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Workflow and challenges in the geological mapping of Uganda 2008–2012

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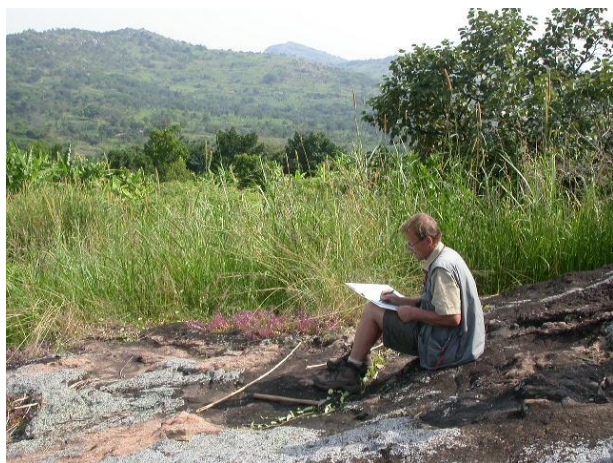
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Major part of Uganda was geologically mapped by the GTK Consortium (Geological Survey of Finland as leading party, with CGS, ITC, GAF AG and Fels Ltd as co-partners) during 2008–2012. This task was a portion of a large World Bank (WB) funded Sustainable Management of Mineral Resources Project, having the Directorate of Geological Survey and Mines of Uganda (DGSM) as its client. The goal of the project was to update the geological knowledge of Uganda – a vital issue in promoting investment in resource-rich low income countries. WB projects have tight budgets and schedules; they must be efficiently executed. In the geological mapping, the following workflow was used: (1) digitalization of the available data, (2) short reconnaissance field trip in Uganda with partners and DGSM, (3) kick-off meeting, (4) compilation of preliminary geological maps, based mainly on new aerogeophysical data, satellite images and existing publications, (5) several ~ 1.5 month long field mapping periods by 4-6 geologists with trainees from the DGSM, (6) download of the new field data to suitable forms, (7) compilation of prefinal geological maps, (8) laboratory results, (9) a couple of weeks long field trip revision, (10) compilation of prefinal map explanatory notes, and (11) compilation of the final maps, notes and databases. All these products were accepted by the client after revision. The mapping was integrated with various inventories on mineral and construction material occurrences, and geochemical and geophysical studies. Thematic workshops were held at intervals.



Issues recognized as strengths during the work: committed, professional and versatile core team, upfront planning, specific mapping areas for each geologist (team), proper equipments, digitalization of the data, GIS support, competent Ugandan partner, and acting relationship with the client.

Matters still needing further emphasis: field nomenclature of rocks, on-the-job training, sharing the compilation and writing tasks between the geologists, and work safety in remote or "restless" areas. Independent third party supervision is also recommended.

Regional scale geological mapping is a critical tool in understanding of the crustal evolution that has concentrated and diversified earth's mineral resources. The mapping, as well as the compilation of maps, explanatory notes and databases, is best implemented by interactive team work. These

procedures also support networking. For the data gathered in the afore-mentioned project, please contact DGSM (www.uganda-mining.go.ug) and look in the references listed below.

References:

- [1] Lehto T and Katto E (eds.) (2014) Geological Survey of Finland, Special Paper 56. 384 p (http://tupa.gtk.fi/julkaisu/specialpaper/sp_056.pdf)
- [2] Lehto T et al. (2014) Geological Map of Uganda, 1:1 000 000. Geological Survey of Finland (http://tupa.gtk.fi/kartta/erikoiskartta/ek_094.pdf)
- [3] Westerhof A B et al. (2014) Geological Survey of Finland, Special Paper 55. 387 p (http://tupa.gtk.fi/julkaisu/specialpaper/sp_055.pdf)

