

## FOREWORD BY THE CHIEF GEOLOGIST OF POLAND

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Geological cartography covers a varied set of studies with specialized topics, different methods of work and various graphic forms. Studies produced by geological cartographers allow recognition of surface and subsurface geological structure of the country and form a basis for specialist research in hydrogeology, mineral resources, geochemistry, environmental sciences, engineering geology, geotourism and other areas important for economic development in various fields.

Polish geological cartography has long traditions, dating back to 1806, when Stanisław Staszic, a pioneer of Polish geological thought, published the first geological map of Poland and adjacent areas, titled *Carta geologica totius Poloniae, Moldaviae, Transylvaniae et partie Hungariae et Valachiae*.

Geological cartography in Poland is regulated by laws and is a high priority task of geological administration. Coordinating geological cartography projects and producing pilot studies has been assigned to the national geological survey, whose tasks are performed by the Polish Geological Institute by the Geological and Mining Law (Act of 4<sup>th</sup> February, 1994).

The Polish Geological Institute since its establishing in 1919, lists geological charting, resulting in compiling and publishing various geological maps in several scales, among major elements of its research and statutory activity.

Since 1919 many cartographic studies in various scales and of various scope have been produced, including serial maps in 1 : 300,000 and 1 : 200,000 scales, as well as non-serial maps and atlases in 1 : 100,000 to 1 : 3,000,000 scales. In 1956, an

enormous task of producing the *Detailed Geological Map of Poland in 1 : 50,000 scale (DGMP)*. In the 1990s, work began on other thematic series fundamental for the country and national geological cartography: the *Geological-Economic Map of Poland in 1 : 50,000 scale (GEMP)* and the *Hydrogeological Map of Poland in 1 : 50,000 scale (HMP)*. Besides the serial maps, other cartographic studies are produced, such as overview and detailed maps and atlases devoted to geochemistry, geoenvironmental problems, engineering geology, maps of the Baltic Sea bottom and shore, geophysics, geotourism and natural resources, digital *Geological Map of Poland in 1 : 50,000 scale (with Quaternary cover)*, *Detailed Geological Map of the Tatra Mountains in 1 : 10,000 scale*, updated *Geological Map of Poland in 1 : 200,000 scale*, *3D model of the deep geological structure of Poland* and other cartographic works.

For all the serial maps, computerized databases are created. Cartographic resources collected in databases provide a starting point for various analyses and research. Sharing the data is beneficial for geology and for the country while optimizing the costs. In the past several years, accelerated pace of work in geological cartography, both basic and thematic, placed Poland among the countries most advanced in geological mapping and in creating geological databases. The many years of Polish experience in modern GIS-based geological cartography resulted in cooperation with geological surveys of the Czech Republic, Belarus, Lithuania and Brandenburg (Germany) on producing thematic maps covering cross-border areas. Poland is also helping developing countries, such as Angola, in implementing modern methods of geological cartography.

Development of geological mapping requires close cooperation between national and foreign cartographic centres, to realize joint projects and tasks, including those of the European Union. It is also necessary to join the INSPIRE (*Infrastructure for Spatial Information in Europe*) — an initiative launched by the European Commission, aiming at facilitating the exchange of spatial information between European partners.

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