

International Civil Aviation Organization

REPORT OF THE HIGH-LEVEL MEETING ON INTERNATIONAL AVIATION AND CLIMATE CHANGE

Montréal, 7–9 October 2009

*Approved by the Council and
published by its decision*



ACT>>>> GLOBAL

ICAO: UNITING AVIATION ON CLIMATE CHANGE





Doc 9929
HLM-ENV/09

International Civil Aviation Organization

REPORT OF THE HIGH-LEVEL MEETING ON INTERNATIONAL AVIATION AND CLIMATE CHANGE

Montréal, 7–9 October 2009

*Approved by the Council and
published by its decision*

Published in separate English, Arabic, Chinese, French, Russian
and Spanish editions by the
INTERNATIONAL CIVIL AVIATION ORGANIZATION
999 University Street, Montréal, Quebec, Canada H3C 5H7

For ordering information and for a complete listing of sales agents
and booksellers, please go to the ICAO website at www.icao.int

**Doc 9929, *Report of the High-Level Meeting on
International Aviation and Climate Change***

Order Number: 9929

ISBN 978-92-9231-440-8

© ICAO 2010

All rights reserved. No part of this publication may be reproduced, stored in a
retrieval system or transmitted in any form or by any means, without prior
permission in writing from the International Civil Aviation Organization.

LETTER OF TRANSMITTAL

To: President of the Council

From: Chairman, High-level Meeting on International Aviation and Climate Change (HLM-ENV/09)

I have the honour to submit the Report on the work of the High-level Meeting on International Aviation and Climate Change (HLM-ENV/09), held at ICAO Headquarters in Montréal from 7 to 9 October 2009.



Yap Ong Heng
Chairman
High-level Meeting on
International Aviation and
Climate Change

Montréal, 9 October 2009

TABLE OF CONTENTS

Letter of Transmittal	(iii)
Table of Contents	(v)
Introduction	1
Agenda Item 1: Aspirational goals and implementation options	7
Agenda Item 2: Proposals for strategies and measures to achieve emissions reductions.....	11
Agenda Item 3: Means to measure progress	14
Agenda Item 4: Financial and human resources	16
Agenda Item 5: Review of Programme of Action on International Aviation and Climate Change and recommendations to COP15	18
Appendix A – List of participants	23
Appendix B – Appendix K of Assembly Resolution A36-22	32
Appendix C – Excerpt from Council Decision on the work of GIACC	37
Appendix D – Address by Mr. Yvo de Boer, Executive Secretary of UNFCCC	40
Appendix E – List of working papers / information papers.....	42

INTRODUCTION

Site and duration of the Meeting

1. The HLM-ENV/09 was convened in the Assembly Hall of the Headquarters of the International Civil Aviation Organization (ICAO) in Montréal from 7 to 9 October 2009.

Attendance

2. The following 73 member States of ICAO were represented at the Meeting:

Afghanistan	Iceland	Republic of Korea
Algeria	India	Romania
Argentina	Indonesia	Russian Federation
Australia	Iran (Islamic Republic of)	Saint Vincent and the Grenadines
Austria	Ireland	Saudi Arabia
Botswana	Italy	Senegal
Brazil	Japan	Singapore
Cameroon	Kenya	South Africa
Canada	Kuwait	Spain
Chile	Libyan Arab Jamahiriya	Sweden
China	Malaysia	Switzerland
Colombia	Mexico	Thailand
Cuba	Mozambique	Tunisia
Czech Republic	Namibia	Turkey
Denmark	Netherlands	Uganda
Dominican Republic	New Zealand	Ukraine
Ecuador	Nigeria	United Arab Emirates
Egypt	Norway	United Kingdom
El Salvador	Pakistan	United Republic of Tanzania
Ethiopia	Paraguay	United States
Finland	Peru	Uruguay
France	Philippines	Venezuela
Germany	Poland	Zimbabwe
Ghana	Portugal	
Greece	Qatar	

3. The following 26 Observer Delegations attended the Meeting:

Arab Air Carriers Organization (AACO)
Arab Civil Aviation Commission (ACAC)
Airports Council International (ACI)
Association of European Airlines (AEA)
African Civil Aviation Commission (AFCAC)
Civil Air Navigation Services Organisation (CANSO)

