



ICAO

ENVIRONMENT

ICAO Secretariat

Session 4 – Financing Cleaner Energies

Agenda



Session 4 – Financing Cleaner Energies

➤ **CAAF/3 Global Framework: Building Block 4**

- Introduction to Building Block 4 – Financing
- Assembly request on financing
- Advocacy and outreach activities
- Basics of SAF projects financing
- Operationalization of ICAO FINVEST Hub

➤ **States and stakeholders' presentations and views**

➤ **Q&A session**



ICAO Assembly Request on Financing

ICAO Assembly request on Financing



LTAG financing – A41-21 requests to Council

18.

a) initiate specific measures or mechanisms so as to facilitate, in particular for developing countries and States having particular needs, better access to private investment capacities, as well as funding from financial institutions, such as development banks, for projects contributing to the decarbonisation of international aviation, as well as encourage new and additional funding to this purpose;

b) further consider the establishment of a climate finance initiative or funding mechanism under ICAO, while addressing the possible financial, institutional and legal challenges, and report to the 42nd Session of the ICAO Assembly.

(...)

28. d): Requests the Council to work with financial institutions to facilitate access to financing infrastructure development projects dedicated to SAF and LCAF and incentives to overcome initial market hurdles;

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 Finvest 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)

Building Block 4 – Financing

4. Financing

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30. Some financing instruments (e.g. blended finance and Public-Private Partnerships) require significant cooperation and collaboration between stakeholders, including States, industry and public and private financial institutions, to mitigate the investment risk. There is a role for ICAO and its Member States to engage in this cross-stakeholder collaboration as appropriate, on possible measures to de-risk investments.

38. States recognize the important role that ICAO can play in encouraging scaled up funding flows, including new and additional funding flows, as appropriate, and their transparent and effective disbursement. ICAO and its Member States need to ensure ‘no stone is left unturned’ in exploring avenues to support these objectives.

