



INTERNATIONAL CIVIL AVIATION ORGANIZATION

A United Nations Specialized Agency

50th Conference of Directors General of Civil Aviation Asia and Pacific Regions

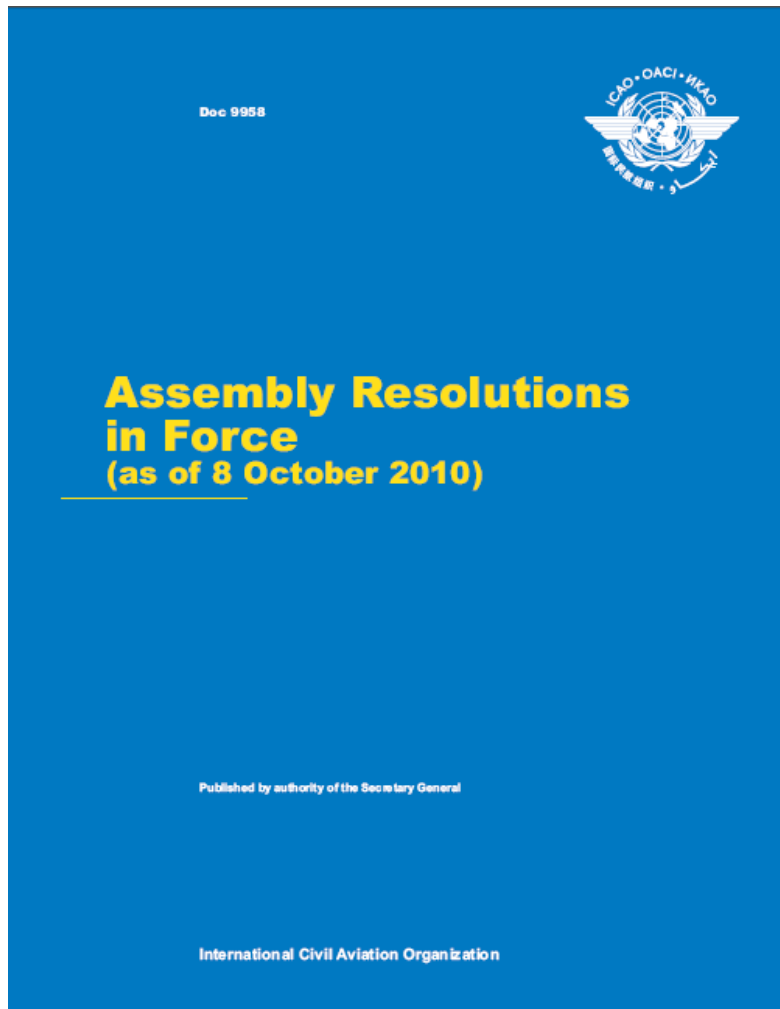
Agenda Item 5: Aviation and Environment

Boubacar Djibo

Director, Air Transport Bureau

ICAO

ICAO policy on climate change



A37-19: Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate change

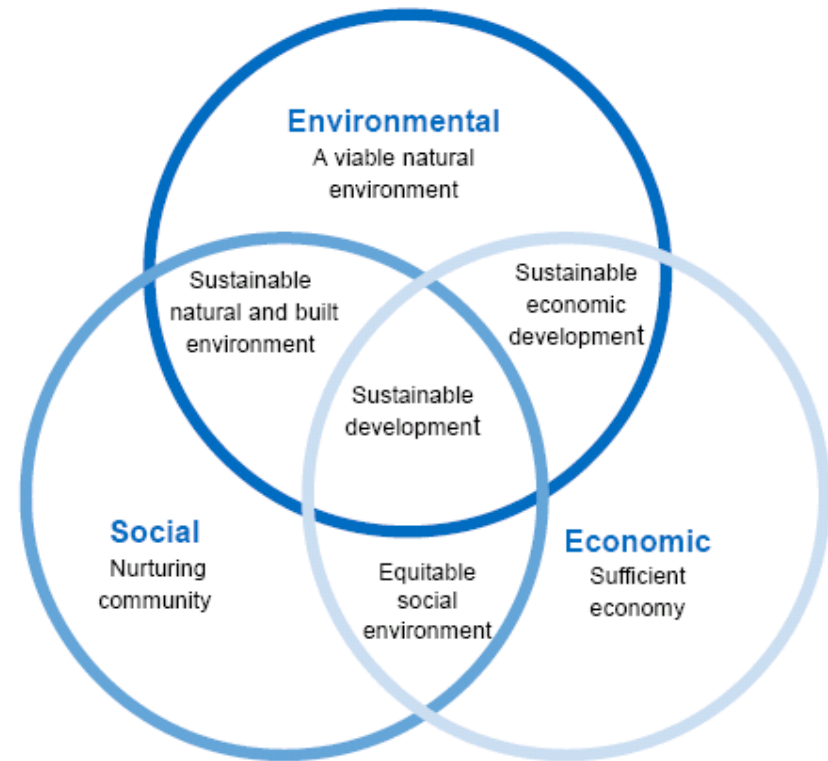
ICAO is the first United Nations agency to lead a sector in the establishment of a globally harmonized agreement for addressing its CO₂ emissions

