



ICAO

ENVIRONMENT

ICAO Secretariat

Setting the Scene – Part 2 Overview of ICAO Global Framework on SAF, LCAF and other Aviation Cleaner Energies

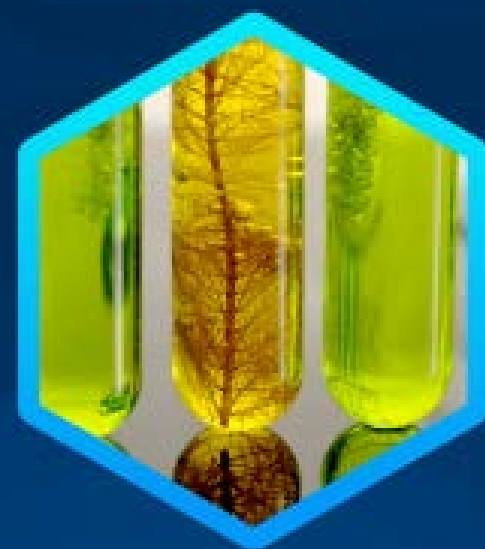


ICAO Global Framework for SAF, LCAF and other Aviation Cleaner Energies

Policy and Planning



Regulatory Framework



Implementation Support



Financing



- Supports global scale up of aviation cleaner energies – Collective Vision to reduce 5% CO₂ by 2030
- Provides clarity, consistency and predictability to all stakeholders on 1) policy and planning, 2) regulatory framework, 3) implementation support, and 4) financing – 4 Building Blocks
- Monitors the implementation progress on emissions reductions and means of implementation
- Aspiring to have cleaner energy production facilities in all regions by CAAF/4 (no later than 2028)
- To update the Vision at CAAF/4 on the basis of market developments

CAAF/3 Global Framework – 4 Building Blocks

1. Policy and Planning

- Global aspirational **Vision** to reduce international aviation CO₂ emissions by **5% by 2030**
- Each State's **special circumstances and respective capabilities**
- **CAAF/4** no later than 2028, with a view to update Vision
- **Collaborative effort** across different stakeholders, and encourage **State policies, action plans and roadmaps**
- Implementation **monitored** and periodically **reviewed**

2. Regulatory Framework

- **CORSIA eligibility framework as accepted basis** for SAF, LCAF and other aviation cleaner energies
- Increase the **number of SCS**, additional fuel production **pathways / life-cycle values**
- Parameters for **fuel accounting methodologies**, leveraging on CORSIA MRV system
- **Study of fuel accounting systems** to determine any possible ICAO role

3. Implementation Support

- **Robust, targeted and tailored** capacity -building and implementation support
- **Building on ACT-CORSIA and ACT-SAF programmes**
- Facilitate **partnerships**, and exchange of best practices
- Develop **policy toolkit/guidance** and support **State Action Plans**
- Support **feasibility studies, pilot projects**, which may facilitate access to investment
- Support **access to technology**

4. Financing

- **Advocacy and outreach** for greater investment in aviation cleaner energy projects, including UN and international financial community
- Welcome and request for **operationalization of ICAO Fininvest Hub** to facilitate better access to public fund / private investment, to respond to Resolution A41-21, para 18. a)
- Expedite work to **consider the establishment of a climate finance initiative or funding mechanism under ICAO**, to respond to A41-21, para 18. b)

ICAO Roadmap for implementation of CAAF/3 outcomes and LTAG

(Approved by ICAO Council on 17 June 2024, C-DEC 232/6 refers)

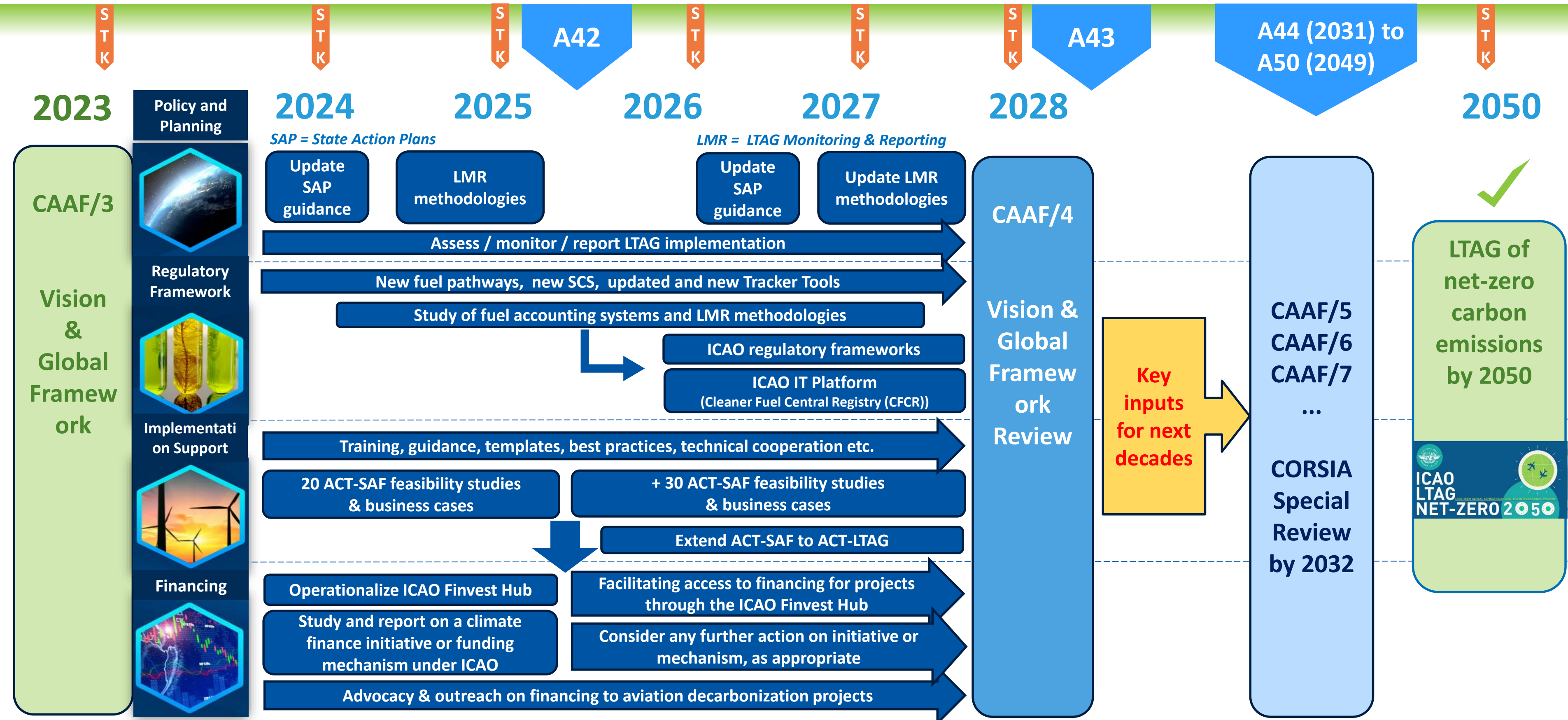
The Council approved the ICAO roadmap for the implementation of the ICAO Global Framework for SAF, LCAF and other Aviation Cleaner Energies, including the planned actions, roles and responsibilities, timeframe, required resources, and the relationship with related ICAO work, such as the LTAG implementation, leading to the 42nd Session of the Assembly in 2025, and until the convening of CAAF/4 by no later than 2028, on the understanding that:

- a) the ICAO roadmap would be a **“living document”** to be regularly updated to reflect the progress of implementation and elaborate on further actions, and this subject would become a recurring item to be reported during subsequent Council sessions, as required
- b) the ICAO roadmap **transparently outlines the additional resources required** to implement the Global Framework and the LTAG, and should be used to **inform resource mobilisation efforts, and subject to the upcoming 2026-2028 Business Plan and Regular Budget discussions**
- c) the implementation of the ICAO roadmap should be **progressed in a balanced manner between the four interdependent Building Blocks**, and should give immediate focus to the need to accelerate the level of capacity building and implementation support, financing and other critical enabling and monitoring elements, so that it may foster swift production and deployment of aviation cleaner energies in all regions
- d) the Secretariat should ensure the **coordination among all relevant Bureaux and ICAO bodies** on cross-cutting issues relating to the implementation of LTAG, and all the elements of the ICAO basket of measures for emissions reductions, under the **“One-ICAO” approach**, with clearly defined roles and responsibilities, such as for undertaking the feasibility studies under ACT-SAF and the operationalization of the Finvest Hub