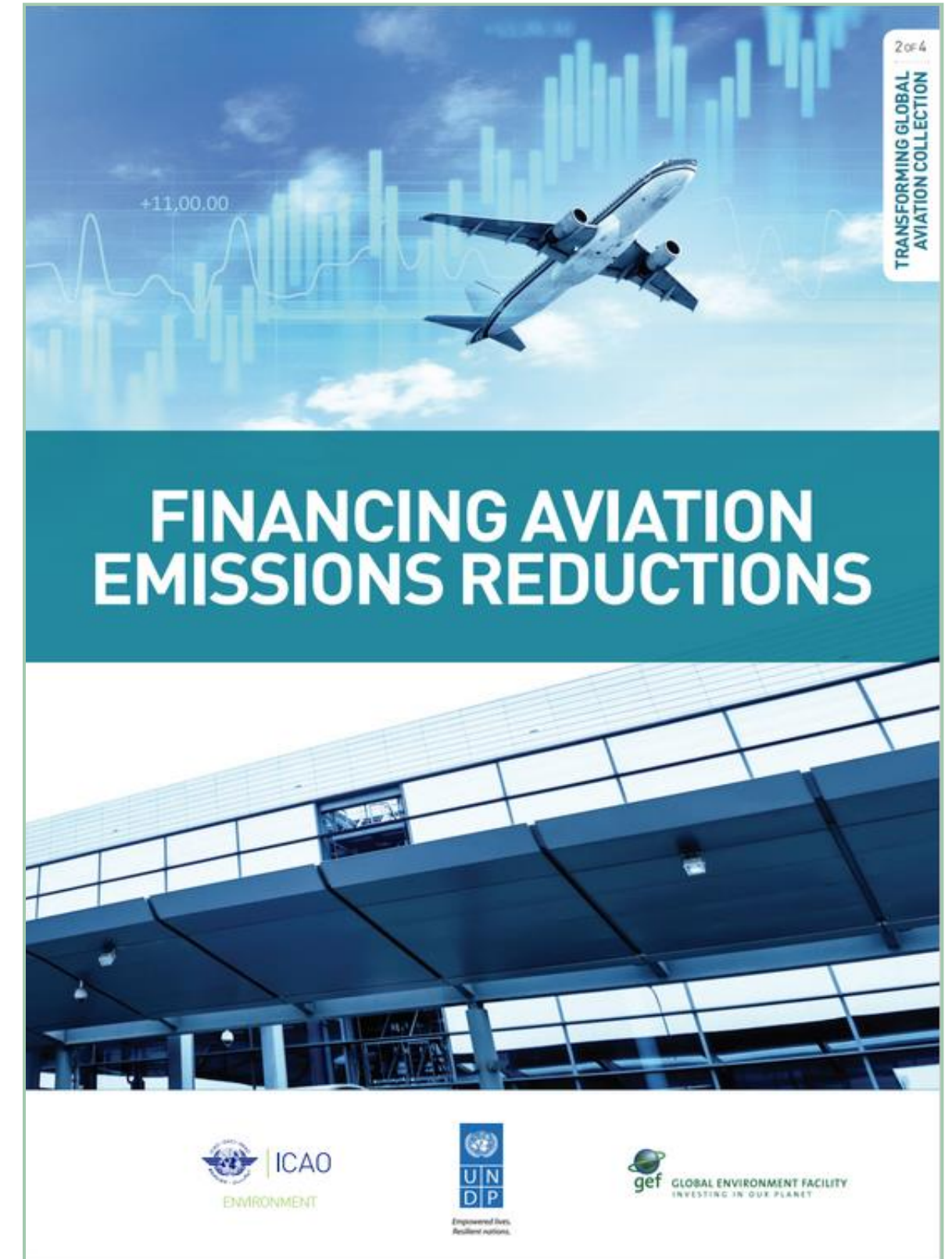
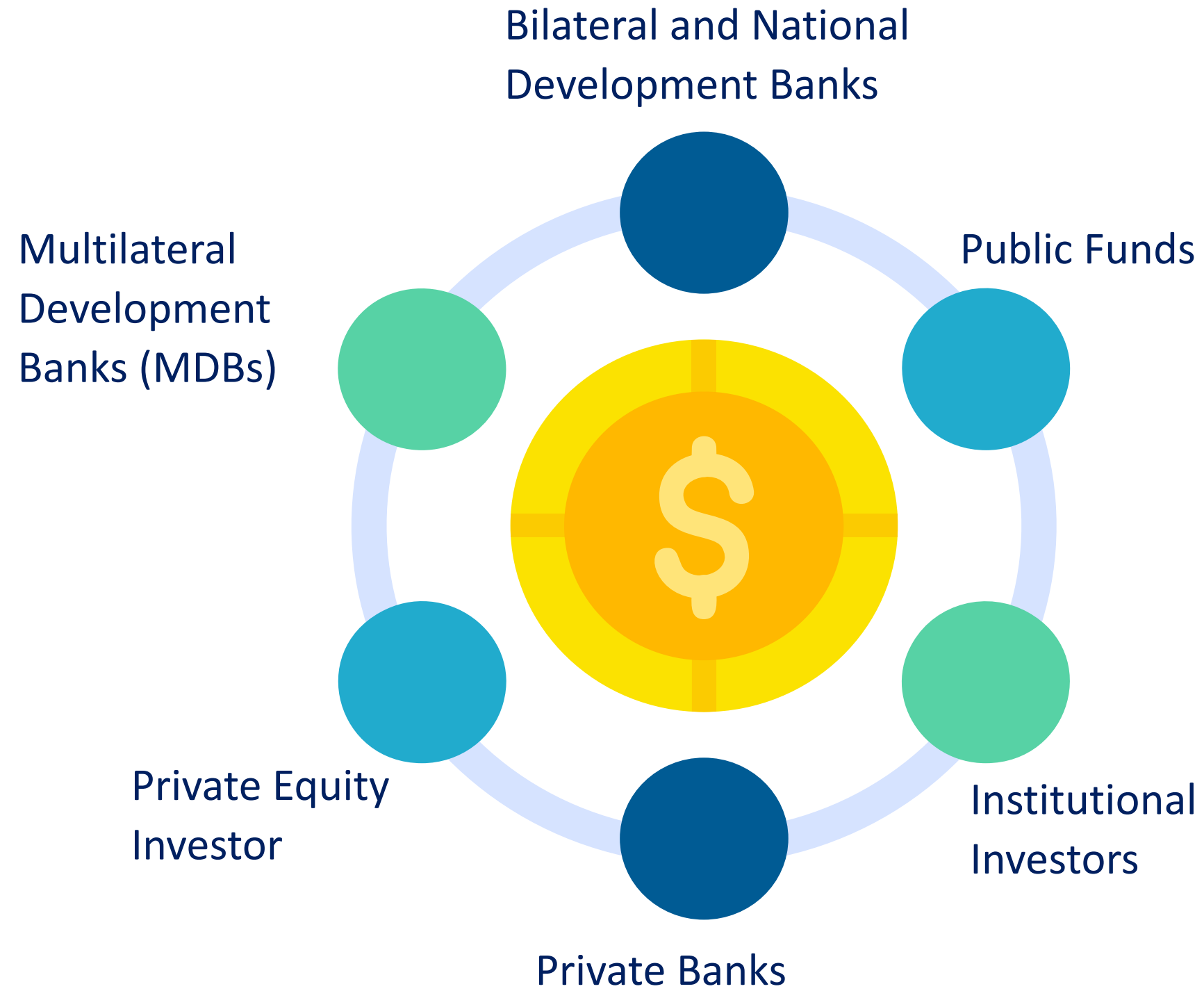
42. ICAO and its Member States should initiate a work stream to actively identify, analyse gaps and monitor developments in the UN and across the international financing community, including *inter alia* the Green Climate Fund and its upcoming replenishment, the Net Zero Asset Owner Alliance, and the Multilateral Development Banks Vision Statement, 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.

