BIOFUEL BLUNDERS

Time to fix two
decades of EU policies
driving food insecurity

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EXECUTIVE SUMMARY

BIOFUELS: A CATASTROPHIC CHOICE

Since 2003, EU policymakers have promoted biofuels to reduce greenhouse gas emissions, but they have turned out to be a disaster for the climate, human rights and food security.

Studies have shown that, when emissions from land-use changes are taken into account, biodiesel made from vegetable oils, such as palm, soy or rapeseed oil, emits more greenhouse gases than fossil fuels.[1]

ON A GLOBAL LEVEL, IN 2022, CROPS USED FOR BIOFUEL PRODUCTION COULD HAVE MET THE BASIC MINIMUM ENERGY REQUIREMENT OF 1.6 BILLION PEOPLE IF THEY HAD BEEN USED FOR HUMAN CONSUMPTION.

In 2022, emissions from biodiesel were estimated to be a shocking 17% more than fossil diesel emissions despite being touted as a climate solution.[2]

EU biofuel policies also incentivize the need for vast areas of land globally to produce feedstocks for the biofuel industry. This led to a global land rush a decade ago,[3] and there are still cases of land grabbing for biofuel production, which severely affect local people and their livelihoods.[4] Human rights violations have also been reported in biofuel production processes.[5]

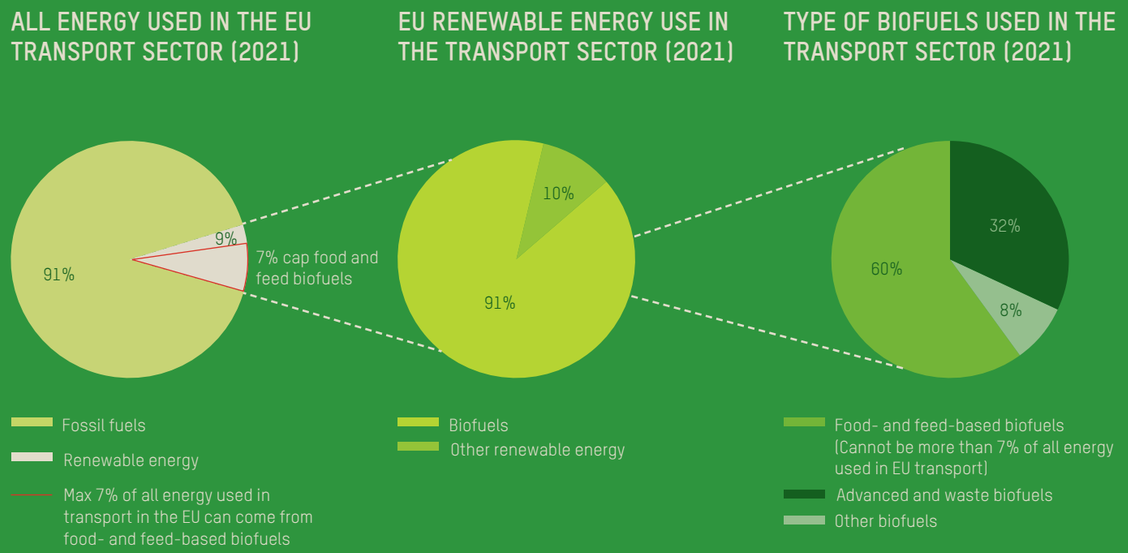
What is more, as this paper details, biofuels are a major threat to food security because of the impact they have on food availability, food prices, food price stability and the social and environmental sustainability of food systems. In a global food crisis, with 783 million people facing hunger in 2022 and 2.4 billion people in a state of food insecurity, it is unacceptable that European countries are still burning food for fuel.[6] On a global level, in 2022, crops used for biofuel production could have met the basic minimum energy requirement of 1.6 billion people if they had been used for human consumption.[7]

A POWERFUL LOBBY IN PURSUIT OF PROFIT

European policies have nurtured the biofuel industry for years, with it becoming an industrial complex solely focused on profit with overwhelming power in the food system. A study by Oxfam in 2016 exposed how the biofuel industry, including producers, feedstock growers, commodity traders, processors and technology providers, spent between €14.5m and €19.5m and hired 399 lobbyists to influence EU policies in 2015.[8]

Today, the biofuel industry continues to have disproportionate political power in discussions on biofuels, leading EU policymakers to put the industry's profit above global food security considerations. Despite striking evidence to the contrary, the biofuel lobby argues time and time again that its existence supports food security. The industry seeks to weaken biofuel policy reform at every step, both at the European and national levels.[9]

