Air emissions accounts (AEA)

Short AEA guidelines on residence adjustments for water and air transport (visual schemes)

The Manual for air emissions accounts – 2015 edition (Annex 3) explains in detail the differences – i.e. bridging items – between AEA totals and the national totals in emission inventories (UNFCCC* and CLRTAP*). This document presents these guidelines in summarised form (visual schemes) for two transport modes, namely water and air transport.

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*UNFCCC: United Nations framework convention on climate change – greenhouse gas emission inventories
*CLRTAP: Convention on Long-Range Transboundary Air Pollution– emission inventories for air pollutants
Water transport – greenhouse gas emissions, e.g. CO₂ (UNFCCC versus AEA)

<table>
<thead>
<tr>
<th>Reporting item in AEA</th>
<th>Arithmetic</th>
<th>Description</th>
<th>Navigation by type (UNFCCC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NACE/ISIC H50</td>
<td>(A)+(B)+(D)+(E)+(F)</td>
<td>Water transport undertaken by resident units of the reporting country</td>
<td>• Domestic navigation: Journeys between two ports located in the same country</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• International navigation: Journeys between two ports located in two different countries</td>
</tr>
<tr>
<td>Bridging item: less residents abroad – water</td>
<td>(B)+(D)+(E)+(F)</td>
<td>Less domestic navigation by residents departing from ports outside reporting country and less all international navigation by resident units</td>
<td></td>
</tr>
<tr>
<td>Bridging item: plus non-residents on territory – water</td>
<td>(C)</td>
<td>Plus domestic navigation by non-residents departing from a port of the reporting country</td>
<td></td>
</tr>
<tr>
<td>Water transport included in UNFCCC</td>
<td>(A)+(C)+(D)+(E)+(F)</td>
<td>National totals in UNFCCC inventories include only domestic navigation departing from ports of the reporting country</td>
<td></td>
</tr>
</tbody>
</table>

**Navigation by operator (SNA/ESA/SEEA)**

- Resident: Operators of water transport who are resident units of the reporting country
- Non-resident: Operators of water transport who are not resident units of the reporting country

**Geo-reference of journey**

- **Within**: Domestic navigation between two ports located in the reporting country
- **Outside**: Navigation between two ports located outside the reporting country
- **From** (outwards): International navigation departing from a port located in the reporting country
- **To** (inwards): International navigation arriving at a port located in the reporting country

UNFCCC: United Nations framework convention on climate change – greenhouse gas emission inventories

AEA: Air emissions accounts

GEO: reporting country

SNA/ESA/SEEA: UN System of national accounts/European system of accounts/System of environmental economic accounting

NACE/ISIC: Statistical classifications of economic activities

H50: NACE/ISIC code for ‘Water transport’

* Journeys departing from ports of the reporting country are approximated based on fuel sales reported in respective statistics of/for the reporting country.
Water transport – emissions of air pollutants, e.g. NOx (CLRTAP versus AEA)

Navigation by type
- National navigation: Journeys between two ports located in the same country
- International navigation: Journeys between two ports located in different countries
  - Maritime (sea and coastal)
  - Inland waterways

Journeys by operator / type
- Resident of GEO
- Non-resident of GEO

Water transport included in CLRTAP
- National navigation and international inland waterways navigation departing from ports of the reporting country
- International maritime navigation departing from ports of the reporting country

Reporting item in AEA
- NACE/ISIC H5: water transport by residents
- Bridging item: less residents abroad – water
- Bridging item: plus non-residents on territory – water
- Water transport included in CLRTAP total

Arithmetic
- (A)+(B)+(C)+...+(H)+(I)+(J)

Description
- Water transport undertaken by resident units of the reporting country
- Less any navigation by residents departing from ports outside reporting country and less international maritime navigation by residents departing from a port of the reporting country
- Plus national and international inland waterways navigation by non-residents departing from a port of the reporting country
- National totals in CLRTAP inventories include all national and international inland waterways navigation departing from ports of the reporting country

Geo-reference of journey
- Within*: National navigation between two ports located in the reporting country
- Outside: Navigation between two ports located outside the reporting country
- From*: (outwards): International navigation departing from a port located in the reporting country
- To (inwards): International navigation arriving at a port located in the reporting country

Navigation by type (CLRTAP)
- National navigation: Journeys between two ports located in the same country
- International navigation: Journeys between two ports located in different countries
  - Maritime (sea and coastal)
  - Inland waterways

Navigation by operator (SNA/ESA/SEEAA)
- Resident: Operators of water transport who are resident units of the reporting country
- Non-resident: Operators of water transport who are not resident units of the reporting country

