



Biofuels in the EU

indirect land-use change emissions

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Content

Policy Framework

- **Renewable Energy Directive**
- **Fuel Quality Directive**

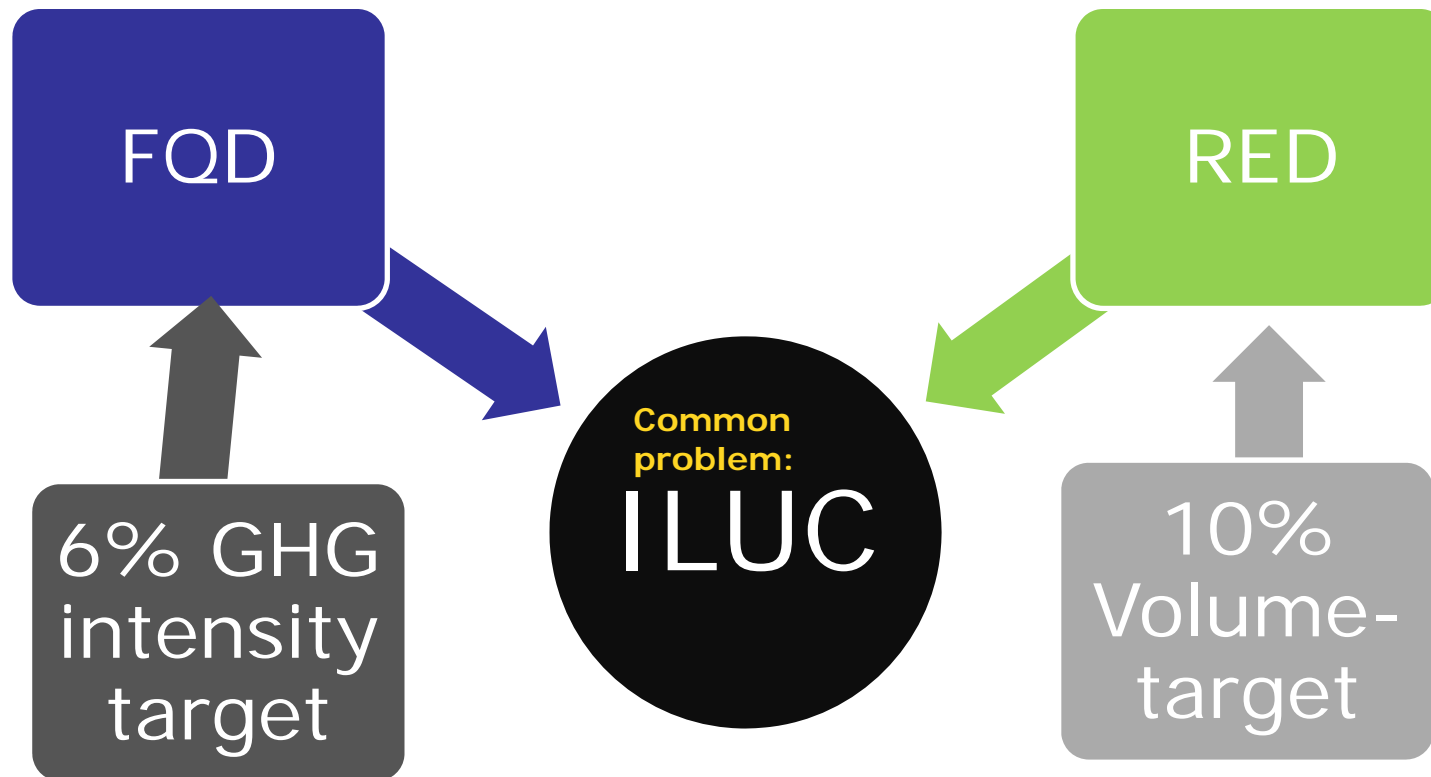
Indirect land-use change emissions

Transport beyond 2020

- **Decarbonisation of the transport sector in EU**



Legal Framework – Two Directives





ILUC – where are we now?

The December-report on ILUC concluded:

- *ILUC can reduce the GHG-benefits of using biofuels*
- *But considerable uncertainties and limitations associated with the modelling remains*

Inter-service consultation on-going.

Adoption possibly in October.





