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Financing Aviation Emissions Reductions





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OVERVIEW

Since the 37th Session of the ICAO Assembly in 2010, ICAO has developed an **integrated and comprehensive strategy** to support States willing to take action to reduce CO₂ emissions from international aviation.

Important elements of this strategy include to **facilitate access to financial resources** to enable the development of action plans and /or the implementation of measures to reduce CO₂ emissions, **build partnerships**, develop guidance documents, technical material, and capacity building activities.



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Assembly Resolution A39 required ICAO Council

Facilitate access to existing and new financial resources, technology transfer, and capacity building for developing countries

Build further partnerships with other international organizations to meet the assistance needs of ICAO's member States

Encourage synergies and constructive engagement among ICAO Member States, stakeholders and other international organizations to actively participate in exchange of information and best practices and facilitate the establishment of partnerships, including through the *ICAO Action Plan Buddy Programme*

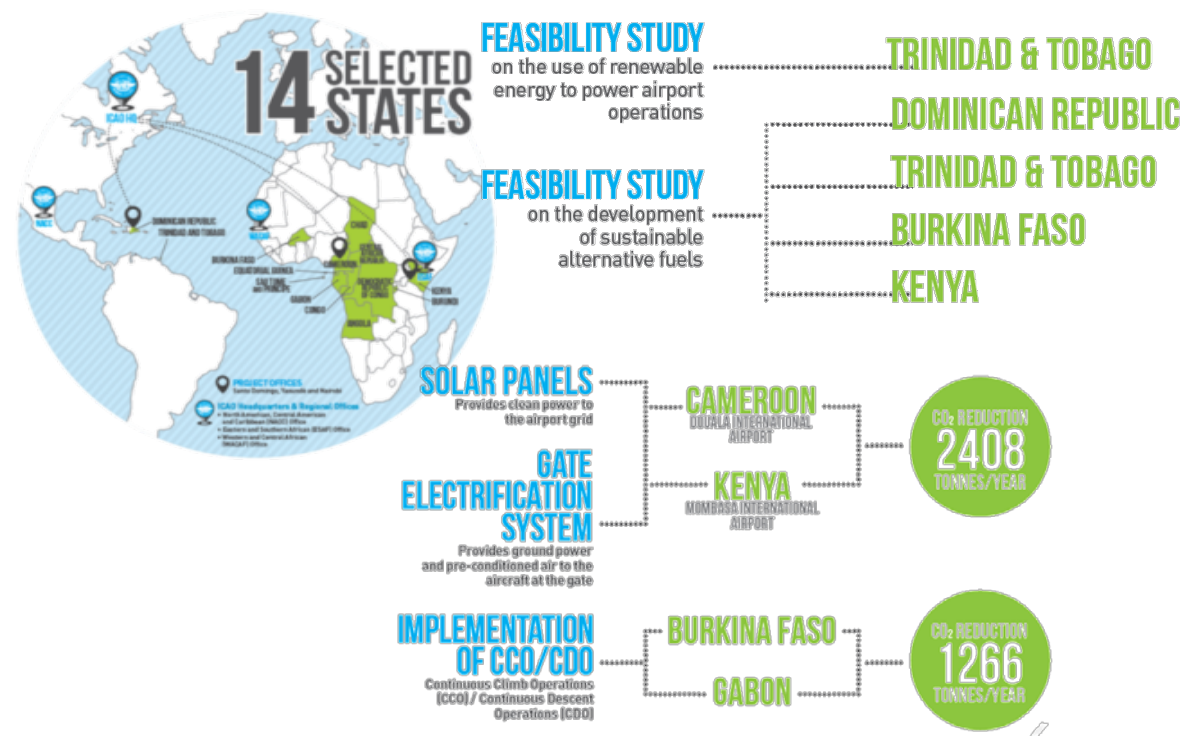
Continue providing assistance to its member States through the dissemination of the latest information on best practices and the provision of guidance and other technical assistance to enhance capacity building and technology



ICAO Capacity Building and Assistance Projects

ICAO-EU project Capacity Building for CO₂ Mitigation from International Aviation

ICAO-UNDP-GEF project *Transforming the Global Aviation Sector: Emission Reduction from International Aviation*



- *Development of guidance documents*
 - Sustainable Aviation Fuels
 - Renewable Energy
 - Governance
 - **Financing of Clean Energy projects**
- *Pilot project on renewable energy at two airports in Jamaica*



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ICAO Partnerships

ICAO-UNDP-GEF Global Capacity-Building Project

Partnership was also established with the United Nations Development Programme (UNDP) with financing from the Global Environment Facility (GEF) to undertake a **Global Capacity Building project** – including the implementation of a pilot project on renewable energy in a Small Island Developing State that can be **replicable** in other SIDs.

