



ICAO

ENVIRONMENT

LTAG GLADs

Route forward on the ICAO work on the feasibility of LTAG

ICAO Secretariat

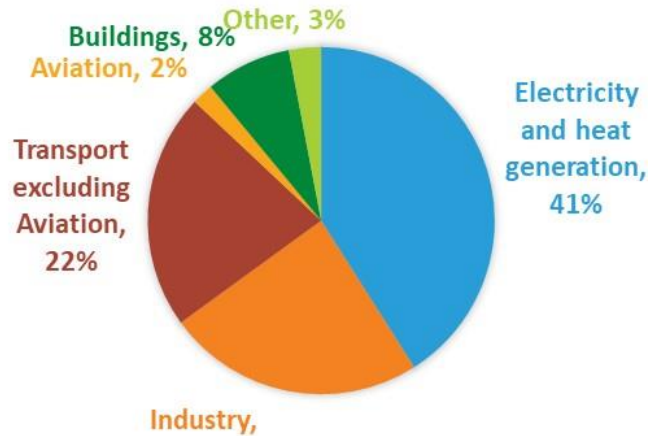
APAC/MID/EURNAT/NACC/SAM/ESAF/WACAF Regions,

10-14 May 2021

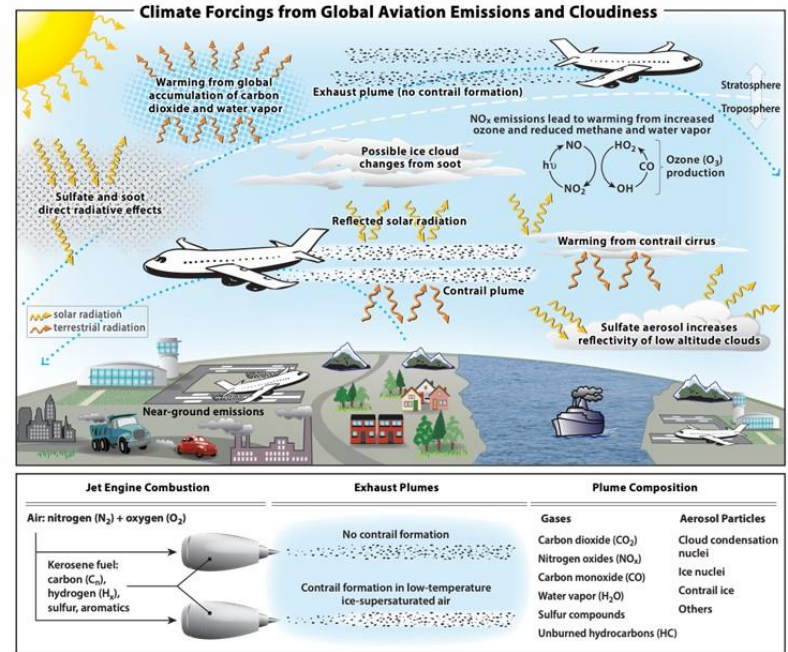


Global Aviation Impact on Climate

- The aviation sector accounts for approx. 2% of global anthropogenic CO₂ emissions (IPCC1999 and AR5 IPCC 2014);
- International aviation alone accounts for 1.3% of global anthropogenic CO₂



Statistics report "CO₂ Emissions from Fuel Combustion" (IEA, 2020)



"Together, aviation impacts are 3.5% of total anthropogenic forcing."

Lee et al. (2020) Atmospheric Environment

Context for Action by Aviation

- Climate science shows that aviation needs to do more
- Global momentum on addressing climate change
- Changes are needed: higher and faster
- Technology and research show it is possible
- Many ways to change
 - ... **Innovations, technologies, aviation fuel and energy, infrastructure development, operations.**
- Accelerate the pace of action



Technology



Operations



Sustainable Aviation
Fuels





Green Recovery UN Secretary General

Six Climate-related Actions to Shape COVID-19 Recovery

1. As we spend huge amounts of money to recover from the coronavirus, we must deliver new jobs and businesses through a **clean, green transition**.
2. Where taxpayers' money is used to rescue businesses, it needs to be tied to achieving **green jobs** and **sustainable growth**.
3. Fiscal firepower must drive a shift from the grey to **green economy** and make societies and people more **resilient**.
4. Public funds should be used to **invest in the future**, not the past, and flow to sustainable sectors and projects that help the environment and the climate. Fossil fuel subsidies must end and polluters must start paying for their pollution.
5. Climate **risks and opportunities** must be incorporated into the financial system, as well as all aspects of public policymaking and infrastructure.
6. We need to **work together** as an international community.