The IFPRI-report

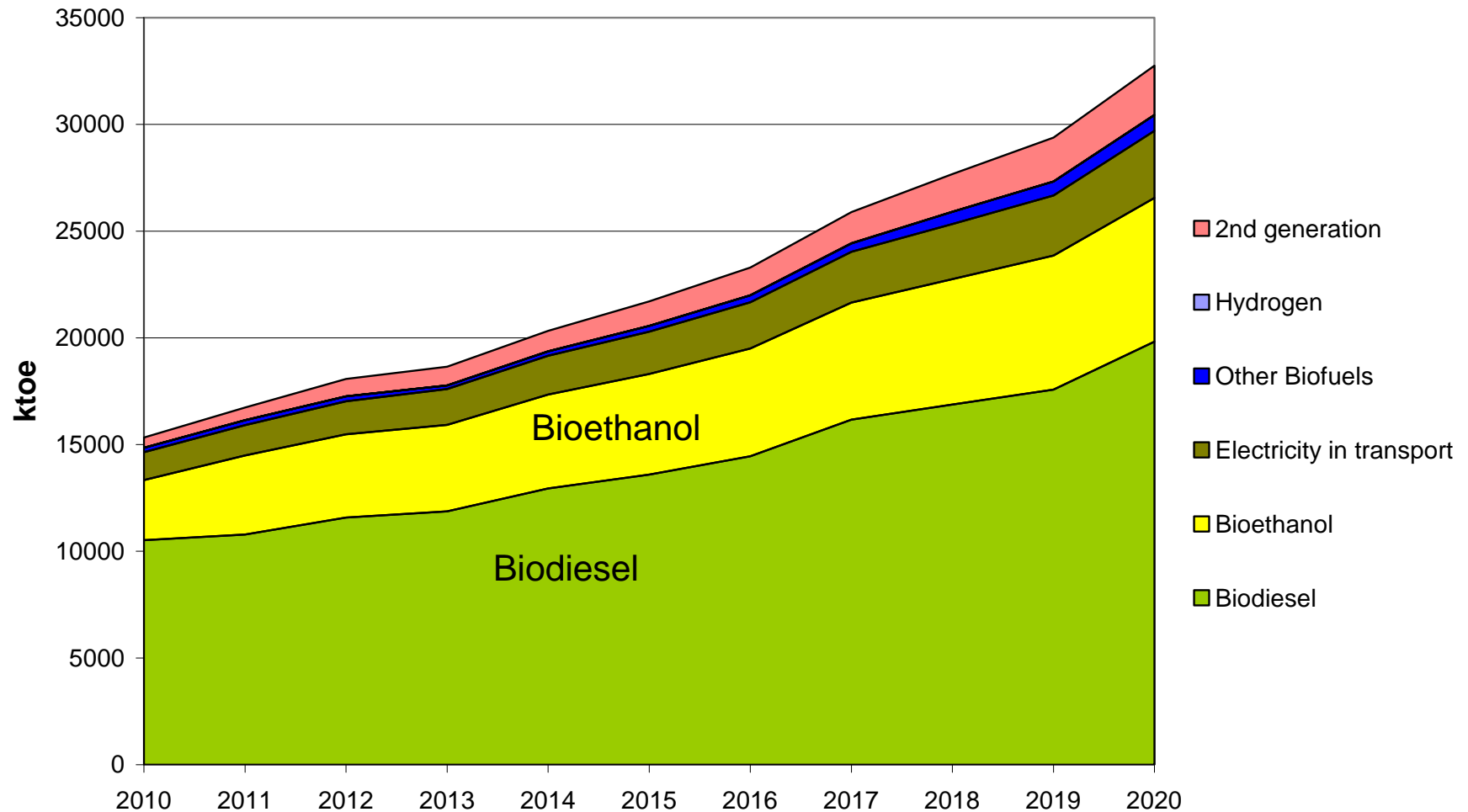
Finalised and published in October 2011¹

Updated and improved compared to the report published last year, some changes:

- **Biofuel demand as set out in the NREAPs**
Improved representation of co-product markets
- **Peat land emissions**
- **Food demand (less elastic)**
- **Uncertainty analysis (monte-carlo)**

1: Available here: http://trade.ec.europa.eu/doclib/docs/2011/october/tradoc_148289.pdf

NREAPs: Technology breakdown in the transport sector towards 2020





IFPRI-study findings

Overall ILUC is estimated to eliminate around 70% the direct savings offered by biofuels, leaving biofuels with 21% savings

- **i.e. Biofuels still saves emissions compared to fossil fuels also when the ILUC is included**

