



ICAO

ENVIRONMENT

**P/06 Agenda Item 7
Pathway to
Sustainable Aviation
ICAO Secretariat**

*NACC/DCA/12
Julio 2024*

**P/06 Cuestión 6 del
Orden del día
Ruta hacia la
aviación sostenible
Secretaría de la OACI**

*NACC/DCA/12
Julio 2024*



The ICAO Long-Term Global Aspirational Goal (**LTAG**) for international aviation



EL Objetivo Ambicioso Mundial a Largo Plazo (**LTAG**) de la OACI para la aviación internacional

ICAO Global Framework for Sustainable Aviation Fuels (**SAF**), Lower Carbon Aviation Fuels (**LCAF**) and other Aviation Cleaner Energies,



Global Framework for Aviation Alternative Fuels

Marco Mundial OACI para Combustibles de Aviación Sostenibles (**SAF**), Combustibles de Aviación con Menor Carbono (**LCAF**) y otras Energías más limpias para la Aviación

ICAO work on the environment

Trabajo de la OACI en medioambiente

ICAO Assistance, Capacity-building and Training for Sustainable Aviation Fuels (**ACT-SAF**)



Programa de Asistencia, Creación de Capacidad e Instrucción de la OACI para Combustibles de Aviación Sostenibles (**ACT-SAF**)

Carbon Offsetting and Reduction Scheme for International Aviation (**CORSIA**) and **ACT CORSIA**



Plan de Compensación y Reducción de Carbono para la Aviación Internacional (**CORSIA**) y **ACT CORSIA**

ICAO State Action Plans (**SAP**) on emissions reduction



Planes de Acción Estatales (**SAP**) para la reducción de emisiones de la OACI



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



clarity, consistency and predictability



to governments, public and private investors, industry and fuel producers,



Global Framework for Aviation Alternative Fuels

Marco Mundial OACI para SAF, LCAF y otras Energías más limpias para la Aviación



claridad, coherencia y previsibilidad



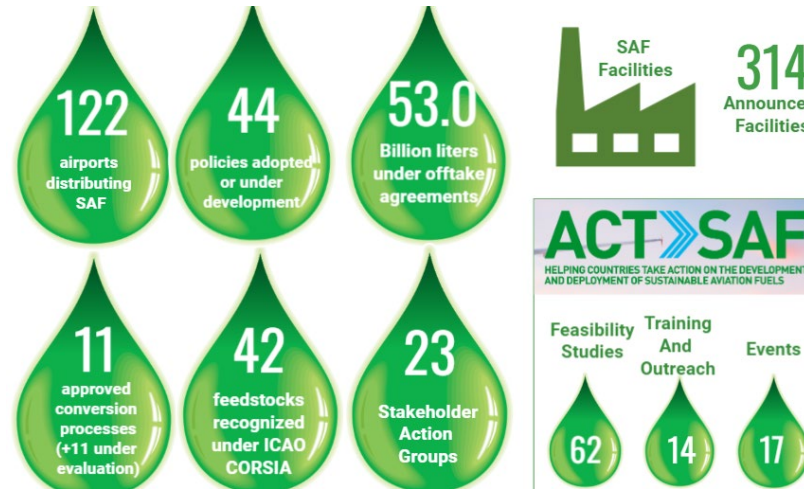
a los gobiernos, inversores públicos y privados, la industria y los productores de combustible

ICAO ACT-SAF programme

Programa ACT-SAF de la OACI



- provides tailored support for States,
- facilitates partnerships and cooperation
- platform to facilitate knowledge sharing, and
- recognition of all SAF initiatives around the world





- brinda apoyo personalizado a los Estados,
- facilita las asociaciones y la cooperación,
- plataforma para intercambiar conocimientos,
- reconocimiento de las iniciativas SAF en el mundo

ICAO ACT-SAF programme

Programa ACT-SAF de la OACI

training programmes on SAF-related topics:

- fuel sustainability,
- certification,
- production technology,
- policies,
- logistics,
- market, and
- feasibility assessment

