

How biofuel companies are lobbying against basic environmental safeguards: An analysis of industry responses to the EU Biofuel Directive Consultation 2006

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“The primary objective of establishing a functioning, stable and mature biofuels market does not, in itself, present a case for establishing a system to enforce minimum environmental standards.”

Renewable Energy Association, UK

Background to the Consultation and the Respondents:

The EU Biofuel Directive was passed in 2003 and requires 5.75% of all transport fuel (excluding aviation) to come from biofuels by 2010. It sets a provisional 8% target for 2015 and obliges member states to introduce policies to expand biofuel use. A public (though barely publicised) consultation was carried out in 2006, as part of an official review of the Directive.¹ Approximately 92 of the responses come from industry (including biofuel industry, food and chemical industry, energy companies and car manufacturers), 16 come from environmental NGOs, 15 from governments or state institutions, 18 from private citizens.²

Many of the industry responses represent several companies: The Renewable Energy Association, for example has 402 members, many of whom invest in biofuels.

The problem: Rainforest Destruction

Since the EU Biofuel Directive was passed in 2003, it has become clear that the target will to a large part be met from tropical imports, particularly from palm oil and sugar cane and possibly soya. Research commissioned by the EU makes it clear that Europe cannot fulfil the Directive without imports, and Brazil, Indonesia and Malaysia are all planning to put millions of hectares of land under energy-crops – much of it virgin rainforest today. In Indonesia, all of the low-land forest could be lost by 2015 or earlier, together with thousands of species, including orang-utan. Palm oil and illegal logging together are destroying the rainforest across south-east Asia. Peat and forest fires have been linked to oil palm plantations and account for around 15% of all CO₂ emissions worldwide every year – a figure which could grow dramatically as more peat is destroyed.

In Brazil, soya is already the driving force behind rainforest destruction. Deforestation is threatening the rainfall cycle on which the entire Amazon region, and possibly much of South and Central America and even part of the US depend. Many scientists fear that the region may be close a tipping point beyond which the Amazon rainforest and much of agriculture around it could collapse. This would raise global temperatures by another 1.5-3 degrees C – and directly threaten one third of all species alive on Earth which depend on South America’s forests.

The problem: Biodiversity Losses in Europe

Worldwide, species are becoming extinct 1000 to 10,000 times faster than they would have done at a natural rate. One third of amphibians and one-eighth of birds are facing extinction, even without accelerating global warming.

Within Europe, too, species are already being lost at an alarming rate: 52% of freshwater fish, 42% of mammals, 45% of butterflies and reptiles, 30% of amphibians are at risk of extinction. 60% of wetlands have been destroyed in northern and western Europe, little natural forest remains intact.³ Agriculture is a major driver of biodiversity losses, due to habitat destruction, use of pesticides (leading to a loss of insects), monocultures, nitrate-pollution of freshwaters, etc. Birds, insects and wild flower species face similar rates of decline. It appears unlikely that the EU can meet its target of halting biodiversity losses by 2010. BirdLife International have studied the likely impact of energy crops and have suggested different ways in which biomass production could aid biodiversity and create valuable habitats. They warn that, without environmental safeguards, energy crops can lead to the loss of more habitats, falling water tables in wetland areas and increased use of pesticides. The possible conversion of set-aside land to biofuels is seen as the greatest threat to large number of species which depend for set asides for their survival. Biofuel production in Spain and Portugal already threatens one of Europe’s most biodiverse habitats. Oilseed rape biodiesel production in Germany and Finland has been linked to declines in already endangered

species, and to water pollution.⁴ Existing environmental regulations that apply to EU agriculture have not slowed the massive loss of biodiversity, and the possible loss set-asides is likely to speed up the rate of extinction.

How can we say whether a company response really supports environmental safeguards?

Firstly, all responses have been assessed according to eight different criteria:

1. Do they mention deforestation as a concern?
2. Do they mention biodiversity losses as a concern?
3. Would they support any environmental safeguards to prevent rainforest destruction for energy crop production?
4. Would they support any environmental safeguards to protect the environment, including biodiversity, in Europe?
5. Would they support any safeguards to ensure that biofuels are only used if they result in lower greenhouse gas emissions than petrol or diesel?
6. Which long-term targets do they support?
7. Do they support protectionist measures in favour of EU producers?

Questions 3-5 relate mainly to the detailed Consultation question 4.

Question 7 does not relate to environmental sustainability. It has been used to establish whether companies or association which insist that environmental regulations must not be imposed because of free trade rules themselves support protectionist measures which go against the spirit of the World Trade Organisation.

Any definition of ‘supporting environmental safeguards’ will be controversial, as is the principle of certification itself: It can be argued that only complete import bans against tropical palm oil, soya and sugar cane will protect rainforests from being turned into biofuel plantations, and that law enforcement in most rainforest nations is too weak for certification to work. This is the position taken by Biofuelwatch and a number of environmental NGOs. Nonetheless, I have counted all responses which favour mandatory certification and minimum environmental standards as positive responses, supporting environmental safeguards. I have separately listed and discussed those responses which favour the use of tax-breaks according to sustainability criteria.

A number of respondents state that they support the principle of environmental standards but call for long delays, oppose government regulation or anything that might interfere with market growth, or want certification schemes to depend on full consensus by all market shareholders. I have classed those responses as being opposed to real safeguards: Several years of rapidly expanding palm oil and soya imports from the tropics could destroy much of south America’s and south-east Asia’s remaining rainforests, with very little left to protect in future. This survey shows that there is no industry consensus in favour of environmental protection – and that there is no commitment across the whole of the industry to even take voluntary action to source only sustainable biofuel crop.

With regard to question 4 (support for environmental, including biodiversity protection in Europe), I considered the main findings submitted by BirdLife International, which are backed up by extensive research: Biodiversity is declining rapidly across Europe, agricultural practices are responsible for a significant number of population declines, cross-compliance and regulations applying to food-production have not been effective in halting biodiversity losses, and set-asides are a refuge for endangered wildlife. Responses which deny any problem, or which state that applying the same regulations as for food production will be ‘good enough’ have been classed as ‘negative ones’.

Question 1: Do they mention deforestation or biodiversity loss as a concern?

	Biofuel industry	Other industries
YES	8	5
NO	41	12

Additional comments: One of the ‘yes’ responses expresses concerns only about ‘excessive deforestation’. One biofuel company states positively that their feed-crop (jatropha) does not require deforestation, without mentioning any concerns otherwise, nor the fact that they also an importer of palm oil.

Question 2: Do they mention biodiversity losses as a concern?

	Biofuel industry	Other industry
YES	6	6
NO	43	10

Additional Comments:

Two of the 'yes' responses mention biodiversity as a concern for tropical/developing countries only. One biofuel company specifically states that there is no risk to biodiversity from growing energy crops in Europe. Three of the 'no' responses include general statements about a risk of harm if land of high environmental value is put under cultivation.

Question 3: Would they agree to any safeguards which would protect rainforests from being cleared for energy crops?

	Biofuel industry	Other industry
YES	11 (+3)	6 (+1)
NO	27	8
OTHER	4	2

Additional comments:

Many of the responses in favour of minimum standards guard call for a simple, low-government-interference scheme.

