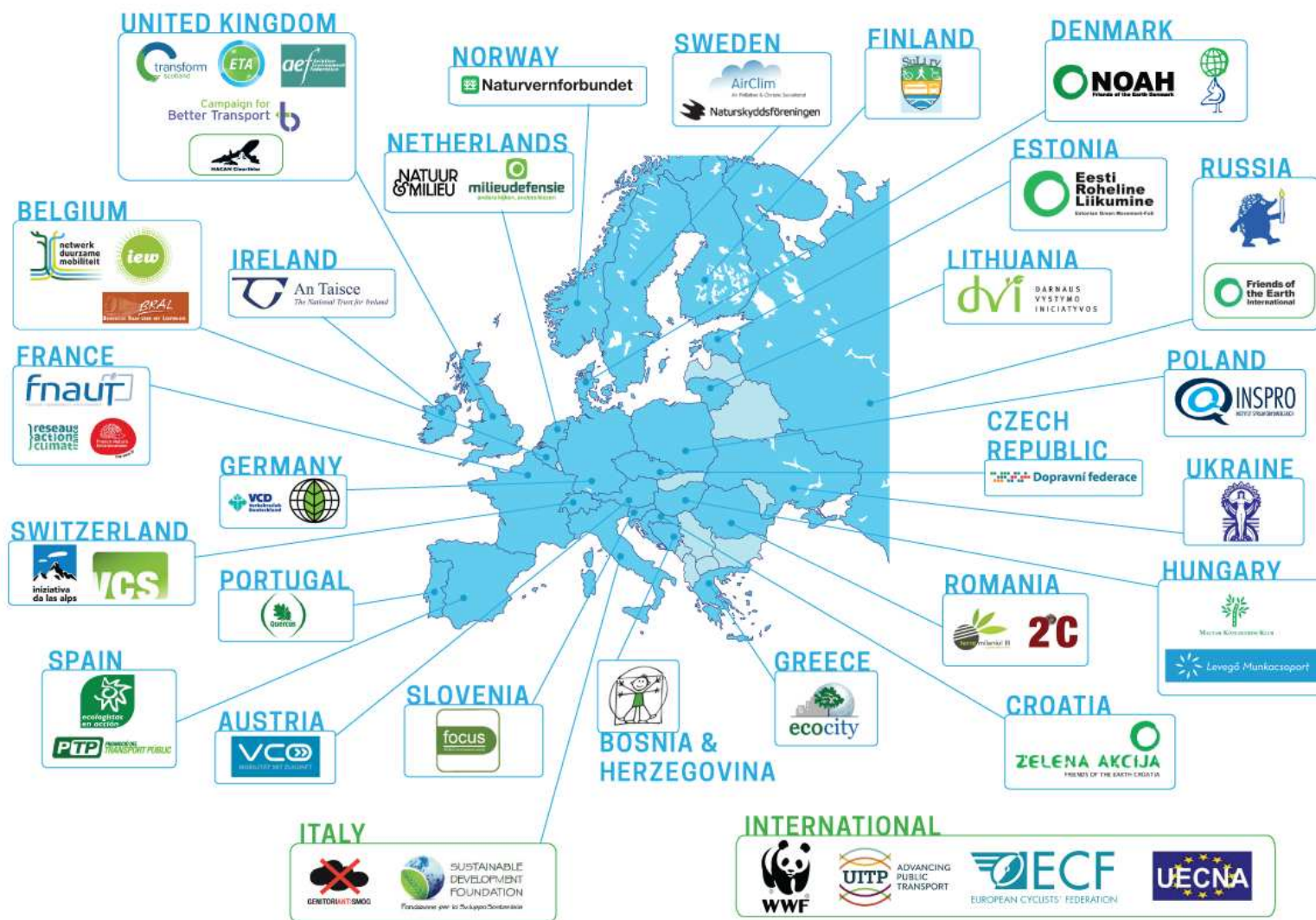


TRANSPORT FUELS DECARBONISATION

Veronica Aneris
National expert, Italy

Rome, 04 October 2017
UIC EE Workshop

T&E: 27 COUNTRIES 50 MEMBER & SUPPORT GROUPS



OUR FOCUS

MOST MODES

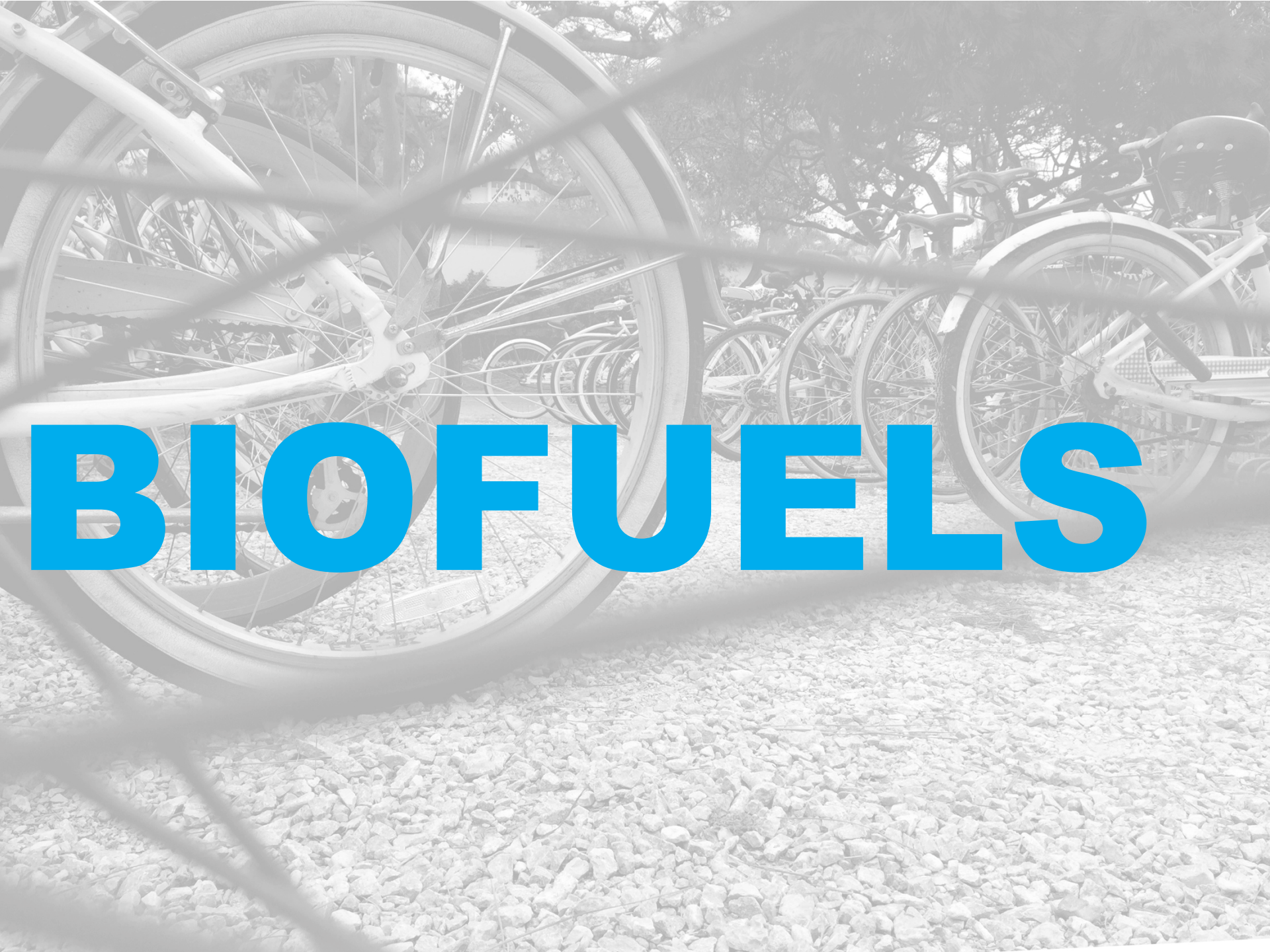


WELL TO WHEEL



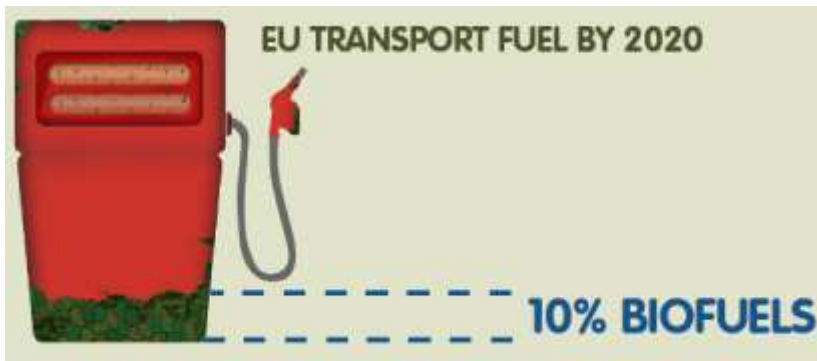
ALL TRANSPORT ENERGY





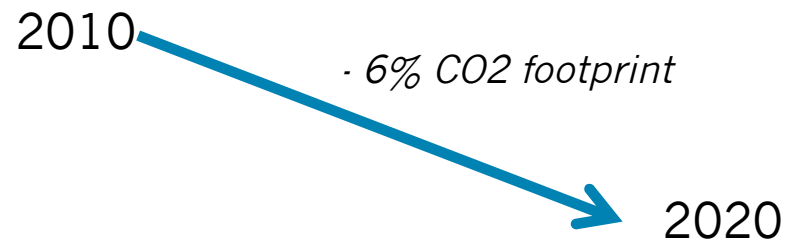
BIOFUELS

CURRENT EU TOOLS



RED I: Renewable Energy Directive
([2009/28/EC](#))

A target of 10% renewable energy in transport by 2020 - to be achieved by EU Member States



Fuel Quality Directive ([2009/30/EC](#))

A target of 6% reduction in carbon intensity of the fuel supplied in road transport in 2020 - to be achieved by EU fuel suppliers

BACKGROUND

- Biofuels first came into legislation in Europe in 2003 with indicative targets
- Replaced by binding targets in 2009
 - Renewable Energy Directive ([2009/28/EC](#))
 - Fuel Quality Directive ([2009/30/EC](#))

European Parliament mandated the EC on ILUC impact

- A difficult fight

To get the studies out!

To get the proposal out!

