

Opinion of the EEA scientific committee on the environmental impacts of biofuel utilisation in the EU

Greenhouse gas emissions from the transport sector are rising steadily, caused by the continuing growth of transport volume. More than 90% of the total transport emissions are due to road transport. Policies and measures have so far not been sufficient to stop further emission growth.

Owing to the increasing urgency of these problems, mandatory biofuel quotas have been introduced in the expectation that in the medium term the growth in transport emissions can be reduced and that the emissions can be subsequently stabilised. In 2003, the Biofuels Directive set the objective of replacing 2% of vehicle fuel supply by 2005 and 5.75% by 2010. The 2005 target was not met and it seems unlikely that the 2010 target can be reached. Nevertheless in 2007 the EU target for biofuels was increased to an ambitious 10% level by 2020, under the conditions of production being sustainable and second generation technologies being commercially available.

Despite the fact that the first targets were missed, the pace of biofuel production in the EU and of biofuel imports from third countries is picking up. This gives rise to increasing concern by the Scientific Committee regarding additional environmental pressures inside and outside the EU. Our concerns can be summarised as follows:

- Biofuel production based on first generation technologies does not optimally use biomass resources with regard to fossil energy saving and to greenhouse gas reduction. Technologies for direct heat and electricity generation should be preferred because they are more economically competitive and more environmentally effective than biofuel production for vehicles.
- Biomass utilisation implies combustion of very valuable and finite resources from our living environment. These resources ought to be preserved wherever possible. Therefore biomass utilisation must necessarily go hand in hand with energy efficiency improvements. This is not yet the case for the majority of applications in the automotive and residential sectors.
- The EEA has estimated the amount of available arable land for bioenergy production without harming the environment in the EU (EEA Report No 7/2006). In the view of the EEA Scientific Committee the land required to meet the 10% target exceeds this available land area even if a considerable contribution of second generation fuels is assumed. The consequences of the intensification of biofuel production are thus increasing pressures on soil, water and biodiversity.
- The 10% target will require large amounts of additional imports of biofuels. The accelerated destruction of rain forests due to increasing biofuel production can already be witnessed in some developing countries. Sustainable production outside Europe is difficult to achieve and to monitor.

The overambitious 10% biofuel target is an experiment, whose unintended effects are difficult to predict and difficult to control. Therefore the scientific committee recommends suspending the 10% goal; carrying out a new, comprehensive scientific study on the environmental risks and benefits of biofuels; and setting a new and more moderate long-term target, if sustainability cannot be guaranteed.