34. States acknowledge and welcome the establishment of the ‘ICAO Finvest Hub’, which delivers on Assembly Resolution A41-21, paragraph 18. a), and look forward to its work to facilitate enhanced access to public and private investment capacities and funding from financial institutions, with prioritization of allocation to developing countries and States with particular needs, for projects contributing to the decarbonization of international aviation, including for the scale-up in development and deployment of SAF, LCAF and other aviation cleaner energies, as well as encourage new and additional funding for this purpose.

35. As a first step, ICAO should urgently put in place the necessary structure and capability, toward the operationalization of the proposed ‘ICAO Finvest Hub’ initiative. Such work should clearly identify how the Finvest Hub initiative complements broader aviation decarbonization capacity building and implementation efforts, including the ACT-SAF programme.



Diverse sources of Financing





Financing the Long Term Global Aspirational Goal (LTAG)

- ICAO Assembly Resolution, A41-21, paragraphs 18. a), b)
- ICAO Global Framework, paragraphs 31 to 42

LTAG Report – Financing costs and investments across stakeholders
Projected cumulative (2020-2050) costs and investments associated with highest-ambition LTAG scenario, across each stakeholder group



Stakeholders	Integrated Scenario 3
States	\$160b
Air Navigation Service Providers	\$20b
Aircraft manufacturers	\$350b
Fuel suppliers	\$3,200b
Airports	\$125b

Note: Some investments from upstream stakeholders are passed on downstream (e.g. airline operators) in the form of incremental price of products

ICAO Advocacy and Outreach Activities with Financial Institutions





Objectives of ICAO Advocacy and Outreach Activities

ICAO is connecting with financial institutions across regions with the objectives to:

1. Raise awareness of financial institutions on the role of SAF to achieve the LTAG, and on the interest of aviation/fuel industries for immediate and massive SAF scale-up;
2. Inform financial institutions of the significant investments needs to scale-up SAF production capacity across all regions, in particular for developing countries.
3. Explore financial institutions' existing or future financing instruments to support SAF deployment and inform financing institutions of ways in which they can best contribute to SAF deployment.



ICAO's Council dialogues with the financing sector and energy providers (March – June 2023)





2023 ICAO Stocktaking Event (July 2023)

- **Pre-CAAF/3 Policy and Finance Consultation**
- **Full day dedicated to financing**
 - Financing the achievement of the LTAG
 - Recent investments in new SAF production facilities
 - Strategic regional and global alliances between stakeholders and investors
 - Implementation support to unlock financing: adoption of roadmaps, capacity building and funding of feasibility studies





Examples of Financing Opportunities

Asian Development Bank

- Non-sovereign finance window of \$4.5bn in 2020 to stimulate private sector investments, including in renewable energy projects (25% of project cost covered).