ACT-SAF Series	Date	Topics	Contributor(s)	Abstract	Video and Presentation
#1	25 November 2022	An introduction to SAF	ICAO	<ul style="list-style-type: none"> • Introduction to ACT-SAF • Basics of SAF 	 <p>Download Presentation</p>
#2	25 January 2023	SAF sustainability and reporting under CORSIA	ISCC RSB Verifavia	<ul style="list-style-type: none"> • process for sustainability certification of SAF • Reporting and verification of SAF Claims under CORSIA 	 <p>Download Presentation</p>
#11	6 May 2024	Implementing the ICAO Global Framework – Step-by-step examples of SAF policy making	Brazil United States European Union	real-life examples of step-by-step SAF policy making and the processes to get there	<p>download presentation</p> <p>Watch the training on ICAO.TV</p>
#12	6 June 2024	ICAO State Action Plans and SAF	Singapore Zimbabwe Cote d'Ivoire Japan	Inclusion of SAF elements in the ICAO State Action Plans	<p>Download presentation</p> <p>Watch the training on ICAO.TV</p>

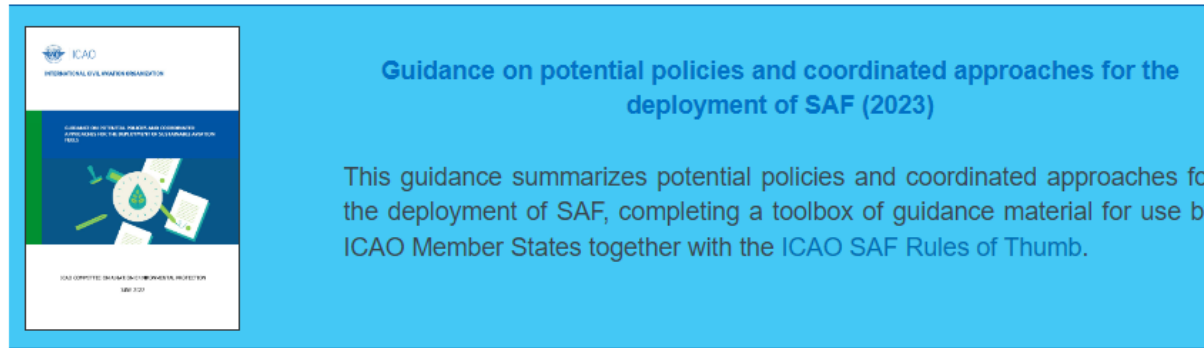
The ACT-SAF Series material is also available on ICAO TV, YouTube, and the ACT-SAF website

Programas de capacitación en temas relacionados con SAF:

- sostenibilidad del combustible,
- la certificación,
- tecnología de producción,
- políticas,
- logística,
- mercado y
- evaluación de factibilidad.

El material de la Serie ACT-SAF también está disponible en OACI TV, YouTube y el sitio web de ACT-SAF

SAF policies adopted or under development



Políticas SAF adoptadas o en desarrollo

SAF feasibility studies



Estudios de factibilidad

SAF business implementation template

Cote d'Ivoire

Rwanda

Zimbabwe

Dominican Republic

Trinidad and Tobago

Kenya

Burkina Faso

Plantilla de implementación de negocios SAF

ICAO State Action Plans Initiative

Iniciativa de Planes de Acción Estatales de la OACI

148 States representing 98.99% of global RTK have voluntarily submitted their State Action Plan to ICAO

15 out of 22 NAM CAR States submitted SAPs, among which 9 submitted fully quantified SAPs

The update of ICAO Doc 9988 has been completed to reflect the 2022 ICAO Assembly's agreement on the LTAG

SAP information

- Submitted
- Not Submitted

Doc 9988
Guidance on the Development of States' Action Plans on CO₂ Emissions Reduction Activities
Third Edition, 2019

Guidance on the Development of State Action Plans on CO₂ Emissions Reduction Activities
— Towards LTAG Implementation —

Notice to Users
This document is an unedited version of an ICAO publication and has not yet been approved in final form. As its content may still be supplemented, removed, or otherwise modified during the editing process, ICAO shall not be responsible whatsoever for any costs or liabilities incurred as a result of its use.

