



Food not fuel: Part Two

Vegetable oils are being burned in cars despite empty supermarket shelves and skyrocketing prices

June 2022

In May 2022 European supermarkets began to announce the unthinkable. Vegetable oils would be rationed. The sight of bare shelves brought the war in Ukraine to consumers from London to Lisbon. Ukraine accounts for over 40% of global exports of sunflower oil and is also Europe's largest external supplier of rapeseed oil.¹

In a time of scarcity it becomes a question of priority. Restoring supply chains is crucial, but extremely challenging right now. Fortunately, there are simpler ways to alleviate at least the pressure on food supplies. Biofuels are a low hanging fruit governments should start with. T&E's previous report² looked at the amount of wheat and other cereals being wasted for ethanol blended into gasoline, while import dependent countries like Egypt and many other countries in Africa and the Middle East struggle to nourish their people. In this report T&E assesses key vegetable oils, especially sunflower oil and rapeseed oil.

18% of the world's vegetable oil production goes to biodiesel. Nearly all of which is fit for human consumption. T&E's analysis shows, based on the most recent 5 year average, that Europe alone burns over 17.000 tonnes of rapeseed and sunflower oil every day - **the equivalent of nearly 19 million bottles of best cooking oil, every single day.**

In these years, Europe put 58% of all rapeseed oil and 9% of all sunflower oil consumed in its cars and trucks. Also large volumes of soy and palm oil, major staple foods in other regions, are diverted to powering road transport in Europe, 50% for palm and 32% for soy oil consumed in the EU.

This has contributed to vegetable oils showing the highest price increases amongst all food products globally, even before the war (see Fig. 1). Prices in 2022 were up to 2.5 times higher than before 2021, when the price hike started after years of stability, with rapeseed and sunflower oil prices showing above average increases amongst the major vegetable oil types. This increase has

¹ UFOP (2022) Ukraine is the top supplier of rapeseed to the EU, March 2022.

https://www.ufop.de/english/news/chart-week/#kw11_2022

² Transport & Environment (2022) Food not Fuel. 23 March 2022

<https://www.transportenvironment.org/discover/food-not-fuel-why-biofuels-are-a-risk-to-food-security/>

been passed on to those consumers lucky enough to come across stocked shelves. In Germany, for example, cooking oils are among the 6 food categories with the highest price increase.

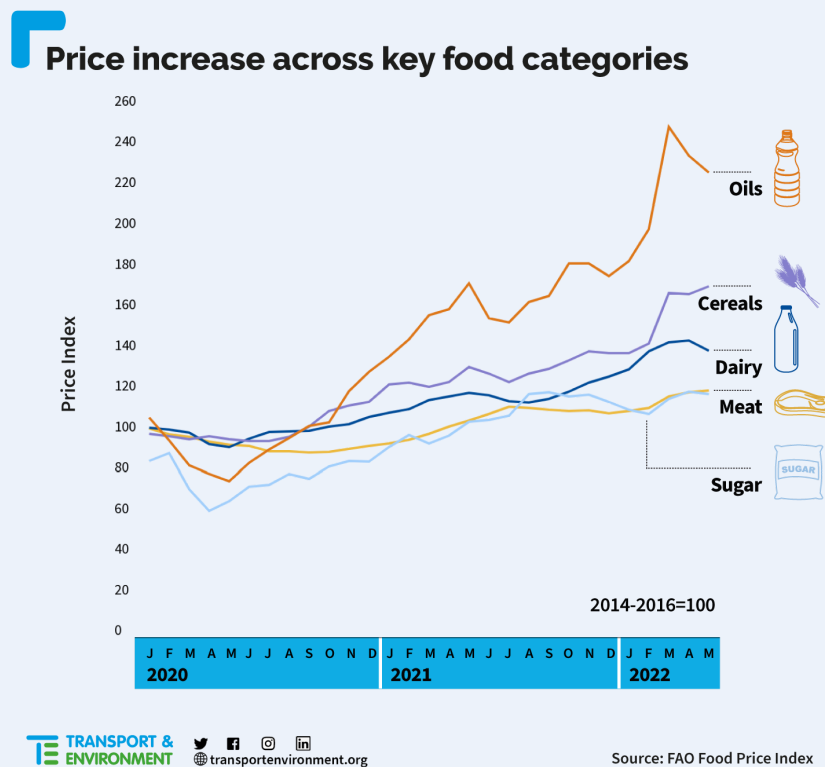


Figure 1: Vegetable oils see the strongest price increases across major food categories.

