

ICAO High-level Meeting on a Global Market-Based Measure (MBM) Scheme

ICAO Pre-event Briefing

1. Overview of ICAO's work on a global MBM scheme and a process toward the 39th ICAO Assembly

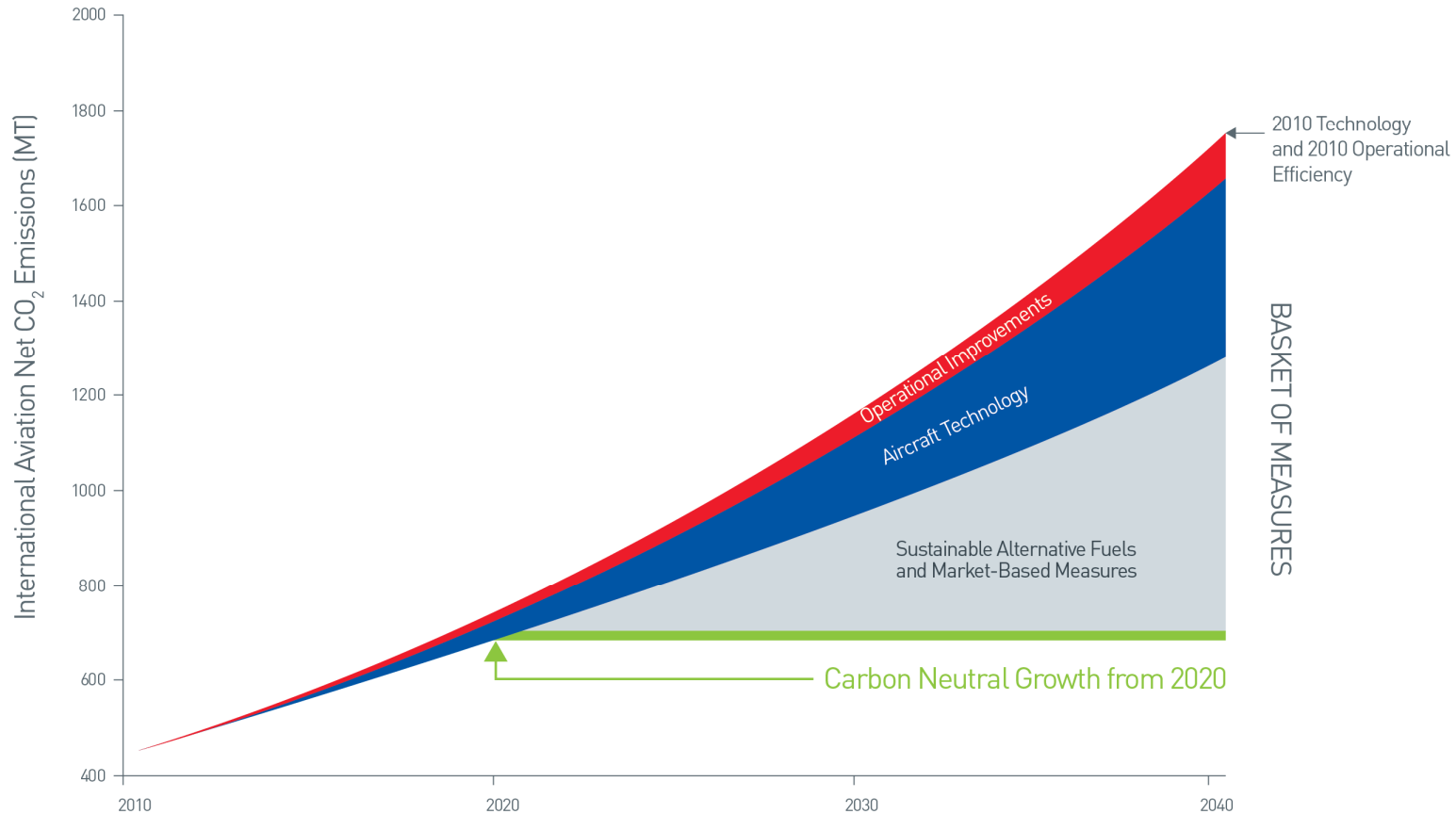


Environment, Air Transport Bureau
International Civil Aviation Organization (ICAO)



