



## A1 – Emissions of pollutants into the atmospheric air

## A2 – Ambient air quality in urban areas

Proposed revision of metadata



STATISTICS



16<sup>th</sup> Session of the Joint Task Force on Environmental Statistics and Indicators, Geneva, 28-29 October 2019

### Air emissions and air quality in the online guidelines

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Indicator	Description	Production	Glossary of terms
A. Air pollution and ozone depletion			
A1. Emissions of pollutants into the atmospheric air (updated October 2014)	<a href="#">PDF</a>	<a href="#">XLS</a>	<a href="#">PDF</a>
A2. Ambient air quality in urban areas (updated October 2014)	<a href="#">PDF</a>	<a href="#">XLS</a>	<a href="#">PDF</a>
A3. Consumption of ozone-depleting substances (updated October 2014)	<a href="#">PDF</a>	<a href="#">XLS</a>	<a href="#">PDF</a>
B. Climate change			
B1. Air temperature (updated October 2014)	<a href="#">PDF</a>	<a href="#">XLS</a>	<a href="#">PDF</a>
B2. Atmospheric precipitation (updated October 2014)	<a href="#">PDF</a>	<a href="#">XLS</a>	<a href="#">PDF</a>
B3. Greenhouse gas emissions (updated October 2014)	<a href="#">PDF</a>	<a href="#">XLS</a>	<a href="#">PDF</a>



## A1 – Air Emissions: information currently recommended for production and sharing

See xls template at <https://www.unece.org/env/indicators.html>



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1. SO<sub>2</sub> emissions per year: total, from stationary sources, from mobile sources
2. NO<sub>x</sub> emissions per year: total, from stationary sources, from mobile sources
3. Non-methane volatile organic compounds (NMVOC) emissions per year: total, from stationary sources, from mobile sources
4. NH<sub>3</sub> emissions per year: total, from stationary sources, from mobile sources
5. CO emissions per year: total, from stationary sources, from mobile sources
6. Hydrocarbons emissions per year: total, from stationary sources, from mobile sources
7. Total suspended particels per year: total, from stationary sources, from mobile sources
8. PM<sub>10</sub> emissions per year: total, from stationary sources, from mobile sources
9. PM<sub>2.5</sub> emissions per year: total, from stationary sources, from mobile sources
10. Absolute values of total emissions of other pollutants: PAH, PCB, PCDD/F, Pb, Cd, Hg, Ni, As, other
11. Main pollutants per capita (SO<sub>2</sub>, NO<sub>x</sub>, NMVOC, NH<sub>3</sub>, CO, Hydrocarbons, TSP, PM<sub>10</sub>, PM<sub>2.5</sub>)
12. Main pollutants per area
13. Main pollutants per GDP



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## A1 – Air Emissions: List of indicators in the new database

Nothing has changed in substance



### STATISTICS

- |        |  |
|--------|--|
| A-1.1  | Emissions of sulphur dioxide per capita  |
| A-1.2  | Emissions of sulphur dioxide per km <sup>2</sup>                                     |
| A-1.3  | Emissions of sulphur dioxide per unit of GDP   |
| A-1.4  | Emissions of nitrogen oxides per capita  |
| A-1.5  | Emissions of nitrogen oxides per km <sup>2</sup>                                     |
| A-1.6  | Emissions of nitrogen oxides per unit of GDP   |
| A-1.7  | Emissions of non-methane volatile organic compounds (NMVOC) per capita               |
| A-1.8  | Emissions of non-methane volatile organic compounds (NMVOC) per km <sup>2</sup>      |
| A-1.9  | Emissions of non-methane volatile organic compounds (NMVOC) per unit of GDP          |
| A-1.10 | Share of sulphur dioxide emissions from stationary or mobile sources                 |
| A-1.11 | Share of nitrogen oxides emissions from stationary or mobile sources                 |
| A-1.12 | Share of NMVOCs emissions from stationary or mobile sources                          |
| A-1.13 | Share of ammonia emissions from stationary or mobile sources                         |
| A-1.14 | Share of carbon monoxide emissions from stationary or mobile sources                 |
| A-1.15 | Share of hydrocarbons emissions from stationary or mobile sources                    |
| A-1.16 | Share of total suspended particels (TSP) emissions from stationary or mobile sources |
| A-1.17 | Share of PM <sub>10</sub> emissions from stationary or mobile sources                |
| A-1.18 | Share of PM <sub>2.5</sub> emissions from stationary or mobile sources               |



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## A1 – Air Emissions: No substantive changes proposed

Metadata were updated in 2014



### STATISTICS

#### Why we do not propose substantive changes:

- Metadata were updated in 2014
- No direct relationship with SDG indicators
- No significant change in related policies (global and regional)

**Main change: Presentation of the metadata (database, distinction between indicators and data/statistics)**

**Does the JTF agree? Comments?**



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## A2. Ambient air quality in urban areas: information currently recommended for production and sharing

See xls template at <https://www.unece.org/env/indicators.html>



### STATISTICS

For selected monitoring stations information about the following pollutants:

- Particulate matter - PM10
- Sulphur Dioxide - SO<sub>2</sub>
- Nitrogen Dioxide - NO<sub>2</sub>
- Ground level Ozone - O<sub>3</sub>

#### NOTE: WHO Guidelines are partly different!

- PM<sub>2.5</sub> and PM<sub>10</sub>: annual mean and a 24-hour mean
- SO<sub>2</sub>: 24-hour mean and a 10-minute mean
- NO<sub>2</sub>: annual mean and a 1-hour mean
- For O<sub>3</sub> an 8 hour mean

Values per pollutant:

- Daily average limit value WHO: 24-hour mean <> daily average limit value; only used for PM and SO<sub>2</sub>
- Annual average limit value WHO: only used for PM and NO<sub>2</sub>
- Highest daily concentration
- Number of days with exceeded daily limit value



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## A2. Ambient air quality in urban areas: Proposal for substantive changes

Better alignment with WHO guidelines



### STATISTICS

#### A. Better consideration of WHO guidelines in our metadata by adding the following:

- PM2.5 as pollutant
- 24h-mean limit value of PM2.5, PM10 and SO2
- 8h-mean limit value of O3
- 10 min. mean limit value of SO2
- 1h-mean limit value of NO2
- Annual mean concentrations of PM2.5, PM10 and NO2

#### B. Related SDG indicators

- 3.9.1 – Mortality rate attributed to household and ambient air pollution (tier I)
- 11.6.2 – Annual mean levels of fine particulate matter (i.e. PM2.5 and PM10) in cities (population weighted) (tier I):

Both SDG indicators are calculated by WHO based on national monitoring data, remote sensing, population estimates, exposure etc.. Therefore, it is proposed to NOT add them to the list of recommended UNECE environmental indicators

Does the JTF agree? Comments?



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## Indicators A1 and A2: Next Steps



### STATISTICS

1. Consideration of comments of JTF and update of database
2. Sharing of draft metadata with experts
3. Revised metadata sheets to all JTF members for comments or approval



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