



The ICAO ESAF/ WACAF Annual Environmental  
Workshop  
and  
The EASA 3<sup>rd</sup> Annual SAF Workshop Under the  
ICAO - EU ACT-SAF Assistance Project

**INTERNATIONAL  
CIVIL AVIATION  
ORGANIZATION**



Kigali, Rwanda  
20-23 April 2026



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ICAO

# ICAO's Environmental Strategy and Latest Developments

## 2026 Priority Focus Areas

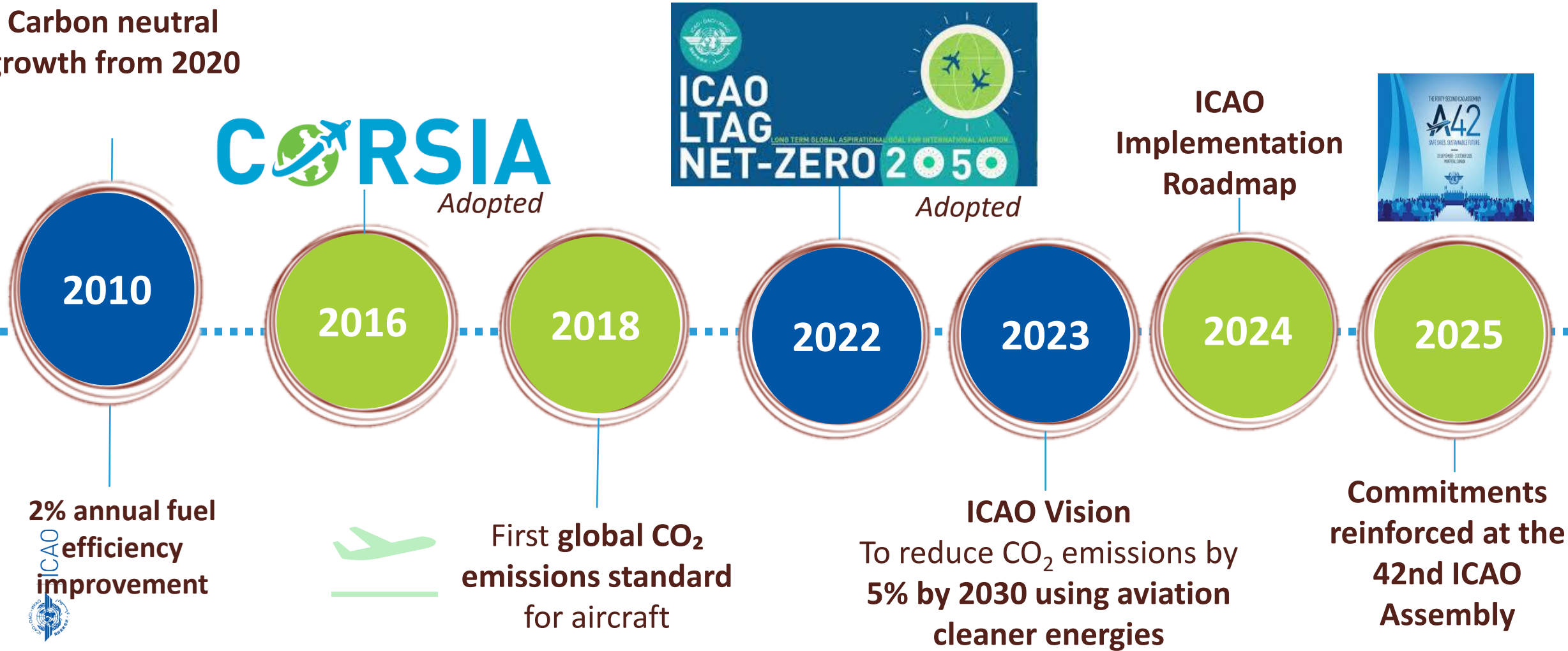
Presenter: Mrs. Chinga Mazhetese  
ICAO ESAF Regional Office



ICAO

# International Aviation Goals and Achievements

Carbon neutral growth from 2020



2% annual fuel efficiency improvement



**CORSAIA**  
Adopted

2016



First global CO<sub>2</sub> emissions standard for aircraft

2018



Adopted

2022

**ICAO Vision**  
To reduce CO<sub>2</sub> emissions by 5% by 2030 using aviation cleaner energies

2023

**ICAO Implementation Roadmap**

2024



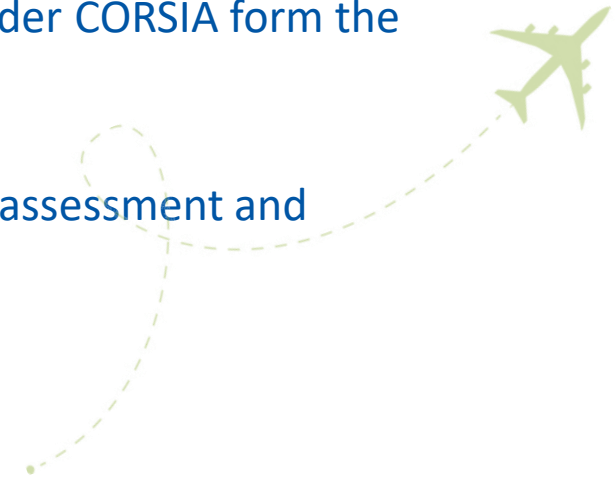
2025

**Commitments reinforced at the 42nd ICAO Assembly**



# Outcomes from the 2025 ICAO Assembly

- **Harmonized Regulatory Framework for SAF, LCAF and cleaner energies:** confirmed that ICAO's sustainability criteria, certification, and life cycle emissions assessment under CORSIA form the accepted basis for the eligibility of aviation cleaner energies.
- **Encouraged the Acceleration** of production pathways, feedstocks, life cycle assessment and sustainability certification to scale up aviation cleaner energies.
- **CAAF/4 by 2028** to update the aviation sector's cleaner energy ambitions.
- **Reiterated Importance of Capacity-Building and Financing** to Accelerate Aviation's Decarbonization – ICAO ACT-SAF programme and Finvest Hub.
- **Expressed Concern against Aviation Taxation** which hinders global air connectivity and aviation decarbonization efforts toward the LTAG.



# 42<sup>nd</sup> ICAO Assembly (2025)

# 1

## Adopted a Comprehensive Environmental Monitoring and Reporting for Aviation



# 2

## Harmonized Regulatory Framework for SAF, LCAF and Cleaner Energies

- Confirmed that **ICAO's sustainability criteria, certification, and life cycle emissions assessment under CORSIA form the accepted basis** for the eligibility of aviation cleaner energies.
- Encouraged the acceleration** of production pathways, feedstocks, life cycle assessment and sustainability certification to scale up aviation cleaner energies.

A collage of ICAO CORSIA documents is displayed, including 'ICAO document CORSIA Eligibility Framework for Sustainability Certification', 'ICAO document CORSIA Approved States', 'ICAO document CORSIA Sustainability CORSIA Eligible Fuels', 'ICAO document CORSIA Default Life Cycle Emissions Values', and 'ICAO document CORSIA Methodology for Calculating Actual Life Cycle Emissions Values'. A QR code is located in the bottom left corner of the collage. The ICAO logo and 'CORSIA' branding are visible throughout the collage.

# 42<sup>nd</sup> ICAO Assembly (2025)



## 3

### Reiterated Importance of Capacity-Building and Financing to Accelerate Aviation's Decarbonization

- Welcomed the progress under the **ICAO ACT-SAF** and **ACT-CORSIA** Programmes.
- Requested the establishment of the **ACT-LTAG** programme to support other aviation decarbonization measures.
- Welcomed the launch of the **ICAO Fininvest Hub** and its collaboration with **IRENA's ETAF platform** to boost funding and investment in aviation clean energy projects.



