



## AMGC Director General's Message



During the month of June 2024, the African Minerals and Geosciences Centre (AMGC) on 31<sup>st</sup> May 2024 visited by 19 first year undergraduate students taking BSc. Mining Engineering from Dar es Salaam Institute of Technology (DIT), Tanzania. AMGC congratulated a young Tanzanian apprentice Miss Mary Mafuru, who had successfully completed her nine months internship program from September 2023 to May 2024 in the Finance and Administration

Department. As a member of the Advisory Board of AfricaMaVal Project, AMGC was represented by the Director General in a consortium meeting which held in Rabat, Morocco from 4<sup>th</sup> to 6<sup>th</sup> June 2024. The Director General of AMGC paid a courtesy visit to the esteemed Embassy of the Sudan Republic in Rabat, Morocco on 5<sup>th</sup> June 2024 and was invited for a dinner as the chief guest held on 6<sup>th</sup> June 2024 by H.E. the Sudanese Ambassador in Rabat, Morocco for the guest of honour, who was Hon. Minister for Industry of the Sudan, who was on an official visit. On 7<sup>th</sup> June 2024 the AMGC was visited by 10 first year undergraduate students taking BSc. Environmental Laboratory Science and technology from Ardhi University (ARU), Tanzania. On 26<sup>th</sup> June 2024 a farewell ceremony held at AMGC for two retired staff after ending their 2 years extension. AMGC expressed its condolences for the death of the Malawi's Vice President in a plane crash along with nine others. AMGC participated in the yearly occupational safety and health inspection conducted by Occupational Safety and Health Authority (OSHA), Tanzania on 11<sup>th</sup> June 2024. AMGC also expressed its condolences to the death of the outstanding geologist Prof. John Randolph Vail. AMGC congratulated a young Tanzanian apprentice Ms. Heriethana Christomoo Tenga who had successfully completed her 9 months internship program.

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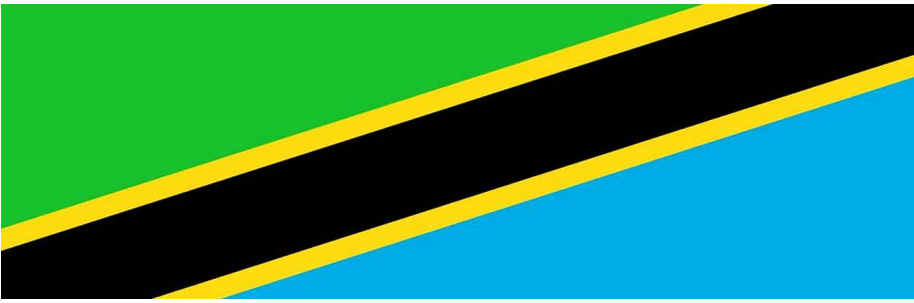
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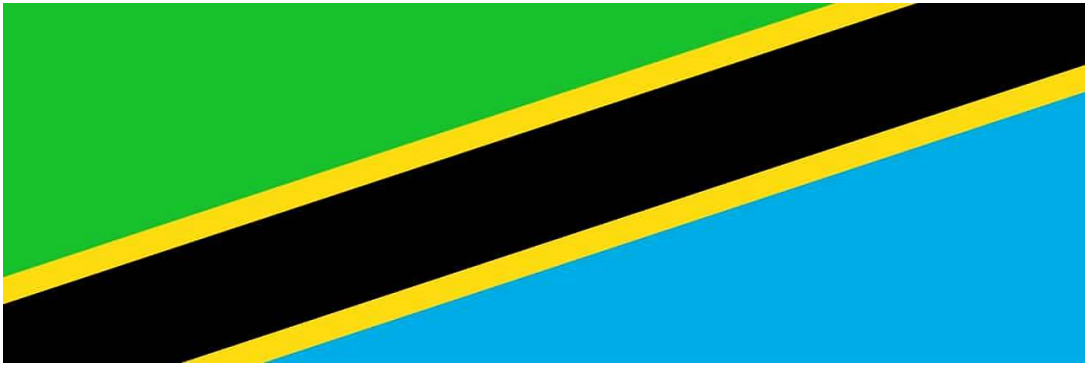
# AFRICAN MINERALS & GEOSCIENCES CENTRE

ISO 9001 : 2015 **certified**

(AMGC)