FIGURE ES.1 ENERGY USE IN THE EUROPEAN TRANSPORT SECTOR



EUROPE CONTINUES TO BURN FOOD FOR FUEL

Despite the longstanding global food crisis, EU countries continue to burn food for fuel. The EU acknowledged the damaging impacts of food- and feed-based biofuels in 2015 by putting a cap on the use of food and feed crops and building in incentives to move towards so-called advanced and waste biofuels.[10] In 2023, the EU also acknowledged the damaging impacts of food- and feed-based biofuels in the aviation and maritime sectors by excluding their use in these sectors.[11]

However, biofuels are still the main source of renewable energy in transport in Europe, taking up a share of 90% in 2021. Biofuel consumption increased massively (39% more in 2021, compared with 2013) and most biofuels (60%) used in 2021 in the EU were still made from food and feed crops (See Figure ES.1).[12] Moreover, while advanced and waste biofuels are made up of non-food and feed materials – such as energy crops like switch grass and agricultural residues such as empty palm fruit bunches – they potentially have their own negative impacts on food security.

In 2023, the third revision of the EU Renewable Energy Directive (RED III),[13] the legal framework that sets binding renewable energy targets for Member States, including specific rules for the use of biofuels, offered an opportunity to protect food security by phasing out crop-based biofuels entirely. However, yet again, and under pressure from the industry lobby, European policymakers failed to seize this opportunity to once and for all stop allowing the use of food for fuel,[14] or ensure that advanced and waste biofuels do not have a negative impact on food security.[15]

EXECUTIVE SUMMARY

BIOFUEL CONSUMPTION INCREASED MASSIVELY AND MOST BIOFUELS (60%) USED IN 2021 IN THE EU WERE STILL MADE FROM FOOD AND FEED CROPS.

EU MEMBER STATES MUST FIX BIOFUEL POLICIES

While the EU RED III was a missed opportunity in the EU policymaking process, Member States can correct this when they transpose the directive into national law. Member States must revise national biofuel policies in line with RED III by May 2025. Member States should use this moment to fully phase out unsustainable and detrimental biofuels and protect global food security.

This paper looks at four Member States – France, Belgium, the Netherlands and Germany – which each have a lot of room for improvement. Each country largely relies on biofuels in its renewable energy mix for its transport sector. While all four Member States want to move away from food- and feed-based biofuels to advanced and waste biofuels, food and feed crops are still predominantly used. Moreover, none of the four countries has adequate arrangements in place to avoid the negative effects of advanced and waste biofuels on food security.

RECOMMENDATIONS FOR SUSTAINABLE BIOFUEL AND TRANSPORT POLICIES

RED III creates legislative space for EU Member States to make national biofuel policies more sustainable and protect food security. Oxfam calls on Member States to:

Phase out biofuels that have negative impacts on food security

- Member States should phase out the use of food- and feed-based biofuels. They can do this by setting the cap for food- and feed-based biofuels at 0% as early as possible and no later than 2030.
- As a stopgap measure, Member States should immediately phase out feedstocks with a high indirect land-use change (ILUC) risk: palm and soy oil.[16] When doing so, they should accordingly reduce the limit on food and feed crops. Otherwise, the excluded high ILUC-risk crops will just be replaced by other food and feed crops.
- Member States should only count advanced and waste (Annex IX of the RED) biofuels towards their renewable energy target for the transport sector after conducting a robust, independent and thorough impact assessment. This should incorporate an analysis of the application of the cascading principle, the principle of waste hierarchy and a fair share principle. Competing uses of the raw materials will therefore be considered, avoiding diverting raw materials, by-products or residues from a higher-value use, in particular in the food value chain.

In addition, the four investigated Member States (France, Belgium, the Netherlands and Germany) should:

- Assess the availability of feedstocks for advanced and waste biofuels needed to reach the sustainable aviation fuel targets while also taking into account the fair global share. [France].
- Following the biennial evaluation of the human rights and sustainability implications of Belgian biofuel policies inside and outside the EU, Belgium should act on the outcomes of the evaluation and embed these in the sustainability criteria. [Belgium].
- Operationalize the fair share principle for the use of global biomass for national biofuel consumption. [Netherlands].

While working towards the phase-out of all food- and feed-based biofuels, as a stopgap measure, Germany should immediately phase out soy biofuels based on its high ILUC risk. When doing so, it should accordingly reduce the limit on food and feed crops, otherwise the excluded high ILUC-risk crops will just be replaced by other crops. [Germany].

Amend sustainability criteria and reporting

- As long as Member States are not allowed by the RED to add sustainability criteria at national level, they should start adding the criteria to their monitoring and reporting requirements. This should include:
  - Correct accounting and reporting for ILUC emissions.
  - Monitoring the impact of biofuels on food prices and food price stability and food availability.
  - Social reporting to protect people in biofuel supply chains, especially when production is in third countries.