## 4

### Supported CORSIA as the Only Global Market-Based Measure (MBM) for International Aviation

- Encouraged more States to **participate voluntarily** in CORSIA to increase its environmental integrity as the only global MBM for international aviation.
- Called for Governments to issue **Letters of Authorization** to facilitate the access and availability of **CORSIA Eligible Emissions Units** to aeroplane operators.



ICAO document

CORSIA Eligible Emissions Units



October 2024

CORSIA

Carbon Offsetting and Reduction Scheme for International Aviation

# 42<sup>nd</sup> ICAO Assembly (2025)

## 5

### Expressed Concern against Aviation Taxation

- Called for States to **refrain from aviation taxation**.
- Duplicate market-based measures, negatively impacting CORSIA implementation.
- **Hinder global air connectivity and aviation decarbonization** efforts toward the LTAG.



## 6

### Expanded Environmental Efforts Beyond Emissions Reduction

- Continued support for **climate change adaptation**.



- To enhance the **scientific understanding of non-CO<sub>2</sub> aviation emissions**.

# International Aviation's Climate Aspirations

2010



Collective medium-term global aspirational goal: **carbon neutral growth from 2020** (CNG2020)

2022



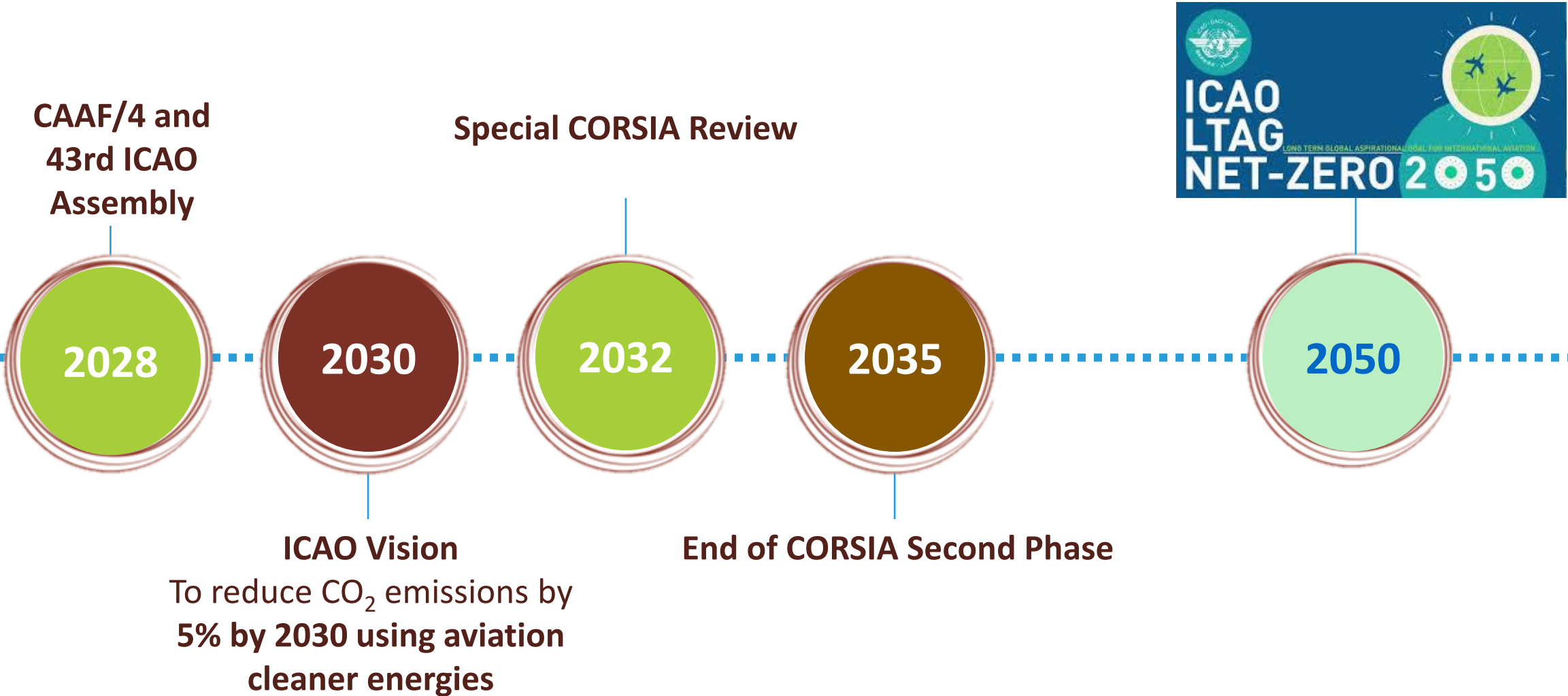
Long-term global aspirational goal (LTAG): **net zero carbon emissions** from international aviation by **2050**

2023



ICAO Global Framework – Collective global aspirational Vision: to **reduce CO<sub>2</sub> emissions by 5% by 2030** using aviation cleaner energies.

# International Aviation – Next Milestones





# Priority Areas and Regional Performance: to date

## ICAO Business Plan (2026-2028)



### The ICAO Business Plan 2026–2028

- the blueprint for implementing the ICAO Strategic Plan 2026-2050;
- focusing on the immediate triennium to drive progress towards the long-term strategic goals.
- outlines how ICAO will work towards its vision:
  - safe, secure and sustainable international civil aviation system that connects the world for the benefit of all nations and people.





**Every Flight is Safe and Secure**



**Aviation is Environmentally Sustainable**



**Aviation Delivers Seamless, Accessible, and Reliable Mobility for All**



**No Country Left Behind**



**The International Civil Aviation Convention and Other Treaties, Laws and Regulations Address All Challenges**



**The Economic Development of Air Transport Assures the Delivery of Economic Prosperity and Societal Well-Being for All**

## ICAO ENV STRATEGIC GOAL

*Strive to achieve the global long term aspirational goal of net-zero carbon emissions for international aviation by 2050 and ensure that international aircraft noise and emissions are mitigated to the lowest level possible, in accordance with international provisions. Additionally, adapt aviation operations and infrastructure to the impacts from climate change.”*

**A42-20:** General provisions, noise and local air quality

**A42-21:** Climate change

**A42-22:** CORSIA

# International Aviation and Climate Change



The **International Civil Aviation Organization (ICAO)** is a **specialized UN agency** that sets global standards and regulations for international civil aviation.

Emissions from **international aviation** and maritime sectors are **not included in the Nationally Determined Contributions (NDCs) under the Paris Agreement.**

These are **addressed by ICAO** and the International Maritime Organization (IMO), respectively, to complement the achievement of the Paris Agreement goals.



Emissions from **domestic aviation** can be addressed by the Parties to the UNFCCC through their NDCs, as part of their efforts to reduce greenhouse gas emissions from all domestic sources.

