

The New Minerogenic Map of Tanzania – An Integral Part of the Geological and Mineral Information System of the Geological Survey of Tanzania

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The mineral wealth of Tanzania comprises of many valuables such as diamonds, gold, copper, gemstones, coal and non-metallic minerals. Especially since the massive development of large gold deposits of the Lake Victoria Gold Field, starting in the late 1990s, the potential of the mineral sector to contribute to the economic and social development of the country became obvious. Consequently, the Government of Tanzania has identified the mineral sector as one of the key factors to contribute to further growth. In this sense, the review, systematisation and publication of mineral and geological data is a strategic task to guide both the state and private mineral sectors to new discoveries, enhance investment and support national planning activities.

Since 2013, the Geological Survey of Tanzania (GST) and Beak Consultants GmbH are implementing a modern Geological and Mineral Information System (GMIS). The system is designed to host and manage the principle geo-scientific information about the territory of Tanzania, such as geo-scientific maps, mineral occurrence, borehole, geochemical and geophysical data, and to provide this information to the state and private sector of the country's economy and society.

An important part of the project is the integration of the mineral and geological data focusing on the generation of minerogenic models and their presentation in the new Minerogenic Map of Tanzania (MMT) as the base for targeting mineral potential.

In the past, comparable simple presentations of mineral occurrence data on low resolution geological maps have been used to describe the connection between mineral formation and the geological environment. The new Minerogenic Map of Tanzania represents the locations of mineral occurrences, describes the linkage between the geological – tectonic development and the related minerals, and displays prospective areas for the different kinds of minerals. The map is accompanied by an explanatory booklet, explaining and illustrating important features of the country's geology, tectonics, stratigraphy and mineral deposits. The map covers nearly all mineral resources, incl. metallic and non-metallic minerals and the hydrocarbon potential as well.

Due to the full integration of the MMT and the GMIS, the accuracy of the mineral occurrence data used for map compilation is very high and satisfies best standards. The map is a product, generated out of a living and developing information system. This close relationship between map and database provides the precondition for quick and easy upgrade procedures.

The information of the database was carefully reviewed, upgraded and corrected where necessary. Field work was carried out to review important mineral deposit data. Among others, each mineral occurrence record carries information like name of mineral deposit / occurrence, genetic main type, commodity group, commodity, deposit size, deposit morphology, mineralisation age, mining / exploration status, and verbal description. Beside the printed version of the map and its explanatory note, the data itself is available via the new data access portal of GST at <http://www.gst.go.tz/>.

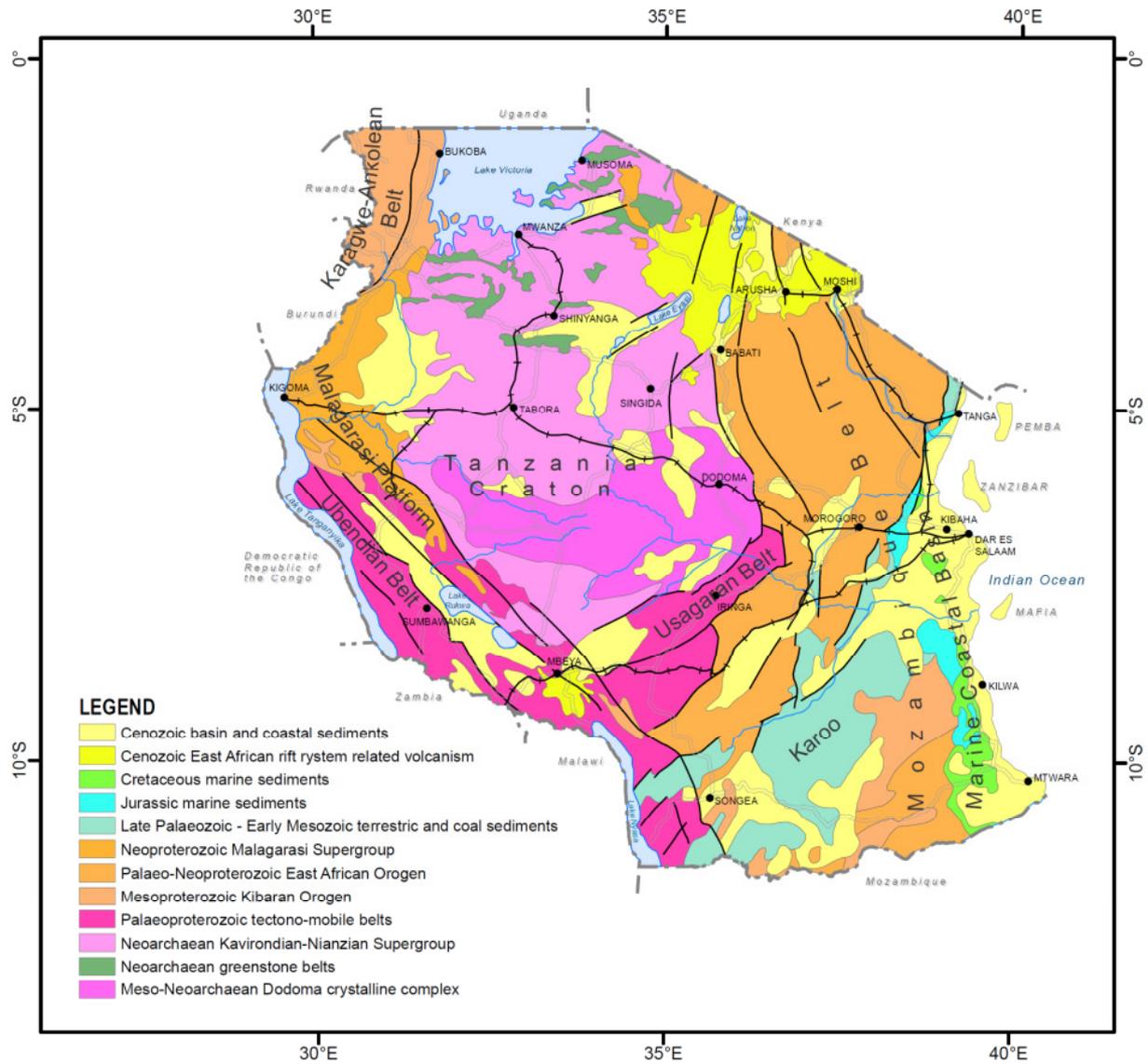


Figure 1: New Geological-Tectonic Overview Map of Tanzania 1:10,000,000