

Paper Number: 3590

PanAfGeo Project: Geoscience information management

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PanAfGeo “Geological knowledge and skills in African Geological Surveys” is a Pan-African project designed by EuroGeoSurveys (EGS) and the Organisation of African Geological Surveys (OAGS) with the support of several partners i.e. European Commission, African Union Commission, African Minerals Development Centre (AMDC) and Geological Society of Africa.

Geological data, including maps and mineral resources inventories are the essential basis for assessing the potential for mineral projects and granting exploration and mining licenses. Thus, comprehensive geological and mineral databases provide governments with informed decision-making options and the capacity to negotiate sustainable mineral development contracts with local and foreign investors. The information technology (IT) equipment and staff support the spatial data infrastructure which enables each Geological Survey organisation (GSO) to fulfil its missions regarding the geoscientific information. These include (i) collect, (ii) store and manage, (iii) valorise, and (iv) ensure availability of reliable georeferenced data to several target groups i.e. other government organisations, national and regional communities, planners, private sector, education and citizens.

Therefore, the specific objectives of this component of the PanAfGeo project are to:

- (1) strengthen geoscience information infrastructures and skilled professionals at operational level in the respective African GSOs, with adaptation to the local context in terms of existing equipment and personnel as well as sustainability potential, and
- (2) contribute to the setting up of the Geological and Mineral Information System (GMIS) Strategy plan of activities which promotes the development of spatial data infrastructures (SDI) among African countries as a tool for geoscience information management, data sharing among private sector and government agencies.

Regarding the capacity building, the project feasibility study showed that in half of the surveyed African GSOs there is a solid knowledge and practice basis in producing digital information but advanced skills in data security, data modelling, quality assurance, complex data analysis, data storage and controlled publication is often missing. Three target groups for dedicated training curricula are identified including IT personnel (infrastructure, administration and interoperability), geoscientists (information management and processing) and GIS professionals (user-oriented products and services). The knowledge base existing in the African GSOs will to be valorised and the training scheme carried out through three levels i.e. foundation, expert and training for trainers in order to anticipate the staff turnover often subsequent to project implementation.

Where appropriate, the South-South cooperation within the project team will be implemented since a significant number of African GSOs have already reached a good level of development and recognised expertise in geoscientific data management and dissemination.

The OAGS group has a key role to play from a continent-wide perspective. AMDC is developing the GMIS Strategy involving a Pan-African SDI for geological and mineral data management, and including as many national facilities provided by the respective OAGS members. Several GSOs such as in Senegal, Ghana, Tanzania, Namibia and South Africa are already equipped with operational infrastructures. PanAfGeo work programme brings the necessary support to bridge the identified gaps regarding the national capacities in the other OAGS members. It includes dedicated training and recommendations for improving procedures as well as implementing standards regarding data storage, authentication processes, metadata catalogue and web services.

