



Information Meeting on the

Carbon Offsetting and Reduction Scheme for
International Aviation CORSIA

Implementation in Switzerland

Introduction

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Bern, May 15th 2018



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1. Aviation and Climate Change

The combustion of Kerosene leads to the emission of significant amounts of substances relevant to climate change.

Illustrative depiction of the emissions resulting from a 1 hr flight of an average aeroplane with a capacity of carrying 150 passengers:





1. Aviation and Climate Change

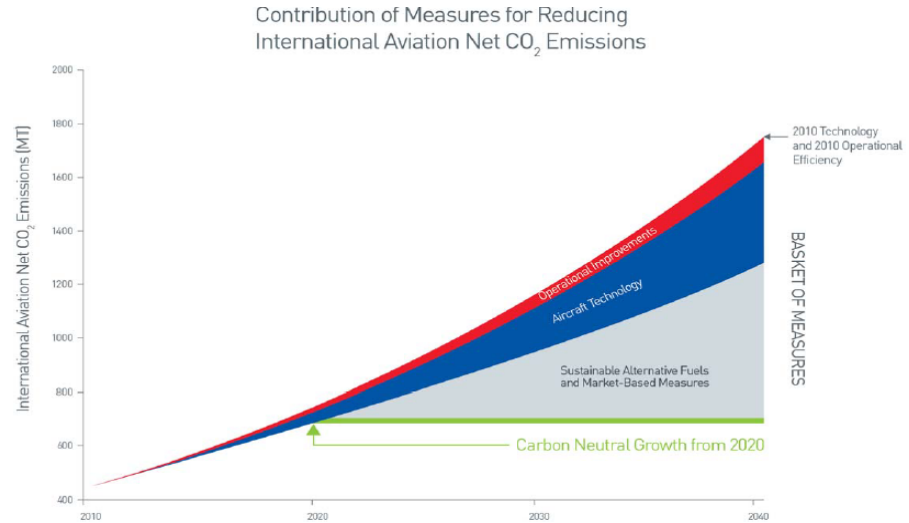
- Civil aviation accounts for approximately 2% of today's anthropogenic CO₂-emissions
- **But:** Aviation will continue to grow at a high pace according to the most recent forecasts. This will lead to an increase of the total CO₂-emissions of aviation while other sectors are reducing their emissions of CO₂ and other substances relevant for climate change
- There is no doubt that aviation has to contribute its fair share to reduce anthropogenic impact on the global climate



2. Basket of Measures: Market Based Measures (MBM)

CORSIA addresses the remaining "emissions gap" to achieve CNG2020

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- Basket of Measures: All areas shall contribute to the mitigation of the impact of aviation to climate change (aircraft technology, operational improvements, sustainable alternative fuels)
- Switzerland: ICAO Action Plan on CO₂-Reduction (<https://www.bazl.admin.ch/bazl/de/home/fachleute/regulation-und-grundlagen/umwelt/icao-aktionsplan-zur-reduktion-von-co2-emissionen-der-schweizer-.html>)



2. Basket of Measures: Market Based Measures (MBM)

- Market based measures to complement the other elements in the basket of measures if these are not sufficient to reach goals
- Only internationally coordinated measures are expedient due to the international nature of civil aviation (approx. 65% international, 35% domestic) as opposed to locally applied charges and taxes
- Emissions trading (cap and trade) allows for the implementation of mitigation measures where they are most cost efficient.
- Offsetting mechanisms help fostering the implementation of cost effective projects with respect to climate change especially in developing countries



3. Emissions Trading

3.1. EU ETS

- Most important instrument of the EU to reach the climate change goals of the EU (reduction of CO₂-emissions by 20% compared to 1990 level until 2020). Covers 45% of the greenhouse gas emissions of the EU; covers 31 States (EEA)
- Covers approx. 11'000 fixed installations plus aviation operators
- Cap and trade – scheme (cap aviation = 5% below average emissions of the years 2004 – 2006; Cap fixed installations = benchmark plus reduction path of 1.74% per year until 2020)
- Implemented in 2005 (without aviation; integration of aviation as of 1.1.2012); 3rd trading period 2013 – 2020; 4th trading period 2021 - 2030 (no foreign emissions units)
- Aviation: Originally (2012) EU ETS covered all flights departing or arriving at an airport within the EU (+EEA) with few exceptions



