

Pricing Carbon for Aviation in Europe

Aviation & Covid: towards a green recovery?

Aki Kachi, 1 December 2020



Convention, Paris, and the EU Contribution



United Nations Framework
Convention on Climate Change



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21·CMP11



Latvian Presidency
of the Council of the
European Union

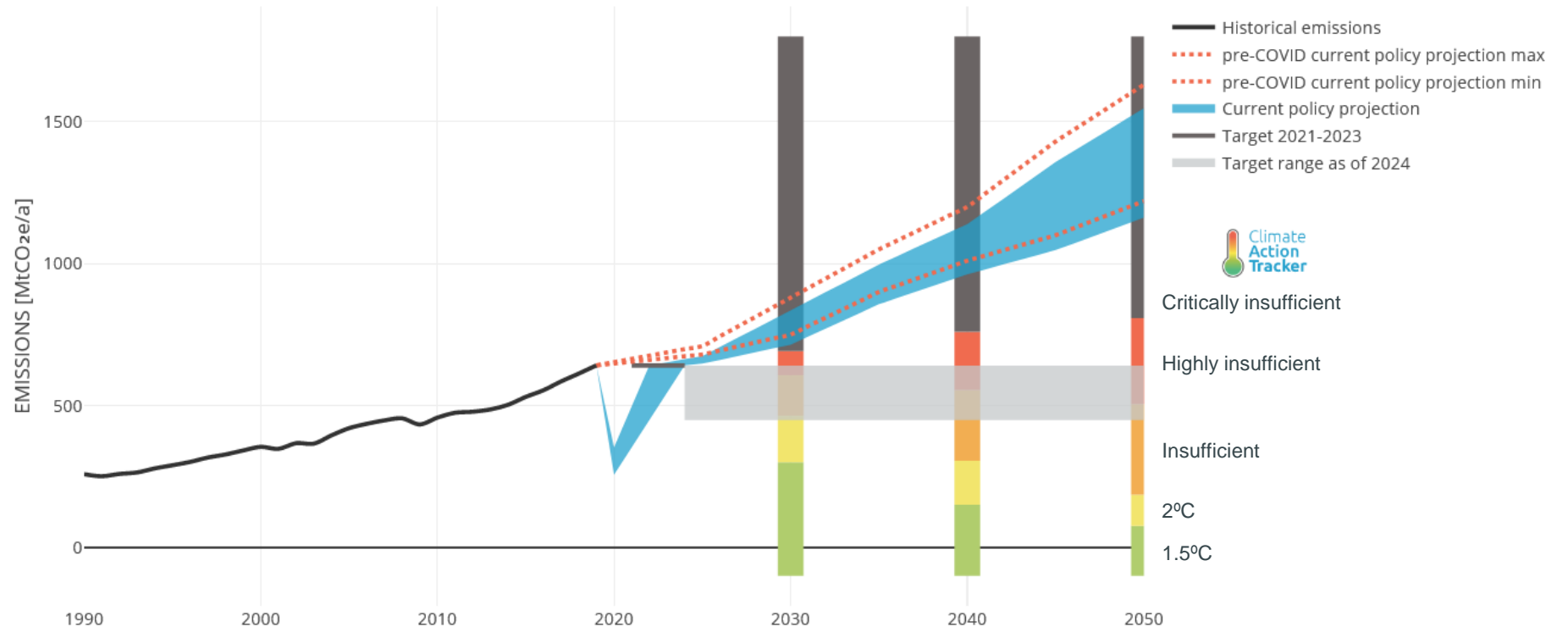
EU2015.LV



- » Under the UNFCCC, the EU and its Member States have taken a joint emission reduction target to reduce the **EU's GHG emissions by 20% compared to 1990 by 2020**. This target excludes the LULUCF sector but includes international aviation (outgoing flights).
- » Holding the increase in the global average temperature to **well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels**, recognizing that this would significantly reduce the risks and impacts of climate change;
- » The EU and its Member States are committed to a binding target of an **at least 40% domestic reduction in greenhouse gases emissions by 2030 compared to 1990**, to be fulfilled jointly, as set out in the conclusions by the European Council of 24 October 2014.
 - No contribution from international credits
- » **Ratcheted ambition for at least 55%**
- » **Climate neutral by 2050**