European Commission (EC)
 European Civil Aviation Conference (ECAC)
 European Low Fare Airlines Association (ELFAA)
 Helicopter Association International (HAI)
 Interstate Aviation Committee (IAC)
 Inter-American Development Bank (IDB)
 International Air Transport Association (IATA)
 International Business Aviation Council (IBAC)
 International Coordinating Council of Aerospace Industries Associations (ICCAIA)
 International Coalition for Sustainable Aviation (ICSA)
 International Federation of Air Line Pilots' Associations (IFALPA)
 International Federation of Air Traffic Controllers' Associations (IFATCA)
 International Federation of Helicopter Associations (IFHA)
 International Maritime Organization (IMO)
 Latin American Civil Aviation Commission (LACAC)
 Organization for Economic Co-operation and Development (OECD)
 Palestinian Authority
 United Nations Framework Convention on Climate Change (UNFCCC)
 United Nations World Tourism Organization (UNWTO)
 World Bank (WB)

4. A list of participants in the Meeting is given in Appendix A to this report.

Mandate

5. The Assembly of the International Civil Aviation Organization (ICAO), at its 36th Session (Montréal, 18 to 28 September 2007), adopted Resolution A36-22: *Consolidated statement of continuing ICAO policies and practices related to environmental protection*. Particularly through Appendix K¹ of this Resolution, the Assembly recognized, *inter alia*, “the critical importance of providing continuous leadership to international civil aviation in limiting or reducing its emissions that contribute to global climate change”².

6. Furthermore, the Assembly requested that the Council “facilitate action by States by vigorously developing policy options to limit or reduce the environmental impact of aircraft engine emissions, developing concrete proposals and providing advice as soon as possible to the Conference of the Parties of the UNFCCC, encompassing technical solutions and market-based measures, while taking into account potential implications of such measures for developing as well as developed countries”³. In order to achieve this, the Assembly requested the ICAO Council:

6.1 To “form a new Group on International Aviation and Climate Change ... for the purpose of developing and recommending to the Council an aggressive Programme of Action on International Aviation and Climate Change”⁴; and

¹ The complete text of Appendix K is provided in Appendix B to this report.

² Resolution A36-22, Appendix K, first paragraph of the preamble.

³ Resolution A36-22, Appendix K, operational paragraph 1.

⁴ Resolution A36-22, Appendix K, operational paragraph 2 a).

6.2 To “convene at an appropriate time, taking into account the fact that the fifteenth meeting of the Conference of the Parties (COP15) of the UNFCCC will be held in December 2009, a high-level meeting to review the Programme of Action recommended by the Group”.⁵

Programme of Action on International Aviation and Climate Change

7. In response to the mandate mentioned in paragraph 6.1 above, the Council established the Group on International Aviation and Climate Change (GIACC), which developed a Programme of Action on International Aviation and Climate Change and submitted it to the Council for its consideration. The Council fully accepted the Programme of Action in June 2009 as a positive development to limit or reduce aviation’s climate impact.⁶

8. Results of the Council’s deliberations included an agreement on fuel efficiency goals, the need to adopt a basket of measures to address aviation emissions, the establishment of a mechanism to collect traffic and fuel consumption data and the concept of States’ action plans.

9. Areas for further work were also identified, including medium- and long-term goals, the development of a CO₂ standard, a framework for market-based measures, and exploring of approaches to provide technical assistance in the reporting process for developing States.

Opening of the Meeting

10. Mr. R. Kobeh González, President of the Council, opened the Meeting with the following opening address:

Ladies and gentlemen, on behalf of the Council and of the Secretary General of ICAO, I welcome you all to this High-level Meeting on International Aviation and Climate Change.

This meeting is about one thing and one thing only – LEADERSHIP.

Leadership from ICAO and its Contracting States in limiting or reducing emissions from international civil aviation that contribute to global warming.

Leadership from ICAO and its Contracting States in developing concrete proposals and providing advice to the COP15 next December on how best to address international aviation emissions under a post-Kyoto agreement on climate change.

In other words, leadership from ICAO and its Contracting States in tackling one of the greatest and most pressing challenges ever to face our global society.

I am fully confident that this first-ever ICAO meeting exclusively dedicated to aviation and climate change will succeed in affirming our leadership on all counts.

⁵ Resolution A36-22, Appendix K, operational paragraph 2 b).

⁶ Relevant excerpts of the Council decision are listed in Appendix C to this report.

