Air Quality e-Reporting products on EEA data service

EEA, March 2017

Introduction

Air Quality e-Reporting follows new rules for reciprocal exchange of information and reporting on ambient air quality for Directives 2004/107/EC and 2008/50/EC of the European Parliament and of the Council. 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 is a snapshot of air quality data collected/calculated by the 20/02/2017. It covers the period 2013 – 2015 and supersedes the previous versions covering 2013 and 2014.

Data collected within the Air Quality e-Reporting start from 2013. Statistics calculated before 2013 (AirBase v8) have been merged with the statistics from e-Reporting and included in this set of products.

For more information about Air Quality e-Reporting please visit http://www.eionet.europa.eu/aqportal or contact 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,
- Air Quality annual statistics calculated by the EEA (2013 – 2015),
- Compliance data reported by the Member States and EEA countries (Air Quality Zones, Assessment Regimes and Attainment reports).

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

1.1 Assessment methods meta-data

Assessment methods meta-data (data set D) describe technical facilities used for the measurement of one pollutant or one of its compounds. The data have been exported from the EEA's Central Data Repository (CDR) where the country reports are stored. The data in the web based application (AIDE D) reflect the latest reports uploaded and successfully tested by automated QC before the **20/02/2017**. The reports are supposed to include all historical information. Keep in mind however that, for some countries, it may be a subset of data stored in EEA's data bases if a country has not included all historical data in its recent report (thus data in csv files available under 'Data by country' tab, which are generated from SQL data bases, may have more records for some of the countries).

You can follow the status of data deliveries here. Data uploaded into the EEA's system after the **20/02/2017** are not included in this version of the data set.

Meta data are available as:

Table 1. Fieldnames in assessment meta-data table (AIDE D).

Field name	Description	Data type
Country Or Territory	Country or territory name.	string
Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Network	Name of air quality measurement network, given by data provider.	string
Responsible Party	Name of responsible authority, institution or body.	string
Time Zone	Time zone in which aggregations and statistics are calculated (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/timezone).	string
Station Name	Name of air quality measurement station (as in AirBase), given by data provider.	string
EoI Station Code	EoI code of air quality measurement station (as in AirBase), given by data provider.	string
Station Type	Type of Air Quality Measurement Station - information whether it is measuring background, industrial or traffic related air pollution (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/stationclassification).	string
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: http://dd.eionet.europa.eu/vocabulary/aq/areaclassification).	string
Pollutant	Air polluting substance, level of which is measured and reported to the EEA (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/pollutant).	string
Sampling Point Local Id	Inspire identifier (Local Id) of sampling point, given by data provider.	string
Latitude	Latitude of air quality measurement station [decimal degrees].	numeric
Longitude	Longitude of air quality measurement station [decimal degrees].	numeric
Altitude	Altitude of air quality measurement station [m a.s.l.].	numeric
Measurement Regime	Information on measurement regime (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/inspire/MeasurementRegimeValue)	string
Operational Activity Begin	Begin date of observation constellation (sampling point, sample, sampling process and property/pollutant).	datetime
Operational Activity End	End date of observation constellation.	datetime
Sample Local Id	Inspire identifier (Local Id) of sample (Feature of Interest), given by data provider.	string
Sampling Process Local Id	Inspire identifier (Local Id) of sampling process (procedure), given by data provider.	string
Measurement Equipment	Information on equipment used for measuring air polluting substances (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/measurementequipment).	string

Measurement Method	Information on method used for measuring air polluting substances (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/measurementmethod).	string
Sampling Equipment	Information on sampling equipment (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/samplingequipment).	string
Analytical Technique	Information on analytical technique (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/analyticaltechnique)	string
Envelope URL	URL of CDR envelope where source data (country report) is located.	string

1.2   Air Quality annual statistics calculated by the EEA (2013 – 2015)

The annual aggregated air quality values have been calculated by EEA based on the primary observations (time series) uploaded by countries into CDR and successfully tested by automated QC before the **20/02/2017**. You can follow the status of data deliveries here.

Pay attention to the fact that the calculations based on hourly values are performed for time zone declared at corresponding air quality network (see meta data) which do not necessarily match the time zone of the countries or time zone reported together with hourly values. Details on methodology used by EEA to calculate air quality aggregations and statistics can be found here.

Data uploaded into the EEA's system after the **20/02/2017** are not included in this version of the data set. The data in the web based application (AIDE F) come from the same source (SQL data base) as the data in csv files available under 'Data by country' tab and so both of the data sets are consistent.

The annual aggregated air quality values as:

Table 2. Fieldnames in annual statistics table (AIDE F).

