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How aviation is fueling conflict and climate disaster

Briefing

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Introduction

Putin's war in Ukraine has also led to disruption for the European airline sector, with companies suspending flights to and over Russia, Belarus and Ukraine and kerosene prices soaring. The war in Ukraine is also driving up the price of fuel which represents a quarter or more of airlines' cost base.

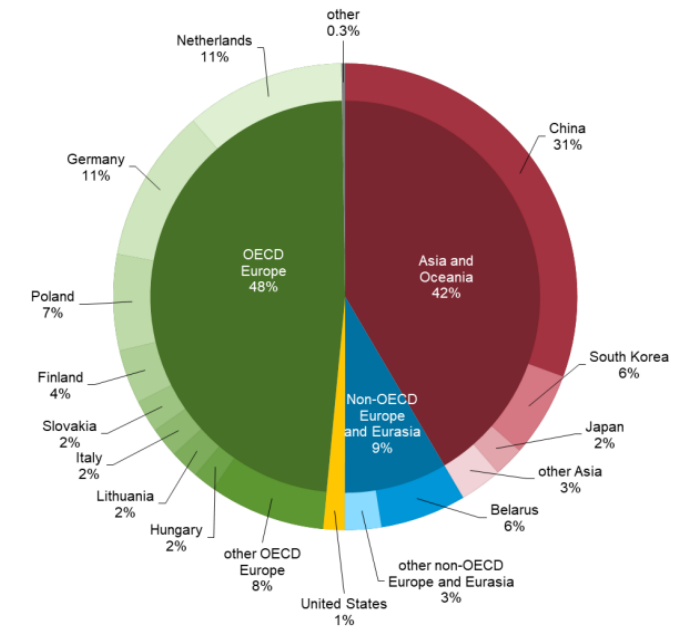
As airlines expect another difficult twelve months, the risk is high that current developments in Ukraine will make those companies that have already received billions of Euros during the COVID crisis even more dependent on public support funds in the long-term. Finnair, which has been particularly affected by Russia-EU airspace sanctions, has already prepared to furlough staff and might become the first airline needing new bailouts.

Dependence on fossil fuel for transport is fueling conflicts and climate change

Almost 70% of all crude oil imports into the EU are used in the transport sector to power planes, cars, trucks and ships. The European transport sector, and with it aviation, is highly dependent on fossil fuel imports from conflict-ridden parts of the world, including Russia (26.9% of oil imports), Iraq (9%), Nigeria (7.9%) and Saudi Arabia (7.7%), according to data from 2019, the last "normal" year for transport. Russia is the most important supplier of crude oil to the EU. In 2019 alone, the EU has spent over 55 billion Euros on 970 million barrels of oil from Russia. Oil exports are the biggest source of income for Russia and likely to fuel Putin's war machine.

Around half of Russia's oil exports go to European OECD countries, with the Netherlands and Germany the most important countries of destination, followed by Poland and Finland.

Figure 2. Russia's crude oil and condensate exports by destination, 2020



Source: Graph by the U.S. Energy Information Administration, based on Russian export statistics and partner country import statistics from Global Trade Tracker

Source: https://www.eia.gov/international/content/analysis/countries_long/Russia/russia.pdf

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Analysis of fossil fuel flows to the aviation sector

At around 27%, Russia accounts for the largest share of oil imports into the EU of which almost 70% is used for the transport sector, with only 3% of EU domestic production. This means that about one in four flights in Europe are powered by oil that is now likely to be financing Putin's war in Ukraine.

Taking all flights in the EU together, the aviation industry consumes about 62.8 million tonnes of jet fuel in an average (pre-pandemic) year. Short-haul flights with train alternatives in the EU, UK, CH and NO alone consume about 4.35 million tonnes of fossil fuel annually, causing about 23.4[1] million tonnes of greenhouse gas emissions, according to recent research by Greenpeace EU.