A Constellation of Partners for Sustainable Skies:
<https://www.youtube.com/watch?v=2PhMjggQNJ4>

Contribution of Measures for Reducing International Aviation Net CO₂ Emissions



- Aspirational goal: carbon neutral growth from 2020 (CNG 2020)
- To be achieved through a basket of measures, including a global market-based measure (MBM)
- Global MBM = complementary role to fill emissions gap for CNG2020

Doc 10022



Assembly Resolutions in Force (as of 4 October 2013)

Published by authority of the Secretary General

International Civil Aviation Organization

The 38th Assembly 2013 “decided to develop a global MBM scheme for international aviation” (implementation from 2020 onwards)

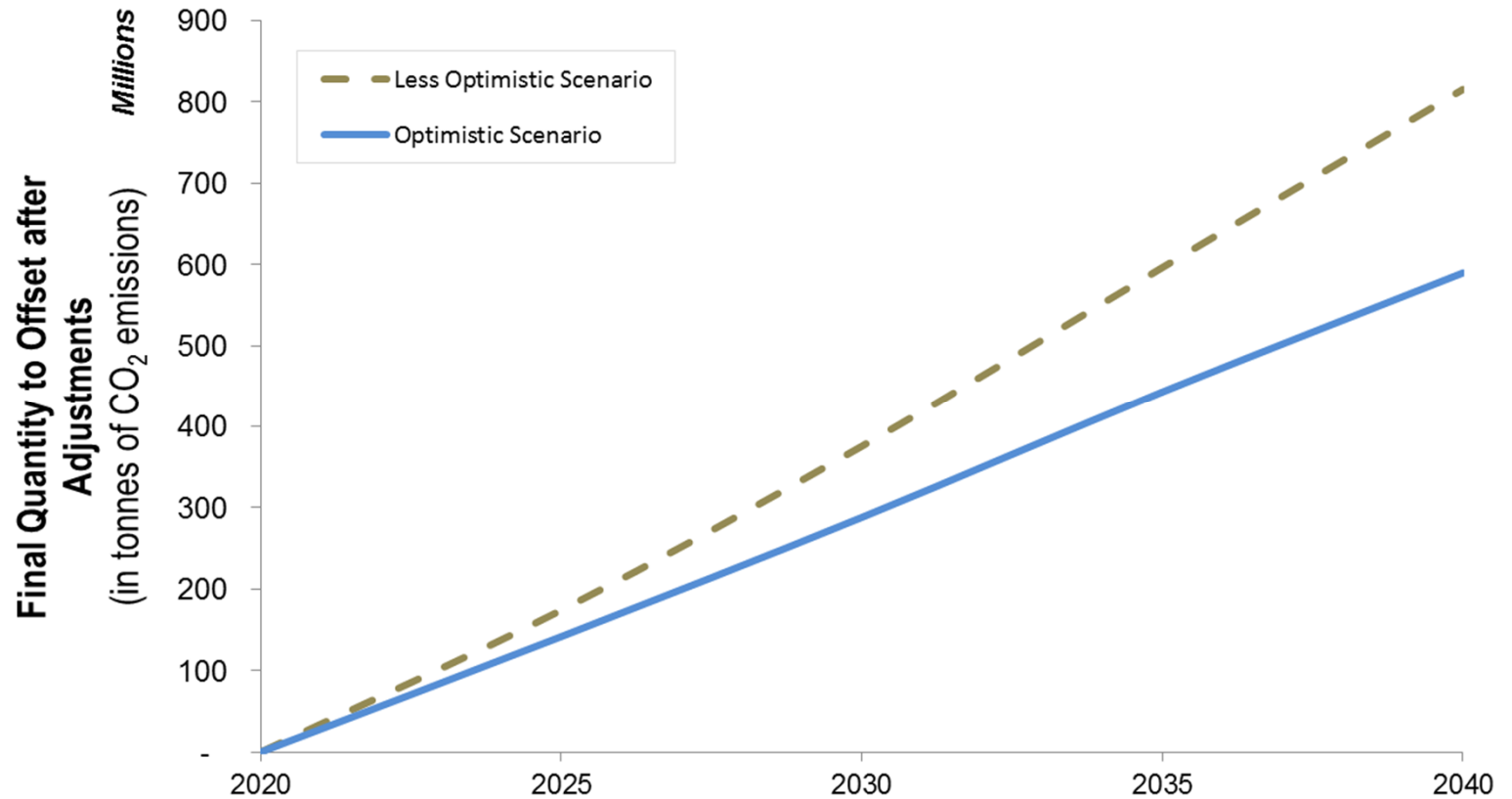
- Requested the Council, with the support of Member States, to:
 - Finalize all preparatory work (technical, environmental and economic impacts, modalities of possible options)
 - Organize seminars and workshops
 - Identify major issues and problems, and make a recommendation for a global MBM that addresses them
 - Report the results of the above work for decision at A39 (2016)



