

# Air Quality e-Reporting products on EEA data service

EEA, October 2021

## Introduction

Air Quality e-Reporting follows new rules for reciprocal exchange of information and reporting on ambient air quality established by the Directives 2004/107/EC and 2008/50/EC of the European Parliament and of the Council amended by Directive 2015/1480. The rules are set out in the [COMMISSION IMPLEMENTING DECISION 2011/850/EU](#) and Commission's guidance documents [IPR guidance part I](#) and [IPR guidance part II](#).

This set of products reflects the status of air quality data collected/calculated by the European Environment Agency. It supersedes all previous versions of air quality data published by the EEA.

The data presented here are under constant update and improvement over the period of September – October (around the main reporting deadline at 30/09). Apart from this time, we foresee the main updates in mid-November, mid-January, mid-April and mid-July. Nevertheless, please make sure that you download all data you need for your analysis/assessments from the different viewers within the same day and you maintain proper versioning on your side.

Data collected within the Air Quality e-Reporting start from 2013. Air quality statistics calculated before 2013 ([AirBase v8](#)) were merged with the statistics from e-Reporting.

For more information about Air Quality e-Reporting please visit <https://aqportal.discomap.eea.europa.eu/> or contact [aqipr.helpdesk@eionet.europa.eu](mailto:aqipr.helpdesk@eionet.europa.eu)

## 1. European data sets

European Data Sets combine data for all countries and include:

- Assessment methods meta-data reported by countries (both for measurements and models or objective estimations),
- Air quality annual statistics calculated by the EEA,
- Air quality modelling results (processed by the EEA to common format and projection),
- Primary observations (time series) reported by countries,
- Compliance data reported by the Member States and EEA countries (Air Quality Zones, Assessment Regimes and Attainment reports),
- Air Quality Plans and Programmes, including plans and supporting source apportionments, scenarios and measures.

The data are available in web-based applications and are described below.

## 1.1 Assessment methods – measurements (data flow D)

Assessment methods meta-data (data set D) describe technical facilities used for the measurement of one pollutant or one of its compounds. The [viewer](#) reflects the status of the latest data (see description of update schedule given in the *Introduction*) uploaded by countries and successfully tested by automated QC.

*Table 1. Fieldnames in assessment methods – measurements meta-data table.*

Field name	Description	Data type
Country	Country or territory name.	string
B-G Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Year	Latest year for which the data flow item has been reported.	numeric
AirQuality Network	Inspire identifier (Local Id) of air quality network, given by the data provider.	string
AirQuality Network Name	Name of air quality measurement network, given by the data provider.	string
Timezone	Time zone in which aggregations and statistics are calculated (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/timezone">http://dd.eionet.europa.eu/vocabulary/aq/timezone</a> ).	string
Air Quality Station Eol Code	Eol code of air quality measurement station (used in AirBase), given by data provider.	string
Air Quality Station Nat Code	National code of air quality measurement station, given by data provider.	string
Air Quality Station Name	Name of air quality measurement station (as in AirBase), given by data provider.	string
Sampling Point Id	Inspire identifier (Local Id) of sampling point, given by data provider.	string
Sampling Point Status*	Status of sampling point (active/closed).	string
Air Pollutant	Air polluting substance, level of which is measured and reported to the EEA (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/pollutant">http://dd.eionet.europa.eu/vocabulary/aq/pollutant</a> ).	string
Longitude	Longitude of air quality measurement station [decimal degrees].	numeric
Latitude	Latitude of air quality measurement station [decimal degrees].	numeric
Altitude	Altitude of air quality measurement station [m a.s.l.].	numeric
Altitude Unit	Unit of measurement of the altitude of the station.	string
Air Quality Station Area	Area of Air Quality Measurement Station classification - information whether it is measuring air pollution in urban, suburban, rural (etc.) environment (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/areaclassification">http://dd.eionet.europa.eu/vocabulary/aq/areaclassification</a> ).	string

Air Quality Station Type	Type of Air Quality Measurement Station - information whether it is measuring background, industrial or traffic related air pollution (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/station_classification">http://dd.eionet.europa.eu/vocabulary/aq/station_classification</a> ).	string
Operational Activity Begin	Start time of the sampling point.	datetime
Operational Activity End	End time of the sampling point.	datetime
Sample Id	Inspire identifier (Local Id) of sample (Feature of Interest), given by data provider.	string
Inlet Height	Height of the sampling point inlet.	numeric
Inlet Height Unit	Unit of measurement of the height of the sampling point inlet.	string
Building Distance	The horizontal distance of the inlet to the nearest building.	numeric
Building Distance Unit	Unit of measurement of the distance of the inlet to the nearest building.	string
Kerb Distance	The horizontal distance of the inlet to the nearest kerb.	numeric
Kerb Distance Unit	Unit of measurement of the distance of the inlet to the nearest kerb.	string
Distance Source	The distance from predominant industrial source or source area.	numeric
Distance Source Unit	Unit of measurement of the distance from predominant industrial source or source area.	string
Main Emission Sources	The main emission source for the pollutant.	string
Heating Emissions	Amount of emissions from domestic heating for a representative area of approximately 1 km <sup>2</sup> .	numeric
Heating Emissions Unit	Unit of measurement of the heating emissions.	string
Mobile	Mobile station qualifier fixed (0) or mobile (1).	numeric
Traffic Emissions	Amount of emissions from road traffic for a section of road representative of at least 100 m.	numeric
Traffic Emissions Unit	Unit of measurement of the traffic emissions.	string
Industrial Emissions	Amount of emissions from industry for a representative area of approximately 1 km <sup>2</sup> .	numeric
Industrial Emissions Unit	Unit of measurement of the industrial emissions.	string
Municipality	The name of the municipality in which the monitoring station is located.	string
Dispersion Local	The location of the station in relation to nearby buildings & trees using a controlled vocabulary.	string
Dispersion Regional	The regional dispersion characteristics or topographic situation on a scale of several kilometres affecting the station from a controlled vocabulary.	string
Distance Junction	Distance of the station from a major junction.	numeric
Distance Junction Unit	Unit of measurement of the distance of the station from a major junction.	string
Heavy Duty Fraction	The fraction of the total traffic volume (assessed as AADT) that is composed of HGVs on the adjacent road.	numeric