The three dimensions of sustainability



United Nations: "Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs."

Triple Bottom Line: In business, one approach to sustainability is focusing on the impact of decisions on the environment and the community in addition to profit (traditional single bottom line). The diagram illustrates this idea.



International Aviation

Economic:

5% Contribution to the global economy

Environment:

2% of emissions



Consistent with the goals of ICAO, as set forth in the Chicago Convention, and with ICAO's status as a specialized agency of the United Nations, a sustainable air transport system, I suggest, is one that:

- "Allows the basic access and development needs of individuals, companies and society to be met safely and in a manner consistent with human and ecosystem health, and promotes equity within and between successive generations.
- Is affordable: operates safely, securely, fairly and efficiently, offers choices of air services and supports a competitive economy as well as balanced regional development.
- Limits emissions and waste within the planet's ability to absorb them, uses renewable resources at or below their rates of generation and uses non-renewable resources at or below the rates of development of renewable substitutes, while minimizing the impact on the use of land and the generation of noise."

Mr. Raymond Benjamin, Secretary General

ICAO's strategic objectives 2014-2015-2016



Safety: Enhance global civil aviation safety

Air Navigation Capacity and Efficiency: Increase capacity and improve efficiency of the global civil aviation system

Security & Facilitation: Enhance global civil aviation security and facilitation

Economic Development of Air Transport: Foster the development of a sound and economically-viable civil aviation system