- In March 2014, the ICAO Council established the Environment Advisory Group (EAG) to oversee all work related to the development of a global MBM scheme, under the Council's guidance
- The EAG was composed of 17 Council representatives and IATA
- The EAG pursued progress, starting with a “Strawman” approach, in which a basic proposal on carbon offsetting was tabled with a view to generating discussion and analyses for improvements
- The EAG met 15 times in total from March 2014 to January 2016



- The EAG and the Council requested CAEP to provide technical analysis on:
 - Volumes of future CO₂ emissions from international aviation and overall cost impacts to achieve the carbon neutral growth from 2020;
 - Cost impacts of using different combinations for individual operator's growth rate and the international aviation sector's growth rate;
 - Various options for distribution of obligations to individual aircraft operators (e.g., route-based approach, accumulative approach, and comparison of these approaches);
 - Adjustments of obligations, technical exemptions and exemptions of routes to/from low emitting States.
- CAEP presented the results of all technical analyses to the EAG/15 meeting in January 2016



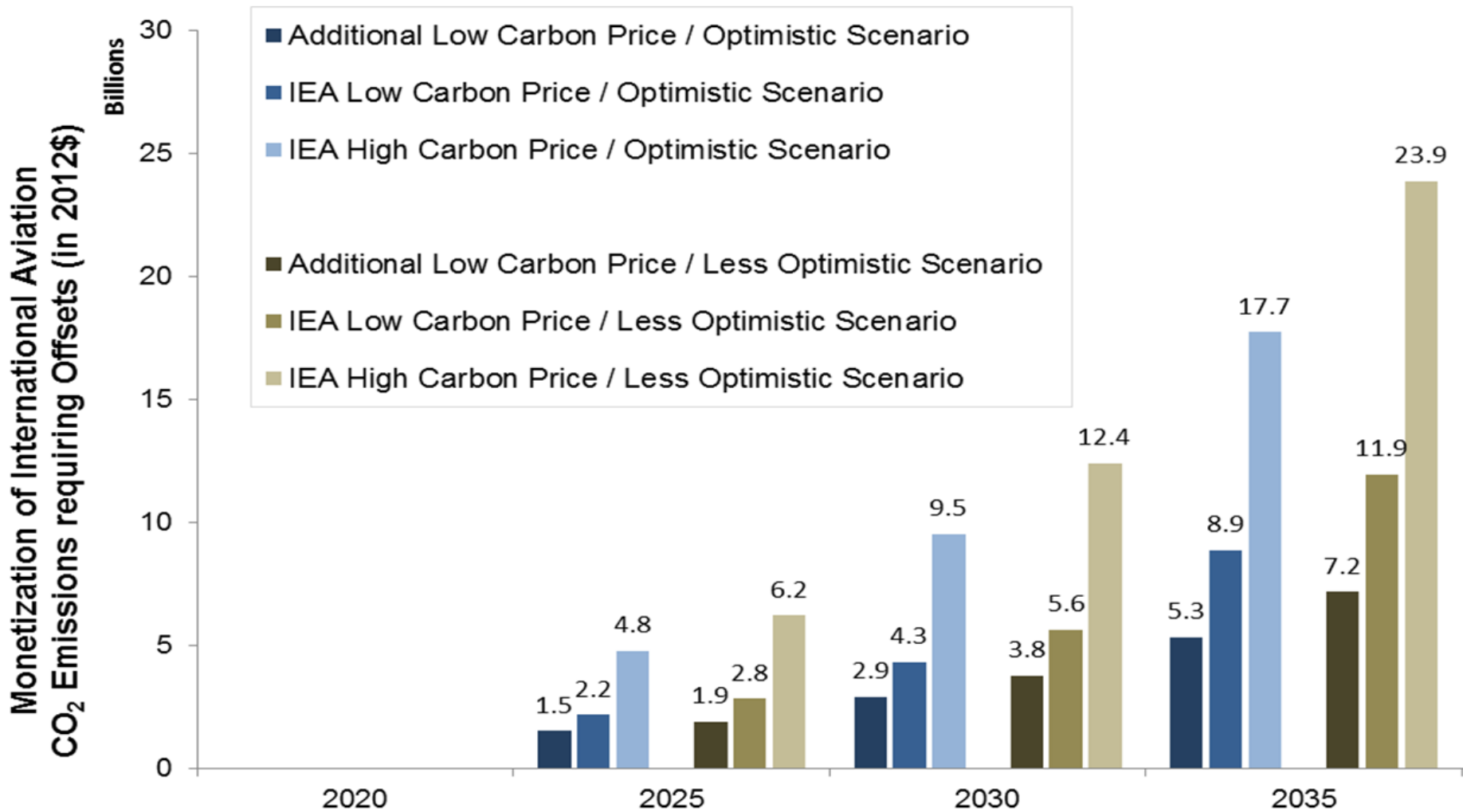
Final Quantity to Offset after adjustments (in Million tonnes of CO ₂ emissions)	2020	2025	2030	2035	2040
Less Optimistic Scenario	-	174	376	596	816
Optimistic Scenario	-	142	288	443	590

Source: CAEP analysis presented at EAG/15



Translation of emissions gap into the cost:

$$\begin{aligned} & \text{Emissions gap} \\ & \quad \times \\ & \text{Carbon price (cost of emissions unit)} \\ & \quad = \\ & \text{Total cost for the sector} \end{aligned}$$