Fieldname	Description	Data type
Country Or Territory	Country or territory name.	string
Reporting Year	Year for which primary data have been reported.	numeric
Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Station Local Id	Inspire identifier (Local Id) of air quality measurement station, given by data provider.	string
Sampling Point Local Id	Inspire identifier (Local Id) of sampling point, given by data provider.	string
Sampling Point Latitude	Latitude of sampling point [decimal degrees].	numeric
Sampling Point Longitude	Longitude of sampling point [decimal degrees].	numeric
Pollutant	Air polluting substance, level of which is measured and reported to the EEA (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/pollutant).	string
Aggregation Type	Information about process of data aggregation into annual values (see in Data Dictionary:	string

	http://dd.eionet.europa.eu/vocabulary/aq/aggregation process).	
AQ Value	Concentration or level of air polluting substance, here given as an aggregation of air pollutant concentration values from primary observation time series.	numeric
Unit	Unit of concentration or level of air polluting substance (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/uom/concentrat ion).	string
Begin Position	Date time begin of measurement (time zone as defined for the air quality network).	datetime
End Position	Date time end of measurement (time zone as defined for the air quality network).	datetime
Validity	Validity flags based on Data Capture, data are 'not valid' if Data Capture <75% (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/observationv alidity).	string
Verification	Information based on verification flags found in reported time series (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/observationv erification).	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
Data Capture	Proportion of valid measurement time relative total measured time (time coverage) in averaging period, expressed as percentage.	numeric
Time Coverage	Proportion of total measured time, calculated from start and end time of observation, within the full averaging period, expressed as percentage.	numeric
Update Time	Time of the latest update of the calculated statistics.	datetime

1.3   Compliance data

There are 4 data sets with compliance data reported by the Member States and EEA countries:

- 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),
- Air Quality Zone geometries (data set B),
- Air Quality Assessment Regimes – applied for each pollutant within individual zones and agglomerations (data set C),
- Attainments of (air quality) environmental objectives (data set G).

The data have been exported from the EEA's Central Data Repository (CDR) where the country reports are stored.

Each of these data sets is accessible via web based applications (AIDE B and Air Quality Zones Feature Download Service, AIDE C and AIDE G) and reflect the latest (per year) reports uploaded and

successfully tested by automated QC before **20/02/2017**. You can follow the status of data deliveries [here](). Data uploaded into the EEA's system after the **20/02/2017** are not included in this version of the data sets.

The air quality zones information is available as:

Table 3. Fieldnames in air quality zones table (AIDE B).

Fieldname	Description	Data type
Country Or Territory	Country or territory name.	string
Reporting Year	Year for which air quality zone has been reported.	numeric
Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Zone Code	Identifier of air quality zone, given by data provider.	string
Zone Id	Inspire identifier (Local Id) of air quality zone, given by data provider.	string
Geographical Name	Geographical Name of air quality zone.	string
Begin Time	Begin time of air quality zone.	datetime
End Time	End time of air quality zone.	datetime
AQD Zone Type	Air quality zone type (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/zonetype).	string
Pollutant	Air polluting substance (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/pollutant) for which the zone is valid.	string
Protection Target	Protection target (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget) for which the zone is valid.	string
Resident Population	Number of population residing in the air quality zone.	numeric
Resident Population Year	Reference year the resident population number.	numeric
Area	Area of the air quality zone.	numeric
Time Extension Exemption	Type of time extension granted for the zone (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/timeextensiontypes).	string
Competent Authority	Name of responsible authority, institution or body.	string
Contact Name	Name of contact person in competent authority.	string
Telephone	Telephone number of competent authority.	string
Address	Address of competent authority.	string
Email	Email of competent authority.	string
Website	Website of competent authority.	string
Envelope URL	URL of CDR envelope where source data (country report) is located.	string

The air quality zone geometries are available in several spatial formats (ESRI Shapefile, SpatialLite, ESRI File Geodatabase, Google Earth KML) as well as an attribute table in Excel (see below).

Table 4. 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
ZoneId	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: http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget) for which the zone is valid.	string
Pollutant	Air polluting substances (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/pollutant) 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^2].	numeric

The air quality assessment regime information is available as:

Table 5. Fieldnames in air quality assessment regimes table (AIDE C).

