

# Compilation/Update of State Geological Maps in Georgia

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## Abstract:

The start of the first systematic geological works in Georgia dates back to 1841, and the results of field geological studies and the first geological reports were published in 1843. Since 1841, systematic geological studies have already originated in Georgia. Among the geological maps, the 1:200,000 scale geological map and the set of specialized maps for various purposes based on it are one of the important ones. Almost all branches of the country's industrial-economic complex (industry, construction, energy, agriculture, environmental protection, medicine, tourism, oil and gas pipelines, railways and highways, tunnels, reservoirs, construction of melioration systems and others) and services of an economic profile are users of the information provided in the mentioned maps and their explanation cards (geological reports).

Regional geological surveys of the territory of Georgia, which include the compilation and publication of different thematic geological maps, were last conducted in the 70-80s of the last century and need to be compiled/updated with modern approaches and methodologies.

After a gap of ten years, since 2014, a Division of Geological Survey was established in the Department of Geology of the National Environment Agency of Georgia, the main activity of which is the compilation/update of state geological maps of various themes and preparation of geological reports.

Georgia is covered by 24 geological map sheets with a scale of 1:200,000. A 15-sheet geological map with a corresponding geological report was already published by the Department of Geology (2016, 2017, 2018, 2020, 2021, 2022, 2024) in 2014-2024 and includes Eastern Georgia and part of Western Georgia (Fig. 1). During the research, a number of activities were carried out, which consists of: processing, analysis data stored in the state geological funds to a state corresponding to modern requirements, field geological studies, during which modern field geological equipment was used. A geographic information system (GIS) is used for mapping. Maps are processed in ArcMap, designed in Adobe Illustrator.

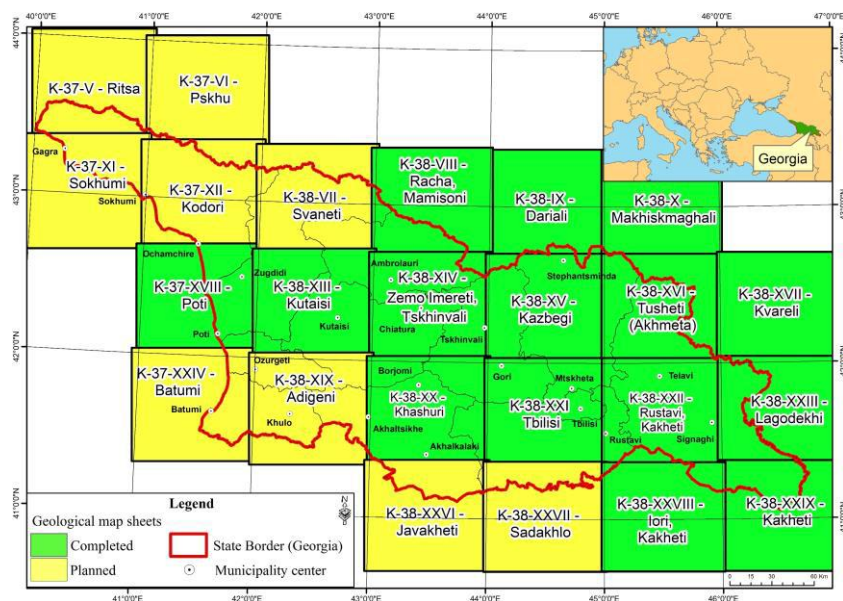


Figure 1. Geological map sheets of Georgia

The geological report includes: a textual part, where all the geological data representing the study area are described and characterized, as well as a graphic part, where a 1:200,000 scale geological map (with appropriate geological sections, legend and stratigraphic column) is presented, where the study is fully presented geological structure of the territory. During the period of work in the research area, a complete picture of mineral resources, their location, types etc. has been newly revealed, on the basis of which a 1:200,000 scale map of mineral resources with conventional signs has been drawn up. 1: 200,000 scale tectonic map shows the fold and fault structures and individual tectonic disturbances developed in the study region.

Described activities are ongoing and next few years, by 2026 department of geology of Georgia plans to complete survey for entire country and publish state geological maps, scale 1:200 000.

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