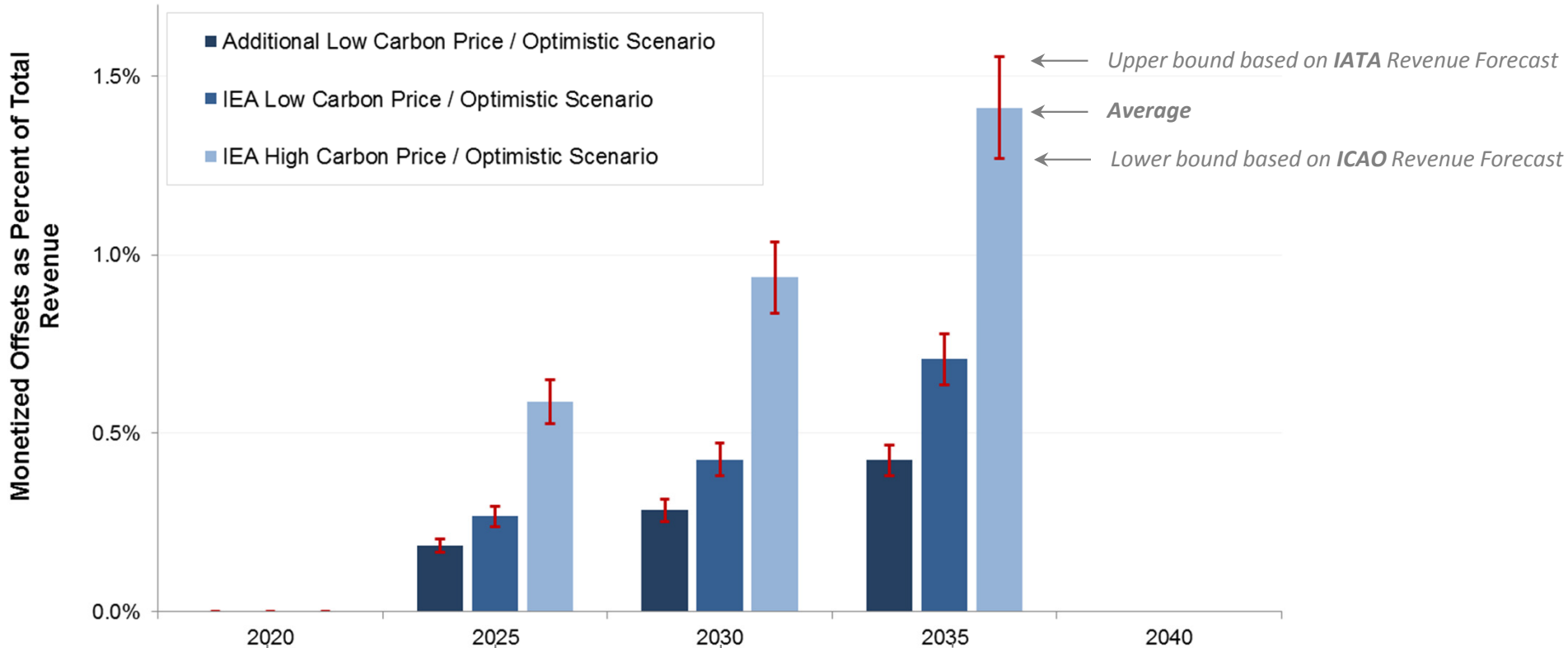


Carbon Price Assumptions:

IEA High	20 \$/ton	33 \$/ton	40 \$/ton
IEA Low	8 \$/ton	15 \$/ton	20 \$/ton
Additional Low	6 \$/ton	10 \$/ton	12 \$/ton



CAEP Analysis: Cost for Aviation (as % of Revenue)



	2020	2025	2030	2035
Revenue Forecast in 2012\$				
ICAO	716 \$B	864 \$B	1,090 \$B	1,330 \$B
IATA	579 \$B	734 \$B	917 \$B	1,140 \$B

Source: CAEP analysis presented at EAG/15

Note: ICAO and IATA Revenue Forecasts compared to Optimistic CO₂ Scenario (A38-WP/26 Scenario 9)



CAEP Analysis: Cost for Aviation (as % of Revenue)

- The analysis shows that depending on the carbon price scenarios, the cost of carbon offsetting for operators is:
 - 0.2 – 0.6 % of total revenues from international aviation in 2025; and
 - 0.5 – 1.4 % of total revenues from international aviation in 2035.
- It is estimated that the cost of carbon offsetting will have marginal impact on operators than the impact of fuel price volatility



- **MRV (Monitoring, Reporting and Verification)** system is needed for a global MBM scheme:
 - Monitoring of fuel use, collection of data and calculation of CO₂ emissions
 - Reporting of emissions data, which provides the basis to calculate the total emissions and annual obligation of participants
 - Verification of emissions data to ensure accuracy and avoid mistakes
- Once the obligation of each participant is known, information on how to offset emissions is needed: **Emissions Unit Criteria (EUC)** ensure that participants purchase appropriate emissions units from eligible mechanisms/programmes/projects
- Finally, **Registries** track and record compliance data against the offset obligation