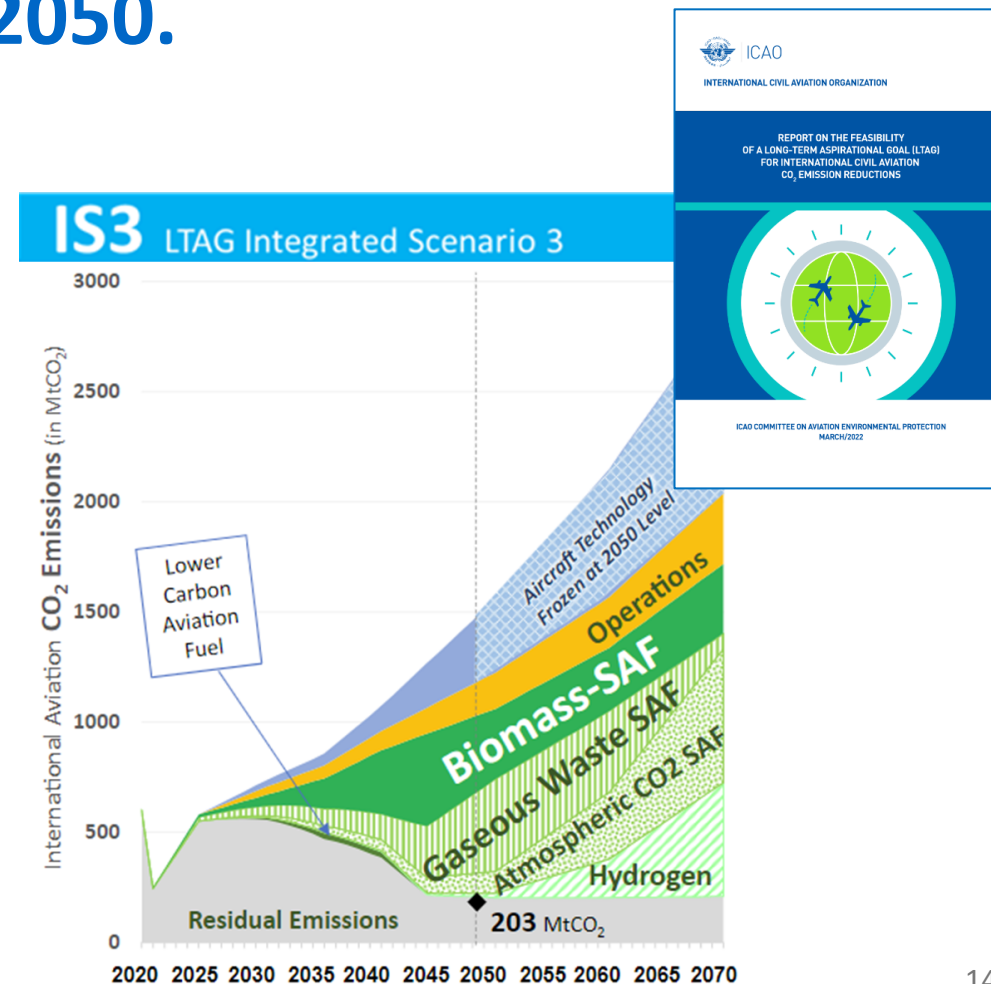
# Long-Term Global Aspirational Goal (LTAG)

A collective long-term global aspirational goal of **net-zero carbon emissions from international aviation by 2050.**

Emissions in 2050 would be reduced by 87% from the baseline scenario (through in-sector measures)

- 21% from aircraft technologies, 11% from operations and **55% from fuels.**

Drop-in fuels have the largest impact driving the overall reductions by 2050....but requires **significant costs and investments.**



# Basket of CO<sub>2</sub> emissions reduction measures



Aviation Cleaner Energies:

up to **55%**



Aircraft Technologies:

up to **21%**

Operational Improvements:

up to **11%**



Remaining CO<sub>2</sub>

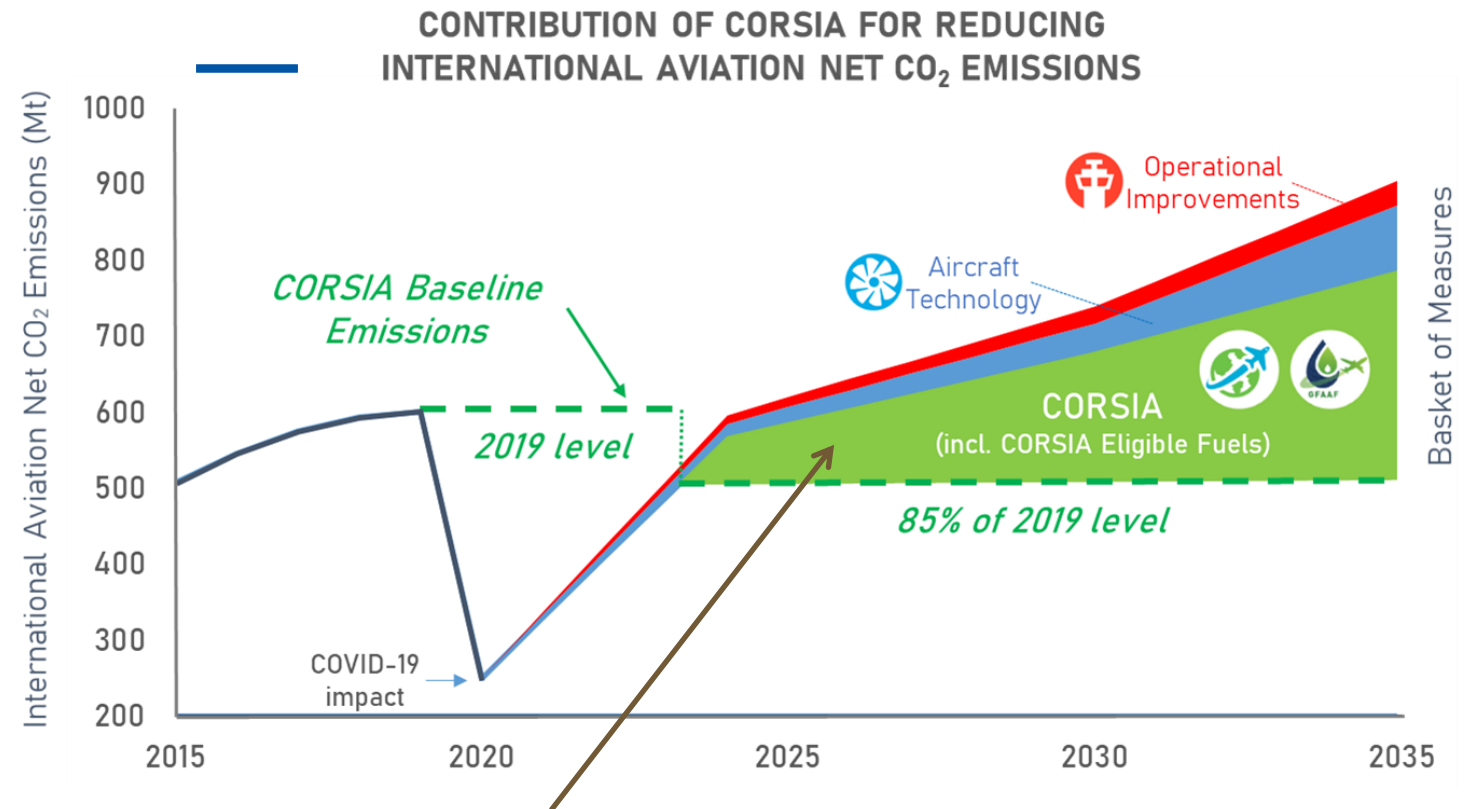
**CORSIA**

## The first global market-based measure for any industry sector

CORSIA complements the other three elements in the ICAO basket of measures:

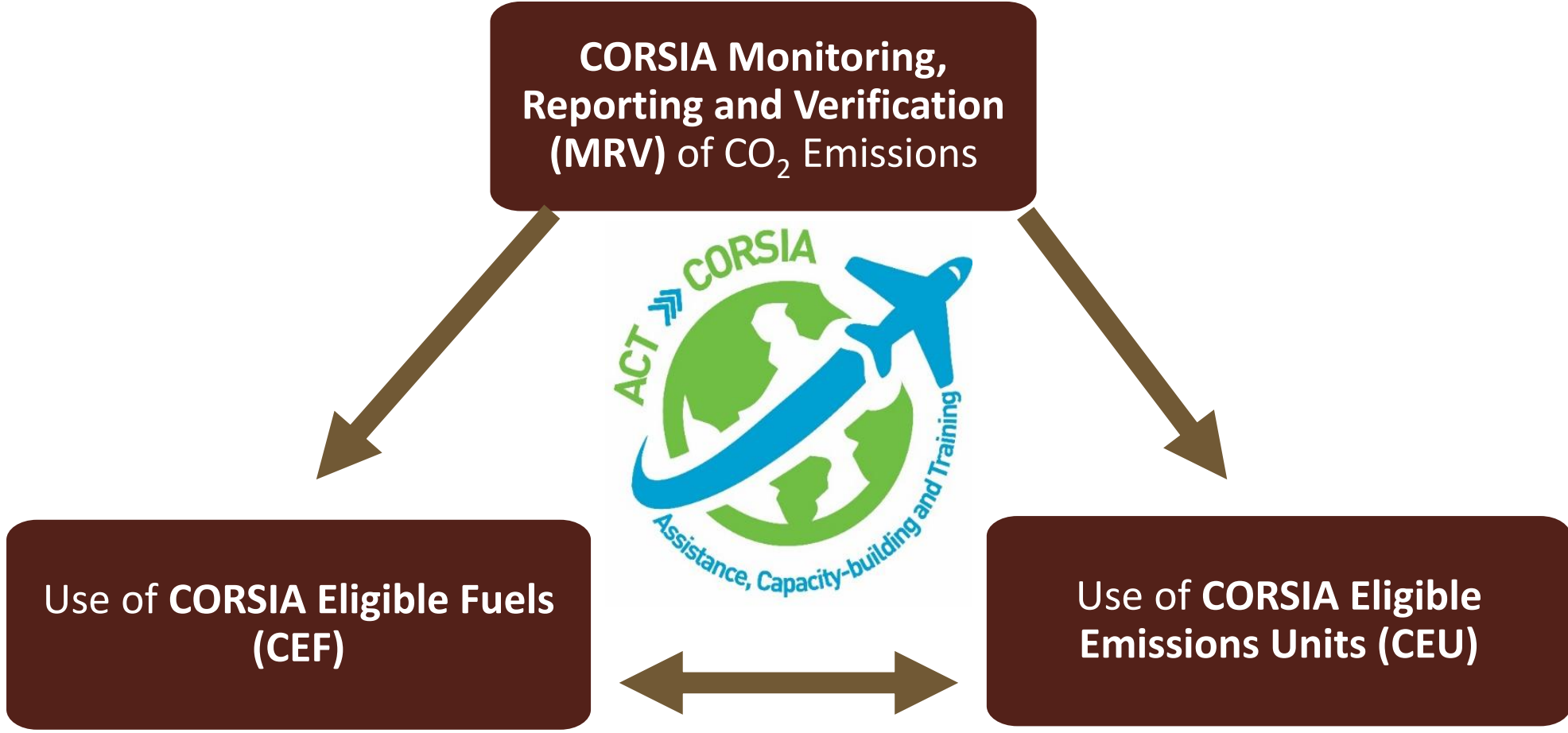
- technological innovations
- operational improvements
- sustainable aviation fuels

**Objective:** Achieve ICAO's global aspirational goal of carbon neutral growth from 2020 (CNG 2020)



**CORSIA addresses the remaining “emissions gap” to achieve CNG2020**

# CORSIA Structure



**CORSIA offsetting requirements (until 2035) could be met by CEF or CEU**

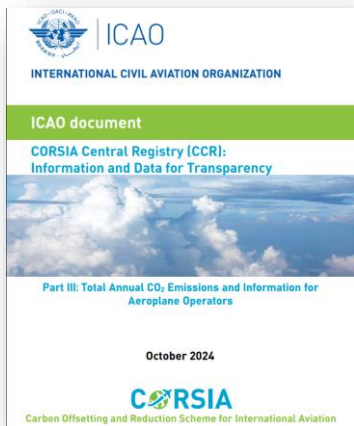
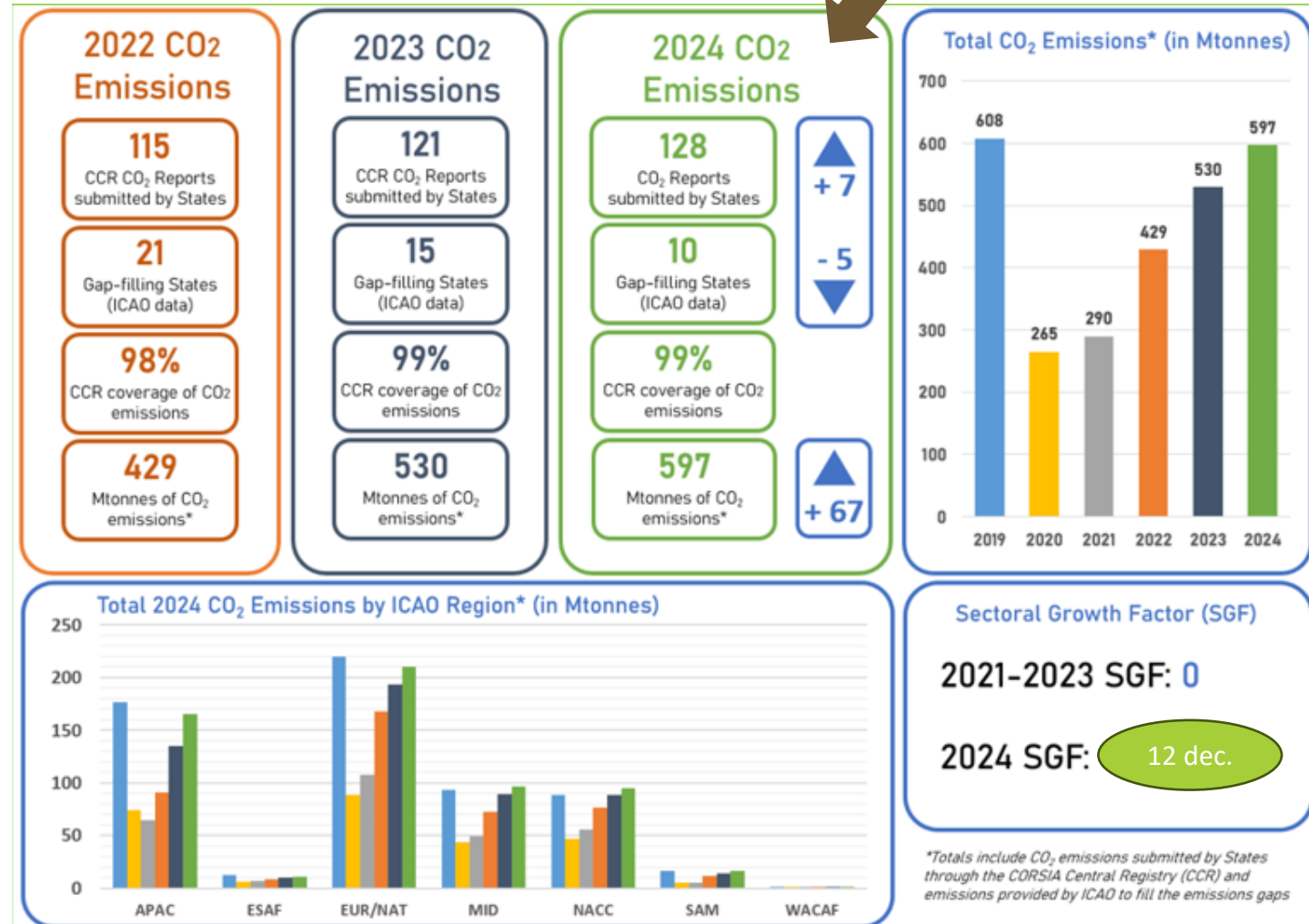
# CORSIA Central Registry (CCR)



Carbon Offsetting and Reduction Scheme for International Aviation

Unprecedented number of States reported 2024 CO<sub>2</sub> emissions through the CCR!

