

PhD scholarship offer by the RMCA/Belgian Cooperation **in partnership with UNILU**

October 2025

Background to the call

The Geodynamic and Mineral Resources Service (GRM) of the Royal Museum for Central Africa (RMCA) contributes to a deeper understanding of Africa's geology and mineral resources through both fundamental and applied research. Its work explores key questions such as: the genetic links between geology and mineral resources; how soil–plant–water interactions influence environmental pollution; ways to sustainably develop geologically remarkable areas; the geological history of our planet; and how geology helps interpret climate change. These questions are central to the sustainable management of mineral resources, and GRM addresses them in part through partnerships with academic and institutional research centres in both the Global North and South.

The RMCA has agreed with the Belgian cooperation program to implement multi-year collaboration projects (2024–2029) with African academic institutions and partners. Within this framework, the GRM has secured funding for the **GeoRes4Dev** (GeoResources for Development) project. Building on its core academic research, this project supports "capacity-building" programs with partner universities in Africa—formalized through memoranda of understanding—focusing on the role of mineral resources in sustainable development.

This academic capacity building program will be developed around 3 distinct approaches:

- A. the contribution of GRM scientists to the graduate academic training programmes (master's degrees) of African partners through the (co-)financing of courses, seminars, conferences, fieldwork, etc.
- B. the supervision (academic, logistical – field, laboratory, and financial) by the scientists of the GRM department of the end-of-cycle thesis work (master's, DEA, PhD) of students from the African partners.
- C. joint academic research work (post-doc) with (young) African researchers.

The sustainable development of mineral resources is a broad field, shaped by the geological, economic, and social context in which each resource occurs. To address this complexity, the GRM Service has identified specific target regions and priority themes. Each one reflects distinct regional challenges where GRM geologists have recently gathered new data and insights. These results can either be applied directly or serve as the basis for regional syntheses, which may be further enriched through studies conducted by students and researchers from local partner institutions, integrating new geological concepts.

For the "eastern DRC" focus area of GeoRes4Dev, known as COMICODE, the GRM service has partnered with UNILU (DRC) and announces a doctoral position focussed on magmatic-hosted critical metal deposits.

The research theme of this call is: “Origin and economic potential of Lithium-Tin-Tantalum deposits associated with pegmatites and quartz veins in the Kibara Belt – Possible extensions of the Manono-Kitotolo pegmatite system?”

The Kanuka region in the Democratic Republic of the Congo represents a highly prospective but scientifically underexplored area for spodumene-bearing pegmatites. The region is home to the well-known Manono-Kitotolo pegmatite system—the world’s largest known spodumene deposits— and recent exploration activities indicate the presence of several other lithium-rich pegmatites in the region surrounding the main Manono-Kitotolo system, which likely linked to the same ca. 950 Ma magmatic event. Despite the significant economic and strategic importance, the origin and nature of pegmatites in the wider region around Manono have not yet been the subject of academic petrographic or geochemical investigations. This project seeks to address this knowledge gap through field studies of granites, pegmatites, and host rocks in the Kanuka and/or Mitwaba areas, complemented by petrographic and geochemical analysis of drill core material provided by companies operating in the area.

The research will focus on establishing the mineralogical, geochemical, and geochronological characteristics of pegmatites and their host rocks in the Kanuka/Mitwaba/wider Manono region, with the aim of constructing a genetic model for their formation and emplacement. Results will be compared directly with data from the Manono-Kitotolo system itself (based on a parallel PhD project at KU Leuven), to evaluate the broader regional controls on pegmatite emplacement and lithium–tin mineralization in the Mesoproterozoic Kibara belt. This work will not only contribute to the academic understanding of Central African pegmatite systems, but will also inform sustainable resource development strategies in one of the DRC’s most promising critical metal provinces.

Applicants are expected to prepare a more detailed project plan as part of their application.

This call for applications is part of point B of the "capacity building" programme described above.

Conditions for the scholarship.