General public is pushing for change

CLIMATE EMOTIONS | CLIMATE CHANGE

Why 'flight shame' is making people swap planes for trains



(Image credit: BBC/Getty Images)

BBC News Sport Reel Worklife More Search

Smart Guide to Climate Change

What is BBC Future?

SMART GUIDE TO CLIMATE CHANGE | ENVIRONMENT

Should we give up flying for the sake of the climate?

Statement of support for Montréal youth Climate Strike



Montréal 26 September 2019 – The leadership and staff of Montreal-based ICAO, the UN International Civil Aviation Organization, express their enthusiasm and support for the youth Climate Strike march being led here tomorrow by Swedish climate change advocate, Greta Thunberg.

In the face of the scientific consensus on climate change, it's important to recognize that everyone has the right and responsibility to reduce their personal carbon footprint.

International flights presently account for 1.3% of annual greenhouse gas emissions produced through human activities. Although aircraft today are 80% more fuel efficient, and fuel consumption per passenger is comparable to a mid-size vehicle, more action and faster innovation are now required to address aviation's near- and long-term impacts.

ICAO joins world youth everywhere in working to help governments to appreciate the urgency for action towards a sustainable future.



ENVIRONMENT

Canadian airlines feel the pressure of flight shaming and the 'Greta effect'

By Christopher Reynolds • The Canadian Press

Posted January 19, 2020 1:00 pm • Updated January 19, 2020 1:34 pm



Global Momentum on Decarbonization

- **76th Session UN General Assembly**
14-30 September 2021
- **UN High-level Dialogue on Energy**
Late September 2021
- **Race to Zero Dialogues in 2021**
- **UNFCCC COP26**
1-12 November 2021



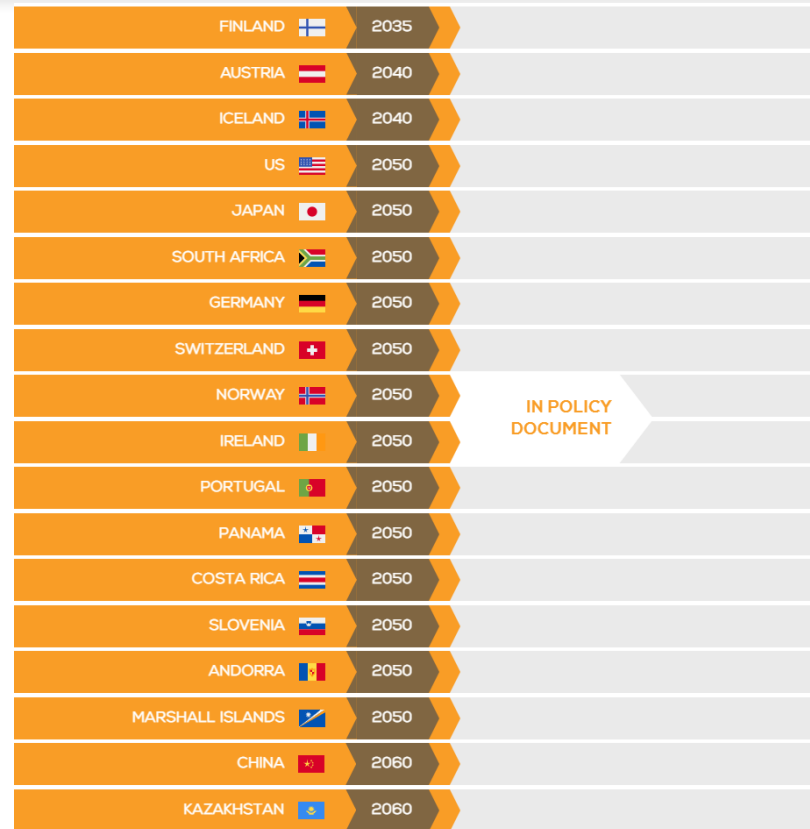
**UN CLIMATE
CHANGE
CONFERENCE
UK 2021**

IN PARTNERSHIP WITH ITALY





Net Zero Commitments by States



Source: Energy&Climate , Net Zero Tracker

Unprecedented pace of initiatives towards a green revolution.