99% coverage maintained



The collage contains the following text elements:

- IMF calls for carbon levy on ships and planes**  
NEWS: Influential financial body estimates US\$30 a tonne tax on emissions from international transport could have raised \$25 billion in 2014
- Norway Mulls Replacing Passenger Tax With Sustainability-Focused Levy**  
Press Release  
Every hour European governments lose out on €4 million in aviation taxes
- UK hints at green taxes frequent fliers**  
U-turn comes just five months after ministers snubbed the industry in lagging.
- Taking more than 2 flights a year? €50 frequent flyer tax could raise much-needed €64bn for climate**
- Destination Net Zero: The Urgent Need for a Global Carbon Tax on Aviation and Shipping**  
By Simon Black, Ian W.H. Parry, Sunalka Singh, Nate Vernon-Lin  
October 4, 2024
- France's eco-tax: the best way to cut down aviation emissions?**  
France leaving However 'misguided' **ICCT20**  
AVIATION CLIMATE FINANCE USING A GLOBAL FREQUENT FLYING FLYER
- COP29 climate talks: What new taxes could help raise money to fight climate change?**  
By Reuters  
November 10, 2023 12:37 PM EST · Updated 8 months ago
- Carbon tax on fossils fuels, marine and aviation transport could generate additional development financing for Africa**  
Carbon tax on fossils fuels, marine and aviation transport could generate additional development financing for Africa.
- Rail and clean industry players join forces with NGOs to call for the introduction of a fuel tax for planes and ships**  
October 18, 2024
- The Aviation Environment... 2024-11-16**  
At this year's U.N. climate conference, a "global solidarity levy" on high-polluting industries is being proposed, with particular emphasis on shipping, aviation, and fossil fuel extraction.
- Guinea considers introduction of carbon levy for some sectors**  
The African state of Guinea could potentially introduce carbon pricing sectors such as aviation and maritime, similar to measures that have...
- Gabon introduces carbon levy for airlines and shipping**
- France, Kenya set to launch Cop28 coalition for global taxes to fund climate action**  
The taskforce, set to be launched at Cop28, will consider the feasibility of levies on
- Denmark introduces green tax on air passengers from 2025**  
By Reuters  
December 15, 2023 6:17 AM EST · Updated a year ago
- Djibouti to launch own carbon registry, tax this year**  
The tiny Republic of Djibouti in eastern Africa is set to launch its own carbon registry this year as part of a "voluntary mandatory".
- How to tax aviation and shipping emissions**
- Malaysia to open for airline carbon levy from April**  
Published 06:34 on March 5, 2024 / Last updated at 06:43 on March 5, 2024 / Nikita Pandey / Asia Pacific, Aviation/CORSIA, Carbon Taxes, International, Other APAC, Voluntary
- An Aviation Tax Could Be The Answer To Climate Change Worries**  
By Tom Brann · Published Jan 15, 2019
- Green taxes could damage aviation and Caribbean tourism**  
to impose a carbon levy on passengers, through the purchase of carbon credits or
- Air Malta says aviation fuel tax could destroy jobs as costs soar and prices rise**  
Cost of aviation fuel will rise by 90% under a proposal included in the Energy Tax Directive as EU

Overlapping proposals for aviation emissions-related levies/taxes to mobilize financial resources for other purposes:

- No direct correspondence to emissions reduction
- Diverts financial resources away from aviation decarbonization
- Negative impact on connectivity, socio-economic development



*“only global market-based measure applying to CO<sub>2</sub> emissions from international aviation ...ensuring that international aviation CO<sub>2</sub> emissions should be accounted for only once”.*

# ACT-CORSIA Buddy Partnerships

Different phases with specific focus areas in order to support necessary actions by States with different timelines

**Phase I (Sep 2018 – Apr 2019): 15 supporting States and 98 requesting States**

- Development and approval of Emissions Monitoring Plans
- Establishment of national/regional regulatory frameworks

**Phase II (May 2019 – Apr 2020): 16 supporting States and 114 requesting States**

- CO2 Emissions reporting and verification

**Phase III (Apr 2020 – Dec 2024): 17 supporting States and 119 requesting States**

Use of the CORSIA Central Registry (CCR)

**Phase III (Jan 2025 – Ongoing): 16 supporting States and 125 requesting States**

- Lessons learned and improved support to MRV

The focus areas of each Phase can form the basis for checklist to assess the progress made and milestones achieved in order to determine the need for a tailored approach to training.

## ACT >>> CORSIA Phase III Assistance, Capacity-building and Training on CORSIA



16 SUPPORTING STATES  
125 REQUESTING STATES

# ICAO Global Framework for SAF, LCAF and other Aviation Cleaner Energies

## Global Framework is set out through 4 Building Blocks

- Adopted at the third ICAO Conference on Aviation and Alternative Fuels (CAAF/3) in November 2023
- **Collective Vision** to reduce **5% CO<sub>2</sub>** by **2030** in international aviation using SAF, LCAF and other aviation cleaner energies
- Requires **~23 million tonnes (Mt)** of cleaner energies use by 2030
- ICAO is monitoring progress on these building blocks through the **ICAO Cleaner Energy Tracker**

### ICAO Cleaner Energy Tracker Tools



ICAO adopted a Vision to reduce CO<sub>2</sub> emissions in international aviation by **5 per cent by 2030** through the use of SAF, LCAF, and other aviation cleaner energies

This requires **23 million tonnes (Mt)** of cleaner energies use in international aviation on 2030  
*(source: LTAG report data)*

This aviation cleaner energy trackers monitors progress under the ICAO Global Framework on this building blocks

(Click on each number to open the full Tracker dashboard)