The responses in brackets (under 'yes') are those which favour graded tax rebates which give the greatest support to biofuels with good environmental performance, although none of those mentions deforestation as a concern. Amongst the other 'yes' responses, only 4 mention any concern about deforestation, hence it is not clear whether the others would actually support safeguards to protect ancient forests. One of the 'yes' responses also specifies a need for 'minimum government interference'. There is only one response which calls for guarantees that biofuels must not in any way contribute to deforestation or unsustainable forestry, and that this must mean import bans: This response comes from Inforce who are closer to the environmental NGO sector than they are to industry. Furthermore, one other industry response calls for a moratorium on biofuel promotion because of the risk of disastrous environmental impacts and doubt whether certification can work and can keep a rapidly growing new global market sustainable.

Amongst the 'no' responses, one states that developing countries will benefit from biofuels irrespective of any environmental impact. Another one states that unsustainable biofuels should be promoted because they will form the backbone of future sustainable ones. Two say that such regulations are inappropriate, one of them mentioning WTO rules. Another one supports certification, but only to control the use of fertilizers and pesticides as well as greenhouse gas emissions. One opposes environmental safeguards because they would 'reduce yields'. Three other industry responses agree with certification, but only to control life-cycle greenhouse gas emissions. Another one wants environmental certification according to standards which apply to fossil fuels, without suggesting what this refers to. Most of the 'no' responses call for delays, or voluntary action only, or warn that nothing must be done which might interfere with market growth, or which might go against free trade principles. Two of the companies state that certification can drive up environmental standards, but nonetheless reject, stating that the EU should instead support international negotiations for standards which should only gradually be introduced.

The 'other' category comprises those responses which either call for monitoring and minimum environmental standards, but do not make it clear whether they would agree to government regulation, or which support mandatory labelling/reporting only. None of those mention deforestation.

4. Would they support any environmental safeguards to protect the environment, including biodiversity, in Europe?

	Biofuel industry	Other industry responses
YES	5 (+3)	3 (+1)
NO	33	10
OTHER	5	1

Additional comments:

Apart from Inforse, none of the ‘yes’ responses actually mentions biodiversity or suggests that minimum standards should be any better than those for intensive food-production in Europe, nor do they express any support for a continuation of set-asides (though the latter was not specifically mentioned in the consultation paper). For figures in brackets, see additional comments to question 3. Two of the ‘yes’ responses support standards with regard to fertilizer and pesticide use.

The ‘no’ responses again include some that say no outright, and others with caveats which would rule out any effective regulation in the near future, or they suggest that certification should only be with regard to greenhouse gas emissions, or they state that they consider environmental regulations of European agriculture to be adequate. 12 biofuel and 3 other industry responses specifically state that environmental regulations in Europe are already adequate, 10 biofuel and 1 of the other industry responses stress that no stricter regulations must apply than for food production, and 4 biofuel and 2 other industry responses expressly call for the abolition of compulsory set-asides. Two biofuel industry responses demand that the EU should allow peat burning to count towards biofuel targets. One other industry response specifically warns that biodiversity must be protected from the threat of monocultures, but goes on to say that environmental regulations must only be introduced very gradually.

The responses listed under ‘other’ state that they support certification, but are too vague to determine whether they would actually support any mandatory standards in the near future. None of them mention biodiversity.

Five responses call for the abolition of compulsory set-asides, which, according to BirdLife International, would hasten biodiversity declines. Two biofuel industry responses also call for permission to promote peat burning under the Biofuel Directive, even though peat is not renewable and burning it leads to carbon emissions similar to coal, if not higher (since carbon may be emitted from an area larger than what is actually burnt).

Question 5:

Do they suggest mandatory regulation to stop the use of biofuels with high life-cycle greenhouse gas emissions?

	Biofuel industry	Other industry responses
YES	4 (+1)	5
NO	29	8
OTHER	10	4

Additional comments:

Some of the ‘yes’ responses speak of regulations to control life-cycle greenhouse gas emissions only as a long-term aspiration, not as a prerequisite for biofuel promotion. The response in brackets is from a biofuel company which wants to consider fossil fuel emissions as part of graded tax rebates, without mentioning other relevant greenhouse gas emissions. One of the ‘yes’ responses suggests that certification should be developed, but emissions linked to biofuel production should be compared to those from tar sands, not ordinary petrol or diesel. Only Inforse support mandatory certification, as well as an import ban on uncertified biofuels.

Most of the reasons listed under ‘no’ are similar to those given under Question 3. One response states that all such research is biased, another that all biofuels lead to greenhouse gas savings, and one says that yields are more important than emissions.

The ‘other’ responses include those which favour graded tax rebates without suggesting that those should have regard to life-cycle greenhouse gas emissions. They also include responses which support standards without making it clear whether they should be mandatory, which speak of a need for action based on future research only,

which support only a labelling/reporting requirement, or which are too vague or undecided to go into either the 'yes' or 'no' category.

Almost all of the industry responses which support biofuel promotion quote climate change emissions as the or one of the main reasons for doing so – yet only a minority support any safeguards that the biofuels which will be promoted should have low life-cycle emissions of greenhouse gases. A significant number of respondents appear to be unaware of the different greenhouse gas emissions associated with (some) biofuel production, such as N₂O emissions, or emissions which result from tropical deforestation. Peat fires, one of the largest sources of global carbon emissions are not mentioned by anybody, despite their close link to palm oil.

6. Which long-term targets do they support?

The consultation paper asks which future targets should be set, and how they should be expressed: As market share (the current approach), as fossil fuel replacement, or as greenhouse gas (ghg) emission savings. The vast majority of biofuel industry responses favours targets expressed as market share (i.e. x% of transport fuel to come from biofuels). A significant minority support targets based on greenhouse gas or CO₂ savings, either in the near future or in the longer term.

However, many of those respondents appear to only consider CO₂ emissions (rather than the significant emissions of N₂O linked to the production of many types of biofuels, which have an even greater global warming impact). Some respondents also presume that all biofuels are carbon neutral over their life-cycle, and think that market share and greenhouse gas targets are identical – something not backed up by even the most optimistic research findings. Four of the respondents favouring greenhouse gas-based targets do not support mandatory certification to ensure that only biofuels linked to low greenhouse gas emissions can be sold. Two of them state that this would be too complicated to do at present.

	Biofuel industry responses	Other industry responses
Market share targets	26	3
First market share, then ghg/CO ₂ targets	2	1
Ghg/CO ₂ targets	8	5
Reassess after 2010	6	1
No comment	2	1

	Biofuel industry responses	Other industry responses
No growth without new technology	0	7
Less than 15% by 2020	2	0
15% by 2020	8	2
20% by 2020	2	0
Over 20% by 2020	3	0
Steep unspecified targets	8	0
Unspecified growth in targets	10	4

It must be noted that high targets for transport fuels, based on market share mean that energy crops **MUST** be used for motor fuels even if there would be higher greenhouse gas savings by using them for biomass burning, something criticised by most environmental NGOs in their responses.

