



In 2019, ENAIRE's management practices avoided the consumption of 95,000 tonnes of fuel and the emission of 298,000 tonnes of CO₂ into the atmosphere

- They did so through a set of measures implemented in recent years to improve flight efficiency
- 58% of the aircraft en route managed to reduce the duration of their flights
- The excess taxi-out time at the main Spanish airports is one of the lowest among Europe's major airports

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The air traffic management measures adopted by ENAIRE in 2019 allowed airlines to save 8.6 million nautical miles, which resulted in saving 95,000 tonnes of fuel and avoided the atmospheric emission of 298,000 tonnes of CO₂, just through direct routing (flights shortened by controllers). So said José Antonio Aznar, head of ENAIRE's Quality and Environment Division at the virtual seminar on the *Decarbonization of Aviation.Perspectives for aeronautical research in Europe*.

In his presentation (*Focus on operations, the point of view of ANSP and airlines*), Aznar underscored some of the main measures taken by ENAIRE in recent years to increase flight efficiency and help fight climate change, most notably:

- Improved civil-military coordination: to yield an optimised network of air routes and shorten flight distances.
- PBN (Performance-Based Navigation) procedures: to make it easier to create more flexible and efficient flight paths.

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- Implementation of Free Routes: to allow aircraft to fly more direct paths.
- Authorisation of direct routing: the controller gives pilots a change in the planned flight path to make it shorter and more efficient.
- The use of continuous descents: making it possible for flights to descend continuously instead of in stages, as is usually done today (step-down).

In his presentation, José Antonio Aznar stated that, through these and other measures, ENAIRe has managed to reduce the en route flight distance of 58% of the aircraft that operate in our airspace, and caused the excess taxi-out (time between when the tower controller instructs the pilot to proceed to the take-off area and the actual take-off) at the main Spanish airports to be among the lowest in Europe.

The event, organised by the Polytechnic University of Madrid (UPM), was attended by representatives of Portugal's Advanced Technical Institute, the National Aviation University of Ukraine and the UPM itself.