Bank of America

- Mobilizing \$2 billion in sustainable finance for the production of SAF and other low-carbon aviation solutions.

Green Investment Group

- USD 30+bn committed and arranged to support green energy projects by Q1 2021.

Green Climate Fund

- USD 11.3bn committed through a range of financing instruments, including on energy and transport projects.

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First Abu Dhabi Bank

- Committed to facilitate sustainable financing of more than USD 75 billion by 2030, with aviation/SAF being a key topic.

Banque de Montreal

- Sustainable financing guarantee programme sharing 50% of the risk up to USD 60m on loans. Bio energy, CCS and hydrogen are eligible sectors.

Brazil Development Bank

- Climate Fund is open for clean energy investments and comes with low interest rates and a ceiling of 80 million Reals



Industry initiatives and alliances

Many alliances and initiatives and support the financing of sustainable aviation fuels. Examples include the following:

- **Clean Skies for Tomorrow** is an initiative supported by the **World Economic Forum** including actors of the aviation and energy industries, aiming to align on a transition to sustainable aviation fuels as part of a meaningful and proactive pathway for the industry to achieve carbon-neutral flying.
- **Renewable and Low-Carbon Fuels Value Chain Industrial Alliance** is an initiative of the European Commission, which gathers stakeholders from across the transport fuels and other relevant value chains, including financing institutions. Objectives of the alliance include to identify pathways for access to finance and fund the scaling-up of SAF.
- The **Sustainable Aviation Buyers Alliance (SABA)** aims to accelerate the path to net zero aviation by driving investment in and adoption of sustainable aviation fuel.
- The **Net-Zero Banking Alliance** has working groups involving financing institutions, aiming to define roadmaps for actors of the economy to decarbonize their activities thanks to the financing of SAF.



Dialogues with Financial Institutions

- **Main takeaways from the dialogues:**
 - **Strong interest** from banks for decarbonization of aviation and deployment of SAF
 - **Transition towards SAF is key**; it will require significant investments across all world regions
 - Both public and private investments will have a key role
 - **Blended finance (public and private)** can act as a catalyst to de-risk SAF projects
 - **Clear criteria and harmonized frameworks for SAF financing** will support IFIs' analysis of SAF projects and facilitate investments.
- **Predictability of SAF offtakes and reliability of the regulatory landscape** are essential to provide confidence to investors and reduce risk