Height Facades	The average height of the building facades adjacent to the station (in meters) at the location of the station.	numeric
Street Width	The width of the street (in meters) at the location of the station.	numeric
Traffic Speed	The average speed of vehicles in km/h on the adjacent road.	numeric
Traffic Volume	The total traffic volume (as an annual average daily traffic) on the adjacent road	numeric
Process Id	Inspire identifier (Local Id) of sampling process (procedure), given by data provider.	string
Process Activity Begin	Start time of the measurement process.	datetime
Process Activity End	End time of the measurement process.	datetime
Measurement Type	The classification (grouping) of measurement methods into generic types. The types of measurements include: Automatic analyser, Remote sensor, Active sampling and Passive sampling.	string
Measurement Method	Information on method used for measuring air polluting substances (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/measurementmethod">http://dd.eionet.europa.eu/vocabulary/aq/measurementmethod</a> ).	string
Other Measurement Method	Other Measurement Method.	string
Measurement Equipment	Information on equipment used for measuring air polluting substances (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/measurementequipment">http://dd.eionet.europa.eu/vocabulary/aq/measurementequipment</a> ).	string
Other Measurement Equipment	Other Measurement Equipment.	string
Sampling Method	Information on the sampling methods used for Active or passive sampling measurement types (i.e. Passive adsorbent, Low Volume Sampling with automatic filter change...).	string
Other Sampling Method	Other Sampling Method.	string
Analytical Technique	Information on analytical technique (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/analyticaltechnique">http://dd.eionet.europa.eu/vocabulary/aq/analyticaltechnique</a> ).	string
Other Analytical Technique	Other Analytical Technique.	string
Equivalence Demonstrated	Specifies the equivalence status of the measuring/sampling process according to Annex VI.B of Dir. 2008/50EC and Annex V of Dir. 2004/107EC.	string
Demonstration Report	Link to the equivalence demonstration report.	string
Detection Limit	The measuring/sampling process including detection limit.	string
Detection Limit Unit	Unit of measurement of the detection limit.	string
Documentation	Title of documentation on data quality.	string
QA Report	Link to report with Quality Assurance information.	string

Duration	The expected sampling duration of the measurement or sampling method.	numeric
Duration Unit	Unit of measurement of the duration.	string
Cadence	The time interval between the start of two consecutive measurements or samples.	numeric
Cadence Unit	Unit of measurement of the cadence.	string
Source Data URL	URL of source data reported to the EEA.	string
Imported	Date and time of source data import into EEA's databases.	datetime

\* attributes used as filters only (not available as columns in the table)

## 1.2 Assessment methods – models and objective estimations (data flow D1b/E1b)

Assessment methods meta-data (data set D) describe techniques used for modelling of air pollutants concentrations. The [viewer](#) reflects the status of the latest data (see description of update schedule given in the *Introduction*) uploaded by countries and successfully tested by automated QC.

*Table 2. Fieldnames in assessment methods – models and objective estimations table.*

Field name	Description	Data type
Country	Country or territory name.	string
B-G Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Year	Year for which the data flow item has been reported.	numeric
AQ Model Id	Inspire identifier (Local Id) of air quality model, given by data provider.	string
Model Process Id	Inspire identifier (Local Id) of air quality model process (methodology), given by data provider.	string
Model Area Id	Inspire identifier (Local Id) of the model area, given by data provider.	string
Assessment Type	The classification of assessment methods into common types.	string
Air Pollutant	Air polluting substance, level of which is modelled and reported to the EEA (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/pollutant">http://dd.eionet.europa.eu/vocabulary/aq/pollutant</a> ).	string
Air Pollutant Description	Label of air polluting substance.	string
Data Aggregation Process	Specific statistic/aggregation reported according to codelist.	string
Unit Of Air Pollution Level	Unit of measurement of air pollution .	string
Result Encoding	Model results delivery within the XML (an inline encoding) or as a separate file (external encoding).	string
Result Format	Type of format of the results.	string
Spatial Resolution Description	Output by the model in simple plain text. Brief description of the regular grid or receptor spacing.	string

Temporal Resolution	Temporal resolution of the predictions output by the model.	numeric
Unit Of Temporal Resolution	Unit of measurement of the temporal resolution.	string
Meteorology	A description of the meteorological dataset used to configure the model.	string
Chemistry	A high level description or citation of the chemical scheme applied to within the model.	string
Emissions	The emissions inventory used to configure the model.	string
Topography	Description scheme for the terrain height and/or surface roughness.	string
Model Application	Description of model purpose (concentrations, forecasting, population exposure...).	string
Boundary Conditions	Description of boundary conditions.	string
Scaling	Description of empirical scaling factors applied as part of the model e.g. scaling factors to derive short-term exceedance statistics from long-term means.	string
Projection (SRID)	Spatial projection of the modelling results (spatial reference ID).	string
Model Description	Brief description of model.	string
Time Of Result	Time Instant for the generation of the model results.	datetime
EEA estimation of MQI**	<a href="#">Fairmode's</a> Model Quality Indicator as calculated by EEA.	numeric
Data Quality Description	Description of the methods used to evaluate the modelled data quality in terms of uncertainty.	string
Data Quality Report URL	Link to a report describing data quality of the model.	string
Model Report Title	Title of report describing the model.	string
Model Report Date	Date of report describing the model.	datetime
Model Report URL	Link to the report describing the model.	string
Administration Level	Level of administration of the responsible authority.	string
Authority Organisation	Name of responsible authority, institution or body.	string
Authority Website	Website of competent authority.	string
Authority Address	Address of competent authority.	string
Source Data URL	URL of source data reported to the EEA.	string
Imported	Date and time of source data import into EEA's databases.	datetime

\*\* - MQI estimated on data processed by the EEA to common format and grid projection (SRID 3035)

### 1.3 Air Quality annual statistics calculated by the EEA

The annual aggregated air quality values, accessible in [viewer](#), have been calculated by the EEA based on the primary observations (time series) uploaded by countries into CDR and successfully tested by automated QC (see also chapter 1.5). For description of update schedule, see *Introduction*.

Pay attention to the fact that the calculations use time zone declared at corresponding air quality network (see assessment methods – measurements meta-data, chapter 1.1) which do not necessarily match the time zone of the countries or time zone reported together with hourly values. Details on methodology used by the EEA to calculate air quality aggregations and statistics are [here](#).

Table 3. Fieldnames in air quality annual statistics table.

