



Biofuels - New Commission proposal for limiting indirect land-use change emissions (ILUC)

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European Commission



Content

Sustainability criteria

Consultation, ILUC Report and studies

**Impact Assessment with evaluation of
policy options**

Commission proposal



Sustainability criteria

Biofuels cannot come from land:

- With high carbon stock
- High biodiversity (primary forest etc.)

Biofuels need to save at least 35% compared to fossil fuels, increasing to 50% in 2017





Consultations and studies (1/3)

4 studies, of which 2 included modelling

Extensive reading of international literature, and cooperation with EPA (federal level) and CARB (California) in the US

2 public consultations, and one expert meeting hosted by JRC

Numerous meetings with stakeholders



Consultations and studies (2/3)

The Commission published a report in 2010 on ILUC, confirming that:

- **ILUC can have an impact on the greenhouse gas savings offered by biofuels, but that**
- **A number of limitations and uncertainties remains**

The conclusion was therefore to do more scientific work, and to include the recently (at that time) received data from Member States on biofuel consumption (through the NREAPs)





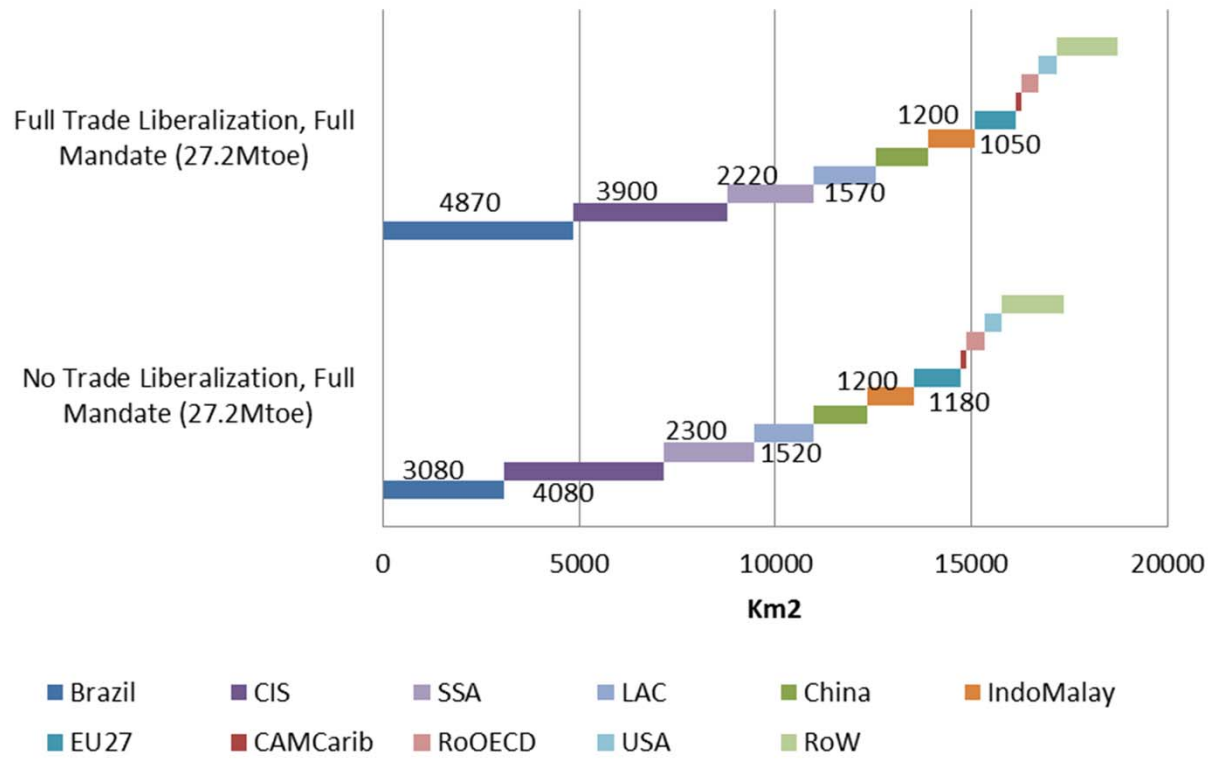
Consultations and studies (3/3)