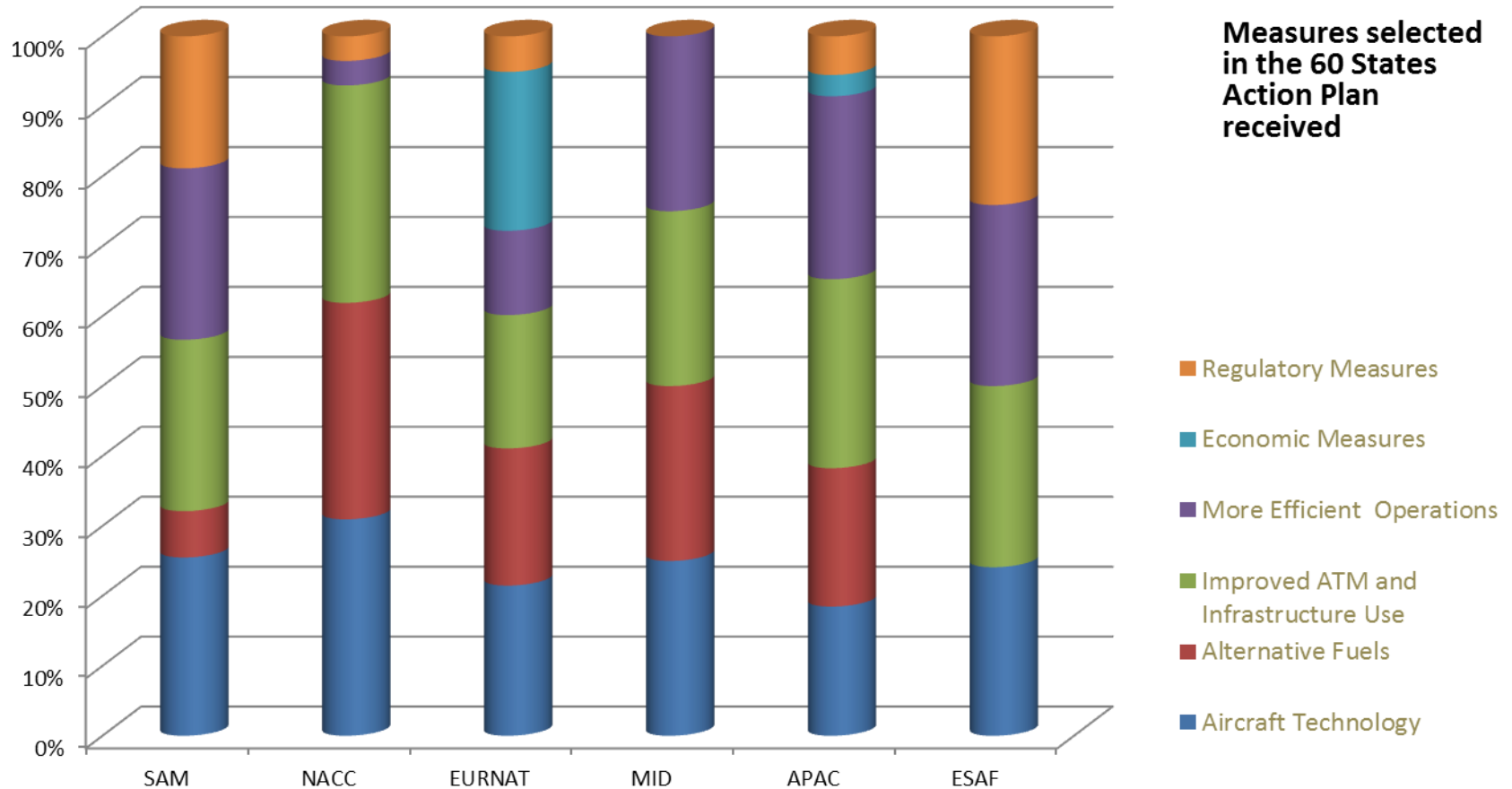
Environmental Protection: Minimize the adverse environmental effects of civil aviation activities

Climate change: Key elements of Resolution A37-19



- **Global Aspirational Goals:**
 - 2% annual fuel efficiency improvement
 - stabilizing its global CO₂ emissions at 2020 levels
- **Basket of Mitigation Measures:**
 - **Technological Measures** – CO₂ certification Standard, etc.
 - **Operational Measures** – Air Traffic Management, etc.
 - **Market-based Measures** – framework / a global scheme
 - **Sustainable Alternative Fuels for Aviation**
- **States' Action Plans**, allowing:
 - States to identify measures on CO₂ emissions reduction activities
 - ICAO to monitor progress in achieving the global aspirational goals and address assistance needs of States