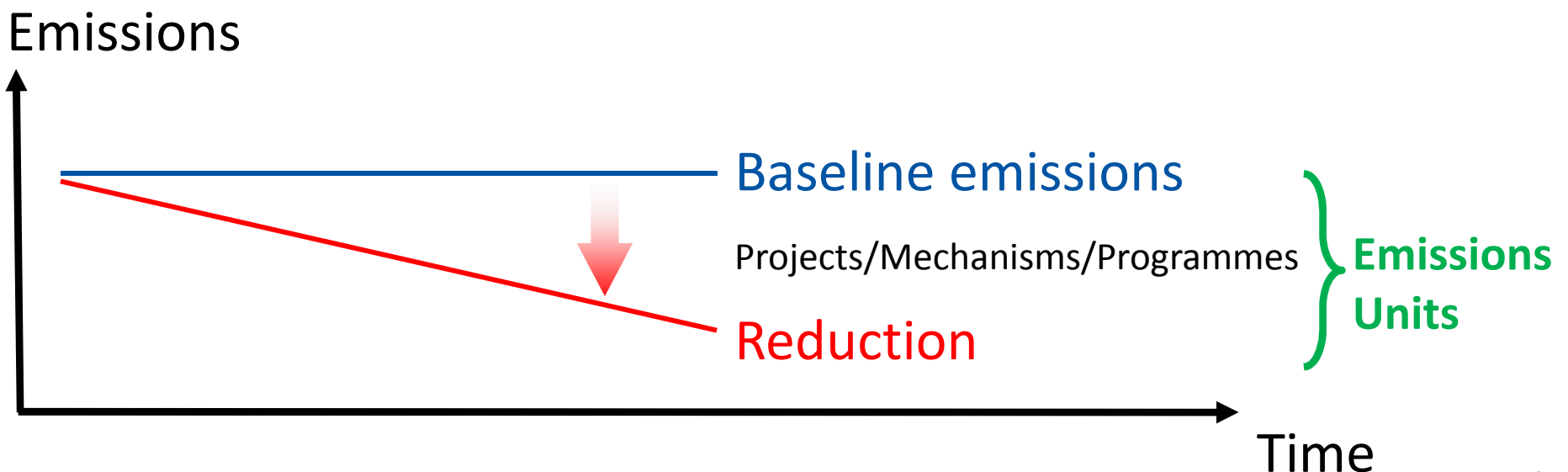


- Each year, an aircraft operator reports emissions information to a State in which the operator is registered, using a standard tool/template
- Sustainable alternative fuels are accounted for by aircraft operators as generating CO₂ emissions reduction pursuant to a formula, with relevant emissions factors, to be provided by ICAO
- Each year, States compile and transmit aggregated emissions information of their operators to ICAO, which calculates the total emissions from the international aviation sector based on the submissions
- Emissions data needs to be verified before it can be reported.
Verification of a report is carried out by:
 - Internal pre-verification by an aircraft operator;
 - Third-party verification before reporting from the operator to a State; and
 - Post-reporting review by the State.

- Offsetting compensates emissions through the reduction of emissions elsewhere, involving the concept of “emissions unit”:

1 tonne of CO₂ = 1 emissions unit

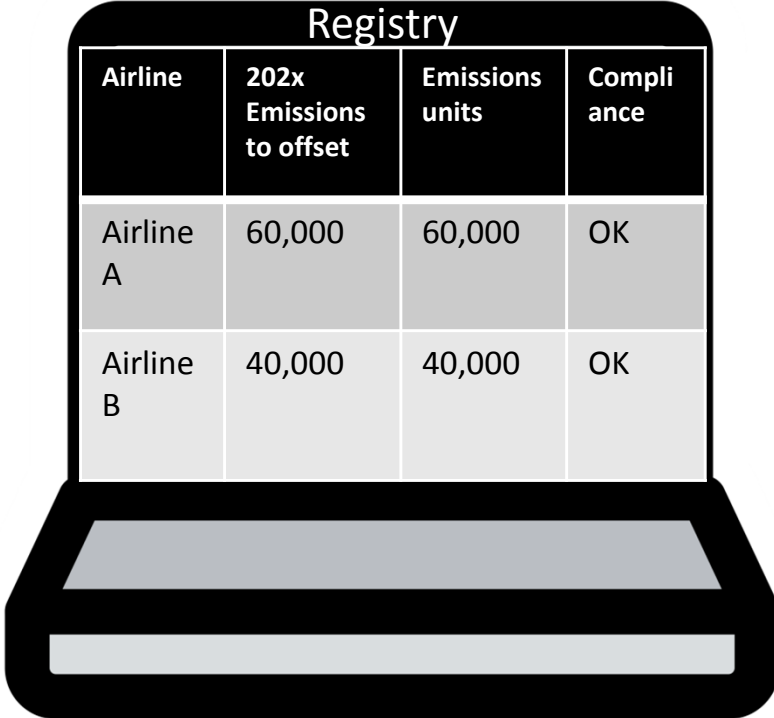
- Aircraft operators could compensate their international aviation emissions through the purchase of emissions units, arising from emissions reduction through Projects/Mechanisms/Programmes





