



**AFCAC AND ECAC JOINT  
ENVIRONMENTAL  
WORKSHOP ON THE ICAO  
LONG-TERM GLOBAL  
ASPIRATIONAL GOAL (LTAG)**

**Understanding Net Zero CO<sub>2</sub>  
emissions by 2050**

**The ECAC Capacity-Building  
programme for environment**



**Videoconference, 29 November, 2022**



# Outline

- **LTAG policy context**
- **Concepts and Terminology**
- **How to achieve Net Zero CO<sub>2</sub> emissions**
- **The European SAF landscape**
- **ECAC Capacity-Building for Environment**

# A key global milestone



- **41st session of ICAO Assembly (27 September to 7 October 2022)**
  - An ambitious **international aviation decarbonisation global goal**:
    - ICAO and its Member States are encouraged to work together to strive to achieve a **collective long-term global aspirational goal for international aviation (LTAG) of net-zero carbon emissions by 2050**, in support of the Paris Agreement's temperature goal...





## LTAG policy context

- **Paris Agreement objectives**

- *Keeping a global temperature rise this century well **below 2 degrees (C)** above pre-industrial levels and,*
- *Pursue efforts to limit temperature increase even **further to 1.5 degrees (C)***



### **United Nations**

Framework Convention on  
Climate Change



# LTAG policy context



- IPCC Special Reports (2018, 2021)

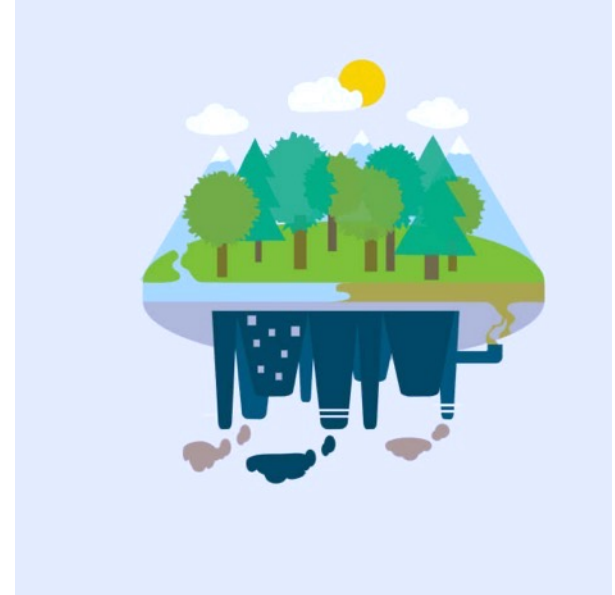
- IPCC 2018 Special Report: Science showed need of reaching NET ZERO around 2050 to limiting global warming to 1.5°C (<https://www.ipcc.ch/sr15/chapter/chapter-2/>)
- Latest IPCC report (2021): “*unless there are immediate, rapid and large-scale reductions in greenhouse gas emissions, limiting warming to close to 1.5°C or even 2°C will be beyond reach*”

“*limiting human-induced global warming to a specific level requires limiting cumulative CO<sub>2</sub> emissions, reaching at least net zero CO<sub>2</sub> emissions”*  
(<https://www.ipcc.ch/report/ar6/wg1/#SPM>)

# Concepts and Terminology

- **Net Zero CO<sub>2</sub> emissions:** What does it mean?
  - **Net zero carbon dioxide (CO<sub>2</sub>) emissions** are achieved when **anthropogenic CO<sub>2</sub> emissions are balanced globally by anthropogenic CO<sub>2</sub> removals** over a specified period
    - Anthropogenic: *Resulting from or produced by human activities*
  - **are also referred to as carbon neutrality**

Reference: IPCC 2018, Annex I, Glossary

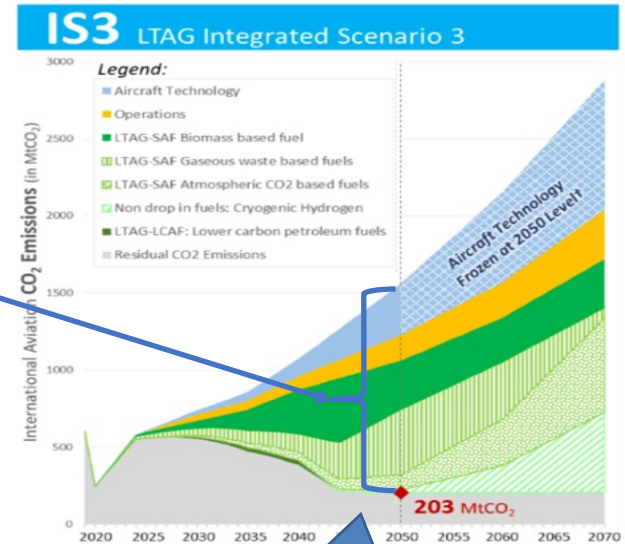




# Concepts and Terminology

- **Net Zero CO<sub>2</sub> emissions: What does it mean?**
  - Strategies to reduce **in-sector emissions** remain critical,
    - They might **not be enough**
  - Net-zero requires **actively removing CO<sub>2</sub> from atmosphere:**
    - **Carbon Dioxide Removal (CDR)**, also called **Negative Emissions or Sinks**