ICAO Roadmap for implementation of CAAF/3 outcomes and LTAG

STK = Annual LTAG Stocktaking events





Building Block 1

Policy and Planning



**Collective global aspirational Vision
to reduce CO2 emissions in international aviation by
5 % by 2030, through aviation cleaner energy use**



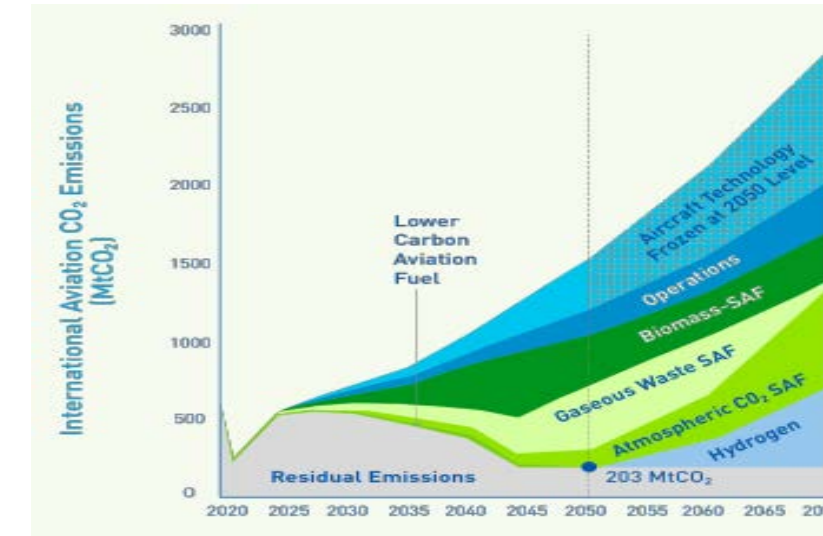
**Each State's special circumstances and respective
capability will inform its ability to contribute to the Vision**



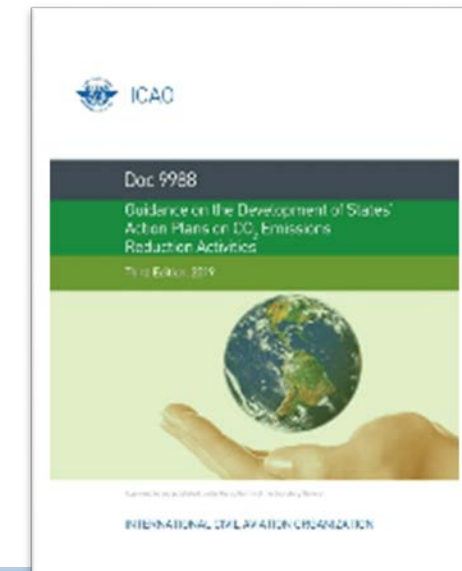
Planned Actions



- To expand ongoing work for the development of **LTAG monitoring methodologies** by including specific methodologies for **monitoring the achievement of the collective global aspirational Vision and the implementation of the Global Framework**
- To add monitoring of the Global Framework implementation, as part of **annual ICAO LTAG Stocktaking events**, including **monitoring of the implementation support and financing**
- To increase **new and updated State Action Plans**, with focus on SAF, LCAF and other aviation cleaner energies, and gather, compile and analyse the data submitted, aiming to assist in monitoring progress
- **To convene CAAF/4 no later than 2028**, with a view to updating the Vision and the Global Framework



ICAO WORK ON LONG-TERM ASPIRATIONAL GOAL			
Operations	Technology	Fuel	
Air operations Ground operations	Aircraft technology Air traffic management Airports Air traffic control	Fuels Drop-in fuels Sustainable aviation fuel Hydrogen	Sources of energy Wind Solar Nuclear Geothermal Hydroelectric Biomass Other renewable energy
Identify combined in-sector scenarios of technology, fuels, and operations, and evaluate:			
Testing Feasibility Availability CO ₂ reduction			





Roles & Responsibilities, Timeframe



- **CAEP/13 in Feb. 2025**, with the support of the Secretariat, to recommend the LTAG monitoring and reporting (LMR) methodologies, for consideration by the Council and subsequently by the **42nd Session of the Assembly**
- **CAEP** to extend LMR methodologies, including monitoring of all aspects of the Global Framework implementation (e.g. implementation support, financing, geographical cleaner energy distribution, impact on growth) **by end of 2025**
- **By no later than 2028**, CAAF/4 to be prepared and convened for possible updates of the Vision and the Global Framework. **CAEP/14 in early 2028** to update the LMR methodologies as required
- **Secretariat** to support the monitoring of the Global Framework including through **annual ICAO LTAG Stocktaking events**
- **Secretariat** to regularly update the ICAO guidance, and provide continuous assistance for **State Action Plans**, with compilation and analyses of data submitted

- **Annual ICAO LTAG Stocktaking events held since 2019**

- 41st Assembly request to monitor the progress towards the achievement of the LTAG (*A41-21, paragraph 9*)
- CAAF/3 request to monitor the implementation of the ICAO Global Framework (*Global Framework, paragraph 11*)



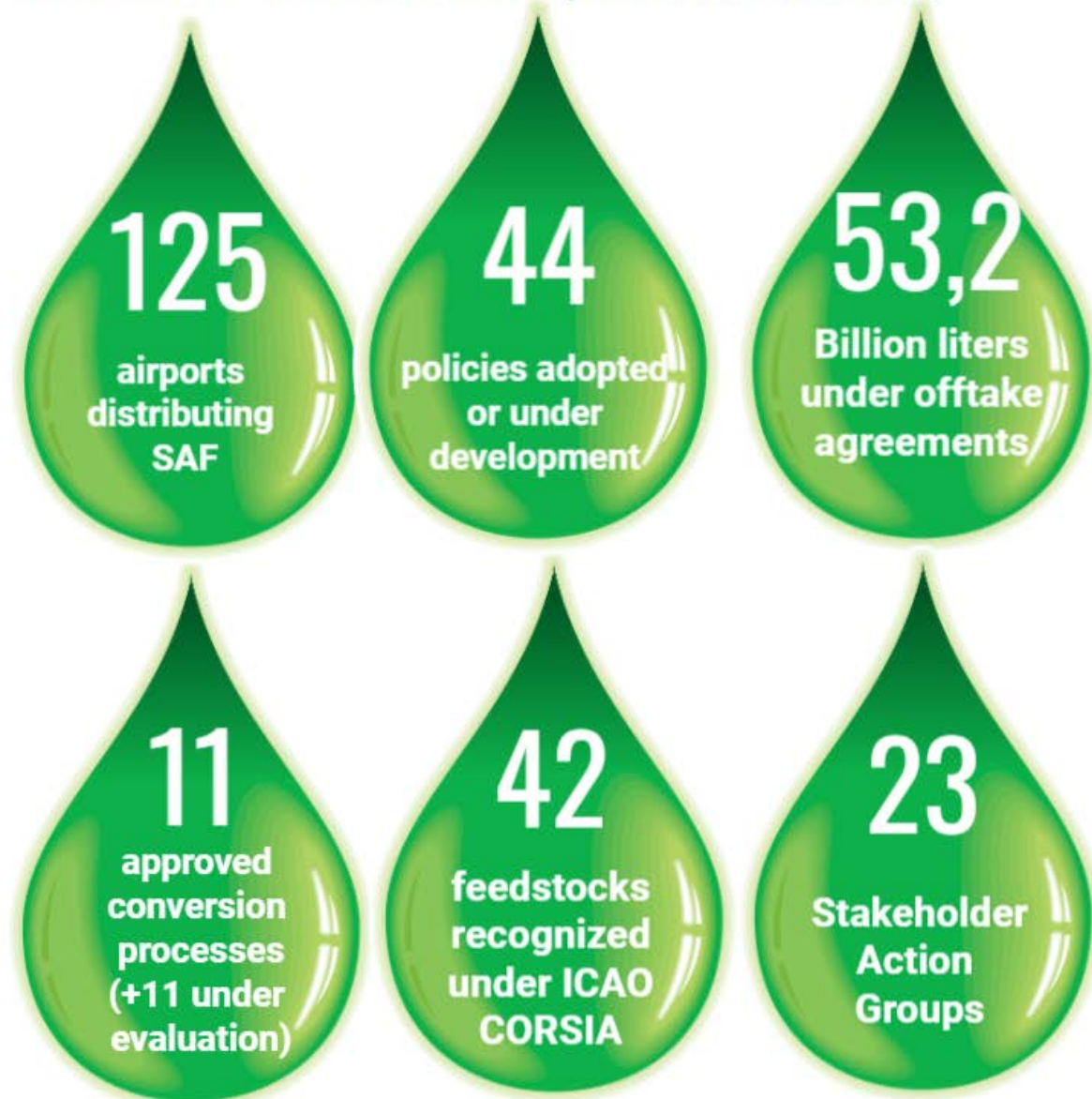
- **2024 ICAO LTAG Stocktaking**

- **7 - 10 October 2024, ICAO HQ, Montreal**
- Showcasing all aviation in-sector CO2 emission reduction measures, including technologies, operations, fuels, cleaner energies, and financing, in view of monitoring progress towards the achievement of the LTAG
- Following the adoption of the ICAO Global Framework at CAAF/3, this event will focus on SAF, LCAF and other aviation cleaner energies, in view of implementing the Framework



