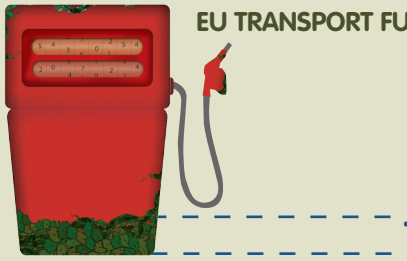
DRIVERS & IMPACTS OF EUROPE'S BIOFUEL POLICY

Reform is needed urgently to stop the development of unsustainable biofuels and to promote the right solutions to decarbonise our transport system.

EU POLICIES

Biofuels and the Renewable Energy Directive (RED)

EU member states are required to source 10% of transport energy from renewable sources, mainly biofuels, by 2020. The RED dictates sustainability criteria that prevent some direct land use change and dictate the minimum CO_2 savings biofuels should achieve relative to fossil fuels in order to qualify for the scheme (and receive state subsidies). These criteria do not currently contain measures to calculate the massive carbon emissions caused by expanding agriculture to accommodate new biofuels demand: so-called 'Indirect Land-Use Change' (ILUC).



Biofuels and the Fuel Quality Directive (FQD)

This law requires fuel suppliers to reduce the carbon footprint of a unit of transport fuel by 6% by 2020 - using more biofuels is one permitted way for suppliers to meet that target. The same biofuels sustainability criteria agreed to in the RED also apply under the FQD – and the same failure to address emissions from ILUC.

WHAT IS INDIRECT LAND-USE CHANGE?

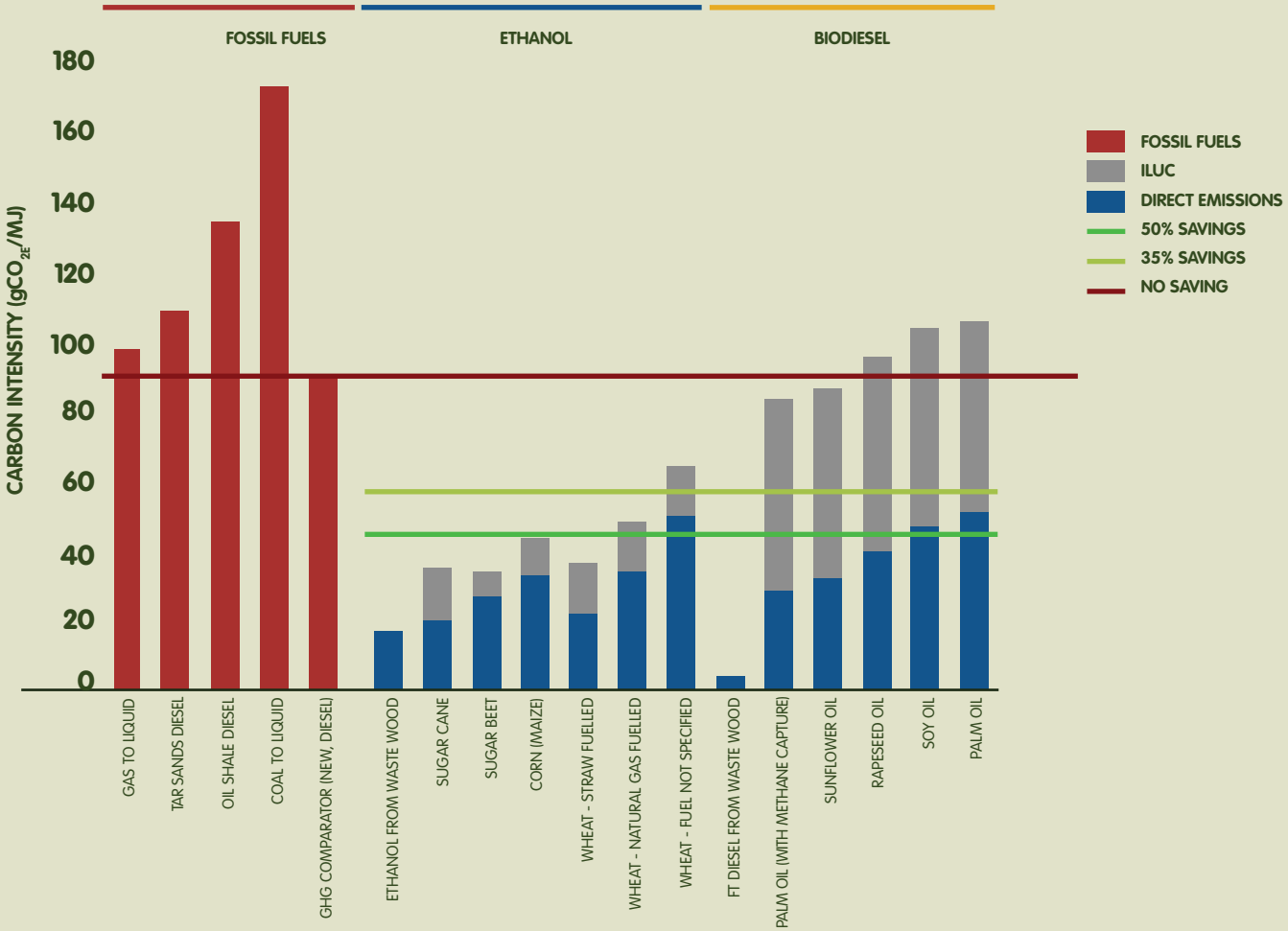
EU policies have generated greater demand for biofuels, increasing overall global demand for agricultural land. To meet this growing demand for new land, fragile ecosystems and carbon stores such as forests, peat lands and grasslands are being converted to crop fields. This results in a loss of biodiversity and in substantial increases in greenhouse gas (GHG) emissions from ploughing the soil and removing vegetation.

