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## A decade of joint geological mapping by Geological Survey of Finland and Geological Survey of Tanzania

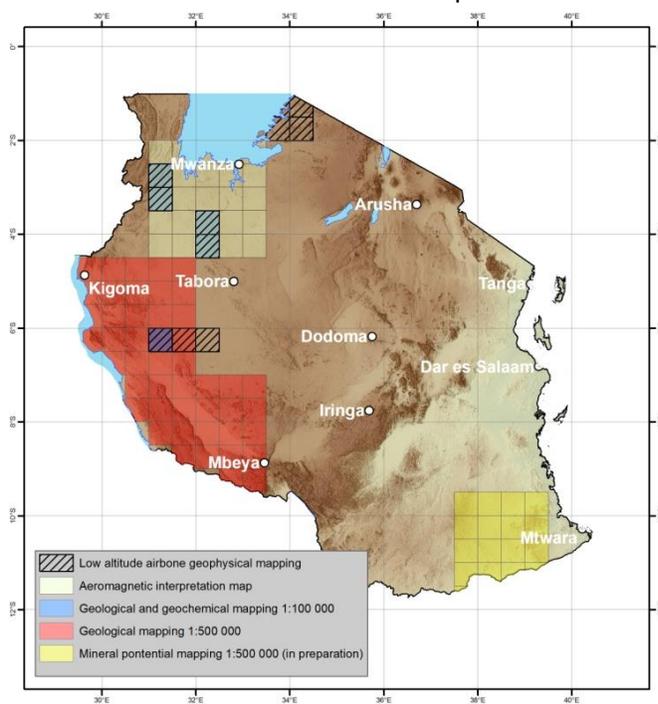
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The Geological Survey of Finland (GTK) and the Geological Survey of Tanzania (GST) started geosector mapping cooperation in 2003. This project (2003-2007) included geological and geochemical mapping with geophysical surveys of selected areas. A new approach for conducting geosurveys was introduced; computer aided field work with GPS-based location. Geological mapping was carried out in the scale of 1:500 000 and 1:100 000. A very central input was acquisition and re-interpretation of data from an old airborne geophysical survey conducted by Geosurvey International during 1977-1980; the data were formally stored by the English company GETECH. Reprocessing and re-interpretation of this data assisted in developing well refined and accurate geological and mineral potential maps in Tanzania and more anomalies were identified. At the same time selected areas were re-surveyed with a high-resolution airborne survey. All data obtained from both the airborne survey and field surveys were processed using ArcGIS and Geosoft techniques. In practice this project shifted GST over from manual procedures to modern digital procedures for data collecting, processing, storing and publishing. In addition multi-element regional geochemical mapping was introduced in Tanzania and the produced maps are very useful in delineating mineral potential areas. As a result of the newly acquired data there was an increased interest by investors and mining companies for potential mineral resources.

A related cooperation program was implemented during 2010-2011 for geological mapping and geophysical measurements on a block area in the scale of 1:500 000. This survey much followed the concept of previous cooperation and attendance of young GST professionals was a priority. Map production locally was strengthened and independent mapping work by GST was ensured. Following the positive outcomes and experiences new joint activities were planned. Thus, a new mapping project focusing on assessment of mineral potential of a block area in the south-eastern parts of the country was launched in mid 2015. This cooperation includes basic geological mapping, small-scale mining assessment, geochemical studies and geophysical field measurements.



During a decade of cooperation a total of 5 geological maps in the scale of 1:100 000 and 3 in the scale of 1:500 000 have been produced. Presently 2 maps in the scale of 1:500 000 are under compilation. Additionally 5 geochemical maps in the scale of 1:100 000 and 11 aerogeophysical maps in the scale of 1:100 000 based on new high-resolution surveys and 6 aerogeophysical maps in the scale of 1:500 000 based on old airborne data have been produced. Several GST

professionals were trained and modern field and laboratory equipment and software were procured and installed in Tanzania. Within the cooperation much effort has been put on proper data storage and making the data available for a larger group of stakeholders.

