

ICAO Colloquium



on Aviation Emissions with Exhibition

ICAO Headquarters, Montréal, Canada, 14 – 16 May 2007

PROGRAMME



MONDAY, 14 MAY 2007

08:00 – 14:00 ON-SITE REGISTRATION

12:00 – 19:30 EXHIBITION

14:00 – 14:30 WELCOME AND INTRODUCTION

14:00 – 14:10 Welcome address: *Mr. Roberto Kobeh González*, President of the Council of ICAO

14:10 – 14:20 Introduction by Colloquium Moderator: *Mr. John Begin*, Deputy Director, Air Transport Bureau (ATB), ICAO

14:20 – 14:30 Overview of the ICAO work on Environmental Protection: *Ms. Jane Hupe*, Chief, Environmental Unit, ATB, ICAO

14:30 – 17:30 PANEL1: AVIATION EMISSIONS – THE NATURE OF THE PROBLEM

This Panel will provide a characterization of aviation emissions:

- ❖ environmental problems associated with aviation operations on the ground and in the upper atmosphere; and
- ❖ scientific findings and new research by the Intergovernmental Panel on Climate Change (IPCC) and others (including the United Nations Framework Convention on Climate Change – UNFCCC).

14:30 – 14:35 Moderator Panel 1: *Dr. Dave Lister*, Environmental Section, Aircraft Certification Department, Civil Aviation Authority (CAA), UK

14:35 Presentations by Panellists

- - ▶ IPCC Special Report on Aviation and the Global Atmosphere – Historic Perspective
- 15:15** ▶ *Dr. Dave Lister*, CAA, UK as IPCC Representative

Colloquium on Aviation Emissions



14:35 Presentations by Panellists (continued)

- ▶ Contribution of Aircraft Engines to Emissions from Local and Global Climate Perspectives

15:15 ▶ *Mr. Ken Young*, Rolls-Royce as Representative of International Coordinating Council of Aerospace Industries Associations (ICCAIA)

15:15 – 15:45 REFRESHMENTS

15:45 Presentations by Panellists (continued)

- ▶ The Assessment of Aviation Cloudiness in IPCC Climate Change 2007 – The Physical Science Basis

17:20 ▶ *Dr. David W. Fahey*, Chemical Sciences Division, Earth System Research Laboratory, National Oceanic and Atmospheric Administration, U.S.

- ▶ Understanding the Science on Climate Change

▶ *Dr. Andreas Volz-Thomas*, Project Coordinator of MOZAIC/IAGOS, Germany

- ▶ Local Air Quality (LAQ)

▶ *Dr. Richard C. Mlake-Lye*, Director, Aerodyne Research Inc. and CAEP Research Focal Point for LAQ

- ▶ Impact of Fossil Versus Alternative Fuels on Local and Climate Air Quality

▶ *Dr. Lourdes Maurice*, Chief Scientist for Environment, Federal Aviation Administration (FAA), U.S. Department of Transportation (DOT)

17:20 – 17:30 Question and Answer (Q&A) Session / Summary

TUESDAY, 15 MAY 2007

09:00 – 19:30 EXHIBITION

09:30 – 12:30 PANEL 2: AVIATION EMISSIONS – ASSESSING THE MAGNITUDE OF THE PROBLEM

This Panel will introduce databases and present methodologies as well as models that are used to measure the impact of aviation emissions. It will include:

- ❖ studies developed in cooperation with the IPCC and the United Nations Framework Convention on Climate Change; and
- ❖ the latest assessments from ICAO's Committee on Aviation Environmental Protection (CAEP).