CLRTAP: Convention on Long-Range Transboundary Air Pollution – emission inventories for air pollutants
AEA: Air emissions accounts
GEO: reporting country
SNA/ESA/SEEAA: UN System of national accounts/European system of accounts/System of environmental economic accounting
NACE/ISIC: Statistical classifications of economic activities
H50: NACE/ISIC code for ‘Water transport’

* Journeys departing from ports of the reporting country are approximated based on fuel sales reported in respective statistics of the reporting country.
Air transport – greenhouse gas emissions, e.g. CO₂ (UNFCCC versus AEA)

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<th>navigation type</th>
<th>Operator</th>
<th>Geo-reference of journey</th>
</tr>
</thead>
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<tr>
<td>NACE/ISIC HS0</td>
<td>(A)+(B)+(D)+(E)+(F)</td>
<td>Air transport undertaken by resident units of the reporting country</td>
<td>(A) Domestic</td>
<td>Resident</td>
<td>Within* reporting country</td>
</tr>
<tr>
<td>Bridging item: less residents abroad – water</td>
<td>(B)+(D)+(E)+(F)</td>
<td>Less domestic aviation by residents departing from airports outside reporting country and less all international aviation by resident units</td>
<td>(B) Domestic</td>
<td>Resident</td>
<td>Outside reporting country, i.e. within another country</td>
</tr>
<tr>
<td>Bridging item: plus non-residents on territory – air</td>
<td>(C)</td>
<td>Plus domestic aviation by non-residents departing from an airport of the reporting country</td>
<td>(C) Domestic</td>
<td>Non-resident</td>
<td>Within* reporting country</td>
</tr>
<tr>
<td>Water transport included in UNFCCC total</td>
<td>(A)+(C)+(D)+(G)</td>
<td>National totals in UNFCCC inventories include only domestic navigation departing from airports of the reporting country</td>
<td>(D) International</td>
<td>Resident</td>
<td>From* (outwards) reporting country</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(E) International</td>
<td>Resident</td>
<td>To (inwards) reporting country</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(F) International</td>
<td>Resident</td>
<td>Outside reporting country, i.e. between two other countries</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(G) International</td>
<td>Non-resident</td>
<td>From* (outwards) reporting country</td>
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</table>

UNFCCC: United Nations framework convention on climate change – greenhouse gas emission inventories
AEA: Air emissions accounts
GEO: reporting country
SNA/ESA/SEEA: UN System of national accounts/European system of accounts/System of environmental economic accounting
NACE/ISIC: Statistical classifications of economic activities
H5: NACE/ISIC code for ‘Air transport’

* Flights departing from airports of the reporting country are approximated based on fuel sales reported in respective statistics of the reporting country.
Air transport – emissions of air pollutants, e.g. NOx (CLRTAP versus AEA)

### Reporting item in AEA

#### NACE/ISIC HS1: air transport by residents

- **Within GEO**
  - Domestic aviation
    - Resident of GEO
    - Non-resident of GEO
  - International aviation
    - Resident of GEO
    - Non-resident of GEO

#### Bridging item: less residents abroad - air

- **Within GEO**
  - Domestic aviation
    - Resident of GEO
    - Non-resident of GEO
  - International aviation
    - Resident of GEO
    - Non-resident of GEO

#### Bridging item: plus non-residents on territory - air

- **Within GEO**
  - Domestic aviation
    - Resident of GEO
    - Non-resident of GEO
  - International aviation
    - Resident of GEO
    - Non-resident of GEO

### CLRTAP

- NACE/ISIC HS1: air transport by residents
  - (A.1)+(A.2)+(B.1)+(B.2)+(D.1)+(D.2)+(E.1)+(E.2)+(F.1)+(F.2)
- Bridging item: less residents abroad - air
  - (B.1)+(B.2)+(A.2)+(D.1)+(D.2)+(E.1)+(E.2)+(F.1)+(F.2)
- Bridging item: plus non-residents on territory - air
  - (C.1)+(G.1)

### CLRTAP total

- Resident of GEO
  - (A.1)+(C.1)+(D.1)+(G.1)
- Non-resident of GEO
  - (A.2)+(C.2)+(D.2)+(G.2)

### Reporting item in CLRTAP

- Resident: Operators of air transport who are resident units of the reporting country
- Non-resident: Operators of air transport who are not resident units of the reporting country

### Flights by stage

#### Aviation by stage

- **LTO**: Landing and take-off
- **Cruise**: Cruising stage

### Flights by operator / geo-reference / stage

- **Within**: Domestic aviation between two airports located in the same country
- **Outside**: Aviation between two airports located outside the reporting country
- **From** (outwards): International aviation departing from an airport located in the reporting country
- **To** (inwards): International aviation arriving at an airport located in the reporting country

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**Eurostat, 29 April 2021**

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**NACE/ISIC**: Statistical classifications of economic activities

**HS1**: NACE/ISIC code for ‘Air transport’