

AVIATION OPERATIONAL MEASURES FOR **FUEL AND EMISSIONS REDUCTION** **WORKSHOP**



WORKSHOP OBJECTIVES

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Emissions Operational Issues



Introductory Panel
Ottawa, 5-6 November 2002

BACKGROUND



- ✈ “IPCC Special Report on Aviation and the Global Atmosphere” identified the operational measures as a way to reduce emissions.
- ✈ CAEP Action Plan incorporates the operational measures as one of the key issues in the strategy to accomplish Kyoto objectives from aviation

Background



- WG 4 was created by CAEP-4 in 1998
- CAEP/4 Agreed WG4 Work program:
- Task was specified to identify, disseminate, and to the extent practicable, ensure use of the industry's fuel conservation/emissions reduction protection.
 - Focus on operational measures that achieve near term reductions in aircraft emissions including in-flight and ground level operation

Background



- ✈ Between CAEP 4 and CAEP 5 , WG activities were focused on two key tasks:
 - ✧ Environmental benefits of CNS/ATM implementation
 - ✧ Circular on operational opportunities to minimize fuel consumption

Summary of results



- ✈ Draft ICAO Circular on Operational Opportunities to Minimize Fuel Use
- ✈ Quantification of fuel reduction via the implementation of CNS/ATM-(Europe/US airspace)
- ✈ Parametric model to expand the study to the rest of the world

Circular Objectives



- ✈ Document the environmental benefits resulting from the use of current aircraft and infrastructure, and the related benefits of infrastructure improvements; and
- ✈ Demonstrate that the more efficient use of infrastructure and equipment is an effective means to reduce aviation emissions

Circular Objectives

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- ➔ This circular is based on the understanding that the most effective way to minimize aircraft emissions is to minimize the amount of fuel used in operating each flight. It reflects operational opportunities and identifies areas where improvements are important;
 - ➔ It is aimed at airlines, airports, ATM/air traffic control (ATC) service providers, airworthiness authorities, environmental and other government bodies.



Principles of Fuel Savings



- Fly the most fuel-efficient aircraft type for the sector
- Taxi the most fuel-efficient route
- Fly the most fuel-efficient route
- Fly at the most fuel-efficient speed
- Operate at the most economical altitude
- Maximise the aircraft's load factor
- Minimise the empty weight of the aircraft
- Load the minimum fuel to safely complete the flight
- Minimise the number of non-revenue flights
- Maintain a clean and efficient airframe and engines

Who is interested?

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- To achieve significant improvements actions need to be taken by all stakeholders including:
 - Providers of Air traffic control
 - Airlines
 - Government regulators
 - Airports
 - Airframe and Engine manufacturers
 - Community

Workshop objectives

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- Disseminate the contents of the ICAO circular
 - Promote the implication of all stakeholders.
 - Extend the industry experience



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Thank you !



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