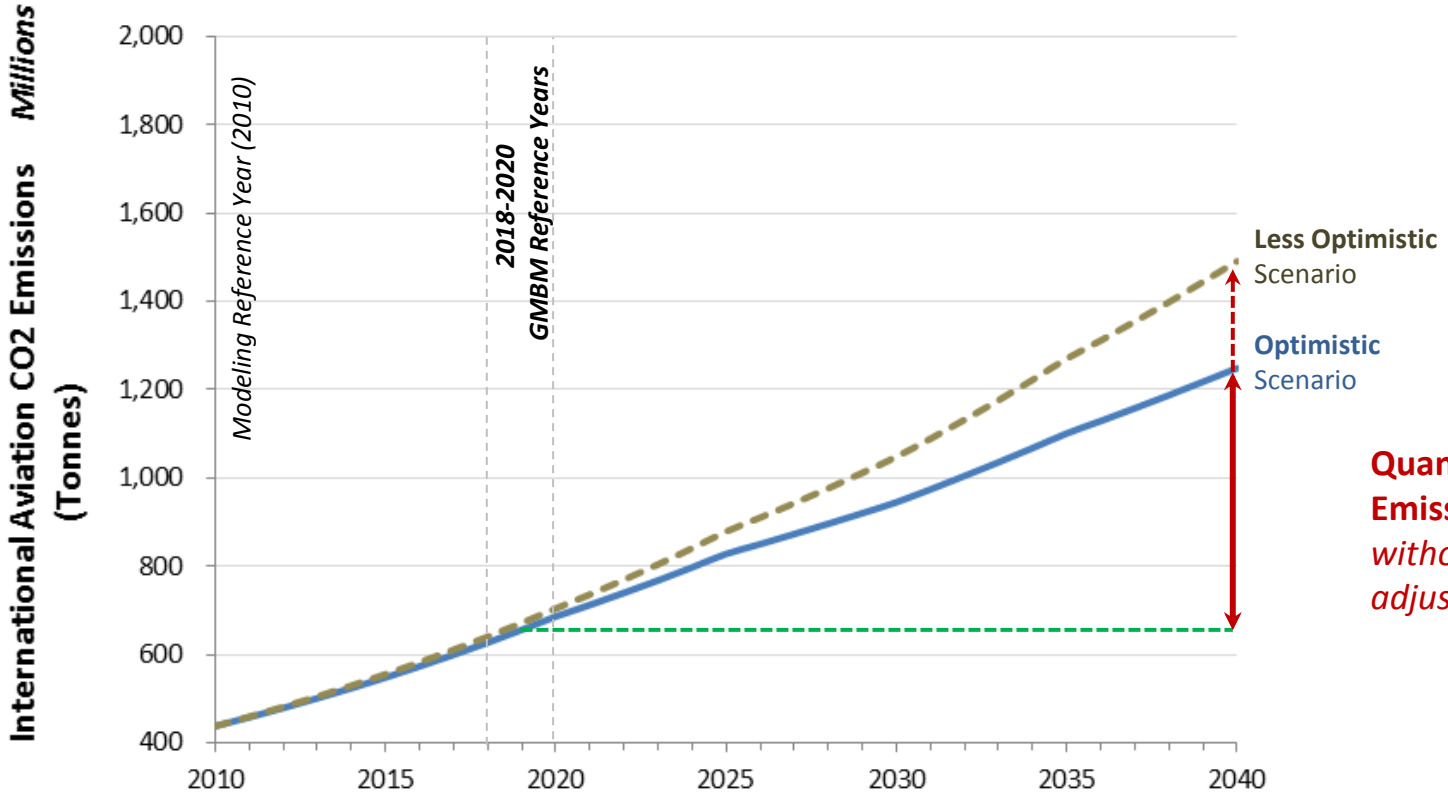
ICAO Global Aviation Partnerships on Emissions Reductions (E-GAP)

