

**Koru  
Climate**

# **Update on carbon offsetting for international aviation**

Workshop on the role of carbon markets in global climate action and implications for market development activities

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World Bank, Partnership for Market Readiness

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# Overview

Goals and measures

How it functions

Ongoing work

Eligibility of offsets

Expectations of demand

Interaction with Article 6

Some implications for suppliers

CORSIA =

Carbon Offsetting and Reduction Scheme for International Aviation

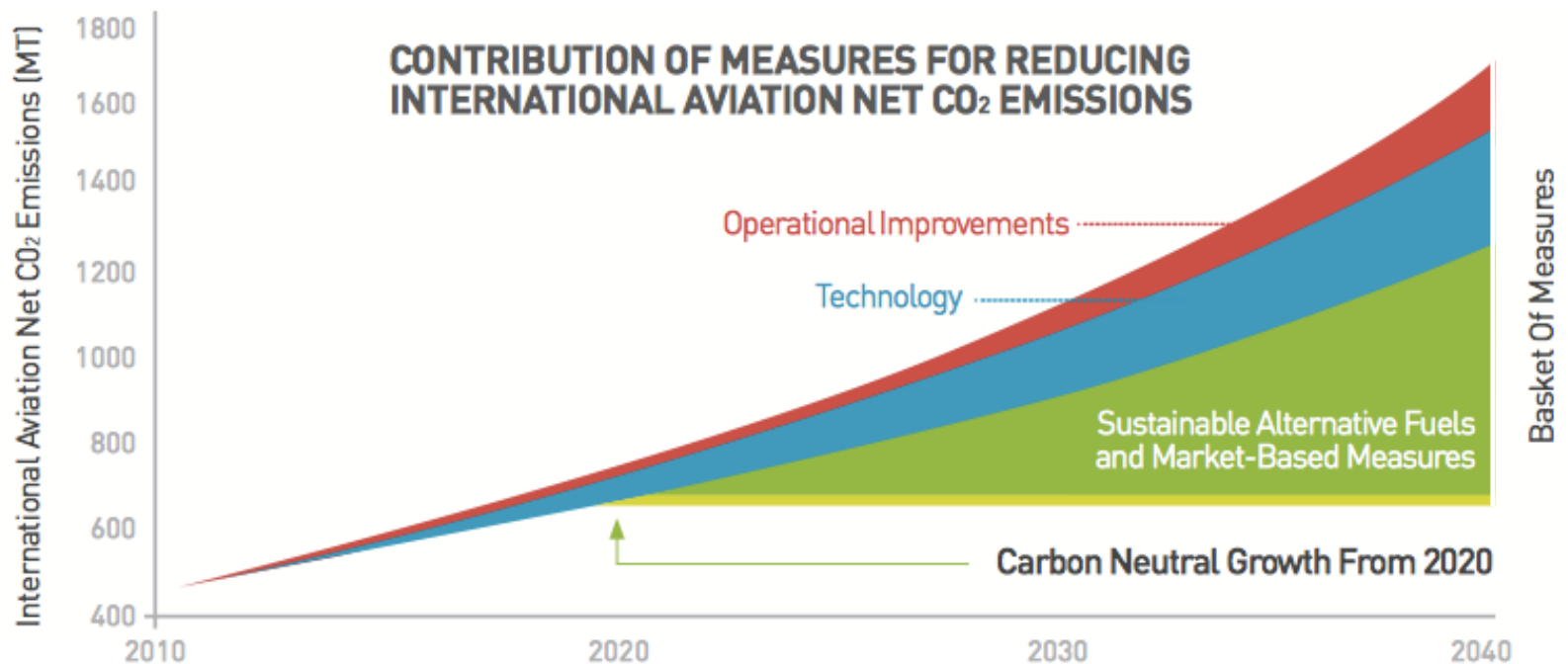


# ICAO's aspirational goals

2% annual fuel efficiency improvement through 2050

Carbon neutral growth from 2020 onwards (“CNG2020”)

Sector is 1.3% of global emissions, but traffic is growing at 5% each year and fuel consumption by 2040 is to be 2.8 to 3.9 times 2010 levels