Fieldname	Description	Data type
Country	Country or territory name.	string
Air Quality Network	Inspire identifier (Local Id) of air quality network, given by data provider.	string
Air Quality Network Name	Name of air quality measurement network, given by data provider.	string
Air Quality Station Eol Code	Eol code of air quality measurement station (as in AirBase), given by data provider.	string
Air Quality Station Name	Name of air quality measurement station, given by data provider.	string
Sampling Point Id	Inspire identifier (Local Id) of sampling point, given by data provider.	string
Air Pollutant	Air polluting substance, level of which is measured and reported to the EEA (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/pollutant">http://dd.eionet.europa.eu/vocabulary/aq/pollutant</a> ).	string
Air Pollutant Description	Description of air polluting substance, level of which is measured and reported to the EEA (see also in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/pollutant">http://dd.eionet.europa.eu/vocabulary/aq/pollutant</a> ).	string
Data Aggregation Process Id	Id of process of data aggregation into annual values (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/aggregationprocess">http://dd.eionet.europa.eu/vocabulary/aq/aggregationprocess</a> ).	string
Data Aggregation Process	Description of process of data aggregation into annual values (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/aggregationprocess">http://dd.eionet.europa.eu/vocabulary/aq/aggregationprocess</a> ).	string
Year	Year for which primary data have been reported/ statistics were calculated.	numeric
Air Pollution Level	Concentration or level of air polluting substance, here given as an aggregation of air pollutant concentration values from primary observation time series.	numeric

Unit Of Air Pollution Level	Unit of concentration or level of air polluting substance (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/uom/concentration">http://dd.eionet.europa.eu/vocabulary/uom/concentration</a> ).	string
Data Coverage	Proportion of valid measurement included in the aggregation process within averaging period, expressed as percentage. If Data Coverage < 75% for averaging period of a year, annual statistics should not be included in air quality assessments, if Data Coverage < 85% (in a year), annual statistics should not be included in compliance checks.	numeric
Verification	Information based on verification flags found in reported time series (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/observationverification">http://dd.eionet.europa.eu/vocabulary/aq/observationverification</a> ).	numeric
Air Quality Station Type	Type of Air Quality Measurement Station - information whether it is measuring background, industrial or traffic related air pollution (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/stationclassification">http://dd.eionet.europa.eu/vocabulary/aq/stationclassification</a> ).	string
Air Quality Station Area	Area of Air Quality Measurement Station - information whether it is measuring air pollution in urban, suburban, rural (etc.) environment (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/areaclassification">http://dd.eionet.europa.eu/vocabulary/aq/areaclassification</a> ).	string
Longitude	Longitude of the location of AQ measurement for which the statistics were calculated.	numeric
Latitude	Latitude of the location of AQ measurement for which the statistics were calculated.	numeric
Altitude	Altitude of the location of AQ measurement for which the statistics were calculated.	numeric
City	City name.	string
City Code	City code as specified in Eurostat's Urban Audit.	string
City Population	Population of city.	string
Source Of Data Flow	Specification of data flow, which is source for raw data used for the statistics calculation.	string
Calculation Time	Date and time when the statistic was calculated.	datetime
Filter on data used in AQ Report*	Flag filtering on data used in AQ Report.	string
Filter on data used in attainment analysis*	Flag filtering on data used in attainment analysis.	string
Filter on Data Coverage*	Flag filtering on Data Coverage.	string
Filter on Sampling Points declared in data flow C*	Flag filtering on Sampling Points declared in data flow C.	string
Filter on single Sampling Point at monitoring site*	Flag filtering on single Sampling Point at monitoring site.**	string



It is potential outlier (AQD pollutants only)*	Flag filtering potential outliers (AQD pollutants only).***	string
Link to raw data (only E1a/validated data from AQ e-Reporting)	Link to raw data (only E1a/validated data from AQ e-Reporting).****	string

\* attributes used as filters only (not available as columns in the table)

\*\* there are cases, especially for PM, that several sampling points are used at the same measurement location (AQ station); we use procedure based on data coverage, importance for attainment analysis and reported air pollution values, to identify single sampling point per each measurement location,

\*\*\* methodology for outliers identification is described at the end of this document (see Appendix: *Defining thresholds for flagging obvious outliers*),

\*\*\*\* for multiyear aggregations the link provides raw data only for the reporting year ('Year').

## 1.4 Air Quality modelling results (data flow E1b)

The EEA processed the data, uploaded by countries into CDR (data flow E1b) and successfully tested by automated QC, to common format and projection (SRID 3035). The [map viewer](#) shows the processed data only but user can reach the original (CDR) files through meta-information available directly in pop-up windows or through table (see 1.2) linked with the viewer.

## 1.5 Primary observation time series (data flow E1a)

These data sets have been exported from EEA's SQL data base which stores primary observations (time series, data set E1a) uploaded by countries into CDR and successfully tested by automated QC.

Air quality time series (primary observations) are available as files generated separately for each sampling point and year. More details as well as the download service can be found [here](#).

Fields in all files are tab-separated and first line contains fieldnames as described in Table 4.

*Table 4. Fieldnames in files with primary observations time series.*

Fieldname	Description	Data type
CountryCode	ISO2 code of country.	string
Namespace (PK)	Inspire identifier/namespace of reporting entity, given by data provider.	string
AirQualityNetwork	Inspire identifier (LocalId) of air quality measurement network, given by data provider.	string
AirQualityStation	Inspire identifier (LocalId) of air quality measurement station, given by data provider.	string
AirQualityStationEolCode	Eol code of air quality measurement station (as in AirBase).	string
SamplingPoint (PK)	Inspire identifier (LocalId) of sampling point, given by data provider.	string

SamplingProcess (PK)	Inspire identifier (LocalId) of sampling process (procedure), given by data provider.	string
Sample (PK)	Inspire identifier (LocalId) of sample (featureofinterest), given by data provider.	string
AirPollutant	Air polluting substance, level of which is measured and reported to the EEA (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/pollutant">http://dd.eionet.europa.eu/vocabulary/aq/pollutant</a> ).	string
AirPollutantCode (PK)	Air polluting substance, level of which is measured and reported to the EEA (see id in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/pollutant">http://dd.eionet.europa.eu/vocabulary/aq/pollutant</a> ).	string
AveragingTime	Averaging time/frequency of reported air quality values (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/primaryObservation">http://dd.eionet.europa.eu/vocabulary/aq/primaryObservation</a> ).	string
Concentration	Measured concentration of air polluting substance.	numeric
UnitOfMeasurement	Unit of concentration of air polluting substance (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/uom/concentration">http://dd.eionet.europa.eu/vocabulary/uom/concentration</a> ).	string
DatetimeBegin	Date-time begin of measurement (UTC+1 for hourly data and original time zone for other averaging times).	datetime
DatetimeEnd	Date-time end of measurement (UTC+1 for hourly data and original time zone for other averaging times).	datetime
Validity	Information about data validity, given by data provider (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/observationvalidity">http://dd.eionet.europa.eu/vocabulary/aq/observationvalidity</a> ).	numeric
Verification	Information whether data have been verified by data provider (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/observationverification">http://dd.eionet.europa.eu/vocabulary/aq/observationverification</a> ).	numeric

**Note:** The fieldnames convention differs from the tables presented in other sections. The time series download service will undergo a significant update in the following year to improve the files structure and data consistency.

