

GEOSCIENTIFIC KNOWLEDGE + SKILLS IN AFRICAN GEOLOGICAL SURVEYS



Activity 3 Geoscientific Mapping in Africa recommendation and perspectives

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BACKGROUND: Relevance of the Topic



- About 80 % of all political decisions depend on availability of spatial data
- The **integration of geosciences** in strategic planning processes is crucial
- The provision and dissemination of geoinformation and geo-data is one of the core responsibilities of Geological Surveys

Background: Relevance of the Topic



Geological map data are base line data for most of thematic maps in geosciences, used for subjects like

- Soil conservation,
- Interpretation of Geophysical and Geochemical Survey,
- Engineering Geological Purpose,
- Exploration and Securing of Mineral Resources,
- Protection of Groundwater Resources,
- others

Responsibility of Geodata Generation & Dissemination



- Geological mapping and dissemination of geological data & information is an activity under the responsibilities of public administration, a sovereign task.
- The providers of official geological maps and map/geo-data are the geological surveys or institutions with that mandate.

What was done so far:



Dissemination and analysis of a questionnaire in 2013 / 14 – specific part:

Geoscientific fieldwork and map production situation

Geoscientific fieldwork and map production situation



Current situation

- What is a **typical scale** for maps in your country?
- What is the **estimated coverage** of your country by maps (in %)?
- Which mapping activities are presently performed/planned within the next 5 years?
- Are the present mapping **projects funded** by the national budget or by international support?
- For which purpose are existing and future maps needed or requested mainly?
- How many of your **geoscientists and technicians are skilled** for field mapping, map compilation, map production, geo-information management and web services provision?
- Are **digital techniques** used for field mapping and cartographic work?
- To which degree is your mapping staff trained?
- Based on your experience, do you have a sufficient number and adequately skilled staff for mapping?

Current situation of geoscientific fieldwork and map production

Analysis and assessment of the current situation

- How restricted is the efficiency of mapping in your country?
- Please state here if you need more information on the following issues: data acquisition, strategic area for mapping, mineral resources assessment, new techniques, database systems, etc.
- Please add here a proposal of a pilot study of geoscientific mapping in your country to be funded by EuroGeoSurveys
- Would you prefer to standardize different cartographic units in geological legends, symbols and indexes used by French and English specialists for rocks or units on geological or special-purpose maps, especially in the cross-border areas of Africa?
- Do you consider an idea to create an **atlas of rocks types** (comprising macro-, thin section- and texture photographs with brief descriptions of rocks, their structural- metamorphic evolution and geochemistry) to be useful for the identification and comparison of related rocks and units, especially in the cross-border areas of Africa?

Thematic Maps for Town and Regional Planning (2003-2005)



Recommendations: Field mapping



Recommendations: GIS Techniques



Hard- + Software Environment with Open Source Products

Recommendations: Map Compilation



Recommendations: SettingUp a SDI



• SDI - Definition

"A spatial data infrastructure (SDI) is a data infrastructure implementing a framework of geographic data, meta data, users and tools that are interactively connected in order to use spatial data in an efficient and flexible way."

Recommendations: Setting Up a SDI



Components

data, meta data



standards, framework

actors

infrastructure



Thank you!