Greenpeace has further estimated that 100,000 ghost flights took place this winter, consuming around 360,000[2] tons of jet fuel. Due to the upcoming summer holiday season the number of ghost flights is expected to decrease during aviation's summer schedule, but the war in Ukraine and the ongoing pandemic situation is creating a high level of uncertainty for the aviation sector.

By immediately stopping the top 250 short-haul flights in Europe,[3] **Europe's demand for Russian crude oil could be reduced by 2 billion Euros**.[4] By banning empty or near-empty ghost flights, Russia could be deprived of about **185 million Euros** that are likely to be financing Putin's war in Ukraine.

Climate impact of aviation

Due to its high dependency on fossil fuel, aviation is a major contributor to rising greenhouse gas emissions. In recent years, annual emissions from aviation have increased by 4-5%, up to the start of the COVID crisis in 2020. Although the pandemic has led to a temporary decline in aviation emissions, air travel is projected to return to its skyrocketing pre-pandemic levels as early as 2024.

Without political action to counter its growth prospects, the aviation industry will become one of the biggest greenhouse gas emitting sectors globally and by 2050 it will have consumed up to a quarter of the global carbon budget for achieving the 1.5°C Paris Agreement goal. With the actual climate impacts of flying up to three times worse than the emission of greenhouse gases alone, decarbonising aviation will be crucial to reaching the Paris Climate targets.

Aviation has been the fastest growing source of transport-related greenhouse gas emissions in the European Union in recent decades. While Europe has reduced its greenhouse gas emissions overall

[1] 23.4 tons of GHG from short-haul flights equals - with a factor 1.7 for non-CO_2 effects - 13.7 million tons of COhttps://ec.europa.eu/eurostat/statistics-explained/index.php?title=Oil_and_petroleum_products_-_a_statistical_overview&oldid=315177 equalling around 4.35 mio tons of jet fuel.

[2] Our calculation for this is: Average standard aircraft (e.g. Boeing 747-400 with around 200 seats), average distance (around 900 km). For this distance the kerosene consumption is around 3.6 tonnes.

[3] except those ones where a train does not exist or where a train goes a route which is more than 5 times longer (e.g. Helsinki-Oslo)

[4] Our calculation for this is: by stopping the 250 busiest short-haul flights in the EU (and UK, Switzerland and Norway), not including flights to islands without train connections and flights where the train alternative takes a much longer route, 2.34 million tonnes of greenhouse gas could be saved, equivalent to the burning of 4.35 million tonnes (3.43 million barrels) of jet fuel. These 250 short-haul flight routes account for 86% of the passengers in the EU (and UK, Switzerland, Norway) flying on all short-haul routes, apart from flights to islands without train connections and flights without a suitable train alternative. According to Eurostat data, in 2019, the EU imported 970 million barrels of crude oil from Russia at a value of 61.7 bn USD (around 55 bn EUR). The 3.43 million barrels of jet fuel needed for short-haul flights would therefore have cost around 2 bn Euros to buy from Russia (ignoring the losses at oil refineries). We assume that in the current Ukraine war crisis, any reduction in demand for oil would reduce imports from Russia by 1:1.

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by more than 30% since 1990, emissions from aviation have more than doubled and have been a major contributor to the trend of rising transport emissions in Europe. Carbon pollution from flying in Europe has risen by a staggering 26% in the last five years (before the pandemic) and airlines rank among the biggest carbon emitters in Europe in 2018.

Short-haul flights in Europe with train alternatives account for about 23.4 million tonnes of greenhouse gas emissions annually. In addition to the CO_2 impact, the non-CO_2 impact of air transport (e.g. nitrogen oxides (NOx), soot particles, water vapour) is two times worse than its CO_2 emissions, as demonstrated by independent scientists and confirmed by a study published by the European Commission.

62% of Europeans support a ban on short-haul flights, according to a survey conducted by the European Investment Bank (EIB) and a large majority supports the development of daytime and night trains.

Only 1% of the world's population flies and is responsible for half of global aviation emissions, with many frequent flyers being European. If current trends continue, the aviation industry will be a major contributor to climate collapse.