The Impact Assessment is therefore relying mainly on the the IFPRI study which:

- **Been subject to a lengthy (3 year) dialogue and discussion between the Commission services and IFPRI**
- **Been subject to stakeholder comments and questions (specific technical consultation held)**
- **Is considered to be best available science on the estimated ILUC impacts of EU use of biofuels**



Estimated land conversion (1.7 Mha)





Estimated ILUC impacts

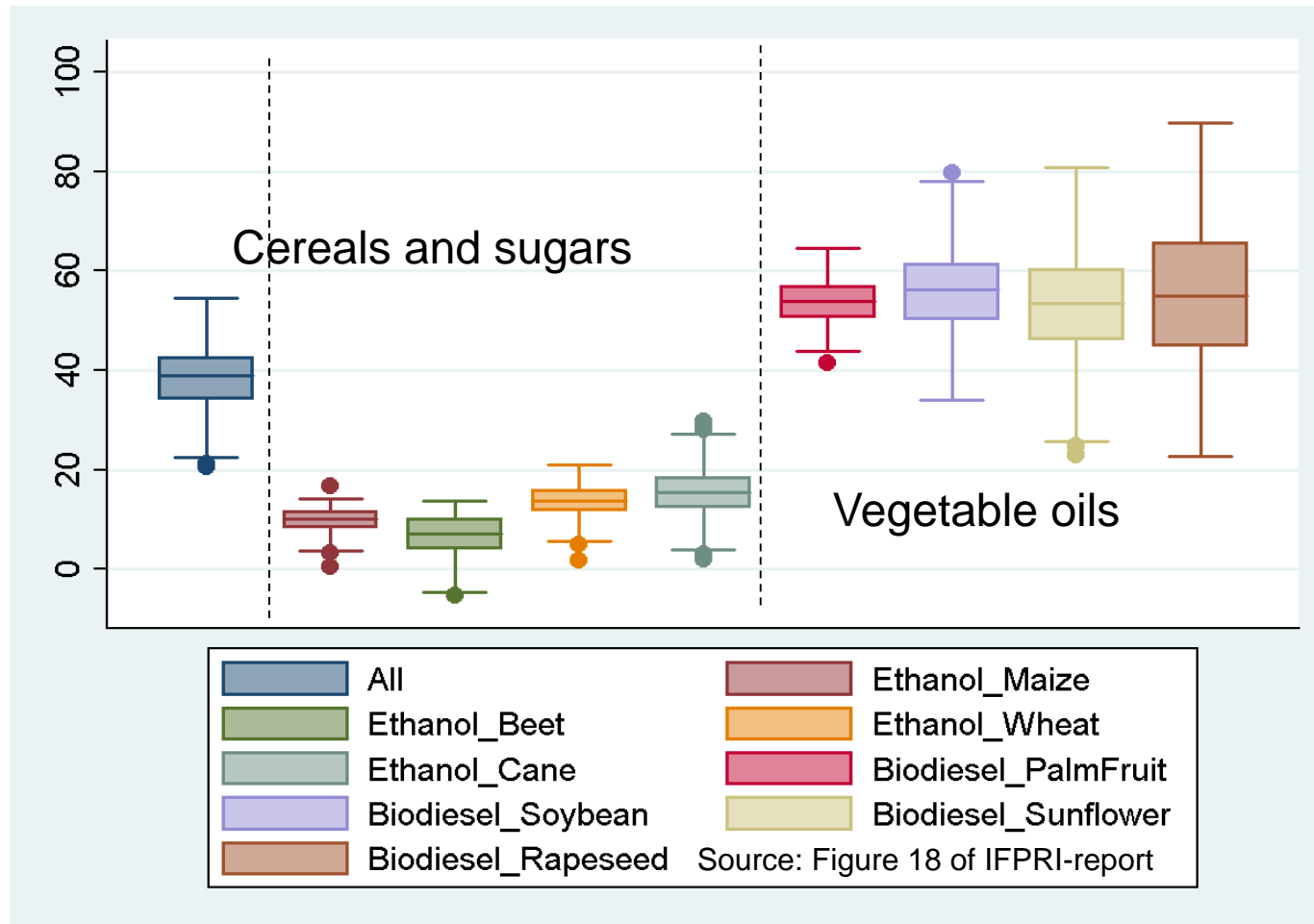
Additional cropland: 1.7MHa, leading to a release of 500Mt CO₂.