The successful candidate must:

- Hold a DEA or a Master's degree (MSc) or an equivalent degree (with confirmation of equivalence) in geology.
- Have the support of an academic staff member or research institution.
- Be prepared to perform geological fieldwork in challenging conditions.
- Being under 40 years old will be a preferred but not exclusive criterion for selection.
- Good knowledge of English (in writing and spoken word) will be essential for communication with the supervisor at the GRM.
- Knowledge of the regional language of the study area will be a favourable but not exclusive criterion for selection.
- Have a professional occupation in a field of earth sciences either with a private employer (e.g. design office, mining company, etc.) or in a (para-)state organisation (e.g. ministry, geological survey, research centre, university or college, etc.). Have a waiver from the employer certifying that the candidate will remain employed but will be released from professional duties for the duration of the scholarship, that they will keep their salary and any other benefits due to them for the duration of the scholarship, and that they will be reinstated in their duties at the end of the scholarship or after graduation.

The applicant must prepare a detailed proposal (max. 3 pages) of the research to be carried out for the realization of a PhD thesis on the above theme.

Academic expertise at the University of Lubumbashi has historically focused on structural geology and ore formation in sediment-hosted systems. Knowledge and research capacity in magmatic petrology is less advanced, despite the growing importance of lithium- and tin-bearing pegmatites for critical mineral supply. This project will contribute directly to strengthening the department's expertise in igneous petrology and igneous-hydrothermal mineral deposit formation, thereby diversifying its research portfolio and aligning it with the country's evolving resource landscape.

Applications from female candidates are highly supported.

Scholarship Content:

Doctorate (PhD) over 3 years; Grant of a maximum of €5000 each year, **which must be justified by invoices** and can be used for:

- geological and computer equipment;
- allocation of studies, operation, administration and logistics of the field in the South (per year);

Additional funding is provided for:

- mobility stay of 6 weeks per year, at the RMCA in Belgium or in another partner university/centre of expertise, for specific training, documentary research, analyses;
- scientific support, in the field and in the laboratory, of a researcher from the RMCA who will be the co-promoter;
- (if applicable) participation in seminars and symposia

Organization:

At the administrative level, the RMCA, **together with its designated DRC partner**, will coordinate and administratively follow up on the scholarship. The scholarship holder will receive advances on the amounts provided as and when needed, with the responsibility of promptly providing proof of his/her expenses. The approval of the advances granted will be given in consultation with the southern and northern promoters of the project.

At the scientific level, the promoter will coordinate the fellow's work and research progress together with the co-promoter of the RMCA.

Documents to be provided by the candidate:

- Attestation from the employer with proof of exemption certifying that the candidate will remain employed but will be released from professional duties for the duration of the award, that the candidate will retain his or her salary and any other benefits due to him or her for the duration of the award, and that he or she will be reinstated at the end of the award or after graduation.
- Cover letter (in English)
- Research proposal (in English) of **maximum 3 pages** explaining the context, research objectives and methodology to be used during the PhD project.
- Letter of recommendation from an academic staff member or research institution
- Candidate's CV

- Copy of diploma required for the qualification for the scholarship
- An example of previous research work (article, final thesis, etc.) will be a favourable but not exclusive criterion for selection.

Please note that the interviews will be held *online* and *in English*.

In the event of selection, the candidate must also provide:

The signed certificate of acceptance of the clauses of the scholarship (*document provided to selected candidates*).

Incomplete applications will not be taken into account during the scholarship selection procedure
The selection panel reserves the right to relaunch the call in the event of an insufficient number of applications meeting the above-mentioned criteria.

Deadline for submission of the application: 26/10/2025 at 11:59 p.m. (local time).

Interviews will be held early November, **online and in English**. Selected candidates will be notified at least one week prior to the interviews.

Applications should be sent, in pdf format, to the following email address: geores4dev@africamuseum with the subject line: "Call for applications 2025 – UNILU – GeoRes4Dev".

The constituent documents of the file will be named by the candidate according to the scheme
Surname-Postlast Name-xxxxxxx

E.g.

- Ilunga Mukoko Dominique-Attestation from the employer
- Ilunga Mukoko Dominique-CV
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