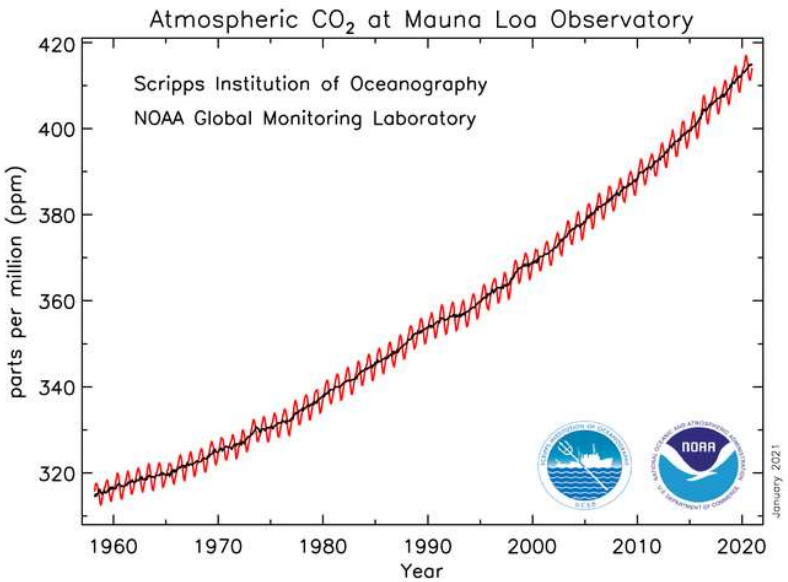
‘Fit for 55’ in the EU, focus on aviation

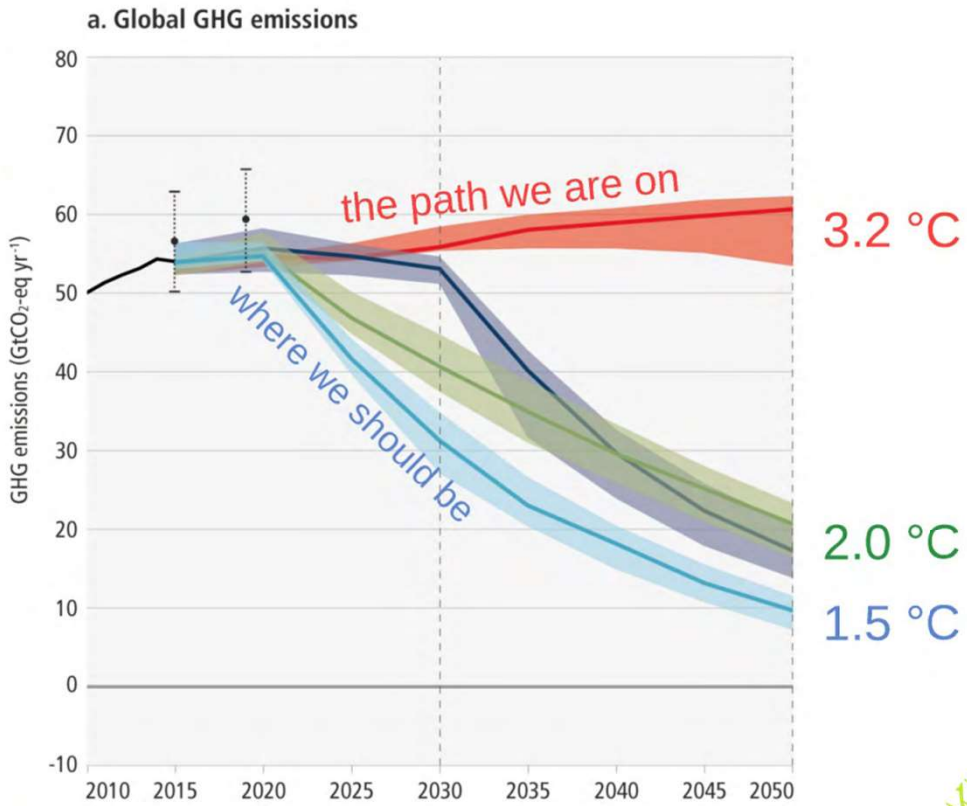
14 June 2022, WS on climate change in the aviation sector for the African Region

Dimitar Nikov, DG CLIMA, European Commission
Unit B4, Intermodal policy, Rail, Maritime, Aviation