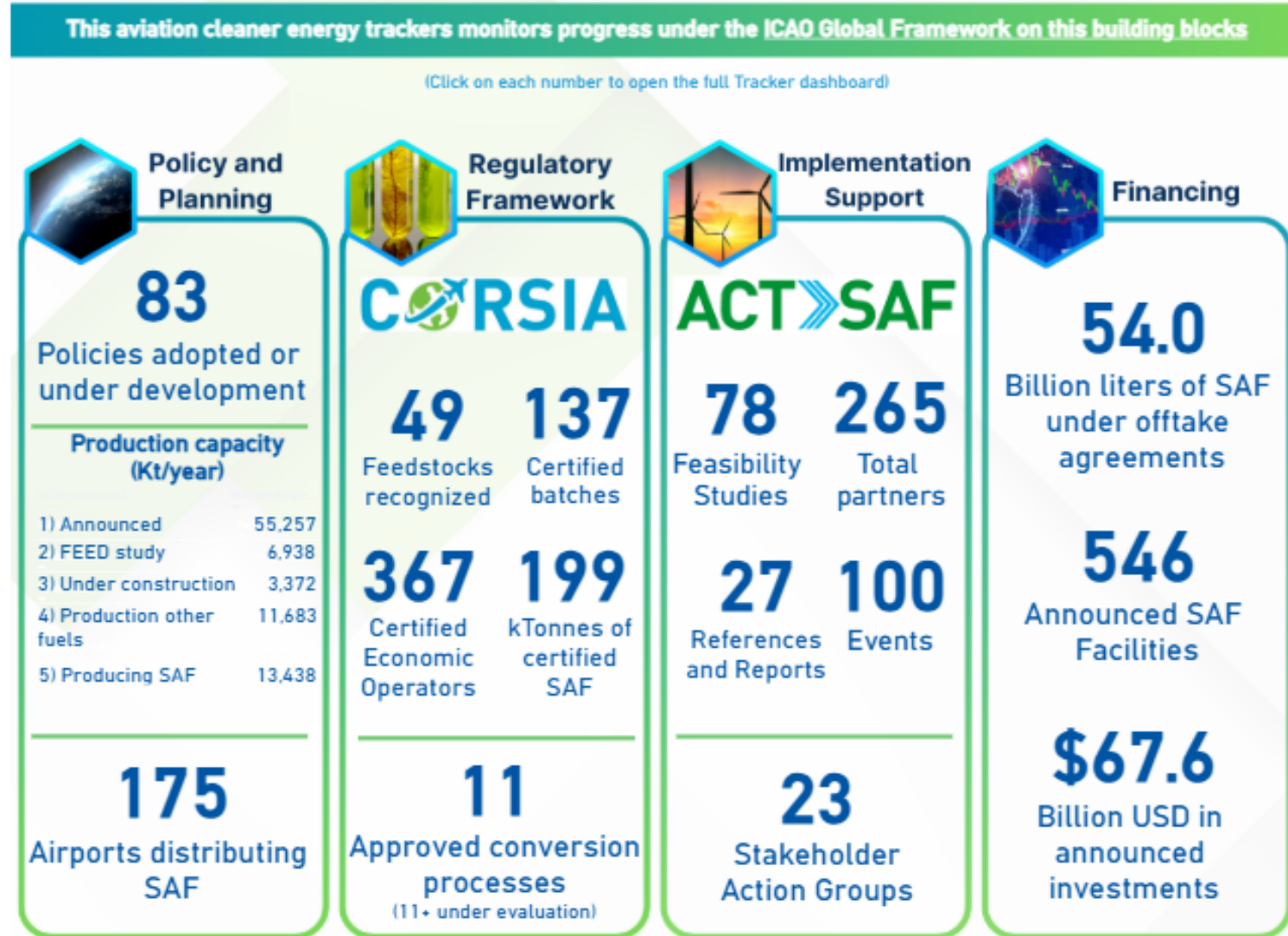
## ICAO Cleaner Energies Tracker Tools

ICAO adopted a Vision to reduce CO<sub>2</sub> emissions in international aviation by **5 per cent by 2030** through the use of SAF, LCAF, and other aviation cleaner energies

This requires **23 million tonnes (Mt)** of cleaner energies use in international aviation on 2030

*(source: LTAG report data)*

**ICAO's Cleaner Energy Tracker Tools** provides up-to-date information on indicators across the four building blocks



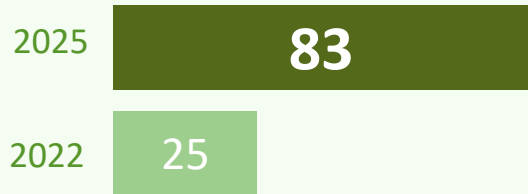
# Progress in Aviation Cleaner Energies

four Building Blocks of ICAO Roadmap

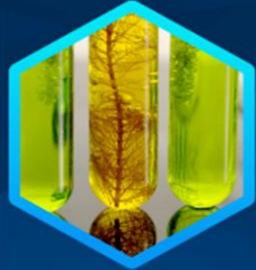
## Policy and Planning



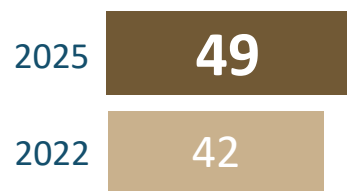
Increase in **SAF policies**



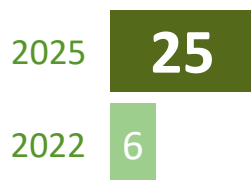
## Regulatory Framework



- Increase in approved **feedstocks**



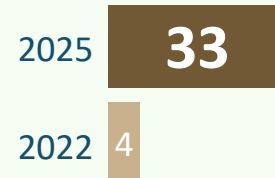
- Increase **CORSIA certified refineries**



## Implementation Support



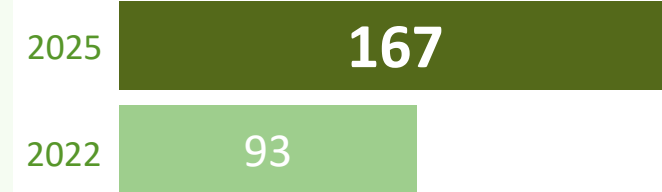
Increase in **SAF studies**: 11 delivered, 22 underway



## Financing



- Increase in airlines **offtake agreements**



- Launch of **Finvest Hub**



# ICAO ACT-SAF Programme

Name	Studies (num)
Airbus	3
Airbus & Volaris	1
EU	17
France	3
Italy	1
Netherlands	4
United Kingdom	3
<b>Total</b>	<b>32</b>

>280 ACT-SAF partners

20 training sessions concluded

33 SAF feasibility studies now

50 studies by 2028

# ICAO Finvest Hub

Connect States and project developers with climate finance opportunities

Launch of the **Finvest@ETAF** portal by ICAO and IRENA in September 2025





## Key Adaptation Areas

### 1. Infrastructure

- Protecting runways, terminals, and support systems from floods, storms, and sea-level rise.