*Incl estimated ILUC: Average biofuel mix has **22% savings** in 2020.*

Large differences in estimated ILUC impacts between crop groups - lower for sugars and cereals than for vegetable oils.



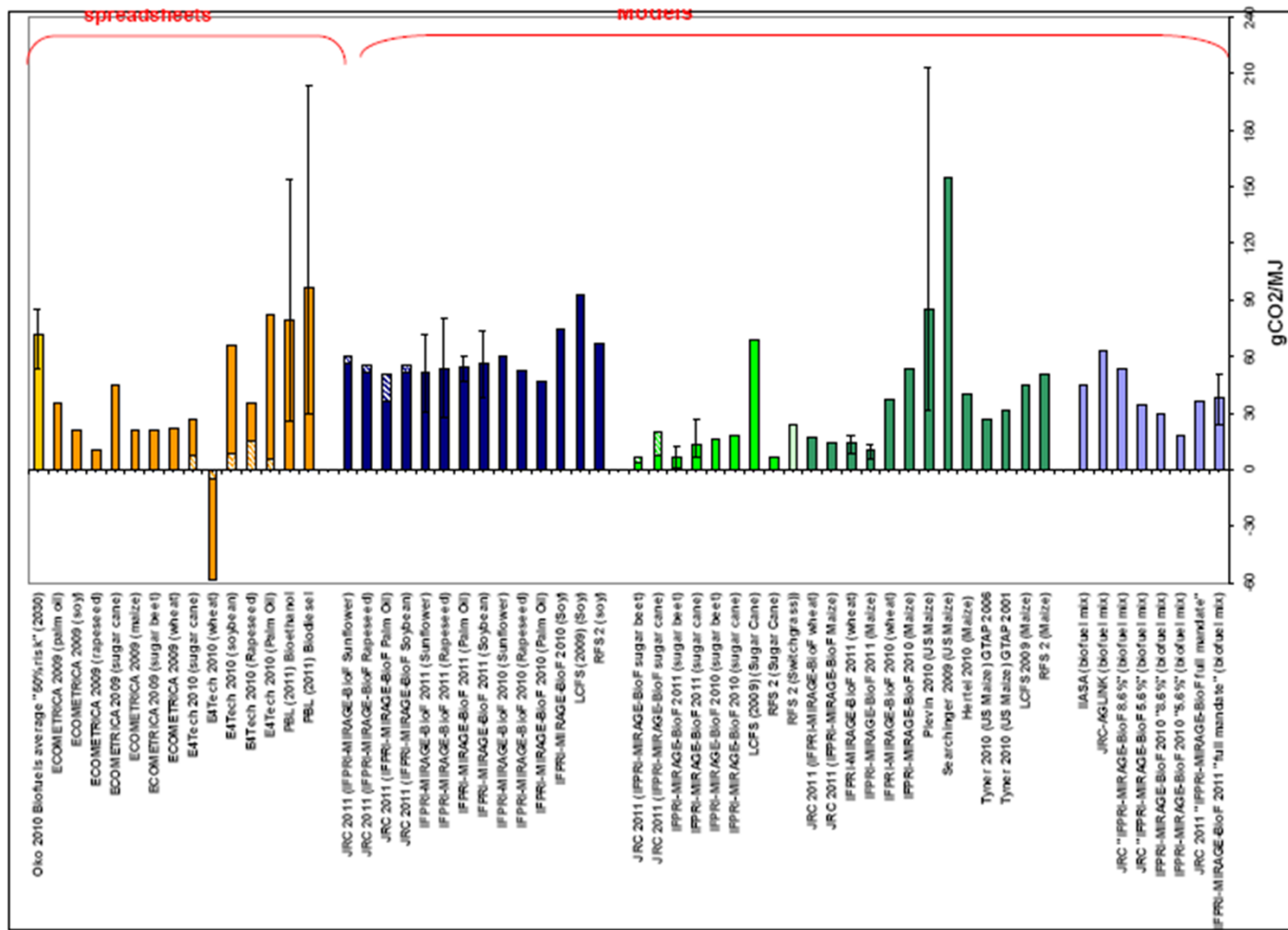
Feedstock specific results



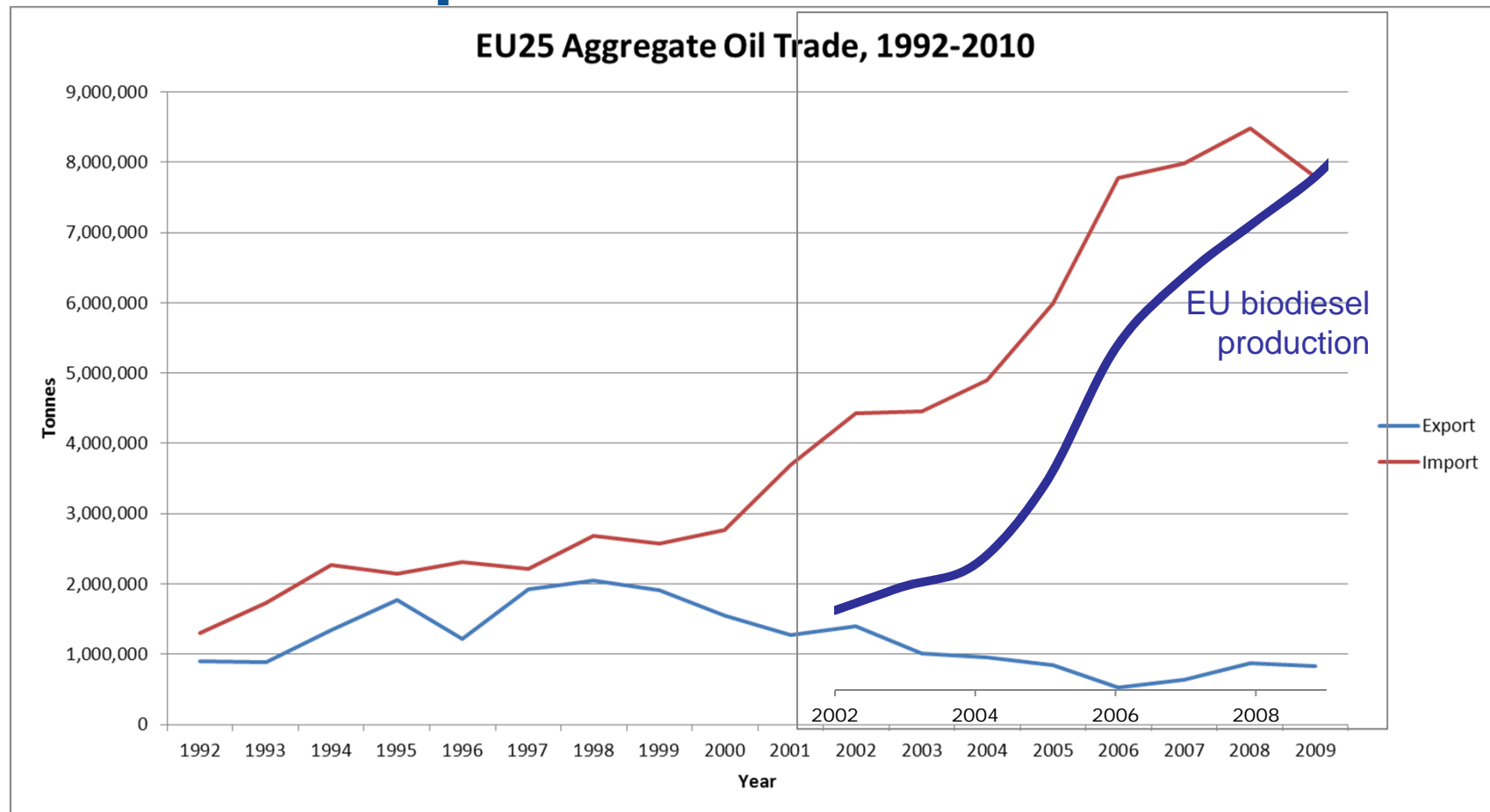


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Other ILUC studies



EU total vegetable oil trade and biodiesel production





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Policy options for addressing ILUC

- A) Take no action while continue to monitor*
- B) Increase the minimum GHG threshold*
- C) Introduce additional sustainability criteria*
- D) Include ILUC factors in sustainability criteria*
- E) Limit contribution of conventional biofuels to RED target*





Context for policy making

- Investments already made in biofuels capacity
- EU needs biodiesel as we have an on-going dieselisation of the fleet
- Ethanol can only be blended to a limited level (too few petrol cars)