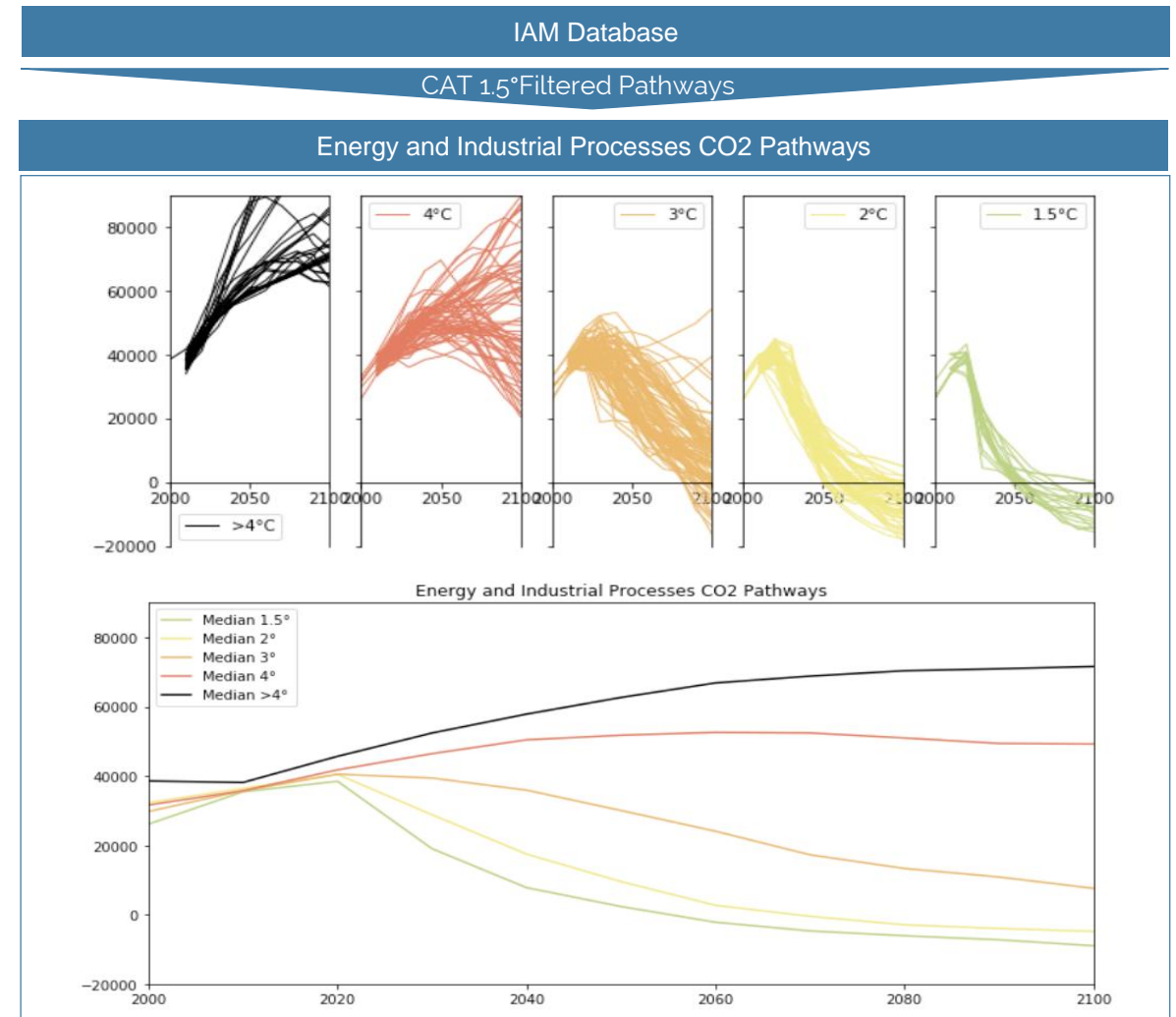
Climate Action Tracker International Aviation Rating

- » 2-3% of global emissions plus non-CO2 impact (less for non-domestic)
- » About 3.6% of EU emissions and set to grow
- » Globally could double or triple by 2050?
- » Unclear longer term impacts of COVID-19?