Question 7:

Do they argue for protectionist measures in favour of EU producers:

	Biofuel industry	Other industry responses
YES	26	6
NO	13	9
NO CLEAR COMMENT	3	

Additional comments:

The vast majority of 'yes' responses support direct subsidies for EU producers of energy crops. One biofuel industry response asks for tax exemption with the aim of favouring European producers against cheap imports. 7 call for tariffs against 'unsustainable' or 'aggressive' imports. Three favour measures to support domestic production against cheap imports, without specifying particular mechanisms.

Of the 'no' responses, two quote WTO rules/free trade, one states that imports should be strongly supported, and most of the others do not elaborate.

Of the five respondents which specifically oppose environmental on the grounds that it would go against WTO regulations/free trade, two favour domestic subsidies.

Speaking out against environmental protection: Quotes from the biofuel industry:

Here is a selection of quotes from the biofuel industry responses which oppose mandatory environmental safeguards, at least in the short term:

Consultation Question 4: Should there be a system – for example, a system of certificates - to ensure that biofuels have been made from raw materials whose cultivation meets minimum environmental standards?

“ Yes, however not right from the start. It would complicate developments in progress and will cause an extra burden to biofuel manufacturers, and limit their possibilities, and further adaptations in a evaluating market.” Pure Plant Oil Organisation Europe

“We fully support minimum environmental standards for biofuels in the European Union, but do not think a certificate system is the best method. In introducing these standards there is always the danger of slowing development in the market whilst standards are developed into a practical working system. There is also the danger of adding more cost into the supply chain.” British Sugar

“In our opinion, and considering that agriculture cheap raw materials will be produced in undeveloped countries, the production of these feedstocks for the biofuels industry will contribute to the reduction of poverty and hungry and will help to the development of the agriculture and this would be the best for all these countries, independent if the environmental aspects are or not satisfactory for our levels.” Sener Grupo de Ingenieria

“An ill-considered approach, which fails to provide sufficient lead-time for the introduction of these constraints will risk undermining future investment in the European biofuels market and could blight existing investment” Renewable Energy Association, UK

“As for further actions to certify fuels based upon their feedstock or efficiency of conversion, (balance of questions 4.1 – 4.3) such a 'system' would become far too complex to create and definitely difficult to implement, and nearly impossible to enforce.” European Natural Gas Vehicle Association (ENGVA)

Conclusions:

Industry is nearly unanimous in their support for biofuel promotion as a way to reduce greenhouse gas emissions and thus the effects of climate change. The majority of biofuel industry responses, however, reject any mandatory safeguards which would ensure that the biofuels sold in Europe will have lower greenhouse gas emissions than the petrol or diesel which they will replace: Palm oil, soya and sugar cane are biofuel feedstocks linked to large-scale deforestation and thus to extremely high carbon emissions. Only a minority of respondents would back any safeguards that would stop billions of tons of carbon being released into the atmosphere by destroying and burning virgin rainforests and peat in order to produce biofuel crops. Many responses suggest that not enough is known about life-cycle greenhouse gas emissions from biofuels, but nonetheless demand government support for rapid market expansion.

Very few of the respondents mention deforestation or biodiversity losses as a concern at all. There appears to be virtually no awareness of the potentially large carbon emissions from rainforest destruction linked to energy-crop cultivation in the tropics.

Most respondents state that environmental safeguards would be desirable, but they put in caveats which would stop any effective regulation: They argue for long delays, for future research (rather than applying the facts which are well-known already), for industry consensus as a basis of any standards, or for voluntary rules. Looking at the range of responses, however, there appears to be no basis for an industry consensus for any environmental safeguards at all.

Various NGO and government reports have suggested that WTO 'free trade' rules may be a major barrier to regulating the biofuel industry. Very few industry responses raise this concern. The majority of respondents strongly favour protectionist measures, mainly domestic subsidies. Agricultural subsidies were one of the main reasons why the recent WTO talks collapse, and the policies advocated by most of the biofuel industry respondents would further undermine the World Trade Organisation. Biofuelwatch do not in any way advocate the free-trade, low-regulation model for which the WTO stand, however those findings highlight the fact that industry lobbying with regard to biofuels is not primarily driven by support for free-trade rules. Instead, the majority of the biofuel industry want to see strong government intervention, including subsidies, tax breaks, mandatory obligations which, they hope, will create a fast-growing and unregulated new market.

Notes:

1 For full details of the consultation and the responses, see here:

http://ec.europa.eu/energy/res/legislation/biofuels_consultation_en.htm

2 The figures are approximate because a small number of responses are in languages which we have been unable to translate. We have studied all industry responses published in English, German and Spanish. The official EU website's category 'NGOs' includes trade associations/organisations which we have counted as 'industry responses'.

3 Figures from 'Towards European Biodiversity Monitoring', IUCN,

<http://www.iucn.org/places/europe/rofe/documents/EHF%20Monitoring%20Report.pdf>

4 See BirdLife International's response to the EU Consultation:

<http://ec.europa.eu/energy/res/legislation/doc/biofuels/contributions/ngos/birdlife.pdf>

ANNEX 1:

Criteria used for analyzing industry responses

All industry responses written in English, Spanish and German have been studied. 47 biofuel industry responses and 18 other industry responses have been analysed. 9 other responses did not answer any questions regarding environmental sustainability, and did not provide enough information to be included. Some other responses did not provide enough information to be included under all 8 questions.

All responses which represent commercial interests linked to biofuel production have been counted as 'biofuel industry responses'. Those include organisations representing a variety of interests including biofuels (for example the National Union of Farmers in the UK). The only exception is the response by Eurovia, the European Petroleum Industry Association: Some of their members are investing in biofuel refineries, but all members primarily represent fossil fuel interests.

Non-profit NGOs have also been counted towards 'biofuel industry' if they include or represent any members which sell products or services linked to biofuels. State-funded organisations set up to promote the growth of the biofuel market have been classed as 'biofuel industry' (such as FNR). Two organisations were difficult to place: I have excluded the Low Carbon Vehicle Partnership, because its aim is to work out sustainability standards, not to represent commercial interests. I have, however, included Inforse, the International Network for Sustainable Energy, because of some of their members' interests.

ANNEX 2:

Full details of responses:

Question 1:

Do they mention deforestation as a concern?

YES:

Blooming Futures; **Unilever**; bio-power (with regard to palm oil); Ecomotion GmbH (with regard to palm oil and soya); **Apag** (only concerned about excessive deforestation); **CIAA**; **AAF**; **SMMT**; EBB; Inforse; EPPOA; ELO

NO:

Pure Plant Oil Organisation Europe; Institut Français des Huiles Végétales Pures; D1 Oils (mention it only in the context of jatropha requiring no deforestation); BioAlcohol Fuel Foundation; Renewable Energy Association (UK); North East Biofuels, eBio; Hydro; *Whyte & Mackay*; British Sugar; **Eurovia**; novozymes (but warn of environmental harm where land of high environmental value is put under cultivation, particularly in third world countries); ENGVA; INSTITUT FRANÇAIS DU PÉTROLE; Neste Oil; Fediol; BEST; **CER**; ALTRAN; AEBIOM; **FIA**; EARPA; **CIAA**; **IMACE** (but warn of pressure on eco-systems and biodiversity in developing countries); EIC; Repsol YPF; Sener; **ACEA**; Lantmaennen; **Toyota**; Ethanol Union; Lyondell; **Caobisco**; Iogen; UFOP; NFU; Tereos; Elinoil; SNPAA; COPA-COGECA; UNGDA; APPA; **CEEP**; **VDA**; Coceral; EFOA; **Ford**; UEPA; **Renault**; NEN Energy Resources; Vegburner; FNR; Association of Spirits and Liquor Producers in Slovakia

Question 2:

Do they mention biodiversity losses as a concern?