Fieldname	Description	Data type
Country or Territory	Country or territory name.	string
Reporting Year	Year for which air quality assessment regime has been reported.	numeric
Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Assessment Id	Inspire identifier (Local Id) of air quality assessment regime, given by data provider.	string
Zone Id	Inspire identifier (Local Id) of air quality zone, given by data provider/ link to air quality zone.	string
Pollutant	Air polluting substance (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/pollutant) for which the air quality assessment regime has been reported.	string
Protection Target	Protection target (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget) for which the air quality assessment regime has been reported.	string
Objective Type	Objective type (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/objectivetype) for which the air quality assessment regime has been reported.	string
Reporting Metric	Reporting metric (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric) for which the air quality assessment regime has been reported.	string

Fieldname	Description	Data type
Exceedance Attainment	Status of assessment threshold exceedance (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/assessmentthresholdexceedance) reported with the assessment regime.	string
Assessment Type	Type of air quality assessment regime (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/assessmenttype).	string
Description	Free text description of the type of assessment regime.	string
Classification Date	Issue date of the classification report.	string
Classification Report	Web link to the classification report.	string
Sampling Point Id	Inspire identifier (Local Id) of sampling point, given by data provider/ link to assessment method.	string
Model Id	Inspire identifier (Local Id) of air quality model, given by data provider/ link to assessment method.	string
Envelope URL	URL of CDR envelope where source data (country report) is located.	string

The attainments of (air quality) environmental objectives are available as:

Table 6. Fieldnames in air quality assessment regimes table (AIDE G).

Fieldname	Description	Data type
Country or Territory	Country or territory name.	string
Reporting Year	Year for which air quality assessment regime has been reported.	numeric
Namespace	Inspire identifier/namespace of reporting entity, given by data provider.	string
Attainment Id	Inspire identifier (Local Id) of attainment, given by data provider.	string
Assessment Id	Inspire identifier (Local Id) of air quality assessment regime, given by data provider/ link to assessment regime.	string
Zone Id	Inspire identifier (Local Id) of air quality zone, given by data provider/ link to air quality zone.	string
Resident Population	Number of population residing in the air quality zone for which the attainment has been reported.	numeric
Pollutant	Air polluting substance (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/pollutant) for which the attainment has been reported.	string
Protection Target	Protection target (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget) for which the attainment has been reported.	string
Objective Type	Objective type (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/objectivetype) for which the attainment has been reported.	string
Reporting Metric	Reporting metric (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric) for which the attainment has been reported.	string
Exceedance Final	Final (after adjustment) status of exceedance: true/false.	string

Exceedance Threshold	Exceedance threshold for environmental objective (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabularyconcept/aq/environmentalobjective) for which the attainment has been reported	string
Aggregation Type	Information about process of data aggregation into annual values (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/aggregation process).	string
Final Numerical Exceedance	Final (after adjustment) level of air pollution in exceedance.	numeric
Final Number Exceedances	Final (after adjustment) number of exceedances.	numeric
Classification Area	Classification of the area of exceedance (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/areaclassific ation).	string
Surface Area Final	Area extent where exceedance occurred (after adjustment).	numeric
Road Length Final	Length of road where exceedance occurred (after adjustment).	numeric
Population Exposed Final	Number of population exposed to exceedance (after adjustment).	numeric
Sensitive Population Final	Number of sensitive population exposed to exceedance (after adjustment).	numeric
Ecosystem Area Exposed	Ecosystem area extent where exceedance occurred (after adjustment).	numeric
Infrastructure Services Final	Infrastructure services exposed to exceedance (after adjustment).	string
Reference Year Final	Reference year for final exceedance (after adjustment).	numeric
Base Numerical Exceedance	Level of air pollution in exceedance (before adjustment).	numeric
Base Number Exceedance	Number of exceedances (before adjustment).	numeric
Adjustment	Indicates if adjustment has been applied (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/adjustmentt ype).	string
Adjustment Source	Reason for adjustment (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/adjustments ourcetype).	string
Adjustment Type	Type of adjustment applied (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/adjustmentt ype).	string
Assessment Type	Type of air quality assessment regime (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/assessmentt ype).	string
Assessment Type Description	Free text description of the type of assessment regime.	string
Model Id	Inspire identifier (Local Id) of air quality model, given by data provider/ link to assessment method.	string
Sampling Point Id	Inspire identifier (Local Id) of sampling point, given by data provider/ link to assessment method.	string
Comment	Free text comment on attainment.	string

Envelope URL	URL of CDR envelope where source data (country report) is located.	string

2. Data sets by country

These data sets are available as csv files generated separately for each country and include:

- Assessment methods meta-data reported by countries (data set D),
- Air Quality annual statistics and other aggregated air quality values calculated by the EEA (2013 – 2015),
- Primary observations (time series) reported by countries, data set E1a (2013 – 2015).

The data sets, covering the period 2013 – 2015, are described below.

