ICAO COLLOQUIUM — PROGRAMME
Wednesday, 12 May 2010

Registration times:
MONDAY, 10 May 1500 – 1700, TUESDAY, 11 May 0800 – 1000 and 1400 – 1700,
WEDNESDAY, 12 May 0800 – 1000

09:00 – 09:30 WELCOME AND INTRODUCTIONS

- Lionel Alain Dupuis, Permanent Representative of Canada on the Council of ICAO and Dean of Council Members
- Keynote speaker: Achim Steiner, Executive Director – United Nations Environment Programme (UNEP)
- Folasade Odutola, Director, Air Transport Bureau – ICAO
- Jane Hupe, Chief, Environment of Environment Branch – ICAO
- Moderator: Christopher Surgenor, Editor – GreenAir Online

09:30 – 11:00 OPENING SESSION – SETTING THE SCENE

A VISION FOR SUSTAINABLE AVIATION FROM YOUR COCKPIT

A panel will present possible global approaches to address aviation greenhouse gas emissions

“If you had the power to make international aviation environmentally sustainable, what would be your action plan to address it?”

- Scott Stone, Acting General Manager Aviation Environment Policy – Australian Representative
- Ma Xiangshan, Senior Climate Change Officer, Dep. of Planning and Development – Civil Aviation Administration of China (CAAC)
- Raymundo Santos Rocha Magno, Representative of Brazil on the Council of ICAO

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Wednesday, 12 May 2010 (continued)

09:30 — 11:00  OPENING SESSION — SETTING THE SCENE (continued)

- **Philip Good**, International Carbon Market, Aviation and Maritime Unit, European and International Carbon Markets Directorate, DG Climate Action – Europe Representative
- **Aysha Al Hamili** – Representative of the United Arab Emirates on the Council of ICAO
- **Carl Burleson**, Director, Office of Environment and Energy – Federal Aviation Authority (FAA), United States
- **Paul Steele**, Director Environment, International Air Transport Association (IATA) – Air Transport Action Group (ATAG)
- **Tim Johnson**, Director AEF, CAEP observer for International Coalition for Sustainable Aviation (ICSA)

11:00 — 11:30  COFFEE BREAK
Sponsored by:

11:30 — 12:30  SESSION ONE — EVALUATING IMPACTS

A. Estimates of aviation’s current and future contribution to global greenhouse gas emissions

*Speakers:*

- **David S. Lee**, Director, Centre for Air Transport and the Environment (CATE) – Manchester Metropolitan University
  *Presentation: Aviation GHG emissions*
- **Ulrich Schumann**, Director, Deutsches Zentrum für Luft und Raumfahrt – DLR Institut für Physik der Atmosphaere
  *Presentation: Contrail cirrus issues*

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SESSION ONE — EVALUATING IMPACTS (continued)

Speakers

- **Ian Waitz**, Professor of Aeronautics and Astronautics, Director of PARTNER – Massachusetts Institute of Technology (MIT)
  
  *Presentation: Non CO₂ Impacts*

  
  *Presentation: Results of the QUANTIFY project*

QUESTIONS AND ANSWERS

12:30 — 14:00 LUNCH BREAK

Sponsored by:

SESSION TWO — AVIATION EMISSIONS QUANTIFICATION AND MRV

A. Trends

B. Databases, data collection processes and GHG inventories

C. How to measure, report and verify (MRV) aviation emissions

Speakers:

- **Gregg Fleming**, ICAO CAEP Modelling and Databases Task Force (MODTF) rapporteur
  
  *Presentation: ICAO Goals assessment*

- **Tim Johnson**, ICAO CAEP Aviation Carbon Calculator Support Group (ACCS) rapporteur
  
  *Presentation: ICAO Carbon Emissions Calculator*
SESSION TWO — AVIATION EMISSIONS QUANTIFICATION AND MRV (continued)

A. Trends
B. Databases, data collection processes and GHG inventories
C. How to measure, report and verify (MRV) aviation emissions

Speakers:

- Stelios Pesmajoglou, Director of Professional Programs – Greenhouse Gas Management Institute
  Presentation on MRV

  Presentation: Principles and practices for collecting data for the aviation EU ETS

- Steve Burt, Eq2
  Presentation: Granular Resource Economics

- Xavier Oh, Environment Manager – Airports Council International (ACI)
  Presentation: Airport GHG inventories

QUESTIONS AND ANSWERS

15:30 — 16:00

COFFEE BREAK
16:00 – 17:30  SESSION THREE — PUSHING THE TECHNOLOGY ENVELOPE

A. Technological improvements to reduce aircraft greenhouse gas emissions from the aviation sector

Speakers:
- Philippe Fonta, Head of Environmental Policy Center of Competence Powerplant, Airbus – International Coordinating Council of Aerospace Industries Associations (ICCAIA)
  Presentation: Aircraft manufacturers perspective
- Steve Csonka, Technical Director Advanced Programmes, Environmental Strategy – ICCAIA
  Presentation: Engine manufacturers perspective – Technological improvement

