



WORKING PAPER

FOURTEENTH AIR NAVIGATION CONFERENCE

Montréal, Canada, 26 August to 6 September 2024

Agenda Item 3: Air Navigation System Performance Improvement

3.1: Proposals to improve the efficiency of air navigation services contributing to LTAG

FEASIBILITY STUDY INTO ESTABLISHING AN ICAO AIR NAVIGATION EFFICIENCY AUDIT PROGRAMME

(Presented by the Secretariat)

EXECUTIVE SUMMARY

The objective of the Conference is to reach a global consensus on performance improvement initiatives that will best allow ICAO, Member States and industry to address, in the context of constrained resources, aviation's global environmental challenges and the rapid evolution in aviation operations and technologies (SL 2024/12 refers). This should include strategies and new initiatives for performance improvement on a wider and more consistent scale. This working paper presents an opportunity to consider, through a feasibility study, the potential benefits of an independent, objective, and consistent air navigation efficiency audit programme with a transparent methodology.

Action: The Conference is invited to agree to Recommendation 3.1/x — Feasibility study into establishing an ICAO air navigation efficiency audit programme in paragraph 3.

<i>Strategic Objectives:</i>	This working paper relates to the Safety, Air Navigation Capacity and Efficiency, and Environmental Protection Strategic Objectives.
<i>Financial implications:</i>	<p><i>Impact for the aviation community:</i> On the realization of such a programme, air navigation performance should be expected to improve, with ultimately lower relative operating costs for airspace users. ANS providers will need to balance the cost of the preparation and holding of an audit against their benefits, but in relation to the feasibility study, no costs will be incurred.</p> <p><i>Impact for ICAO (relative to the current Regular Programme Budget resource levels):</i> The cost of the activities associated with the feasibility study referred to in this paper cannot be covered by existing resources and would require extra-budgetary resources.</p>
<i>References:</i>	Annex 11 — <i>Air Traffic Services</i> Doc 9750, <i>Global Air Navigation Plan</i> Doc 9854, <i>Global Air Traffic Management Operational Concept</i> Doc 9882, <i>Manual on Air Traffic Management System Requirements</i> Doc 9883, <i>Manual on Global Performance of the Air Navigation System</i>

1. INTRODUCTION

1.1 ICAO audits, including the Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA), support the development of assistance strategies for States facing challenges in resolving its deficiencies. This assistance facilitates the timely implementation of corrective action plans, ensuring that States meet their obligations under the Chicago Convention and its Annexes. In parallel, ICAO is able to better direct and advance its implementation support activities, including technical assistance and resource mobilization.

1.2 Efficiency of air navigation is given equal emphasis with safety in the Strategic Objectives, Articles 37 *Adoption of international standards and procedures* and 44 *Objectives* of the Chicago Convention, and is exemplified, for instance, by the objective of air traffic services (ATS) to expedite and maintain an orderly flow of air traffic (Annex 11, Chapter 2.2). And yet, it does not have a comparable programme aiming at measuring air navigation performance improvements. There is now a realization that ICAO must contribute equally to supporting implementation in safety, security and now efficiency of the air navigation system. This is in large part by the recognition¹ that there are opportunities to assist with aviation's global environmental challenges and have a direct impact on fuel savings across all phases of flights on the ground and in the air.

1.3 States are also experiencing difficulty in meeting the intent of AN-Conf/13 Recommendation 4.3/1 – *Improving the performance of the air navigation system* and Recommendation 4.3/2 – *Regional and national collaboration and implementation*. These recommendations, where directed at States support, inter alia,

- a) the adoption and adaptation as needed, of the six-step performance management process for the planning and implementation of air navigation improvements and reflect this process in their national air navigation plans;
- b) alignment of their national air navigation plans with regional plans to attain a globally harmonized performance management process and support the achievement of global performance objectives;
- c) adherence to the implementation commitments agreed at the regional level, and reflected in the regional air navigation plans, in order to effectively deploy regional initiatives;
- d) cooperation among themselves and with the industry to strengthen State implementation provisions within the framework of the No Country Left Behind (NCLB) initiative;
- e) planning of the modernization of their air navigation system together with all stakeholders, based on local needs and available resources, taking into account regional and global commitments; and
- f) participation of high-level authorities in the decision-making process for planning and implementation.