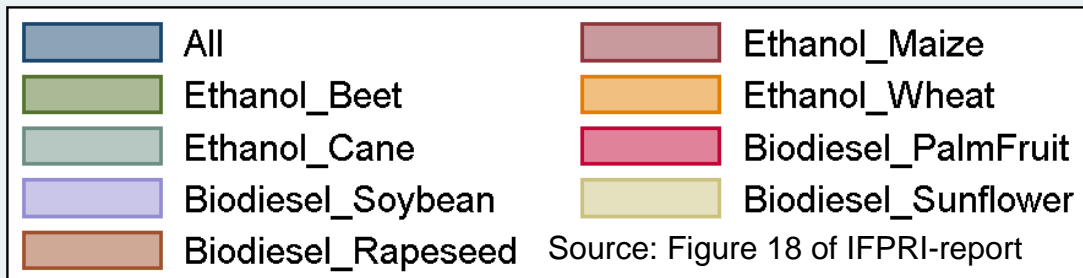
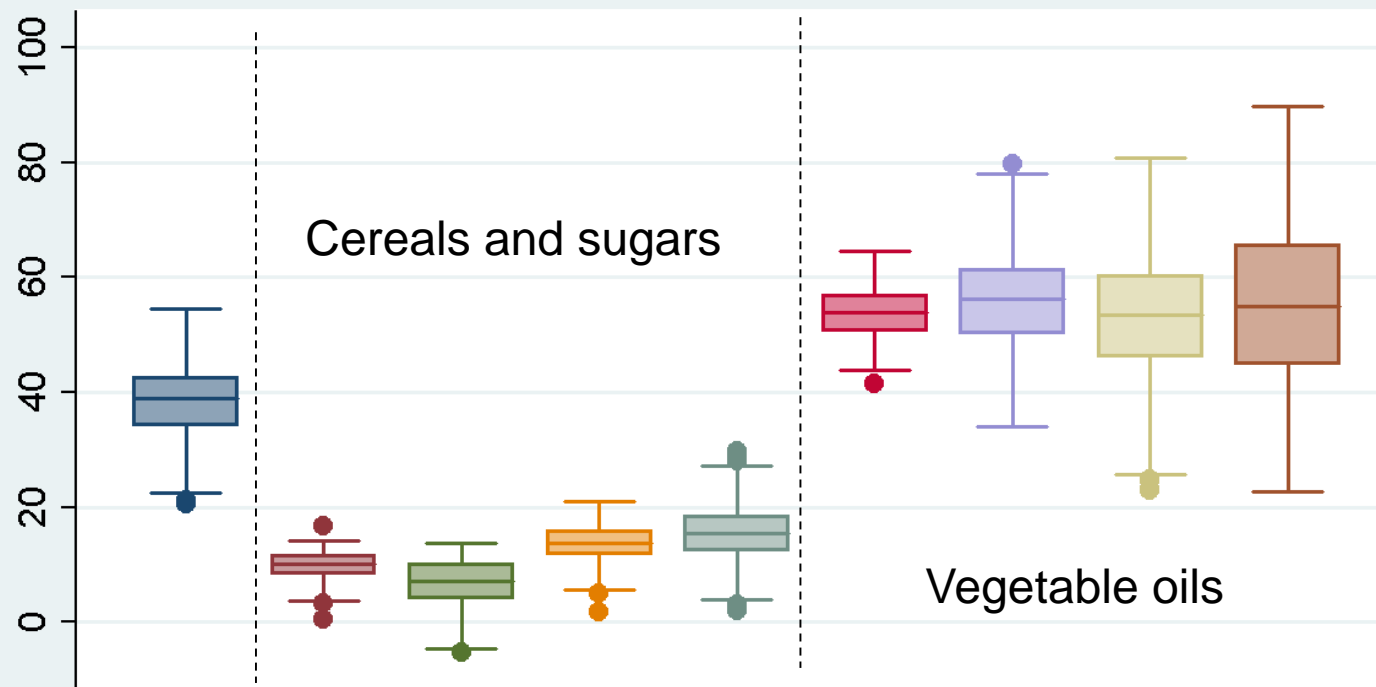
Large differences in estimated ILUC between sugars, cereals and vegetable oils