We have a good basis from which to start – the Programme of Action prepared by the Group on International Aviation and Climate Change, known as GIACC. GIACC's mandate from the 36th Session of the ICAO Assembly was to develop and recommend such a Programme of Action based on consensus, and reflecting the shared vision and strong will of all Contracting States.

The GIACC submitted its report in May of this year and the Council reviewed it in June. The Council fully recognized the value of the work of the GIACC, accepted the recommended Programme of Action and provided further guidance. The Council also decided that this High-level Meeting would prepare recommendations for COP15.

Let me be clear – we are not here to renegotiate the results of GIACC. We are here to: identify actions that build on the Council's recommendations; translate the outcome of that process into a strategy to guide the international aviation sector in its environmental work; and incorporate relevant elements into a proposed set of recommendations to COP15.

We must keep in mind that the framework we are to develop must include four key elements: aspirational goals and implementation options; strategies and measures to achieve emissions reductions; means to measure progress; and financial and human resources needed to implement the goals.

We must also identify a broad range of solutions including technological innovations, operational improvements and market-based instruments. Another consideration is how to integrate the development and deployment of alternative aviation fuels as a promising option for effectively reducing greenhouse gas emissions from aircraft.

This is a major undertaking, but we have never shied away from our responsibilities. While we are a relatively young and vibrant sector, we have consistently shown maturity when it comes to the protection of the environment. Over the years, we have achieved remarkable results, including:

- fuel efficiency improvements of more than 70%;
- current engines with 40% less NOx emissions; and
- aircraft today which are 75% quieter than their counterparts of 40 years ago.

And we are definitely becoming greener!

Ladies and gentlemen, we have in this room the experience, the expertise and the imagination required to transform our enviable track record, the ICAO Council recommendations and our common determination to succeed, into an effective strategy to combat climate change.

We may never have another opportunity such as this one to influence global decisions affecting aviation and climate change. As the world works hard to find solutions to address climate change, we have to make sure that the international aviation sector is a vital part of the discussions.

This High-level Meeting can demonstrate our collective determination to ensure a sustainable future for international aviation operations. It must be an expression of strong political

will on the part of all States, under ICAO, to work together with the aviation industry to reduce emissions contributing to climate change.

We need to do our share to protect life on the planet and to develop the required institutional, organizational and financial mechanisms that are within our sphere of influence.

Let me assure you in closing that the Council of ICAO is anxiously waiting for the results of your deliberations, and your recommendations to COP15.

I am also looking forward to your political Declaration, one that reflects your leadership on actions to address emissions from international aviation.

Above all, let us be united in our determination to ACT Global!

11. After his opening address, the President introduced a video address by Mr. Yvo de Boer, Executive Secretary of the UNFCCC. Mr. de Boer highlighted the need for action by the international aviation sector in order to ensure that governments adopt a comprehensive strategy on how to address climate change at UNFCCC COP15. A transcript of Mr. de Boer's address is given in Appendix D to this report.

Secretariat

12. At the invitation of the President, Mr. Raymond Benjamin, ICAO Secretary General was nominated the Secretary of the Meeting. Mr. Benjamin, also welcomed the participants and introduced the Meeting Secretariat.

13. The advisers to the Secretary of the Meeting were Mrs. F. Odutola, Director, Air Transport Bureau and Mr. J. Begin, Chief of Coordination, Revenue and Communication Office. The Deputy Secretary of the Meeting was Mrs. J. Hupe, Chief of Environment Section, Air Transport Bureau. The Assistant Secretaries were Mr. T. Tanaka and Mr. S. Pesmajoglou, Environmental Officers of Environment Section, supported by Mr. E. Jahangir and T. Thrasher, Environmental Officers of Environment Section, Mr. S. Da Silva, Technical Officer of Air Traffic Management Section, Air Navigation Bureau, and Mr. B. Verhaegen, Legal Officer, Legal Bureau. A number of other staff provided support and the full resources of the Secretariat were at the disposal of the Meeting.

Election of the Chairman and Vice-Chairman of the Meeting

14. On the nomination of Saudi Arabia, seconded by South Africa, Mexico, Egypt, Qatar and Ecuador, Mr. Yap Ong Heng, Director-General, Civil Aviation Authority of Singapore was elected Chairman of the Meeting, and Mr. Valery M. Okulov, Deputy Minister of Transport of the Russian Federation was elected Vice-Chairman of the Meeting.