Multiplying Environmental Action

Carbon Markets

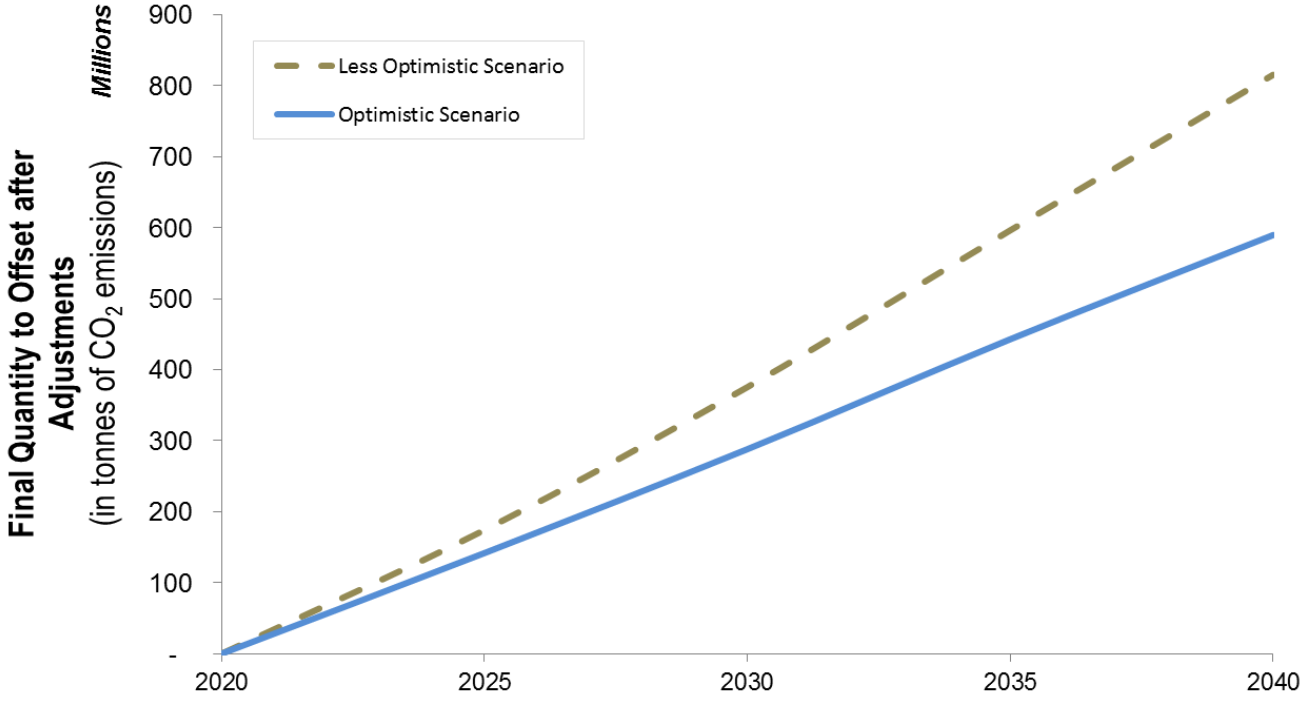
- Raised during regional consultation meetings on the global MBM
- Issues ranged from understanding supply, demand and price to eligibility of units
- International aviation role in the carbon market
- Linking UN mechanisms and efforts

International aviation CO_2 emissions between 2010 - 2040



International Aviation CO_2 Emissions (in Million tonnes)	2010	2018-2020	2020	2025	2030	2035	2040
Less Optimistic Scenario	438	671	704	879	1,048	1,270	1,491
Optimistic Scenario	438	656	686	828	945	1,101	1,249

Final quantity to offset after adjustments with total CO_2 emissions to provide context