3. Emissions Trading

3.1. EU ETS

- 2013 – 2016 Application of EU ETS «aviation» restricted to flights within EEA («Stop the Clock»)
- In December 2017 Regulation 2017/2392/EU prolonged the application of the intra-EEA geographic scope of the EU ETS «aviation» until the end of 2023; starting in 2021 reduction path of 2.2% per year also for aviation
- EU plans to implement CORSIA via ETS-Directive 2003/87
- Regulation 2017/2392 enables EU Commission therefore to align the MRV-systems of the EU ETS and of CORSIA through «delegated acts»
- As of today it is not clear how CORSIA will be implemented via the ETS Directive



3. Emissions Trading

3.2. CH ETS

- Implemented in 2008; covers 54 fixed installations which emit a total of approx. 5 mio tonnes of CO₂ per year (corresponding to approx. 10% of total greenhouse gas emissions of Switzerland). Aviation is not part of the CH ETS so far
- Due to the low volume and the often comparatively high prices of allowances traded in the Swiss ETS, Swiss industry has an interest in linking the Swiss ETS with the EU ETS in order to gain access to the bigger and more liquid market of the EU ETS and its lower prices
- Negotiations on a linking of the two systems started in 2011; a bilateral linking agreement was initialled in 2016 and finally signed in November 2017.
- The ratification of the linking agreement is currently under discussion by the Swiss Parliament. It will entail modifications of the Swiss CO₂-legislation.