There is also an extract of meta-data, generated from SQL data base, available in the same service.

Keep in mind that this file may include some (accumulated) data, which have not been delivered in the latest reports in EEA's Central Data Repository ([CDR](#)). Therefore, for some of the countries, there may be more (outdated) records than in the [web based application](#) described in section 1.1.

**Note:** We advise to use the [viewer](#) described in section 1.1 to get the meta-data on measurements. Description of the table available in time series download service is given here for explanatory purpose.

Table 5. Fieldnames in meta-data files available in time series download service.

<b>Field name</b>	<b>Description</b>	<b>Data type</b>
CountryCode	ISO2 code of country.	string
Timezone	Timezone used by the country to report dates	string
Namespace (PK)	Inspire identifier/namespace of reporting entity, given by data provider.	string
AirQualityNetwork	Inspire identifier (Local Id) of air quality measurement network, given by data provider.	string
AirQualityStation	Inspire identifier (Local Id) of air quality measurement station, given by data provider.	string
AirQualityStationEolCode	Eol code of air quality measurement station (as in AirBase).	string
AirQualityStationNatCode	National code of air quality measurement station (as in AirBase).	string
SamplingPoint (PK)	Inspire identifier (Local Id) of sampling point, given by data provider.	string
SamplingProcess (PK)	Inspire identifier (Local Id) of sampling process (procedure), given by data provider.	string
Sample (PK)	Inspire identifier (Local Id) of sample (Feature of Interest), given by data provider.	string
AirPollutantCode (PK)	Air polluting substance, level of which is measured and reported to the EEA (see id in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/pollutant">http://dd.eionet.europa.eu/vocabulary/aq/pollutant</a> ).	string
ObservationDateBegin	Observation's start time (yyyy-mm-dd hh:mm:ss)	datetime
ObservationDateEnd	Observation's end time (yyyy-mm-dd hh:mm:ss)	datetime
Projection	Identifier of spatial reference system (EPSG).	string
Longitude	Longitude of air quality measurement station [decimal degrees].	numeric
Latitude	Latitude of air quality measurement station [decimal degrees].	numeric
Altitude	Altitude of air quality measurement station [m a.s.l.].	numeric
MeasurementType	Information if measurement was taken using active or passive sampling, by automatic analyzer or remote sensor (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/measurementtype">http://dd.eionet.europa.eu/vocabulary/aq/measurementtype</a> ).	string
AirQualityStationType	Type of Air Quality Measurement Station - information whether it is measuring background, industrial or traffic related air pollution (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/stationclassification">http://dd.eionet.europa.eu/vocabulary/aq/stationclassification</a> ).	string
AirQualityStationArea	Area of Air Quality Measurement Station - information whether it is measuring air pollution in urban, suburban, rural (etc.) environment (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/areaclassification">http://dd.eionet.europa.eu/vocabulary/aq/areaclassification</a> ).	string
EquivalenceDemonstrated	Information on measuring method equivalence (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/equivalencedemonstrated">http://dd.eionet.europa.eu/vocabulary/aq/equivalencedemonstrated</a> ).	string
MeasurementEquipment	Information on equipment used for measuring air polluting substances (see in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/measurementequipment">http://dd.eionet.europa.eu/vocabulary/aq/measurementequipment</a> ).	string

<i>InletHeight</i>	<i>Height above ground level on which samples of air are taken [m].</i>	<i>numeric</i>
<i>BuildingDistance</i>	<i>Distance from the sampling inlet to a nearest building [m].</i>	<i>numeric</i>
<i>KerbDistance</i>	<i>Distance from the sampling inlet to a nearest kerbside [m].</i>	<i>numeric</i>

## 1.6 Compliance data

There are six data sets with compliance data generated by the EEA based on reports uploaded by the Member States and EEA countries into CDR and successfully tested by automated QC:

- Air Quality Zones information – describing delimitation and type of zones and agglomerations in which the assessment and management of air quality is to be carried out (data set B and B preliminary),
- Air Quality Zone geometries (data set B and B preliminary),
- Air Quality Assessment Regimes – applied for each pollutant within individual zones and agglomerations (data set C and C preliminary),
- Air Quality Assessment Regimes Methods – listing assessment methods applied within each assessment regime applied (data set C and C preliminary),
- Attainments of (air quality) environmental objectives (data set G).
- Attainments of (air quality) environmental objectives - methods (data set G) – listing assessment methods used for assessing each of the attainments status.

For description of update schedule, see *Introduction*.

The air quality zones information is available in [here](#).

*Table 6. Fieldnames in air quality zones table.*

<b>Fieldname</b>	<b>Description</b>	<b>Data type</b>
Country	Country or territory name.	string
B-G Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Year	Year for which the data flow item has been reported.	numeric
Preliminary	Yes if zone reported as forward look (Year+1) or No as retrospective look (Year-1).	string
AQ Zone Id	Inspire identifier (Local Id) of air quality zone, given by data provider.	string
Zone Code	Identifier of air quality zone, given by data provider.	string
Zone Type	Air quality zone type (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/zonetype">http://dd.eionet.europa.eu/vocabulary/aq/zonetype</a> ).	string
Geographical Name	Geographical Name of air quality zone.	string
hasPredecessor*	Zone superseding the new zone.	string

Predecessor Id	Inspire identifier (Local Id) of air quality zone predecessor, given by data provider.	string
Resident Population	Number of population residing in the air quality zone.	numeric
Resident Population Year	Reference year the resident population number.	numeric
Begin Time	Begin time of air quality zone.	datetime
End Time	End time of air quality zone.	datetime
Area	Area of the air quality zone.	numeric
Area Unit	Unit of measurement of zone's area (usually km2).	string
Authority Organisation	Name of responsible authority, institution or body.	string
Authority Website	Website of competent authority.	string
Authority Telephone	Telephone number of competent authority.	string
Authority Address	Address of competent authority.	string
Source Data URL	URL of source data reported to the EEA.	string
Imported	Date and time of source data import into EEA's databases.	datetime

\* attributes used as filters only (not available as columns in the table)

The air quality zone geometries are available in [Air Quality Zones Feature Download Service](#) in several spatial formats (ESRI Shapefile, SpatialLite, ESRI File Geodatabase, Google Earth KML) as well as an attribute table in Excel (see below).