SAF tracking tools for monitoring progress

ICAO SAF Tracker tools (click for details)



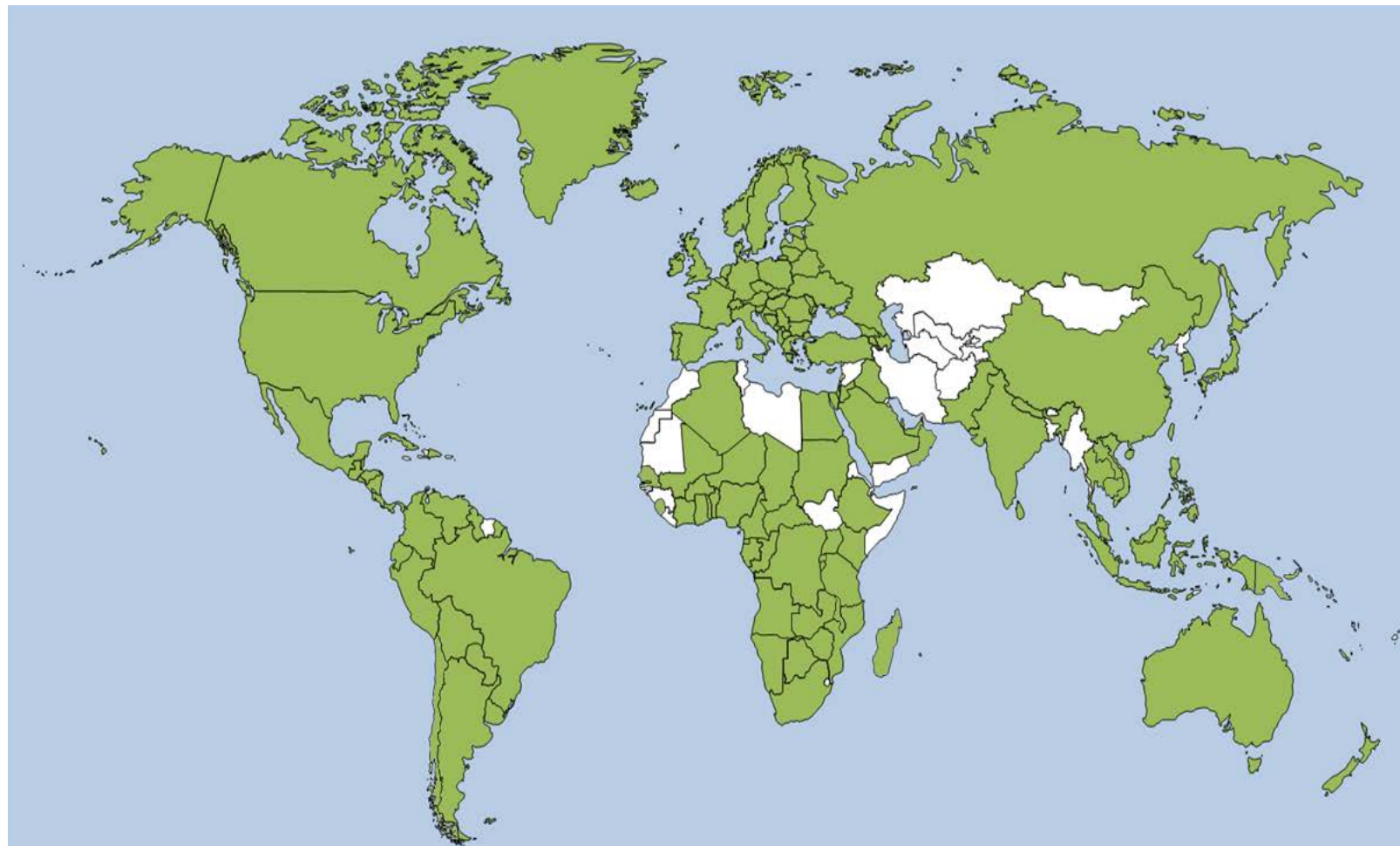
ICAO SAF tracking tools to monitor progress and facilitate information exchange



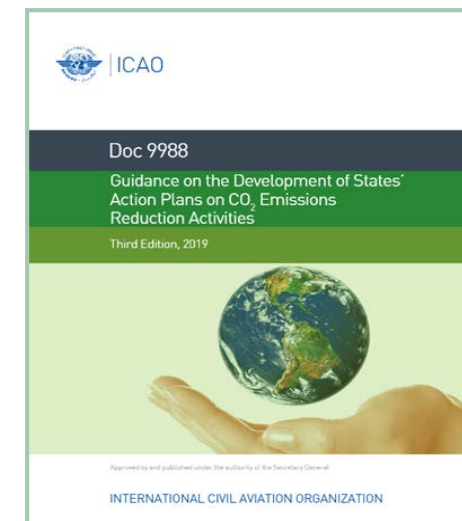
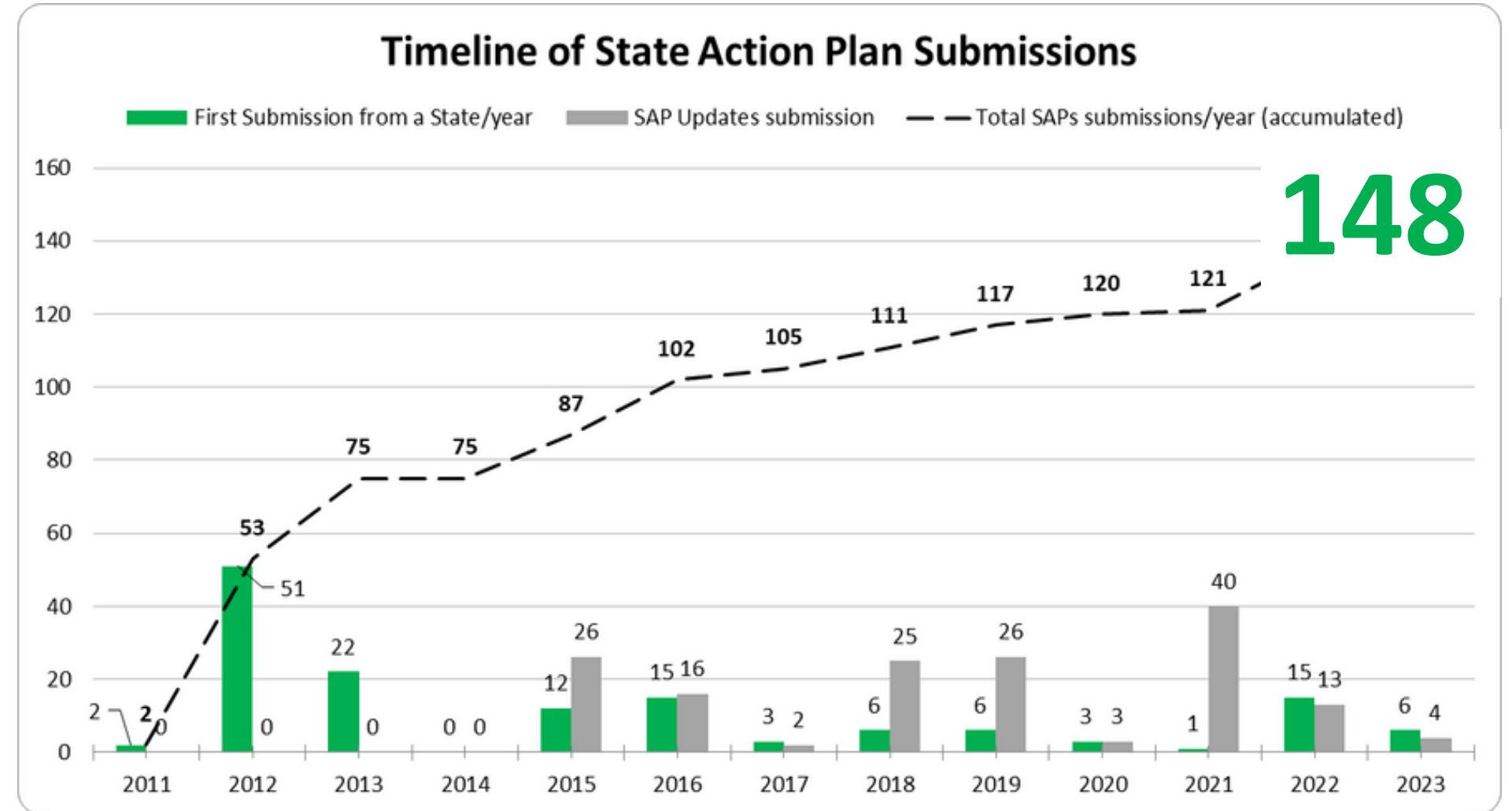
Latest news (click for details)