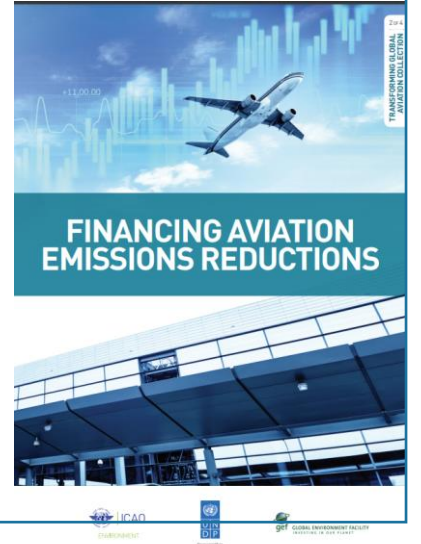
Basics of SAF Projects Financing

ICAO Guidance Material on Financing

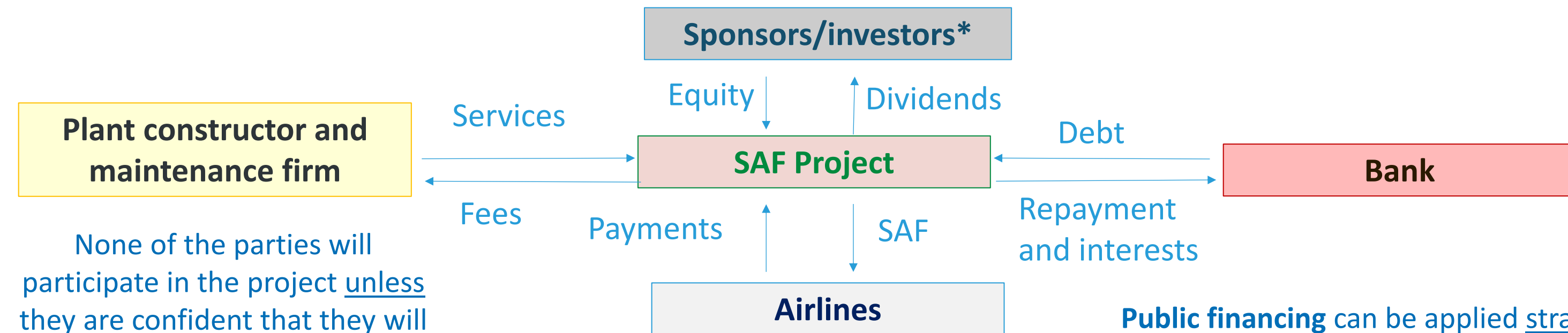


ICAO Guidance on financing Aviation Emission Reductions – guidance on how to finance projects to reduce CO2 emissions from international aviation activities

Available at <https://www.icao.int/environmental-protection/Pages/financing.aspx>



Basics on SAF project financing



None of the parties will participate in the project unless they are confident that they will **earn an adequate return on their investment** for their effort

Public financing can be applied strategically in the development of a project where there exist market weaknesses **to support project success.**

* Investors can be a large variety of actors, including banks, airlines, SAF producers, and many others



Equity and debt financing

Equity and debt are the two primary options for financing project construction

- The percentage of equity versus debt can vary depending on available resources and the cost of borrowed money.
- Interest rates on loans are determined by the creditworthiness of the borrower and the risk of the project to generate sufficient revenue for repayment.
- To finance a first project, the cost of borrowing may be high, but if this project is successful, the cost of borrowing to finance an n^{th} project will likely decrease.
- Where States have higher credit ratings resulting in higher interest rates, public financing through organizations (e.g. World Bank) can provide concessionary loans to improve project economics in developing countries.

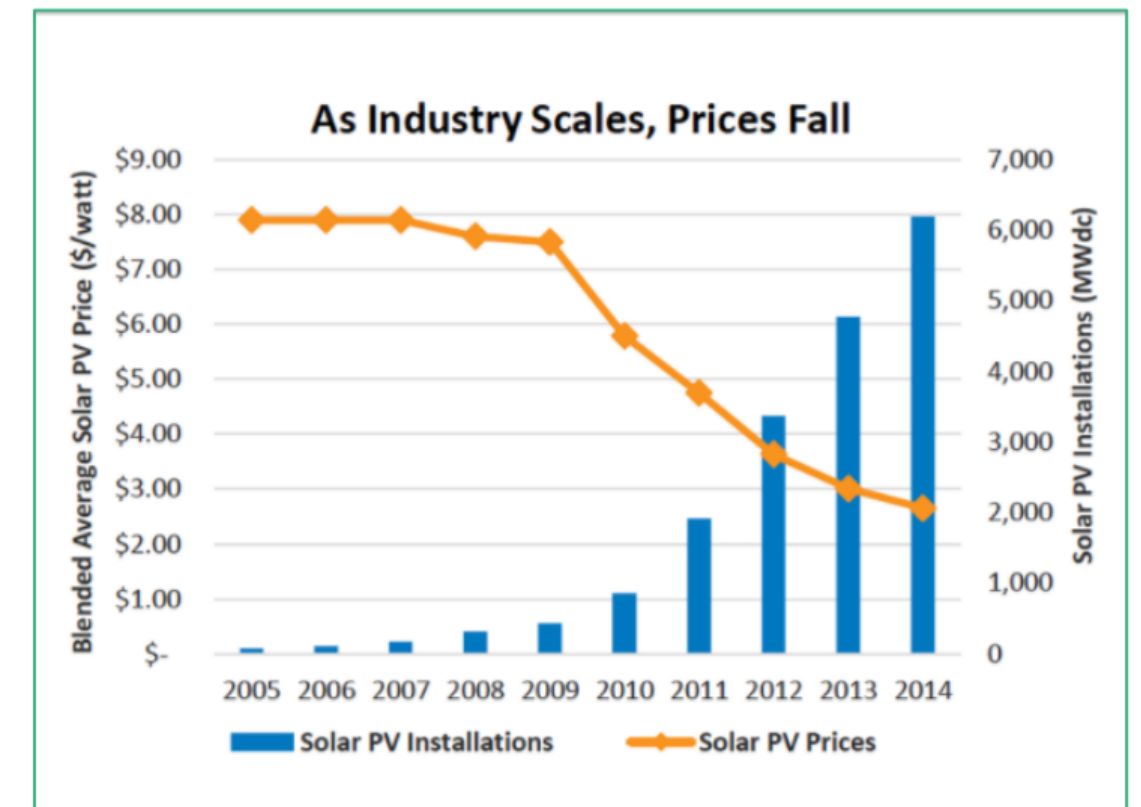




Relationship between public and private financing

Public and **private** financing are both important in developing SAF projects.