*Table 7. Fieldnames in attributes table of zone geometries (Air Quality Zones/e-Reporting WFS).*

Fieldname	Description	Data type
OBJECTID	Id (internal) of the zone geometry.	numeric
Zoneld	Inspire identifier (Local Id) of air quality zone, given by data provider.	string
CountryOrTerritory	Country or territory name.	string
ISO2	Country or territory ISO2 code.	string
Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
ProtectionTarget	Protection targets (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget">http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget</a> ) for which the zone is valid.	string
Pollutant	Air polluting substances (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/pollutant">http://dd.eionet.europa.eu/vocabulary/aq/pollutant</a> ) for which the zone is valid.	string
UpdateTime	Indicates the time of the latest update of geometry	datetime
SHAPE_Length	Length of zone geometry perimeter [m].	numeric
SHAPE_Area	Area of zone geometry [m <sup>2</sup> ].	numeric

The air quality assessment regime information is available in [here](#).

Table 8. Fieldnames in air quality assessment regimes table.

Fieldname	Description	Data type
Country	Country or territory name.	string
B-G Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Year	Year for which the data flow item has been reported.	numeric
Preliminary	Yes if Assessment regime reported as forward look (Year+1) or No as retrospective look (Year-1).	string
AQ Assessment Regime Id	Inspire identifier (Local Id) of air quality assessment regime, given by data provider.	string
AQ Zone Id	Inspire identifier (Local Id) of air quality zone, given by data provider.	string
Classification Year	The year of the last assessment of the pollution level in the zone in relation to the assessment thresholds	numeric
Classification Report	URL to an on line report or resource describing the classification procedure being reported with thin the assessment regime.	string
Air Pollutant	Air polluting substance (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/pollutant">http://dd.eionet.europa.eu/vocabulary/aq/pollutant</a> ) for which the air quality assessment regime has been reported.	string
Protection Target	Protection target (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget">http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget</a> ) for which the air quality assessment regime has been reported.	string
Objective Type	Objective type (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/objectivetype">http://dd.eionet.europa.eu/vocabulary/aq/objectivetype</a> ) for which the air quality assessment regime has been reported.	string
Reporting Metric	Reporting metric (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric">http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric</a> ) for which the air quality assessment regime has been reported.	string
Assessment Threshold Exceedance	Status of assessment threshold exceedance (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/assessmentthresholdexceedance">http://dd.eionet.europa.eu/vocabulary/aq/assessmentthresholdexceedance</a> ) reported with the assessment regime.	string
Nr Of Fixed Sampling Points	Number of fixed sampling points used in the assessment regime.	numeric
Nr Of Fixed-Random Sampling Points	Number of fixed-random sampling points used in the assessment regime.	numeric
Nr Of Indicative Sampling Points	Number of indicative sampling points used in the assessment regime.	numeric

Nr Of Sampling Points For Objective Estimation	Number of sampling points used for objective estimation in the assessment regime.	numeric
Nr Of Models	Number of models used in the assessment regime.	numeric
Source Data URL	URL of source data reported to the EEA.	string
Imported	Date and time of source data import into EEA's databases.	datetime

The data listing assessment methods applied within each air quality assessment regime is available in [here](#).

*Table 9. Fieldnames in air quality assessment regimes - methods table.*

Fieldname	Description	Data type
Country	Country or territory name.	string
B-G Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Year	Year for which the data flow item has been reported.	numeric
Preliminary	Yes if Assessment regime reported as forward look (Year+1) or No as retrospective look (Year-1).	string
AQ Assessment Regime Id	Inspire identifier (Local Id) of air quality assessment regime, given by data provider.	string
Assessment Method Id	Inspire identifier (Local Id) of assessment method (sampling point or model), given by data provider.	string
AQ Zone Id	Inspire identifier (Local Id) of air quality zone, given by data provider.	string
Air Pollutant	Air polluting substance (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/pollutant">http://dd.eionet.europa.eu/vocabulary/aq/pollutant</a> ) for which the air quality assessment regime has been reported.	string
Protection Target	Protection target (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget">http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget</a> ) for which the air quality assessment regime has been reported.	string
Objective Type	Objective type (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/objectivetype">http://dd.eionet.europa.eu/vocabulary/aq/objectivetype</a> ) for which the air quality assessment regime has been reported.	string
Reporting Metric	Reporting metric (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric">http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric</a> ) for which the air quality assessment regime has been reported.	string
Assessment Type	The classification of assessment methods into common types.	string
Assessment Type Description	Description of the classification of assessment methods into common types.	string
Assessment Method	The classification of assessment methods into common types. The types of assessment are those	string

	management by data flow D on assessment methods e.g. fixed measurement, modelling, indicative measurement, objective estimation.	
Source Data URL	URL of source data reported to the EEA.	string
Imported	Date and time of source data import into EEA's databases.	datetime

The attainments of (air quality) environmental objectives are available in [here](#).

*Table 10. Fieldnames in air quality attainments table.*

Fieldname	Description	Data type
Country	Country or territory name.	string
B-G Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Year	Year for which the data flow item has been reported.	numeric
AQ Attainment Id	Inspire identifier (Local Id) of air quality attainment, given by data provider.	string
AQ Assessment Regime Id	Inspire identifier (Local Id) of air quality assessment regime, given by data provider.	string
AQ Zone Id	Inspire identifier (Local Id) of air quality zone, given by data provider.	string
Air Pollutant	Air polluting substance (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/pollutant">http://dd.eionet.europa.eu/vocabulary/aq/pollutant</a> ) for which the air quality assessment regime has been reported.	string
Protection Target	Protection target (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget">http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget</a> ) for which the air quality assessment regime has been reported.	string
Objective Type	Objective type (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/objectivetype">http://dd.eionet.europa.eu/vocabulary/aq/objectivetype</a> ) for which the air quality assessment regime has been reported.	string
Reporting Metric	Reporting metric (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric">http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric</a> ) for which the air quality assessment regime has been reported.	string
Exceedance Type Id	Exceedance description stages (base, adjustment or final).	string
Is Exceedance	Statement to be declared whether levels are above or below the environmental objective.	string
Numerical Exceedance	The description of the highest concentration value observed or predicted in the zone for the pollutant and environmental objective specified.	numeric
Number Of Exceedances	The number of short term exceedances for the description of the highest number of exceedances of short term reporting metrics observed or	numeric