This has been exacerbated by governments across the world imposing export restrictions on key food crops, including vegetable oils. Recently, Indonesia temporarily banned exports of palm oil to stabilise local cooking oil prices, putting further pressure on global vegetable oil prices. After the ban was lifted, prices stabilised, albeit on a level far exceeding even that of the 2007-2008 global food crisis.

In the face of a global food crisis, we must do all that we can to increase supplies. Ending the burning of food crops in cars and trucks should be an immediate priority.

Policymakers have all the instruments at hand to act with no delay, as it is their very own policy instruments - like the Renewable Energy Directive (RED) in the EU - that created an artificial biofuels market over the last two decades. Now more than ever, politicians must choose food over fuel.

1. Cooking oils continue to power cars & trucks

Globally, 18% of the consumption of vegetable oils goes into biodiesel.³ Also Europe’s production of biodiesel is mainly based on vegetable oils (see Fig. 2), adding substantially to this demand. Between 2015 and 2019, the latest year for which a breakdown of biofuel feedstocks is available for the EU27 and the UK, 58% of all rapeseed oil and 9% of all sunflower oil consumed went into biodiesel. Together, the EU and UK burned 5.9 million tonnes of rapeseed oil and 0.4 million tonnes of sunflower oil in their cars and trucks - per year. With a density of about 0.9 kg/l⁴, this translates into 6.8 billion litres per year, or **18.7 million bottles⁵ of cooking oil per day** - just for rapeseed and sunflower oil. Also large volumes of soy and palm oil, major staple foods in other regions, are diverted to powering cars and trucks in Europe,

accounting for 50% of all palm oil and 32% of all soy oil consumed in the EU. The amount of palm and soy oil burned each year (4.7 Mt) is equivalent to yet another 14 million bottles per day. In 2018, most of the palm oil used for biodiesel originated from Indonesia (65%), while the soybeans for producing soy oil were mainly supplied from South America (73%), with EU farmers providing only 7%.⁶ These numbers only cover vegetable oils used in EU biodiesel production and do not capture additional volumes used for the production of biodiesel imported by the EU from third countries (because of lack of transparency).

Feedstocks used in the production of EU biofuels

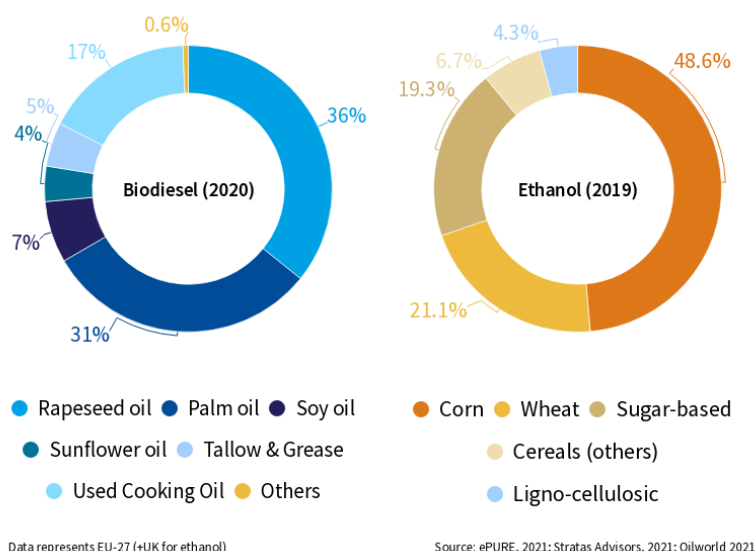


Figure 2: Most biofuels in

Europe are made from food.

