TOWARDS GLOBAL AIR EMISSION ACCOUNTS

A METHODOLOGY TO ESTIMATE AIR EMISSION ACCOUNTS IN LINE WITH THE SEEA-CF FOR CO2, CH4 AND N2O

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Objective and rationale

Objective

- Develop a methodology that can be used
  - *(i) as a starting point for countries that do not yet compile AEAs*
  - *(ii) to increase the coverage of a global database on AEAs*

Rationale

- AEAs can be linked to national accounts and inter-country input-output tables, enabling analyses on demand-based air emissions and emission intensities by industry, and the monitoring of the SDGs
- Currently, mostly European countries compile AEAs (official AEAs for 28 EU + 7 non-EU countries are available on OECD.Stat)

OECD methodology

- Methodology: UNFCCC inventories are allocated to ISIC rev. 4 industries and households using Eurostat's (2015) correspondence table:

  (i) One-to-many mappings based on output shares

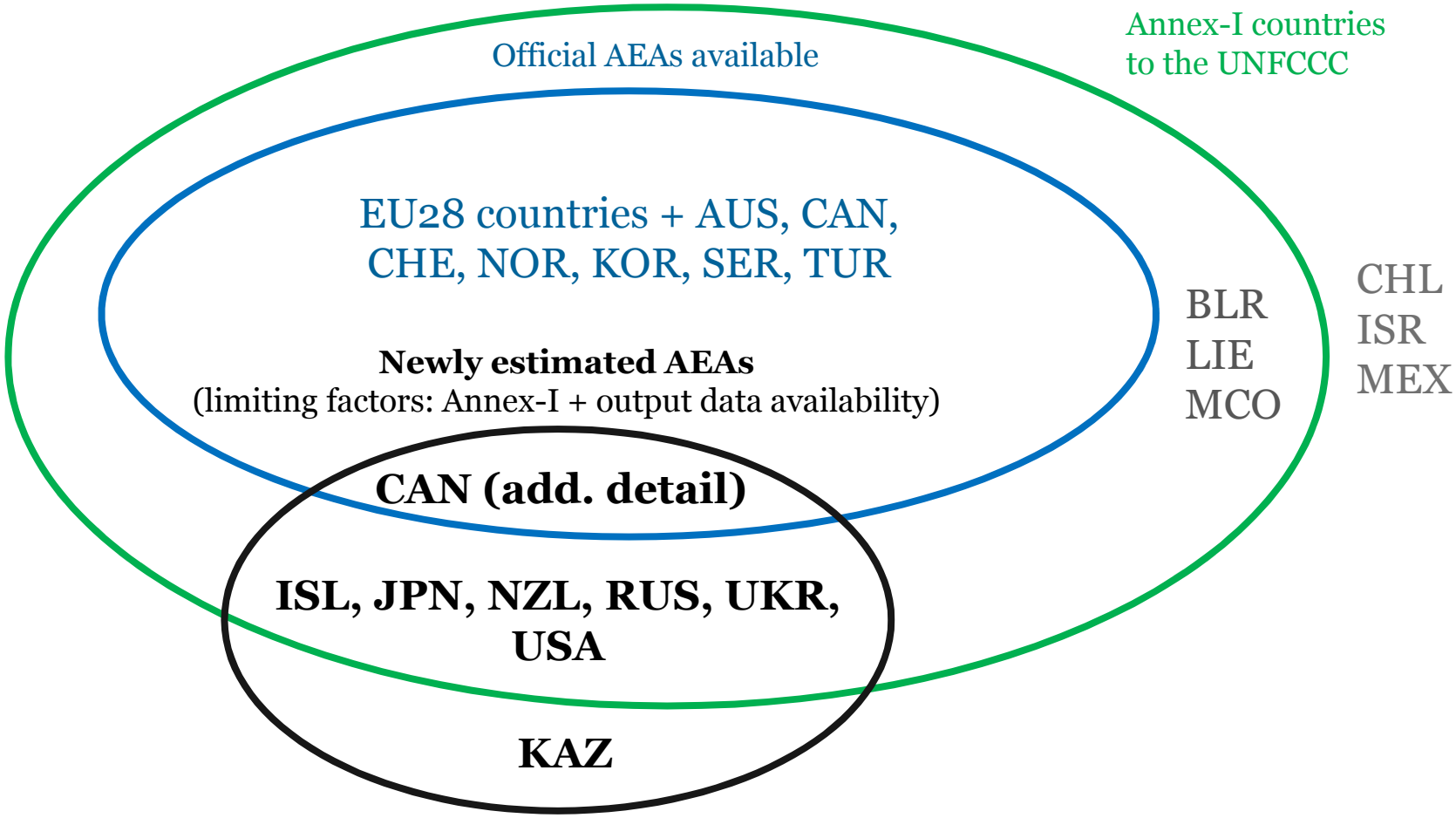
  (ii) Exception – allocating road transport emissions using averages from road transport models (DNK, FRA and SWE)