B. Research and development, future initiatives

Speakers:
- Ebad Jahangir, Environment Officer— ICAO Secretariat
  Presentation: ICAO Technology Goals for Aviation Environmental Protection
  Presentation: The CO₂ standard
- Larry Leavitt, Chief Engineer for Aerosciences — National Aeronautics and Space Administration (NASA) Representative
  Presentation: Future improvement, future vehicles

QUESTIONS AND ANSWERS

17:30 – 19:30  WELCOMING RECEPTION

Sponsored by:

BOMBARDIER
SESSION FOUR — FLYING THROUGH THE OPERATIONS OPPORTUNITIES

A. GHG-saving opportunities from improved operational measures
B. ATM improvements and best practices

Speakers:

- **Vince Galotti**, Deputy Director, Air Navigation Bureau – ICAO Secretariat  
  *Presentation: ATM improvement – Global Plan*

- **Alan Melrose**, ICAO CAEP Independent Experts Rapporteur  
  *Presentation: The results of the Independent Expert Review on Operational Goals*

- **John-Paul Clarke**, Sc.D. Associate Professor, Daniel Guggenheim School of Aerospace Engineering and H. Milton Stewart School of Industrial and Systems Engineering, Director, Air Transportation Laboratory, Georgia Tech.  
  *Presentation: How to create en route (cruise) trajectories that have minimal impact on the environment?*

- **Alain Siebert**, Chief Economics and Environment — SESAR Joint Undertaking  
  *Presentation: SESAR*

- **Celia Alves Rodrigues**, Environmental Officer — SESAR Joint Undertaking  
  *Presentation: AIRE*

- **Maria Dipasquantonio**, ATO, International NextGen Projects Lead — FAA, United States  
  *Presentation: NextGen and Aspire*

- **Shannon Scott**, Senior Policy Adviser, Aviation Environment — Civil Aviation Authority, New Zealand  
  *Presentation: New Zealand’s efforts to reduce aviation emissions through operational measures*
### PROGRAMME

**Thursday, 13 May 2010 (continued)**

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| 09:00 – 11:00 | SESSION FOUR — FLYING THROUGH THE OPERATIONS OPPORTUNITIES (continued) | A. GHG-saving opportunities from improved operational measures  
B. ATM improvements and best practices  
Speakers:  
▷ Jeff MacDonald, Director, Operations Planning and Programs — NAV CANADA, Canada  
*Presentation: First progress report on Collaborative Initiatives for Emissions Reductions*  
▷ Tim Rees, Environment Programmes Manager — Civil Air Navigation Services Organisation (CANSO)  
*Presentation: ATM improvements*  
▷ Paul McCarthy, Representative of IFALPA to ICAO — International Federation of Air Line Pilots' Associations (IFALPA)  
*Presentation: The Pilots’s Perspective* |
| 11:00 – 11:30 | COFFEE BREAK | Sponsored by: NAV CANADA |
| 11:30 – 12:30 | SESSION FIVE — MARKET–BASED MEASURES | A. The carbon market  
Speakers:  
▷ Andrew Howard, Manager (OIC), Strategy and Policy Development, Sustainable Development Mechanisms Programme — United Nations Framework Convention on Climate Change (UNFCCC) Secretariat  
*Presentation: The carbon market — status and structure* |

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A. The carbon market
Speakers:
  - Holly Krambeck, Carbon Finance Unit – The World Bank
    Presentation: The carbon market

B. Carbon offset programmes
Speakers:
  - Lisa M. Hodes, Gold Standard, General Counsel and Director, U.S. Markets – The Gold Standard Foundation
    Presentation: The carbon market
  - Jon Godson, Assistant Director, Aviation Environment - Best Practices – IATA
    Presentation: Airlines carbon offset programme
  - OMEGA
    Presentation: Carbon offset schemes for aviation

QUESTIONS AND ANSWERS

12:30 — 14:00
LUNCH BREAK
Sponsored by:

14:00 — 16:00
C. Emissions trading schemes (ETS)
Speakers:
  - Katie Sullivan, Canadian Director on the Markets Mechanisms to Address Climate Change – International Emissions Trading Association (IETA)
    Presentation: ETS
    Presentation: EU ETS
SESSION FIVE — MARKET-BASED MEASURES (continued)

C. ETS (continued)
Speakers:
- Carl Burleson – FAA, United States
  Presentation: U.S. Perspectives
- Shannon Scott – Civil Aviation Authority, New Zealand
  Presentation: New Zealand’s ETS

