# Global Aviation Dialogues (GLADs) on Market-Based Measures to address Climate Change

Key Elements of an Aviation MBM



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



- Key Elements of an Aviation MBM
  - A scope
  - An objective
  - A baseline
  - A common approach for all participants to contribute to the attainment of the objective
  - Monitoring, reporting and verifying emissions
  - Environmental integrity of emissions units
  - Registry
  - Compliance cycle
  - Enforcement mechanism
- Planning to A39



### Scope

- Type of greenhouse gas emissions
  - CO<sub>2</sub> only
- Type of flights
  - International flights
- Attribution of emissions in international airspace
  - Every international flight is only covered once for its full length, to avoid double counting
- Sustainable alternative fuels
  - Provisions for accounting emissions from flights using sustainable alternative fuels needs to be defined (in the current CAEP Work Programme)



- Objective
  - ICAO's aspirational goal is carbon neutral growth from 2020
- Baseline
  - International aviation emissions in 2020
- A common approach for all participants to contribute to the attainment of the objective:
  - Distributes obligations among operators
  - Adjustments and/or exemptions might be needed



- Monitoring, reporting and verifying emissions
  - Purpose: to collect data on international aviation emissions annually and compare emissions against the baseline
  - Components:
    - Monitoring of fuel use and calculation of CO<sub>2</sub> emissions (1 tonne fuel burn = 3.16 tonnes  $CO_2$  emissions)
    - Reporting of emissions data, a basis to establish annual obligation
    - Verification of reported emissions data to ensure completeness and avoid misstatements

# **Example - MRV**

#### **Operators**

- Monitoring Plan
- Fuel Burn Monitoring
- Calculation of Emissions
- Development of report
- Internal Verification of Report

#### Report

#### 3<sup>rd</sup> Party Verifier

 Verification of Report before submission

Monitoring Reporting Verification

Report

#### **ICAO**

- Collection of States emission data
- Assessment of overall global compliance
- Maintain registry

#### Report

#### **Single State Authority**

- Approval of Monitoring Plan
- Post Verification of Report
- Report emissions to ICAO



### Environmental integrity of emissions units

- Quality: emissions units must correspond to actual emission reductions (e.g.: real, permanent, additional, verified)
- Quantity: emissions units must not be counted for more than one purpose in this MBM and/or other MBMs (no double counting)
- Compliance: need to cancel an adequate amount of emissions units to offset emissions above the baseline

## Registry

- Track compliance of participants of the MBM
- Avoid double counting by recording all transactions centrally
- Help assess progress towards the goal
- Maintains transparency for participants and stakeholders

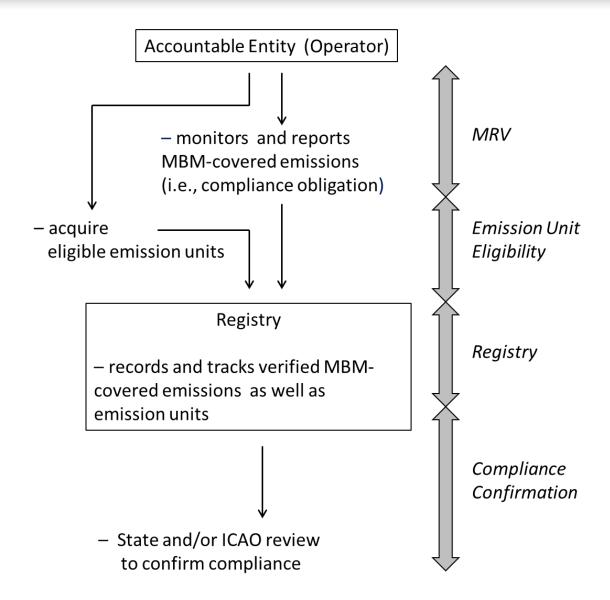


# ICAO ENVIRONMENT Example - Emissions Units

# There are two main types of emissions units, and a variety of issuers worldwide

Type of unit	Definition	Examples of issuers
"Allowance"	Units issued by an ETS  Correspond to the emissions cap established by the ETS	National/subnational governments
"Credit"	Units issued by a crediting programme  Correspond to emissions reductions that have been monitored, reported and verified	UNFCCC (CDM)  National/subnational governments  Third parties/Voluntary Markets

# ICAO ENVIRONMENT Example - Registry Process





# Compliance cycle

- Monitoring of emissions
- Reporting of emissions
- Verification of emissions
- Cancellation of emissions units (compliance)

#### **Enforcement mechanism**

- States agree to relevant Assembly Resolution and potential ICAO standards
- It is expected that States will then adopt provisions to implement and enforce the scheme for covered operators



# ICAO ENVIRONMENT Planning to A39 - 2016

