public consultation for a sustainable biofuel system. IUCN supports the transition to energy systems that are ecologically sustainable, socially just and economically efficient.

Acknowledging climate change and urgency to reduce GHG emissions

Healthy ecosystems provide services, including water flows, nutrient cycling and biomass production, which underpin energy systems and support our livelihoods and economies. Climate change – largely caused by our current energy choices – affects ecosystems globally and amplifies current pressures on biodiversity such as habitat loss, fragmentation and pollution with impacts on human livelihoods. IUCN therefore supports initiatives that lead to the reduction of greenhouse gas (GHG) emissions and mitigate climate change.

Replacing mandatory biofuel targets with GHG emission reduction targets

Replacing fossil fuels with biofuels does not necessarily result in a net GHG emission reduction. Thus clear targets for reduced GHG emissions in the transport sector would more effectively stimulate regulatory and market incentives for efficient technologies than mandatory biofuel volume targets of 5.75% by 2010 and 10% by 2020. Such technologies include increased vehicle efficiency, investments in public transport, other renewable energy sources (solar, hydro and wind) and smart fuel technologies. Specific to biofuels, sustainable land use and avoided deforestation, both of which are linked to feedstock production, can also contribute to climate change mitigation.

Including the ecosystem approach in sustainability criteria

IUCN supports biofuel sustainability criteria for ecosystems and livelihoods. IUCN suggests that the criteria further include an ecosystem approach for sustainable and equitable natural resource management, as defined under the UN Convention on Biological Diversity. IUCN suggests using existing systems for identifying biodiversity priorities, such as Protected Areas and High Conservation Value Areas. IUCN recommends the EC to build on the work of Member States who are developing more advanced criteria, which is further being compiled by the Roundtable on Sustainable Biofuels (RSB).

Including social well-being in sustainability criteria

Given the EC's commitment to the Millennium Development Goals, the criteria should also address social issues, particularly in producer countries. Rural communities should benefit from biofuel developments and the associated enhanced livelihoods and rural development opportunities.

IUCN recommends the Energy and Transport Directorate-General to take a broader analysis when considering biofuels, to reflect the contribution biofuels can make amongst other energy options for reducing GHG emissions of the transport sector, and to consider an ecosystem approach when considering both environmental as well as social risks and opportunities of biofuels production.

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IUCN welcomes the approach given in the consultation paper to develop and implement environmental sustainability criteria for biofuels, firstly to ensure they deliver real benefits in terms of ensuring greenhouse gas savings, and secondly to ensure they do not conflict with EU efforts and legislation to protect biodiversity or meet the EU's target of 'halting the loss of biodiversity by 2010'.

Together, climate change and biodiversity loss are the most urgent environmental challenges facing the EU¹, and safeguards must therefore be in place to ensure that tackling one of these problems does not undermine EU efforts to tackle the other.

From this perspective, IUCN wishes to draw the Energy and Transport Directorate-General's attention to the follow specific points concerning the consultation document.

Q1. How should a biofuel sustainability system be designed?

1.1 Is the possible way forward described feasible?

The possible way forward describes the implementation of the proposed sustainability criteria for biofuels.

Firstly, IUCN believes that the criteria should be strengthened to ensure sustainable and equitable biofuel feedstock production. A broader set of criteria are required, based on an ecosystem approach for natural resource management, as defined under the UN Convention on Biological Diversity: a strategy for integrated management of land, water and natural resources that promotes conservation and sustainable use in an equitable way. Amongst others, this would include water and soil qualities and quantities, and considerations for livelihoods and rural development.

IUCN recommends the EC build on the work of its Member States, several of which are developing more advanced criteria that are further being compiled by the Roundtable on Sustainable Biofuels.

Secondly, the implementation of the sustainability criteria should be compatible with implementation systems currently being

developed by several Member States. This should be harmonised across the EU to ensure consistency in application and markets. The indicators required as evidence for criteria compatibility should also be as harmonised as possible. An important issue to resolve in this case is the compatibility of the calculation of GHG emissions (including GHG emissions from land-use change).