- Report on the feasibility of a LTAG developed by CAEP



# Concepts and Terminology

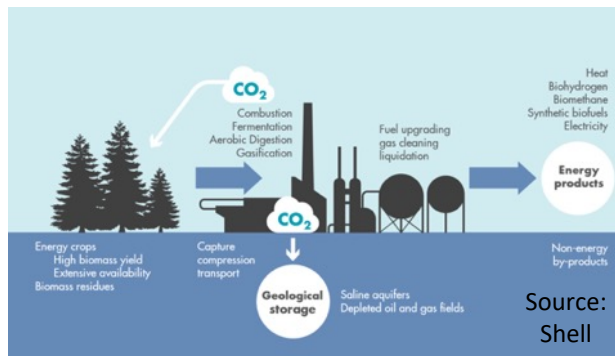
- **Carbon Dioxide Removal (CDR):** *Withdrawal of CO<sub>2</sub> from the atmosphere as a result of deliberate human activities*

## Biological capture of CO<sub>2</sub>

## Technical removal and storage



Reforestation



Bioenergy production with Carbon Capture and Storage (BECCS)



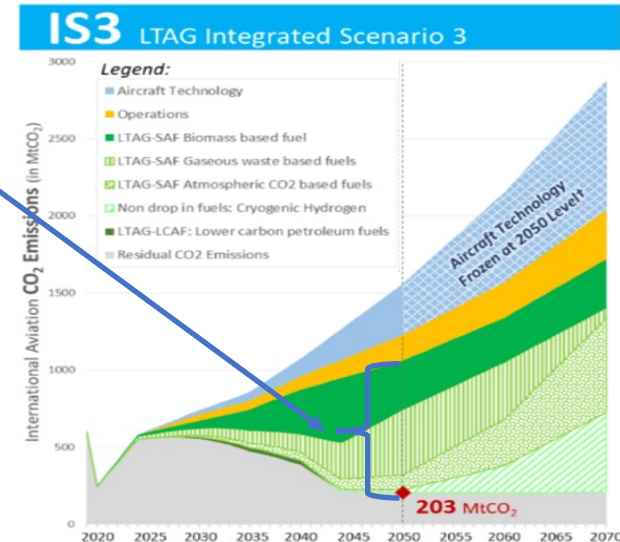
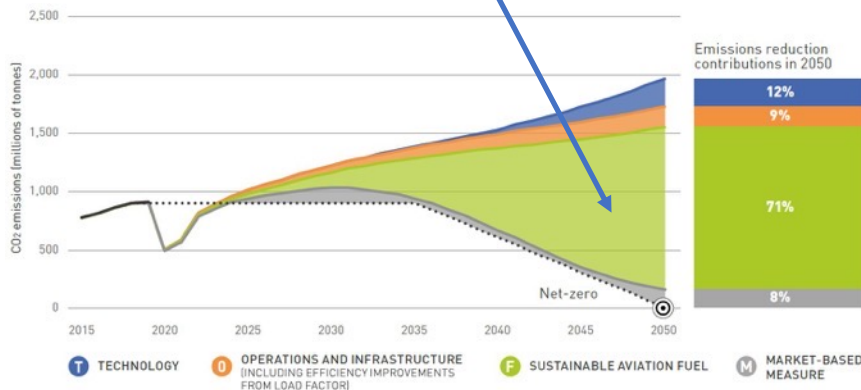
Direct Air Carbon Capture and Storage (DACCS)



# How to achieve Net Zero CO<sub>2</sub> emissions

- Drop-in fuels had the largest impact on residual CO<sub>2</sub> emissions driving the overall reductions by 2050: **SAF is the key enabler**

- Report on the feasibility of a LTAG developed by CAEP



- Waypoint 2050 (ATAG)