Agenda

15. The Meeting adopted the following agenda which had been approved by the Council and presented in HLM-ENV/09-WP/1 (Rev. No. 1):

Agenda item 1: Aspirational goals and implementation options;

Agenda item 2: Proposals for strategies and measures to achieve emissions reductions;

Agenda item 3: Means to measure progress;

Agenda item 4: Financial and human resources; and

Agenda item 5: Review of programme of action on international aviation and climate change and recommendations to COP15.

Structure and rules of procedure

16. The Meeting also adopted the organizational matters included in HLM-ENV/09-WP/2. The rules of procedure were the *Standing Rules of Procedure for Meetings in the Air Transport Field* (Doc 8683).

Documentation

17. A list of the documentation associated with the work of the Meeting is presented in Appendix E. All papers prepared for the HLM-ENV/09 are available on the ICAO web site (<http://www.icao.int/HighLevel2009/>).

18. In addition to working and information papers, the Secretariat prepared two documents (HLM-ENV/09-SD/1 (Rev. No. 1) and SD/2 (Rev. No. 1)) containing summaries of the discussions during the Meeting. These summaries provide a record of the key issues identified under each Agenda Item. These papers were not agreed by the Meeting.

— — — — —

Agenda Item 1: Aspirational goals and implementation options

1.1 Documentation

1.1.1 The Meeting reviewed the following working papers and information papers from the Secretariat, States and international organizations:

Secretariat (HLM-ENV/09-WP/3) presented the decision of the ICAO Council on the work of the GIACC. The Council, at its 187th Session, fully accepted the Programme of Action, and highlighted the importance and urgency in finding a means of limiting or reducing the impact of GHG emissions from international civil aviation on the global climate. It recognized the progress achieved to that end by the GIACC and that, building upon GIACC's work, ICAO needed to prepare a message to be presented to COP15;

Secretariat (HLM-ENV/09-WP/4 – information paper) presented the results of the meetings and deliberations of the GIACC and the Programme of Action that was agreed by consensus by the GIACC and subsequently approved by the 187th Session of the ICAO Council. The paper also contained a set of recommendations prepared under the responsibility of the Chairman and Vice-Chairman of the fourth meeting of GIACC;

Secretariat (HLM-ENV/09-WP/5) presented the aspirational goals in the Programme of Action on International Aviation and Climate Change, a brief discussion on the use of metrics for fuel efficiency goals, an estimate of the cumulative effects of the fuel efficiency goals recommended by the GIACC and accepted by the Council, proposed goals by the aviation industry, and proposals on international aviation submitted and being considered under the UNFCCC process;

Sweden, on behalf of the European Community and its Member States and by the other States Members of the European Civil Aviation Conference (ECAC) (HLM-ENV/09-WP/14) outlined a proposal for measures that should be taken with regard to aspirational goals for the sector. The proposed goals include: a 2% annual fuel efficiency improvement from 2010 to 2012; emissions reduction by 2020 below 2005 baseline, with secondary goal of 2% annual fuel efficiency improvement for 2013 to 2020 from technological and operational contributions; and emissions reduction consistent with the 2°C target for long-term;

Canada, Mexico and United States (HLM-ENV/09-WP/25) outlined a proposal that incorporated the endorsement of the aspirational goals of the Programme of Action and the establishment of a process that would develop proposals for more ambitious aspirational goals. This process would aim to complete its work in time for the next ICAO Assembly in 2010;

Australia (HLM-ENV/09-WP/21) proposed that a mechanism should be established in order for ICAO to respond promptly to the outcome of COP15 and to progress all issues relating to international aviation and climate change before the 2010 Assembly. Such mechanism would need to take into consideration, among other things, the necessity for more ambitious aspirational goals and the potential role of market-based measures. In particular, Australia proposed carbon neutral growth during the medium term (2012-2020) using 2005 as the base year; and significant net carbon reductions over the long term (2020-2050);

United Arab Emirates (HLM-ENV/09-WP/24) presented its position on aviation emissions management, which is based on the outcome of the GIACC and the views of the aviation industry. In particular, it proposed a medium term goal of carbon neutral growth by 2020; and a long-term goal of 50% reduction by 2050 based on 2005. The paper also proposed that actions on international aviation should recognize the 'early movers' principle and should avoid multi-layered, regional schemes and local taxes to address emissions from international aviation;