A legislative framework for the sustainability criteria should ensure social and ecological sustainability, but not impose trade barriers on producer countries. The involvement of producer countries view in the design of a biofuel sustainability programme is therefore important. IUCN recommends a consultative process with stakeholders from producer countries (such as the RSB) to ensure harmonisation across the EU and producer countries, and to ensure effective criteria implementation.

1.2 Likely administrative burden

Claims of sustainable and equitable biofuel feedstock production would be verified through an independent, third party verification system that is designed to ensure that smallholders can access and benefit from biofuel markets.

These issues are being addressed in other sustainability initiatives, such as Forest Steward Council (FSC), Roundtable for Sustainable Palm Oil (RSPO) and the EurepGAP certification scheme for good agriculture practices. The EU can reduce the extra administrative burden in the same way as the Roundtable on Sustainable Biofuels, by adopting policies that build on and complement existing initiatives.

EU Member States should assist biofuel feedstock producers to comply with additional sustainability policies.

1.3 Comments on way forward

The proposed sustainability criteria 1 to 3 together with additional criteria on ecological sustainability and social well-being, would sufficiently cover the *direct* effects of biofuel feedstock production. Further criteria are needed to address the potential *indirect* negative effects of biofuel feedstock production including displacement of food crops and increasing feed and food prices.

The increasing demand and prices for biofuel feedstock are likely to result in the further

¹ As mentioned by Stavros Dimas, EU Environment Commissioner in his [speech](#) to the Brussels Green Week (2006)

expansion of agricultural systems and compete with other agricultural production or forestry for land and natural resources. Even with sustainable biofuel feedstock, the displacement of other agricultural production would cause a net loss of biodiversity and the degradation of ecosystems. This is particularly of concern if a biofuel feedstock development causes the displacement of local food production from good quality land.

The EC can start to address the potential displacement problem by setting up setting up an independent group to monitoring trends for possible indirect effects (see question 2).

Pro-active measures to avoid the risks of displaced agricultural production should be developed in a wide consortium of stakeholders. In addition to regulatory approaches, alternative financing for ecosystem services and payments for avoided deforestation could be used as market mechanisms for internalising costs of displacement. The Commission should provide the enabling legislative framework for such policies.

Sustainability criteria

1.4 Carbon stock differences in land use changes

Sustainability criterion 1 and 2

GHG emission reduction is one of pillars of the EU biofuels policy, thus the EC should strive for a net positive GHG emissions reduction in the policy. Setting a minimum GHG emission reduction compared to the fossil fuel equivalent is realistic and achievable (i.e. 40%). A system of continuous improvement should promote the increase of the GHG savings. A minimum percentage should be made obligatory and greater GHG savings (i.e. 40-80% and > 80%) should be made attractive through market-based mechanisms.

Sustainability criteria 2 is also extremely important, as biofuels must not be produced in areas which are particularly effective for carbon storage such as wetlands, peatlands and grassland. Criterion 1 and 2 should be merged in order to take into account carbon stock, both above and below ground, as part of the GHG balance for the full lifecycle.

The system for calculating GHG savings developed by JRC/EUCAR/Concawe does not incorporate GHG emissions from land-use change. The Roundtable on Sustainable

Biofuels is developing a tool for complete GHG calculations, based on tools currently under development in other EU Member States. A similar calculation tool should be adopted for the EU biofuels policy.

1.5 and 1.6 “Exceptional biodiversity” term and use

Sustainability criterion 3

The term “exceptional biodiversity” does not currently have a standard definition in the conservation world. IUCN recommends the use of existing tools and definitions to identify such areas.

For example, World Heritage Sites under the World Heritage Convention take into account areas of “outstanding cultural or natural importance”. The IUCN Protected Area categories detail a range of management options from the strictly protected to Category V, for example, which allows “a sustainable flow of natural products and services to meet community needs”.