Biofuels are also produced for blending with gasoline and also this consumes substantial amounts of crop based feedstocks. According to a recent article citing Matin Qaim, professor at the University of Bonn

³ Source for all figures in this paragraph if not indicated otherwise: Mielke (2021) Oil World Annual 2021, ISTA MielkeGmbH, June 11 2021.

According to Mielke (2021), in 2020, 37.7 Mt of vegetable oils have been used for biodiesel out of a total vegetable oil consumption of 205 Mt as reported by USDA (2022) PSD online database. Accessed 8 June 2022. <https://apps.fas.usda.gov/psdonline/app/index.html#/app/advQuery>

⁴ 0.927 kg/l for soy oil and 0.92 kg/l for rapeseed oil, see [FAO Standard for Named Vegetable Oils](#)

⁵ Bottles of 1L

⁶ Navigant (2022) Technical assistance in realisation of the 5th report on progress of renewable energy in the EU, 5 October 2020. <https://data.europa.eu/doi/10.2833/428247>

(Germany), **ethanol for blending with gasoline consumes 10% of all grains produced globally.**⁷ For more information on the impact of ethanol fuel production on global food security, see T&E's previous report on biofuels and food.⁸

2. Vegetable oils a driver of global food price hikes

According to a most recent UN report, record high food prices are forecasted to push around 180 million people into facing food crisis or worse conditions, with 19 million more facing chronic undernourishment.⁹ Also in wealthy regions like Europe, food price inflation has a severe impact on those people having to survive on low incomes, prompting e.g the German government to consider reduced taxes on staple food.¹⁰

Countries like India are being hit particularly hard. India is the second largest consumer of vegetable oils in the world, relying over 60% on imports to satisfy its domestic demand.¹¹ With shipments from Ukraine representing 14% of all vegetable oil imports of India, the country will have to find alternatives for a substantial gap in their external supplies.¹²

In 2021, after years of stable prices and long before the war on Ukraine started, prices for vegetable oils started soaring. Prices reached heights far beyond the levels seen during the global food crisis in 2007/2008. Strong increases in prices for cooking oil in 2021, for example, forced India to reduce import taxes, to impose stockpile limits and to suspend futures trading in edible oils and oilseeds.¹³ These measures by the Indian government received their first fatal blow in late January 2022 through the announcement of Indonesia to restrict exports of palm oil, as consumer prices for cooking oil also in this country became unaffordable for low income families.¹⁴ Aiming at bringing local prices down, this lifted

⁷ Le Page, M. (2022) Cutting biofuels can help avoid global food shock from Ukraine war, 14 March 2022. <https://www.newscientist.com/article/2312151-cutting-biofuels-can-help-avoid-global-food-shock-from-ukraine-war/>

⁸ Transport & Environment (2022) Food not Fuel. 23 March 2022 <https://www.transportenvironment.org/discover/food-not-fuel-why-biofuels-are-a-risk-to-food-security/>

⁹ UN (2022) Global impact of the war in Ukraine: Billions of people face the greatest cost-of-living crisis in a generation, UN Global Crisis Response Group on Food, Energy and Finance, 8 June 2022. <https://bit.ly/GCRG-Brief-02>

¹⁰ Tagesschau (2022) Keine Mehrwertsteuer auf Obst? 8 June 2022. <https://www.tagesschau.de/wirtschaft/verbraucher/lebensmittel-preise-mehrwertsteuer-101.html>

¹¹ USDA (2022) PSD online database. Accessed 8 June 2022. Accessed March 2022. <https://apps.fas.usda.gov/psdonline/app/index.html#/app/advQuery>