In addition this project has the objective to facilitate access to GEF national allocation – ***ICAO Guidance document on Financing Aviation Emissions Reductions***



Presentation Outline

Basics of Financing

Financial Instruments

Organizations and Programmes

Steps to Identify and Access Financing

Financing Specific Measures





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ICAO Guidance on Financing

Chapter 1 - *introduction to financing climate change mitigation in the aviation sector*. This overview includes an introduction to the basics of project finance, a description of the barriers to private investment, a summary of the relationship between public and private financial instruments, and a detailed description of the architecture of public climate financing.

Chapter 2 - *how aviation interests can identify and access financing for climate change mitigation projects*. This includes how to prepare a compelling project for financing, the need to build in-country support for the project, the process for building a funding database and identifying appropriate programs to pursue, followed by soliciting project funding from those sources.

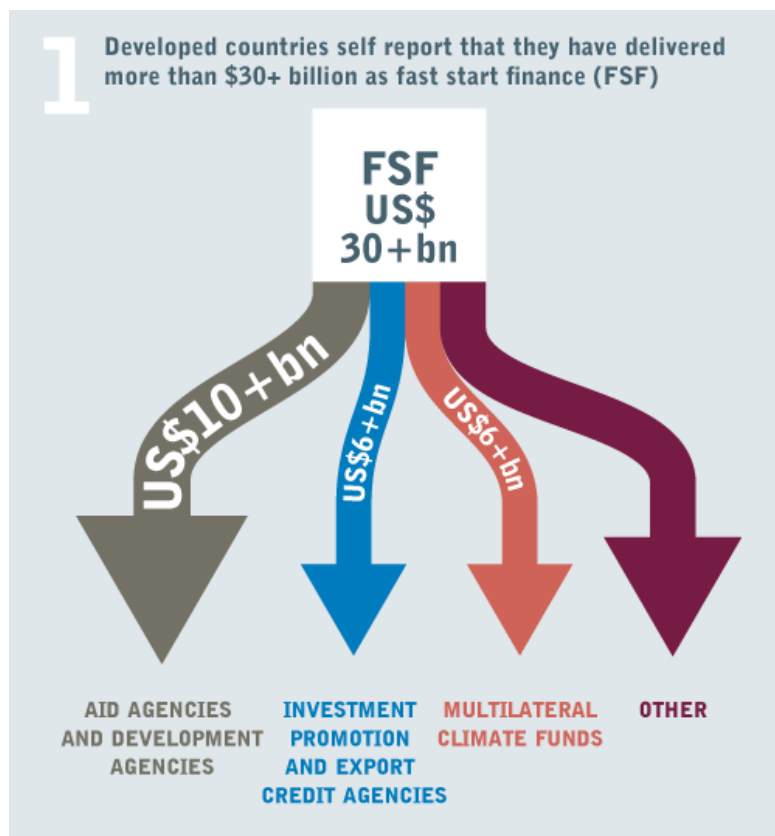
Chapter 3 - *the types of financing instruments and specific programs*. It includes loans from international organizations and public and private banks, grants for risky pre-development costs and local capacity building, various types of bonds to meet long-term financing requirements, and direct foreign investment and the ancillary requirements.

Chapter 4 - *financial policies and tools*. The policies are those that encourage market investment in low carbon investment such as deregulation, public procurement programs, and tax policy. Tools include some of the legal instruments used to facilitate public-private partnerships including power purchase agreements, and property and equipment leases.

Chapter 5 - examples of low carbon financing in specific industry areas: *renewable energy, electrification, and drop-in biofuels* which are most applicable to the aviation sector.



Financial Instruments



Grants

- Development, Capacity Building

Loans

- Contingent, Concessionary

Bonds

- Green, Infrastructure

Guarantees/Insurance

- Contracts

Direct Investment

- Government, Private Equity



Organizations and Programmes: Multilateral Climate Funds

Overseen by NGOs including the
United Nations

- Open and transparent allocation process

Green Climate Fund

Name	Recipient	Class	Type / Amount
Building the Resilience of Wetlands	Peruvian Trust Fund for National Parks	Mitigation & Adaptation	Grant, USD 6.2m
Scaling Up of Modernized Climate Information and Early Warning System	Disaster Management Authority, Malawi	Adaptation	Grant, USD 12.3m
KawiSafi Ventures Fund, East Africa	Acumen Fund to 10-15 solar companies for off-grid solar in Kenya and Rwanda	Mitigation & Adaptation	Equity, USD 20m Grant, USD 5m



