

New study confirms CO₂ reduction benefits of shifting short-haul flights to rail are limited

- **While a direct comparison of current emissions shows that rail has lower CO₂ emissions per passenger kilometre than air travel, the CO₂ benefits of shifting short-haul flights to rail are limited and generate other environmental as well as social and economic costs.**
- **Multiple factors need to be considered when assessing the optimal policy for short-haul aviation in Europe. Flights under 500km represent 1–2% of total EU aviation emissions. Mandatory shifts from air to rail is not a silver bullet for curbing emissions. They would also compromise the ability of short-haul aviation to be the testbed for aviation decarbonisation.**
- **Aviation associations call for greater balance and factual accuracy in the debate around the intermodality of sustainable transport. All transport modes have their role to play; it's not about aviation or rail, but aviation and rail.**

Brussels/London, 28 March 2022 – With an increase in global decarbonisation targets, transportation has come under increased scrutiny, and in particular aviation. One solution that has been proposed to reduce greenhouse gas emissions from transport is a modal shift from air to rail. This has already been encouraged both through massive investment in rail infrastructure and by bans and taxes on short-haul flights in certain countries, with potentially more to follow.

However, a new study commissioned by European aviation associations and carried out by economics and finance consultancy Oxera, confirms that the extent to which rail travel can substitute for air travel is limited.

The report, "[Short-haul flying and sustainable connectivity](#)", highlights the fact that the picture is far more complex than simply shifting from one transport mode to another. Building new railway lines has a high environmental cost due to the CO₂ emissions associated with cement and steel production, and emissions from the fuel used for construction of infrastructure. The study also identifies significant impact on biodiversity and damage to wildlife habitats as additional environmental factors.

For many short-haul air routes with a lower traffic frequency, or at airports without a good high-speed rail connection, rail cannot be economically viable as it is based on a different business model with lower occupancy and speed rates. Moreover, there is no guarantee that passengers will switch from air to rail, choosing to travel by car instead, which could lead to higher CO₂ emissions.

Importantly, aviation decarbonisation will be well underway by the time comparable rail infrastructure is deployed. Hybrid-electric aircraft will be trialled first on regional routes by 2030, bringing CO₂ emissions down by 50 per cent per flight in that market segment. Therefore, as both the rail and aviation sectors decarbonise, the gap between air and rail CO₂ emissions will be further reduced. In addition, as the routes most likely to decarbonise first, short-haul flights within Europe will play a significant role in rolling out lower carbon disruptive technologies first thereby accelerating wider decarbonisation roll-out.

Regional airports and airlines are crucial in their region's economic and social development, as they ensure local economies can access bigger economic centres. They are key to the EU's cohesion policy and essential tools to reduce territorial and social inequality. The European Parliament estimates that the aviation sector supports around five million jobs and contributes €110bn to European GDP per year.¹ If indirect effects are included, these numbers rise to 12 million jobs and at least €700bn in GDP.²

The heads of the aviation associations therefore call upon policymakers to take these environmental, social and economic factors into account when considering how to optimise the decarbonisation of regional transport in Europe.

¹ Erbach, G. (2018), 'CO2 emissions from aviation', European Parliament, European Parliamentary Research Service, accessible [here](#)

² Air Transport Action Group, (2019), 'Aviation Benefits Report 2019'

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About ACI EUROPE (Airport Council International)

ACI EUROPE is the European region of Airports Council International (ACI), the only worldwide professional association of airport operators. ACI EUROPE represents over 500 airports in 55 countries. Our members facilitate over 90% of commercial air traffic in Europe. Air transport supports 13.5 million jobs, generating €886 billion in European economic activity (4.4% of GDP). In response to the Climate Emergency, in June 2019 our members committed to achieving Net Zero carbon emissions for operations under their control by 2050, without offsetting.

About CANSO

CANSO – the Civil Air Navigation Services Organisation – is the global voice of the air traffic management (ATM) industry and is shaping our future skies. Our members support over 90% of the world’s air traffic and include air navigation service providers, airspace users and operators, manufacturers and aviation industry suppliers. We raise the bar on global ATM performance by connecting the industry to share knowledge, expertise and innovation.

About European Regions Airline Association (ERA)

Founded in 1980, European Regions Airline Association (ERA) is a non-profit trade association representing around 58 airlines and 136 companies involved in European air transport, and is the only association that bring together the entire spectrum of companies involved in European aviation. The association supports and defends the airline industry in providing safe, efficient and sustainable air connectivity to all regions of Europe. By lobbying European regulatory bodies on policy matters, ERA promotes and protects social responsibility, environmental sustainability and the development of regional economies and local communities.