ILUC is a serious concern, but significant uncertainties remains

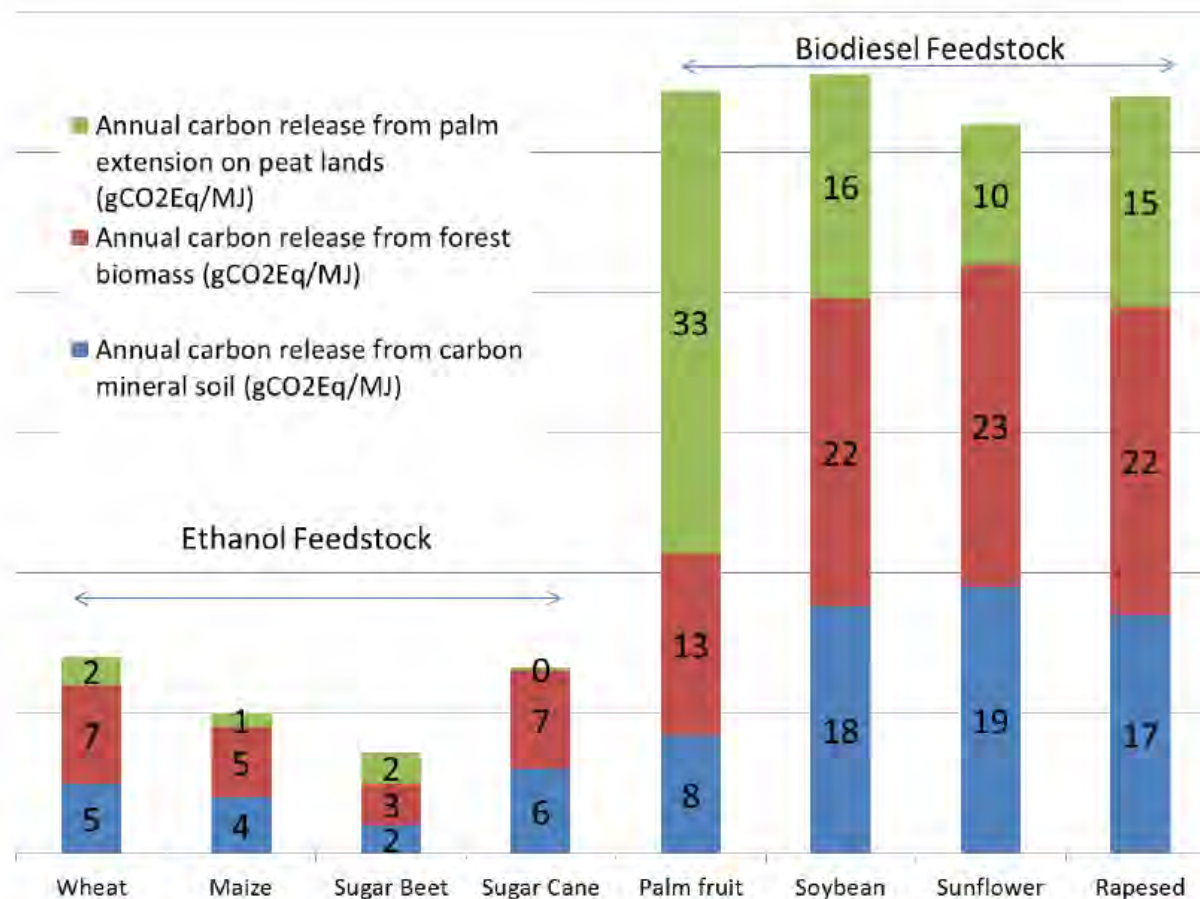
- **Includes as list of 25 sources of uncertainty**