The post-COVID-19 recovery - A great momentum for global climate action

<p>SUSTAINABLE AVIATION CLEANER QUIETER SHORTER</p>	<ul style="list-style-type: none"> Clear, reliable and impartial advice to inspire responsible travel
	<ul style="list-style-type: none"> Zero emission aircraft concepts (including hydrogen aircraft) ITAKA project - SAF development and deployment Fello'fly project - formation flights to reduce CO2 emissions
	<ul style="list-style-type: none"> EnableH2 project - liquid hydrogen research for civil aviation
	<ul style="list-style-type: none"> New generation of hydrogen fuel cell systems with zero CO2 emissions
	<ul style="list-style-type: none"> Supplier of sustainable, high-quality battery cells , with the mission to build the world's greenest battery.
	<ul style="list-style-type: none"> First certified electric aircraft R&D on hydrogen and other low carbon concepts

https://www.icao.int/environmental-protection/SAC/Pages/coalition_partners.aspx

	<ul style="list-style-type: none"> Transforming operational data into personalised performance feedback and targets
	<ul style="list-style-type: none"> Identification and sourcing of Clean Tech Solutions
	<ul style="list-style-type: none"> Sourcing, blending and distribution of Sustainable Aviation Fuels Guarantee of sustainability throughout the supply chain Co-funding of price gap over conventional jet fuel.
	<ul style="list-style-type: none"> India's first test flight powered by Sustainable Aviation Fuel
	<ul style="list-style-type: none"> Development of more fuel efficient planes and engines. Investment in alternative transport means Improvement of direct, optimal routing Investment in sustainable energy/fuel.
	<ul style="list-style-type: none"> Zero-emission hydrogen-electric aircraft with 19 seats



A number of climate change commitments / initiatives / announcements. What about ICAO? What's the possible consequences of ICAO not agreeing on LTAG ?

- Proliferation of national / regional aviation policies?
- Aviation will not address its climate responsibilities?
- Will there additional cost on the sector?
- Risk of aviation being impacted by outside policies?
- The sector may not attract financing?
- There will be limited reduction on aviation CO2 emissions?
- Others?

Non exhaustive list

Question for the small group discussion later



ICAO work continues on three LTAG work streams

1) Data gathering

2) Development of in-sector emissions reduction scenarios;

3) Impacts analysis of the scenarios.

How can States and Regions contribute to the ICAO LTAG work?

- Submitting information and innovations through the ICAO Stocktaking process?
- Supporting R&D and deployment of new technologies, operations or fuels?
- Engaging financing institutions?
- Coordinating with national and regional stakeholders?
- Developing national clean energy policies?
- Developing a State Action Plan, and implementing it?

Non exhaustive list

Question for the small group discussion later



- CAEP LTAG-TG will deliver results to the CAEP/12 meeting in February 2022
- ICAO High Level Meeting in 2Q / 2022
- ICAO Council consideration of the work on the feasibility of an LTAG leading up to the 41st Session of the Assembly in 3Q / 2022
- ICAO discussions in 2022 will also involve the future role of CORSIA in light of possible LTAG options, as well as a possible mechanism to incentivize new technologies and innovation under CORSIA





What are the main pieces of information or additional process approaches that you would find useful to enhance your understanding and assist LTAG deliberations at the 41st Session of the ICAO Assembly?

Question for the small groups to discuss



- **Global momentum on decarbonizing – both in aviation sector and beyond – including for COP26**
- **Many activities on climate change are also ongoing in ICAO including LTAG work (e.g., stocktaking, scenario development)**
- **Continued leadership of ICAO and its Member States in addressing emissions from international aviation – What’s the consequence of non-action ?**
- **States / regions are invited to contribute to the climate efforts**
- **How can we enhance the ICAO work ? More information ?**



Questions ?



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THANK YOU