TOWARDS GLOBAL AIR EMISSION ACCOUNTS

CURRENT STATUS OF WORK

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OECD
BETTER POLICIES FOR BETTER LIVES

Currently available information at the OECD

- A first database with official air emission accounts (link):
  - 28 EU countries, available from Eurostat
  - 5 non-EU countries (Iceland, Serbia, Switzerland, Norway and Turkey), also available from Eurostat
  - 4 additional non-European countries (Australia, Canada, New Zealand and Korea)

- A second database with estimated air emission accounts, according to a methodology endorsed by the UNCEEA (link):
  - 5 countries (Japan, Kazakhstan, Russia, Ukraine and the United States)
  - Belarus should be added soon

Currently available information at the OECD

Main characteristics of the OECD estimated air emission accounts:

- The 3 main GHGs (CO_2, CH_4 and N_2O) are covered
- 8 to 14 industries (depending on country) are available, in addition to households (less detail than in official AEAs)
- Territory-based emissions so far, but on-going work for the residence-territory adjustment of CO_2 emissions related to air transport (next slides).

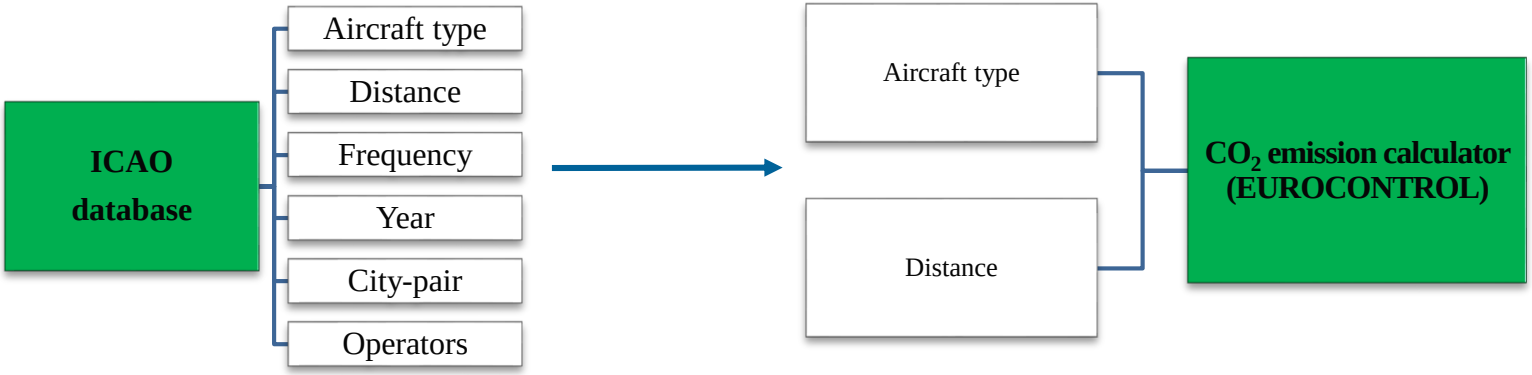
Residence-territory adjustment for CO_2 emissions related to air transport

Motivation:

- Centrally compiling and allocating CO_2 emissions from air transport to countries is technically feasible. Would allow efficiency gains and a harmonisation of methods.
- Importance of air transport for CO_2 emissions:
  - In the EU28 as a whole, air transport (ISIC-H51) accounts for 30% of CO_2 emissions of the transport industry (ISIC-H), and 6% of CO_2 emissions generated by ISIC industries.
  - The International Air Transport Association (IATA) anticipates a doubling of air passenger traffic in the next 20 years.

Residence-territory adjustment for CO_2 emissions related to air transport

Overview of the proposed methodology:



CO_2 emissions for each airline, city-pair, aircraft and year

Aggregation by country and year
(Territory-based emissions are associated to the country of departure, as in UNFCCC inventories)

Split between domestic and international flights
(domestic when departure and arrival in the same country)

Allocation of emissions following the residence principle
(*using operator nationality*)

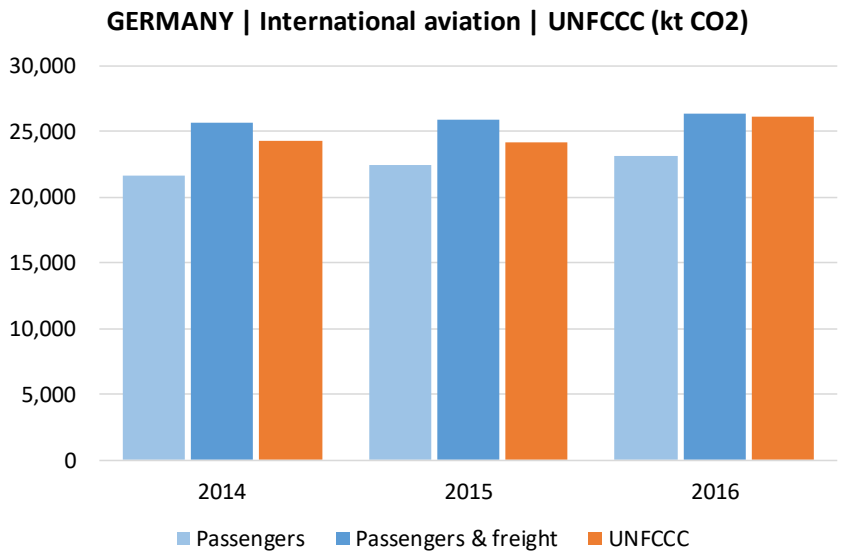
Comparison with emissions from national/international aviation in UNFCCC inventories