YES:

Renewable Energy Association (UK); North East Biofuels; eBio (only in the context of tropical countries); Fediol; **FIA**; **CIAA**; **AAF**; **IMACE** (mainly as a concern for developing countries – want to see an end to compulsory set-asides); EIC; **CEEP**; **VDA**; Inforse

NO:

Pure Plant Oil Organisation Europe; Institut Français des Huiles Végétales Pures; Blooming Futures; **Unilever**; D1 Oils; BioAlcohol Fuel Foundation; bio-power; Hydro; **Whyte & Mackay**; **Apag**, Ecomotion GmbH (state that there is no risk of environmental harm from Bioenergy crops in Europe); British Sugar; **Eurovia**; novozymes (but warn of environmental harm where land of high environmental value is put under cultivation, including in Europe); ENGVA; INSTITUT FRANÇAIS DU PÉTROLE; Neste Oil; BEST; **CER**; ALTRAN; AEBIOM; EARPA; Repsol YPF; Sener; **ACEA**; Lantmaennen; **Toyota**; Ethanol Union; **SMMT**; Lyondell; **Caobisco**; EBB; Iogen; UFOP; NFU; Tereos; Elinoil; SNPAA; COPA-COGECA; UNGDA; APPA; Coceral; EFOA; **Ford**; UEPA; **Renault**; NEN Energy Resources; Vegburner; EPPOA; ELO; FNR; Iogen; Association of Spirits and Liquor Producers in Slovakia

Question 3:

Do they agree to any mandatory regulation that would stop biofuels linked to deforestation being sold in the EU (without insisting that this should be put off so as not to interfere with market expansion)?

YES:

D1 Oils (support certification/environmental assurance scheme - no mention of deforestation)

Bio-power (support minimum standards, including to exclude palm oil linked to deforestation, but want minimum government interference)

eBio (support minimum environmental standards, without mentioning deforestation, and want use of general tariffs to exclude imports of those with a negative environmental impact)
Hydro (support a simple certification scheme with compliance regulation; no mention of deforestation)
Ecomotion GmbH (will consider mandatory certification of imports only, using current EU regulations and practices as a model)
Apag (EU-wide mandatory certification linked to targets; mention deforestation)
BEST (yes to certification, not clear if mandatory, also consider standards for a reporting requirement and labelling – no mention of deforestation – land use changes outside their remit)
CIAA and **AAF** (minimum environmental standards – do not mention deforestation)
FIA (minimum standards for cultivation and production – no mention of deforestation)
Toyota (no support for biofuels unless minimum standards are guaranteed with regard to land use and competition for water , support labeling – no mention of deforestation)
UFOP (want environmental certification of all biofuels which count under the biofuel obligation and which receive tax reductions; do not mention deforestation)
NFU and COPA-COGECA (want all biofuels counted towards the obligation to be certified as cross-complying with existing internal EU standards – no mention of deforestation)
Inforse (want certification, which must specify that biofuels do not contribute to deforestation and that any forest product only comes from forests which are replanted, also guarantees re biodiversity losses – import bans unless products are certified)
ELO: (want certification, but not clear if this means solely a reporting requirement – specifically mention deforestation)

SUPPORT DIFFERENTIAL TAX SYSTEM ONLY

Institut Français des Huiles Végétales Pures (no reference made to deforestation)
Blooming Futures (refer to deforestation, but not in this context)
VDA (want certification of minimum standards, including land use for tax rebates – but no mention of deforestation)
Vegburner (want tax rebates graded according to an ecological footprint – no mention of deforestation)

NO:

Pure Plant Oil Organisation Europe (not in the short term, but support long-term certification system to be developed in cooperation with the biofuel industry – not clear what it would relate to)
INSTITUT FRANÇAIS DU PÉTROLE: want to explore options based on future research done by the EU (no mention of deforestation)
CEEP: support minimum environmental standards of what counts towards the obligation, but wants them to be introduced only gradually – no mention of deforestation
NEN Energy Resources: yes in general, but only if there is a consensus, to be introduced very gradually – do not mention deforestation
BioAlcohol Fuel Federation (support unsustainable biofuels, too, but give even more support to better ones)
Renewable Energy Association (UK) and North East Biofuels (no certification scheme if it interferes with market expansion, but support long-term work on EU-wide standards and reporting requirements)
Whyte&Mackay and Tereos and SNPAA and UNGDA and UEPA (favour minimum standards, but those should be no more than current standards for food production, and should only be imposed on third countries gradually, so as not to harm EU trade interests)
British Sugar (minimum standards, based on good practice agreements, but no certification); **Europia** (want certification based on GHG emissions, do not mention deforestation only 'environmental' standards as a concern)
ENGVA (too complex, difficult to impose – inappropriate regulations)
Neste Oil (needs to be studied – nothing to interfere with market growth – no mention of deforestation)
Fediol (only after an international agreement has been reached, which does not distinguish between food and non-food uses, should standards be enforced through tradeable certificates for biofuels)
CER (want certification, but only to the standards currently applying to fossil fuels, meaning labelling – no mention of deforestation)
AEBIOM (no in principle – also cite WTO rules)
Repsol YPF (support certification, but only with regard to pesticide and fertilizer use and GHG emissions)
Sener (strictly no – say developing countries will benefit despite any environmental harm)
ACEA and **Renault** (certification for GHG emissions and fuel quality only)
Lantmaennen and Ethanol Union(want the EU to develop international standards to which importing nations will adhere, but want them to be introduced gradually, so as not to impede trade)
Lyondell (might support standardized minimum standards, but say not feasible in the short term – do not mention deforestation)
Caobisco (support sustainability but only if it does not reduce competitiveness – no mention of deforestation).
EBB (mention deforestation, but only want sustainability schemes to be developed over 5-10 years and introduced into all industries at once, using RSPO and RSSO as models; want an international agreement under the UN, not an EU-scheme)
Elinoil (say environmental safeguards would reduce yields)
APPA (say minimum sustainability safeguards yes, but needs further consultation and industry consensus)
Coceral (actively promote imports and see growth in supply as the top priority, say they will participate in multi stakeholder agreements, but only if in line with WTO rules)
EFOA (research future certificates, but nothing to be done now, since it could slow market growth – no mention of deforestation)
Ford: Want policies to avoid environmental harm, but no specific proposals – no mention of deforestation; say certification must not delay biofuel promotion
EPPOA (want sliding tax scale favouring biofuels with good environmental records – specifically to prevent deforestation; but only in the longer term, no certification)
FNR (yes to certification, but only if accepted by all stakeholders and if it does not breach WTO rules – no mention of deforestation)
Association of Spirits and Liquor Producers in Slovakia (cannot see any problem)

OTHER:

Unilever (believe that mandatory certification only works on a small-scale and cannot deal with massive market expansion – want a moratorium on all biofuel promotion pending a full impact assessment, with future support for sustainable biofuels only)
Novozymes want 'monitoring' and certification, but nothing too bureaucratic or complicated – not clear if mandatory
EARPA want to 'explore' ways to promote sustainability, and speak of minimum environmental standards (no mention of deforestation)

IMACE (want minimum sustainability criteria, but do not refer to deforestation)
EIC want to see EU-wide certification of all fuels, but only as a reporting requirement (no mention of deforestation)
SMMT: want safeguards, but do not say how, and suggest mandatory labeling only
Iogen: want reporting standards and 'sustainability' values on biofuel certificates, which can be used similar to ETS certificates – no mention of deforestation, land-use, etc, though

Question 4:

Do they agree to any new mandatory regulation to prevent environmental harm in Europe?