CAT Rating Methodology

- » International bunkers are assumed to decarbonise at the same rate as all energy and industrial processes
- » Rating is for CO₂ emissions only
 - Non CO₂ impact also significant and should be taken into consideration





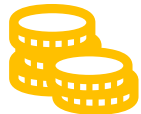
- » Ambition level of climate neutral growth from 2020 (2019) level is insufficient / highly insufficient



- » Limited participation
 - CORSIA may cover less than 50% of emissions between 2021-2035



- » Heterogeneous offset unit quality
 - ICAO Technical Advisory Body shows heterogeneous application of Emission Unit Criteria in 2019 and 2020 recommendations



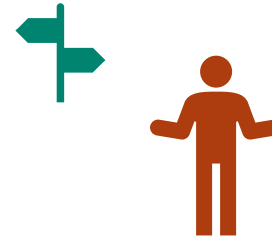
- » Expected CORSIA compliance unit prices unlikely to trigger investments in operation and technical measures
 - Cheaper to purchase offsets than efficiency or major new technological advancement in fuels or aircraft design – likely large oversupply of credits at very low prices (below 1 EUR)



- » CORSIA eligible fuels may not deliver real and sufficient reductions
 - Emission reduction potential of alternative fuels
 - Claimed reduction vs overall reduction

Aviation and the EU ETS

- » Aviation included in the EU ETS in 2012
 - Capped environment
 - Most allowances allocated for free (opportunity cost)
- » “Stop the clock” suspension of EU ETS to and from non-EEA countries – continued application intra EEA
 - Continued scope until 31 December 2023
- » Current EUA prices around 27 EUR / tonne (EEX)
 - Future prices depending on many considerations, MSR, etc.



Policy Options

1. EU ETS Full Scope to and from EU/EFTA
2. EU ETS for intra EU/EFTA (CORSA for the rest)
3. CORSA only
4. ETS-CORSA “clean cut”: EU ETS for intra, CORSA for non EU EFTA
5. ETS-CORSA “mix”: EU ETS up to 2020 levels, CORSA for above 2020 levels
6. ETS-CORSA “mix”: according to licence of aircraft operators

Thought exercise

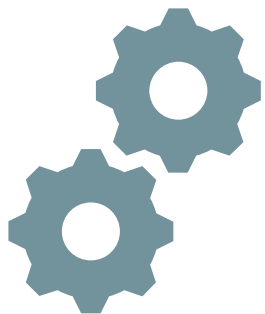
According to the ICAO Carbon Calculator, a round-trip economy class flight from Paris (CDG) to New York (JFK) – does not necessarily perfectly reflect ICAO MRV methodology	654.6 KG CO ₂
• At the price of a CORSIA EUA ~1 EUR / tonne CO ₂	0.65 EUR
• At current EUA price ~27 EUR (EEX)	17.66 EUR
Cost of checking one extra piece of luggage on Delta (non-Skymiles/Flyingblue member)	85 EUR
Kerosene jet fuel prices given increasing electrification of other modes of transport?	?????

Looking past COVID-19, clear need for a short-term basket of measures of:

- *Demand management incentives (shifts to lower emitting modes)*
- *Stronger incentives for operational measures*
- *Stronger incentives for improved aircraft design and retiring old aircraft*

Already chart a medium-term path towards:

- *Electrification of should haul flights*
- *Synthetic power to liquid fuels*



Further information

- » Climate Action Tracker Aviation Assessment (July 2020): <https://climateactiontracker.org/sectors/aviation/>
- » CDM supply potential for emission reductions up to the end of 2020 (November 2020): <https://newclimate.org/2020/11/25/cdm-supply-potential-for-emission-reductions-up-to-the-end-of-2020/>
- » Current EUA price information: <https://www.eex.com/en/market-data/environmental-markets/spot-market>
- » The cost of supporting alternative jet fuels in the European Union: https://theicct.org/sites/default/files/publications/Alternative_jet_fuels_cost_EU_20190320.pdf
- » ICAO TAB First Assessment: https://www.icao.int/environmental-protection/CORSIA/Documents/TAB/TAB_JANUARY_2020_REPORT_EXCERPT_SECTION_4.EN.pdf
- » ICAO TAB Second Assessment: https://www.icao.int/environmental-protection/CORSIA/Documents/TAB/TAB%202020/TAB_October2020Report_Excerpt_Section4_EN.pdf



Thank you

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