- The *estimated AEAs* are benchmarked to the *official AEAs*.

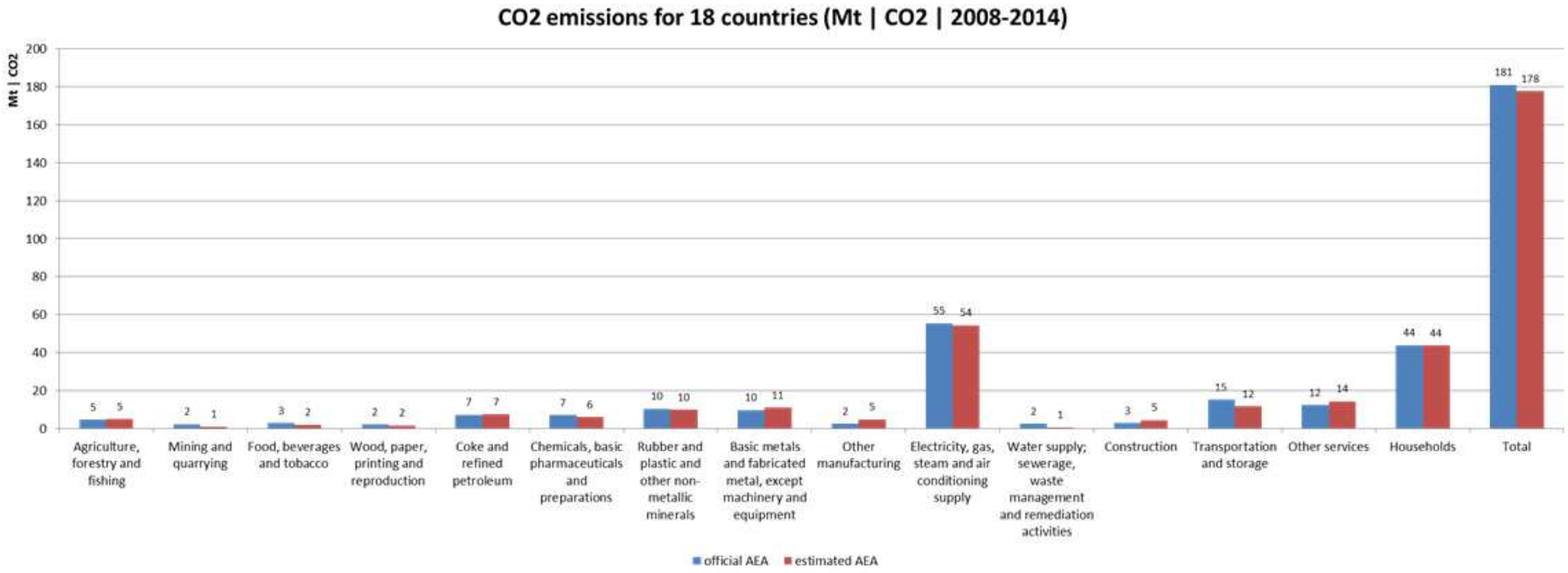
- The comparison is based on the territory principle.

- Estimated AEAs for 38 countries can be accessed using a private link (not yet available on the public OECD.Stat website).