- CAEP is currently working on the criteria for emissions units to be purchased by operators under the global MBM:
 - **Programmes** that generate offset credits should have: clear methodologies and protocols; validation and verification procedures; avoidance of double counting/claiming, etc.;
 - **Offset credits** should be: additional; based on a realistic and credible baseline; represent permanent emissions reductions, etc.;
 - **Allowances** from emissions trading schemes should ensure environmental integrity; market access and transparency, etc.

- Registry = Computer database, which:
 - Provides a record of international aviation CO₂ emissions:
 - Who holds each emission unit;
 - Transfer of emissions units from one account to another; and
 - When emission units are cancelled to prevent future use.
 - Assesses operator's compliance with the offsetting requirements
- CAEP work on registries is ongoing
 - States can establish their own registries, or groups of States can cooperate to establish joint registries
 - State/joint registries communicate with a consolidated central registry, established by ICAO



Airline	202x Emissions to offset	Emissions units	Compliance
Airline A	60,000	60,000	OK
Airline B	40,000	40,000	OK



- In response to the Assembly request to organize seminars and workshops on a global MBM scheme, ICAO conducted two rounds of Global Aviation Dialogues (GLADs), covering all ICAO regions
- The objectives of the GLADs were to:
 - Share information regarding MBMs and their role in a basket of measures
 - Provide up-to-date information on the ICAO work to develop a global MBM scheme
 - Familiarize participants with the proposed draft Assembly Resolution text
 - Provide opportunities to receive feedback from States and organizations, in particular from States not represented in the Council or CAEP
 - Serve as preparation for the High-level Meeting and subsequently for the 39th Assembly

- The format of GLADs (informative presentations, small group dialogues, panel discussions) received positive feedback; it supported engagement and active exchange of views by participants