Approved by and published under the authority of the Secretary General

Fourth Edition (advance unedited) - 2024

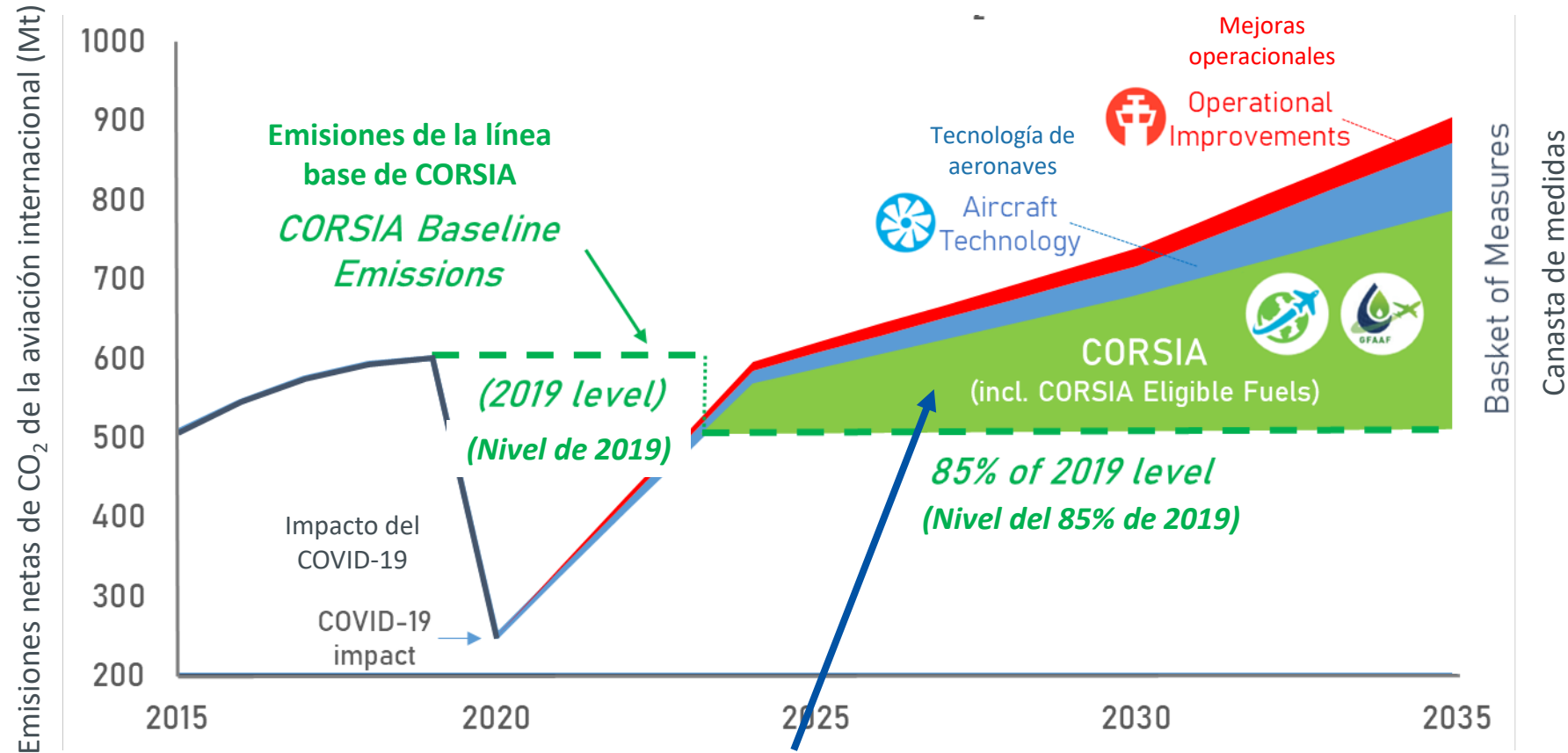
148 Estados que representan el 98,99% de los RTK globales han presentado voluntariamente su Plan de Acción Estatal a la OACI

15 de 22 Estados NAM CAR presentaron SAP, de los cuales 9 presentaron SAP completamente cuantificados

Se completó la actualización del Doc 9988 de la OACI para reflejar el acuerdo de la Asamblea de la OACI de 2022 sobre el LTAG

