

# 2024 ICAO REGIONAL SEMINAR ON ENVIRONMENT

Hosted by



ICAO MID

**MID Region**

12 to 13, August 2024

Cairo, Egypt



ICAO

ENVIRONMENT



ACT SAF

CORSIA





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ICAO 2024 Regional Seminar on Environment



## Sustainable Aviation Fuel "S.A.F." in Egypt

Turning the Challenges into Opportunities

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جمهورية مصر العربية  
وزارة الطيران المدني  
Ministry of Civil Aviation

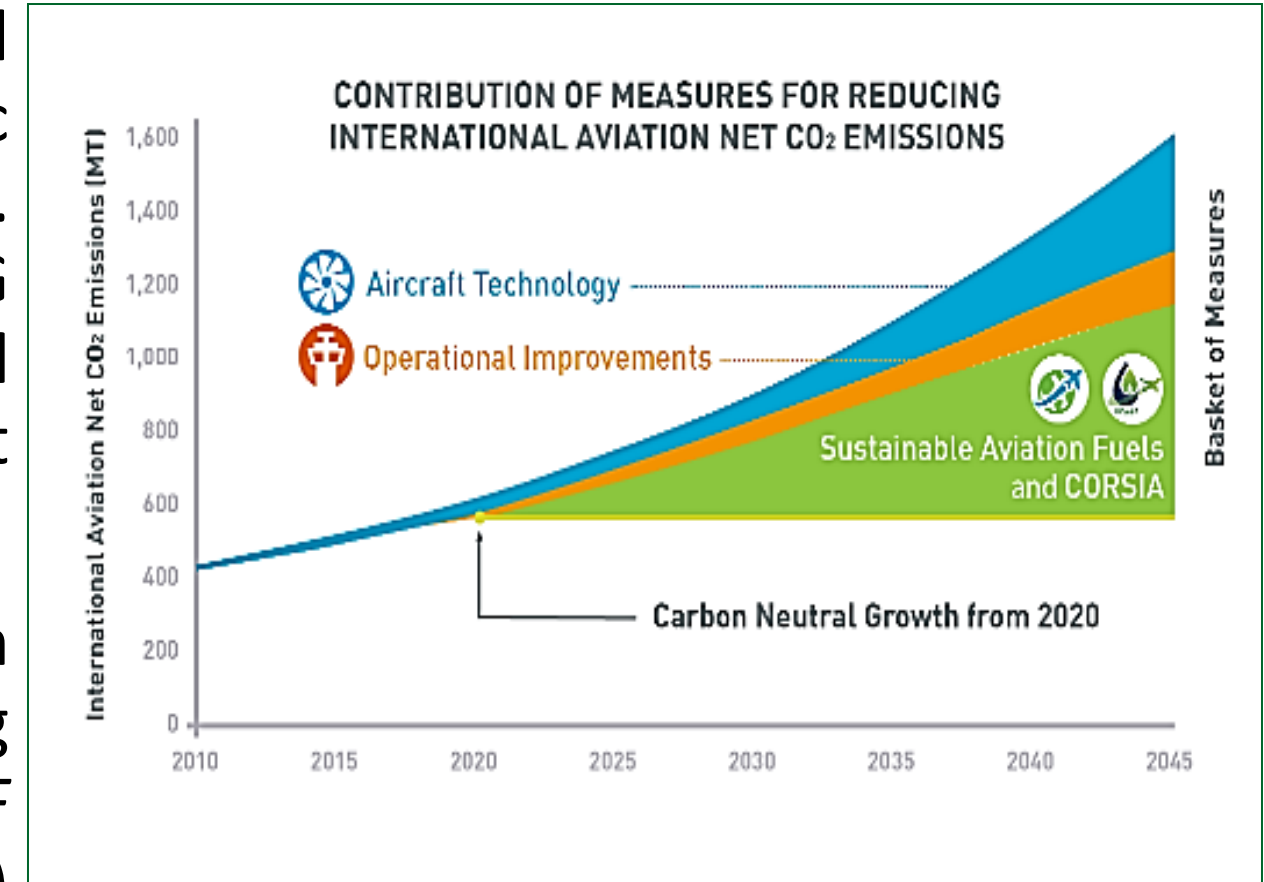
# Historical Background

- ❑ The most ever Challenge/Opportunity in the green transition of the civil aviation sector in Egypt is the **Energy** including Sustainable Aviation Fuel / Lower Carbon Aviation Fuel (**SAF/LCAF**), renewable energy, and Green hydrogen as a potential energy source for the future.
- ❑ The **ICAO LTAG Report**, which is the result of nearly two years of intensive work by **CAEP**, provides the background, methodologies, results, and interpretations of the LTAG-TG study. A set of supporting appendices also provide modelling approaches, methodologies, models, assumptions, and the depicting of results for the sake of transparency and comprehensiveness.
- ❑ It clearly shows that the Aircraft technology and associated design decisions will continue to address the global market needs and will not vary by region.



# Historical Background

- Most significant regional variations are expected in the production and uptake of fuels. This is due to a range of factors such as regional availability of waste and biomass feedstocks, CO<sub>2</sub> and cryogenic hydrogen, renewable energy, market dynamics and infrastructure. While a limited number of scenarios were constructed by the LTAG-TG to capture increasing aspirations across **technology, operations and fuels (known as In-Sector Measures)**, there are multiple paths that may result in similar levels of CO<sub>2</sub> emissions.
- The LTAG-TG analyses show that **costs and investments** associated with the 3 scenarios are **largely driven by fuels (e.g. SAF)** acknowledging that incremental costs of fuels (*i.e. minimum selling price of SAF compared to conventional jet fuels*) further motivates fuel (energy) efficiency improvements from aircraft technology and operations.