YES:

D1 Oils (support certification/environmental assurance scheme – no mention of biodiversity)
Bio-power (support certification and minimum standards, but little government regulation – no mention of biodiversity)
Hydro (support a simple certification scheme with compliance regulation; no mention of biodiversity)
Apag (support mandatory certification for minimum environmental standards, but do not specify protection of biodiversity in Europe – also suggest that sustainability means not taking raw materials away from other industries)
BEST (yes to certification, not clear if mandatory, also consider standards for a reporting requirement and labelling – no mention of biodiversity – land use changes outside their remit)
FIA (minimum environmental standards – do not mention biodiversity)
Inforse (certification to ensure no reduction in biodiversity and no pollution, want Environmental Impact Assessments with documentation; certification prerequisite for tax rebates)
Unilever (believe that mandatory certification only works on a small-scale and cannot deal with massive market expansion – want a moratorium on all biofuel promotion pending a full impact assessment, and support for sustainable biofuels only)

SUPPORT DIFFERENTIAL TAX SYSTEM ONLY:

Institut Français des Huiles Végétales Pures (want tax reductions/exemptions tied to environmental and energy efficiency standards – no mention of biodiversity)
Blooming Futures (want tax reductions/exemptions tied to environmental and energy efficiency standards; to favour organically grown rapeseed oil and other oil plants grown without fertilizers; do not mention biodiversity)
Repsol YPF (want minimum standards to consider fertilizer and pesticide use, with mandatory certification/labeling and differential tax rebates; do not mention biodiversity)
VDA (want minimum certified standards for tax rebates; do not mention biodiversity)
Vegburner (want tax rebates graded according to an ecological footprint – no mention of biodiversity)

NO:

CEEP: support minimum environmental standards of what counts towards the obligation, but wants them to be introduced only gradually, say they would want to avoid monocultures destroying biodiversity
CIAA and **AAF** want minimum environmental standards, but say cross-compliance with EU regulations would be sufficient for European products
Pure Plant Oil Organisation Europe (not in the short term, but support long-term certification system to be developed in cooperation with the biofuel industry – not clear what it would relate to)
BioAlcohol Fuel Federation (support unsustainable biofuels, too, but give even more support to better ones)
Renewable Energy Association (UK) and North East Biofuels (no certification scheme if it interferes with market expansion, but support long-term work on EU-wide standards and reporting requirements)
eBio (support minimum environmental standards but state that concerns relate to the impact on tropical countries only)
Whyte&Mackay and Tereos and SNPAA and UNGDA and UEPA (favour minimum standards, but those should be no more than current standards for food production)
Ecomotion GmbH (categorically no)
British Sugar (state existing agricultural regulations are good enough – want no higher standards than for food crops)
Europia (want mandatory certification, but based on GHG reductions, with a general mention of environmental concerns)
ENGVA; Neste Oils (needs to be studied – nothing to interfere with market growth – no mention of biodiversity – want to be able to use peat)
Fediol (state that rapeseed oil production already is sustainable and cross-compliance sufficient); **CER** (want certification, but only to the standards currently applying to fossil fuels, meaning labelling – no mention of biodiversity)
AEBIOM – strictly oppose any new regulations in Europe)
IMACE (want minimum sustainability standards, but no mention of biodiversity; oppose compulsory set-asides)
Sener (strictly no interference in the market)
ACEA and **Renault** (certification for GHG emissions and fuel quality only)
Lantmaennen and Ethanol Union (no higher environmental standards than in the food industry);
Lyondell (might support standardized minimum standards, but say not feasible in the short term – do not mention biodiversity)
Caobisco (support sustainability but only if it does not reduce competitiveness – no mention of biodiversity – want no additional standards – want to abolish compulsory set-asides)
EBB (cross-compliance sufficient; want to do away with compulsory set-asides)
UFOP (support certification in general, but mention importing countries in particular and want an end to compulsory set-asides)
NFU and COPA-COGECA (cross-compliance seen as adequate)
Elinoil (say environmental safeguards would reduce yields)
APPA (no higher standards than for food production)
Coceral (support cross-compliance but say they will support multi-stakeholder agreements only if in line with WTO rules; want to abolish compulsory set-asides)
EFOA (research future certificates, but nothing to be done now, since it could slow market growth – no mention of biodiversity)

Ford (want policies to avoid environmental harm, but no specific proposals – no mention of biodiversity, but mention risk of land with high environmental value in Europe being put under cultivation; support cross-compliance; say certification process must not delay biofuel promotion)

NEN Energy Resources (yes in general, but only if there is a consensus, to be introduced very gradually – do not mention biodiversity)

ELO:(want certification, but not clear if this means a reporting requirement only; no mention of biodiversity; are concerned to put more land back under cultivation in Europe and want to abolish compulsory set-asides)

FNR (yes to certification, but only if accepted by all stakeholders and if it does not breach WTO rules – no mention of biodiversity – no stricter standards than exist for food production)

EIC want to see EU-wide certification of all fuels, but only as a reporting requirement

EPPOA: support differential tax system which includes environmental factors, but no reference to protecting biodiversity (only mention fertilisers, pesticides, CO2 emissions, deforestation – want more extensive agriculture in Europe); only want it in the longer term – no certification

Association of Spirits and Liquor Producers in Slovakia (unaware of environmental problems)

OTHER:

Novozymes want 'monitoring' and certification, but nothing too bureaucratic or complicated – not clear if mandatory

INSTITUT FRANÇAIS DU PÉTROLE: want to explore options based on future research done by the EU (no mention of biodiversity)

EARPA want to explore ways to ensure sustainability and speak of minimum environmental standards (no mention of biodiversity)

Toyota (no support for biofuels unless minimum standards with regard to land use and fertilizers are guaranteed ; support labeling – no mention of biodiversity)

Iogen: want reporting standards and 'sustainability' values on biofuel certificates, which can be used similar to ETS certificates – no mention of biodiversity, land-use, etc, though

SMMT: see a need for minimum environmental standards (mention land use, but not biodiversity), but want only a reporting requirement in the short term, with possible EU-wide certification in future.