3. Emissions Trading

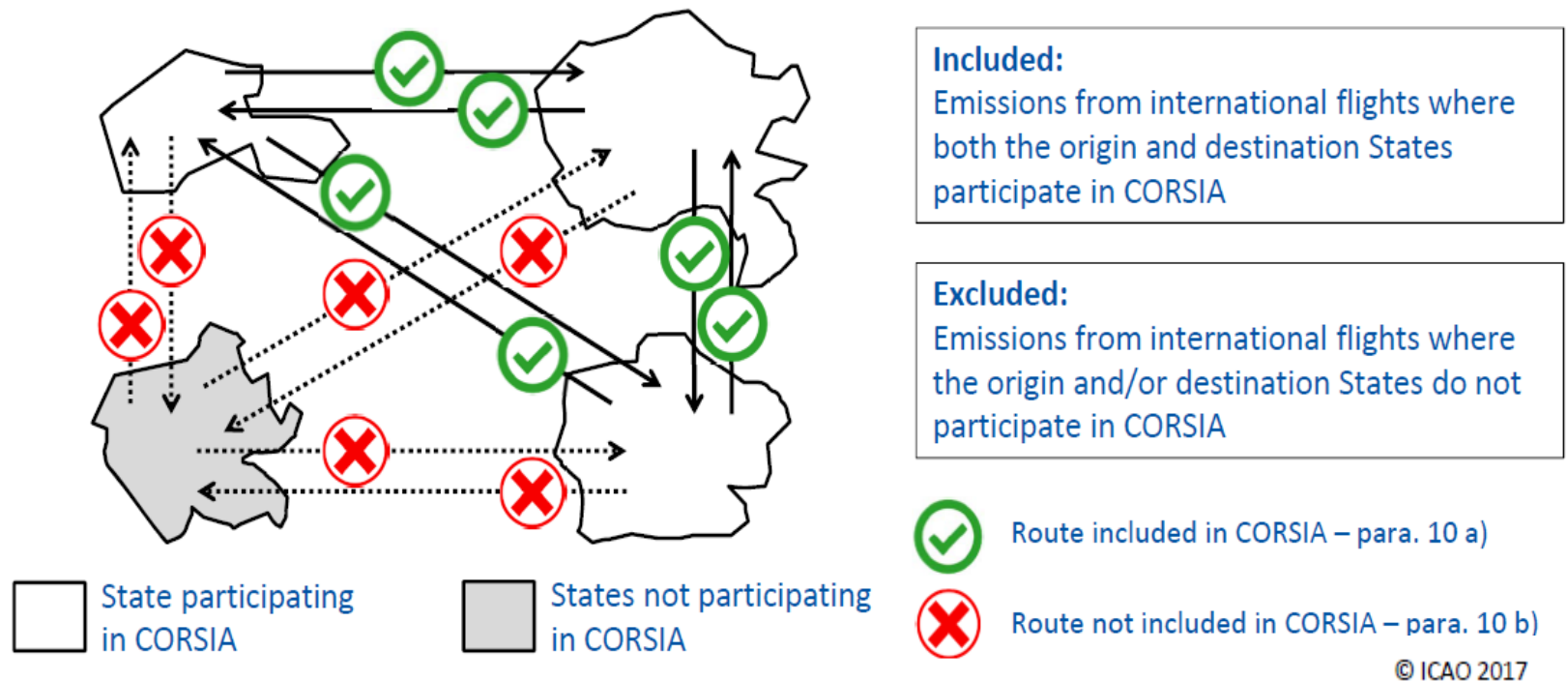
3.2. CH ETS

- The linking agreement does not foresee the adoption of the EU-directive 2003/87 but instead it is based on a mirroring of the requirements of the EU ETS in the CH ETS
- The implementation of the agreement will be overseen by a joint committee
- Aviation: Cap will be calculated based on the tkm-data collected by operators in 2018 using the actual EU benchmark value
- One-stop-shop: every operator will only be administered by one State. Emission of allowances, balancing of allocated allowances to be assured in the background by the authorities involved



4. CORSIA: Overview

Emissions Coverage: Route-based approach



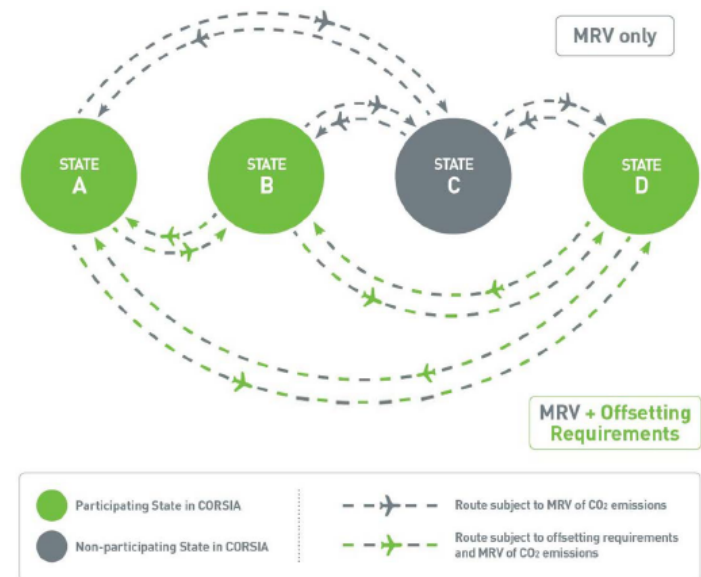


4. CORSIA: Overview

CORSIA Monitoring, Reporting and Verification (MRV)

ALL ICAO MEMBER STATES with aeroplane operators conducting international flights are required to monitor, report and verify CO₂ emissions from these flights every year from 2019, independent of their participation in CORSIA.

ICAO MEMBER STATES PARTICIPATING IN CORSIA need to ensure that their aeroplane operators comply with the CORSIA offsetting requirements every three years (starting in 2021), in addition to annual CO₂ MRV.



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Note: Only operators emitting > 10'000 t CO₂ per year on international routes are obliged to monitor and report emissions



4. CORSIA: Overview

Phased Implementation:

- Participation of Member States in the CORSIA:
 - Pilot Phase (2021-2023)
 - First Phase (2024-2026)
 - Second Phase (2027-2035)

Voluntary participation

Participation of all States except for exempted ones
- **All Member States** are encouraged to participate in the pilot and first phases of CORSIA

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Note 1: 2018 Form A reporting to be used for decision on mandatory participation from 2027 onwards

Note 2: Reporting obligations for all States from 2019 onwards



4. CORSIA: Overview

- As per Assembly Resolution A39-3, the ICAO Secretariat provides public updated information on the States that volunteer to participate in the CORSIA.
- As of 11 January 2018, **73 States**, representing **87.7%** of international aviation activity (2014 RTK data), intend to voluntarily participate in the CORSIA from its outset.