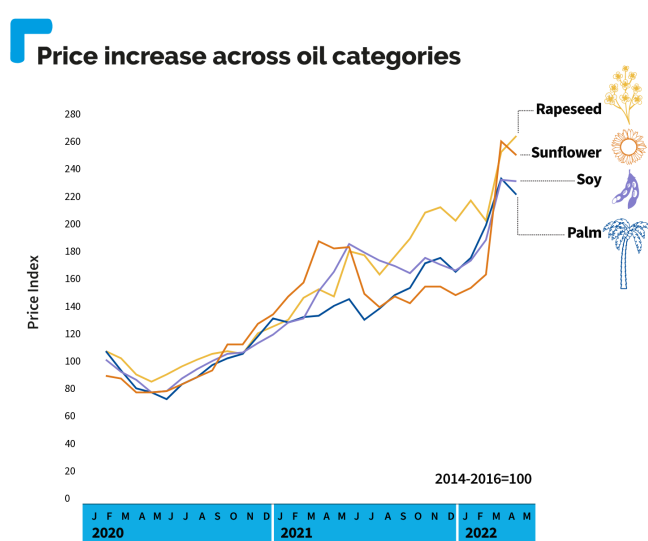
¹² FAO (2022) Detailed Trade Matrix. Accessed 10 June 2022. <https://www.fao.org/faostat/en/#data/TM>

¹³ Jadhav, R. (2022) India struggles to contain vegoil prices as Indonesia restricts exports. 9 Feb 2022 Available: <https://timesofindia.indiatimes.com/business/india-business/india-struggles-to-contain-vegoil-prices-as-indonesia-restricts-exports/articleshow/89438098.cms>

¹⁴ Jadhav, R. (2022) Indonesia's palm oil export curbs upend global edible oil markets. 28 Jan 2022. <https://www.reuters.com/article/indonesia-palmoil-prices-idUSL1N2U80K4>

palm oil prices on the global market to new record levels.¹⁵ The start of the war in Ukraine sent another shock wave through the industry, driving not just palm oil prices to levels never seen before.

The global markets for all types of vegetable oils are highly interconnected. The increase in the prices of one type of oil invariably leads to an increase in prices across all vegetable oil types.¹⁶ Data provided by the Food and Agriculture Organisation of the United Nations (FAO) show the price hike of vegetable oils and cereals to be the main driver of the FAO food price index recently jumping towards new records.¹⁷ The FAO Food Price index for vegetable oils reached an all time annual high in 2021, forcing buyers to pay 1.65 times more for vegetable oils compared to the reference period 2014-2016. This trend continued in 2022, peaking in March when buyers had to pay even 2.5 times more. In this period, rapeseed¹⁸ and sunflower oil¹⁹ experienced the most dramatic price increases (see Fig. 3)



The high prices on international markets are of course being passed on to consumers, even if not in full. In German supermarkets, vegetable oils are now, on average, almost 50% more expensive compared to 2020, placing them amongst the 6 food categories with the highest price increase.²⁰ Also in the UK, 'oils & fats' show the strongest price increase across all food categories²¹ and in Spain, consumers have to pay nearly twice as much now for sunflower oil compared to late 2021.²²

¹⁵ Markets Insider (2022) Palm Oil Price. <https://markets.businessinsider.com/commodities/palm-oil-price>

¹⁶ Searle, S. (2017) How rapeseed and soy biodiesel drive oil palm expansion. ICCT. <https://theicct.org/publication/how-rapeseed-and-soy-biodiesel-drive-oil-palm-expansion/>

¹⁷ FAO (2022) World Food Situation. Accessed 03 June 2022. <https://www.fao.org/worldfoodsituation/foodpricesindex/en/>

¹⁸ IndexMundi (2022) Rapeseed Oil Monthly Price. Accessed 1 June 2022. <https://www.indexmundi.com/commodities/?commodity=rapeseed-oil&months=180>

¹⁹ IndexMundi (2022) Sunflower Oil Monthly Price. Accessed 1 June 2022. <https://www.indexmundi.com/commodities/?commodity=sunflower-oil&months=180>

²⁰ Destatis (2022) Verbraucherpreisindex, accessed 23 May 2022. <https://www-genesis.destatis.de/genesis//online?operation=table&code=61111-0004&bypass=true&levelindex=0&levelid=1654250206724#abreadcrumb> The consumer price index for vegetable oil prices had been at 138.5 in April 2022. The 2020 average had been 92.8.