The scale of climate challenge, the gap in ambition



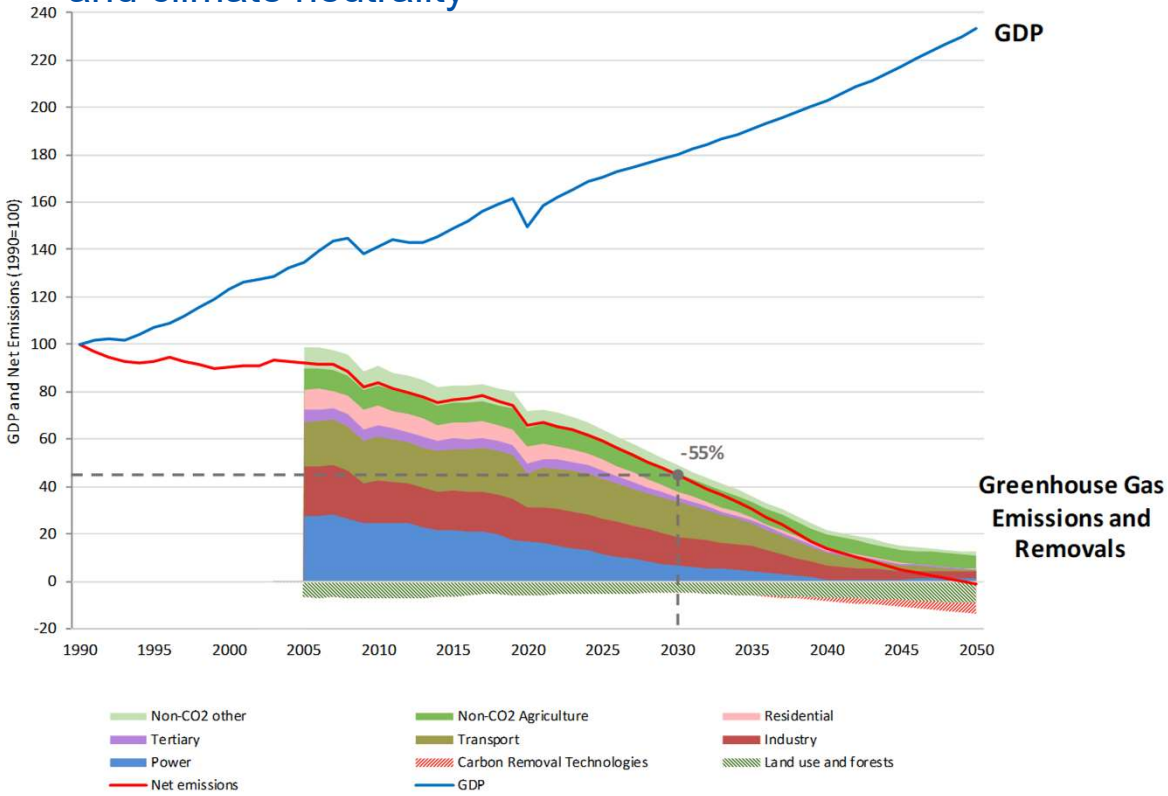
Atmospheric concentrations of CO_2 at Mauna Loa were 421ppm in May 2022



Source: IPCC 2022, comments: Rahmstorf

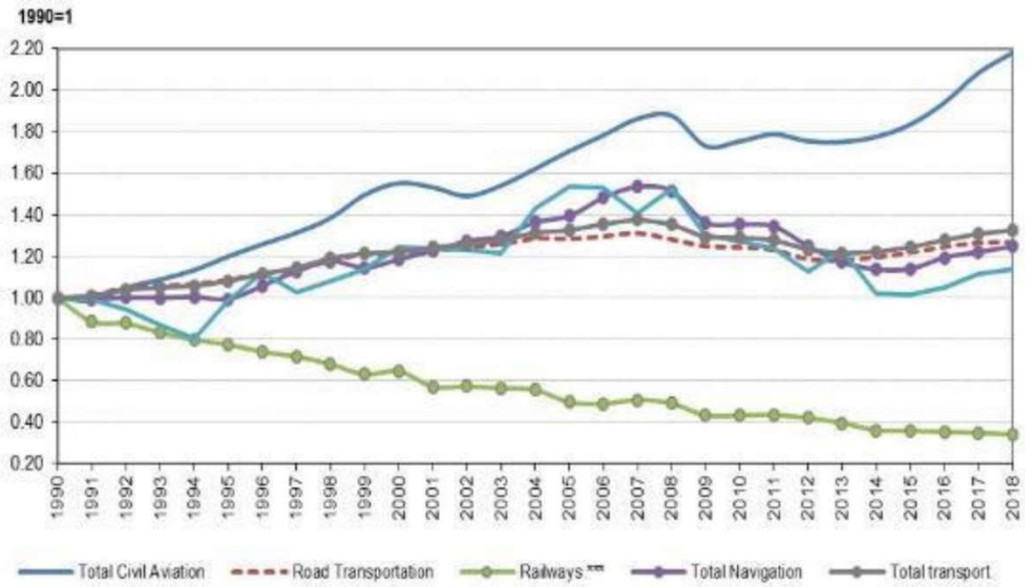
EU climate law: binding economy-wide commitments

