

Two decades of restored detail geological survey 1:25 000 in Moravian Carpathians (Czech Republic)

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After covering the entire territory of the Czech Republic by geological maps in scale 1:50 000, the Czech Geological Survey (CGS) focussed since 1996 to detail geological maps in scale 1:25 000. The concept of new map projects covered selected areas, like national parks, geoparks, agglomerations and geohazard areas instead of entire territory of the country.

Since 1996, the production of detail maps was supported by four consequent projects with duration between 5 and 7 years. Budget of these projects, previously covered from public sources is, in the present time, financed from internal sources of the CGS or based on contracts from industry (*e.g.*, geological maps for nuclear power plants). The map production supported by the GIS-technologies has fully digital outputs prepared for print or archiving. The detail geological survey follows CGS internal guidelines for construction of geological map, its graphic supplements (*i.e.*, legend, cross section, and stratigraphic chart) and explanatory booklet. Format and content requirements are defined by detail methodical manuals. Map reliability is supported by a database of reference points built on the Oracle platform. About 400 points is required for a map sheet. The database contains outcrop descriptions, petrographic, biostratigraphical and structural data.

The geological map is accompanied by a set of special maps: mineral-resources, hydrogeological, engineering-geological, and environmental factors. Detail geological survey retakes data on slope failures recorded and evaluated in frame of independent project. The special maps serve as a tool for consulting in land-use planning, utilizations of mineral resources, ground water protection, etc.

The detail geological survey is performed besides the Bohemian Massif also in Outer Carpathians in Moravia including the Carpathian Foredeep, Carpathian Flysch Belt and Vienna Basin. Up to now, the survey covered Brno agglomeration, Hodonín area, Olomouc city, Dukovany nuclear plant area, Hranice area, Vsetín area and Beskydy.

Within the Outer Carpathian domain, 39 geological map sheets from a total of 135 were finished or are still in progress, what makes 21% of a whole. Fifteen maps with explanatory booklets were printed. The CGS database of reference points contains 19 704 items for the Outer Carpathians, what makes 505 points per map sheet. Interactive geological maps are available online in open-access mode at: http://mapy.geology.cz/geocr_25/.

Detail geological survey brought many new observations, improved lithostratigraphy, biostratigraphical and structural data inspiring further research. Prospect for a continuation of the detail geological survey in the future is open and some interesting areas are waiting for coverage (*e.g.*, Bílé Karpaty and Beskydy) depending on society demand and financial support.