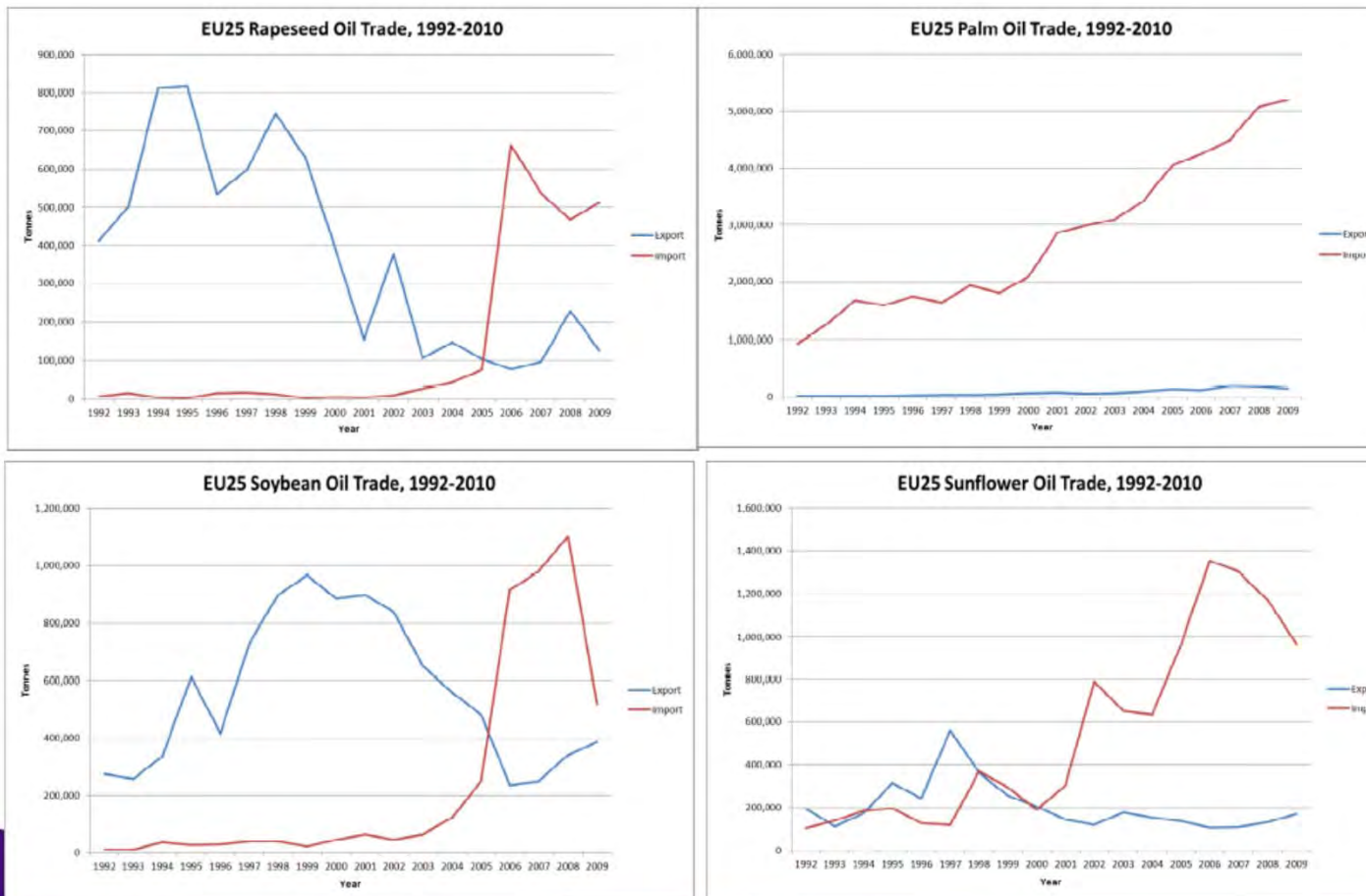
Feedstock specific results



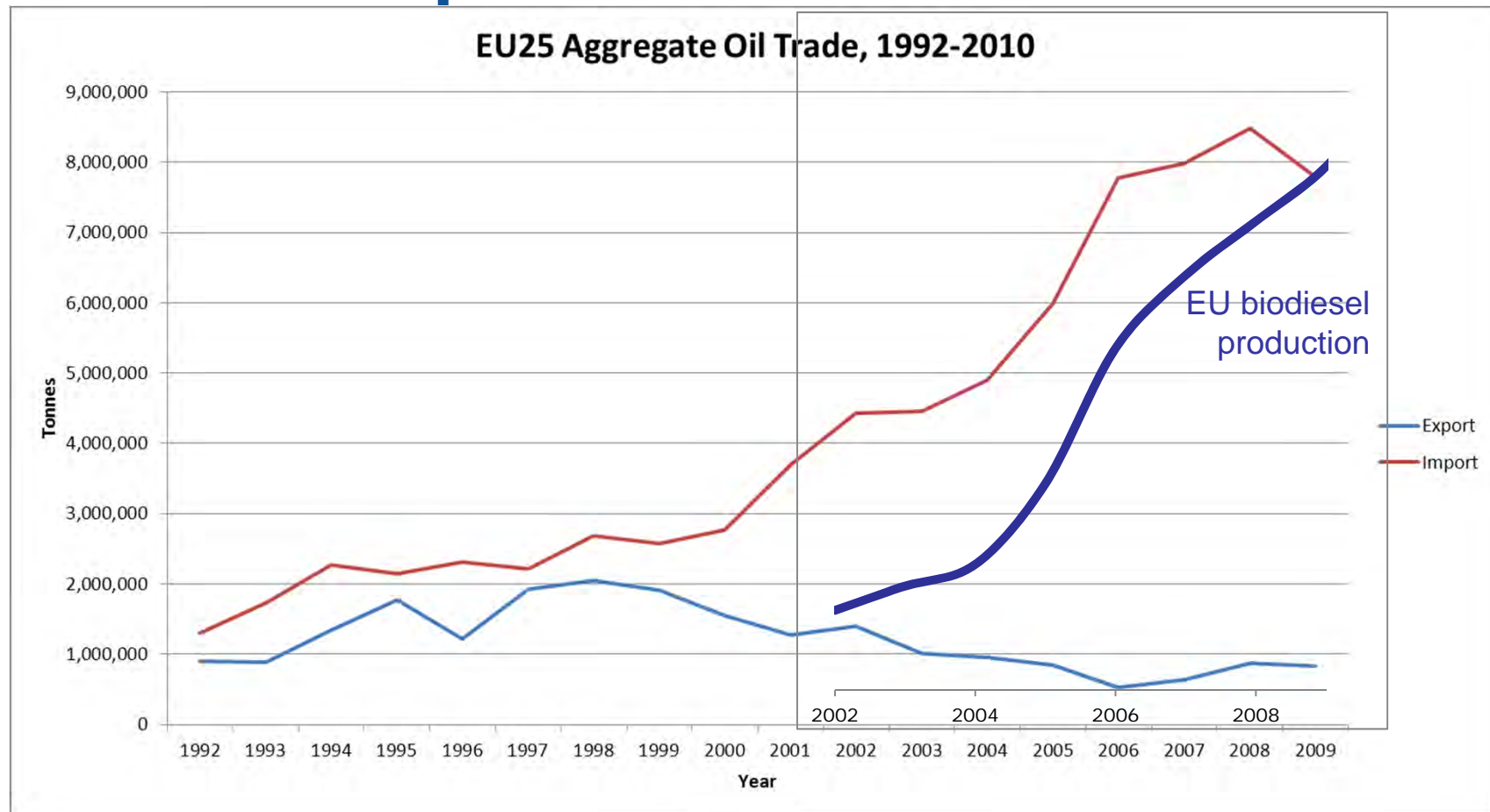
Overall results (note importance of peatland emissions which only account for 2% of the expansion of cropland)



How does this fit with historical data?