Due to ILUC, an extra 313 to 646 Mt CO_2-e (million tonnes of carbon dioxide equivalent) is expected to be emitted into the atmosphere between 2011 and 2020. This is the equivalent of adding between 14 and 29 million more cars to European roads in 2020.[1]

By 2020, an extra 4.7 to 7.9 million hectares of new land – an area up to the size of Ireland – is estimated to be converted to agricultural use globally in order to meet additional biofuels demand in the EU27.[2]

REAL CO_2 EMISSIONS FROM BIOFUELS (WITH ILUC)

Different crops cause different levels of ILUC emissions, and biodiesel feedstocks are some of the worst. According to the European Commission impact assessment study, biodiesel that originates from palm oil, soybean or rapeseed has more emissions than fossil diesel from conventional oil.[3]



To achieve real GHG emission reductions, it is absolutely crucial that carbon emissions are correctly accounted for both biofuels and fossil fuels. With biofuels this means including ILUC factors in the calculation.

CURRENT AND EXPECTED EU BIOFUEL CONSUMPTION

2011[4]

13.6 MTOE

One fifth of 2011 biofuels came from imports

- **78%** BIODIESEL
- **21%** BIOETHANOL
- **1%** OTHER BIOFUELS

2020[5]

30.4 MTOE

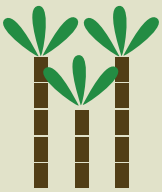
MTOE: MILLION TONNES OF OIL EQUIVALENT

- **70%** BIODIESEL
- **23%** BIOETHANOL
- **7%** OTHER BIOFUELS

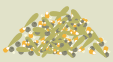
BIOFUELS' IMPACT ON FOOD PRODUCTION, PRICES AND FOOD PRICE VOLATILITY

Biofuels' share of global food production [6]

2007-2009

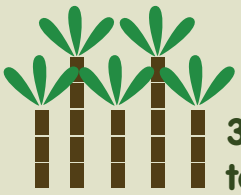


20% of total sugarcane

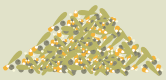


9% of oilseeds and coarse grains

2021 (under current policies)



34% of total sugarcane



30% of oilseeds and coarse grains

Regional impact - Today, biofuels consume:

65% of vegetable oil

50% of sugarcane

40% of corn

Expected impact on global food prices by 2021 [7]

Vegetable oils ↑36% Corn ↑22% Sugar ↑21% Oilseeds ↑20%

"Prices are substantially higher than they would be if no biofuels were produced", say the FAO, OECD, World Bank. They recommend: "G20 Governments remove provisions of current national policies that subsidize (or mandate) biofuels production or consumption."

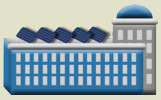
Price volatility in Food and Agricultural Markets: Policy responses. A 2011 report by FAO, IFAD, IMF, OECD, UNCTAD, WFP, the World Bank, the WTO, IFPRI and the UN HLTF.

GLOBAL PUBLIC SUBSIDIES [8]

Biofuels that count towards RED and FQD targets are eligible for direct payments from national governments, tax breaks or compulsory blending mandates, which shift the cost from governments onto consumers.

Biofuels US$ 22Bn.

Wind Power US$ 18Bn.



Solar PV US$ 12Bn.

Biofuels –Top recipient of public subsidies among renewable energy technologies in 2010 (even though biofuel's environmental benefits are much more questionable).

WATER

Globally, agriculture takes up approximately 70% of freshwater consumption in a world that is already struggling with increasing water shortages and the need to produce more food to feed the growing world population. Biofuels add to this pressure.

1l of biofuel = 2500l of water[9]

BIODIVERSITY

Land use change due to the biofuel demand created by European targets drives deforestation and destruction of peatlands and grasslands. The Mean Species Abundance (a measure for biodiversity) of the areas converted will be reduced by about 85%.[10]

LANDGRABBING

So far 37 million hectares of land have been acquired to produce biofuels, according to the International Land Coalition, making biofuels one of the foremost drivers of the global rush for land in recent times.[11]

OTHER ENVIRONMENTAL IMPACTS

The evidence does not only show that biodiesel is worse for the climate than fossil diesel, but biofuels perform worse than fossil fuels on a whole range of other environmental indicators. When the EMPA Institute in Switzerland[12] assessed the full environmental impacts of biofuels, they found that, compared to using fossil fuels, crop-based biofuel pathways had higher total impacts on the climate, eutrophication from fertiliser run-off, acidification, ozone depletion, and human health impacts.

SOLUTIONS

The EU should:

- **abolish volume targets for biofuels in the transport sector**
- **include correct carbon accounting (ILUC factors) in the RED and FQD**
- **strengthen sustainability criteria**

This will give the right incentive to move away from unsustainable biofuels, and towards a green tranport future based on energy saving technologies, renewable electricity in cars, and limited use of fuels from waste and residues (flanked by clear definitions, sustainability criteria to prevent displacement effects and respect waste hierarchy).

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