Question 5:

Do they suggest mandatory regulation to stop the use of biofuels with high life-cycle greenhouse gas emissions?

YES:

Unilever (only biofuels with GHG savings must count towards any indicative targets – but want moratorium on biofuel promotion pending impact assessment)

Bio-power (mentions fossil fuel emissions only; also support tax-reductions according to fossil fuel carbon savings; want limited regulation)

British Sugar (certification of raw materials and technologies, develop standards, but compare to tar sands, rather than conventional oil)

Europaia (base it on the Low Carbon Vehicle Partnership model, use tradable certificates based on GHG reductions; base future targets on GHG reductions)

Apag (want certification linked to life-cycle assessments)

BEST (yes to certification, not clear if mandatory, also consider standards for a reporting requirement and labelling)

IMACE (minimum standards including CO2 efficiency and GHG emissions)

Toyota (no support for targets unless GHG/CO2 standards are guaranteed; support labeling)

Inforse (certification pre-requisite for tax rebates, also import bans on un-certified biofuels)

Repsol YPF (want minimum standards to consider life-cycle GHG emissions, with mandatory certification/labeling and differential tax rebates; plus use of certificates in emissions trading)

SUPPORT FOR DIFFERENTIAL TAXATION SYSTEM ONLY:

Institut Français des Huiles Végétales Pures (vague)

Blooming Futures (vague, except for support for organic cultivation of oilseed rape and other low-fertilizer oily crops)

ACEA and Renault (want EU-wide standards and certification as a basis for EU-wide tax rebates)

VDA (want differential tax rates based mainly on CO2 emissions)

Vegburner (want tax rebates graded according to an ecological footprint)

NO:

EPPOA (want differential tax rates which reflect greenhouse gas balance, but only in the longer term, and no certification)

Pure Plant Oil Organisation Europe (support certification in the long-term only, if developed in cooperation with the biofuel industry; support future targets based on greenhouse gas savings, but only after 2010)

BioAlcohol Fuel Federation (support unsustainable biofuels, too, but give even more support to better ones – higher support depending on environmental criteria and CO2 savings)

Renewable Energy Association (UK) and North East Biofuels (no certification scheme if it interferes with market expansion, but support long-term work on EU-wide standards and reporting requirements; carbon-saving certification should not affect biofuels counting towards targets)

eBio (support development of standards, but no regulation since it could interfere with the market; presumption that biofuels have low GHG emissions, reference to fossil fuel use only; but want credits to be given to lingo-cellulosic bioethanol technique)

Whyte & Mackay and Tereos and SNPAA and UNGDA and UEPA (only support research to help industry reduce emissions voluntarily)

Ecomotion GmbH (state all such research is biased)

Neste Oils (would consider CO2 life-cycle figures in the long term only, and not as a barrier to free trade – want to be able to use peat)

Fediol (state all biofuels lead to GHG reductions)

CER (want certification, but only to the standards currently applying to fossil fuels, meaning labelling – speak of energy ratings, not GHG figures; but want more encouragement for better biofuels)

AEBIOM (oppose certification – also think yield per hectare is most important and will be favoured by the market)

CIAA and AAF (mention minimum environmental standards – no reference to emissions)

Sener (strictly no interference in the market)

Lantmaennen and Ethanol Union(want research and information only, without certification); Lyondell (want the EU to develop a carbon quality assurance system, but say no certification feasible at present)
Caobisco (support sustainability but only if it does not reduce competitiveness)
 EEB (strictly no for the next 7-10 years; only research)
 NFU (yes to a simple carbon reporting scheme, but no certification based on emissions in the near future, in order not to drive up costs and not to breach WTO regulations)
 COPA-COGECA (strictly no because of costs; even assessment should only be done after 2015)
 APPA (no – not practical and would favour imports)
CEEP (say reasonable in principle but difficult to implement)
 Coceral (push for increased supplies, stress WTO rules);
 EFOA (research future certificates, but nothing to be done now, since it could slow market growth
Ford (ultimately want tax on all fuel to be based on CO2 emissions, but to do nothing that would stop biofuel promotion just now)
 NEN Energy Resources (too risky – don't do anything soon)
 Hydro (in principle, but cautious about feasibility at present; want future targets to be linked to life-cycle CO2 reductions, but not GHG emissions in general)
 EIC want to see EU-wide certification of all fuels, but only as a reporting requirement
 ENGVA oppose mandatory certification but would accept future subsidies being given according to energy efficiency and CO2 savings.
 Biofuel obligations could also be linked to certificates stating how efficient production is and what CO2 emissions are.
FIA (want certification but only to support better performers; but want future targets to be based on GHG figures)
 Association of Spirits and Liquor Producers in Slovakia (cannot see any environmental problems)

OTHER:

Novozymes want 'monitoring' and certification, but nothing too bureaucratic or complicated – not clear if mandatory
 INSTITUT FRANÇAIS DU PÉTROLE: want to explore options based on future research done by the EU
 EARPA (want research into life-cycle emissions, and want to explore ways of promoting sustainability)
SMMT want some safeguards, but only suggest mandatory labeling
 Iogen: want reporting standards and 'sustainability' values, based largely on GHG performance on biofuel certificates, which can be used similar to ETS certificates
 UFOP want a standardized reporting system and requirement, with companies reporting on CO2 emissions only
 Elinoil say certification has merits but may be too bureaucratic
 FNR: may support differential tax rebates, but think any certification according to GHG emissions would be difficult to do
 D1 Oils (support environmental assurance scheme/certification – no mention of GHG emissions)

Question 6:

Do they argue for protectionist measures in favour of EU producers:

YES:

Blooming Futures (direct subsidies)
 Pure Plant Oil Organisation Europe (direct subsidies; also want tax exemption for all biofuels with the aim of favouring European producers against cheap imports)
 Institut Français des Huiles Végétales Pures (direct subsidies)
 BioAlcohol Fuel Foundation (direct subsidies for 10 years)
 Bio-power (direct subsidies, especially for local, small-scale biofuel, CHP and biomass schemes)
 Renewable Energy Association (UK) and North East Biofuels (direct subsidies)
 eBio (direct subsidies, and use of tariffs to exclude unsustainable imports)
 Hydro (direct subsidies)
 Fediol (want direct subsidies, maintain current agricultural tariffs, want 'defence mechanism' against aggressive imports)
 BEST (want direct subsidies)
CER (want direct subsidies)
CIAA and **AAF** (want support to increase Europe's agricultural output)
 EIC (want direct subsidies)
 Repsol YPF (want direct subsidies)
 Sener (want direct subsidies)
 EBB (want direct subsidies)
 UFOP (want strong support for the domestic market and warn of growing imports, but do not specify any particular protectionist measures)
 NFU (want direct subsidies)
Whyte & McKay and Tereos and SNPAA and UNGDA and UEPA (want import duties against Brazilian ethanol to remain)
 COPA-COGECA (want direct subsidies)
 APPA (want direct subsidies)
CEEP (want direct subsidies)
Ford (want direct subsidies)
 Vegburner (support direct subsidies)
 EPPOA (want direct subsidies)
 Inforce (member states should be able to have direct subsidies)

NO:

Unilever; D1 Oils; British Sugar; **VDA** (do not favour direct subsidies – but no specific statement made); **Europaia**; INSTITUT FRANÇAIS DU PÉTROLE; **Apag**; AEBIOM (want to promote European businesses, but oppose direct subsidies and any regulation of imports); **FIA**; EARPA; **ACEA**; **Renault**; **Toyota**; Lantmaennen and Ethanol Union; **SMMT**; Lyondell (but may accept direct subsidies for rural

development); Elinoil (no specific comment); Coceral (strongly encourage imports); NEN Resources (do not answer question 5, but do not suggest any protectionist measures); FNR (say this would go against WTO); Association of Spirits and Liquor Producers in Slovakia

OTHER:

Iogen: neither for nor against direct subsidies, want subsidies for second-generation R&D

EFOA: say they want a self-sustaining domestic biofuel industry – presumably not protectionist?