- Many 1st gen biofuel crops provide important proteins as animal feed
- Regulatory stability
- Increasing imports

Evaluation of possible approaches

Option	Effectiveness- GHG savings incl ILUC emissions (%)	Comments
A	BAU- 22% GHG	No ILUC mitigation before 2020
B	56% GHG	High uncertainty around its effectiveness subject to technological developments
C	Not known	Not possible to be fully implemented at this point
D	70% GHG	Major industrial adjustment requirement not achievable to 2020
E	44% GHG	Sound effectiveness and balanced transition period



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The Commission Proposal (1/4)

*Starts the transition to biofuels that deliver **solid GHG savings** incl. estimated ILUC, and a more diversified supply of biofuel feedstocks*

A limit to the amount of 1st gen. biofuels that can count towards the Renewable Energy Directive targets to current consumption levels (5%); effectively creating a sub-target





The Commission Proposal (2/4)

*The science on ILUC is **not sufficiently stable** to be integrated in the sustainability criteria.*

*The **estimated ILUC emissions** are therefore rather including in the MS reports in both Directives to increase transparency of all biofuels.*





The Commission Proposal (3/4)

Remaining growth in the biofuels' market comes from advanced biofuels, for which incentives are also increased (quadruple accounting).

In addition, the greenhouse gas emissions saving requirements are increased to 60% for new installations.





The Commission Proposal (4/4)

In conclusion;

*-we respect investments made,
-while enhancing incentives for advanced
biofuels that can be produced with little risk
of ILUC*

*Such biofuels also offers prospects for
cheaper fuels through substantial technology
learning*





Thank you

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

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

*The **ILUC proposal** and **Impact Assessment** underpinning it are available here:*