2.1 Assessment methods meta-data

Assessment methods meta-data are available files generated separately for each country (file name syntax: <countrycode>_<year>_metadata.csv) and have been generated from SQL data base. The SQL data base stores information from reports uploaded and successfully tested by automated QC before the **20/02/2017**. You can follow the status of data deliveries here. Keep in mind that these files may include some (accumulated) data which have not been delivered in the latest reports in CDR and therefore there may be more records for some of the countries than in in the web based application (AIDE D) described above.

Data uploaded into the EEA's system after the **20/02/2017** are not included in this version of the data set.

Fields in all files are tab-separated and first line contains fieldnames as described in Table 7.

Table 7. Fieldnames in meta-data files.

Field name	Description	Data type
CountryCode	ISO2 code of country.	string
Timezone	Time zone in which aggregations and statistics are calculated (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/timezone).	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
AirQualityStationEoICode	EoI 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
AirPollutant	Air polluting substance, level of which is measured and reported to the EEA (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/pollutant).	string
AirPollutantCode (PK)	Air polluting substance, level of which is measured and reported to the EEA (see id in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/pollutant).	string
ObservationDateBegin	Begin date of observation constellation (sampling point, sample, sampling process and property/pollutant).	date
ObservationDateEnd	End date of observation constellation.	date
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: http://dd.eionet.europa.eu/vocabulary/aq/measurementtype).	string
AirQualityStationType	Type of Air Quality Measurement Station - information whether it is measuring background, industrial or traffic related air pollution (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/stationclassification).	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: http://dd.eionet.europa.eu/vocabulary/aq/areaclassification).	string
EquivalenceDemonstrated	Information on measuring method equivalence (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/equivalencedemonstrated).	string
MeasurementEquipment	Information on equipment used for measuring air polluting substances (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/measurementequipment).	string
InletHeight	Height above ground level on which samples of air are taken [m].	numeric
BuildingDistance	Distance from the sampling inlet to a nearest building [m].	numeric
KerbDistance	Distance from the sampling inlet to a nearest kerbside [m].	numeric

2.2 Air Quality annual statistics and other aggregated time series calculated by the EEA (2013 – 2015)

The statistics and aggregated air quality values have been calculated by EEA based on the primary observations (time series) uploaded by countries into CDR and successfully tested by automated QC before the **20/02/2017**. You can follow the status of data deliveries [here](#).

Pay attention to the fact that the calculations based on hourly values are performed for time zone declared at corresponding air quality network (see meta data) which do not necessarily match the time zone of the countries or time zone reported together with hourly values. Details on methodology used by EEA to calculate air quality aggregations and statistics can be found [here](#)..

Data uploaded into the EEA's system after the **20/02/2017** are not included in this version of the data set.

The annual aggregated air quality values as files generated separately for each country, which contain annual statistics but also all other aggregated air quality values such as daily, monthly, 8 hour averages, etc.

File name syntax is: <countrycode>_<pollutant_notation>_<year>_aggregated_timeseries.csv

Fields in all files are tab-separated and first line contains fieldnames as described in Table 8.

Table 8. Fieldnames in files with statistics/aggregated 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 (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
AirQualityStationEoICode	EoI code of air quality measurement station (as in AirBase).	string
SamplingPoint (PK)	Inspire identifier (Local Id) of sampling point, given by data provider.	string
AirPollutant	Air polluting substance, level of which is measured and reported to the EEA (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/pollutant).	string
AirPollutantCode (PK)	Air polluting substance, level of which is measured and reported to the EEA (see id in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/pollutant).	string
DataAggregationProcess	Information about process of data aggregation into values other than hourly (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/aggregationprocess).	string
AirPollutionLevel	Concentration or level of air polluting substance, here given as an aggregation of air pollutant concentration values from primary observation time series.	numeric
UnitOfAirPollutionLevel	Unit of concentration or level of air polluting substance (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/uom/concentration).	string
DataCapture	Proportion of valid measurement time relative total measured time (time coverage) in averaging period, expressed as percentage.	numeric

DataCoverage	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
TimeCoverage	Proportion of total measured time, calculated from start and end time of observation, within the full averaging period, expressed as percentage.	numeric
DatetimeBegin	Date-time begin of measurement (time zone as defined for the air quality network).	datetime
DatetimeEnd	Date-time end of measurement (time zone as defined for the air quality network).	datetime
Validity	Validity flags based on Data Capture, data are 'not valid' if Data Capture <75% (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/observationvalidity).	numeric
Verification	Information based on verification flags found in reported time series (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/observationverification).	numeric

2.3   Primary observation time series (2013 – 2015)

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 before the **20/02/2017**. You can follow the status of data deliveries here. Data uploaded into the EEA's system after the **20/02/2017** are not included in this version of the data set.