[invozymes – say yes to a list of proposals, including direct subsidies, but not clear what the ‘yes’ refers to]

Question 7:

How great a future share do they want?

SUMMARY:

Targets should be based on market share:

Pure Plant Oil Organisation Europe: 15% by 2015, 20% by 2020, to be expressed as ghg savings

Institut Français des Huiles Végétales Pures: 15% by 2015, 30% by 2020, 50% by 2025, 75% by 2030 based on market share

Blooming Futures: ‘steep mandatory targets’ every five years, based on market share

Unilever: any future target should be based on GHG savings and energy savings, but no target above 3% without a full environmental and food impact assessment

D1 Oils: 8% by 2015, 15% by 2020, based on market share

BioAlcohol Fuel Foundation: 10% by 2010; 20-25% by 2020, based on market share in the short term, possibly on other targets in the long term

Bio-power: steep mandatory targets beyond 2010, based on reduction in fossil fuel consumption

Renewable Energy Association (UK) and North East Biofuels: 8% by 2015; 15% by 2020 (expressed as market share)

eBio: 10% by 2015, 15% by 2020 and 25% by 2030, based on market share

Hydro: Steeper future targets, based on CO2 reductions

Whyte&Mackay and Tereos and SNPAA and UNGDA and UEPA: want future growth driven by market-share targets

Ecomotion GmbH: 15% by 2015, 20% by 2020, based on market share

British Sugar: 8% by 2015, more thereafter, based on market share

Europia: future targets should be based on GHG emissions reductions, and embrace all biomass

invozymes: have mandatory targets, based on GHG emissions reductions

ENGVA: 20-35% by 2020 (mainly from biogas), based on market shares

Neste Oil: want ‘significant’ future targets, based on market share energy-content

Fediol: meet 5.75% target first, then re-assess

Apag: mandatory targets as high as possible, as long as there are enough raw materials available for other industries – no opinion on how targets should be expressed

BEST: 30% by 2050 (looking at fossil fuel substitution)

AEBIOM: 8% by 2015, later 25%, based on market share

FIA: there should be new targets in future, expressed as GHG reduction targets, but not much above the 2010 target

CIAA and AAF: No greater target than at present based on first-generation biofuels

IMACE: future targets must be sustainable, no increased target based on first-generation biofuels

EIC: 8% by 2015 (do not state what it should be based on)

Repsol YPF: future targets to be based on market share, deemed to be identical with GHG emissions, and on reduction on fossil fuel oil use

Sener: 10% by 2015, 12.5% by 2020, based on market share and reduction in fossil fuel oil use

ACEA: want any future target to be based on GHG emissions calculated as fossil fuel oil replaced

Renault: want future CO2 based taxation scheme (agree with ACEA on targets)

Lantmaennen and Ethanol Union: future targets to be set later, but based on market share

Toyota: future targets to follow environmental impact assessment, to be based on CO2 reductions in the transport sector overall, and on GHG savings from biofuels

Lyondell: too early to set a future target, want targets based on market share in the short term, but may support GHG savings targets in the longer term

Caobisco: no increase in the 5.75% target based on first-generation biofuels

EBB: more than 10% by 2015, based on market share

Iogen: 8% by 2015, 15% by 2020, based on CO2 emissions

UFOP: do not set a higher target until later – 5.75% is very ambitious; targets should be based on market share and replacement of fossil fuel oil

NFU: 8% by 2015, possibly 12% by 2020, based on market share

Elinoil: 8% by between 2015 and 2020, based on market share

COPA-COGECA: 8% by 2015, 25% by 2030, based on market share

APPA: 10% by 2015, 15% by 2020, 25% by 2030, based on market share

CEEP: 8% by 2015, 15% by 2020, based on market share

VDA: future targets necessary, should be based on CO2 reduction

Coceral: warn that 8% target by 2015 will have major impact on food markets and supplies

EFOA: want future targets to be set later

Ford: 10% by 2015, 15-20% by 2020, initially based on market share, then on CO2 reductions

Inforse: 8-10% by 2015, 12-15% by 2020, based on renewable energy in transport market share

Vegburner: want further increased targets, based on market share, but EU should assess environmental impact

EPPOA: steep mandatory targets based on market share

ELO: Want future targets based both on market share and on contribution to GHG reductions

FNR: future targets to be based on improving energy efficiency in the transport sector and on GHG transport emissions

Association of Spirits and Liquor Producers in Slovakia: future targets based on market share only

ANNEX 3: Details of respondents

NOTE: Normal script is used for biofuel industry respondents, bold script for other industry respondents.

Unilever are not part of the biofuel industry, but compete for the same raw materials. They are members of the RTSPO and are aware of environmental impacts.

Renewable Energy Association (UK): There is a joint response with North-East Biofuels. REA have over 420 members, 40 of them involved in the biofuel-transport sector. North-East Biofuels are a cluster of companies involved in biofuels in the north-east of England, including D1 Oils, Petroplus and Biofuels Corporation (clash with D1 Oils' own response)

Blooming Futures: A not-for-profit cooperative specialising in the production of biofuels (PPOs) and conversion of car engines. Receive UK government grants.

Pure Plant Oil Organisation Europe: Industry representatives for small businesses making PPO from rapeseed oil and sunflower seeds.

BioAlcohol Fuel Federation: A Swedish federation of companies involved in biofuels; formerly the Swedish Ethanol Development Foundation

D1 Oils: UK-based global producer of biodiesel, using *Jatropha curcas* as the primary feeding stock, but also use palm oil.

Bio-power: A UK-based non-profit organisation which is both a trade association and a franchise. They support a co-operative network of local businesses, both in the UK and with partners across Europe, Africa and Asia. They particularly support Straight Vegetable Oil, including waste vegetable oil.

Institut Français des Huiles Végétales Pures: French members of the European Pure Plant Oil Association

e-Bio: European Bioethanol Fuel Association (no further details in their response or on their website)

Hydro: Norwegian company involved in the development of a new biodiesel-from-wood plant in Norway

Whyte and Mackay: Glasgow-based whisky distillery. They have responded to other Bioenergy consultations, too (same response as Tereos)

Ecomotion GmbH: German biodiesel company

British Sugar: one of the leading British sugar producers, member of Associated British Foods

Europtia: European Petroleum Industry Association, includes oil companies with refineries in Europe, and some that supply biofuels, too

Novozymes: A biotech company which specializes in enzymes and micro-organisms. Works in 40 industries and in 130 countries. Work in detergents, fuel ethanol and aquaculture.