# SAF in Egypt (Opportunity and Challenge)

## FINANCE<sup>1</sup>

The great Challenge to start to scale the production capacity for produce and scale-up the use of SAF , Egypt needs for green field fuel production plants many investments which is a great challenge :

- 1) Investments from the government
  - 2) Investments from fuel suppliers
  - 3) Costs and investments for airports: Towards the implementation of operations measures
  - 4) Costs and investments for Air Navigation System Providers (ANSPs)
- ❑ After Egypt hosted the COP27, the presidency vision is to move from negotiations and planning to implementation. We need to harmonize our global efforts. If we are to meet our pledges and commitments words must be turned into action. Our collective efforts to combat the adverse impacts of climate change are necessary and crucial if we are to secure a sustainable future for all.

*Finance<sup>1</sup> is the cornerstone for implementing climate actions and scaling up ambition and hence it has been at the heart of the UNFCCC process and the Paris Agreement negotiations. The Glasgow outcomes also reiterated the centrality of finance as a catalyst for progress on all aspects of the global climate agenda and many Parties demonstrated the political will to deliver on finance commitments. To address several aspects of the climate finance ecosystem, including but not limited to, innovative and blended finance and financial instruments, tools and policies that has the potential to enhance access, scale up finance and contribute to the transition envisaged and needed, including those related to debt for environment swaps.*

# SAF in Egypt (Opportunity and Challenge)

## Science & Technologies 2

are emerging as potential solutions to reduce carbon in the atmosphere. The outcomes of the ICAO LTAG report and its recommendations and further enhance engagement of the climate community, practitioners and different stakeholders to discuss and engage on the linkages and findings related to climate change, it would provide an opportunity to engage with the science community and academia and bring their views into the conversation so as to ensure that all work and action is based on solid, credible science, and further discuss roles of academia in support for global action to tackle climate change.

