

Pricing Carbon for Aviation in Europe

Aviation & Covid: towards a green recovery?

Aki Kachi, 1 December 2020



Convention, Paris, and the EU Contribution



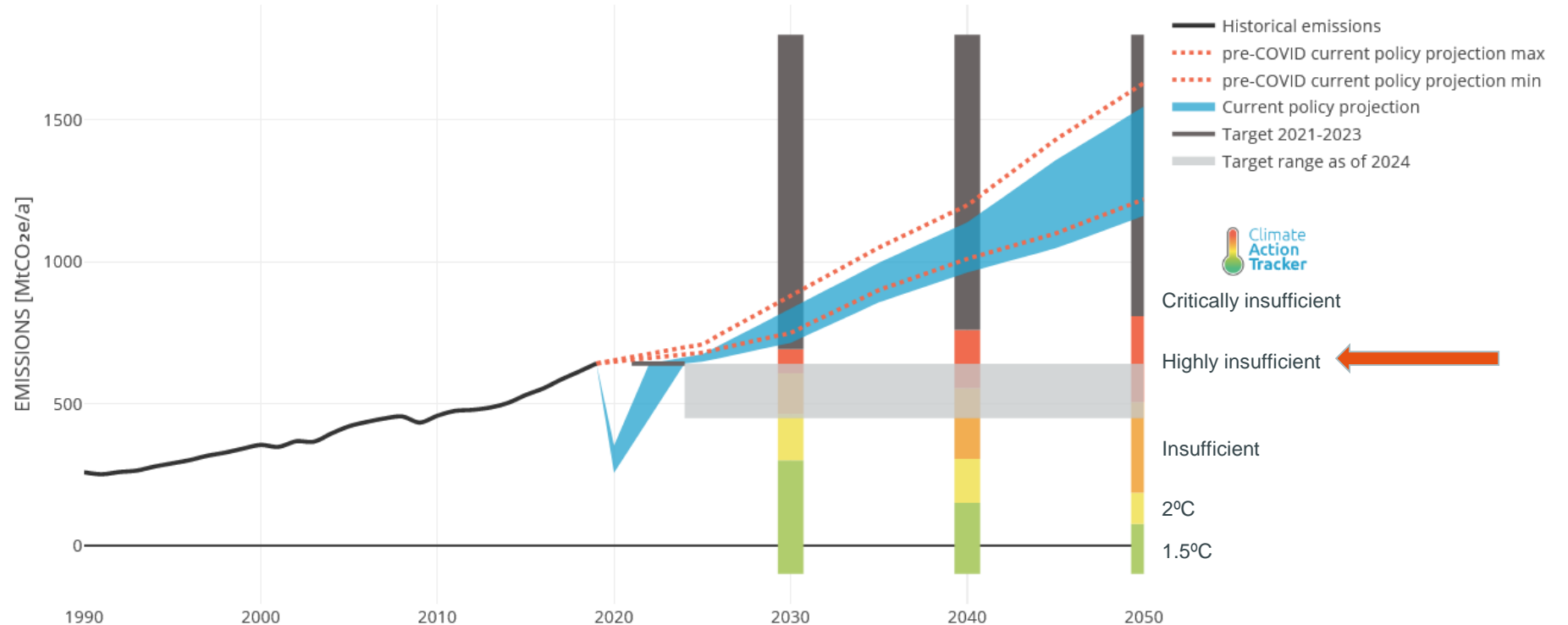
PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21·CMP11



- » *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;*
- » *(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).) – Fourth Biennial Report of the European Union*
- » *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**