The sustainability criteria developed by the Netherlands uses a “stepwise approach” that is based on a priority list for biofuel feedstock developments. On a first level, developments must respect International Conventions (such as CBD and CITES). On a second level, biofuel developments cannot take place in Protected Areas and High Conservation Value Areas (HCVA), such as the EU’s Natura 2000 (areas already recognised by the EU as being of Community Interest for their high biodiversity value).

When a biofuels development does take place, conservation practices should be adopted in such as areas set aside for biodiversity, biological corridors and appropriate buffer zones, as described under the UNESCO Man and Biosphere reserves programme.

The approach is compatible with other agricultural and forest sustainability criteria developed or under current development, for example the Forest Steward Council, the Roundtable for Sustainable Palm Oil and the Roundtable for Responsible Soy. The HCVA approach is also multi-stakeholder and can be used at various levels (local, regional and national) and can address social and cultural issues in addition to environmental and biodiversity criteria.

Finally, any EU policies or legislation in this area should be developed in line with the

recommendations of the European Commission's Biodiversity Communication Action Plan (2006), which includes a series of targets in relation to climate change mitigation and adaptation measures, and use of biomass. This includes the use of environmental impact assessments which take into account impacts on High Nature Value farmland and forests.

Q2. How should overall effects on land use be monitored?

IUCN supports the idea that direct and indirect effects from biofuel feedstock production should be monitored. In addition to land use changes associated with specific biofuel feedstock production, the indirect effect of displacing other agricultural production to marginal areas should also be monitored. Other indirect effects include price fluctuations of agricultural commodities and related impacts on biofuel, food and feed markets.

An independent multi-stakeholder group should be commissioned by the EC to monitor land-use changes (i.e. through remote sensing based on satellite images and ground truthing) and analyse trends and price developments for various commodity markets. This group should report to the Commission and also advise the Commission and/or Member States on how to minimise the indirect effects of biofuel feedstock production. For example, based on scientific data and monitoring, the independent monitoring group could inform key decisions of Member States as where to/where not to source feedstock based on sustainability performance.

Q3. How should the use of 2nd generation biofuels be encouraged?

'2nd generation' biofuels are expected to achieve up to 90% GHG emission reduction compared to fossil fuel equivalents. Hence a policy for GHG emission reduction would stimulate the development of new

technologies, including enzymatic hydrolysis amongst others, required for the full development and commercialisation of 2nd generation biofuels. Market mechanisms could further promote the development of new technologies achieving more than the required minimum GHG emission reduction (i.e. 40-80%) or superior GHG emission reduction (>80%).

Thus IUCN recommends maintaining the mandatory volume mix of biofuels in transport fuels for '2nd generation' biofuels at the level of '1st generation biofuels of 2%'. IUCN believes that stimulus for the development of '2nd generation' biofuels should be linked directly to targets to reduce GHG emissions. The Commission should not promote one technology over the other.

The sustainability of 2nd generation feedstock production, including full GHG balance calculation, should also be taken into account. For example, feedstock for 2nd generation biofuels can take the form of agricultural waste and residues, which are normally left on site have a role in the nutrient-, water- and carbon balance.

Q4. What further action is needed to make it possible to achieve a 10% biofuel share?

The proposed 10% biofuels target encourages investment in the bioenergy industry though it is important to avoid a situation where the focus is solely on meeting the biofuel target, regardless of a biofuel's GHG savings or other more effective strategies. IUCN therefore believes that specific **targets to reduce GHG emissions** for transport would be more appropriate. Sustainable and efficient biofuel production that contributes to GHG emission reductions would then complement other strategies, including increasing energy efficiencies, to achieve GHG reductions.

The World Conservation Union (IUCN) is the world's largest and most important conservation network. The Union brings together 83 States, 110 government agencies, more than 800 non-governmental organizations (NGOs), and some 10,000 scientists and experts from 181 countries in a unique worldwide partnership. The Union's mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.