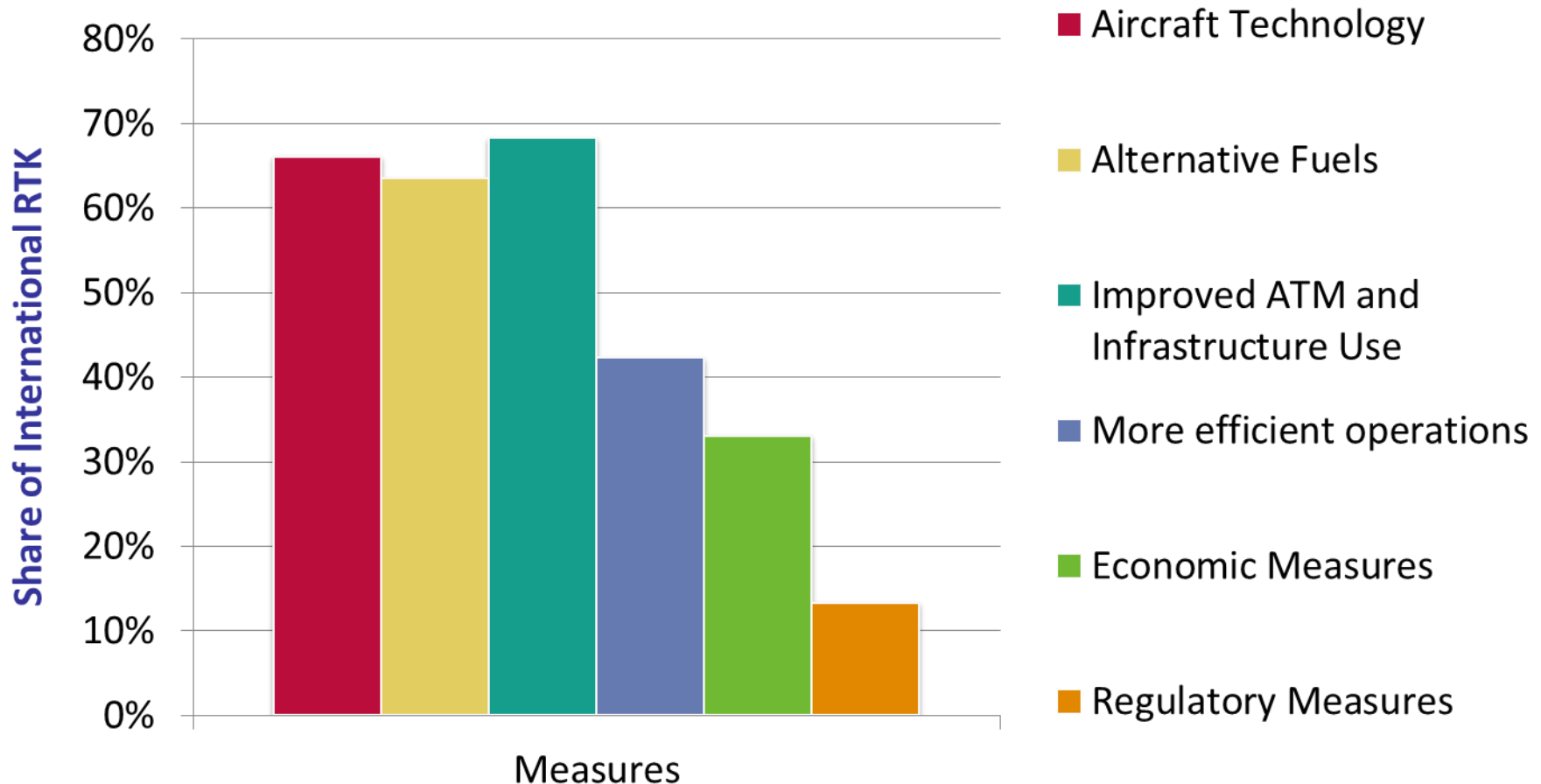
5. Minimizing impact on environment



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Measures selected in the Action Plans submitted



Environmental protection



Environmental Protection

Quantification of aviation impacts on environment

Development of policies, Standards and goals

Close relations with other UN bodies & aviation stakeholders



States' action plans

- **For Member States**

Opportunity to identify and communicate measures to address CO2 emissions from international aviation as well as any assistance needs to implement the measures



- **For ICAO**

Assess the global progress towards the achievement of aspirational goals and address specific assistance needs of States.

... ICAO role from “Standard and policy setting” to “implementation mode”

States' action plans



- **For Member States**

Opportunity to identify and communicate measures to address CO2 emissions from international aviation as well as any assistance needs to implement the measures