Date	Link
15 juil. 2024	UL and TCD to collaborate on Sustainable Aviation Fuel research study
10 juil. 2024	EASA Establishes SAF Clearinghouse
3 juil. 2024	China regulator launches country's first 'green' jet aviation fuel centre
3 juil. 2024	OMV Petrom secures raw materials for production of sustainable fuels
1 juil. 2024	KWE and IAG Cargo Agree to Expand Use of Sustainable Aviation Fuel
1 juil. 2024	Korean Air and CEVA Logistics partner on cargo SAF use – Sustainable Aviation Fuel
26 juin 2024	MUFG Bank Invests in LanzaJet and its Sustainable Aviation Fuel Production Technology

148 States (98.99% of global RTK)
have voluntarily submitted State
Action Plans

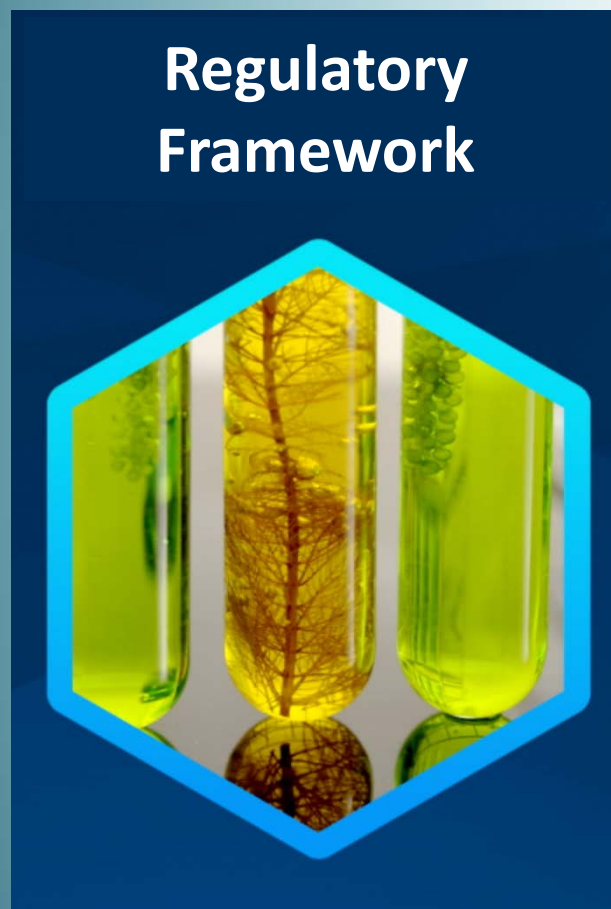


Need for SAP updates in light of
LTAG and Global Framework



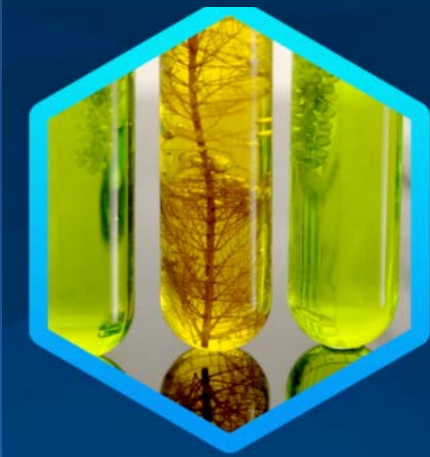
**Guidance on the Development of
States' Action Plan on CO2
Emissions Reduction Activities
(Doc 9988)**

Updated version is now
available !



Building Block 2

Regulatory Framework

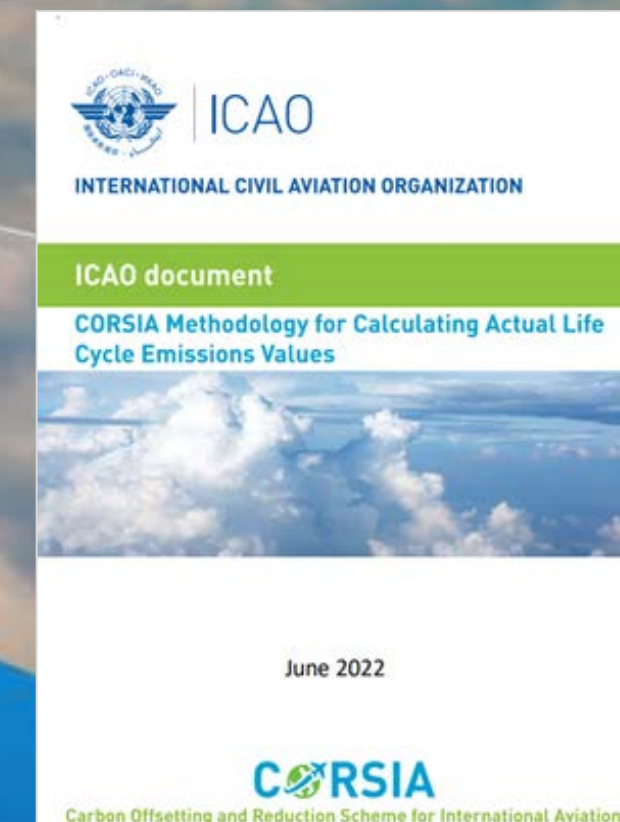
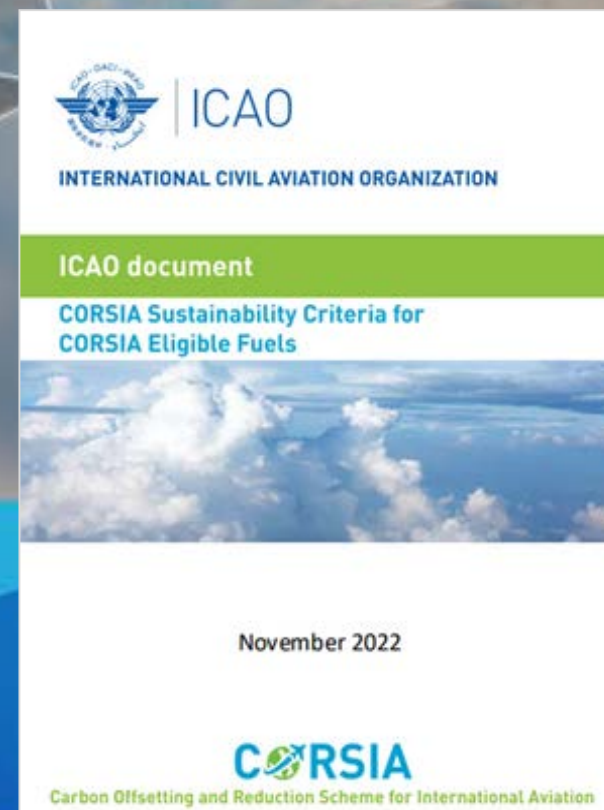