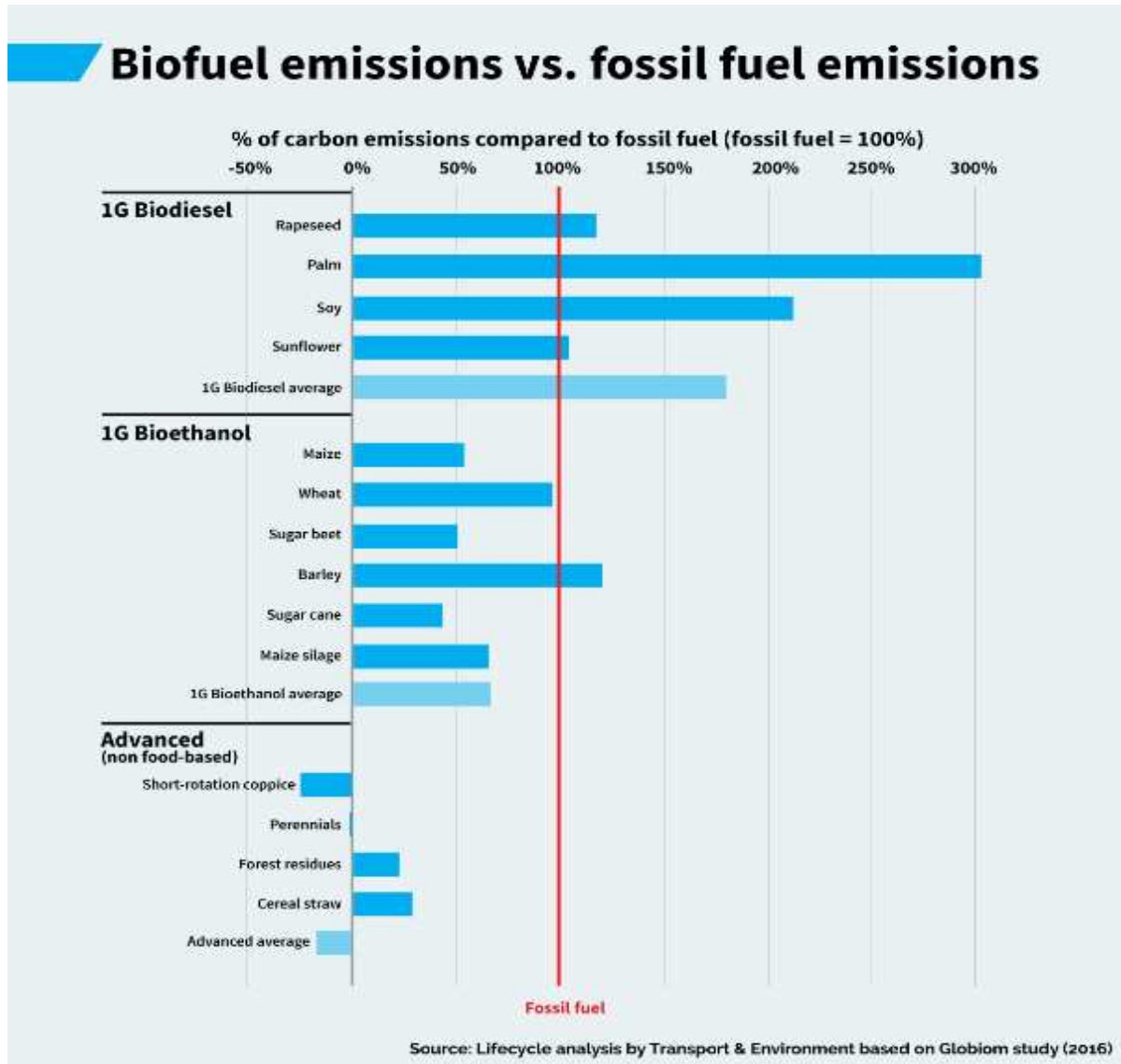


WHAT IS ILUC?

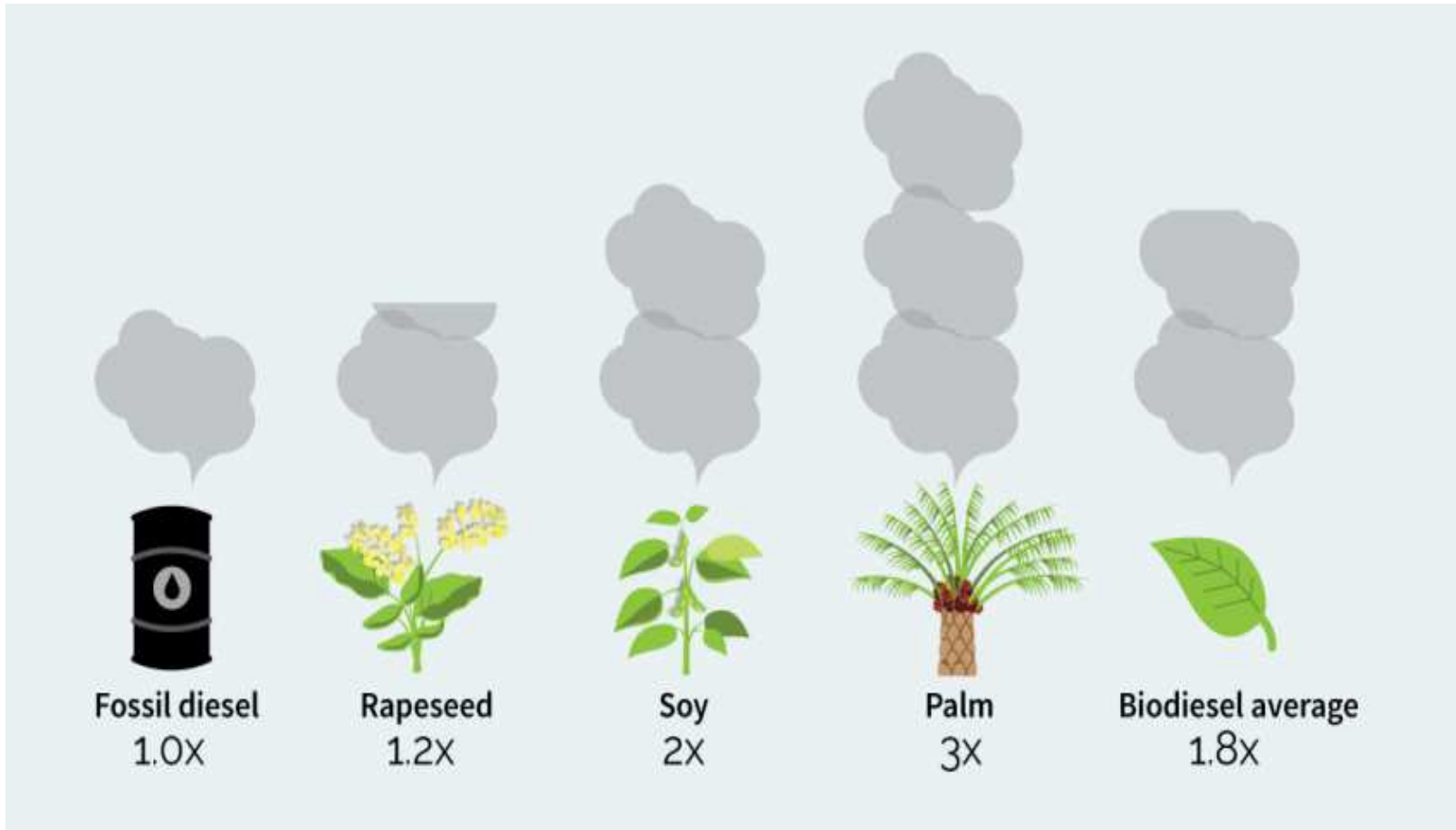
Peter and Jane: A Short Film about Biofuels