Alternatives to fossil fuels in aviation: reduction of flights

As Europe is trying to cut ties with (Russian) fossil fuels, a debate about alternatives has begun. With the transport sector being highly dependent on oil and consuming two thirds of the EU's oil imports, clearly decarbonisation of this sector will be decisive in reducing oil dependency.

For years the aviation industry, with its high dependence on fossil fuels, has claimed that it will achieve net-zero emissions by 2050 through carbon offsetting and so-called Sustainable Aviation Fuel (SAF). SAF is an umbrella term for a variety of relatively new types of jet fuel intended to replace fossil fuel based kerosene.

While certain fuels made from 100% renewable electricity (e-kerosene and/or green hydrogen) could provide an opportunity for airlines to reduce greenhouse gas emissions in the long-term for the few flights which will never be be possible to avoid or move to rail, the vast majority of SAF based on biomass or waste is either non-sustainable or unavailable in sufficient quantities for today´s aviation demand and would not make any difference to decarbonising aviation.

Before the COVID pandemic, less than 200,000 tonnes of sustainable aviation fuel was produced globally, a tiny fraction of the 300 million tonnes of jet fuel needed by commercial airlines in a normal year. The International Energy Agency expects that SAFs will make up 19% of airline fuels by 2040, meaning that 81% will still be fossil-fuel based kerosene, which is not enough to bring aviation in line with the Paris agreement.

Despite these limitations, together with carbon offsetting, SAFs are the most popular "strategy" for airlines to reduce emissions in the long-term and their promotion is often used by companies to appear 'green' - so-called greenwashing. In reality, the aviation industry lacks the short-term strategies that are needed to decarbonise aviation in line with the Paris Climate targets over the next eight years.

Greenpeace is calling for the full decarbonisation of aviation in Europe by 2040, which means a full phase-out of any fossil fuel through a reduction in air traffic and their replacement with fuels which are made from 100% renewable energy for the remaining air traffic.

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Greenpeace demands to policy makers

EU leaders should act to reduce oil consumption in the aviation sector and bring the sector in line with the Paris Climate Agreement which requires a full decarbonization of the European transport sector by 2040. In order to reduce the European aviation sector's dependency on Russian fossil fuels, and oil in general, Greenpeace calls on European leaders to

1. Ban all short-haul flights in Europe where train alternatives exist

The European Council should agree to immediately ban all short-haul flights as an emergency measure to reduce oil consumption in Europe. This immediate measure should be integrated in the Air Services Regulation and the Commission should ensure that its proposal to revise the Regulation, expected by the end of the year, includes a ban on short-haul flights in Europe for which train and ferry alternatives are available.

2. Prevent further ghost flights in Europe

The European Council should agree to prevent empty or near empty 'ghost flights' for all Member States and airlines, by exempting further implementation of the Airport Slot Regulation and thus halting the obligation for airlines to use 50 to 80% of their slots in order not to lose landing rights.

3. Further reduce the dependency of aviation on fossil fuel

The European Council should take immediate action to reduce the overall demand for aviation by supporting measures that reduce the need for short- and long-haul flights, through the strong regulation of air traffic, a modal shift to less carbon intensive means of transport, as well as through measures to replace the need for mobility by, for example, the further promotion of alternative meeting technologies for business as well as domestic tourism.

4. Phasing out all fossil fuel subsidies in the aviation sector

The European Council should agree to immediately and fully phase out all forms of subsidies for the aviation sector while ensuring kerosene is properly taxed, taking into account its environmental impact. This includes the introduction of an effective kerosene tax and VAT on international tickets.

5. Using Cohesion and Recovery Funds to support rail

The European Council should call on all Member States to fully use all funds that are made available through Cohesion Funding as well as the Recovery and Resilience Fund to support investment in rail infrastructure, rolling stock and staff to ensure proper alternatives to polluting flights become more and more available. This massive investment should include the installation of at least 30 new day and night train connections in the next three years.

6. Implement a long-distance Rail Action Plan

The European Council should instruct the European Commission to immediately start with the full implementation of its Action Plan to boost long-distance and cross-border passenger rail.