CORSIA

126 States voluntarily participate in the scheme from its first phase in 2024

CORSIA sustainability criteria, sustainability certification, and life-cycle assessment methodology for SAF and LCAF, as the accepted basis for the eligibility of aviation cleaner energies

- Parameters for fuel accounting & reporting methodologies
- Study on fuel accounting systems / possible ICAO role





Planned Actions



- To urgently accelerate the analysis and approval of **life cycle values for new fuel sources and pathways** as CORSIA eligible fuels, while ensuring environmental integrity in line with CORSIA requirements
- To urgently accelerate the development and approval of **new Sustainability Certification Schemes (SCS)** on the use of CORSIA eligible fuels in all regions, while ensuring environmental integrity in line with CORSIA requirements
- To undertake a **study of fuel accounting systems for international aviation**, which can help determine **any possible ICAO role**
- To develop and/or update necessary **ICAO regulatory frameworks**, as appropriate, based on the study of fuel accounting systems and the LTAG monitoring and reporting (LMR) methodologies
- To develop a **possible ICAO IT platform** to integrate the monitoring of the Global Framework LTAG implementation, as appropriate



Study on fuel accounting systems

Necessary ICAO regulatory frameworks

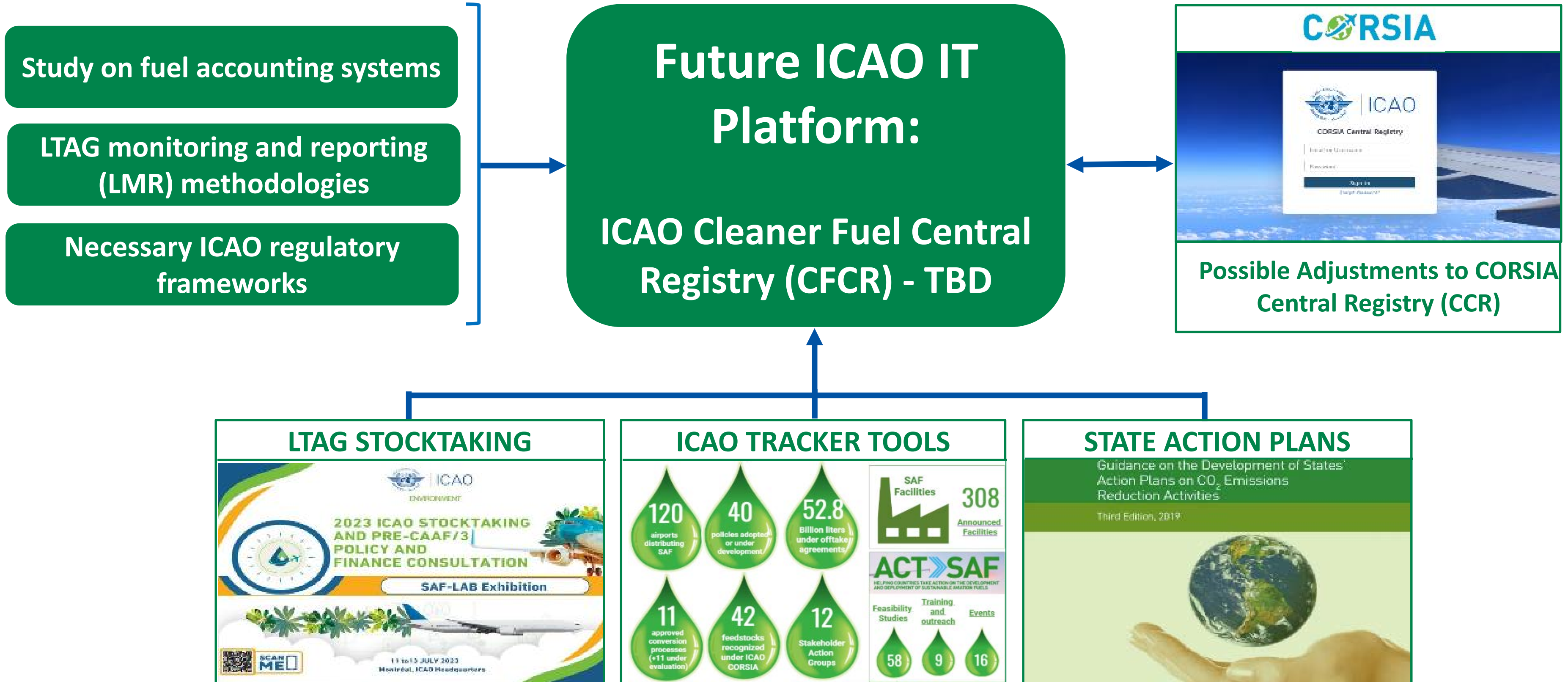
Possible ICAO IT platform



Roles & Responsibilities, Timeframe



- CAEP to urgently increase its technical and neutral work to recommend the **life cycle values for new fuel sources and pathways, and additional SCS, for Council approval**, in support of global production and deployment of SAF, LCAF and other aviation cleaner energies in all regions
- CAEP to **study fuel accounting systems** for international aviation including any possible ICAO role, **in conjunction with consideration of the LMR methodologies, by the end of 2025 and beyond**
- As soon as following the study of fuel accounting systems and the LMR methodologies, CAEP to recommend to the Council **any necessary ICAO regulatory frameworks** developments and/or updates
- Secretariat to enhance continuous support to the Council and CAEP work
- Secretariat to enhance continuous support to gather, compile, analyse and systematically update information, through **existing ICAO Tracker Tools, and development of additional tools** for emerging topics
- As part of its monitoring and implementation work, the Secretariat to consider the potential development of an **ICAO IT platform**, supporting any recommended ICAO regulatory frameworks developments and/or updates, and integrating the monitoring of the Global Framework and LTAG implementation (e.g. ICAO Cleaner Fuel Central Registry: CFCR), as well as possible adjustments to the CORSIA Central Registry (CCR), as appropriate