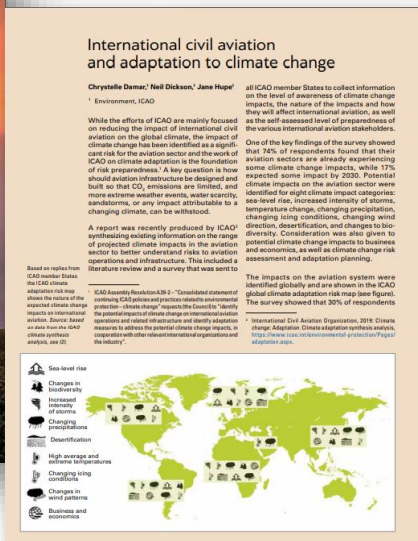
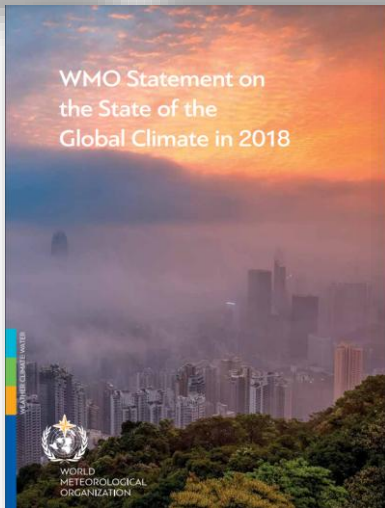
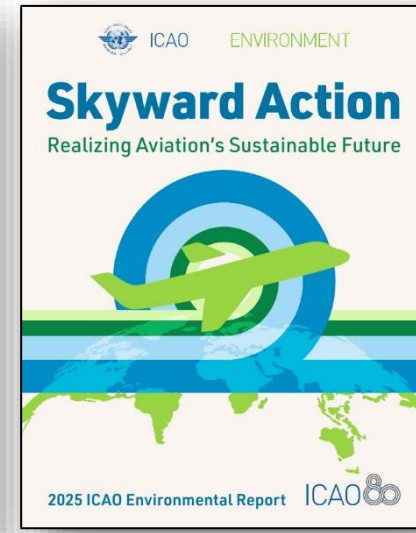
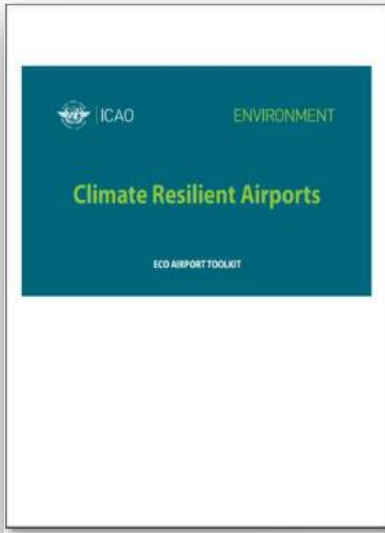
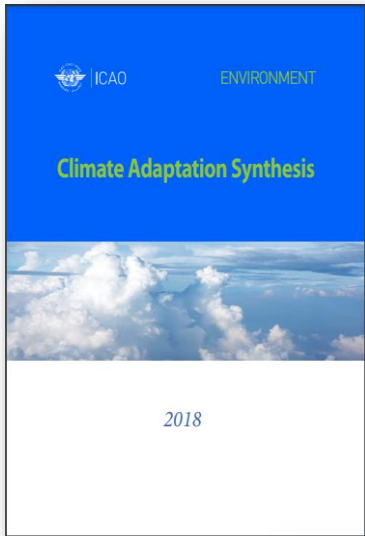
### 2. Operations

- Enhancing weather forecasting, flight planning, and emergency response systems.

### 3. Aircraft Design

- Adapting to increased turbulence, higher temperatures, and changing atmospheric conditions.

# Climate Change Adaptation and Resilience



# Green Airports



Aviation cleaner energies at airports



Financing environmental projects



Adaptation strategies to enhance climate resilience



Fostering partnerships

**Build Resilient, Sustainable Airports**





ICAO

ENVIRONMENT

# Skyward Action

Realizing Aviation's Sustainable Future



2025 ICAO Environmental Report



## 2025 ICAO Environmental Report



# 16 Chapters

1. Aviation and Environmental Outlook
2. Climate Change Mitigation (Overview)
3. Aircraft Technologies
4. Operations
5. Aviation Cleaner Energies
6. CORSIA
7. State Action Plan
8. Capacity-Building and Implementation Support
9. Climate Financing
10. Aircraft Noise
11. Local Air Quality
12. Green Airports
13. Climate Adaptation and Resilience
14. Towards a Circular Economy
15. Biodiversity
16. Multistakeholder Cooperation



Updates now available!





Kigali, Rwanda  
20-23 April 2026



ICAO

## Regional environmental performance

Annex 16 Standards, States' regulatory readiness and ICAO environmental initiatives (SAPs, ACT-SAF, ACT-CORSIA)

# Priority Areas

## Key Priorities (2026–2028)



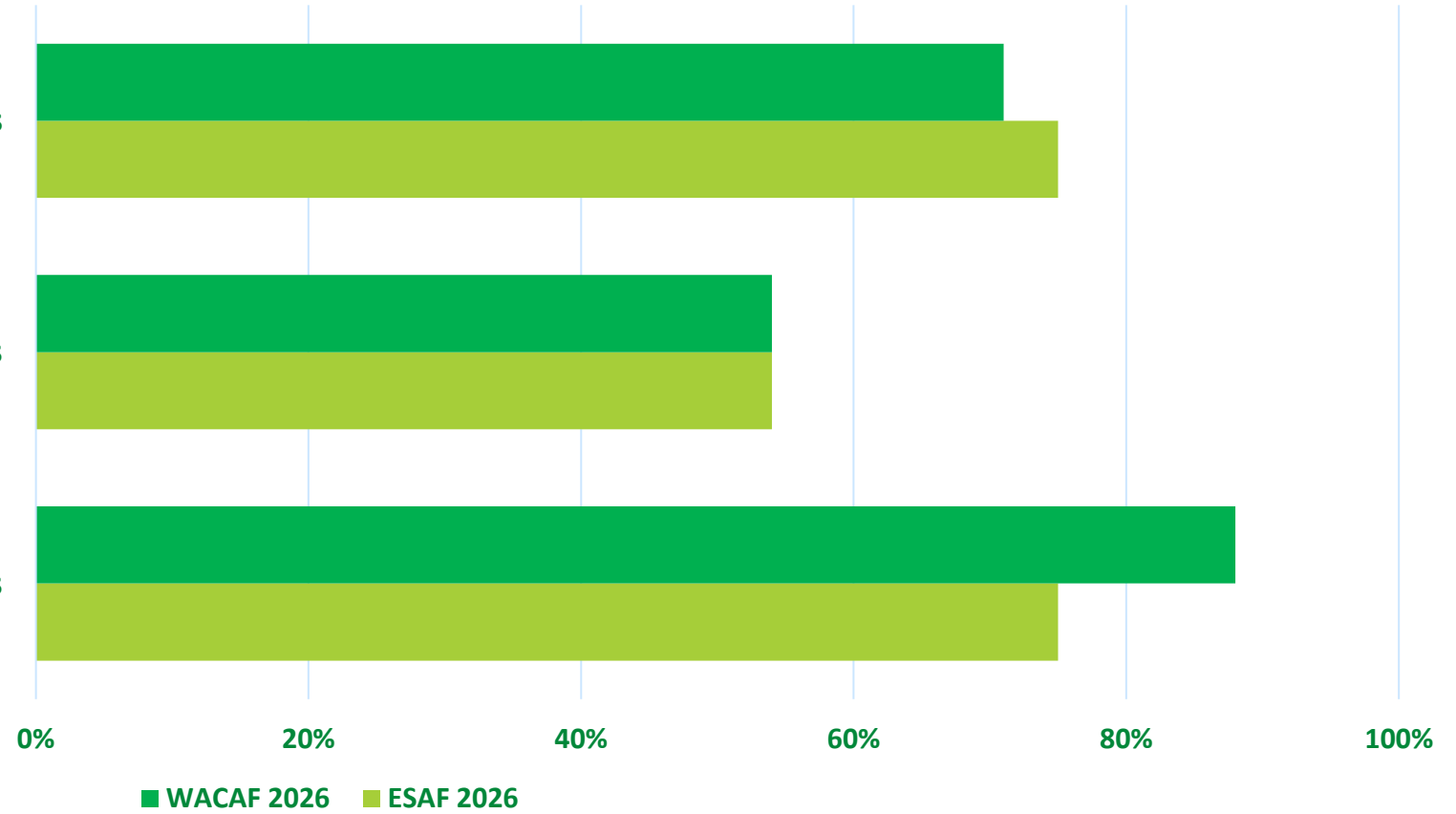
- Deliver targeted, tailored capacity-building support to developing States with specific needs through ACT-CORSIA, ACT-SAF and ACT-LTAG initiatives.
- Accelerate the development and approval of sustainability certification schemes, including life-cycle assessment and approval of new fuel sources and pathways.
- Operationalize the ICAO Finvest Hub to catalyze aviation decarbonization projects.
- address emerging priorities such as climate adaptation, infrastructure resilience, circular economy approaches, and enhanced scientific understanding of aviation’s climate impacts.