EU pathway to sustained economic prosperity and climate neutrality



Source: Climate Target Plan (COM/2020/562 final), p7

Figure 16: Evolution of GHG emissions by transport mode in the EU-27 (1990 = 1)



Source: Sustainable and Smart Mobility Strategy (SWD/2020/331), p74

Carbon pricing works

- In the EU, market-based incentive of ~80€/tCO_2 to reduce emissions. EU Member States invest >75% of >€60bn auction revenues on climate action plus, at Union level:
  - The EU ETS's **Innovation Fund** may provide €40 billion for the period 2020-30 from auction revenues for the deployment of innovative technologies, processes and substitute material (e.g. July 2021 onwards, Rome airport battery storage project for solar energy)
  - The EU ETS's **Modernisation Fund** may provide €48 billion in 2021-30 from ETS auction revenues to accelerate energy efficiency improvements and transformation in some Member States, and to reduce fossil fuel dependency (in addition, RePowerEU initiative is underway)
- Closely co-operating with other countries with carbon pricing: China, Korea, California, Canada, New Zealand, UK, + link with Switzerland in force since 2020
- Equal treatment of aircraft operators on routes is vital to avoid distortions of competition, secured since 2012

All sectors must contribute

- **Aviation ETS revision**: full auctioning from 2027; EU ETS for intra-European flights (including departing flights to UK and CH), CORSIA for EU-based airlines' extra-European flights

- **ReFuelEU Aviation**: SAF blending mandate, 2025 – 2%, 2030 – 5%, 2050 – 63%; sub-mandate for e-fuel, 2030 – 0.7%, 2050 – 63%

- **ETD revision**: taxation of kerosene at 10.75 EUR/GJ, ramp-up in 10% steps over 2023-2033 period

- **The proposals are currently in co-decision**: Agreement of the European Parliament and the 27 Member States (Council) is needed for the proposals to become EU law.

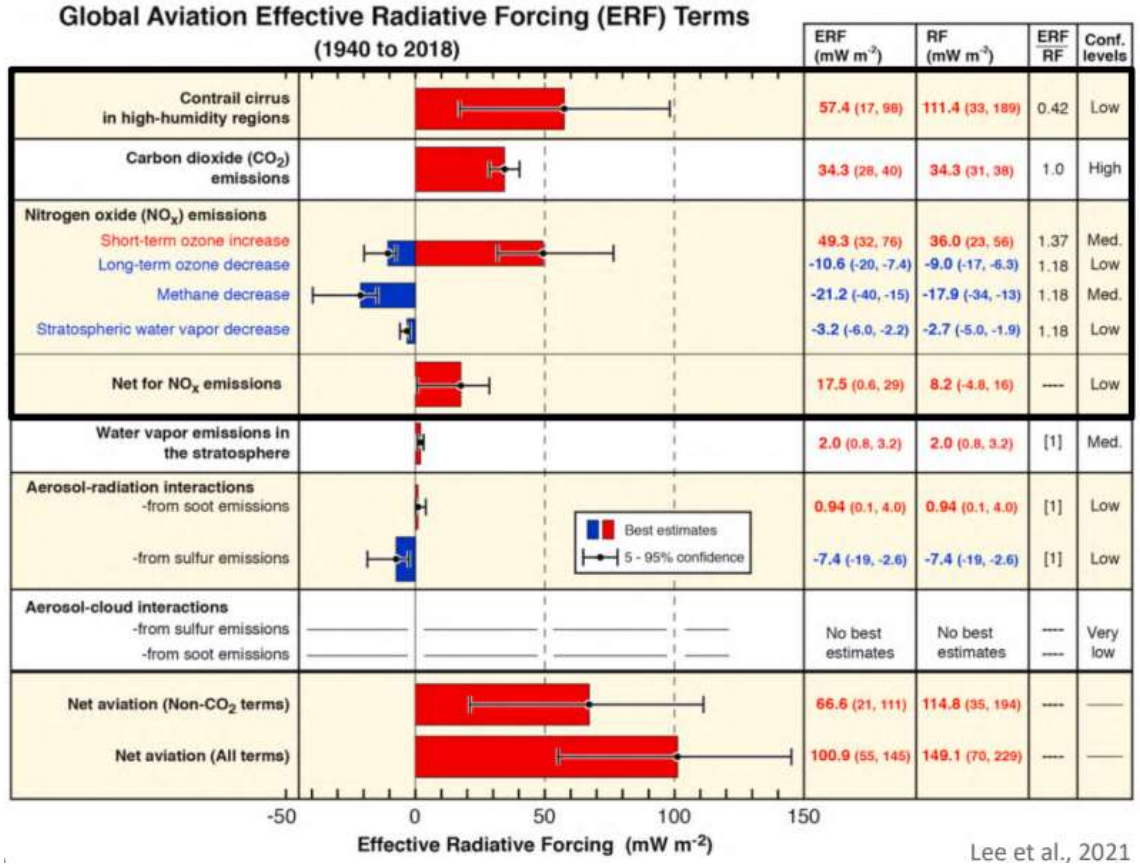
Proposal	Council		European Parliament		Next steps
Aviation ETS	ENV Council	28 June	• EP ENVI report • EP TRAN • Plenary	16 May 29 April 7-9 June	Trilogues
CORSIA zero-offsetting notification	Negotiating mandate	20 May	• EP ENVI report • EP TRAN • Plenary	11 May 29 April 7-9 June	
ReFuelEU Aviation	TTE (TRAN) Council	02 June	• EP TRAN draft report Plenary	27 June tbc, July tbc	