²¹ ONS (2022) Consumer price inflation tables, Office for National Statistics UK, accessed 2 June 2022. <https://www.ons.gov.uk/economy/inflationandpriceindices/datasets/consumerpriceinflation>

²² Andrina et al (2022) Magdalenas de marca blanca, aceite o lentejas pardinas: ¿Cuánto ha subido el precio de la compra del supermercado? El País, April 14 2022. <https://elpais.com/economia/2022-04-14/magdalenas-de-marca-blanca-aceite-o-lentejas-pardinas-cuanto-ha-subido-el-precio-de-la-compra-del-supermercado.html>

3. Biofuel policies one key driver of vegetable oil price

The biofuel market is entirely driven by flawed policies based on the belief that biofuels can help bring greenhouse gas emissions down in the transport sector. In particular Indonesia (palm oil), Argentina, Brazil and the US (soy oil) and Europe²³ (mainly rapeseed & palm oil), fell for this. T&E and others have shown repeatedly that this is far from the truth.²⁴

In the aftermath of the 2007/2008 food crisis, increasing demand for biofuels had been identified as one major driver for the then price hike in food commodities, in particular for vegetable oils.²⁵ With more and more countries introducing biofuel mandates, this link has only grown stronger,²⁶ causing increasing concerns amongst many stakeholders about these policies.

Most recently, three OECD executives felt compelled to call for a limit on biofuels in the Financial Times.²⁷ Earlier on, the EU Commission expressed their support for EU member states that would want to reduce the share of food crops in biofuels.²⁸ Germany's environment ministry consequently developed a proposal to reduce crop based biofuels in 2023 by nearly 50% and phasing them out completely 2030.²⁹ A similar proposal is in the making in Belgium and many also many other

²³ 'Europe' refers to the EU27+UK throughout the report, if not specified otherwise.

²⁴ Transport & Environment (2016) Globiom: the basis for biofuel policy post-2020. April 2016.

<https://www.transportenvironment.org/publications/globiom-basis-biofuel-policy-post-2020>; Douglas, L.

(2022) U.S. corn-based ethanol worse for the climate than gasoline, study finds. Reuters. 14 February 2022.

<https://www.reuters.com/business/environment/us-corn-based-ethanol-worse-climate-than-gasoline-study-finds-2022-02-14/>

²⁵ Transport & Environment (2017) Biofuels policies drive up food prices, say over 100 studies.

<https://www.transportenvironment.org/discover/biofuels-policies-drive-food-prices-say-over-100-studies/>

²⁶ Menker (2022) Gro's CEO, Sara Menker, Briefs the United Nations Security Council: Conflict and Global Food Security, 19 May 2022.

<https://gro-intelligence.com/blog/gro-s-ceo-sara-menker-briefs-the-united-nations-security-council>

²⁷ Halland et al (2022) Links between energy and food must be weakened, 28 May 2022.

<https://www.ft.com/content/471d4513-176c-4837-a7d4-7ef2609b720a>

²⁸ European Commission (2022) Safeguarding food security and reinforcing the resilience of food systems, 23 March 2022.

https://ec.europa.eu/info/sites/default/files/food-farming-fisheries/key_policies/documents/safeguarding-food-security-reinforcing-resilience-food-systems.pdf

²⁹ Argus (2022) Germany suggests phase out of crop biofuels by 2030, 17 May 2022.

