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

Energy and Transport Directorate-General, European Commission

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

However, as EU Environment Commissioner Dimas acknowledged, *"we have to move very*

with sustainability criteria for energy use of biomass to ensure that its target is not damaging, though is nevertheless concerned that biofuel policies are ahead of the science. Driven by government mandates and subsidies, investments in first generation biofuels are already increasing production, accelerating biodiversity loss through conversion of peat forests, rainforests, savannas and "set-aside" agricultural land. Meanwhile, nec 10.02Td[cr end of 20oolsi)7(d-1( )]orause oTJ0.illne)6dcowdfirss5 tes EATEMC/ar MAC ID 14 >>

Recognizing the potential and the challenges of biofuels

If planned and managed well, in conjunction with community stakeholders, biofuels may have ecosystem and livelihood benefits. Biofuel markets may create incentives for landscape restoration, such as developing abandoned and degraded lands, thereby promoting rural development. Rural communities could also benefit from higher income from local, regional and global biofuel markets.

However, if poorly managed, biofuel feedstock developments can exacerbate existing agricultural impacts, which are already a leading cause of biodiversity loss. These include: deforestation; soil and land degradation; water pollution and scarcity; potential invasive tendencies of alien plant species introduced for biofuel production; and higher GHG emissions, through land-use change, fertilisers, farming practices and fossil-fuel powered farm machinery. Weak tenure and access regimes may result in the further marginalisation of vulnerable groups such as women and the landless poor.

Given the EC's commitment to both the Kyoto agreements and the Millennium Development Goals, criteria and incentives for sustainable biomass production should promote the most environmentally sound solutions and address social issues, particularly in producer countries. Rural communities should benefit from the livelihood and development opportunities associated with biofuels.

Whether biofuels have a positive or negative impact depends on the type of feedstock used, how and where it is grown, and how and where the biofuel is processed and transported.

- "First generation" biofuels are produced from the edible parts of crops, growing demand for which contributes to increased land-use change and commodity prices, undermining food security.
- "Second generation" biofuels are generally more sustainable and energy efficient as they are produced from cellulosic biomass, like straw, agricultural waste, woods and grasses. However, the technologies needed to break down ligno-cellulose are not commercially available and, due to their high cost, are unlikely to be affordable for the poor.
- "Third generation" biofuels based on algae and/or genetically modified plants are currently the subject of much research and investment given their high energy content and yield potential.

Ensuring a coherent approach within the EU

Together, climate change and biodiversity loss are the most urgent environmental challenges facing the EU[1], and safeguards must therefore be in place to ensure that tackling climate change does not undermine EU efforts to address biodiversity loss. From this perspective, IUCN wishes to emphasize to the Energy and Transport Directorate-General the following specific points concerning the sustainability of the EU Directives on Renewables and Fuel Quality:

- GHG emission reduction is one of pillars of the EU biofuels policy and the proposed minimum reduction of 35% compared to the fossil fuel equivalent is welcome. Market-baseCN w4, 0 1ecimtasures 0 1ec