BIOFUEL VS FOSSIL FUEL EMISSIONS



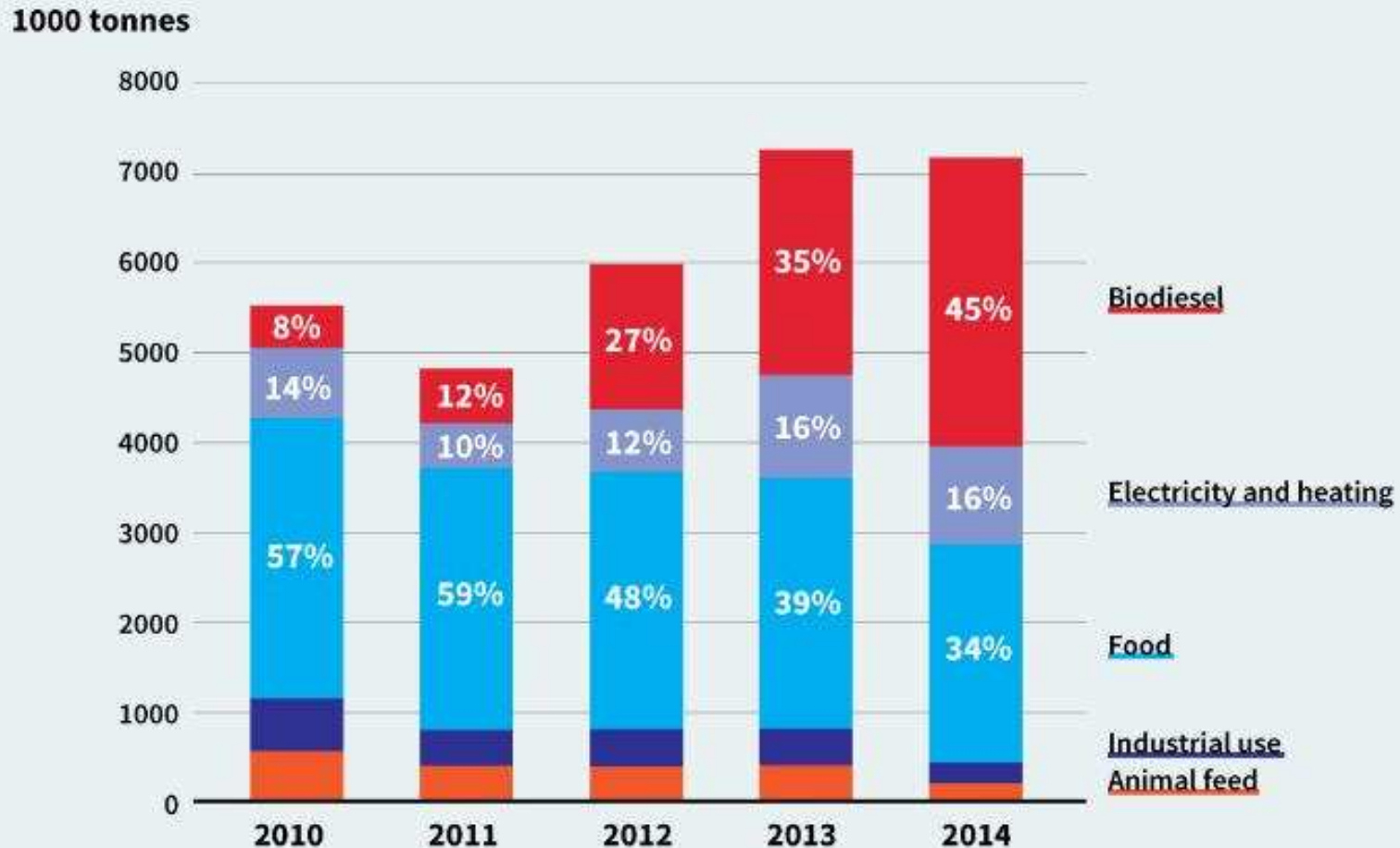
BIODIESEL: the cure worse than the disease



Crop-based biodiesel on average 80% worse for climate than fossil diesel.