Organizations and Programmes: Bilateral Funds

Donor and Recipient

- Gives donor more control

UAE Caribbean Renewable Energy Fund

2017 (First Round)	2018 (Second Round)
Antigua and Barbuda	Belize
Bahamas	Dominican Republic
Barbados	Greanda
Dominica	Guyana
St. Vincent and the Grenadines	Haiti
	St. Kitts and Nevis
	St. Lucia



Organizations and Programmes: Multilateral Development Banks

Concessional Loans

- Act like other banks, but with more charitable terms

Operate on regional basis

African Development Bank (AfDB)

Asian Development Bank (ADB)

European Bank for Reconstruction and Development (EBRD)

European Investment Bank (EIB)

Inter-American Development Bank (IDB)

The World Bank Group

*Goal is to attract private capital from green investor funds, corporations, and commercial banks.



Steps to Identify and Access Financing

Prepare a Project Concept

- Review Action Plans
- Define Objectives
- Identify Benefits
- Prepare Concept Plan

Build In-Country Support

- Identify Project Partners
- Prepare Communication Tools
- Specify Partner Roles

Public policy incentives

- Review funding Opportunities
- Coordinate with Partners
- Prepare an application



Financing Specific Measures

Renewable Energy

- Phase I has a capacity of 160 MW
- offsets approximately 250,000 tonnes of CO₂ emissions annually.
- The project was supported by loan guarantees and below market financing through the World Bank and African Development Bank, which significantly decreased the cost of the facility.

Noor Concentrating Solar Power Plant Morocco





Financing Specific Measures

Energy Efficiency



Public Buildings in the City of Sisak, Croatia

Project: energy efficiency programme to reduce energy consumption in public buildings.

Partners: UNDP and GEF

Over two years, 24 projects cut energy consumption by 13% and saved the city budget USD 220,000 per year. CO₂ emissions were reduced by 780 tonnes.



Financing Specific Measures

Electrification



Seattle-Tacoma International Airport, USA

Alaska Airlines and Seattle-Tacoma International Airport (Sea-Tac) partnered to replace fossil-fuel-powered ground support equipment (GSE), including belt loaders and baggage tugs, with electric vehicles.

- the Port of Seattle constructed 296 charging stations with grant funding from the US Government.
- Alaska Airlines purchased 204 electrically-powered GSEs
- Result: a reduction of 2,000 metric tonnes of CO₂ annually.



Financing Specific Measures

Drop-In Biofuels



Oslo International Airport, Norway

In January 2016, Oslo Airport started regular supply of a sustainable aviation fuel (SAF) blend through its existing common fuel distribution system.

This is the first time an airport has made SAF available to all refueling aircraft relying on existing infrastructure.

The fuel is produced under the Initiative Towards sustainable Kerosene for Aviation (ITAKA) framework – a collaborative project for the development and use of sustainable biofuel in Europe funded by the EU's Seventh Framework Programme, a research and development initiative.



Funding Example: Global Environment Facility



- Cook Island Project
- 3 MW PV
- Battery Storage
- 1 MW Rarotonga Airport



Funding Example: UAE Caribbean Renewable Energy Fund



- Initiated January 2017
- USD 50 Million
- First round 6 Project
- Antigua and Barbuda, Bahamas, Barbados, Dominica, St. Vincent and the Grenadines



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Concluding summary of the Guidance

- Project financing can be complex and may require that the National Action Plan Team coordinate with other national stakeholders in order to access specific information and expertise.
- Financial instruments long used in international development have been modified to benefit climate financing. They provide great opportunity for developing States, but depend on close cooperation with international agencies like the World Bank Group.
- Public financing to reform the energy sector and incentivize low carbon energy, which must be developed within the State, are critical to attracting private investment.
- State Action Plans developed using ICAO Doc 9988 can be a good starting point for financing projects to reduce international aviation emissions.
- Using internationally approved plans and methodologies as the basis to assess potential CO₂ benefits from projects can highly facilitate the approval of green financing for selected aviation projects.



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gef

GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

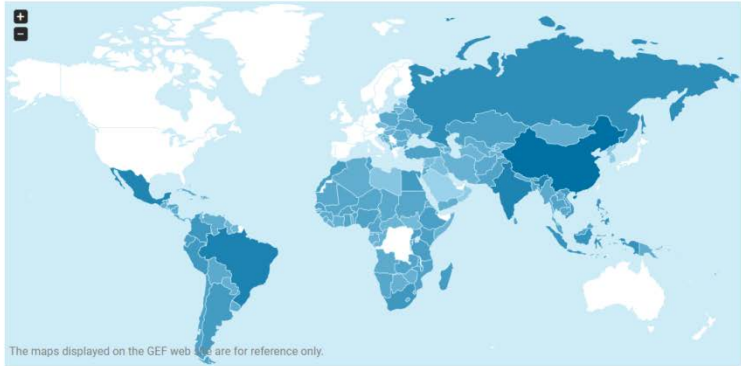
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Enter your keywords

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Country Profiles

Browse for GEF Projects via the map or search by keyword below.



