BIOFUELWATCH WORKSHOP: HOW SUSTAINABLE ARE BIOFUELS?

Aims of the workshop:

To help participants critically analyse the claims made by the biofuel industry, and to give them basic information relating to the sustainability of biofuels.

1. Introductions

Ask people to say there names and whether they have any particular concerns or experiences with regards to biofuels.

2. 'Biofuels: What is good and bad about them?'

Brainstorming:
Ask participants to say something things which are positive and which worry them about biofuels and write them onto different A1 sheets.

3. Basic background on biofuels:

Explain what biofuels are: Liquid fuels for transport made from biomass. Ethanol is made from sugar/starch and comes from plants like sugar cane, sugar beet or corn or, less commonly, wheat or potatoes. Biodiesel is made from vegetable oil and comes from plants like oil palms, jatropha, soya, oilseed rape. Both require processing. Ethanol is blended with petrol, biodiesel with ordinary diesel. Some people also use straight vegetable oil, which comes from the same sources, and also from waste vegetable oil (eg chap fat, which is available on a very small scale). This requires no processing, but adaptation of the engine. Give time for questions to clarify facts [Note: Ensure that the focus of the workshop remains the sustainability of biofuels, not a technical discussion on how they are produced].

Option: Use pictures of different bioenergy crops and where they are grown.

4. Greenhouse Gas Emissions from Biofuels:

Ask participants: If you look at the whole life-cycle of biofuels, at how the crops are grown, how the biofuels are made, can you think of different stages at which different greenhouse gases are released? Brainstorm and write answers on an A1 sheet.

Offer prompts once participants have run out of answers. You would look for the following:
CO2 releases from soils if soil is tilled;
CO2 releases if forests or natural ecosystems are converted to agriculture;
N2O releases from soils if nitrogen fertilisers are used (10-100 times higher in the tropics_;
N2O releases from fertiliser production;
CO2 emissions from the use of farm machinery and transport vehicles;
CO2 emissions if fossil fuels are burned to provide energy for the processing of biofuels (ie in ethanol or biodiesel refineries);
NOx tail-pipe emissions (similar to those from burning fossil fuel petrol or diesel).

Plus the often irreversible loss of carbon sinks – which can be worse than the actual emissions!

Explain briefly that there have been a lot of life-cycle studies looking at emissions from bioenergy crops grown in Europe and the US and that most of them find that, if no new land is converted to agriculture, biofuels are linked to somewhat lower greenhouse gas emissions than fossil fuels – only about 13% lower in the case of corn ethanol, for example, which is the main biofuel in the US. There are a lot of uncertainties, though, and detailed background papers can be found on the Biofuelwatch websites for those who are interested. However, there are other important issues, such as impact on biodiversity, water supplies, food production.

5. Tropical biofuels and deforestation:

Explain that there are no studies into the life-cycle emissions of tropical biofuels, but most of Europe's biofuel imports are south-east Asian palm oil, with increasing imports of soya and palm oil from South America, and a likelihood of growing imports from Africa and other parts of Asia, including jatropha. Participants to look at pictures of how this is produced in order to reach their own conclusion.

Show images:

www.esa.int/esaCP/ SEMRA7YO4HD_index_1.html (2 peat fire pictures)

http://www.esa.int/images/Fire72_M.jpg

http://www.post-gazette.com/pg/05171/524318.stm (picture only)

www.cnn.com/EARTH/ 9711/24/amazon.burning/

www.dhushara.com/book/ diversit/extra/smok.jpg

Ask participants to comment and discuss as a group [minimum promts].

Give basic background information:

Tropical deforestation accounted for up to 25% of all greenhouse gas emissions in the 1990s, but those emissions are increasing. Additionally, south-east Asia's peat fires account for about 1 billion tonnes of carbon emissions a year, which is the same as 15% of all global emissions from burning fossil fuels. The figure was up to 2.5 billion tonnes or 40% of global fossil fuel emissions in 1997/98, and possibly will be similar this year. By comparison, the Kyoto Agreement only aims to reduce total global emissions by just over 188 million tonnes of carbon from 1990 levels, so it would take quite a few Kyoto Agreements to make up for Indonesia's peat fires alone.

Time: 15 minutes
Materials: Pictures (laminates or power point)
Goal: Make participants aware of the large-scale deforestation caused by biofuels

6. What can we do?

Give basic information: The main biofuel companies in the UK are D1 Oils, Greenergy and Biofuel Corporation, with Ineos about to move in as a new big player. All of them rely heavily

on imported tropical feedstocks, particularly on palm oil from south-east Asia and, increasingly, soya from South America. Greenergy, D1 Oils and Biofuel Corporation are building or have built large refineries near ports in the north of England. Ineos are planning the biggest refinery of all at Grangemouth in Scotland. Those imports are helping to raise the price of palm oil and are likely to increase the rate of deforestation as a result.

Inform people of the Biofuelwatch yahoo group.

Discuss whether participants feel that they can do as individuals and campaigners (open discussion, participant-led).

Tips for facilitators:

If participants suggest a particular course of action, make sure that people are clear when they will discuss this further, and what they might plan to do (personal and campaigning goals). Do not offer to much additional factional information, because it is difficult to take in too many facts and figures during a workshop. If somebody in the group has a particular technical interest, perhaps this can be discussed in more detail after the workshop. Facilitators don't need to have 'all the answers' – it is fine to offer to search for an answer and email people information later on.