CONTRIBUTION OF CORSIA FOR REDUCING INTERNATIONAL AVIATION NET CO2 EMISSIONS

CONTRIBUCIÓN DE CORSIA A LA REDUCCIÓN DE EMISIONES NETAS DE CO2 DE LA AVIACIÓN INTERNACIONAL



CORSIA aborda la "brecha de emisiones" restante para lograr el Crecimiento Neutro en Carbono a partir del 2020
CORSIA addresses remaining 'emissions gap' to achieve Carbon Neutral Growth from 2020



Implementación por fases de CORSIA

Participation criteria in the second phase:

- Accumulated 90% of the RTK global of 20180,
- 5% of 2018 individual RTK
- Voluntary participation

Exemptions:

LDCs, LLDCs, SIDS

Criterios de participación en la segunda fase:

- 90% acumulado del RTK global de 2018
- 0.5% del RTK individual de 2018
- Participación voluntaria

Exenciones:

LDCs, LLDCs, SIDS



• Participation of States in the pilot phase (2021 to 2023) and first phase (2024 to 2026) is voluntary.



• La participación de los Estados en la fase piloto (2021 a 2023) y la primera fase (2024 a 2026) es voluntaria.

Volunteer States in CORSIA

Estados voluntarios en CORSIA

88 States for 2021

Afghanistan	El Salvador	Kenya	Republic of Korea
Albania	Equatorial Guinea	Latvia	Republic of Moldova
Armenia	Estonia	Lithuania	Romania
Australia	Finland	Luxembourg	Rwanda
Austria	France	Madagascar	San Marino
Azerbaijan	Gabon	Malaysia	Saudi Arabia
Belgium	Georgia	Malta	Serbia
Benin	Germany	Marshall Islands	Singapore
Bosnia and Herzegovina	Ghana	Mexico	Slovakia
Botswana	Greece	Monaco	Slovenia
Bulgaria	Guatemala	Montenegro	Spain
Burkina Faso	Guyana	Namibia	Sweden
Cameroon	Honduras	Netherlands	Switzerland
Canada	Hungary	New Zealand	Thailand
Costa Rica	Iceland	Nigeria	Turkey
Côte d'Ivoire	Indonesia	North Macedonia	Uganda
Croatia	Ireland	Norway	Ukraine
Cyprus	Israel	Papua New Guinea	United Arab Emirates
Czechia	Italy	Philippines	United Kingdom
Democratic Republic of the Congo	Jamaica	Poland	United Republic of Tanzania
Denmark	Japan	Portugal	United States
Dominican Republic	Kazakhstan	Qatar	Zambia

107 States for 2022

Bahamas
Grenada
Palau
Trinidad and Tobago
Barbados
Kiribati
Saint Kitts and Nevis
Tuvalu
Belize
Mali
South Sudan
Vanuatu
Cook Islands
Nauru
Suriname
Gambia
Oman
Tonga
Uruguay