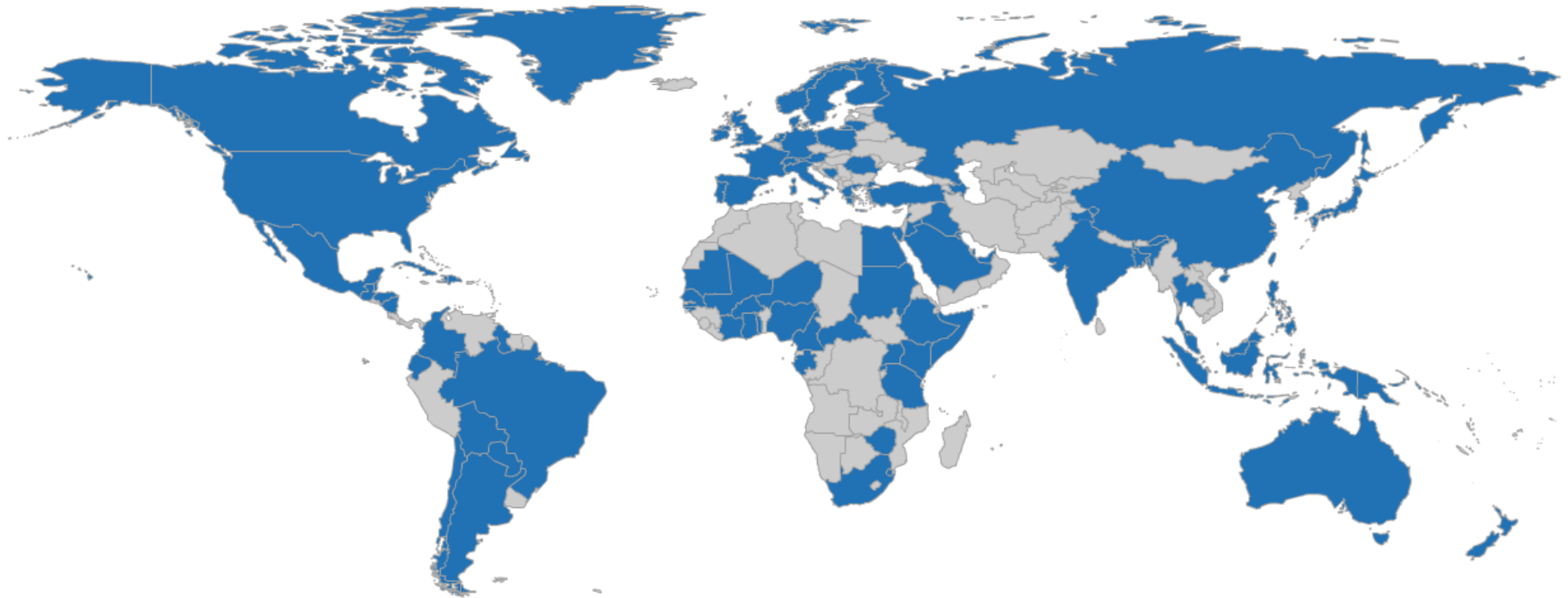


- **For ICAO**

Assess the global progress towards the achievement of aspirational goals and address specific assistance needs of States.

... ICAO role from “Standard and policy setting” to “implementation mode”