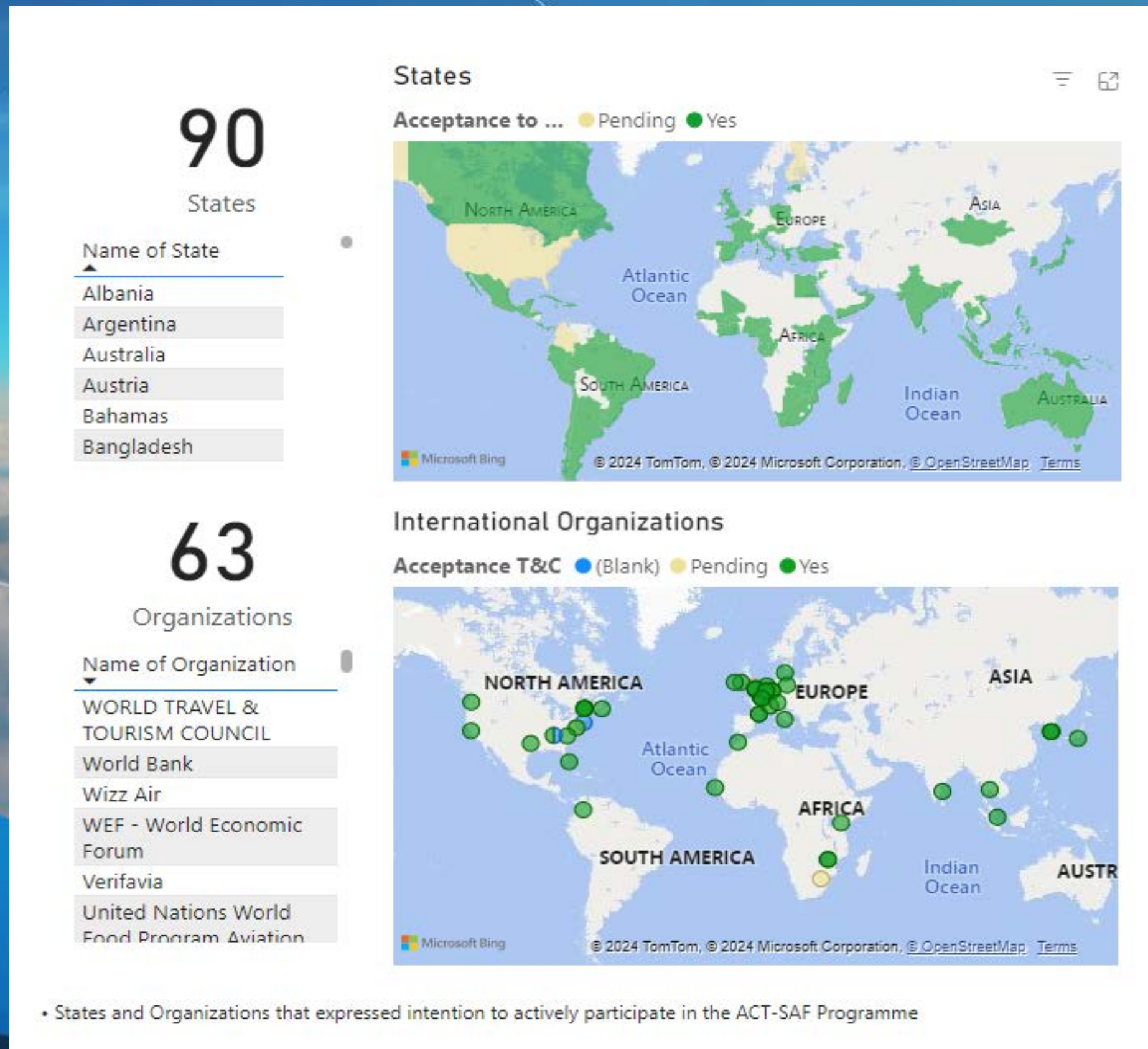
Building Block 3

Implementation Support



- ACT-SAF Web platform
- ACT-SAF Training Series
- ACT-SAF Template & Guide for Feasibility Studies

ACT-SAF





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ICAO Roadmap BB3 – Implementation Support (ACT-SAF and ACT-LTAG programmes)



Planned Actions



- To deliver a **robust, targeted and tailored** capacity-building and implementation support, to promote the development and production of SAF, LCAF and other aviation cleaner energies
- ACT-SAF programme, including **guidance and training, sharing of best practices, feasibility studies and business cases, supporting development of project proposals, and partnerships knowledge sharing and technical cooperation** amongst States, industry and other stakeholders
- To extend ACT-SAF to add other emissions reduction measures (e.g. aircraft technology, operation) as **ACT-LTAG programme**





ICAO Roadmap BB3 – Implementation Support (ACT-SAF and ACT-LTAG programmes)



Roles & Responsibilities, Timeframe



- Secretariat to update & enhance **training of existing topics** and develop new **training of emerging topics**
- Secretariat to **track and share best practices**, and develop & update **templates** for feasibility studies and business cases
- CAEP to regularly update **ICAO guidance & rules of thumb**.
- Secretariat to promote **knowledge sharing and cooperation** between States and with industry, including on technical skills, manufacturing, processing and equipment.
- **By 2025**, Secretariat to complete **20 ACT-SAF feasibility studies and business cases** in total, with voluntary contributions to ICAO ENV Fund
- **By 2028**, Secretariat to complete **50 ACT-SAF feasibility studies and business cases** in total, with voluntary contributions to ICAO ENV Fund
- Secretariat to extend ACT-SAF into **ACT-LTAG programme** as soon as possible, building upon the ACT-SAF approach/maturity

150+ States/Organizations become ACT-SAF partners



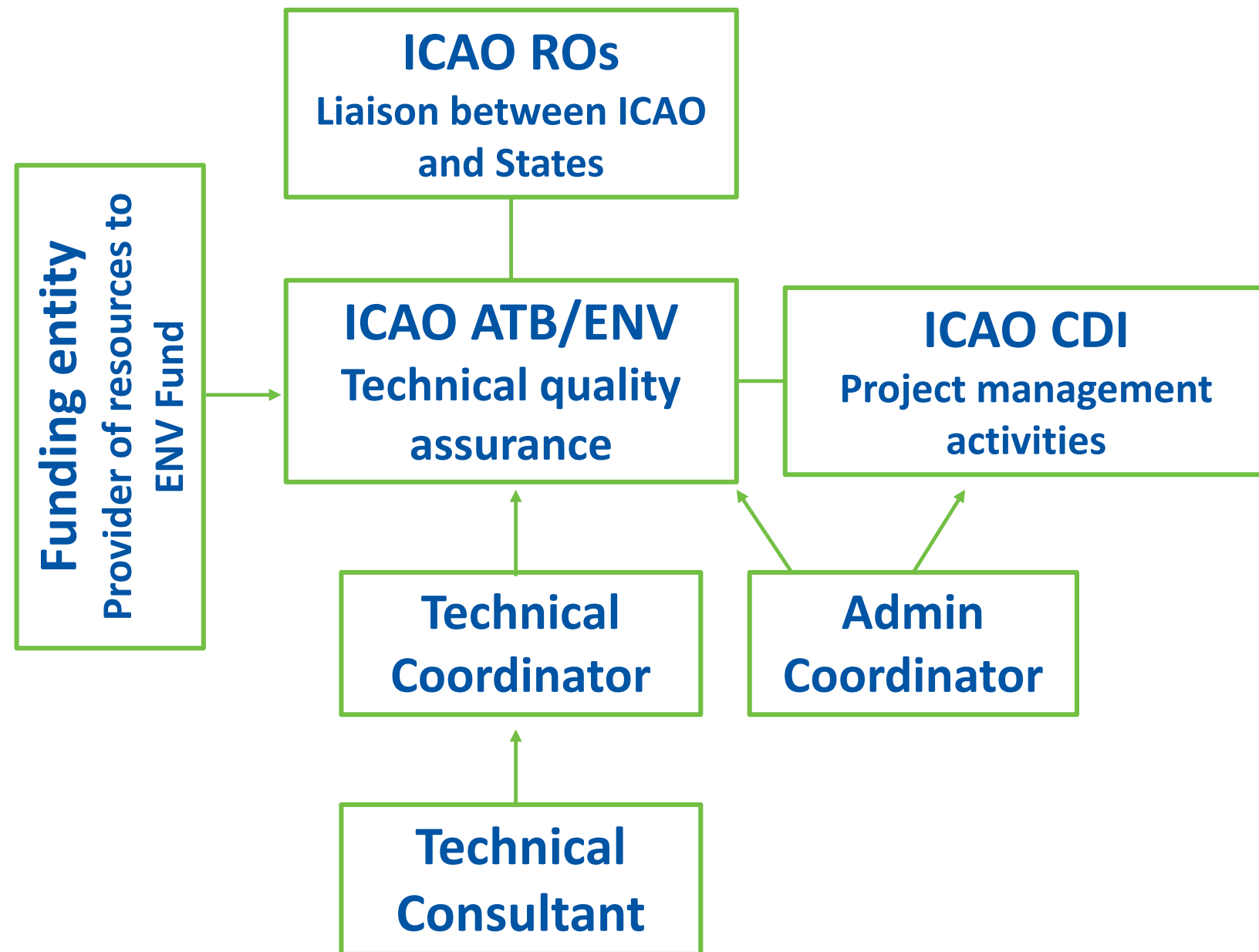
Scaling up SAF feasibility studies & business cases (2024 - 2026) with contributions to ENV Voluntary Fund

European Union	France	United Kingdom
Support 10 SAF feasibility studies for African States and India	Support 3 SAF feasibility and business cases, focused in African States	Support 3 SAF feasibility and business cases, focused in African States
Netherlands	Austria	Airbus
Support 3 SAF feasibility studies, for States in various regions	Support SAF feasibility studies (TBD)	Support SAF feasibility studies (TBD)



ICAO project management structure for ACT-SAF feasibility studies & business cases

- **ICAO ATB/ENV** to lead the technical quality assurance, including the definitions of the project scope and milestones, and expertise requirements to hire project’s consultants (**Technical Coordinator & Technical Consultant**), overseeing the consultants, with assessment and approval of deliverables.
- **ICAO CDI** to provide the administrative support of the project, including coordination for project management documentation, consultant recruitment, travel arrangements, financial transactions, procurements, etc. in coordination with ENV, LEB, FIN, ADB.
- **ICAO ROs** to act as the main liaison between ICAO and States receiving support, including the support to technical consultants undertaking feasibility studies and business cases in those States.