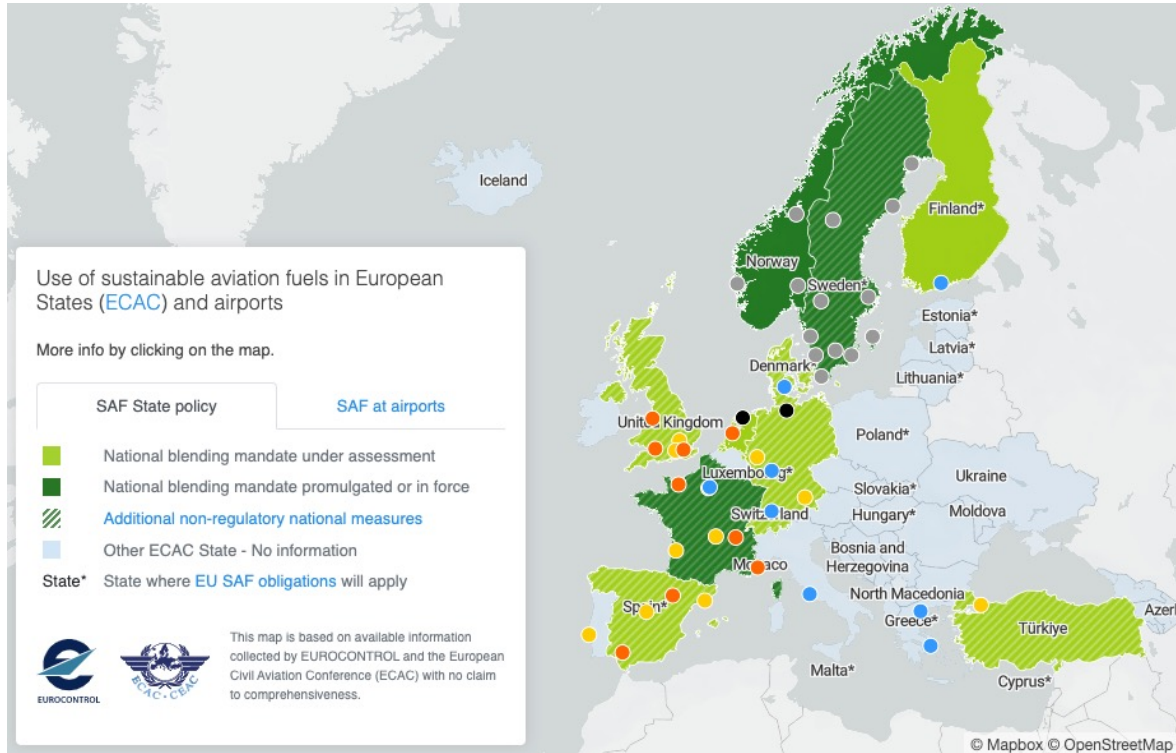
# How to achieve Net Zero CO<sub>2</sub> emissions

- Drop-in fuels had the largest impact on residual CO<sub>2</sub> emissions driving the overall reductions by 2050: **SAF is the key enabler**





# The European SAF landscape



# The ECAC ENV capacity-building programme

## • Types of activities:

- ✓ *ENV monthly Familiarisation webinars*
  - ✓ *Tailored support to States*
  - ✓ *Information Seminars*
  - ✓ *Guidance material*
  - ✓ *Thematic Workshops*
- *Focus on Sustainable Aviation Fuels (SAF)*

## Capacity-Building Programme for Environment

Written by ECAC. Posted in Activities

ECAC's commitment to environmental capacity building is long-standing, and ECAC's work programme recognises the need for environmental capacity building as a priority. Its environmental tasks already support ECAC Member States sharing information and building capacity mainly through the [ECAC Environmental Forum](#) but also through the work of the [European Aviation and Environment Working Group \(EAEG\)](#) co-chaired with the European Commission.

Environmental capacity building was prioritised after the 2016 [Bratislava Declaration](#) commitment to address needs that would arise from States requiring technical assistance in relation to the implementation of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA).

The additional boost to environmental capacity building was made effective with the addition to the [ECAC Secretariat](#) in December 2020 of a Climate Change and Capacity-Building Specialist, seeking to support Member States in delivering their environmental obligations and to build on ECAC's previous capacity-building success in other aviation domains, by further strengthening the competencies and knowledge of officials at all levels dealing with environment matters in ECAC Member States.

### Objectives

The ECAC environmental capacity-building programme has three broad objectives:

- **Objective 1:** supporting ECAC Member States' own efforts to fulfill ICAO environmental policy and regulatory requirements.
- **Objective 2:** strengthening the competencies and knowledge of people dealing with environment matters in ECAC Member States.
- **Objective 3:** promoting and supporting information sharing and policy awareness among ECAC Member States.

Responsible for the Capacity-Building Programme for Environment within the ECAC Secretariat



**César Velarde**

Climate Change and Capacity-Building Specialist



# The ECAC ENV capacity-building programme

➤ LTAG can only be achieved through

- ✓ Global cooperation & discussion
- ✓ Capacity-building
- ✓ Guidance

✓ ECAC to work with partner organisations:





**Thank you for your  
attention!**



For more information

[www.ecac-ceac.org](http://www.ecac-ceac.org)

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