EP Plenary on aviation/ETS revision

- EP Plenary vote, 8 June (backing largely the report of Parliament's **ENVI** (lead) Committee, 16th May)
  - **Support to apply Corsia as proposed to extra-European flights**, but also **extending the EU ETS** to departing flights from EEA airports with deduction of (any) Corsia offset costs; re-applying ETS to some flights involving EU MS outermost regions;
  - € 2-4 billion **support** (in the form of free allowances) **from ETS to uplift SAF** in the manner of a 'contract-for-difference' to bridge the remaining price gap (after the ETS's €250/t kerosene incentive) for high quality SAF/ synthetic fuels.
  - ETS revenues to be used to **mitigate climate impacts in vulnerable countries**, and to reduce climate impacts (incl. addressing non-CO_2 climate impacts)
  - **MRV** (to start 6 months after adoption of the Directive) **and a legislative proposal**, if appropriate (by end 2026) **to cover non-CO_2.**
  - **Quicker phase out of free allocation**, i.e. full auctioning as from 2025.

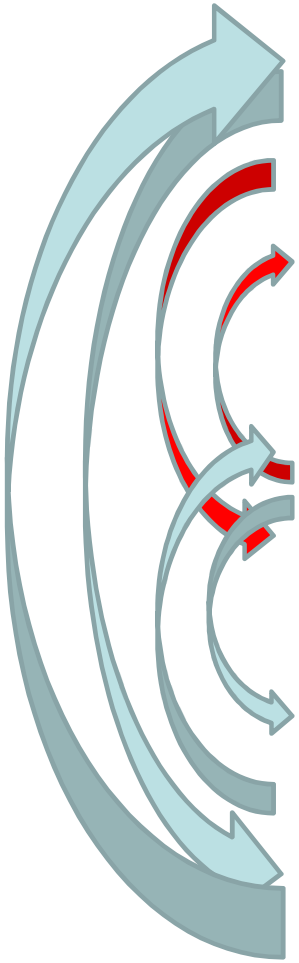
Lessons learned on non-CO2

- The major forcings from global aviation come from:
  - CO_2
  - contrail cirrus clouds
  - The 'net NO_x' effect
  - with minor contributions from water vapour, soot and sulfur aerosol-radiation interactions
- Main non-CO2-effects come from NOx and Contrail Cirrus
- **Non-CO_2 impacts are crucial to address climate-neutrality :** Non-CO_2 impacts represent currently ~2/3rd (66%) of the net Effective Radiative Forcing (CO_2 emissions ~34% share of the total)
- While uncertainties remain, low-hanging policy options are at hand



Lee et al., 2021

Policy options on non-CO2



Type of measures		Issues to overcome
Financial	**Inclusion of aircraft non-CO2 emissions in the EU ETS**	Improve methods for estimating aircraft emissions (e.g. in-flight measurement); Reduce uncertainty on climate impact from aircraft emissions
	Charge (NOx/all climate impact)	Select an appropriate CO2 equivalent emissions metric and time horizon; Determine climate damage costs to define level of charge
ATM	**Avoidance of ice-supersaturated areas**	Reduce uncertainty on optimization of flight paths and reduction in persistent contrail-cirrus formation (CO2/contrail cirrus trade-off); Enhanced meteorological forecast models capabilities needed to predict persistent contrails correctly in time and space
Fuels	**Reduction of aromatics and Sulphur in fuel specifications**	Reduce uncertainty on climate benefit of cleaner fuels with lower aromatics that lead to lower nvPM emissions and reduced contrail-cirrus formation
	Mandatory use of SAF	Facilitation to ensure uptake of SAF by the aviation sector; Implement system to monitor fuels used and environmental benefits delivered

Thank you!
Questions?

© European Union 2020
Unless otherwise noted the reuse of this presentation is authorised under the CC BY 4.0 license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.