D. Taxes and levies
Speakers:
- Tim Johnson – ICSA
  Presentation: Taxes

E. Other approaches
Speakers:
- IMO representative
  Presentation: Market-based measures under review by IMO
- Scott Stone, Aviation Environment Policy, Aviation Operations Branch – Australia
  Presentation: Australia’s carbon footprinting work using the ICAO Carbon Calculator
- Andy Kershaw, Manager, Environmental Policy – Aviation Global Deal Group and
  Mark Watson, Head of Environmental Affairs – Cathay Pacific Airways
  Presentation: A sectoral approach to addressing international aviation emissions

QUESTIONS AND ANSWERS

14:00 – 16:00

C. ETS (continued)

D. Taxes and levies

E. Other approaches

COFFEE BREAK
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16:30 – 17:30 SESSION SIX — ADAPTATION

Speakers:

- Ulrich Schumann, WMO Rapporteur on Aviation and the Environment on behalf of Dr Herbert PUEMPEL Chief, Aeronautical Meteorology Division – World Meteorological Organization (WMO)

- Xavier Oh, Environment Manager – ACI
  Presentation: Airport perspective

- Alan Melrose – EUROCONTROL
  Presentation: The first results of the EUROCONTROL study

- Chris Lyle, Representative of United Nations World Tourism Organization (UNWTO) to ICAO
  Presentation: Adaption and inter-agency co-ordination

QUESTIONS AND ANSWERS

17:30 – 19:30 RECEPTION
Sponsored by:

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SESSION SEVEN — ALTERNATIVE FUELS

A. Overview
B. ICAO global framework for aviation alternative fuels

Speakers

- **Jane Hupe**, Chief, Environment of Environment Branch — ICAO Secretariat
  
  *Presentation: ICAO global framework for aviation alternative fuels*

- **Paul Steele**, Director, Aviation Environment — IATA
  
  *Presentation: Possible alternative fuels for aviation*

- **Chris Schroeder**, Head of CSR, Environment and Fuel Optimization — Qatar Airways
  
  *Presentation: GTL jet fuel*

- **Yuri Herreras Yambanis** – Bioenergy & Agroenergetic Crops S.L. (BIOECA)
  
  *Presentation: The raw material production alternative*

- **Guilherme Freire**, Director of Environment, Embraer — ICCAIA
  
  *Presentation: Flight tests and ICCAIA perspective*

- **Nancy Young**, Vice President, Environmental Affairs — Air Transport Association (ATA)
  
  *Presentation: Key steps for airlines in purchasing and deploying alternative fuels*

- **Charles Schlumberger**, Principal Air Transport Specialist, Energy, Transport and Water Department — The World Bank
  
  *Presentation: The World Bank activities in alternative fuels*

11:00 — 11:30  
**COFFEE BREAK**
C. Life cycle GHG assessment from alternative jet fuels
   Speakers:
   - Lourdes Maurice, Chief Scientific and Technical Advisor, Environment Office, Environment and energy (AEE-3) – FAA, United States
     Presentation: Life cycle analysis and CAAFI’s work
   - Luisa Marelli – European Union
     Presentation: Life-cycle analysis

D. Long-term alternative fuels
   Speaker:
   - Keiichi Okai, Associate Senior Researcher, Jet Engine Technology Research Center, Aerospace Research and Development Directorate – Japan Aerospace Exploration Agency (JAXA)

QUESTIONS AND ANSWERS

12:30 – 14:00
   LUNCH BREAK

14:00 – 14:45
   SESSION EIGHT — FINANCING

A. Discussion on financing, capacity building and technology transfer in the aviation sector
   Speakers:
   - Ari Huhtala, Team leader, Climate Change Program – The World Bank
     Presentation: World Bank activities

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SESSION EIGHT — FINANCING (continued)

A. Discussion on financing, capacity building and technology transfer in the aviation sector

*Speakers:*

- Arnaldo Vieira de Carvalho, Sr. Energy Specialist with the Energy Division – Inter-American Development Bank (IDB)
  Presentation: IDB activities focussing on biofuels

QUESTIONS AND ANSWERS

SESSION NINE — THE WAY FORWARD: PROGRAMME OF ACTION ON INTERNATIONAL AVIATION AND CLIMATE CHANGE

A. ICAO’s response to global challenges: Programme of Action on International Aviation and Climate Change

B. States’ actions: How governments can help to address GHG emissions from the aviation sector

*Speakers:*

- Jane Hupe, Chief, Environment of Environment Branch – ICAO
- Roberto Kobeh González, President of the ICAO Council

OPEN DISCUSSIONS

SESSION TEN — CLOSING SESSION: PUTTING IT TOGETHER

A. Colloquium conclusions and closing statement

Roberto Kobeh González, President of the ICAO Council

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