NOTE: Updates to this information can be found on the ICAO CORSIA website:
<http://www.icao.int/environmental-protection/Pages/market-based-measures.aspx>

ALBANIA	GUATEMALA	POLAND
ARMENIA	HUNGARY	PORTUGAL
AUSTRALIA	ICELAND	QATAR
AUSTRIA	INDONESIA	REPUBLIC OF KOREA
AZERBAIJAN	IRELAND	REPUBLIC OF MOLDOVA
BELGIUM	ISRAEL	ROMANIA
BOSNIA AND HERZEGOVINA	ITALY	SAN MARINO
BOTSWANA	JAMAICA	SAUDI ARABIA
BULGARIA	JAPAN	SERBIA
BURKINA FASO	KENYA	SINGAPORE
CANADA	LATVIA	SLOVAKIA
CHINA	LITHUANIA	SLOVENIA
COSTA RICA	LUXEMBOURG	SPAIN
CROATIA	MALAYSIA	SWEDEN
CYPRUS	MALTA	SWITZERLAND
CZECH REPUBLIC	MARSHALL ISLANDS	THAILAND
DENMARK	MEXICO	THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA
EL SALVADOR	MONACO	TURKEY
ESTONIA	MONTENEGRO	UKRAINE
FINLAND	NAMIBIA	UNITED ARAB EMIRATES
FRANCE	NETHERLANDS	UNITED KINGDOM
GABON	NEW ZEALAND	UNITED STATES
GEORGIA	NIGERIA	ZAMBIA
GERMANY	NORWAY	
GREECE	PAPUA NEW GUINEA	

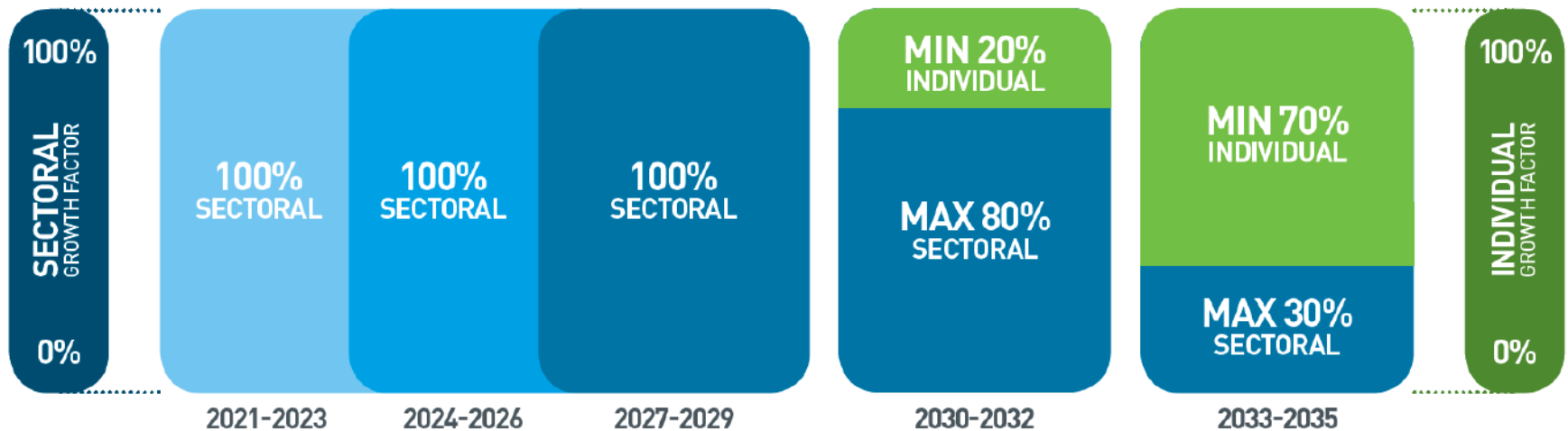
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4. CORSIA: Overview