09:30 – 09:35 Moderator Panel 2: *Mr. Roger Gardner*, Chief Executive, OMEGA, Manchester Metropolitan University, UK

09:35 Presentations by Panellists

-
- 10:35
 - ▶ IPCC Emission Scenarios – Importance for ICAO
 - ▷ *Dr. Hans Schlager*, Head, Department of Atmospheric Trace Species, Institute of Atmospheric Physics, German Aerospace Centre (DLR)
 - ▶ IPCC Methodology for Assessing Aviation Emissions
 - ▷ *Mr. Dan Allyn*, Boeing as Representative of ICCAIA
 - ▶ ICAO Airport Air Quality Guidance
 - ▷ *Mr. Roger Gardner*, OMEGA, UK

10:35 – 11:05 REFRESHMENTS

11:05 Presentations by Panellists (continued)

-
- 12:05
 - ▶ Aviation Emissions Databases
 - ▷ *Mr. Ted Elliff*, Aviation Environmental Research Manager, EUROCONTROL Experimental Centre

Colloquium on Aviation Emissions



11:05 Presentations by Panellists (continued)

—

- ▶ Modelling Aviation Emissions — Local and Global Effects

12:05

- ▶ *Mr. Gregg Fleming*, Chief of the Environmental Measurement and Modelling Division, Volpe National Transportation Center, U.S. DOT

- ▶ Modelling Health and Welfare Impacts

- ▶ *Prof. Ian Waitz*, Massachusetts Institute of Technology, U.S.

12:05 – 12:30 Q & A Session / Summary

12:30 – 14:00 PRESENTATION AND LUNCH

Sponsored by:



EXHIBITION

14:00 – 17:15 PANEL 3: MITIGATION MEASURES — LOCAL AIR QUALITY

This Panel will review measures available to mitigate the effects of aviation emissions on local air quality (LAQ) and evaluate their effectiveness. It will cover:

- ❖ existing ICAO standards, such as NO_x stringencies;
- ❖ new guidance material on LAQ and local emission charges;
- ❖ the latest aircraft engine technologies; and
- ❖ operational measures, such as Continuous Descent Approach.

14:00 – 14:05 Moderator Panel 3: *Ms. Julie Draper*, Special Assistant for International Environmental Planning, FAA, U.S. DOT

14:05

Presentations by Panellists

—

15:25

- ▶ Engine Technology Development to Address LAQ Concerns
 - ▷ *Mr. John Moran*, Rolls-Royce as Representative of ICCAIA
- ▶ NOx Emissions Standards
 - ▷ *Mr. Curtis Holsclaw*, Emissions Division Manager, FAA, U.S. DOT
- ▶ Long-term Technology Goals for NOx Emissions
 - ▷ *Mr. Peter Newton*, Assistant Director, Department of Trade and Industry, UK
- ▶ Operational Procedures for Local Air Quality
 - ▷ *Associate Prof. J.P. Clarke*, Director — Air Transportation Laboratory, School of Aerospace Engineering, Georgia Institute of Technology, U.S.

15:25 – 15:55

REFRESHMENTS

15:55

Presentations by Panellists (continued)

—

16:55

- ▶ ICAO Guidance on LAQ Emissions Charges
 - ▷ *Mr. Archie Muckle*, Environmental Officer, Air Transport Bureau, ICAO
- ▶ Overview of Existing Emissions Charges at Airports
 - ▷ *Mr. Emanuel Fleuti*, Public Affairs & Environment, Airports Council International (ACI), Switzerland
- ▶ Cost-effectiveness Case Study of Emissions (NOx) Charges on LAQ
 - ▷ *Mr. Roger Roy*, Director General, Economic Analysis, Policy Group, Transport Canada

16:55 – 17:15

Q & A Session / Summary

17:30 – 19:30

PRESENTATION AND RECEPTION

Sponsored by:

EXHIBITION



Colloquium on Aviation Emissions



WEDNESDAY, 16 MAY 2007

09:30 – 12:45

PANEL 4: MITIGATION MEASURES – GLOBAL CLIMATE

This Panel will consider measures and their effectiveness for reducing fuel burn and emissions to mitigate the effects of aviation on global climate. It will introduce existing ICAO guidance and policies associated with :

- ❖ aircraft innovations, both engine and airframe technologies;
- ❖ environmental benefits of improved operational measures including air navigation procedures; and
- ❖ market-based measures, such as guidance on emissions trading.

