

# ICAO'S WORK ON A LONG TERM GOAL FOR INTERNATIONAL AVIATION

Jane Hupe Deputy Director on Environment, ICAO

Aviation Noise & Emissions Symposium 2022 Climate Change and Aviation – Pathways to NetZero

### ENVIRONMENT ICAO Climate Global Aspirational Goals



#### ICAO Assembly requested the ICAO Council to:

• explore the feasibility of a long-term global aspirational goal (LTAG)

#### 2010



Results of the feasibility of LTAG will be presented.





### ICAO, UNFCCC, IPCC goals



International aviation emissions are addressed through ICAO, and thus not covered by the Nationally Determined Contributions (NDCs) under the Paris Agreement. Domestic aviation is covered by the NDCs.



Paris Agreement Goal: to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.



Science shows need of reaching NET ZERO around 2050 to limiting global warming to 1.5°C (2018 Special Report)

"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" (2021 AR6)

Aviation accounts for approximately 2% of the world's man-made carbon emissions. International aviation is responsible for 1.3%.

### VIRONMENT ICAO 40th Assembly Request (2019)

#### Resolution A40-18, paragraph 9 requested the LTAG work



The Assembly... Requests the Council to continue to explore the feasibility of a long term global aspirational goal for international aviation, through conducting detailed studies assessing the attainability and impacts of any goals proposed, including the impact on growth as well as costs in all countries, especially developing countries, for the progress of the work to be presented to the 41st Session of the ICAO Assembly. [2022] Assessment of long term goals should include information from member States on their experiences working towards the medium term goal.



### **ICAO LTAG Work General Timeline**



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## ICAO ENVIRONMENT Data gathering - ICAO Stocktaking

- "Take stock" of Member States' and stakeholders' progress on aviation in-sector CO2 emissions reductions
  - Collecting data on Technology, Operations and SAF:
  - Solutions, innovations, visions, roadmaps; and







### ICAO Stocktaking 2020

- Forum of discussion, with aviation and climate leaders and experts;
- More than 100 evolutionary & disruptive innovations;
- ✓ Net-Zero Commitments and roadmaps;
- ✓ Over 100 questionnaires submitted
   CAO 2022

### CAO ENVIRONMENT Data gathering - ICAO Tracker Tools

#### **In-Sector Initiatives**

As part of the Global Coalition for sustainable Aviation, the ICAO in-sector aviation CO<sub>2</sub> emissions reduction initiatives tracker tool has three main streams: Technology, Operations and Sustainable Aviation Fuels.



#### **Aviation Net Zero Initiatives**



#### **Other Climate Initiatives**

	Other Climate Initiatives				
	<ul> <li>Date</li> </ul>	Name of Initiative/ Project	Category	Country / Stakeholder	Scope
	2021-08-01	Norway proposes gradual Increase in carbon tax rate	Emission Reduction	Norway	National
	2021-04-29	Ryanair commits to 12.5% sustainable fuel by 2030	Emissions Reduction Initiative	Rynair	Ireland
	2021-03-28	Oman Air marks Earth Hour 2021 with renewed commitment to sustainable operations		Oman Air	Oman
	2021-03-16	SATAVIA-Dubai alliance to cut avlation's climate impact by two- thirds	Stakeholders Group Action	Satavia & Dubal Alliance	International
	2021-01-27	Boeing commits to ensuring its aircraft can fly on 100 per cent SAF by 2030		Boeing	International
	2021-01-27	UK opens consultation on implementing CORSIA and policy options for interaction with UK ETS	CORSIA Implementation	United Kingdom	National



### **ICAO LTAG Report**

#### The ICAO Committee on Aviation Environmental Protection (CAEP) undertook:

(1) data gathering from internal and external sources in a transparent and inclusive manner,

(2) *development of combined in-sector scenarios* from technology, fuels, and operations that represent a range of readiness and attainability, and

#### (3) conducted final analysis to:

- understand impacts on CO<sub>2</sub> emissions ,
- estimate costs associated with the scenarios,
- place results in context of the latest scientific knowledge.

# The LTAG report is now available at the LTAG Website.

https://www.icao.int/environmental-protection/Pages/LTAG.aspx (or search "ICAO LTAG")



# ENVIRONMENT Key Questions Addressed in ICAO LTAG Report

		Addressed in LTAG Report:	
Question 1:	How could in-sector measures (i.e., technology, operations, and fuels) help reduce CO <sub>2</sub> emissions from international aviation through 2050 and beyond?	Section 4.2	
Question 2:	Given CO <sub>2</sub> emissions trends for each scenario, what would be the cumulative emissions from aviation? How do cumulative aviation emissions compare to requirements to limit the global temperature increase to 1.5°C and 2°C?	Section 4.3	
Question 3:	What investments are required to support the implementation of the in-sector measures associated with each scenario? What would be the cost impacts to aviation stakeholders?	Section 4.4	
Question 4:	What would be the impacts of various future aviation traffic levels?	Section 4.5	
Question 5:	How sensitive are the results to scenario assumptions?	Section 4.6	

**ICAO** 

### **ENVIRONMENT Future International Aviation Emissions in Context**

- Estimated cumulative residual global anthropogenic CO<sub>2</sub> emissions from the start of 2020 to limit global warming to 1.5°C is 400 GtCO<sub>2</sub> at 67% probability.
  - International aviation share ~4.1-11.3%

- For a warming limit of 2°C, the remaining allowed carbon emissions are estimated to be 1150 GtCO<sub>2</sub> at 67% probability.
  - International aviation share ~1.4-3.9%



### O ENVIRONMENT Main takeaways from ICAO LTAG Report





• Global action on climate change is being taken through a number of processes:





• High-Level Meeting on LTAG – from 20 to 22 July 2022

Objective: consider the CO2 emissions reduction scenarios and options for LTAG, its means of implementation and the monitoring of progress.

#### • 2022 ICAO Stocktaking – from 18 to 19 July 2022

Objectives: Share the latest innovations on technology, operations and fuels, and complement information available to the High-level Meeting.

• ICAO Council (late August/early September 2022):

Objectives: consider the outcomes of the HLM, and deliberate on the Assembly Working Paper on LTAG

• ICAO 41st Assembly (from 27 September 2022).













### **ICAO LTAG Process**





**Innovations:** 



**In-sector focused:** 







### **CAEP undertook:**

(1) data gathering from internal and external sources in a transparent and inclusive manner,

(2) *development of combined in-sector scenarios* from technology, fuels, and operations that represent a range of readiness and attainability based on the data gathering, and

(3) conducted final analysis of the scenarios to understand those impacts on CO<sub>2</sub> emissions and cost associated with the scenarios and economic impacts on aviation growth, noise and air quality, in all countries especially developing countries and the results was placed in context of the latest consensus scientific knowledge.

The Council in March 2022 agreed that ICAO LTAG report be made available, as the input to further consideration by all States and stakeholders at the LTAG GLADs.

The LTAG report is now available at the LTAG Website.

https://www.icao.int/environmental-protection/Pages/LTAG.aspx (or search "ICAO LTAG")



## **ICAO** Mission

To serve as the global forum of States for international civil aviation

# **UN Specialized Agency**

**193 Member States** 

# **ICAO Objectives**



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### ICAO Strategic Objective Environmental Protection

Minimize the adverse effect of global civil aviation on the environment. Limit or reduce the impact of aviation greenhouse gas emissions on global climate







# ICA0 ENVIRONMEN CAO Global Coalition for Sustainable Aviation



#### The full list of Coalition Partners is available here.

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