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





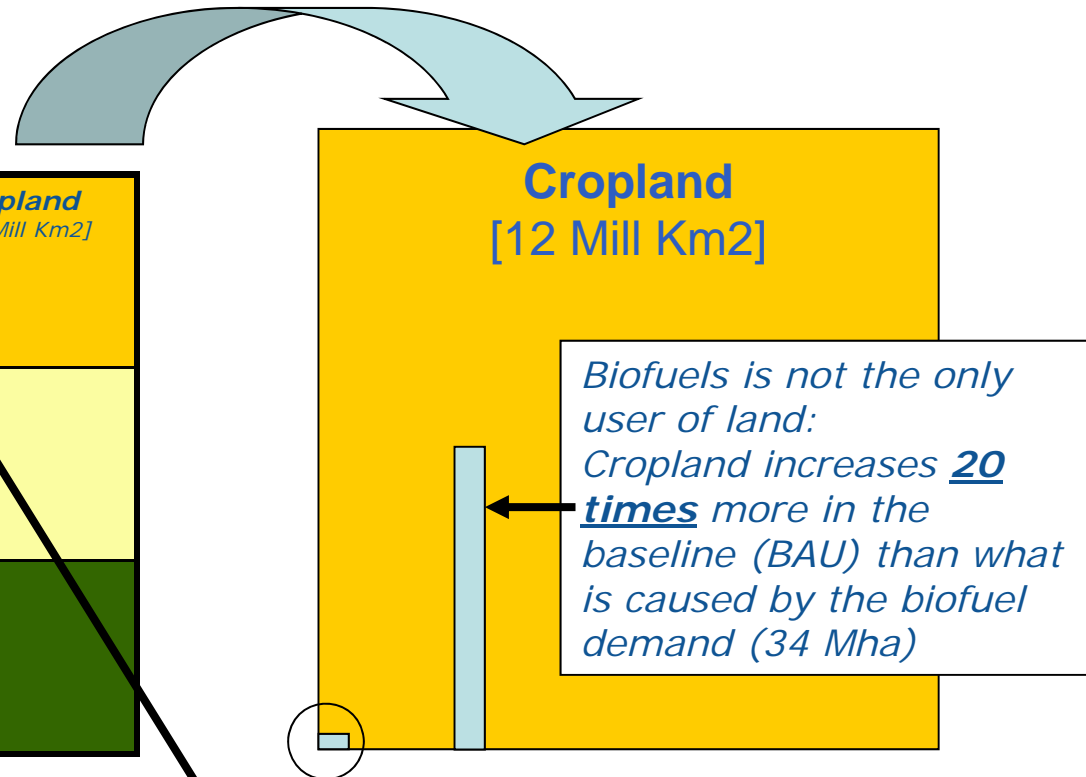
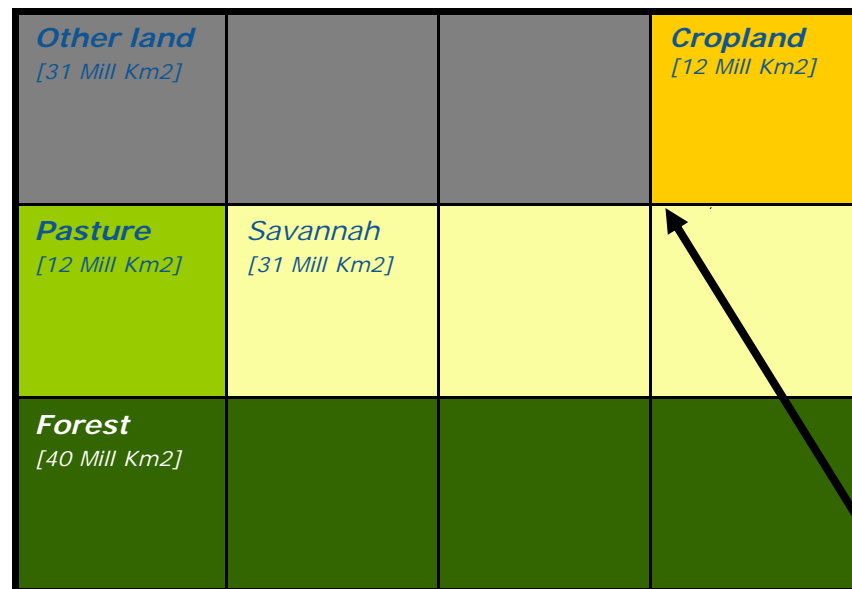
Back-up:

- *More results from IFPRI*
- *Food price impacts*
- *Biofuel use in the various Member States*



What land resources do we have?