2015 GLADs Venues

Lima, Peru
Nairobi, Kenya
Cairo, Egypt
Singapore
Madrid, Spain

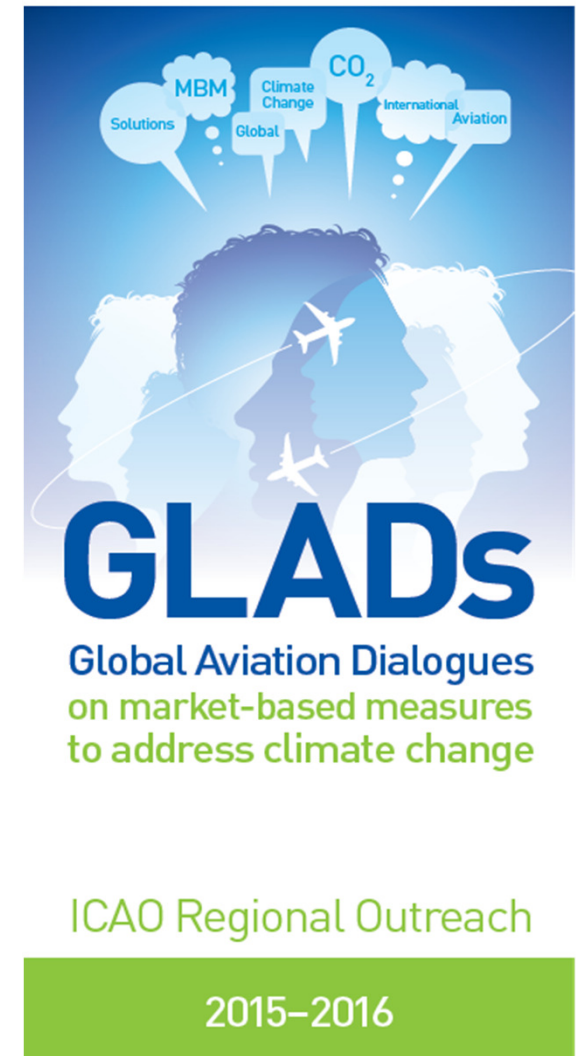
2016 GLADs Venues

Cairo, Egypt
Dakar, Senegal
Legian, Indonesia
Utrecht, Netherlands
Mexico City, Mexico



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ENVIRONMENT





- 2015 GLADs identified major considerations for the design of a global MBM scheme, such as:
 - Administrative simplicity
 - Environmental integrity
 - Cost effectiveness
 - Differentiation/non-discrimination
 - Avoiding excessive cost or administrative burdens
- 2016 GLADs highlighted the links between the major considerations identified by 2015 GLADs with specific paragraphs of the draft Assembly Resolution text
- In addition, it was highlighted that the draft Assembly Resolution text includes design elements to address differentiation in a practical way without impacting the non-discrimination principle



- Most States expressed that further assistance and capacity building would be needed to implement a MRV system and a registry
- Regarding the Emissions Unit Criteria, top 3 priorities included:
 - Operators should be free to choose the offsets, as far as they comply with agreed quality requirements (100 % support in all 2016 GLADs as top priority);
 - There should be a preference for projects located in developing/least developed States; and
 - There should be a preference for units under the current and new UNFCCC mechanisms (i.e., Clean Development Mechanism (CDM))
- Most 2016 GLADs participants indicated that the draft text would be a good basis to move forward, for further improvements and clarifications, in particular paragraphs 7 to 9



- The EAG/15 meeting in January 2015 considered a draft Assembly Resolution text on a global MBM scheme and recommended that a High-level Group on a global MBM Scheme (HLG-GMBM) be established
- Council agreed on the EAG/15 recommendation and established the HLG-GMBM on a global MBM Scheme
 - Composed of 18 high-level representatives
 - To facilitate convergence of views in order to finalize the draft Assembly Resolution text on a global MBM scheme, for consideration by the Council
- HLG-GMBM met twice to review the draft Assembly Resolution text (24 and 25 February; and 13 to 15 April 2016)



- Second meeting on the HLG-GMBM took into account the results of the 2016 GLADs, and included informal consultations sessions by small groups, with a view to facilitating possible convergence of views on specific topics:
 - The means for differentiation/non-discrimination;
 - Environmental integrity and emissions coverage; and
 - Distribution of obligations.
- Meeting agreed on a few improvements to the draft Assembly Resolution text, and recognized that divergent views remained on paragraphs 7, 8 and 9 of the draft text, for further discussions to bridge the divergent views
- The Council on 20 April 2016 took note of the progress made by the HLG-GMBM in clarifying the draft Assembly Resolution text, and decided on the text to be presented to the High-level Meeting for its consideration



Draft Assembly Resolution text on a global MBM Scheme

Main Elements

Opening and role of a global MBM scheme	paragraphs 1 to 6
Phased implementation	paragraph 7
Route-based exemptions	paragraph 8
Distribution of offsetting requirements	paragraph 9
Exemptions and adjustments	paragraphs 10 to 12
Technical and administrative issues	paragraphs 13 to 16
Implementation mechanisms	paragraphs 17 to 20
<ul style="list-style-type: none">• MRV, EUC, Registries, Governance, Regulatory framework• Capacity building, Partnerships• Further actions on the use of emissions units• Further actions on aviation-related methodologies	