# How it functions

- Route-based system
  - Emissions aggregated for all routes across CORSIA states
  - ICAO compiles information and determines annual sectoral growth factors over a baseline of 2019-2020 average emissions
- Aircraft operators offset obligations set by sectoral (and individual) growth rates (de minimis and new entrant exemptions apply)
- Three-year compliance cycles with annual reporting
- Compliance and enforcement lies with the national governments
- Offset mechanism but initially little carbon pricing incentive
  - Obligation primarily determined by sector-wide growth
  - Slow growers subsidize faster growers
  - However an adjustment for biofuel use is planned



# Cycles and phases

	Compliance cycles	Calculation of offset obligation	
Voluntary	2021-2023	Allows application to 2020 emissions	Pilot phase
	2024-2026	Normal formula (100% on sector growth)	First phase
Mandatory	2027-2029	Normal formula (100% on sector growth)	Second phase
	2030-2032	Normal formula (minimum 20% on individual growth, exact rate to be decided)	
	2033-2035	Normal formula (minimum 70% on individual growth exact rate to be decided)	

Periodic reviews every 3 years  
Special review by 2032 on future of CORSIA



# Voluntary participation in the pilot phase

72 States with 87.7% of international aviation (as of Aug 2017)



Data source: ICAO, graphic source: BMUB

# Ongoing work - MRV

- Draft standards and recommended practices (SARPs) and related guidance are prepared and undergoing review
  - Annual data on emissions through attribution of flights to airlines
  - Fixed fuel burn ratio (1 tonne of fuel = 3.16 tonnes of CO<sub>2</sub>)
  - Simplified procedure for small emitters
  - Quantities of sustainable alternative fuel use
- Data flow: operators → State authority → ICAO
  - Third party verification undertaken by operators
  - Order of magnitude review by State Authorities
- External verification based on existing ISO standards
- MRV SARPs to be adopted in 2018, as pilot phase States need to MRV their 2019-2020 data for the baseline setting



# Ongoing work - registries

- Tracking through electronic databases
  - Operator emissions and offsetting obligations
  - Emission units – purchase, ownership and surrender
- Registries operated by States (or groups of States)
- Information to be sent to the CORSIA central registry
  - Maintains and publishes information
  - Determines sectoral growth rates and offsetting requirements
- Registry SARPs to be adopted in 2018, to allow implementation by pilot phase States in time for 2021





# Ongoing work – Emission Unit Criteria

- EUC will determine the eligibility of external programmes to supply units into CORSIA
- EUC are applicable to both programme and unit level, which may allow for full programme eligibility or only specific activity types
- Draft SARPs and related guidance currently undergoing review
  - Expected to be mandatory
  - May undergo testing before finalization
  - Expected to be agreed in 2018
- Units from mechanisms established by the UNFCCC and Paris Agreement are eligible, if they align with ICAO decisions on avoiding double counting and on eligible vintage and timeframe



# EUC at the programme level

Clear methodologies and protocols, and their development process	Programme governance
Scope considerations	Transparency and public participation provisions
Offset credit issuance and retirement procedures	Safeguarding systems to address environmental and social risks
Identification and tracking	Sustainable development criteria
Legal nature and transfer of units	Avoidance of double counting, issuance and claiming
Validation and verification procedures	



