

## INTRODUCTION

The hydrological yearbook is one of the forms of the public presentation of monitoring results and assessment of hydrological conditions in the Czech Republic carried out by the Czech Hydrometeorological Institute (CHMI) on the basis of an authorization of the Ministry of the Environment. In the last few years the processing of the hydrological yearbook has been closely interconnected with the hydrological balance prepared by the CHMI under Ministry of Agriculture Decree No. 431/2001. The content of the hydrological yearbook is based on the processed results of measurements and monitoring in 2015 and their annual assessment in relation to the long-term characteristics. The present-day yearbooks do not already offer complete data as was the case in the earlier ones. Results of all hydrological measurements and observations are stored in digital form in the CHMI's database and the yearbook presents only summary characteristics derived from the data sets. The primary data are presented for illustration for some selected monitoring sites on the main rivers and for some groundwater observation sites.

For the most part, the yearbook presents the assessment of the whole calendar year 2015. If some assessment and annual characteristics are related to the hydrological year, i.e. the period from 1 November 2014 to 31 October 2015, this is highlighted in the text. All water quality characteristics relate to the calendar year.

The 2015 Hydrological Yearbook comprises six separate chapters and two appendices. The second and the third chapters, based on the results of the water quantity and quality hydrological balance, form the core of the Yearbook. The fifth chapter is devoted to selected current topics of the respective year.

### Chapter I. „Hydrological assessment of 2015“

The chapter contains a description of the meteorological and hydrological situation in 2015. Complete runoff data (mean daily discharges) for 12 selected main water gauging stations and monthly data on boreholes water levels and spring yields for 30 selected groundwater observation sites are given just for completeness.

### Chapter II. „Hydrological balance – water quantity assessment“

The chapter contains spatial and temporal assessment of the hydrological balance elements, especially precipitation course, snow cover, runoff and changes in groundwater resources. The assessment of the balance results is described in text for individual river basin districts and accompanied by tables, graphs and maps.

### Chapter III. „Hydrological balance – water quality assessment“

The chapter offers an evaluation of surface water and groundwater quality parameters and their comparison to reference values. The evaluation is based on results of monitoring programs of surface and groundwater.

The water quality balance assessment is structured according to individual river basin districts. Water quality maps based on selected determinants are presented. The water temperature, concentration and quantity of suspended solids are also assessed on selected streams.

### Chapter IV. „Processing of data and its publication“

The first part of the chapter outlines real-time information provided by the CHMI within the frame of flood warning and forecasting service on the CHMI web-sites. The second part of the chapter informs about regime data and characteristics, which are stored in the CHMI database. The information can be processed to order according to the individual users' requirements. Information on surface and groundwater quality is made public via the information system ARROW on the CHMI web site.

### Chapter V. „Topical and regional hydrological problems and tasks“

The penultimate chapter of the Yearbook is usually targeted on selected topical themes of the given year and on regional problems. It provides a scope for the presentation of work of individual hydrological departments of the Headquarters and Regional Offices of the Institute. This yearbook presents contributions related to the drought in 2015:

- „Assessment of hydrological drought in 2015“,
- „Influence of selected reservoirs on low flows during the hydrological drought in 2015“,
- „The representativeness of gauging stations for the measurement and evaluation of low flows“.

### Chapter VI. „References of published works in 2015“

The last chapter contains as usual a review of hydrological papers and studies in the given year. For selected titles, an annotation is quoted, which describes the aim and results of the quoted papers.

### Appendix PI. „Overview of hydrological observations in 2015“

The Yearbook contains an overview of the numbers of observation sites and profiles, list of the hydrological ordering of the main river basins and list of the hydrogeological regions. Furthermore, observed parameters of water quality monitoring are listed. More detailed information is available through a map project on the web-site of the CHMI only.

### Appendix PII. „Overview of the CHMI hydrological offices“

This appendix contains updated addresses and contact details for the CHMI hydrological offices.

The hydrological yearbook in this printed form has been published since 1992. Since the 2004 edition it has been also published in an electronic form and since the same year it has been also available on the web-sites of the CHMI.

The hydrological yearbook is published only in the Czech version and a brief English summary is included in the introduction to the yearbook and in the introductions to the individual chapters. Titles of hydrological papers and studies in the bibliography and legends to tables, figures and maps are given in English as well.