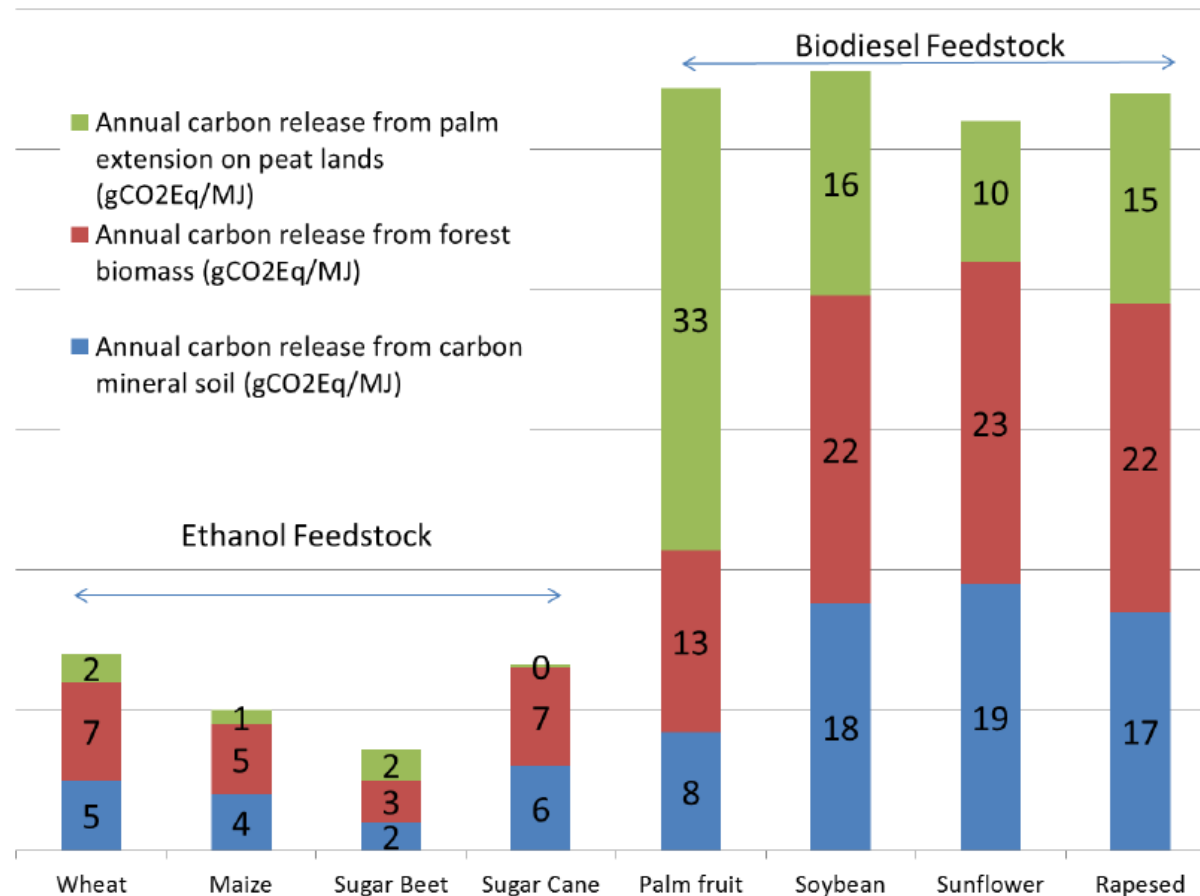
World's available land: 126 Mill Km²



IFPRI result: 0.017 Mill Km² (1.7 Mha), equal to 0.14 % of existing cropland



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



Source: Figure 15 of IFPRI-report



Land use and food price consequences

*IFPRI estimates that the 5% of 1st generation biofuels will need a **net** amount of around 1.7 Mha of land.*

- **In comparison the world has around 1500 Mha of cropland, of which around 80 Mha are in the EU.**

Estimates from IIASA and IFPRI shows price increases of 1-2% for cereals and around 4% for oil crops as a result of EU's use of biofuels.



Use of biofuels in the EU