- The amount of public financing depends on the maturity of the project. Too much public financing can crowd out private sector investment, but insufficient public financing presents a high risk to private sector investments.
- Public financing is initially required to create markets, but as markets mature, the role of public financing should decrease, and private sector financing should meet the investment needs.
- Private capital is easier mobilized when projects are forecast to produce sufficient revenue to repay outstanding obligations and provide a return on investment.



Both public and private investments are currently needed to scale up SAF production



Examples of public and private financing

Industry actors (airlines, SAF producers, others) resort to various financing strategies to invest in SAF.

On August 7, 2014, Cathay Pacific Airways, a Hong Kong-based airline, announced that it has made a strategic equity investment in Fulcrum BioEnergy Inc., a U.S.-based leader in the development and commercialization of converting municipal solid waste into sustainable aviation fuel. Cravath represented Cathay Pacific in connection with this transaction.

United Airlines Launches \$100 Million Investment Vehicle for SAF

Governments and organisations also deploy financing instruments to kick-start their domestic market

3 June 2022

Neste signs a green term loan agreement

Published in [Releases and news](#) under [Investors](#)

Neste Corporation, Press Release, 3 June 2022 at 11:45 a.m. (EET)

Neste has signed today a EUR 500 million green term loan agreement. The proceeds of the loan will be used to finance Eligible Assets and Projects in accordance with Neste's Green Finance Framework. The loan has a tenor of 3 years with two 1-year extension options.

International Airlines Group (IAG), the airline's parent company, is investing \$400 million over the next 20 years into the development of SAF and British Airways has existing partnerships with several companies to develop plants and purchase the sustainable fuel.

How LPO Can Support the Sustainable Aviation Fuel Grand Challenge

The Department of Energy today announced the **Sustainable Aviation Fuel Grand Challenge**, a government-wide effort to reduce the cost, enhance the sustainability, and expand the production and use of Sustainable Aviation Fuel (SAF). The effort is part of the Biden-Harris Administration's overall strategy to decarbonize the aviation sector by 2050. Read more in the [White House fact sheet](#).



Commercial-scale SAF projects that utilize innovative technology and avoid, reduce, or sequester greenhouse gas emissions and meet other program requirements may be eligible for loan guarantees under the LPO's Title 17 Innovative Energy Loan Guarantee Program. LPO has received strong interest from SAF project developers about the potential for DOE financing of SAF production facilities.

Advanced Fuels Fund (AFF) competition winners

Each organisation will receive a share of £165 million for the development of sustainable aviation fuel (SAF) production plants in the UK. The following projects have been awarded funding.