EU DRIVERS TOP CONSUMERS OF PALM OIL



POLITICAL VICTORIES

- 1. CAP AT 7%** FOR BIOFUELS FROM FOOD CROPS (for the 10% target only)
- 2. ILUC EMISSIONS** RECOGNIZED AND REPORTED (but not accounted)
- 3. POST 2020:** NO PUBLIC SUPPORT FOR FOOD-BASED BIOFUELS (Commission communication)



RED II

RED II AND TRANSPORT



Crop-based biofuels

Phase down from 7% to 3.8%



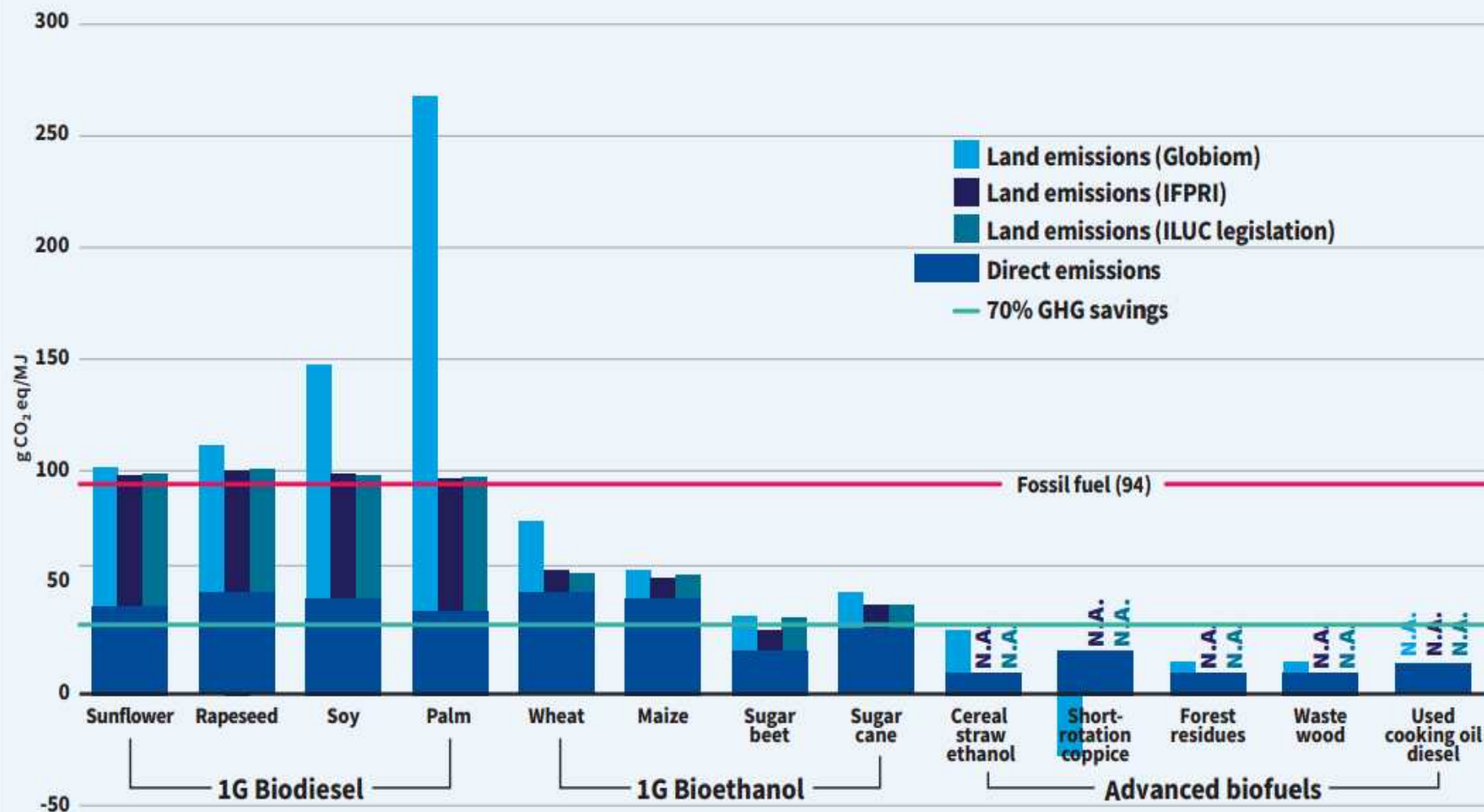
Advanced biofuel

Target of blending 6,8% of advanced fuels



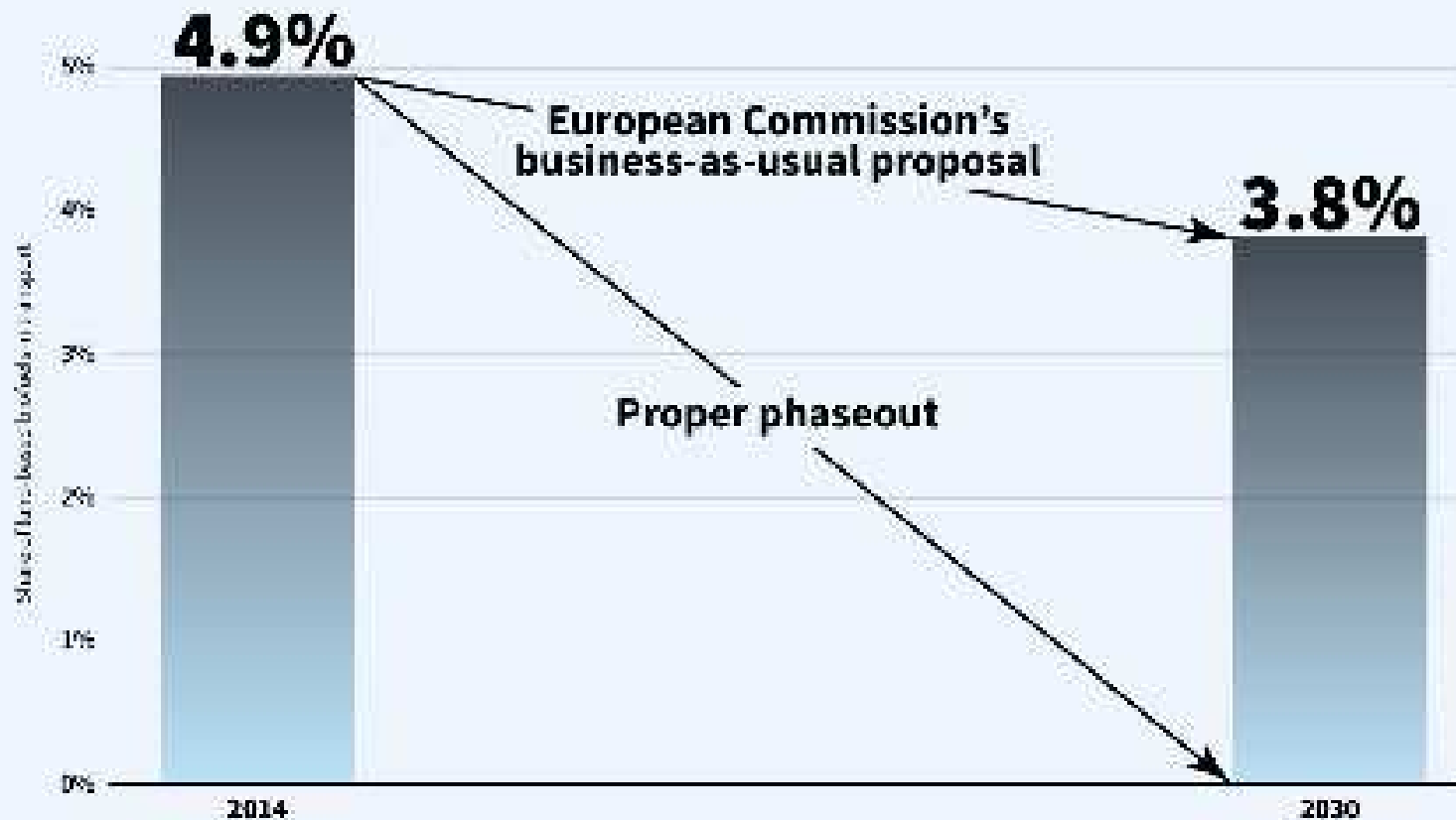
Electromobility

Direct emissions plus land emissions

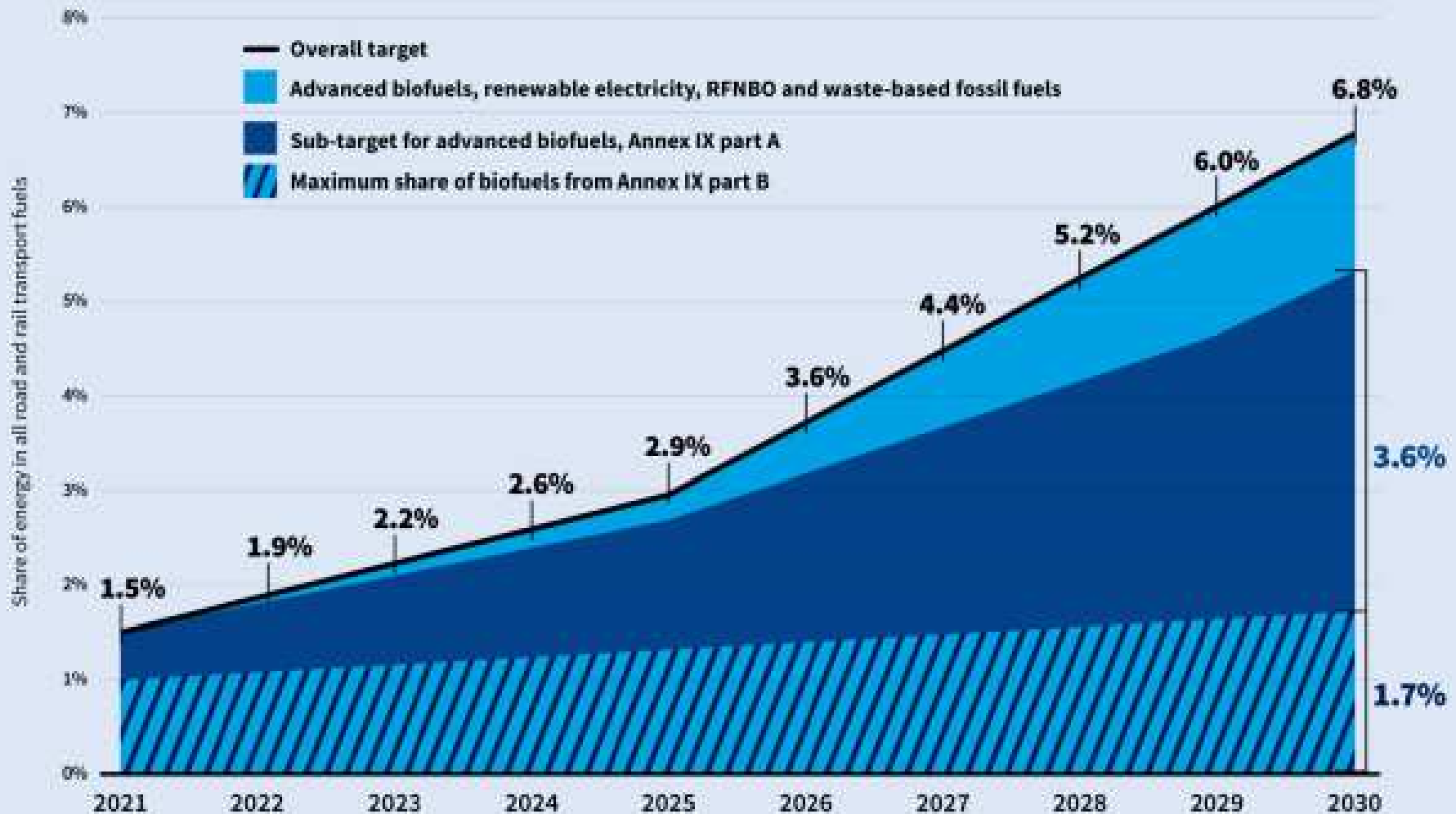


EC PROPOSAL – NOT A REAL PHASE-OUT

Land-based biofuels in Europe: business as usual or phaseout?