¹ Report on the Feasibility of a Long-term Aspirational Goal (LTAG) for International Civil Aviation CO₂ Emission Reductions, Appendix M4 Operations Sub Group Report.

2. DISCUSSION

2.1 The *Global Air Navigation Plan* (Doc 9750) is ICAO's air navigation strategic document and a key driver of the evolution of the global air navigation system, in concert with the *Global Air Traffic Management Operational Concept* (GATMOC, Doc 9854), the *Manual on Air Traffic Management System Requirements* (Doc 9882) and the *Manual on Global Performance of the Air Navigation System* (Doc 9883). Developed in collaboration with and for the benefit of stakeholders, the GANP is a key contributor to the achievement of ICAO's Strategic Objectives and has an important role to play in supporting the United Nations 2030 Agenda for Sustainable Development. Despite its importance, and that it provides guidance on how performance can be improved using block upgrades to the air navigation system, the GANP does not mandate any performance improvement.

2.2 There is no internationally accepted mechanism for assessing compliance with those ICAO provisions most akin with air navigation performance improvement or an effective feedback mechanism on implementation difficulties which States may be encountering. In addition, there may be gaps in the standards, the uniform application of which is recognized as necessary for performance improvement. It is also recognized that many, if not most, ICAO efficiency-related provisions are conditional, typically as Procedures for Air Navigation Services (PANS) and based on a local need.

2.3 There are, however, States and sub-regions that have for some time applied transparent and independent mechanisms and reviews to support the effective monitoring and delivery of ATM performance improvement. These mechanisms include reporting to regulatory authorities and can be directly correlated with the global objectives of an efficient and sustainable air navigation system as outlined in the GANP.

2.4 While it is the intention of ICAO to continue its programme of ICAO Air Navigation (AN) World symposia and workshops to improve the ability of States to better understand and implement provisions related to air navigation performance improvement, it is recognized that States may benefit from a more specific and in-depth technical audit that can assist the development of appropriate assistance strategies, supported by specific corrective action plans. ICAO offers an extensive catalogue of products and services to help States overcome their technical challenges.

2.5 Regulatory safety oversight-focused audits are of a scope to sometimes cover both safety and efficiency aspects when protocol questions do not differentiate. However, the absence of compliance-based, focused audits on the effective provision of air navigation services, whether or not performance improvement plans or activities exist, means that there is no observable data on the implementation of efficiency measures. Additionally, the potential for corrective action plans is not available.

2.6 In formulating a potential way forward for an ICAO air navigation efficiency audit programme, a feasibility study would be necessary to consider various factors including, but not limited to:

- a) the potential benefits that stand to be gained from the introduction of an independent, objective, and consistent air navigation efficiency audit programme with a transparent methodology;
- b) the scope of the programme, the extent an ATS compliance-focused audit only would be necessary, and the implications of such a programme on the role of planning and implementation regional groups (PIRGs);

- c) the extent to which the programme would use the existing ICAO compliance-focused security audit², as a model;
- d) the extent to which the programme might incorporate aspects of current national and sub-regional mechanisms already in use;
- e) the potential for the programme to be voluntary (on request) and based on voluntary contributions;
- f) the necessary resources needed for its establishment and administrative operation; and
- g) the extent to which the development of ICAO Standards and Recommended Practices (SARPs) would be required to support the programme;

3. CONCLUSION

3.1 Effective implementation of the standards and procedures that apply to the performance improvement of the air navigation system under the Chicago Convention is a fundamental concern for ICAO. Similar to safety standards, various support and technical assistance mechanisms should be considered to allow for a multi-pronged approach, which might include the introduction of an objective, transparent, consistent, and independent air navigation efficiency audit programme.

3.2 In light of the above, the Conference is invited to agree to the following recommendation:

Recommendation 3.1/x — Feasibility study into establishing an ICAO air navigation efficiency audit programme.

That ICAO:

- a) undertake a feasibility study into establishing an ICAO air navigation efficiency audit programme and process the study through the appropriate established mechanisms.

— END —

² ICAO identifies the need for compliance-focused or oversight-focused security audits and determines their scope, whereas the type, scope and scheduling of any USAP-CMA cost-recovery audit will require agreement between ICAO and the State and will be assessed by ICAO on a case-by-case basis.