ENGVA: European Natural Gas Vehicle Association, covers biogas and ethanol. (trade association?)

INSTITUT FRANÇAIS DU PÉTROLE: A public research and training centre which is funded partly by the French government, but also takes part in joint-industry funded projects. They support oil and gas exploration as well as biofuels and other technologies.

Neste Oil Corporation: Independent northern European oil refining and marketing company, based in Finland. Currently building their first biodiesel plant

Fediol: EU Oil and Proteinmeal Industry; a European industry federation based in Brussels, which represents seed and bean crushers, meals producers, vegetable oil producers and processors, including those using vegetable oils for biofuel.

Apag: European Oleochemicals & Allied Products Group. They represent European producers of fatty acids, glycerine, alcohols, metallic soaps and fatty nitriles and their derivatives and fatty esters.

Best: BioEthanol for Sustainable Transport – a four year project, partly funded by the EU, in which three car manufacturers, five bioethanol producers and four universities cooperate to accelerate the market introduction of bioethanol across Europe.

CER: Community of European Railway and Infrastructure Companies (comprising 53 railway companies in the EU)

ALTRAN: European company involved in technology and innovation consulting, organization and information systems consulting and strategy and management consulting. They invest in most types of energy businesses, including both fossil fuels and biofuels.

AEBIOM: European Biomass Association; a group of national biomass associations in Europe

FIA: Fédération Internationale de l'Automobile; representing national motoring and touring associations

EARPA: European Automotive Research Partners Association; an association of automotive R&D organisations. They include the Biofuels Research Advisory Council

CIAA: Confederation of the Food and Drink Industries of the EU (this includes the response by the AAF, which is the European Starch Industry Association)

IMACE: International Margarine Association of the Countries of Europe (CIAA members)

EIC: European Environmental Industries Commission; they are a trade association with over 300 members and close links within the UK government. 40 companies are members of their Renewable Transport Fuel Working Group.

Repsol YPF: Spain's largest oil and gas company; invest in biodiesel

Sener: Sener Grupo de Ingenieria; Spanish company which works in a variety of fields of technology innovation, including biodiesel

ACEA: European Car Manufacturing Association; trade association representing 13 European car, truck and bus manufacturers at European level and throughout the world

Lantmaennen: Lantmaennen Group Sweden are owned by 49,000 farmers, operate in 19 countries within the food, energy and agriculture sector and operate two biofuel plants via Lantmaennen Agroetanol A.B.

Toyota: Toyota Motor Europe have entered into a biofuels partnership with BP

Ethanol Union: French bioethanol company

SMMT: Society of Motor Manufacturers and Traders; the leading trade association for the automotive industry in the UK with 600 member companies

Lyondell: One of the largest chemical companies with involvement in bioethanol production

Caobisco: The Association of Chocolate, Biscuit and Confectionery Industries of the European Union; trade association for 2200 companies

EBB: European Biodiesel Board; the European Federation of biodiesel producers, with 38 member companies, accounting for around 80% of EU biodiesel production

Iogen: Multinational biotechnology company specializing in the production of cellulose bioethanol; has partnerships with Shell, Goldman Sachs & Co, Petro Canada, Government of Canada, DSM

UFOP: Union for Promoting Oil and Protein Plants; founded by the German Farmers' Union and German Agricultural Union (DBV and BDP), representing members growing food and energy crops

NFU: National Farmers Union, UK; Their NFU Sugar branch has a particular interest in biofuels, and NFU have actively lobbied for increased biofuel production in the UK

Tereos: French agro-industrial co-operative group which processes sugar beet, sugar cane and cereals into sugars and alcohol, including bioethanol. Actively involved in Brazilian sugar ethanol and French ethanol from sugar-beet. Second largest sugar business in Europe. (same response as Whyte & McKay)

Elinoil: Private Greek company working in fuels and lubricants, including biofuels

SNPAA: Syndicat National des Producteurs d'Alcool Agricole; involved in bioethanol projects (same response as Tereos and Whyte & McKay)

COPA-COGECA: COPA is the Committee of Professional Agricultural Organisations in the EU. COGECA is the General Confederation of Agricultural Co-Operatives in Europe. Includes the NFU, and biofuel interests.

UNGDA: L'Union Nationale des Groupements de Distillateurs d'Alcool; French ethanol and bioethanol group

APPA: Asociación de Productores de Energías Renovables; national representatives of biofuel producers in Spain

CEEP: European Centre of Enterprises with Public Participation and of Enterprises of General Economic Interest; representing enterprises and employers' organisations and recognised as a Social Partner by the European Commission

VDA: German Association of Automotive Industries

Coceral: The national trade organisation of the European cereal, rice, feedstuffs, oilseeds, olive oil, oils and fats and agrosupply trade. Members are private traders and some farmers' cooperatives. They include biofuel suppliers.

EFOA: European Fuel Oxygenates Association. Includes biofuel producers.

Ford: They produce flexi-fuel vehicles

UEPA: The Brussels based organisation representing most EU producers of agricultural ethyl alcohol used for industrial, beverage or fuel purposes

INFORSE (International Network for Sustainable Energy) A network of 70 European NGOs working for sustainable energy and poverty reduction. In Britain, they include the PV-UK Association, Centre for Alternative Technology, Solar Energy Society, The Greenhouse, West Wales Eco-Centre, Energy Solutions North-West London, Hebden Bridge Alternative Technology Centre, Severn Wye Energy Agency. Members include industry.

NEN Energy Systems: A Dutch NGO which provides services regarding biofuel specification, sampling and other commercial services.

Vegburner: An NGO which provides biofuel consultation and design services on a commercial basis.

EPPOA: A non profit NGO set up to promote pure plant oil (or straight vegetable oil) as a biofuel within Europe (ie a lobbying organization for the PPO/SVO industry)

ELO: European Landowners' Organisation; UK members include Country Land and Business Association, Scottish Rural Property and Business Association, Scottish Estates Business Group and Scottish Gamekeepers Association. 56 members in Europe altogether.

FNR: Fachagentur fuer nachwachsende Rohstoffe (agency for renewable biofuels), funded by the German government to support the biofuel industry with research, development and marketing advice.

Association of Spirits and Liquor Producers in Slovakia: Members of the European Confederation of Spirits Producers – from the response they appear to include members involved in ethanol, however there is no web-based information in English to confirm this.

The following responses have been omitted since they do not answer the relevant questions:

ASPEC (Association of Sorbitol Producers within the E.C.), Finnish Oil and Gas Federation; Waterman Sustainable Energy; Verband der chemischen Industrie e.V. (German Chemical Industry Association); Bundesverband Gueterkraftverkehr, Logistik und Entsorgung (German Transport and Logistics Association); Danish Transport and Logistics Association; Cofalec (Association of European Yeast Manufacturers); Sundance (a non-profit cooperative in Wales that produce biodiesel and other renewables); ATC (The Technical Committee of Petroleum Additive Manufacturers in Europe, including suppliers to the biofuel industry)