



# Low emission inventory

- DATABASE OF LOW EMISSION SOURCES
- MODELLING, CALCULATION AND ANALYSIS OF LOW EMISSION FROM DIFFERENT SOURCES
- VISUALISATION OF RESULTS



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Institute for Ecology of Industrial Areas

**Ambient air quality directly affects human health. A February 2023 report by the European Environment Agency (EEA) indicates that residents of European cities are exposed to levels of air pollution that exceed levels of air pollutants that exceed the new WHO guidelines. This applies to 97% of Europe's urban population for PM10 particulate pollution, 94% for nitrogen dioxide, and 99% for ozone**

Low emission inventory will enable local government units which are responsible for air quality at a regional and local level to assess the air quality and plan appropriate remedial actions. The inventory will provide information on the spatial distribution and volume of low emission and the resultant excessive concentrations of air pollutants in a given area. This will allow to better focus undertakings aimed at the reduction and elimination of air pollution sources and improve the living conditions of the inhabitants.

## Scope of service

- collection of input data from available public sources (e.g. Geographical Information System - GIS, Statistics Poland - GUS, National Centre for Emissions Management - KOBiZE)
- determination of emission sources in the studied area and their structure
- modelling and calculation of low emission levels
- analysis and visualisation of low emission inventory results (maps, diagrams, etc.)

**The customer receives information on the identified and recorded low emission sources and sensitive areas, in that:**

Spatial database containing input data and resultant emission data in the resolution assumed in the customer's order, broken down into sectors requested by the customer (emission from heating, transportation)

Input data included in the database with information on housing infrastructure, e.g. thermal insulation of buildings, structure of the existing heat sources and the energy carriers used therein, as well as information on their usage

Visualisation of data presented in tables, charts and diagrams

## Contact

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The rising awareness of the society regarding the occurrence of exceeded air pollutant concentrations in a given area, including nuisance smog phenomena, encourages government administration and local government units to identify sensitive areas and propose short/medium and long-term measures to contribute to air quality improvement.

#### Air pollution inventory is the first stage to achieve ecological benefits, such as:

- improvement of air quality in areas where emission exceedance has been recorded (e.g. PM 2.5, PM 10, benzo(a)pyrene, CO<sub>2</sub>, SO<sub>2</sub>, NO<sub>x</sub>)
- use of renewable energy sources
- reducing heating costs

#### Inventory of low emission and analysis of pollution sources is:

- the basis for further spatial planning work, including the development of documents and projects related to environmental protection (including projects co-financed from EU funds)
  - the basis for monitoring the implementation of measures to reduce low emission
  - part of the Air Protection Programmes or their updates, Low Emission Reduction Programmes (LERP) and Low Emission Economy Programmes (LEEP).
- Experienced IETU employees use modern IT tools which allow them to provide analyses and adequate visualisation of large amounts of data and ensure legibility and availability of information, which guarantees high quality of the performed service.

#### Recipients of the service

The service is particularly recommended in cases where making the inventory based on data obtained via a direct interview is not always possible (due to time limits or costs), e.g. when the inventory is carried out at the level of regions (NUTS 1), provinces, poviats or cities with poviat rights.

#### Low emission inventory based on the methodology developed in IETU enables:

- presentation of the spatial distribution of low emission volume from particular types of sources in a given area
- identification of sites with the highest risk of occurrence of excessive concentrations and emission sources responsible for these exceedances
- detailed diagnosis of the causes of excessive concentrations of air pollutants and more effective targeting of actions taken by the authorities of a given area

More information: [ietu.pl/en/services/](https://ietu.pl/en/services/)

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