Operator's annual emissions \times Growth Factor = CO₂ offset requirements

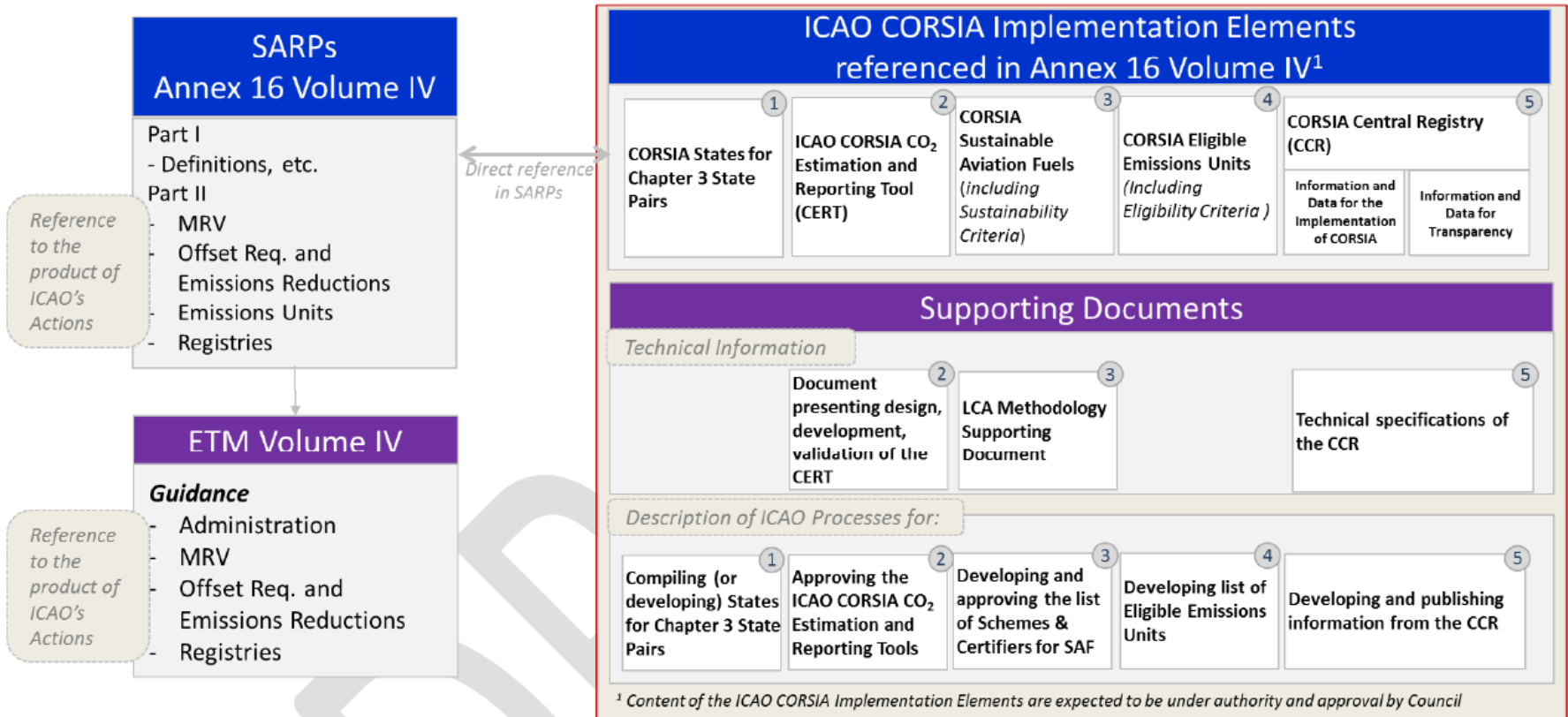
The Growth Factor changes every year taking into account both the sectoral and the individual operator's emissions growth. The Growth Factor is the percent increase in the amount of emissions from the baseline to a given future year, and is calculated by ICAO.



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5. CORSIA: Overview - Implementation via SARPs – Package



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