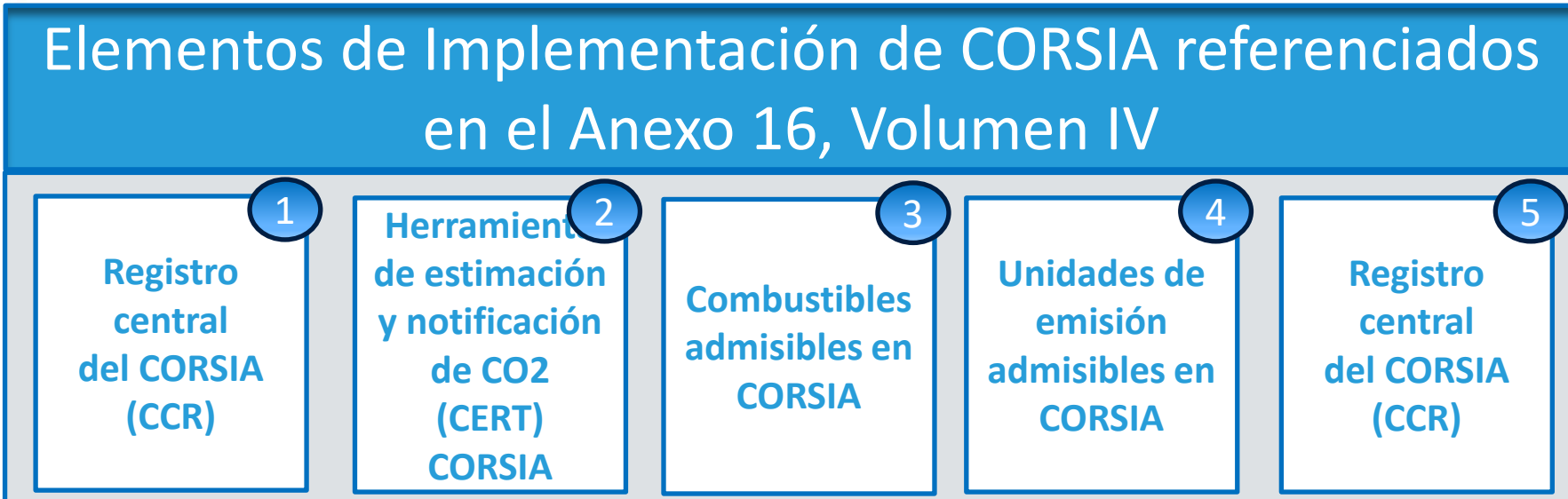
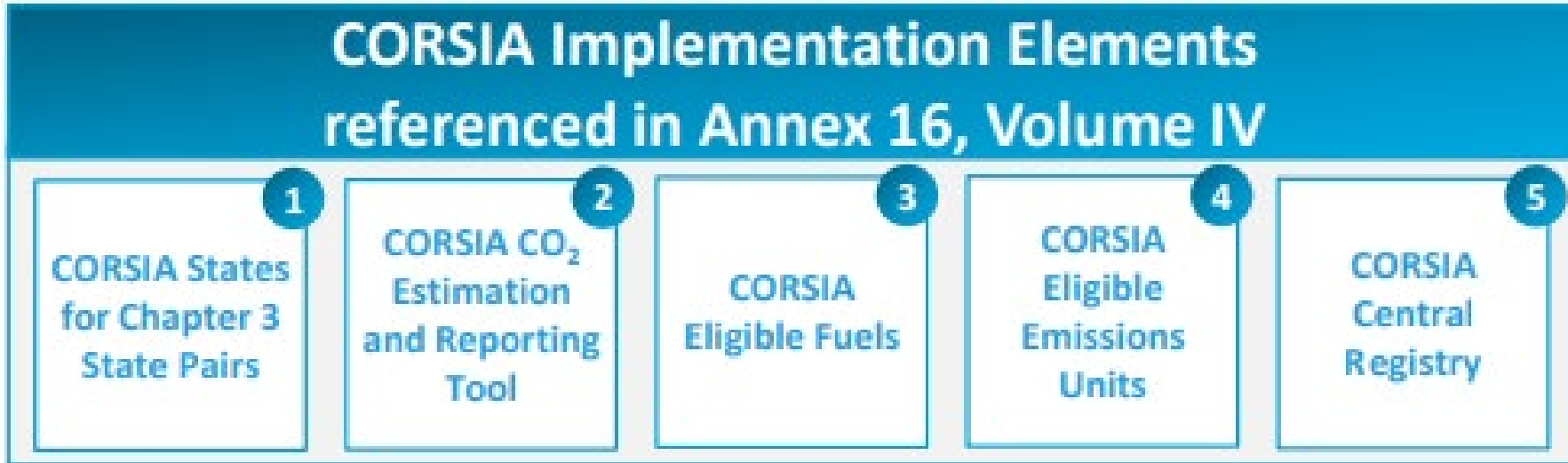
115 States for 2023

Zimbabwe
Federated States of Micronesia
Maldives
Timor-Leste
Saint Vincent and the Grenadines
Cuba
Cambodia
Iraq

126 States for 2024

Antigua and Barbuda
Bahrain
Ecuador
Kuwait
Samoa
Seychelles
Sierra Leone
Solomon Islands
Mauritius
Malawi
Haiti

Más información aquí: <https://www.icao.int/environmental-protection/CORSIA/Pages/state-pairs.aspx>



ACT-CORSIA Buddy Partnerships

Partenariados de ACT-CORSIA

Three phases from Sep 2018 with specific focus areas to support necessary actions by States