“One-ICAO” Approach



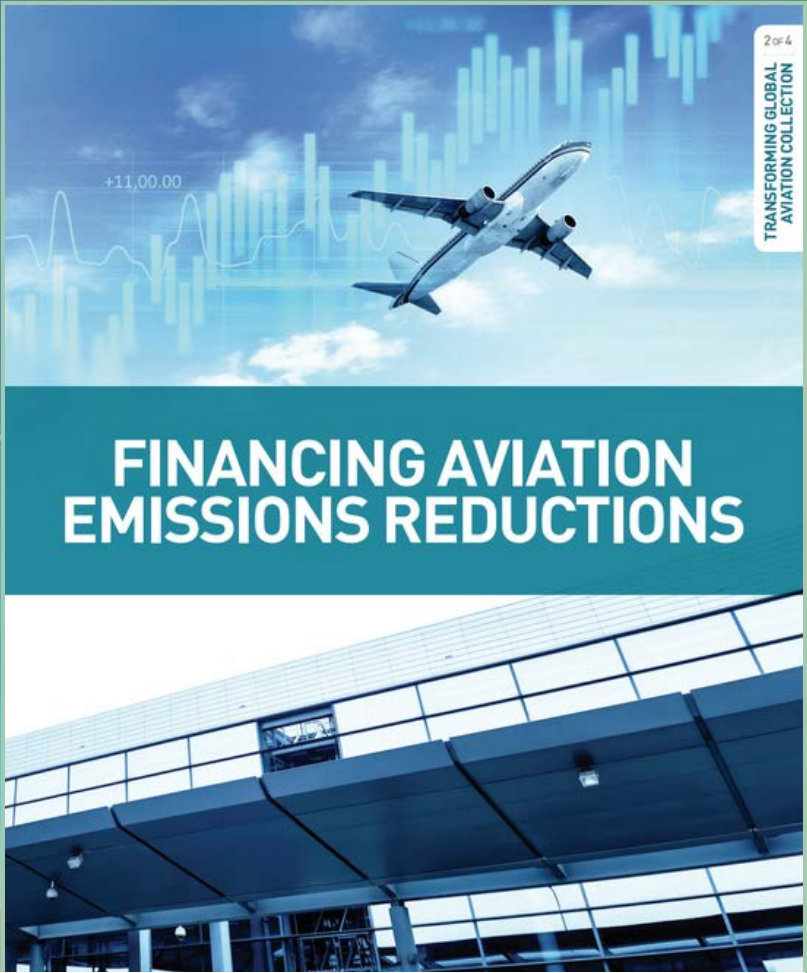


Building Block 4

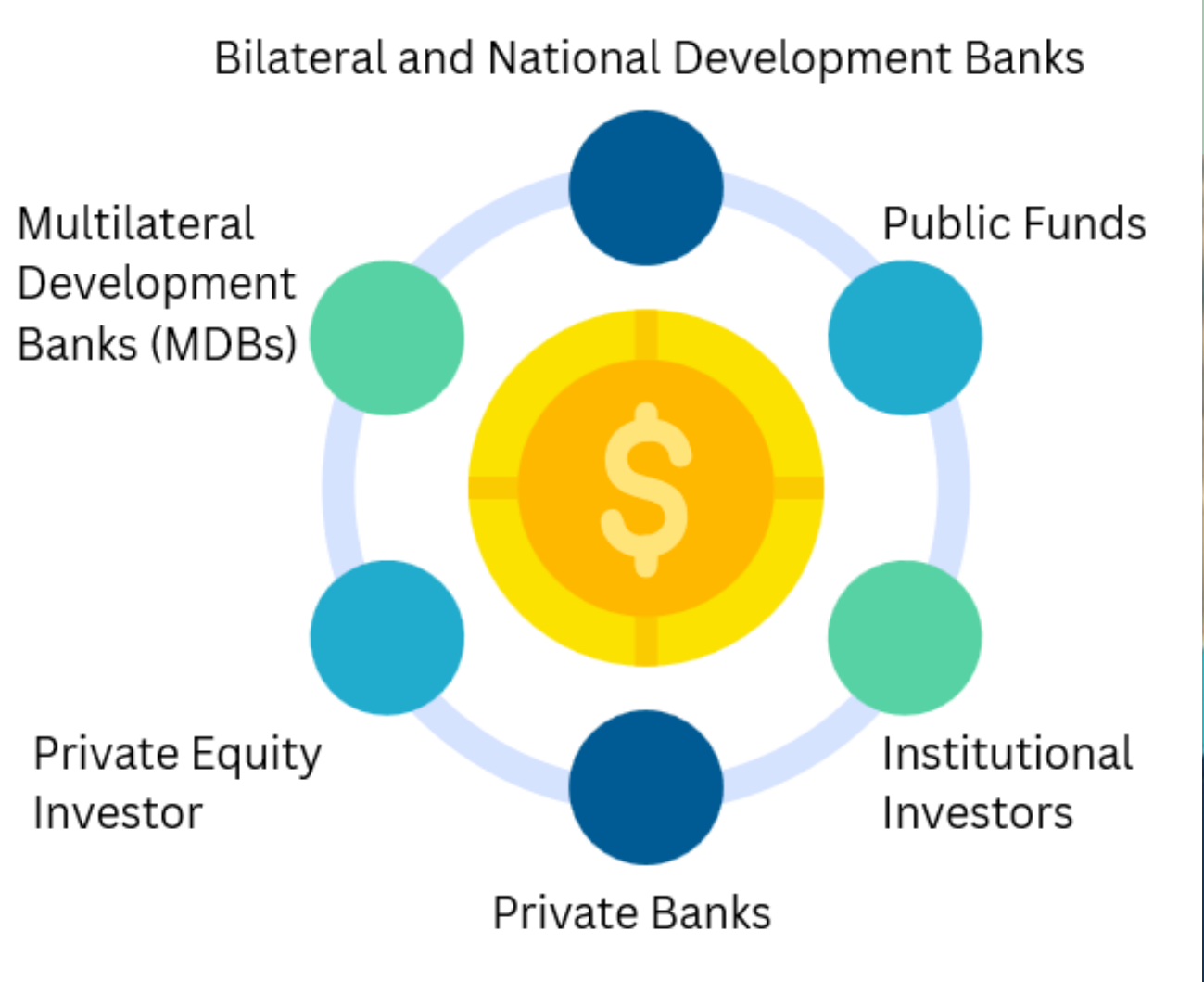
Financing



Financing aviation emissions reductions



- Operationalization of ICAO *Fininvest Hub* initiative
- Study to consider the establishment of a climate finance initiative or funding mechanism under ICAO





Planned Actions

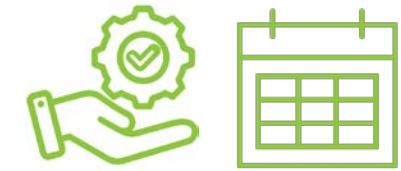


- As part of **advocacy and outreach activities** regarding financing needs towards the achievement of the LTAG, to **enhance engagement and establish networks and structured dialogues with the international finance community and other relevant stakeholders** (Framework paragraph 32 refers) in order to identify and promote financing opportunities for funding projects related to decarbonization, particularly the development and production of SAF, LCAF and other aviation cleaner energies, especially in developing countries
- To develop **specific measures or mechanisms to facilitate better access to financing** (e.g. private investment capacities, as well as funding from financial institutions such as development banks) for developing countries and States having particular needs, in particular the **operationalization of the ICAO Fininvest Hub** (A41-21, para 18. a))
- ICAO and its Member States to initiate a work stream to actively identify, analyze gaps and monitor developments in the UN and across the international financing community (Framework paragraph 42 refers) to identify and aggressively pursue opportunities to increase the allocation or earmarking of public and private capital devoted to aviation decarbonization projects, particularly on SAF, LCAF and other aviation cleaner energies
- To conduct a study through the services of a third-party consultancy, regarding the **consideration of the establishment of a climate finance initiative or funding mechanism under ICAO**, while addressing the possible financial, institutional and legal challenges (A41-21, para 18. b)); support development of a report by the Council to the Assembly; and consider any further action as appropriate