Data availability

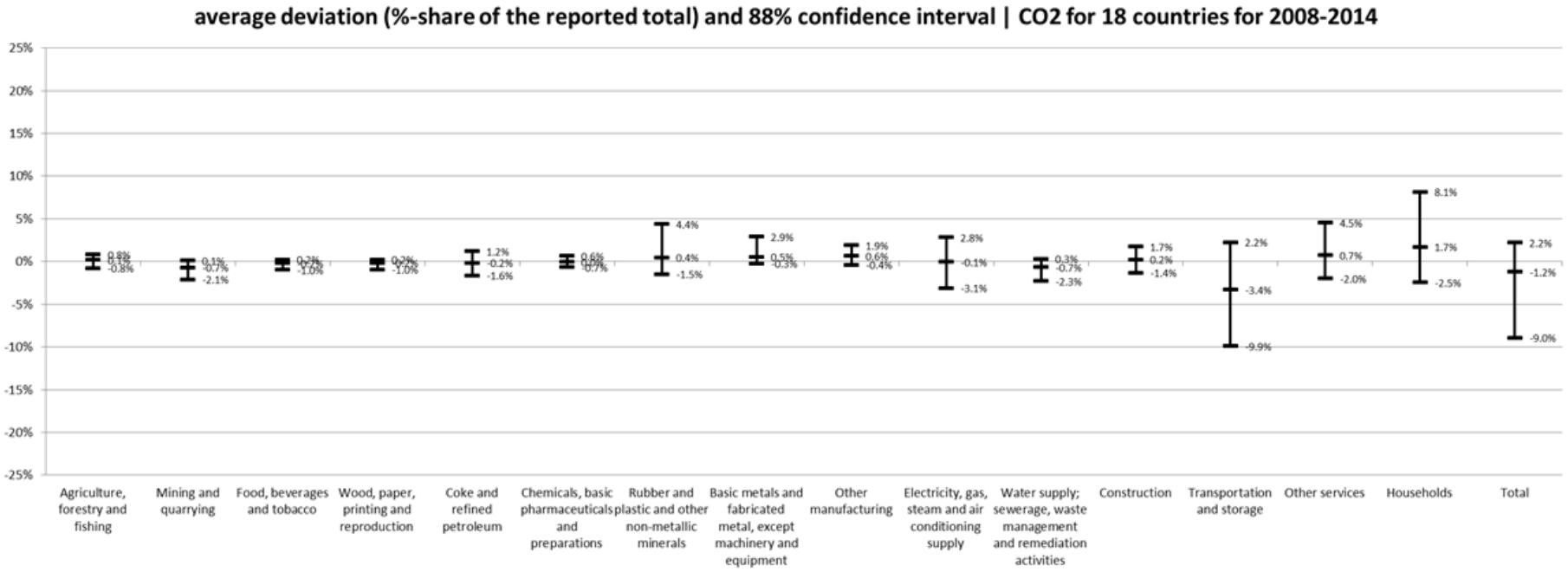


Results for carbon dioxide – CO_2 (1/2)



Note: 18 countries – Austria, Belgium, Czech Republic, Germany, Denmark, Estonia, Finland, France, Greece, Hungary, Italy, Latvia, Netherlands, Portugal, Slovak Republic, Slovenia, Spain and the United Kingdom

Results for carbon dioxide – CO_2 (2/2)



Reading note: 0.1% of overall CO_2 emissions are misallocated to the *agriculture, forestry and fishing* industry on average across countries and time. 88% of the misallocations to the *agriculture, forestry and fishing* industry are located between -0.8% and +0.8% of overall CO_2 emissions.

Conclusions, next steps and questions to the UNCEEA (1/2)

Conclusions

- The comparison with benchmark official AEAs shows that the OECD methodology allows estimating very reliable AEAs for CO2, as well as CH4 and N2O, for Annex-I countries to the UNFCCC.
- The estimated AEAs follow the territory principle and do not include AFOLU/LULUCF emissions.
- The SEEA-CF Technical Committee recommends that the UNCEEA formally endorses this methodology as a way to complement global SEEA databases.
- It also encourages countries that do not yet compile AEAs to use the OECD estimates as a starting point for the compilation of official AEAs, taking advantage of all available national data sources.

Conclusions, next steps and questions to the UNCEEA (2/2)

Next steps

- After UNCEEA endorsement, the OECD will individually contact countries for which it intends to publish estimated AEAs.
- These accounts will be flagged as OECD estimates on the OECD website, and will only be published for countries that do not release official AEAs.

Focus of further research

- Estimation of CO2 emission accounts for non-Annex-I countries, probably based on a mix of IEA and EDGAR data.
- Estimation of the residence-territory adjustment, at least for air emissions related to air transport.
- Estimation of AFOLU/LULUCF emissions, and allocation to ISIC industries.

Expected input from the UNCEEA

- Formal endorsement of the OECD methodology as a way to complement global SEEA databases
- Comments on the proposed way forward