	predicted in the zone for the pollutant and environmental objective specified.	
Surface Area	The area of exceedance.	numeric
Unit Of Surface Area	Unit of measurement of the area of exceedance.	string
Road Length	The length of road exceeding.	numeric
Population Exposed	An estimate of the total resident population exposed to levels above the environmental objective.	numeric
Ecosystem Area Exposed	An estimate of the area of this sensitive receptor type to levels above the environmental objective.	numeric
Unit Of Ecosystem Area	Unit of measurement of the ecosystem area of exceedance.	string
Sensitive Population	An estimate of the percentage of sensitive population in the exceedance area, defined as sum of percentage under 18 and over 60 years of age.	numeric
Infrastructure Services	The total number of infrastructure services for sensitive population groups in the exceedance area (hospitals, kindergardens, schools etc.).	numeric
Reference Year	Time position for the year in which the population estimates in declared in aqd:populationExposed were collected.	numeric
Adjustment Type	Reference to a codelist describing that either adjustment has not been applied (/noneApplied) or adjustment is not applicable (/noneApplicable).	string
Adjustment Source	Reference to a codelist detailed description of the source being adjusted e.g. sea spray or volcanic activity with the country.	string
Assessment Type	The types of assessment are those management by data flow D on assessment methods e.g. fixed measurement, modelling, indicative measurement, objective estimation.	string
Description Of Assessment Type	Short textual description of the adjustment assessment type and how it is applied.	string
Reason	Reason of exceedance.	string
Reason Other	Reason of exceedance (other).	string
Administrative Units	List of administrative units coincident with the exceedance situation area.	string
Comment	Further explanation of exceedance.	string
Spatial Extent	A geometry description of the extent of the exceedance area.	string
Source Data URL	URL of source data reported to the EEA.	string
Imported	Date and time of source data import into EEA's databases.	datetime

The data listing assessment methods used for assessing each of the attainments status is available in [here](#).

Table 11. Fieldnames in air quality attainment - methods table.

Fieldname	Description	Data type
Country	Country or territory name.	string
B-G Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Year	Year for which the data flow item has been reported.	numeric
AQ Attainment Id	Inspire identifier (Local Id) of air quality attainment, given by data provider.	string
Assessment Method Id	Inspire identifier (Local Id) of assessment method (sampling point or model), given by data provider.	string
AQ Zone Id	Inspire identifier (Local Id) of air quality zone, given by data provider.	string
Air Pollutant	Air polluting substance (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/pollutant">http://dd.eionet.europa.eu/vocabulary/aq/pollutant</a> ) for which the air quality assessment regime has been reported.	string
Protection Target	Protection target (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget">http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget</a> ) for which the air quality assessment regime has been reported.	string
Objective Type	Objective type (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/objectivetype">http://dd.eionet.europa.eu/vocabulary/aq/objectivetype</a> ) for which the air quality assessment regime has been reported.	string
Reporting Metric	Reporting metric (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric">http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric</a> ) for which the air quality assessment regime has been reported.	string
Exceedance Type Id	Exceedance description stages (base, adjustment or final).	string
Is Exceedance	Statement to be declared whether levels are above or below the environmental objective.	string
Assessment Method	Type of method (sampling point, model, objective estimation).	string
Source Data URL	URL of source data reported to the EEA.	string
Imported	Date and time of source data import into EEA's databases.	datetime

## 1.7 Air Quality Plans and Programmes

There are four data sets with air quality plans and programmes information generated by the EEA. The data sets are based on reports uploaded by the Member States and EEA countries into CDR and successfully tested by automated QC. They include the following information:

- Air Quality Plans – information on air quality plans delivered by countries for zones and agglomerations where environmental objectives are not attained (see data flow G, attainment reports),
- Source apportionments – information on source apportionments delivered by countries for each air pollutant considered in air quality plans (see data flow H, air quality plans),
- Air quality scenarios – information on air quality scenarios delivered by countries and supporting air quality plans (see data flow H, air quality plans),
- Air quality measures – information on air quality measures reported by countries and applied within air quality plans (see data flow H, attainment reports).

For description of update schedule, see *Introduction*.

The information on air quality plans is available in [here](#).

Table 12. Fieldnames in air quality plans table.

Fieldname	Description	Data type
Country	Country or territory name.	string
H-K Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Year	Year for which the data flow item has been reported.	numeric
AQ Plan Id	Inspire identifier (Local Id) of plan, given by data provider.	string
Local Code	Unique local reference to air quality plan provided by data provider.	string
Name	Name of the air quality plan(s).	string
First Exceedance Year	Year of the (first) exceedance of the LV, LV+MoT) or TV, which triggered the implementation of the air quality plan.	numeric
Status	The current status of the air quality plan based on a controlled vocabulary.	string
Adoption Date	The date of official adoption of the plan by the country of administration.	datetime
Time Table	Description of timetable for the implementation of the air quality plan.	string
Online Document URL	A URL to document or web resource describing the last version of full air quality plan.	string
Country Comment	A short description or notes for clarification in relation to the plan from data provider.	string
Valid Attainment Link*	Yes if there is valid link between plan and attainment report.	string

Authority Organisation	Name of responsible authority, institution or body.	string
Authority Website	Website of competent authority.	string
Authority Telephone	Telephone number of competent authority.	string
Authority Address	Address of competent authority.	string
AQ Attainment Id	Inspire identifier (Local Id) of air quality attainment, given by data provider.	string
B-G Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Attainment Reporting Year	Year for which the corresponding attainment report has been reported.	numeric
AQ Zone Id	Inspire identifier (Local Id) of air quality zone, given by data provider.	string
Air Pollutant	Air polluting substance (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/pollutant">http://dd.eionet.europa.eu/vocabulary/aq/pollutant</a> ) for which the air quality assessment regime has been reported.	string
Protection Target	Protection target (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget">http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget</a> ) for which the air quality assessment regime has been reported.	string
Objective Type	Objective type (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/objectivetype">http://dd.eionet.europa.eu/vocabulary/aq/objectivetype</a> ) for which the air quality assessment regime has been reported.	string
Reporting Metric	Reporting metric (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric">http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric</a> ) for which the air quality assessment regime has been reported.	string
Source Data URL	URL of source data reported to the EEA.	string
Imported	Date and time of source data import into EEA's databases.	datetime

\* attributes used as filters only (not available as columns in the table)

The information on source apportionments is available in [here](#).