## Capacity Building 3

is the key element that could serve to spreading awareness, sharing experiences and best practices and perhaps building future alliances and collaborations. There could also be potential needs for capacity building and assistance, which could include workshops on solutions that States can implement to reach goals, including understanding likely costs, and assistance on monitoring and measuring CO<sub>2</sub> emissions from international aviation, as part of an overarching training programme that could be similar to the successful ACT-CORSIA.

# Sustainable Aviation Fuel production in Egypt Turning the Challenges into Opportunities

- ✓ US conglomerate Honeywell is considering building a sustainable aviation fuel "SAF" production facility in Alexandria under a public-private partnership (PPP) with state-run Egyptian Petrochemicals Holding Company and local private companies, according to an Oil Ministry statement on October 2023.
- ✓ The ministry expects the facility to produce 120k tonnes of the fuel per year using edible oils as a feedstock.
- ✓ Feasibility studies are being carried out for the proposed facility.

<https://www.icao.int/environmental-protection/SAF/Pages/Production-Facilities.aspx>

The screenshot displays the ICAO tracker of SAF facilities website. The page features a navigation menu on the left with options like Innovation, Publications, Statements, Events, and Contact us. The main content area includes a map of the world with a focus on Egypt, showing a single facility location. Below the map, there are summary statistics and a table of recent announcements.

Number of facilities: 1

Announced capacity (billion liters/year): 0.2

Announced Capacity (kt): 120

Filter by: Status, Country, Company

Announcement Date	Entry in Service	Company	Country	City	projected capacity (Million liters/year)
23 Feb 2024	2026	ANRPC	Egypt	Alexandria	120

# Sustainable Aviation Fuel production in Egypt Turning the Challenges into Opportunities

- ✓ The European Commission announced \* support for the development of sustainable aviation fuels (SAF) under the International Civil Aviation Organization's (ICAO) Capacity-building and Training for Sustainable Aviation Fuels programme (ACT-SAF).
- ✓ The funding will go towards increasing SAF production, feasibility studies and assistance with the certification of these fuels.
- ✓ Implemented by ICAO and the European Union Aviation Safety Agency (EASA), the project involves 12 partner states: Cameroon, Egypt, Equatorial Guinea, Ethiopia, Gabon, India, Kenya, Mauritania, Mozambique, Rwanda, Senegal and South Africa. This list may be expanded at a later stage.

Reference : ICAO WEBPAGE

<https://www.icao.int/Newsroom/Pages/Decarbonizing-aviation-European-Commission-to-support-development-of-sustainable-aviation-fuels-around-the-world.aspx>;

<https://www.icao.int/environmental-protection/Pages/ACT-SAF.aspx>

Here you will find more information on ACT-SAF Participants\* and Initiatives.

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States

Name of State

Cuba  
Dominican Republic  
Ecuador  
Egypt  
El Salvador  
Equatorial Guinea

States

Acceptance to ... Pending Yes



63

Organizations

Name of Organization

WORLD TRAVEL &  
TOURISM COUNCIL  
World Bank  
Wizz Air  
WEF - World Economic  
Forum  
Verifavia