Make changes in transport systems

- Changing the energy supply alone will not bring about a truly sustainable transport system. Member States should focus on energy demand reduction, public transport and active mobility, a fair distribution of the available energy, the electrification of transport systems and energy efficiency.

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Oxfam acknowledges the assistance of: Alba Saray Pérez Terán, Alice Horrocks, Ally Davis, Amélie Laurent, Barbara Smailagic (Transport & Environment), Chris Malins (Cerulogy), Evelien van Roemburg, Hanna Saarinen, Jacqueline Persson, Jade Tenwick, Kathrin Anna Frank (Deutsche Umwelthilfe), Manuela Cicirello, Marc-Olivier Herman, Nienke Onnen (Natuur & Milieu), and Quentin Ghesquière in its production.

Designed by: Studio Kohl

For further information on the issues raised in this publication please email advocacy@oxfaminternational.org

Published by Oxfam GB for Oxfam International under DOI: 10.21201/2024.000029.
Oxfam GB, Oxfam House, John Smith Drive, Cowley, Oxford, OX4 2JY, UK.

NOTES

1. H. Valin, D. Peters, M. van den Berg, S. Frank, P. Havlik, N. Forsell and C. Hamelinck. (2015). *The Land Use Change Impact of Biofuels Consumed in the EU*. ECOFYS. Accessed 29 May 2024. https://energy.ec.europa.eu/system/files/2016-03/Final%2520Report_GL0BI0M_publication_0.pdf/; C. Malins. (2012). 'A Model-based Quantitative Assessment of the Carbon Benefits of Introducing ILUC Factors in the European Renewable Energy Directive'. *GCB Bioenergy*, 5(6), 639–51.https://doi.org/10.1111/j.1757-1707.2012.01207.x.

In addition, Lark et al. conclude that the carbon intensity of maize-based ethanol in the USA is no less than that of gasoline and probably at least 24% higher. See T.J. Lark, N.P. Hendricks, A. Smith, N. Pates, S.A. Spawn-Lee, M. Bougie, E.G. Booth, C.J. Kucharik and H.K. Gibbs. (2022). 'Environmental Outcomes of the US Renewable Fuel Standard'. *PNAS*, 119(9), e2101084119. https://www.pnas.org/doi/10.1073/pnas.2101084119.

2. S. Suzan. (2023). *Biofuels: From Unsustainable Crops to Dubious Waste? Analysis of the European Biofuels Market*. Transport & Environment. Accessed 29 May 2024. https://www.transportenvironment.org/articles/biofuels-from-unsustainable-crops-to-dubious-waste

3. International Institute for Environment and Development (IIED). (n.d.). *Understanding Growing Pressures on Land: 'Land Grabbing' and Beyond*. Accessed 4 December 2023.https://www.iied.org/understanding-growing-pressures-land-land-grabbing-beyond; W. Anseeuw, L. Alden Wily, L. Cotula and M. Taylor. (2012). *Land Rights and the Rush for Land: Findings of the Global Commercial Pressures on Land Research Project*. International Land Coalition. Accessed 29 May 2024. https://grassrootsjusticenetwork.org/wp-content/uploads/2017/02/ILC-GSR-report_ENG.pdf

4. IPES-Food. (2024). *Land Squeeze: What is Driving Unprecedented Pressures on Global Farmland and What Can be Done to Achieve Equitable Access to Land?* International Panel of Experts on Sustainable Food Systems. Accessed 29 May 2024. https://ipes-food.org/wp-content/uploads/2024/05/LandSqueeze.pdf; M.-O. Herman and J. Mayrhofer. (2016). *Burning Land, Burning the Climate: The Biofuel Industry's Capture of EU Bioenergy Policy*. Oxfam International. Accessed 29 May 2024. https://oi-files-d8-prod.s3.eu-west-2.amazonaws.com/s3fs-public/bp-burning-land-climate-eu-bioenergy-261016-en_0.pdf. For examples in Ghana, see B. Aha and J.Z. Ayitey. (2017). 'Biofuels and the Hazards of Land Grabbing: Tenure (In)security and Indigenous Farmers' Investment Decisions in Ghana'. *Land Use Policy*, 60, 48–59. For examples in Brazil, see E. Cudlínová, V. Giacomelli Sobrinho, M. Lapka and L. Salvati. (2020). 'New Forms of Land Grabbing Due to the Bioeconomy: The Case of Brazil'. *Sustainability*, 12(8), 3395. https://doi.org/10.3390/su12083395

5. Oxfam België/Belgique. (2021). *Fueling Human Rights Violations: Consequences of EU and Belgian Biofuel Policies in Northern Peru*. Accessed 29 May 2024. https://oxfambelgie.be/sites/default/files/2022-06/fueling_human_rights_violations_oxfam_belgique_report_1.pdf