GEF Overview

Number of Projects:
4804

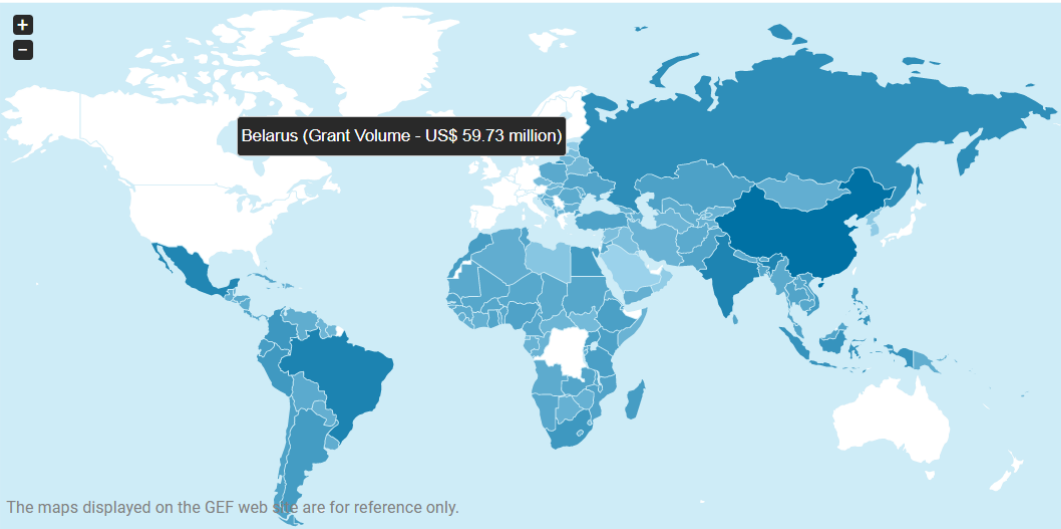
GEF Grant Volume:
US\$ 17,529.01 million

Cofinancing:
US\$ 108,649.87 million

What do you want to know?

Country Profiles

Browse for GEF Projects via the map or search by keyword below.



Belarus

Number of Projects:
28

GEF Grant Volume:
US\$ 59.73 million

Cofinancing:
US\$ 472.11 million

What do you want to know?



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GEF – Country Profile

Belarus



Country-At-A-Glance

Belarus is a member of a constituency comprised of the following countries: Armenia, Belarus, Russian Federation

Select another country

What do you want to know?



Number of Projects

50

GEF Grant Funding

283.74
Million

Additional Co-Financing

937.74
Million

PPG Amount

3.78
Million

Total Funding Received

Trust Fund	Project Type	Number of Projects	Total Financing	Total Co-Financing
GEF	National	28	\$59,730,305	\$472,113,805
	Regional/Global	22	\$224,011,313	\$465,630,579
	Total	50	\$283,741,618	\$937,744,384

STAR GEF-6 Allocation and Utilization (All amounts in US\$)

Focal Area	Indicative allocation	Allocation utilized	Allocations remaining to be programmed
Land Degradation	\$500,000	\$500,000	\$0
Biodiversity	\$1,500,000	\$2,500,000	\$-1,000,000
Climate Change	\$8,547,119	\$4,174,550	\$4,372,569
Total	\$10,547,119	\$7,174,550	\$3,372,569

Additional Information

- Cancelled Projects (0)
- STAR GEF-5 Allocation and Utilization (All amounts in US\$)

News

EBRD and GEF make "greener" toys in Belarus
January 15, 2019

Cool tech: Building capacity for reducing ozone-depleting substances
October 26, 2016

The power of peat: Restoring ecosystem health to peatlands in Belarus
October 26, 2016

Publications

Sustainable Forest Management: A History of Support for Forests

Experience in Europe and the CIS region with clean energy: UNDP, GEF, and UNECE

GEF Agencies working in Belarus

GEF Secretariat

The World Bank

United Nations Development

<https://www.thegef.org/country/>



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In Summary

Investment risks in new markets limits participation by private sector players

Publicly supported financial instruments can be deployed to decrease risk and build markets

Instruments include grants, low interest loans, insurance/guarantees, and new policies to improve investment

Support provided by multinational climate programmes, bilateral agreements, and multilateral development banks

Funds could be deployed by airports for renewable energy, energy efficiency, electrification, and drop-in biofuels



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Dakar

European and
North Atlantic
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Paris

Middle East
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Southern African
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Beijing

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