09:30 – 09:35

Moderator Panel 4: *Dr. Lourdes Maurice*, Chief Scientist for Environment, FAA, U.S. DOT

09:35

Presentations by Panellists

–

10:55

- ▶ Airframe Side of Fuel Conservation
 - ▷ *Mr. Philippe Fonta*, Airbus as Representative of ICCAIA
- ▶ Operations Opportunities – ICAO Circular 303
 - ▷ *Mr. Ted McDonald*, Manager – Environmental Protection, Civil Aviation – International Operations, Transport Canada,
- ▶ IATA Fuel Conservation Programme
 - ▷ *Mr. Juergen Haacker*, Director Operations, International Air Transport Association (IATA), Switzerland
- ▶ Air Traffic Management Opportunities
 - ▷ *Mr. Guido Kerkhofs*, Director – Air Traffic Management Programmes, EUROCONTROL

10:55 – 11:15

REFRESHMENTS

11:15 Presentations by Panellists (continued)

- - ▶ En-Route Traffic Optimization to Reduce Environmental Impact
 - ▷ *Associate Prof. J.-P. Clarke*, Georgia Institute of Technology, U.S.
- 12:35
 - ▶ Voluntary Emissions Reductions Schemes
 - ▷ *Prof. Katsuhiko Yamaguchi*, Graduate School of Public Policy, University of Tokyo, Japan
 - ▶ ICAO Guidance on Aviation Emissions Trading
 - ▷ *Mr. Andreas Hardeman*, Assistant Director, Aviation Environment, IATA and
 - ▷ *Mr. Kalle Keldusild*, Senior Advisor for Air Transport and Environment, Luftfartsstyrelsen, Sweden
 - ▶ European Emissions Trading Scheme for Aviation
 - ▷ *Mr. Niels Ladefoged*, Policy Officer, Clean Air and Transport Unit, Directorate-General for the Environment, European Commission

12:35 – 12:45 Q & A Session / Summary

12:45 – 14:00 PRESENTATION AND LUNCH

Sponsored by:



Rolls-Royce

EXHIBITION

14:00 – 17:00 PANEL 5: THE WAY FORWARD

This Panel will provide an opportunity for various stakeholders from States, governmental and non-governmental organizations and aviation industries to express and discuss their views on possible approaches to deal with aviation emissions.

14:00 – 14:05 Moderator Panel 5: *Mr. David McMillan*, Director General of Civil Aviation, Department for Transport, UK

Colloquium on Aviation Emissions



14:05 Presentations by Panellists:

-
- 16:35
- ▷ *Dr. Taïeb Chérif*, Secretary General, ICAO
 - ▷ *Mr. Kenton Sim*, Group Specialist Safety, Corporate Office, Airports Company South Africa
 - ▷ *Ms. Sue McIntosh*, General Manager, Aviation Services, Department of Transport and Regional Services, Australia
 - ▷ *Mr. Kaixuan Zhou*, Deputy Director General of Department of Aircraft Airworthiness, General Administration of Civil Aviation, China
 - ▷ *Mr. Wilton Vilanova*, Manager, Environment and Infrastructure Division, Civil Aviation National Agency, Brazil
 - ▷ *Mr. Daniel Calleja*, Director Air Transport, Directorate-General for Transport and Energy, European Commission
 - ▷ *Mr. Andrew B. Steinberg*, Assistant Secretary for Aviation and International Affairs, U.S. DOT
 - ▷ *Mr. H. A. Wilson*, Representative on ICAO Council, St. Lucia
 - ▷ *Mr. João Vieira*, Policy Officer, European Federation for Transport and Environment/ International Coalition for Sustainable Aviation
 - ▷ *Mr. Robert J. Aaronson*, Director General, ACI
 - ▷ *Mr. Brian Pearce*, Chief Economist, IATA
 - ▷ *Mr. Howard Aylesworth*, Director, Air Traffic Systems & Aircraft Noise and Emissions, ICCAIA

15:15 – 15:30

REFRESHMENTS

16:35 – 16:45

SUMMARY

16:45 – 17:00

CLOSING STATEMENT

- ▷ Colloquium Moderator

EVENT MEDIA





International Civil Aviation Organization
999 University Street
Montréal, Québec
Canada H3C 5H7