Air quality time series (primary observations) are available as files generated separately for each country, file name syntax: <countrycode>_<pollutant notation>_<year>_timeseries.csv

Fields in all files are tab-separated and first line contains fieldnames as described in Table 9.

Table 9. 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
AirQualityStationEoICode	EoI 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: http://dd.eionet.europa.eu/vocabulary/aq/pollutant).	string
AirPollutantCode (PK)	Air polluting substance, level of which is measured and reported to the EEA (see id in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/pollutant).	string
AveragingTime	Averaging time/frequency of reported air quality values (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/primaryObservation).	string
Concentration	Measured concentration of air polluting substance.	numeric
UnitOfMeasurement	Unit of concentration of air polluting substance (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/uom/concentration).	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: http://dd.eionet.europa.eu/vocabulary/aq/observationvalidity).	numeric
Verification	Information whether data have been verified by data provider (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/observationverification).	numeric

3.   Annual statistics merged with historical data

Automated mapping has been applied to merge statistics calculated before 2013 (AirBase v8) with the statistics from e-Reporting (you can trace the origin of data in the field 'Datasource').

Pay attention to the fact that there may be still cases where the mapping does not resolve into a 1-to-1 relation between e-Reporting and AirBase v8 and also that some of the measurement configurations may not map to any of the sampling points (you will find more information about this in the fields 'History' and 'Comment'). If the AirBase records could not be mapped to any of the AQ e-Reporting sampling points, then the sampling point local IDs have been generated using the following pattern: 'SPO-' + Air Quality Station EoI Code + AirBase pollutant code + AirBase measurement configuration group code + '_eea'.

Keep also in mind that due to stricter QA rules which were added over the recent years, some of the time series reported by countries in 2013 could not be used anymore for statistics and aggregations.

It means that some annual statistics were missing for 2013 in the latest calculations. To avoid significant gaps we have added statistics calculated in 2014 for reporting year 2013 and not present in current results (you can trace it using field 'CalculationSource'). Therefore the annual statistics merged with historical data can have more records for the year 2013 than other data sets with annual statistics presented in previous chapters.

If you have any comments on the merged statistics, please contact aqipr.helpdesk@eionet.europa.eu

The file 'AQerep_StatsMerge.csv' has been prepared by EEA. The first line contains fieldnames as described in Table 10.

Table 10. Fieldnames in the file with annual statistics merged with historical data.

Fieldname	Description	Data type
Country	Country or territory name.	string
CountryCode	ISO2 code of country.	string
City	City where the air quality measurements took place.	string
AirQualityNetwork	Inspire identifier (Local Id) of air quality measurement network, given by data provider.	string
AirQualityNetworkName	Name 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
AirQualityStationEoICode	EoI code of air quality measurement station (as in AirBase).	string
AQStationName	Name of air quality measurement station (as in AirBase), given by data provider.	string
SamplingPoint	Inspire identifier (Local Id) of sampling point, given by data provider.	string
AirPollutant	Air polluting substance, level of which is measured and reported to the EEA (see notation in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/pollutant).	string
AirPollutantCode	Air polluting substance, level of which is measured and reported to the EEA (see id in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/pollutant).	string
DataAggregationProcess	Information about process of data aggregation into values other than hourly (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/aggregation process).	string
YearOfStatistics	Year for which primary data have been reported (and the annual statistics was calculated).	numeric
AirPollutionLevel	Concentration or level of air polluting substance, here given as an aggregation of air pollutant concentration values from primary observation time series. Proportion of total measured time, calculated from start and end time of observation, within the full averaging period, expressed as percentage.	numeric
UnitOfAirpollutionLevel	Unit of concentration or level of air polluting substance (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/uom/concentration).	string
DataCoverage	Proportion of valid measurement included in the aggregation process within averaging period, expressed	numeric

	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.	
Verification	Information based on verification flags found in reported time series (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/observationverification).	numeric
AirQualityStationType	Type of Air Quality Measurement Station - information whether it is measuring background, industrial or traffic related air pollution (see in Data Dictionary: http://dd.eionet.europa.eu/vocabulary/aq/stationclassification).	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: http://dd.eionet.europa.eu/vocabulary/aq/areaclassification).	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
History	Information about data matching between AirBase and AQ e-Reporting.	string
Datasource	Information about the origin of data.	string
CalculationSource	Information about calculation source, to trace statistics calculated in 2014 for reporting year 2013 and added to the current calculations.	string
Comment	Information about duplicates.	string