ACI, CANSO, IATA AND ICCAIA (HLM-ENV/09-WP/19 Revised) presented the collective commitment of the air transport industry that builds on the GIACC outcome and proposes a global sectoral approach that provides for 1.5% annual improvement in CO₂ efficiency until 2020, carbon neutral growth from 2020 onwards, subject to critical aviation infrastructure and technology advances achieved by the industry and government, and 50% reduction of CO₂ emissions in 2050 compared to 2005 levels;

IBAC (HLM-ENV/09-WP/22) highlighted the support of the business aviation community in respect to aspirational goals to be included in a strong, comprehensive, cost-effective and thorough framework for international aviation. It also proposed that ICAO considers an alternative metric (to revenue tonne kilometres) appropriate to small emitters in general and business aviation operations;

Secretariat (HLM-ENV/09-IP/1) reproduced Resolution A36-22: *Consolidated Statement of Continuing ICAO Policies and Practices Related to Environmental Protection* adopted by 36th Session of the ICAO Assembly in 2007;

Secretariat (HLM-ENV/09-IP/2) reproduced extracts from the Minutes of the 13th and 14th Meetings of the 187th Session of the ICAO Council, regarding the progress report of the GIACC;

Secretariat (HLM-ENV/09-IP/3) presented the "Declaration of the Leaders of the Major Economies Forum on Energy and Climate" (G8 Summit 2009, L'Aquila, Italy, 9 July 2009); and

Secretariat (HLM-ENV/09-IP/4) included preliminary results of the assessment of present and future global aviation CO₂ emissions, conducted by the Committee on Aviation Environmental Protection (CAEP).

1.2 Discussion

1.2.1 All States expressed their appreciation for the work of the GIACC and their support for the ICAO Council decision. They recognized that the Programme of Action on International Aviation and Climate Change is a positive first step in the efforts of the ICAO on addressing GHG emissions from international aviation. They also recognized the need for the aviation sector to continue to develop in a sustainable manner.

1.2.2 There was general support for ICAO to continue to exercise its leadership and the need for ICAO to provide concrete input to the UNFCCC process and COP15 on how the impact of international aviation on climate change would be addressed. It was also indicated that, given the expected growth of the sector over the coming decades, the aspirational goals of annual 2 per cent fuel efficiency improvement recommended by GIACC would not lead to absolute reductions of CO₂ emissions in the long-term.

1.2.3 The Meeting acknowledged that more ambitious medium-term and long-term goals for international emissions reductions would be required to address the projected growth of greenhouse gas emissions from international aviation. There was extensive discussion on possible more ambitious aspirational goals in line with the proposals of several States in their working papers.

1.2.4 Some States were in favour of the adoption of more ambitious medium- and long-term goals consistent with the proposals of the air transport industry.

1.2.5 Other States suggested that a process be established to develop proposals on more ambitious goals with the aim of finalizing the position of ICAO at the 37th Assembly in 2010, taking into account the outcome of COP15.

1.2.6 A large number of States expressed the view that it would be difficult to agree on more ambitious goals during this Meeting. They indicated that, in light of the mandate given by the Assembly (Resolution A36-22 Appendix K) and taking into account the principle of common but differentiated responsibilities and respective capabilities (CBDR) of the UNFCCC, the consensus position developed by the GIACC on the short-, medium- and long-term fuel efficiency goals should be maintained.

1.2.7 The aviation industry explained that, although its proposed short-term goal for fuel efficiency improvement (1.5 per cent) was lower than that proposed by GIACC, it was expected that the additional 0.5% would be the result of added government commitment, rather than its own financial resources.

1.2.8 IBAC, supported by several States, proposed that ICAO consider the development of metrics other than volume of fuel used per revenue tonne kilometre performed that could be used for defining fuel efficiency goals for small operators.

1.2.9 Due to the divergent views expressed on this subject, and with a view to facilitating further discussions on aspirational goals, the Chairman established an informal group under his authority,

consisting of representatives from States⁷. The Chairman informed the Meeting that any recommendations from the informal group would be presented back to the Plenary for the consideration of the Meeting.

⁷ Representatives from the following 18 States participated in the informal group: Australia, Brazil, Canada, Chile, China, Egypt, France, India, Mexico, Nigeria, Russian Federation, Saudi Arabia, Singapore, South Africa, Sweden, UAE, UK and US. New Zealand joined the informal group at a later stage. Industry was invited to provide additional clarifications to the group on their emissions-reduction goals proposal.