Phase III (Apr 2020 - currently): 17 supporting States and 119 requesting States

- Use of the CORSIA Central Registry (CCR)
- Development and approval of Emissions Monitoring Plans
- Establishment national/regional regulatory frameworks

ACT-CORSIA Phase III Assistance, Capacity-building and Training on CORSIA	
AUSTRALIA	KENYA / UNITED KINGDOM
1. BRUNEI DARUSSALAM	1. ETHIOPIA
2. INDONESIA	2. RWANDA
3. NAURU	3. SEYHELLES
4. PAPUA NEW GUINEA	4. SOUTH SUDAN
5. SRI LANKA	5. UGANDA
6. THAILAND	6. UNITED REPUBLIC OF TANZANIA
BRAZIL	NEW ZEALAND
1. ANGOLA	1. FIJI
2. CABO VERDE	2. SAMOA
3. MOZAMBIQUE	3. SOLOMON ISLANDS
4. SAO TOME AND PRINCIPE	4. VANUATU
CANADA (Facilitated by CASSOS)	NIGERIA
1. ANTIQUA AND BARBUDA	1. GAMBIA
2. BARBADOS	2. GHANA
3. GUYANA	3. LIBERIA
4. HAITI	4. SIERRA LEONE
5. JAMAICA	5. SUDAN
6. SURINAME	REPUBLIC OF KOREA
7. TRINIDAD AND TOBAGO	1. LAO PEOPLE'S D. R.
CANADA / FRANCE	2. MONGOLIA
1. BENIN	3. PAKISTAN
2. BURKINA FASO	4. PHILIPPINES
3. BURUNDI	5. VIETNAM
4. CAMEROON	QATAR
5. CENTRAL AFRICAN REPUBLIC	1. SAUDI ARABIA
6. CHAD	2. IRAQ
7. COMOROS	3. IRAQ
8. CONGO	4. JORDAN
9. CÔTE D'IVOIRE	5. KUWAIT
10. DJIBOUTI	6. LIBYA
11. D. R. OF CONGO	7. OMAN
12. GABON	SINGAPORE
13. GUINEA	1. COOK ISLANDS
14. MADAGASCAR	2. KIRIBATI
15. MALI	3. MARSHALL ISLANDS
16. MAURITANIA	4. PALAU
17. MAURITIUS	5. TONGA
18. NIGER	6. TUVALU
19. SENEGAL	SOUTH AFRICA
20. TOGO	1. BOTSWANA
FRANCE (Facilitated by ACAI)	2. ESWATINI
1. ALGERIA	3. LESOTHO
2. MOROCCO	4. MALAWI
3. TUNISIA	5. NAMIBIA
GERMANY	6. ZAMBIA
1. ALBANIA	7. ZIMBABWE
2. ARMENIA	SPAIN (* Facilitated by COCESNA)
3. AZERBAIJAN	1. BELIZE *
4. BELARUS	2. BOLIVIA
5. GEORGIA	3. COLOMBIA
6. KAZAKHSTAN	4. COSTA RICA *
7. NORTH MACEDONIA	5. CUBA
8. REPUBLIC OF MOLDOVA	6. EL SALVADOR *
9. SAUDI ARABIA	7. EQUATORIAL GUINEA
10. SERBIA	8. GUATEMALA *
11. TAJIKISTAN	9. HONDURAS *
12. TURKMENISTAN	10. MEXICO
ITALY / UNITED KINGDOM	11. NICARAGUA *
1. BAHAMAS	12. PARAGUAY
2. ERITREA	13. PERU
3. SOMALIA	14. URUGUAY
JAPAN	USA
1. AFGHANISTAN	1. ARGENTINA
2. BANGLADESH	2. DOMINICAN REPUBLIC
3. BHUTAN	3. ECUADOR
4. CAMBODIA	4. PANAMA
5. MALAYSIA	
6. MYANMAR	

Tres fases desde Sep 2018 con áreas de enfoque específicas para apoyar las acciones necesarias de los Estados

Fase III (abr 2020 - actualmente): 17 Estados de apoyo y 119 Estados solicitantes

- Uso del Registro Central de CORSIA (CCR)
- Desarrollo y aprobación de Planes de Vigilancia de Emisiones
- Establecimiento de marcos regulatorios nacionales/regionales

Workshop on Dissemination of Environmental Protection Measures in International Civil Aviation Armenia, Colombia, 02-05 April 2024

- Technical Advisory Body (TAB) documents and procedures for CORSIA-eligible Emission Units;
- Criteria for CORSIA-eligible fuel standards and certifications;
- CAAF/3 Main Results;
- Long-term aspirational goal (LTAG) targets and updates;
- State Action Plan on CO2 Emission Reduction Activities and its updates in accordance with resolutions A41.