Table 13. Fieldnames in source apportionment table.

Fieldname	Description	Data type
Country	Country or territory name.	string
H-K Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Year	Year for which the data flow item has been reported.	numeric
Source Apportionment Id	Inspire identifier (Local Id) of source apportionment, given by data provider.	string

Reference Year	The year for which source apportionment has been calculated.	numeric
AQ Plan Id	Identifier of Air Quality Plan.	string
AQ Plan Reporting Year	The year of the Air Quality Plan.	numeric
First Exceedance Date	Year of the (first) exceedance of the LV, LV+MoT) or TV, which triggered the implementation of the air quality plan.	numeric
Country Comment	Comment or clarification from data provider.	string
Exceedance Reason	The reason for exceedance.	string
Regional Background Total	Total contribution from regional background. The regional background contribution is the concentration of pollutants coming from sources >30km from the exceedance situation.	numeric
Urban Background Total	Total background contributions excluding the regional background and local increment contributions. The urban background source apportionment component represents the contribution to concentrations from emissions sources within towns or agglomerations that are within 30km of the exceedance situation.	numeric
Local Increment Total	Total local contributions from emissions sources immediately adjacent to the location of the exceedance situation excluding the regional background and local increment contributions.	numeric
Regional Background Natural	Contribution to regional background from Natural Sources.	numeric
Urban Background Natural	Contribution to urban background from Natural Sources.	numeric
Local Increment Natural	Contribution to local increment from Natural Sources.	numeric
Regional Background Inside Country	Contribution to regional background within the Member State.	numeric
Regional Background Transboundary	Contribution to regional background from outside the Member State (transboundary).	numeric
Urban Background Transboundary	Contribution to urban background from outside the Member State (transboundary).	numeric
Local Increment Transboundary	Contribution to local increment from outside the Member State (transboundary).	numeric
Regional Background Other	Contribution to regional background from other source.	numeric
Urban Background Other	Contribution to urban background from other source.	numeric
Local Increment Other	Contribution to local increment from other source.	numeric
Urban Background Agriculture	Contribution to urban background from Agriculture.	numeric
Local Increment Agriculture	Contribution to local increment from Agriculture.	numeric
Urban Background Industrial	Contribution to urban background from Industrial sources.	numeric

Local Increment Industrial	Contribution to local increment from Industrial sources.	numeric
Urban Background Commercial	Contribution to urban background from commercial and residential sources.	numeric
Local Increment Commercial	Contribution to local increment from commercial and residential sources.	numeric
Urban Background Off Road	Contribution to urban background from off road mobile machinery sources.	numeric
Local Increment Off Road	Contribution to local increment from off road mobile machinery sources.	numeric
Urban Background Shipping	Contribution to urban background from shipping sources.	numeric
Local Increment Shipping	Contribution to local increment from shipping sources.	numeric
Urban Background Traffic	Contribution to urban background from traffic sources.	numeric
Local Increment Traffic	Contribution to local increment from traffic sources.	numeric
Valid Attainment Link*	Yes if there is valid link between source apportionment data and attainment report.	string
AQ Attainment Id	Inspire identifier (Local Id) of air quality attainment, given by data provider.	string
B-G Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Attainment Reporting Year	Year for which the related Attainment has been reported.	numeric
AQ Zone Id	Inspire identifier (Local Id) of air quality zone, given by data provider.	string
Air Pollutant	Air polluting substance (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/pollutant">http://dd.eionet.europa.eu/vocabulary/aq/pollutant</a> ) for which the air quality assessment regime has been reported.	string
Protection Target	Protection target (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget">http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget</a> ) for which the air quality assessment regime has been reported.	string
Objective Type	Objective type (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/objectivetype">http://dd.eionet.europa.eu/vocabulary/aq/objectivetype</a> ) for which the air quality assessment regime has been reported.	string
Reporting Metric	Reporting metric (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric">http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric</a> ) for which the air quality assessment regime has been reported.	string
Source Data URL	URL of source data reported to the EEA.	string
Imported	Date and time of source data import into EEA's databases.	datetime

\* attributes used as filters only (not available as columns in the table)

The information on air quality scenarios is available in [here](#).

Table 14. Fieldnames in air quality scenarios table.

Fieldname	Description	Data type
Country	Country or territory name.	string
H-K Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Year	Year for which the data flow item has been reported.	numeric
Scenario Id	Inspire identifier (Local Id) of scenario, given by data provider.	string
AQ Plan Id	Inspire identifier (Local Id) of air quality plan, given by data provider.	string
AQ Plan Reporting Year	Year for which the related Air Quality Plan has been reported.	numeric
First Exceedance Date	Year of the (first) exceedance of the LV, LV+MoT) or TV, which triggered the implementation of the air quality plan.	numeric
Source Apportionment Id	Inspire identifier (Local Id) of source apportionment, given by data provider.	string
Source Apportionment Reporting Year	Year for which the related Source Apportionment has been reported.	numeric
Attainment Year	The calendar year for which the projections have been calculated.	numeric
Scenario Code	Local code for the the evaluation scenario, given by data provider.	string
Start Year	The year from which the projections are have been calculated. It define base year from which modelling of future projection is based will effect the emissions inventory used, atmospheric conditions and implemented measures within the base year.	numeric
Publication	Link to published information on related Air Quality Plan.	string
Base Scenario Emissions	The emissions scenario applied in the baseline analysis (without additional measures).	numeric
Projection Scenario Emissions	The emissions scenario applied in the projection year (with additional measures included).	numeric
NS WSS Correction	Statement if adjustment for natural sources (NS) and / or WinterSanding and Salting (WSS) is applied/applicable.	string
Valid Attainment Link*	Yes if there is valid link between scenario and attainment report.	string
AQ Attainment Id	Inspire identifier (Local Id) of air quality attainment, given by data provider.	string
B-G Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Attainment Reporting Year	Year for which the related Attainment has been reported.	numeric

AQ Zone Id	Inspire identifier (Local Id) of air quality zone, given by data provider.	string
Air Pollutant	Air polluting substance (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/pollutant">http://dd.eionet.europa.eu/vocabulary/aq/pollutant</a> ) for which the air quality assessment regime has been reported.	string
Protection Target	Protection target (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget">http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget</a> ) for which the air quality assessment regime has been reported.	string
Objective Type	Objective type (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/objectivetype">http://dd.eionet.europa.eu/vocabulary/aq/objectivetype</a> ) for which the air quality assessment regime has been reported.	string
Reporting Metric	Reporting metric (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric">http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric</a> ) for which the air quality assessment regime has been reported.	string
Source Data URL	URL of source data reported to the EEA.	string
Imported	Date and time of source data import into EEA's databases.	datetime

\* attributes used as filters only (not available as columns in the table)

The information on air quality measures is available in [here](#).