Roles & Responsibilities, Timeframe



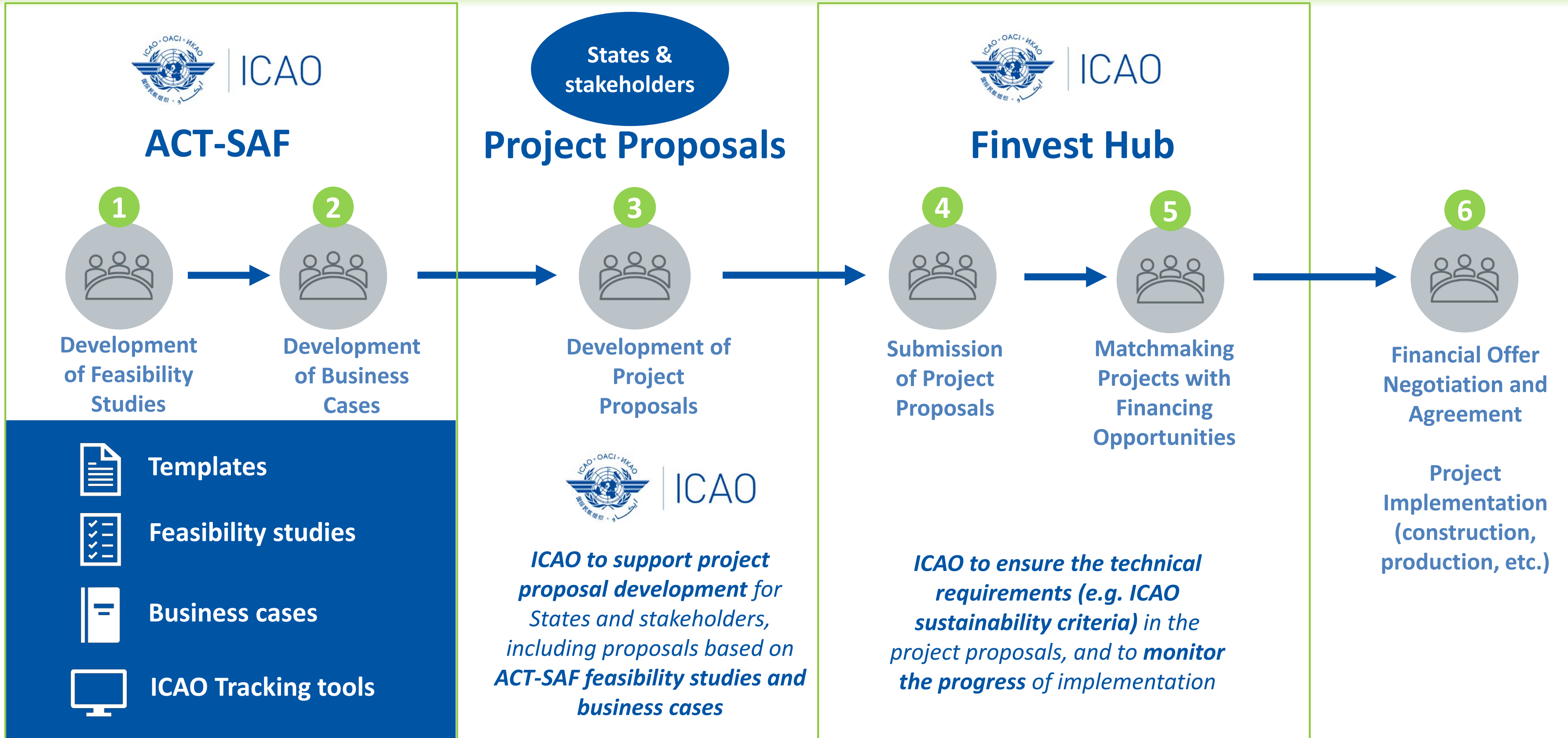
- Secretariat to continue to undertake **advocacy and outreach**, including at the annual LTAG Stocktaking events, and further dialogues for the high-level exchange of views
- **By 2025**, the Secretariat to **operationalize the ICAO Fininvest Hub**, by **recommending to the Council possible options including in-house developments or partnerships** with Financing Platforms of other organizations, to facilitate financial access to aviation decarbonization project proposals, including project proposals developed **based on ACT-SAF feasibility studies and business cases**
- Regarding the consideration of the establishment of a climate finance initiative or funding mechanism under ICAO, **a selected third-party consultancy will deliver a study based on the TORs approved by the Council Small Group:**
 - ✓ Intermediary study (in 3 months from the start of the consultancy) and draft final study to the Small Group **by end of 2024**
 - ✓ Presentation to the Council **by early 2025**, before the final study to be delivered shortly thereafter
 - ✓ Based on the study, the Council will consider and approve its report to the deliberation of the **42nd Session of the Assembly**
 - ✓ Any further action can be considered, as appropriate, **after the Assembly**.



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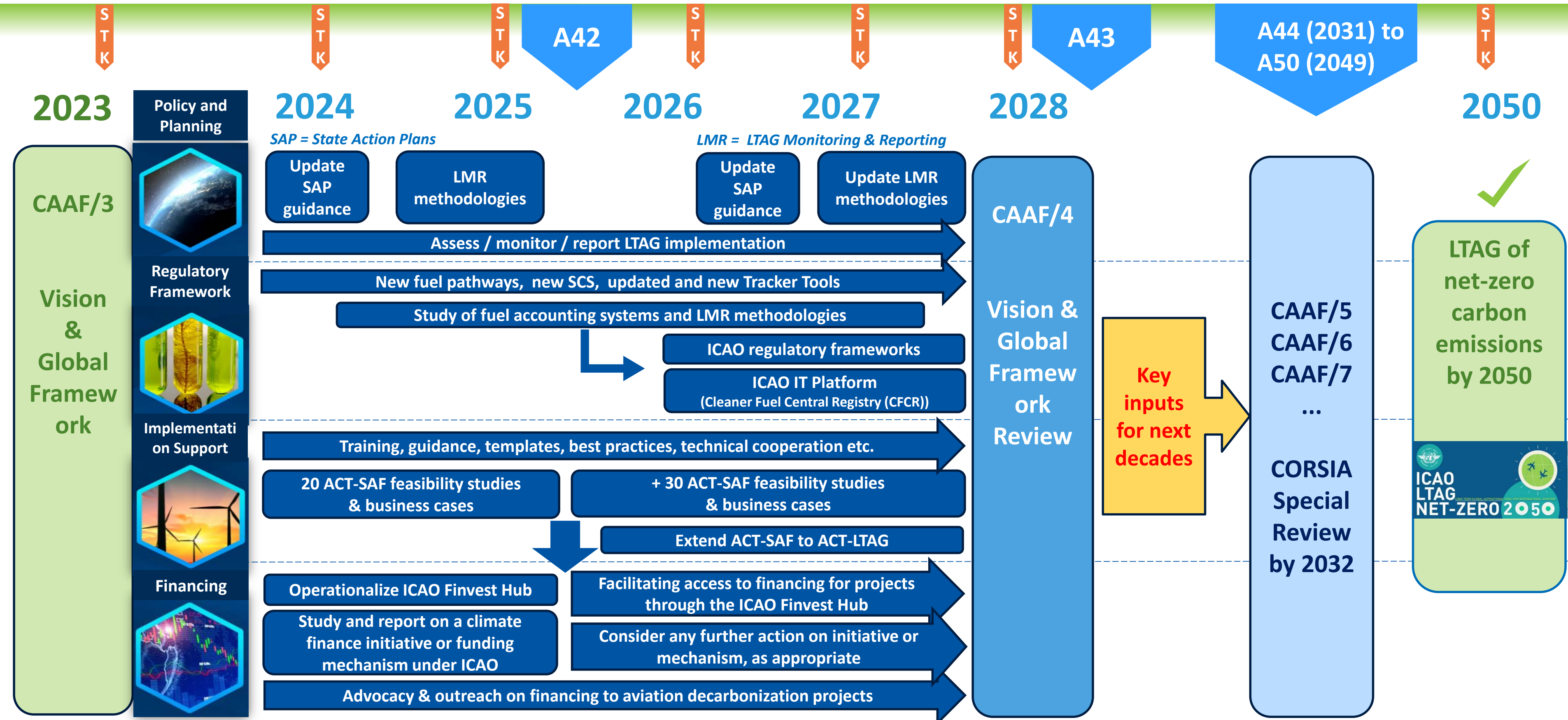
ENVIRONMENT

ICAO Roadmap BB4 – Financing (Advocacy & Outreach, Fininvest Hub, Study)



ICAO Roadmap for implementation of CAAF/3 outcomes and LTAG

STK = Annual LTAG Stocktaking events





Q&A Session

Thank You

