



ASSEMBLY — 41ST SESSION

EXECUTIVE COMMITTEE

Agenda Item 17: Environmental Protection – International Aviation and Climate Change

CLIMATE ACTION FROM ANSPs IN SUPPORT OF INDUSTRY DECARBONISATION

(Presented by Civil Air Navigation Services Organization)

EXECUTIVE SUMMARY

The information paper presents action being undertaken by Air Navigation Service Providers to address climate impacts and enable the ATM sector to contribute to the global aviation industry goal of net-zero carbon emissions by 2050. The air transport sector has taken a proactive, collaborative and ambitious approach to dealing with its climate change impact, including by all sub-sectors in the industry.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective – <i>Environmental Protection</i> .
<i>Financial implications:</i>	None
<i>References:</i>	Green ATM Environmental Accreditation Programme - CANSO ICAO Assemblies (atag.org)

1. COMMITMENT TO CLIMATE ACTION

1.1 In October 2021 the collective air transport sector raised its ambition with a new long-term climate commitment: global civil aviation operations will achieve net-zero carbon emissions by 2050, supported by accelerated deployment of a comprehensive programme of effective emission reduction, energy transition and innovation across the aviation sector and in partnership with governments around the world.

1.2 The industry is determined to accelerate the efficiency improvements and CO₂ emissions reductions that it has achieved so far. But it also understands the climate challenge requires an even greater commitment, including critical partnership with governments and the energy sector.

1.3 All parts of the aviation industry are committed to making the net-zero carbon goal a reality. ANSPs are undertaking a range of measures that reduce both global aviation emissions (from jet fuel use in operation) and also in other parts of the business. These efforts are supported by program at the Civil Air Navigation Services Organization (CANSO).

2. MEASURES TO UNLOCK AVIATION EMISSIONS REDUCTION THROUGH IMPROVEMENTS IN ATM

2.1 While production of low carbon sustainable aviation fuel is increased to reach volumes able to materially reduce emissions from operations, maximizing fuel efficiency through operations will continue to be an important measure, particularly helping to unlock early action in aviation efficiency. Efficient ground, terminal and enroute procedures can impact emissions levels by avoiding excess fuel burn.

2.2 During the past two years lower traffic levels and the reduction in congestion enabled ANSPs to increase per flight and system efficiency. ANSPs worked to implement improvements that would provide temporary efficiencies by leveraging lower traffic levels for direct routings, continuous descent and climb, reductions and elimination of holding procedures, more efficient taxiing and optimizing enroute altitudes and speeds. ANSPs also used the lower traffic period to advance initiatives that will deliver permanent efficiency benefits such as increasing the number of performance-based navigation procedures or the volume of free route airspace, enhancing ATFM tools, and negotiating improved flexible use airspace arrangements. These measures reduced operating costs for aircraft still flying and reduced aviation's cumulative emissions.

2.3 Optimised air navigation services cannot eliminate all inefficiencies and some related to avoidance of severe weather, or other factors such as separation minima, runway throughput, or other danger areas will continue. A study by Eurocontrol examining excess emissions in European airspace found 2019 average fuel inefficiency was between 8.6 per cent to 11.2 per cent. The report finds that in 2020 fuel inefficiency for operators in Europe fell to 3.5 per cent, representing a 5.1 to 7.7 per cent efficiency improvement in the lower traffic year. There is reason to believe that similar improvements occurred in other regions (<https://www.eurocontrol.int/sites/default/files/2020-12/eurocontrol-european-atm-network-fuel-inefficiency-study.pdf>). While some of the improved efficiency will erode with the return of traffic volumes, ANSPs are working hard to maintain optimised routings wherever possible and to work collaboratively with partners in the industry to re-think our approaches to congestion.

2.4 The Global Air Navigation Plan provides a map to the capabilities that will deliver operational efficiency improvements in the future, enabling the system to absorb future traffic volumes with improving efficiency for a user base that is increasingly diverse. ANSPs are committed to progressively bringing new ASBU capabilities into effect in consultation with customers and to driving research on innovative means of improving flight efficiency.

3. ACTIONS BY CANSO TO ASSIST MEMBERS CLIMATE ACTION

3.1 To recognize the measures ANSPs are taking to reduce aviation emissions and reduce their own environmental footprint and to spur additional ambition and provide a guide to continuous improvement CANSO has launched the CANSO GreenATM Program.

3.2 The CANSO GreenATM Program is an environmental accreditation program for ANSPs. The program will provide ANSPs with an independent, industry endorsed, accreditation of their environmental efforts through a comprehensive assessment of the maturity of their actions to facilitate airspace users in their airspace to minimize emissions and their efforts to reduce their own direct environmental footprint.

3.3 The structure of the GreenATM program has been built upon the levels recognized in maturity models, such as the well-known CANSO Standards of Excellence in Safety Management Systems

and Cybersecurity. The program includes an assessment of ANSP actions and policies across 29 topics with five levels determined for each topic and overall points weighted to those topics where there is the largest room for positive environmental impact. This structure provides an objective means to assess the maturity of ANSPs environmental actions and provides a useful guide to support the advancing maturity of ANSPs environmental actions. Updates to the program over time will incorporate evolving best practices such as the eventual adoption of wake energy retrieval procedures.

3.4 While there are a number of programs which offer frameworks or standards with which a company can align their environmental activities, none fit the unique nature of the services and operation of an air navigation service provider or place sufficient emphasis on Scope 3 emissions which an ANSP can influence. The CANSO GreenATM Program draws on objectives and strengths of other programs, but is uniquely designed for ANSPs and is therefore able to focus specifically on areas in which an ANSP can positively influence emissions and other environmental factors.

3.5 The GreenATM program is designed to meet the needs of small and large ANSPs. Applications for accreditation can be submitted at any time during the year. The program is open to CANSO and non-CANSO Member ANSPs. More information is available [here](#).

4. CONCLUSION

4.1 Meeting aviation's climate goals will require collaborative action by all parties. Experience during the pandemic has shown the system and per flight environmental benefit of improved ATM efficiency efforts. As recovery continues, early action by ANSPs can help to reduce cumulative emissions by ensuring that efficiency efforts minimize excess emissions during a period in which carbon-based fuels have not yet been widely replaced by lower carbon alternatives.

4.2 CANSO is committed to the global aviation industry's goal of net-zero carbon emissions by 2050 and to ensuring that ATM is able to contribute to that goal by putting in place operational measures to enable airspace users to minimise excess fuel burn and emissions. The launch of an environmental accreditation program for ANSPs will provide objective benchmarking and inspire and encourage higher levels of ambition and action, helping to ensure collective ANSP's contribution to that goal.

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