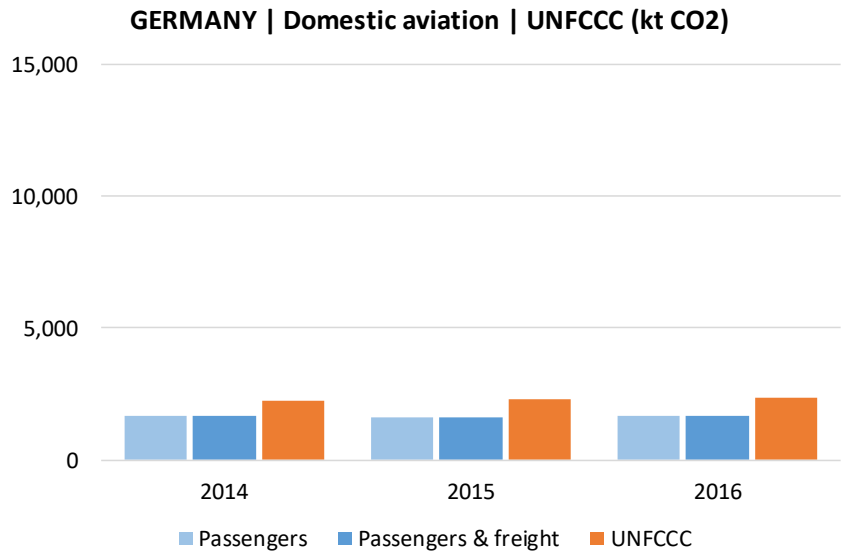
Comparison with emissions from air transport (ISIC-H51) and bridging items in air emission accounts

Residence-territory adjustment for CO_2 emissions related to air transport

Very encouraging results:

1. Ability to closely replicate UNFCCC totals on a territory basis

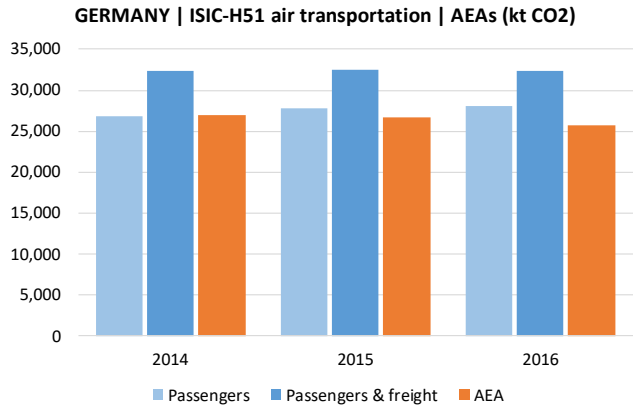


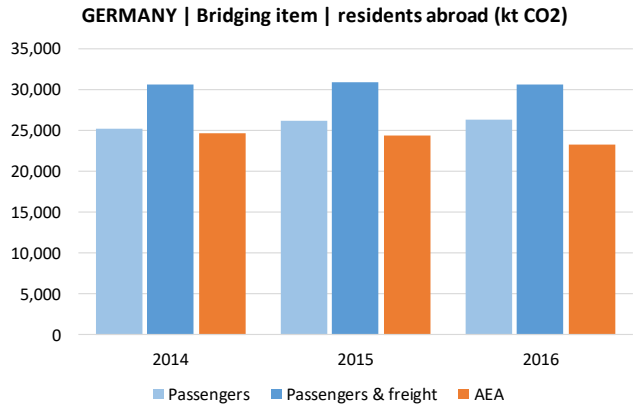


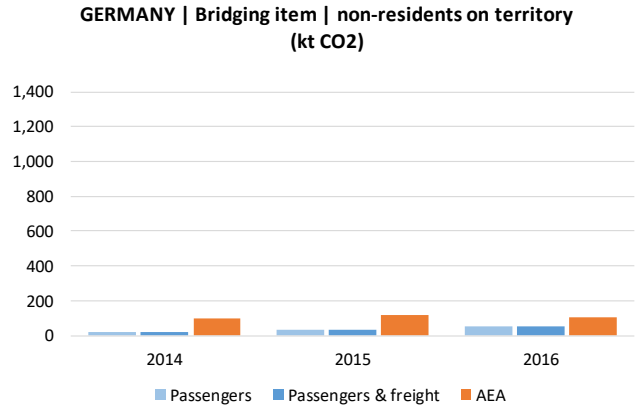
Residence-territory adjustment for CO_2 emissions related to air transport

Very encouraging results:

2. Ability to replicate emissions from air transport (H51) and bridging items in official AEAs on a residence basis







Residence-territory adjustment for CO_2 emissions related to air transport

Conclusions:

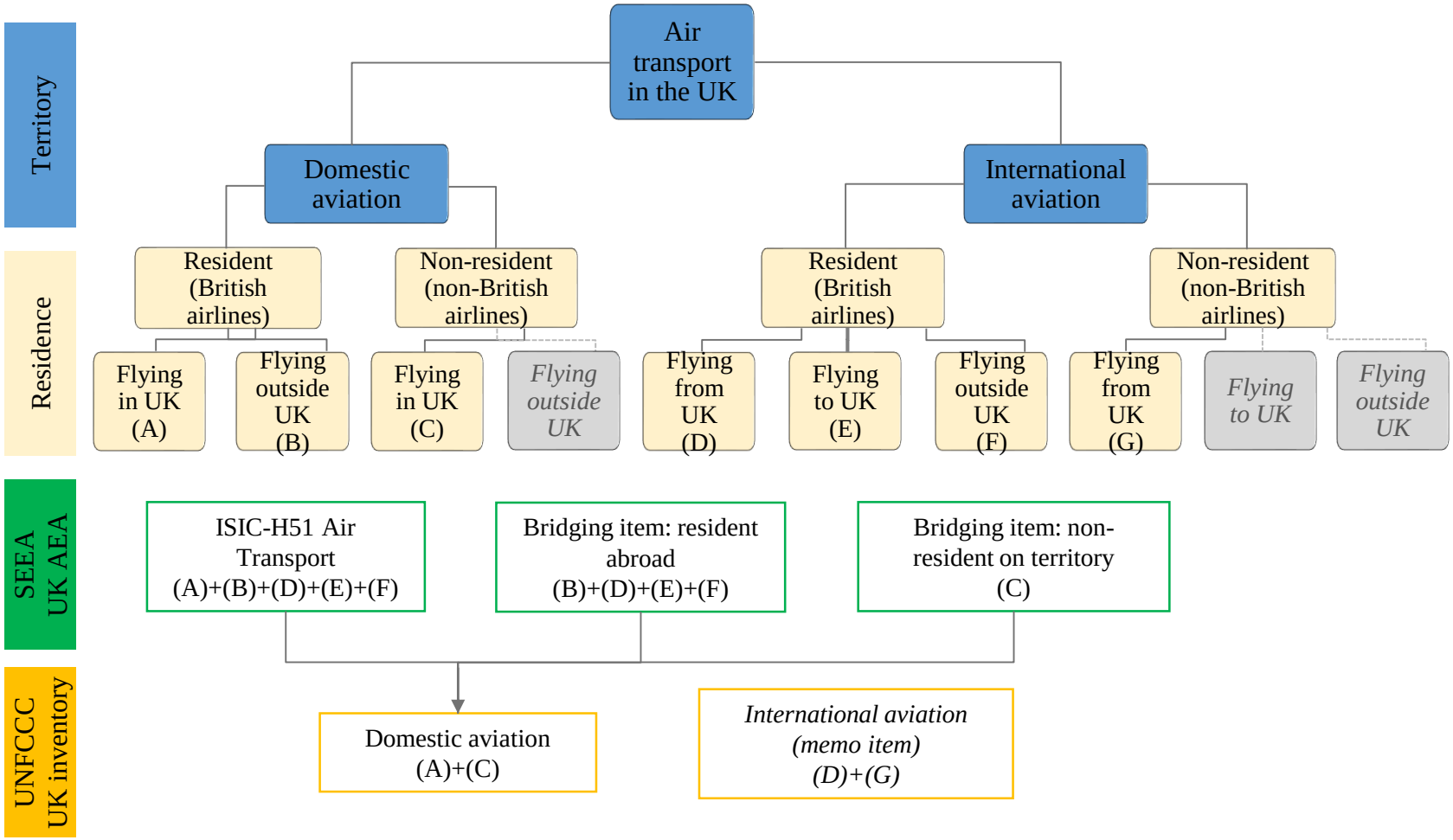
- Our estimated CO_2 emissions from air transport are usually well aligned with official statistics, either UNFCCC inventories or AEAs.
- Results for specific countries show that discrepancies can be related to the definition of bridging items, the use of simplifying assumptions by countries for the estimation of their bridging items, or the classification of airlines into resident and non-resident units.
- Considering establishments rather than airlines as a whole would allow us to refine the application of the residence principle.
- Anyhow, we need to ensure that the concept of residence is applied in a consistent way across countries. Potential spillovers for national accounts.

Way forward:

- Reach an agreement with ICAO regarding the use of their data for SEEA implementation.
- Reach out to countries (e.g. through Eurostat's Task Force) to understand where potential discrepancies come from.

Thank you for your attention.

Appendix: Allocation principle – UK example



Notes: The bridging items bridge between the SEEA air emission account total and the UNFCCC inventory total excluding the memo item international aviation. Any additional flight categories in the *residence* section that are neither relevant to the SEEA nor the UNFCCC of the UK are shown in grey in this chart (e.g., a domestic flight outside the UK by a non-resident airline is neither accounted for in the UK air emission accounts nor the UK UNFCCC inventory).