Hands-on training workshops



ICAO fuel savings estimation tool

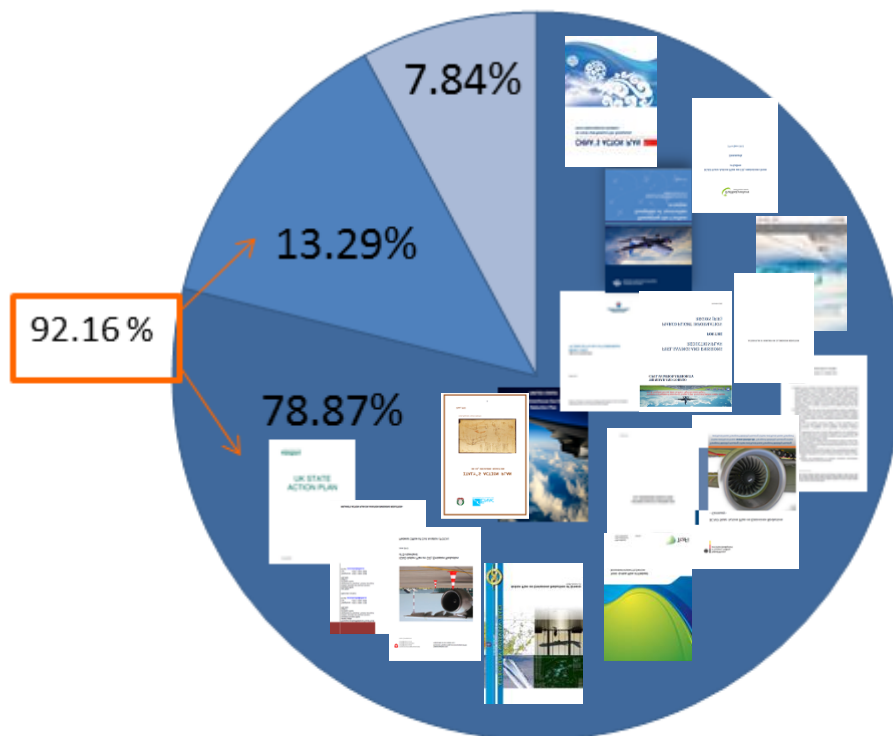


<http://www.icao.int/environmental-protection/Pages/Tools.aspx>

States' action plans on CO₂ emissions reduction activities



60 States, representing 78.87% international RTK, submitted an Action Plan as of June 2013



- 60 States submitted an Action Plan
- 22 States plan to submit an Action Plan in 2013
- Remaining States

ICAO “Assistance for Action – Aviation and Climate Change” Seminar

The poster for the seminar features a blue background. On the left is the ICAO logo. To its right, the text 'Assistance for Action' is written in large white letters, followed by 'Aviation and Climate Change Seminar' in smaller blue letters. Below this, the dates '23 - 24 October 2012' and the location 'ICAO Headquarters, Montréal, Canada' are listed. On the right side of the poster is a large image of two hands holding a globe of the Earth, with the hands and globe rendered in shades of blue, green, and yellow.

<http://www.icao.int/meetings/acli/Pages/default.aspx>

Sustainable drop-in alternative fuels for aviation



- One of the most exciting and promising opportunities for reducing aviation CO2
- ICAO – forum for the exchange of information on the state of worldwide activities in this area
- Airlines are using sustainable drop-in biofuels from different feedstocks
- Technological aspects are proved to be viable



Market based measures (MBMs)



- The 37th Assembly requested the development of a framework for MBMs, and the exploration of a global MBM scheme
- Three options for a global MBM scheme identified by the ICAO Council
- It is recognized that future work will be required and it is expected that the 38th Assembly may direct the Council to finalize the study relating to a global MBM scheme and to report to the next Assembly.

Key characteristics of MBMs

- MBMs are economic measures. They are policy tools that use price signals to provide incentives to reduce emissions by market players in order to achieve a given objective
- MBMs provide participants with flexibility on how to meet an emissions reduction goal while enabling continued growth
- MBMs have the potential to incentivise low cost reductions
- Ways of mitigation
 - Within the sector: incentives to use optimal technological and operational measures; reduced demand
 - Outside the sector (majority): buying carbon credits (offsetting)
- Impact of MBM on traffic may vary according to the different price elasticity of air travel demand in international markets based on their maturity level

Summary

- ICAO and its member States have been making progress in key areas on international aviation and climate change:
 - CO₂ Standard expected
 - Operational improvements
 - Sustainable alternative fuels for aviation
 - Market-based Measures (MBMs)
- A package of all the mitigation measures is available for States to choose and include in their Action Plans.
- Climate change will remain the main challenge on the ICAO environmental activities in the upcoming years.



The Conference is invited to:

- a) note the information contained in this paper;
- b) encourage individual States to actively participate in, and contribute their expertise and resources to, the work of ICAO on aviation and the environment;
- c) request those States that have not yet submitted action plans to inform their national action plan focal points of the availability of further assistance from the ICAO Secretariat related to the preparation and submission of States' action plans;
- d) further promote the use of the ICAO IFSET tool for the quantification of environmental benefits from operational measures, as part of the preparation of States' action plans; and
- e) encourage individual States to continue to collaborate with their national focal points for the preparation, update and implementation of States' action plans.

Thank You



ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION



DESTINATION GREEN

DRIVING PROGRESS THROUGH ACTION ON AVIATION AND THE ENVIRONMENT

STATE PROFILE SPECIAL FEATURES: CAMEROON & MALAYSIA

STATE CO₂ ACTION PLANS
CAEP/9 ACHIEVEMENTS
ACI AIRPORT CARBON ACCREDITATION



Vol. 08, No. 2

ICAO ENVIRONMENTAL REPORT 2010



AVIATION and CLIMATE CHANGE



Destination Green
ICAO Headquarters, Montréal, Canada
14 - 16 May 2013

For more information on our activities, please visit ICAO's website: <http://www.icao.int/env>