

Interoperable WEBGIS services for georesources in Katanga Province (Democratic Republic of Congo)

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In 2007, the Belgian Royal Museum for Central Africa (MRAC) and the Royal Belgian Institute of Natural Sciences (IRScNB) created a centre for scientific research and expertise in Earth Sciences. In its pilot phase, the project, called GECO for "Geology for an economic sustainable development" focused its activities on the Katanga Province (DRC).

The Katanga Province and more specifically its mining sector has a long industrial history of nearly a century, marked by numerous milestones and stakeholders. This background has generated a significant mass of information uneven in quality and sometimes difficult to assess. The GECO project has collected and edited this information to be able to draw an overview of the future research priorities. One of the main outcomes of the first phase of the project was the development of a cartographic server system, hosting an extensive georesources database over Katanga.

The GECO website (www.gecoproject.org) host an Internet Geographic Information System application (WebGIS) which offers tools for visualisation, spatial and logical queries as well as interactive data processing.

As an analysis and consultation tool for information scattered over the whole Katanga Province, the WebGIS of GECO have been engineered around free and open-source software. This guarantees independence in terms of development and change, both for the GECO centre and Congolese authorities. So far, the end-user application has reached a level equivalent to many commercial applications.

The cartographic server uses also widely adopted WebGIS standards. These standards have been released by the Open Geospatial Consortium (OGC) and the International Organisation for Standardisation (ISO) to ensure interoperability between web mapping services (WMS) located all over the world. The provided data and associated metadata are in compliance with INSPIRE (Infrastructure for Spatial Information in Europe) recommendations.