## Environmental Performance: ESAF & WACAF Regions

ACT-SAF Partner States

CORSIA Voluntary Participation States

States with Action Plans on CO2 Emissions Reductions



## Universal Safety Oversight Audit Programme (USOAP)

USOAP

Continuous Monitoring Approach



Promoting global aviation safety

by continuously monitoring and updating  
the safety oversight capabilities of all ICAO Member States.



## USOAP: Compliance Checklists (CCs)

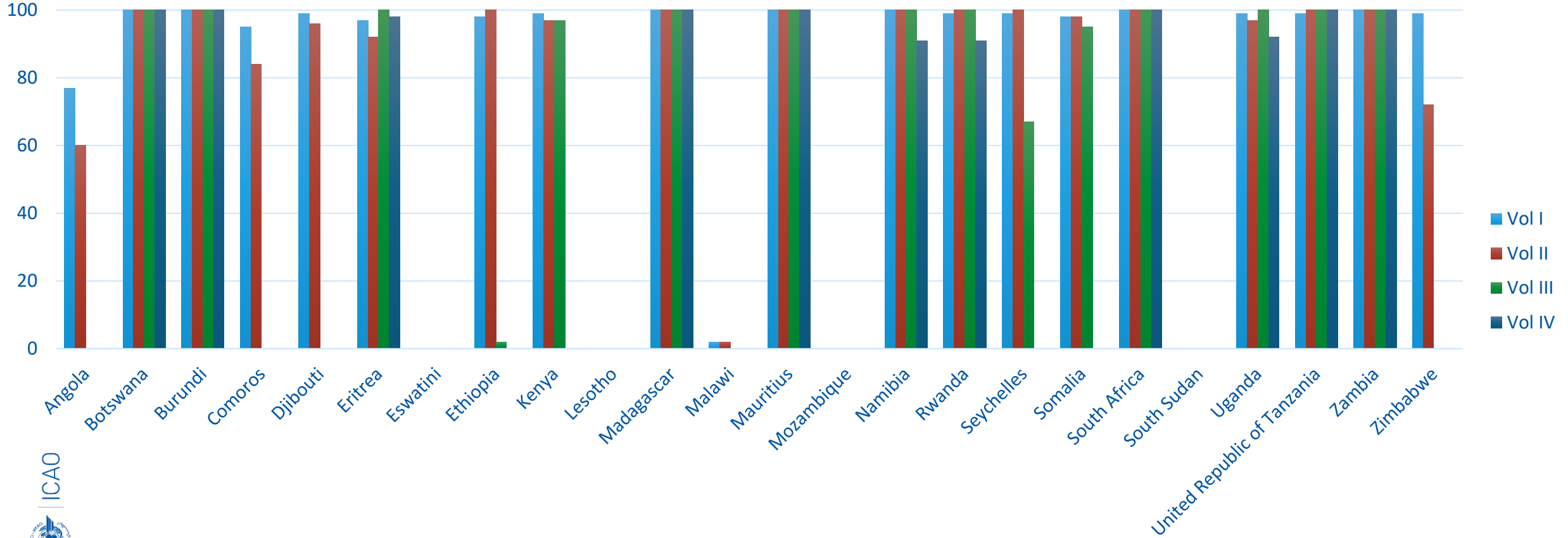
a web-based tool that allows States to **assess and report their level of implementation of the SARPs** contained in the ICAO Annexes to the Chicago Convention.

- This includes Annex 16
  - [Annex 16 Vol I- Aircraft Noise](#)
  - [Annex 16 Vol II- Aircraft Engine Emissions](#)
  - [Annex 16 Vol III- Aeroplane CO<sub>2</sub> Emissions](#)
  - [Annex 16 Vol IV- Carbon Offsetting and Reduction Scheme for International Aviation \(CORSIA\)](#)
- It supports ICAO's Universal Safety Oversight Audit Programme (USOAP) by providing a structured overview of compliance.
- It helps States:
  - self-evaluate their **regulatory frameworks**.
  - It identifies areas where comply, or do not comply with ICAO SARPs. national regulations comply, partially

# ESAF Region

Status of Annex 16 CCs- % Completion- as of 19 Apr 2026

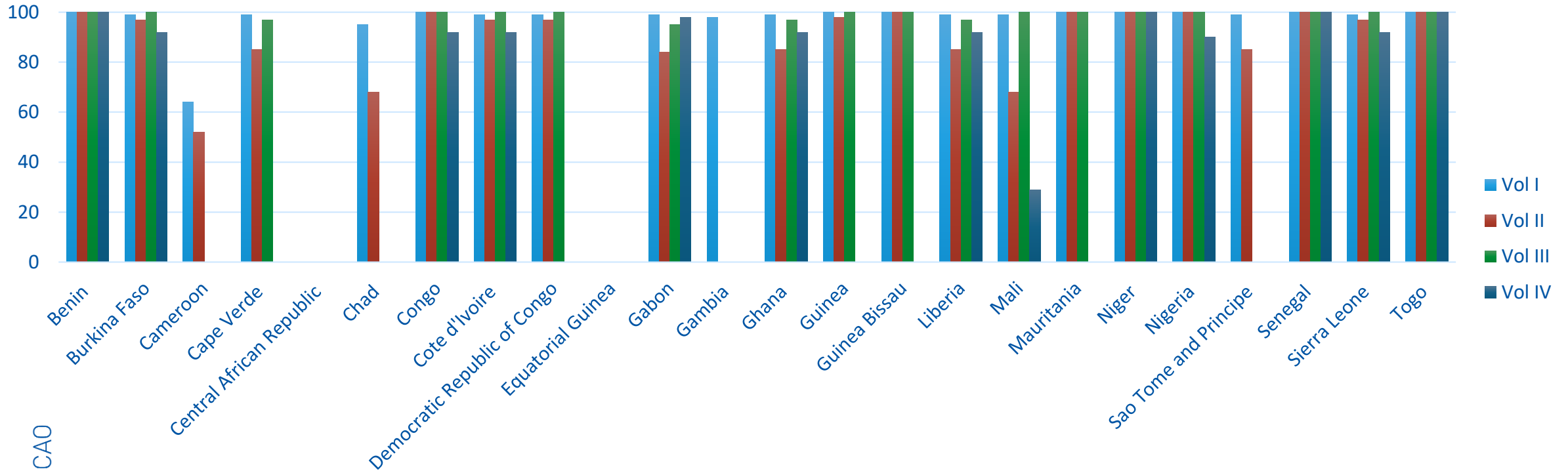
### ESAF Region -Annex 16 CC % of Completion



# WACAF Region

Status of Annex 16 CCs- % Completion-as of 19 Apr 2026

## WACAF Region -Annex 16 CC % of Completion



# Upcoming Global ENV In-Person Workshop



## ICAO 2026 Climate Week

- To be hosted in Montreal, Canada
- Dates: 2-4 June 2026.

## 11th AFI Aviation Week

- To be hosted by Egypt,
- Dates: 27-31 July 2026.
- Will include:
  - a DGCA Meeting- ICAO led and coordinated with AFCAC
  - the AFI Aviation Week Symposium- to be opened by ICAO Secretary General and will include a Session on ENV

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# Thank You

