



# The weather impact on global Air Traffic Management operations and how to solve it

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**Amsterdam, Netherlands, 7 August 2024** – The Civil Air Navigation Services Organisation (CANSO) has highlighted the challenges faced by Air Navigation Service Providers (ANSPs) across the globe with the increased frequency of adverse weather creating a more challenging operating environment.

Global aviation is experiencing strong traffic growth. In the second quarter of 2024 there were 13.2 million flights, with both the Middle East and North America seeing a double digit increase in year over year flight volumes, and all other regions seeing a 6 to 9 per cent increase.

Against this backdrop of strong traffic growth, adverse weather events are on the rise. Most discussions focus on aviation's impact on the environment but it is increasingly apparent that the reverse is also true. Climate is affecting air transport through adverse weather.

On 8 July 2024, at Bush Intercontinental Airport – Houston's international hub – 973 flights were cancelled as Hurricane Beryl hit Texas with 140km/h winds and almost 12cm of rainfall in a 24-hour period. The hurricane had already barrelled through the Caribbean, isolating islands that depend on air connectivity.

Furthermore in Europe last year, weather was for the very first time attributed as the main reason for en-route Air Traffic Flow Management (ATFM) delay.<sup>1</sup> This summer Europe has experienced even more adverse weather: in July, weather-related ATFM delay per flight was over 40 per cent higher than the same month in 2023.

CANSO Director General, Simon Hocquard explains: "There is no doubt that adverse weather is having a big impact on the efficiency of operations across the globe. During thunderstorms or convective weather, ANSPs have a duty to reduce capacity by re-routing traffic into those areas not experiencing adverse weather. While delays are of course undesirable, the primary concern of ANSPs must always be to ensure the safe passage of aircraft through our skies."

This issue is compounded by a marked worsening of flight plan adherence by the airlines – flights that are planned but not executed, and flights that are executed but not planned. According to EUROCONTROL figures for Europe in July 2024,<sup>2</sup> around **65 per cent** more flights did not adhere to their flight profile compared to July 2023. On a daily basis this equates to an average of 3000 flights that are planned but do not materialise. This has a very negative double impact on ATC capacity, as the airspace capacity made available is not used and is therefore lost. Those same aircraft arrive unscheduled in other parts of the network which often

results in ANSPs cutting declared capacity levels to safely handle the greater unpredictability.

Solving this complex challenge requires greater coordination and collaboration between all actors in the aviation system – airlines, airports and ANSPs. A great example of the power of collaboration is CANSO’s CADENA platform (CANSO ATFM Data Exchange Network for the Americas). “It’s a simple premise,” explains Simon Hocquard. “CADENA is a series of webinars and online tools that enable ANSPs to share information on factors affecting airspace demand and capacity, and facilitate enhanced situational awareness with all aviation stakeholders to optimise air traffic.”

CADENA has a proven record of increasing safety and efficiency during contingency events, like weather and natural disasters. During 2017’s Hurricane Maria in Puerto Rico and the surrounding area for example, the close communication between all affected States and stakeholders saved the airlines more than \$1 million.

In Europe, the ‘All Together Now’ campaign<sup>3</sup> led by the Network Manager (EUROCONTROL) provides guidance on processes for all operational stakeholders to follow to ensure efficient, optimal operations.

Collaboration platforms like CANSO’s CADENA and the Network Manager in Europe have a crucial role to play managing global airspace efficiently. CANSO reaffirms its total commitment to facilitating the sharing of data across the aviation industry and to exploring common solutions.

1. [Performance Review Report \(PRR\) 2023 | EUROCONTROL](#)
2. [July 2024 – Overview of Network Performance | EUROCONTROL](#)
3. [All together now 2024 | EUROCONTROL](#)

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

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