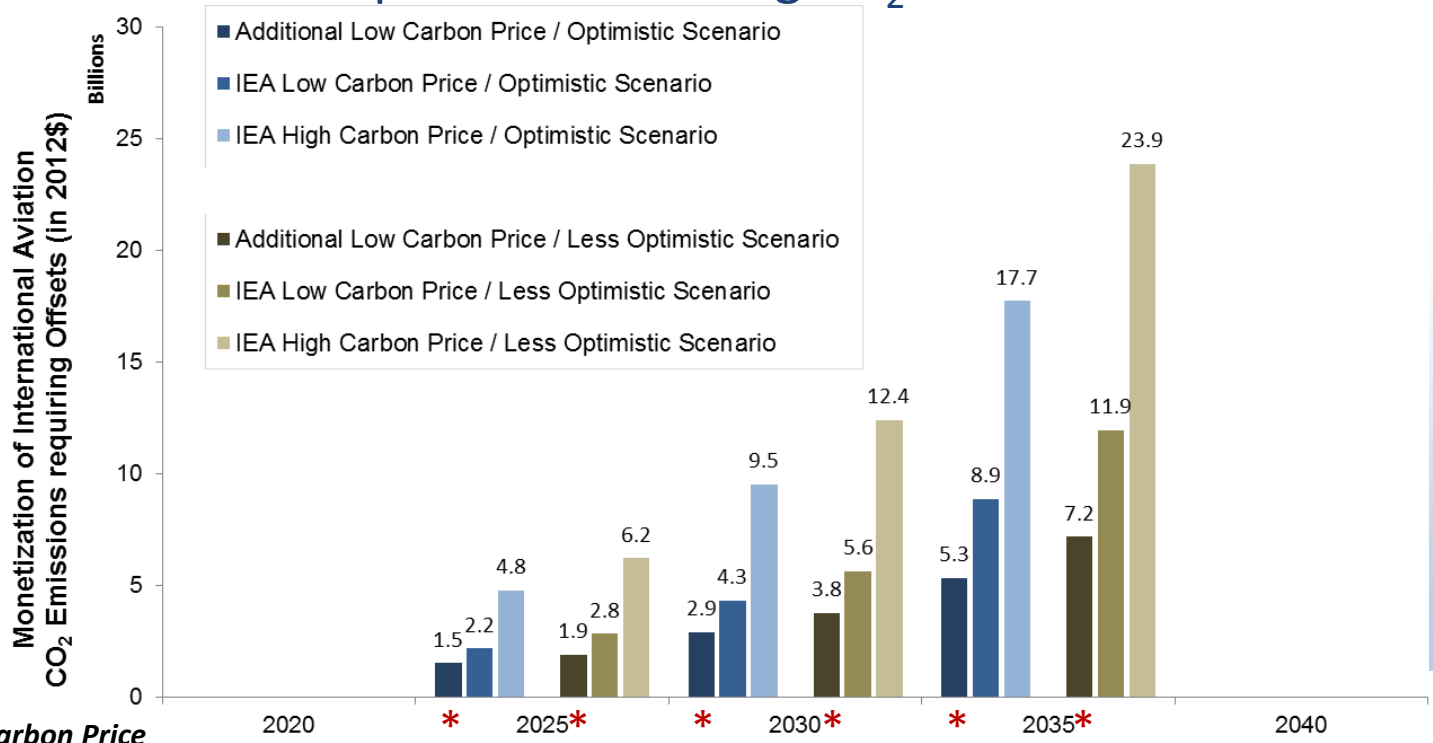


Final Quantity to Offset after adjustments (in Million tonnes of CO2 emissions)	2020	2025	2030	2035	2040
Less Optimistic Scenario	-	174	376	596	816
Optimistic Scenario	-	142	288	443	590

Sources for international aviation to address demand to offset emissions

- Forecasts beyond 2020 are challenging Allowances - ETS
  - National/region cap and trade systems
  - Offset credits affiliated with ETS
- Offset Credits
  - compliance markets (Kyoto Protocol, REDD+)
  - voluntary (VCS, Gold Standard)

- Assumptions on unit carbon price are driving significant uncertainty in total cost impacts of offsetting CO_2 emissions from international aviation.



Carbon Price Assumptions:	2020	2030	2035
IEA High	**20** $/tonne	**33** $/tonne	**40** $/tonne
IEA Low	**8** $/tonne	**15** $/tonne	**20** $/tonne
Alternative Low	**6** $/tonne	**10** $/tonne	**12** $/tonne

IEA WEO 2013 carbon price paths reflect allowance prices only.

The alternative low carbon price path takes into account a larger pool of emissions units with lower abatement costs.

* New case with alternative low carbon price

Costs to address emissions relative to revenue (USD billion)