Operationalization of the ICAO *FINVEST Hub*

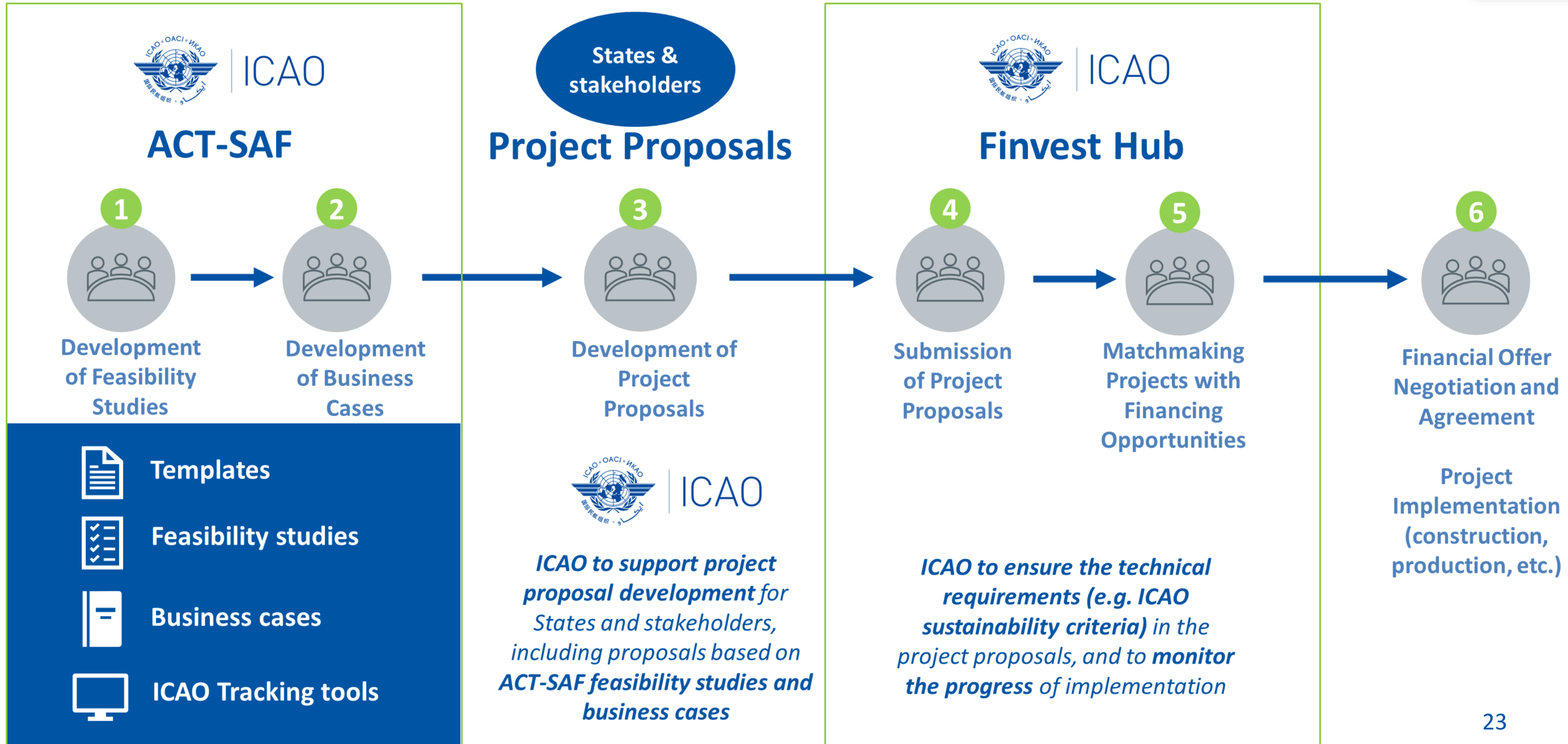


Building Block 4 – Financing

4. Financing

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35. As a first step, ICAO should urgently put in place the necessary structure and capability, toward the operationalization of the proposed ‘ICAO Finvest Hub’ initiative. Such work should clearly identify how the Finvest Hub initiative complements broader aviation decarbonization capacity building and implementation efforts, including the ACT-SAF programme.
36. Key activities that the ICAO Finvest Hub could undertake include:
 - a) developing a platform to connect aviation decarbonization projects with potential public and private investors, including a ‘matchmaking’ function, thus helping investors to identify and assess projects;
 - b) working with various stakeholders to explore innovative funding and risk mitigation mechanism adapted to the decarbonisation of aviation, incentivizing investments, and promoting collaboration among stakeholders to mobilize financial resources effectively (e.g. fostering Public Private Partnerships);
 - c) collaborating with financial institutions, such as development banks, to create pathways for the funding of projects;
 - d) developing a database of funding and financing sources, together with their terms and conditions, for project developers to be able to draw on; and
 - e) developing a toolkit of term sheets templates (basic conditions to satisfy investors) for SAF, LCAF and other aviation cleaner energies.





ICAO Roadmap Building Block 4 – Financing

Planned Actions



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.**



Financing

Q&A Session

Next:



Session 4 – Financing Cleaner Energies

States and stakeholders will share information and views regarding the need and opportunities for aviation decarbonization projects to have better access to financing and investment

Thank You