BLENDING OBLIGATION – ADVANCED FUELS



ADVANCED BIOFUELS



DEFINITION?

- Residues.
- Waste.

SUSTAINABILITY?

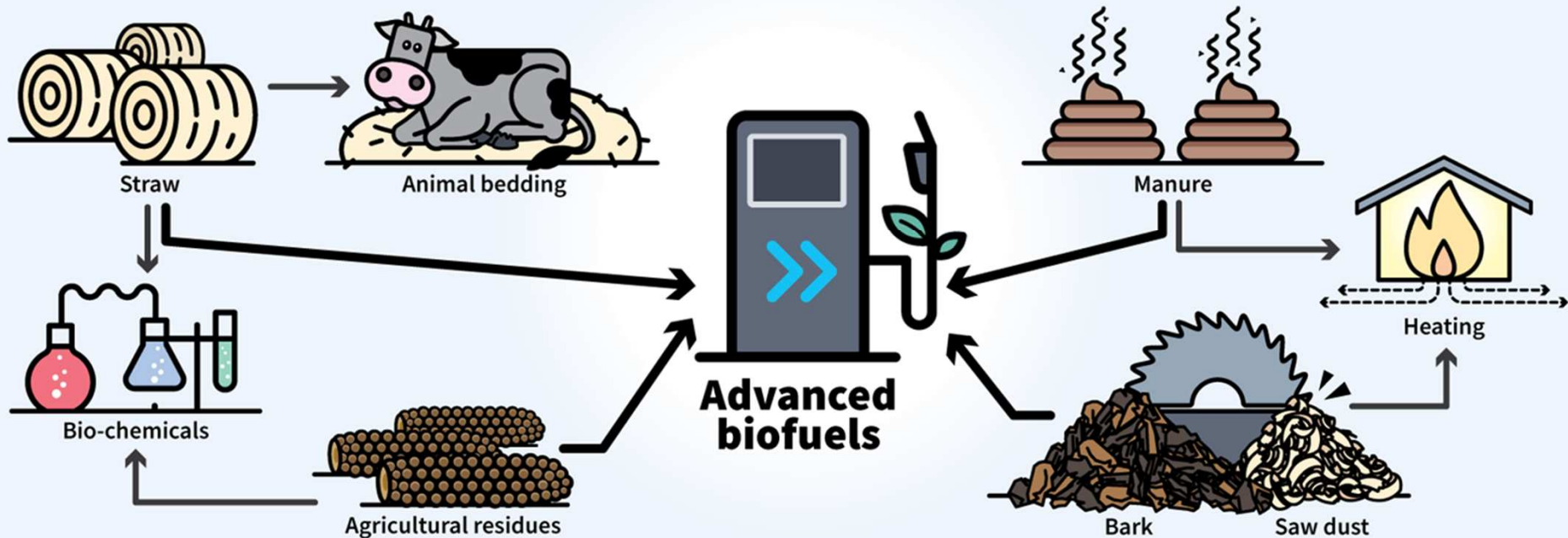
- GHG savings.
- Biodiversity & soil quality.

AVAILABILITY?