Taller sobre Difusión de Medidas de Protección del Ambiente en la Aviación Civil Internacional Armenia, Colombia, 02-05 Abril 2024

- Documentos y procedimientos del Órgano Asesor Técnico (TAB) para las Unidades de emisión admisibles en el CORSIA;
- Criterios de normas y certificaciones sobre combustibles admisibles en el marco del CORSIA;
- Principales resultados de la CAAF/3;
- Metas y actualizaciones del objetivo aspiracional a largo plazo (LTAG);
- El Plan de Acción Estatal sobre Actividades de Reducción

2024 ICAO Environment Events Eventos de la OACI sobre Medio Ambiente en 2024

2024 ICAO Seminar on Green Airports

18 - 19 April 2024
Athens , GREECE

- net-zero goals and roadmaps for airports,
- innovations in airport management,
- transition to cleaner energy sources and sustainable infrastructure.
- deployment and distribution of SAF, LCAF and other Aviation Cleaner Energies at airports



2024 Seminario de la OACI sobre aeropuertos ecológicos 18 - 19 de abril de 2024 Atenas, Grecia

- objetivos netos cero y hojas de ruta para aeropuertos,
- innovaciones en la gestión aeroportuaria,
- transición hacia fuentes de energía más limpias e infraestructuras sostenibles.
- Implementación y distribución de SAF, LCAF y otras energías más limpias de aviación en aeropuertos.

2024 ICAO Environment Events Eventos de la OACI sobre Medio Ambiente en 2024

2024 ICAO Seminar on Green Airports

18 - 19 April 2024
Athens , GREECE

- net-zero goals and roadmaps for airports,
- innovations in airport management,
- transition to cleaner energy sources and sustainable infrastructure.
- deployment and distribution of SAF, LCAF and other Aviation Cleaner Energies at airports



2024 Seminario de la OACI sobre aeropuertos ecológicos 18 - 19 de abril de 2024 Atenas, Grecia

- objetivos netos cero y hojas de ruta para aeropuertos,
- innovaciones en la gestión aeroportuaria,
- transición hacia fuentes de energía más limpias e infraestructuras sostenibles.
- Implementación y distribución de SAF, LCAF y otras energías más limpias de aviación en aeropuertos.



ICAO Symposium on
Non-CO₂ Aviation
Emissions

16 — 18 September 2024
Montréal, Canada

The banner features a green background with a white airplane flying over a stylized landscape of green hills and blue water. A globe is positioned on the right side, with another white airplane flying in front of it. The text is centered in white.



2024 ICAO LTAG
STOCKTAKING

7 — 10 OCTOBER 2024
ICAO HEADQUARTERS, MONTREAL, CANADA

The banner has a white background with colorful line art. On the left, there are icons for a wind turbine, a battery, a water tap, and a gear. On the right, there is a stylized globe with a pink star and a purple lamp post. The text is in green.

2024 ICAO Environment Events Eventos de la OACI sobre Medio Ambiente en 2024



NAM CAR SAM REGIONS
24 and 25 April 2023,
Santo Domingo,
Dominican Republic

NAM CAR SAM
REGIONS
20 – 21 August 2024,
Asunción,
Paraguay

NAM CAR SAM REGIONS
TBD 2025,
Host the 2025 ICAO Regional Seminar
and accelerate progress towards the
LTAG!
Organice el Seminario Regional OACI
2025 y aceleremos el progreso hacia el
LTAG!

Se propone la conclusión y las acciones sugeridas registradas en la Nota de Estudio NE/07

The conclusion and suggested actions recorded in the working paper WP/07 are proposed



ICAO

ENVIRONMENT



ICAO

North American
Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima

ICAO
Headquarters
Montréal

Western and
Central African
(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
Bangkok



THANK YOU