<https://www.argusmedia.com/en/news/2332243-germany-suggests-phase-out-of-crop-biofuels-by-2030>

countries across Europe, including Finland³⁰, Latvia³¹, the Czech Republic, Norway, Sweden and Croatia, have reduced biofuel blending mandates or are considering to do so.³²

4. Biofuels in the European Union

The EU's Renewable Energy Directive (RED), in place since 2009, was supposed to increase the use of sustainable renewable alternative fuels in transport. Instead of leading to a rapid transition to e-mobility, it has mostly incentivised biofuels blending, driving the use of crop based biofuels with negative impacts on climate, the environment and also food supplies. In its current form, the directive allows for the share of biofuels produced from food and feed crop in any member state to be up to one percentage point higher than the share of such fuels in the members states final consumption of energy in 2020 (in the road and rail transport sectors), with an upper limit of 7%. And while the directive attempts to limit at least the biofuels with the highest emissions ('high indirect land-use change-risk feedstocks'), it only applied stricter rules to palm oil, with a long phase out until 2030, and loopholes that are likely to prevent a full phase. It does not apply to soy whose expansion is driving deforestation in South America.

As part of their Fitfor55 package from July 2021, the European Commission proposed changes to this directive, but failed to address its inherent flaws with regards to biofuels. The Commission did not propose any changes that would reduce the reliance on crops in general.

The finally adopted changes to the directive will fortunately not depend on the Commission alone. It will be the result of votes followed by a trilogue between the Commission, the Council of the EU and the European Parliament. **In the latter, the first of two committee's in charge (ENVI - the Environment Committee) has recently voted for a full phase out of soy and palm oil (incl. by-products) in biofuels by July 2023, and a more than 50% reduction in the eligible share of food and feed crop based biofuels.** The European Parliament should seek to maintain these proposals and fight for them in the trilogue process.

³⁰ McGarrity, J. (2022) New relaxations on blending mandates could reduce biofuels demand, FastMarkets, 13 April 2022..

<https://www.fastmarkets.com/insights/new-relaxations-on-blending-mandates-could-reduce-biofuels-demand>

³¹ Aprīņķis (2022) Koalīcija atbalsta priekšlikumu biodegvielas piejaukuma prasības terminētai atcelšanai, 3 May 2022.

<http://www.aprinkis.lv/index.php/ekonomika/32680-koalicija-atbalsta-priekšlikumu-biodegvielas-piejaukuma-prasibas-terminetai-atcelšanai>

³² Claeys, C. (2022) Russia-Ukraine stalls EU Biofuels, but accelerates its medium/long-term targets, StratasAdvisors, 23 May 2022.

<https://energypost.eu/russia-ukraine-stalls-eu-biofuels-but-accelerates-its-medium-long-term-targets/> IEA (2022) Renewable Energy Market Update - May 2022.

<https://www.iea.org/reports/renewable-energy-market-update-may-2022/transport-biofuels>

5. Conclusion

Biofuels from crops never made sense. They are worse for the climate, worse for biodiversity and contribute to higher food prices.

To keep requiring the use of vegetable oils, wheat, corn and other food crops in biofuels to power our cars and trucks is irresponsible.

To even expand the use of crops for energy use would not help to significantly reduce our dependence on Russian fossil fuels, nor would it help to bring prices down at the petrol stations across Europe. It would, however, aggravate the social and environmental impact from bioenergy.

Whilst the initiatives of the European Parliament, Germany and others fall short of really addressing the global food crisis to the extent needed, they are steps in the right direction. More EU governments, but also outside Europe, like the US, Brazil, and Indonesia need to take such steps. And they need to become bolder, to give real and long lasting relief to global food supply disruptions.

We are calling on national governments to immediately halt the use of food and feed crops in biofuels.

We are calling on the European Commission to strongly encourage its member states to halt the use of food and feed crops in biofuels, and refrain from pushing for opening up biodiversity set aside areas for food production, until all other options have been exhausted.

We are calling on the European Commission, the Council and the European Parliament to agree on ending support for crop based biofuels in their current revision of the EU's Renewable Energy Directive.

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