



# Five Pillars for a Green Single European Sky

## A call by EASA and EUROCONTROL

The European Union strives to become the first climate-neutral region in the world by 2050 and reduce the greenhouse gas (GHG) emissions from transport by 90 % compared with 1990. Until the COVID-19 pandemic, aviation was the only mode of transport that continued to increase its carbon emissions: by 85 % between 1990 and 2017. The share of aviation's emissions in transport had increased to 13.2% in 2018. Contrary to road transport, however, there is today no zero local emissions aircraft available for commercial air transport.

A wide consensus exists on the ambitious decarbonization objectives of the air transport sector. These can be achieved only with decisive and coordinated actions including the large-scale introduction of Sustainable Aviation Fuels, low and zero emissions aircraft, as well as operational improvements and a regulatory framework incentivizing innovation and performance.

Operational improvements are of particular interest as they offer emissions reductions that can be implemented relatively fast and at relatively low cost. The potential for such carbon emissions reduction through operational improvement is significant. According to one estimate, inefficiencies in the European air traffic management network result in an average additional fuel burn of 8.6%-11.2% or 24-28 million tons of CO<sub>2</sub>. Operational improvements aim to optimize flight routes to avoid diversions and delays through efficient air traffic management (ATM).

Under the Single European Sky regulatory framework a Performance Scheme had been created already in 2009 to monitor performance of the air navigation service providers in terms of safety, capacity, cost efficiency and environment in cooperation with the Member States, their National Supervisory Authorities and operators. However, the current environmental performance of the air traffic management system in the Single European Sky (SES) is still not sufficiently contributing to the ambitious decarbonization targets of the Green Deal and the Paris Agreement.

Following the dramatic reduction of traffic in 2020 by roughly 60% compared to the previous year due to the COVID-19 crises, it was expected that the environmental performance of the system would improve significantly. However, in reality the environmental Key Performance Indicator ("Horizontal Flight Efficiency") improved only marginally by 0.44%.

This limited improvement is due to three main stumbling blocks:

- (1) **Slow technology uptake.** Despite the ATM modernisation efforts undertaken by SESAR in the past years fragmented ground infrastructure that still not fully exploit the advantages of digitalisation and automation.
- (2) **Fragmented governance.** There is currently no uniform approach and governance to manage the path towards sustainable aviation. Various different activities are taking place in a fragmented manner. It is crucial to agree on the contribution necessary by each actor.

- (3) **Lack of adequate performance indicators.** The limits of the current indicators have been made most transparent in 2020 when despite no traffic delays the environmental performance was not substantially improved over 2019. New indicators will be required to implement the revised regulatory framework to allow for tracking of the environment and climate performance targets.

The current momentum towards climate neutrality in combination with the effects of the COVID-19 pandemic provide a unique opportunity to overcome these stumbling blocks.

The following ***five pillars for a Green Single European Sky*** would, if implemented together, allow the ATM system to contribute its utmost to the European Union climate-neutrality ambition by enabling aircraft and airspace users to further reduce their carbon footprint.

- (1) **Re-focused green objective:** SES high level objectives should reflect the new political priorities introducing climate objectives fostering CO2 reduction and environmental objectives, notably reduction of noise and air pollution.
- (2) **Green performance:** there should be green (environment and climate) performance targets for the Air Navigation Service Providers and the EUROCONTROL Network Manager offering green trajectories to airspace users.
- (3) **Green charging:** use of the SES charging scheme as a tool to provide incentives to encourage efficient flight trajectories.
- (4) **Green digitalisation:** boost the timely deployment of digital technologies and services by relevant operational stakeholders guided by the EUROCONTROL Network Manager in the SESAR deployment framework under the supervision of EASA
- (5) **Green oversight:** Under the supervision of the European Commission install a single monitoring and reporting system for the Single European Sky. This could leverage the existing mechanisms involving national authorities, EASA and PRB, and entities guiding the SESAR innovation cycle.

Adopting a holistic approach as part of the proposed revision of the Single European Sky Package will stimulate climate and environment friendly behavior and orientate investments as a key condition to enable the green recovery of air transport.



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