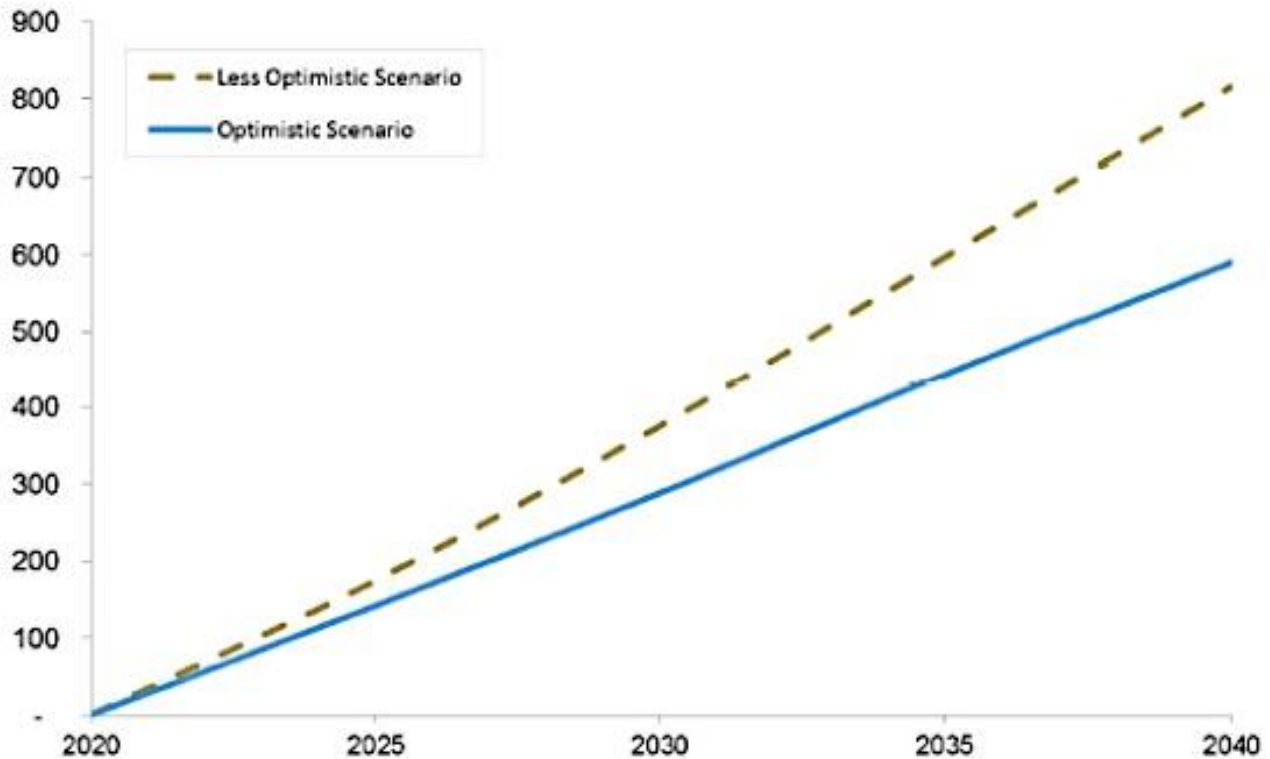
# EUC at the unit level

Are additional	Represent permanent emissions reductions
Are based on a realistic and credible baseline	Assess and mitigate against potential increase in emissions elsewhere
Are quantified, monitored, reported, and verified	Are only counted once towards a mitigation obligation
Have a clear and transparent chain of custody	Do no net harm



# Expectations of demand, slow at first

Source: ICAO



Quantity to offset (Mt CO2)

Less optimistic

174

376

596

816

Optimistic

142

288

443

590

# Possible “early action” package

- Possible supply to the pilot phase from reductions made prior to 2020, from the CDM and voluntary carbon standards
- No decision yet on appropriate vintage restrictions, for example
  - 2013 (decision to develop a market-based measure)
  - 2016 (adoption of CORSIA)
- Unclear if restrictions would be dates of registration or issuance
- Demand in the pilot phase is anyway relatively low
- Not clear if pre-2020 reductions will be allowed at all



# Interaction with Article 6

- Both ICAO and Paris require avoidance of double counting
  - Aircraft operator purchase of units from Paris needs an adjustment to “add back” emissions to transferring country’s inventory
  - May also require attestation by transferring country that the units are not being used against another target or supplied to others
- Adjustments can be implemented by
  - Treating transfers to aircraft operators as being transfers to CORSIA as a “country” (full integration of CORSIA into Article 6 accounting)
  - ICAO requiring reliable demonstration that units are cancelled (maintaining ICAO and Article 6 separate but creating a bridge)
- Full integration offers many benefits ... universal accounting, universal system of serial numbers, integrated registries, etc



# Some implications for credit suppliers

- Consider adapting to the emerging EUC and assessment process – CORSIA may set the standard if Article 6 guidance is limited
- Information on transfers made will be needed for adjustments
- Clarify entity authorizations to make international transfers and make internal cancellations for units being used under CORSIA
- Take advantage of integration possibilities with Article 6, in particular for systems of tracking and accounting
- Be aware that CORSIA is a system of multi-year targets and may require vintage information on the timing of reductions – this may have implications for accounting in supplier countries
- Set reasonable expectations for demand, and competition, especially for pre-2020 reductions and the early years of CORSIA

