

## Preface

The summary annual tabular survey "Air Pollution and Atmospheric Deposition in Data, the Czech Republic..." (hereinafter the Tabular Survey) is published as a basic overview of the measured pollutants' concentrations in ambient air in the Czech Republic for the given calendar year. It is meant mainly for the work of state administration authorities and organizations concerned with environmental issues and air quality protection in the Czech Republic. The Tabular Survey has been published by the Czech Hydrometeorological Institute since the beginning of the nineteen seventies. Starting from 1981 data from the air pollution networks for monitoring air pollution conditions were stored and processed in the Internal (later Air Pollution) Information System (IIS) of the Territorial Information System (ISU). At present the data are stored in the Air Quality Information System database (ISKO).

The Tabular Survey for the year 2009 is published on CD and it is also publicly accessible at the CHMI websites (<http://www.chmi.cz>).

The Tabular Survey is the result of summary processing of the measured air pollution data stored in the ISKO database over the given calendar year. It is intended primarily to give a timely objective publication of measured air pollution data from the monitoring networks which are stored in the ISKO database. The process of verification of the credibility of the measured data plays an important role in the annual processing and is an inseparable part of data processing in the ISKO database.

Information is stored continuously in ISKO air pollution database from CHMI monitoring networks (national air pollution network), from the networks of the Health Institutes (ZÚ), from stations in the networks of the Forest Management and Gamekeeping Research Institute (VÚLHM), ČEZ Inc. operated by the Organization for the Rationalization of Power Plants (ORGREZ) Co. as well as from the networks of municipal monitoring. Changes are made in the monitoring networks operating on the territory of the Czech Republic within the programme on optimization of air pollution measurement. Of those that occurred in 1993, the most important included termination of operations of the older system and initiation of the innovated automated air pollution monitoring (AIM) in the network of CHMI, in 2003–2004 the CHMI monitoring networks were re-established. The number of measuring programmes and the location of the monitoring stations was set with regard to the monitoring aims required by the respective EU directives, the Clean Air Act No. 86/2002 Coll. as amended on clean air protection and amendment of some other acts and the Government Order No. 597/2006 Coll. on the monitoring and assessment of air quality, in order to ensure the ambient air quality monitoring on the whole territory of the Czech Republic and mainly in the areas with deteriorated air quality

On the basis of EU requirements on national networks of air pollution measurement the CHMI air pollution monitoring sites proved the compliance of their activities (sampling and measurements) with strict requirements for the system of quality set by the international standard CSN EN ISO/IEC 17 025. The compliance with this standard was confirmed in the external audit by the third party (the Czech Accreditation Institute) and air pollution monitoring sites obtained the certificate of testing laboratory No. L 1460 accredited by the Czech Accreditation Institute for testing and sampling listed in the Annex Accreditation Certificate (see [www.cai.cz](http://www.cai.cz), section Accredited Bodies). The audit covered not only validated measurement procedures and the used measuring instruments but also the staff responsible for the operation of the network. The Certificate of Compliance applies to the major part of carried out sampling and measurements in air pollution monitoring network. The successful accreditation process facilitates international recognition of the results of CHMI measurements.

Since 1993, the Tabular Survey has consisted of both the part including the summary annual survey and also the detailed part consisting of daily information. The summary part presents a number of air pollution measurements from specialized monitoring networks. Since 1994 information on contents of heavy metals in suspended particulate matter and information on volatile organic compounds (VOC) in the air has been provided and since 1997 the survey has been extended to include the monitoring of persistent organic pollutants (POP) and the monitoring of polycyclic aromatic hydrocarbons (PAH). The Tabular Survey presents also data on chemical composition of precipitation which are included in the ISKO database on a regular annual basis.

The Tabular Survey includes also the assessment of PM<sub>2.5</sub> measurements with regard to the set air pollution limit value in the directive 2008/50/EC.

More extensive assessment, especially graphic outputs including the spatial maps of concentrations and the respective comments, is contained in the Graphic Yearbook, the preparation of which is bound to the tabular data processing.

The requirements of accuracy in the contents and formal aspects and completeness of the Tabular Survey and the requirement that the information be published as soon as possible lead to a certain conflict of conditions in the preparation of this Survey and each published edition thus constitutes a compromise between these two requirements. The readiness with which the Tabular Survey can be published is determined primarily by the deadline for completion of the annual input of data into the database, especially data from manual networks, their assembling, multi-level verification and correction in cooperation with data suppliers. Statistically based database applications to find significant errors in extensive sets of measured values have become a standard part of the preparation since 1994. The utilization of these procedures prior to the actual data processing for the Tabular Survey increases the quality of the published data.

The presentation of the measured and calculated data (aggregated data) in this Tabular Survey fully meets the valid legislation of the Czech Republic in the field of air quality protection.

In conclusion, it is necessary to point out that this publication, and especially the measured data stored in the ISKO database on which it is founded, were created as a consequence of a vast amount of work on the part of a great many individuals, employees of the institute branches, laboratories of the Air Quality Protection Division of the CHMI and of cooperating organizations. The actual preparation of the Tabular Survey is the result of cooperative work by the group of authors from the Air Quality Information System Department, the Impacts and Risks Assessment Department and employees of the IDEA-ENVI Co. Ltd.

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