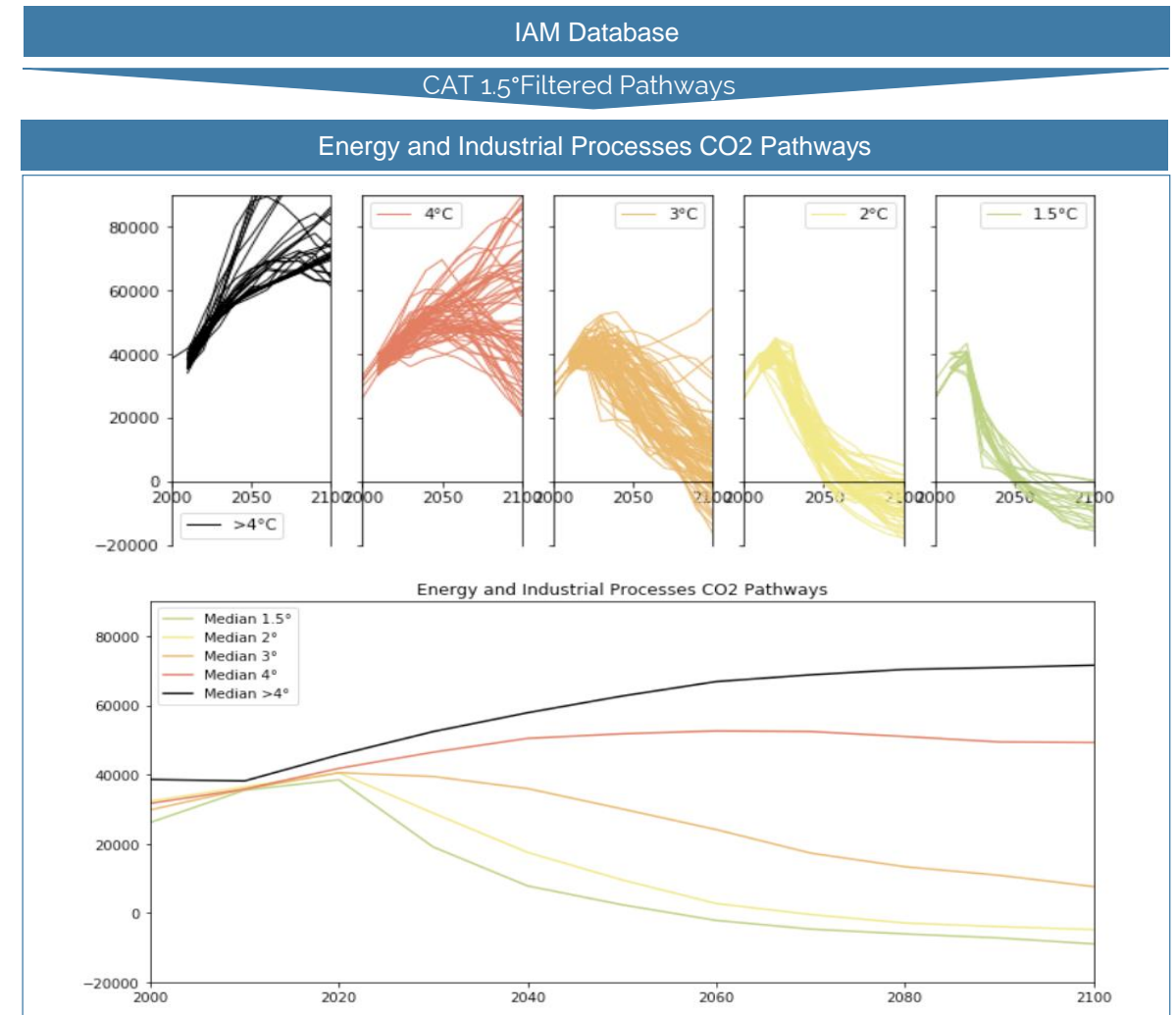
Climate Action Tracker International Aviation Rating

- » Aviation accounts for 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





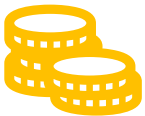
- » Climate neutral growth from 2020 (2019) level is insufficient / highly insufficient for the Paris Agreement



- » Limited participation
 - CORSIA may cover less than 50% of emissions between 2021-2035. Many relevant states missing: China, India, Brazil, South Africa, Chile, Argentina,



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

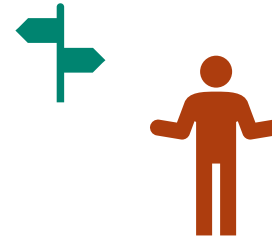


- » Expected CORSIA compliance unit prices unlikely to trigger investments in operation and technical measures
 - Cheaper to purchase offsets than to invest in efficiency, synthetic fuels, or new technological advancement in aircraft design – likely large oversupply of credits at very low prices (below 1 EUR), only a fraction of this is paid as it only applies to additional growth above the baseline



- » CORSIA eligible fuels may not deliver real and sufficient reductions
 - Emission reduction potential of alternative fuels, claimed reduction vs overall reduction* evaluation of “Sustainable Alternative Fuel” certification scheme is ongoing – outcome unknown

- » 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.



EU Policy Options

1. EU ETS “Full Scope” to and from EU/EFTA
2. EU ETS for intra EU/EFTA (No CORSIA)
3. CORSIA only
4. ETS-CORSIA “clean cut”: EU ETS for intra, CORSIA for non EU EFTA
5. ETS-CORSIA “mix”: EU ETS up to 2020 levels, CORSIA for above 2020 levels
6. ETS-CORSIA “mix”: according to licence of aircraft operators

Thought exercise

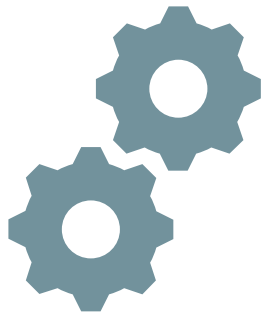
| | |
|---|--------------------------|
| According to the ICAO Carbon Calculator, a round-trip economy class flight from Paris (CDG) to New York (JFK) — does not necessarily perfectly reflect ICAO MRV methodology | 654.6 KG CO ₂ |
| • At the price of a CORSIA unit ~1 EUR / tonne CO ₂ (*tiny fraction of this is actually paid considering only growth from 2019 levels) | 0.65 EUR* |
| • At current EUA price ~27 EUR (EEX) (*does not reflect free allocation) | 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/>
- » Information on states participating from 2021: https://www.icao.int/environmental-protection/CORSIA/Documents/CORSIA_States_for_Chapter3_State_Pairs_Jul2020.pdf
- » 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>
- » ICAO “Sustainable Alternative Fuels” information: <https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-Eligible-Fuels.aspx>
- » 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

Aki Kachi



a.kachi@newclimate.org

**NEW
CLIMATE**

INSTITUTE

www.newclimate.org