6. Food and Agriculture Organization of the United Nations (FAO). (2023). *The State of Food Security and Nutrition in the World 2023*. Accessed 29 May 2024. https://www.fao.org/publications/home/fao-flagship-publications/the-state-of-food-security-and-nutrition-in-the-world/en

7. This is 1.3 billion people if adjusted for the fact that distillers' grains from ethanol production can be returned to the market as animal feed. C. Malins. (2024). *How Does Biofuel Demand Affect Food Markets*? Cerology. Accessed 7 July 2024. https://www.epure.org/news/eu-biofuels-chain-joint-statement-on-the-european-commission-communication-on-food-security/

8. M.-O. Herman and J. Mayrhofer. (2016). *Burning Land, Burning the Climate*, op. cit.

9. ePure. (30 March 2022). *EU Biofuels Chain: Joint statement on the European Commission communication on food security*. Press release. Accessed 29 May 2024. https://www.epure.org/news/eu-biofuels-chain-joint-statement-on-the-european-commission-communication-on-food-security; S. Vackeová and X. Noyon. (18 March 2022). *RePowerEU: biofuels play a strategic role in boosting Europe's energy independence*. Euractiv [sponsored by the European Biodiesel Board]. Accessed 29 May 2024. https://www.euractiv.com/section/biofuels/opinion/repowereu-biofuels-play-a-strategic-role-in-boosting-europes-energy-independence/; EU Biofuels Chain. (29 August 2022). *Five reasons Europe needs to do better on biofuels*. Politico [Sponsored by EU Biofuel Chain]. Accessed 29 May 2024. https://www.politico.eu/sponsored-content/five-reasons-europe-needs-to-do-better-on-biofuels.

10. European Commission. (n.d.). *Biofuels*. Accessed 9 October 2023. https://energy.ec.europa.eu/topics/renewable-energy/bioenergy/biofuels_en

11. European Parliament and Council of the European Union. (2023). *Regulation (EU) 2023/1805 of the European Parliament and of the Council of 13 September 2023 on the Use of Renewable and Low-carbon Fuels in Maritime Transport, and Amending Directive 2009/16/EC*. Accessed 29 May 2024. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R1805; European Parliament and Council of the European Union. (2023). *Regulation (EU) 2023/2405 of the European Parliament and of the Council of 18 October 2023 on Ensuring a Level Playing Field for Sustainable Air Transport (ReFuelEU Aviation)*. Accessed 29 May 2024. https://eur-lex.europa.eu/eli/reg/2023/2405/oj

12. Authors' calculations to generate absolute values without the use of multiplicators. Based on: European Commission. (2023). *Union Bioenergy Sustainability Report*. Accessed 29 May 2024. https://eur-lex.europa.eu/resource.html?uri=cellar:b27b8b93-725d-11ee-9220-01aa75ed71a1.0001.02/DOC_2&format=PDF; Eurostat. (2021). *SHARES up to 2020 and 2021: Summary Results*. Accessed 29 May 2024. https://ec.europa.eu/eurostat/web/energy/database/additional-data#Short%20assessment%20of%20renewable%20energy%20sources%20

13. The first version of the Renewable Energy Directive was agreed upon in 2009, and revised in 2018 as RED II. The third RED revision started in 2021 under the Fit for 55 package and was finalized in 2023.

14. For examples of the pressure exercised by biofuel lobby association ePure, see D. Carpintero. (9 December 2022). *Biofuels and sustainability: time for the EU to get its story straight*. Euractiv. Accessed 29 May 2024. https://www.euractiv.com/section/biofuels/opinion/biofuels-and-sustainability-time-for-the-eu-to-get-its-story-straight; e.Pure. (8 April 2022). *EU renewable ethanol is part of the solution to Europe's food security and fossil-free energy*. Accessed 29 May 2024. https://www.epure.org/news/eu-renewable-ethanol-is-part-of-the-solution-to-europes-food-security-and-fossil-free-energy

15. I. Vera et al. (2022). 'Land Use for Bioenergy: Synergies and Trade-offs Between Sustainable Development Goals'. *Renewable and Sustainable Energy Reviews*, 161, 112409. Accessed 29 May 2024. https://www.sciencedirect.com/science/article/pii/S1364032122003173?ref=pdf_download&fr=RR-2&rr=8753486cfd7b74fa

16. Sugar cane could also be considered a high-ILUC risk feedstock. Transport & Environment (2019). *High & low ILUC risk biofuels: Policy recommendations for the EU delegated act*. Accessed 6 June 2024. https://www.transportenvironment.org/uploads/files/2019_01_High_low_ILUC_TE_briefing_final.pdf