EU total vegetable oil trade and biodiesel production

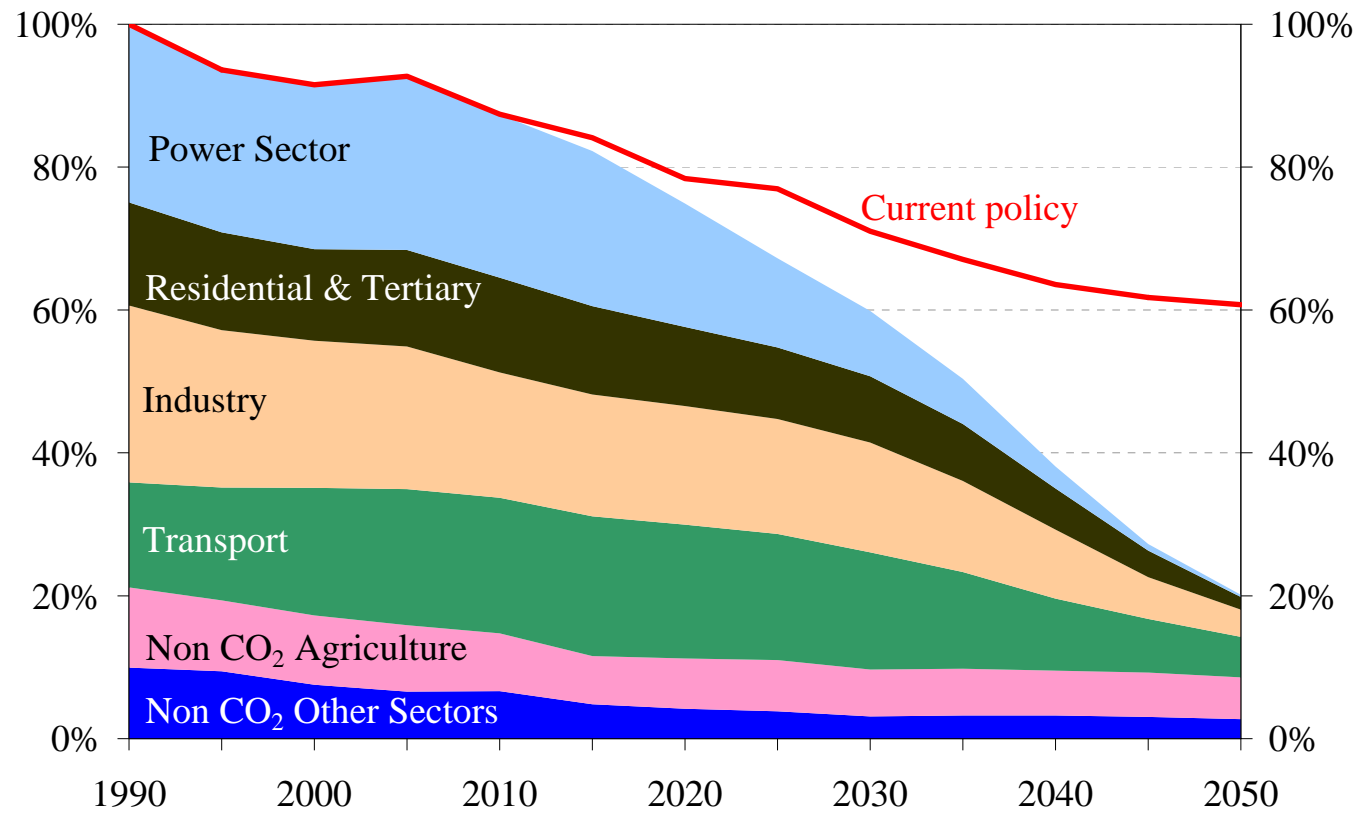




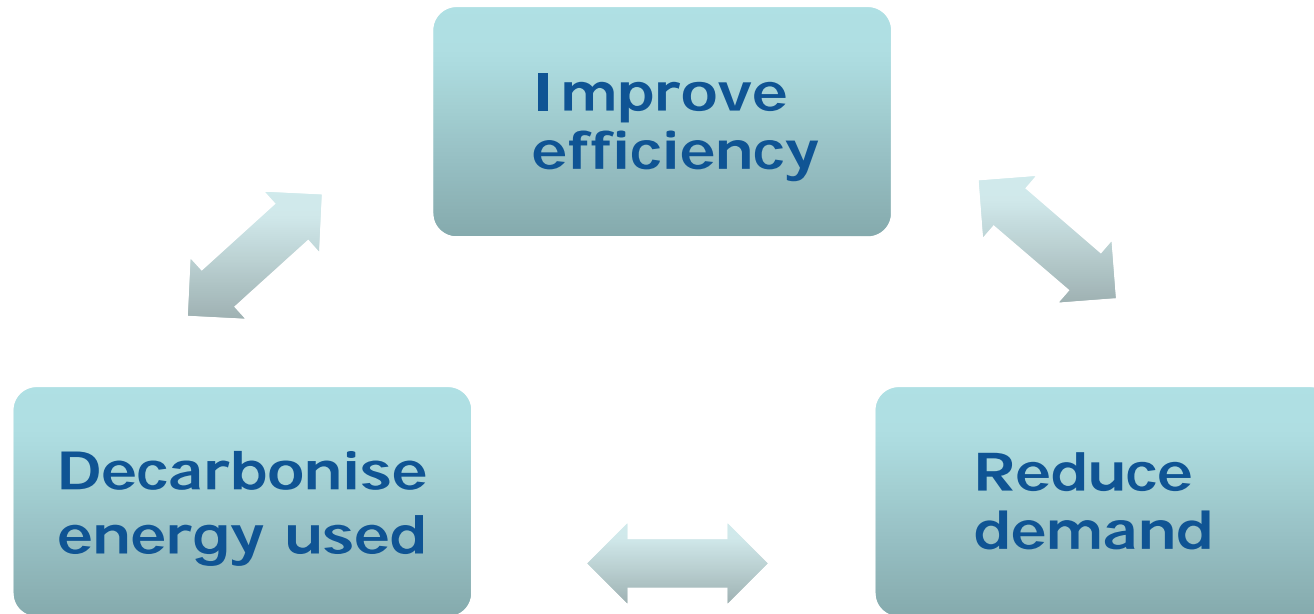
Transport beyond 2020



Low Carbon Road Map Trajectory



Ways to decarbonise transport





EU transport: routes to 2050

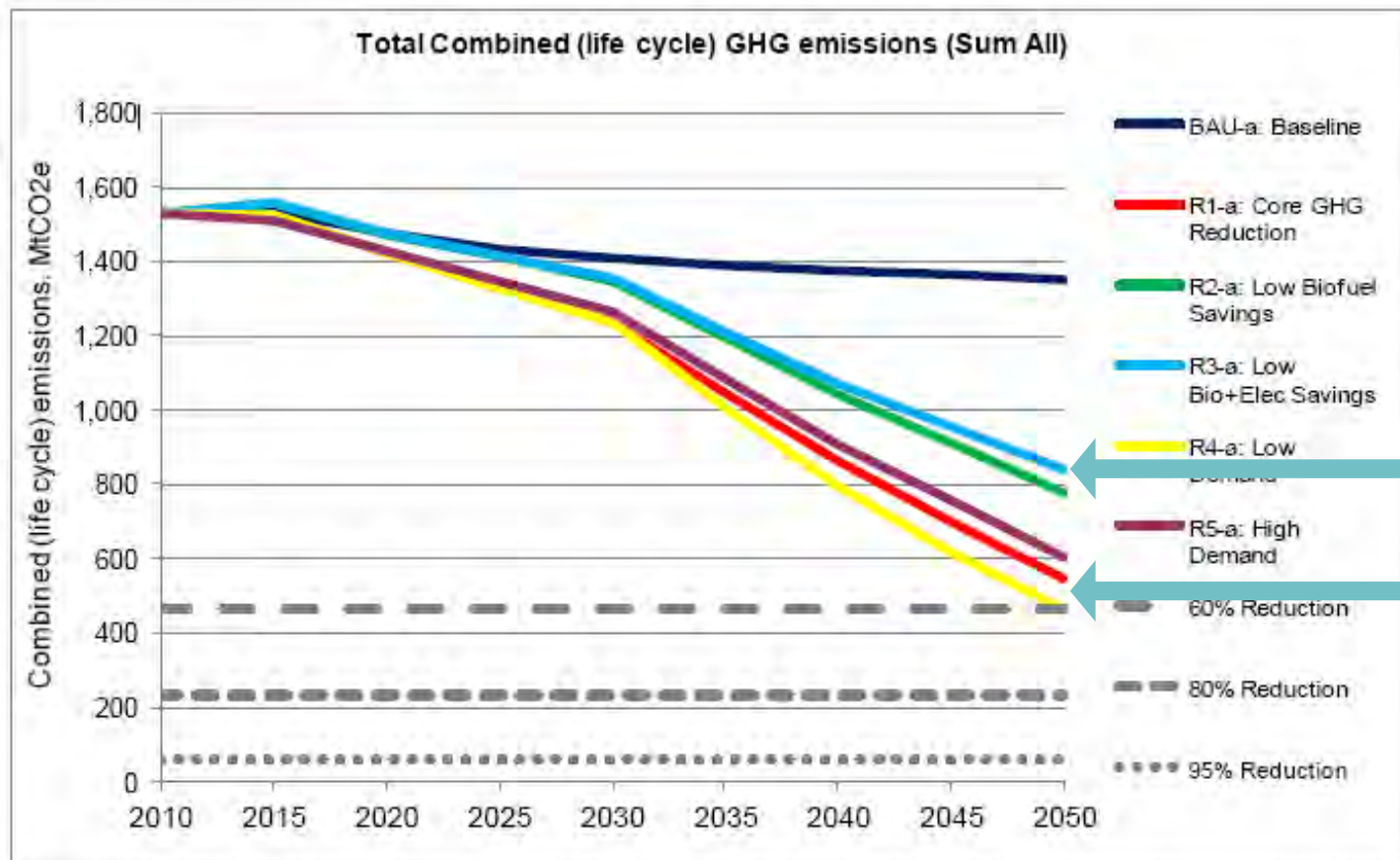
Potential scenarios for delivering reductions: White Paper for transport

In the central scenario, biofuels would represent around **a third of total energy used in the transport sector** (around 100 Mtoe biofuels)

To reach the 60% reduction target, the biofuels would need to deliver total savings of **around 70-80%** (including potential indirect effects)



Potential impacts of low GHG balance



Assumes around 100 Mtoe of biofuels in all forms of transport

Biofuels saves around 20%

Biofuels saves around 75%

Conclusions

ILUC is a serious concern that needs to be addressed

100 Mtoe biofuels are needed towards 2050, and these biofuel need to provide considerable savings (indirect effects included)

Discussions on ILUC:

- **ISC on-going**
- **Adoption possibly in October**



Thank you for your attention.

Material on the sustainability criteria including the GHG methodology is available here:

http://ec.europa.eu/energy/renewables/biofuels/sustainability_criteria_en.htm

Background on the origin of the default values:

<http://iet.jrc.ec.europa.eu/about-jec/downloads>

The IFPRI report and other studies on ILUC are available here:

http://ec.europa.eu/energy/renewables/studies/land_use_change_en.htm