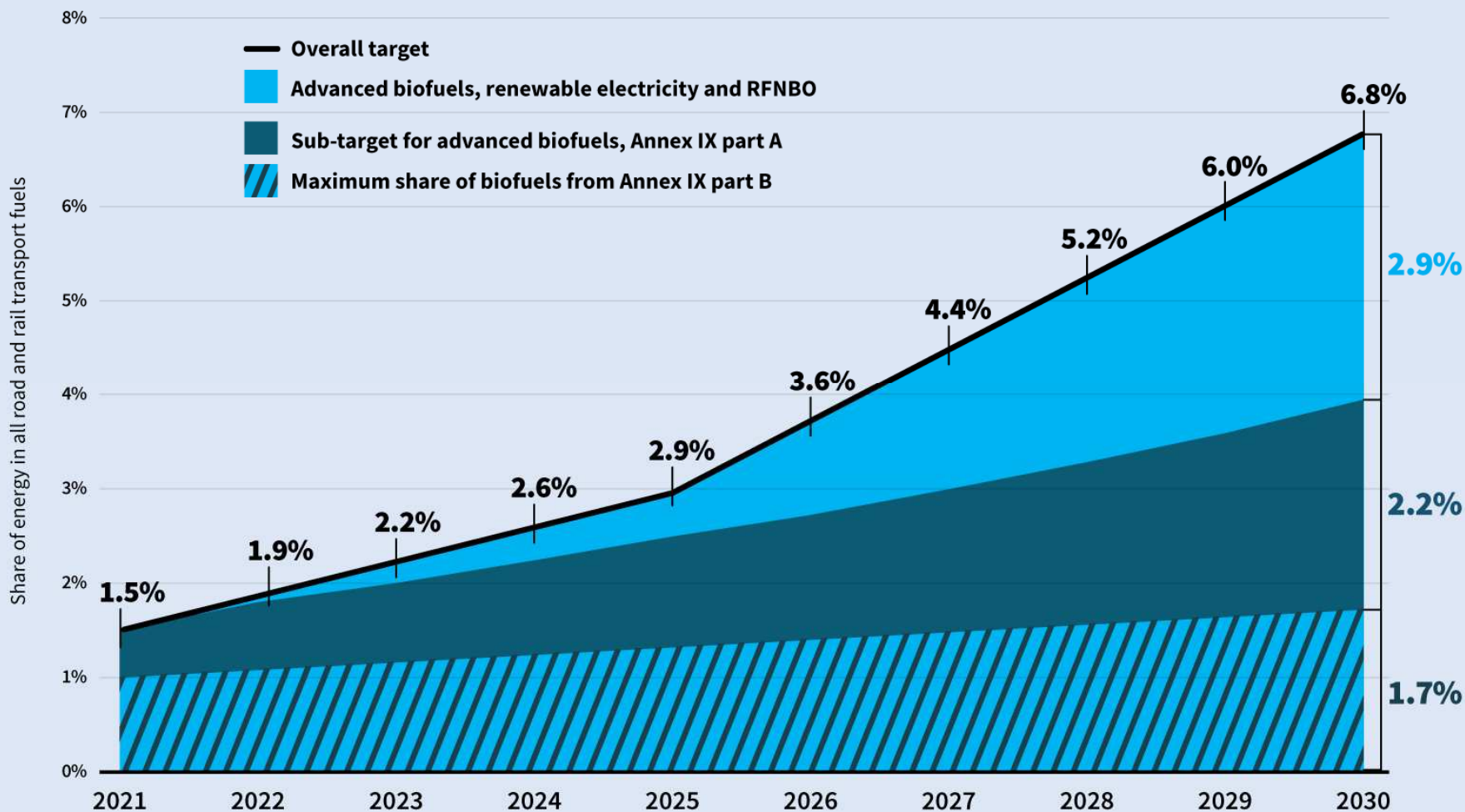
- Availability at sustainable levels.
- Competing uses.

COMPETING USES

Advanced biofuels and their competing uses



Transport & Environment RES-T proposal



ELECTRICITY IN RED II

RED II proposal

- Electricity is part of overall blending mandate.
- Accounting exercise, no real incentive.
- National or EU level RES-E share used to count renewable electricity in transport.

T&E recommendations

1. Create space for electricity in the blending mandate.
2. Create a market for renewable transport energy (Article 25(4)).
3. Do not punish electricity for being efficient: insert a multiplier of 2.5
4. Use national share of renewable electricity.

SUMMARY

➤ **PHASE OUT CROP BASED BIOFUELS**

- Bring the current proposed cap to 0% in 2030.
- Quicker phase-out of crop biodiesel.

➤ **ADVANCED BIOFUELS**

- Appropriate sustainability criteria needed for all types of biomass, including for advanced biofuels.
- Review list of eligible feedstocks.
- Target level should reflect availability at sustainable levels.

➤ **ELECTRICITY IN REDII**

- Create space in blending obligation
- Create a market for renewable transport energy
- Do not punish electricity for being efficient





**THANKS FOR YOUR KIND
ATTENTION! 😊**

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BACK UP SLIDES

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PHASE-OUT LAND BASED BIOFUELS

RED II proposal

- No specific renewables target in transport with crop biofuels.
- Decrease of cap on food & feed crops from 7% to 3.8% in 2030.
- Lower limit can be set on crop-based biodiesel.

T&E recommendations

1. No new national transport target in the RED.
2. Phase-out of crop-based biodiesel as soon as possible and by 2025 at the latest.
3. Phase-out all crop based biofuels completely by 2030 - 0% crop cap.
4. Ensure alternatives to crop biofuels are made sustainably.

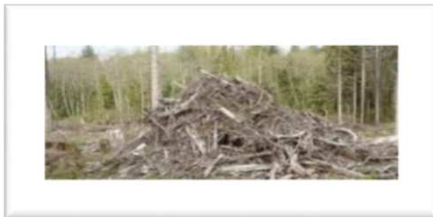
ADVANCED BIOFUELS

RED II proposal

- Separate target in the blending obligation.
- Target focuses on quantity - quality needs to be improved.
- Weak sustainability criteria.

T&E recommendations

1. Review the list of eligible feedstocks & remove unsustainable ones.
2. Include appropriate sustainability criteria.
3. Target level should reflect realistic sustainable availability – 2.3%.



ELECTRICITY

- **Climate benefits**

Cleanest fuel available. EVs have best WTW CO₂ performance compared to conventional and other alternative fuels (DG Move, 2015).

Electricity becoming cleaner - renewables share in electricity is growing - 28% in 2015.

- **Environmental benefits**

Electrified transport will result in less local pollution (SO_x and NO_x) and less noise pollution.

- **Job creation**

EV shift will create many jobs in the EU - Between 660,000 and 1.1 million net additional jobs could be generated by 2030 (2013 study by CE).

- **Cost & competitiveness**

EVs are becoming mainstream - all car manufacturers are entering the race, which will further reduce the cost of ownership.

INVESTMENTS INTO FOOD AND FEED BIOFUELS

	2010		2015	
	Plants	Capacity used	Plants	Capacity use
Biodiesel (FAME)	250	44%	237	45%
Biodiesel (HVO)	1	100%	11	82%
Bioethanol	68	65%	71	68%

Source: USDA FAS

<https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Biofuels%20Annual%20The%20Hague%20EU-28%206-29-2016.pdf>

Only a few new plants since 2010

Ecofys 2012 Grandfathering study

By 2017 95% of biodiesel plants paid back

Usual payback period is 5-10 years

HVO plants could use or are using non-food feedstocks – more flexible technology