Table 15. Fieldnames in air quality scenarios table.

Fieldname	Description	Data type
Country	Country or territory name.	string
H-K Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Year	Year for which the data flow item has been reported.	numeric
MeasureId	Inspire identifier (Local Id) of air quality measures, given by data provider.	string
AQ Plan Id	Inspire identifier (Local Id) of air quality plan, given by data provider.	string
AQ Plan Reporting Year	Year for which the related Air Quality Plan has been reported.	numeric
Source Apportionment Id	Inspire identifier (Local Id) of source apportionment, given by data provider.	string
Source Apportionment Reporting Year	Year for which the related Source Apportionment has been reported.	numeric
Scenario Id	Inspire identifier (Local Id) of scenario, given by data provider.	string
Scenario Reporting Year	Year for which the related Scenario has been reported.	numeric



Attainment Year	The calendar year for which the projections have been calculated	numeric
Code	Unique local code for the measure, given by data provider.	string
Name	A short title of the pollution abatement measure.	string
Description	Descriptive information on the measure	string
Measure Classification	Classification of the measure using one of a series measure tyoes. The measure classifications type available to countries are controlled by codelist, see <a href="http://dd.eionet.europa.eu/vocabulary/aq/measurclassification">http://dd.eionet.europa.eu/vocabulary/aq/measurclassification</a> .	string
Measure Type	Describe the high-level implementation mechanism or scope of the measure. The measure types available to countries are controlled by codelist, see <a href="http://dd.eionet.europa.eu/vocabulary/aq/measurtype">http://dd.eionet.europa.eu/vocabulary/aq/measurtype</a> .	string
Administration Level	The administrative level responsible for implementation of the measure.	string
Time Scale	The timescale for the implementation of the measure.	string
Estimated Costs	Estimated costs for the implementation of the measure over its implementation life time.	numeric
Actual Cost	The actual costs of implementing the measure.	numeric
Currency	The currency of the costs provided.	string
Cost Comment	Comments / notes for clarification added to the costs information, given by data provider.	string
Emission Reduction	The reduction in total annual emissions attributable to the measure kt/yr Emissions in the area addressed by the measure for the year for which the projections are developed.	numeric
Emission Reduction Comment	Comments / notes for clarification to the emission reduction, given by data provider.	string
Impact Concentration Delta	The reduction in average concentrations for the relevant long-term reporting metric as a numerical value with recommended units of ug/m3.	numeric
Impact Exceedance Delta	Expected impact in number of exceedances in the Projection yearFor short-term reporting metrics values, this information class specifies the reduction in the number of exceedances for the relevant long-term reporting metric.	numeric
Impact Exceedance Hours	For short-term reporting metrics values, the units of measure for the number of exceedances from a codelist. Allowed values are 'days' or 'hours'.	string
Impact Comment	Comments / notes for clarification on the expected impact on ambient concentration of the measure, given by data provider.	string

Source Sector	The high-level activity sector targeted by the measure.	string
Spatial Scale	The geographical scope of the measure.	string
Valid Attainment Link*	Yes if there is valid link between measure and attainment report.	string
AQ Attainment Id	Inspire identifier (Local Id) of air quality attainment, given by data provider.	string
B-G Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Attainment Reporting Year	Year for which the related Attainment has been reported.	numeric
AQ Zone Id	Inspire identifier (Local Id) of air quality zone, given by data provider.	string
Air Pollutant	Air polluting substance (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/pollutant">http://dd.eionet.europa.eu/vocabulary/aq/pollutant</a> ) for which the air quality assessment regime has been reported.	string
Protection Target	Protection target (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget">http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget</a> ) for which the air quality assessment regime has been reported.	string
Objective Type	Objective type (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/objectivetype">http://dd.eionet.europa.eu/vocabulary/aq/objectivetype</a> ) for which the air quality assessment regime has been reported.	string
Reporting Metric	Reporting metric (see notation in Data Dictionary: <a href="http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric">http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric</a> ) for which the air quality assessment regime has been reported.	string
Source Data URL	URL of source data reported to the EEA.	string
Imported	Date and time of source data import into EEA's databases.	datetime

\* attributes used as filters only (not available as columns in the table)

If you have any comments on the EEA's air quality products, please contact [aqipr.helpdesk@eionet.europa.eu](mailto:aqipr.helpdesk@eionet.europa.eu)

## Appendix

### Defining thresholds for flagging obvious outliers

The work is based on the absolute deviation around the median (or MAD). This methodology is described in:

- <https://aakinshin.net/posts/harrell-davis-double-mad-outlier-detector/> and in
- <https://www.r-bloggers.com/2013/08/absolute-deviation-around-the-median/>

The chosen aggregations are the highest daily values of the year for all pollutants except CO and O3 for which the highest day max value (based on 8 hour running mean) of the year was used. These statistics are calculated for all pollutants and are more sensitive to any QA/QC issues with the raw measurement data than the other aggregations. Obvious outlier values at this level might affect other statistics such as the annual mean values and number of hours/days in exceedance used in the European legislation.

Calculation, over the period 2015 - 2019 was done for each country at 5x standard deviations corresponding to 99.9999426697%.

It appears that the thresholds calculated by the MAD methodology ( 'MAD thresholds') are below the highest daily value of the year for several countries and several pollutants. Using the MAD thresholds as such might then result in flagging valid values. On the other hand, some of the highest day max values of the year (used for CO and O3) are clearly outside the range of values observed for other countries.

Therefore, the results are processed further with the following steps:

- Finding the max 'MAD threshold' and the max of the highest daily value of the year on all reporting countries, but excluding the values corresponding to out-of-range cases for the statistics,
- Applying a "safety margin" of 25% on the max the max of the highest daily value of the year,
- The final threshold is then the maximum between the max 'MAD threshold' and the max of the highest daily value of the year, including the safety margin.