International Organizations

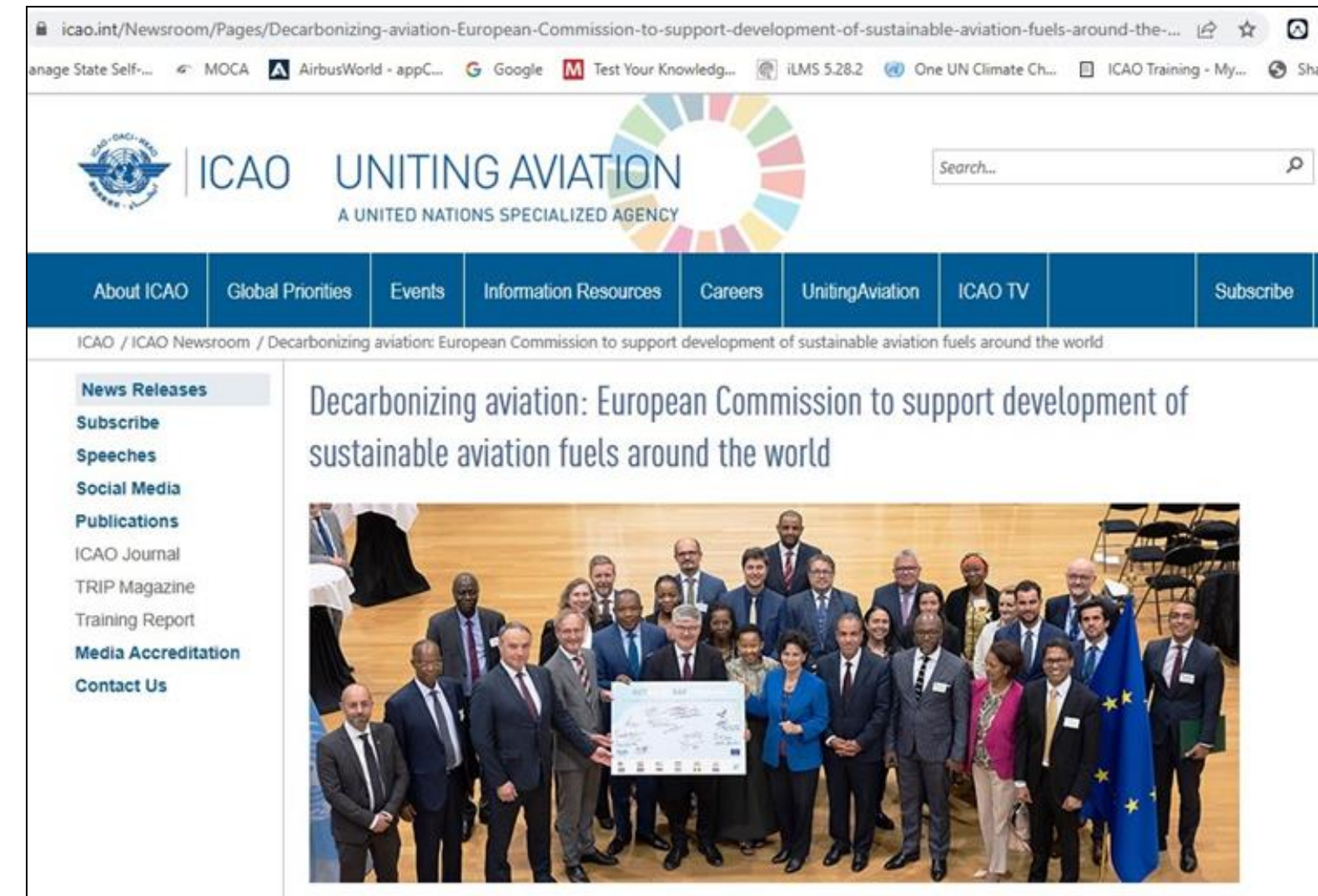
Acceptance T&C (Blank) Pending Yes





# Sustainable Aviation Fuel production in Egypt Turning the Challenges into Opportunities

- It's of high importance to enable all States to accelerate the pace of the SAF, LCAF and cleaner energy production; through developing their national policies and mechanisms, and in accordance with their national capabilities SCRC. Meanwhile, ICAO's vision should be kept "collective" and in line with the ICAO's recent landmark Assembly Resolution on the LTAG, which made clear that: (The required level of ambition entails the availability of possible means of implementation). In order to ensure this scale-up and to ensure that fuel production is not concentrated in some States and geographic regions recently, but for all.
- I would like to take this opportunity to appreciate all the efforts of the governments of donor States, non-governmental and international organizations, and research institutes, financial institutions along with the tireless efforts of the ICAO and its member States, in particular, the ACT-SAF program, hope to be transformed into ACT-LTAG soon.



# Thank You