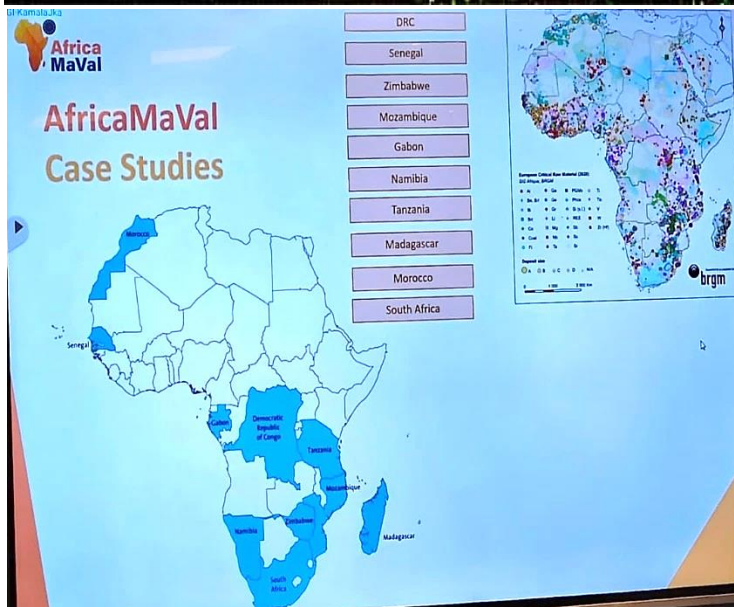


On 31<sup>th</sup> May 2024 the African Minerals and Geosciences Centre (AMGC) an ISO 9001:2015 Certified was visited by 19 first year undergraduate students taking BSc. Mining Engineering at Dar es Salaam Institute of Technology (DIT), Tanzania. The visit aimed at complementing theoretical skills gained in class to the hands-on practical skills. The students were accompanied by their supervisor, Engineer Zakaria. The Centre has continued to provide this service free of charge so as to build capacity to young scientists and engineers in the field of mineral resources and environmental management for sustainability.



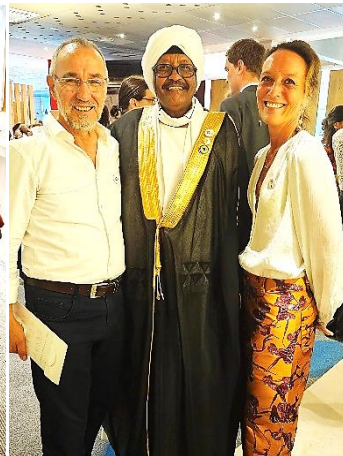
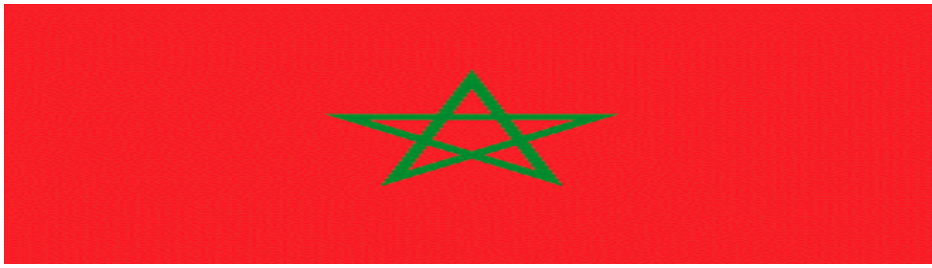
On 31<sup>th</sup> May 2024 the African Minerals and Geosciences Centre (AMGC) congratulate a young Tanzanian apprentice Miss. Mary Mafuru who had successfully completed a 9 months internship program from September 2023 to May 2024 in the Finance and Administration Department of the Centre. This program is one of the mandates of the Centre to build capacity to young graduates for sustainable management of the mineral resources of Africa.



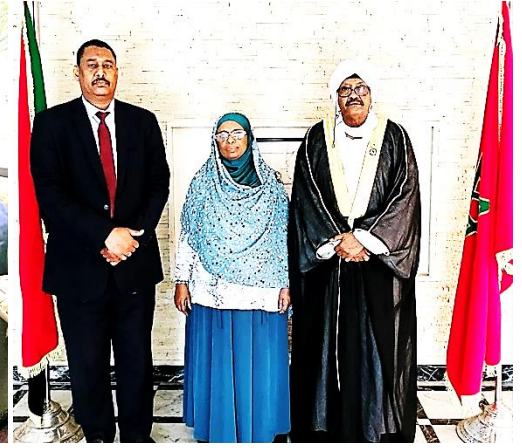


**Africa MaVal Main outcomes / Perspectives**

- ▶ A **sustainable business network** to create a real intensification of the exchanges between European and African enterprises to open new possibilities of investments. **Development of strategic partnerships** in the field of mineral exploration, extraction, processing, refining and recycling of raw materials supply but also on Energy and Infrastructures.
- ▶ The dissemination of the **best practices on ESG** for a more responsible mining: guidelines and at least 10 "Best in Africa-factsheets" will contribute to both to a local sounded development but also, will aid European actors to select African partners who are in line with responsible extraction visions thus ensuring the **supply of traceable raw materials from trusted sources**.
- ▶ A comprehensive view of **all existing mining, processing and recycling projects related to ECRM** in Africa.
- ▶ The final deliverable of AfricaMaVal will be a list of evaluated **100 opportunities of responsible investments** to enhance the EU-Africa partnerships in the ECRM value chains. We expect that between **30 and 50%** of these opportunities could be converted into concrete projects of partnerships. This could lead to a significant increase of European mining projects in Africa.



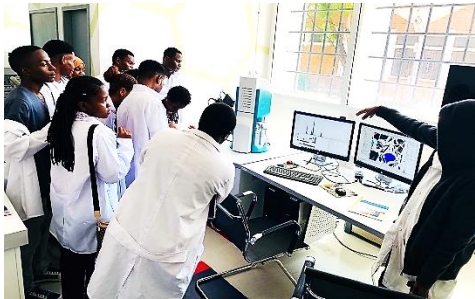
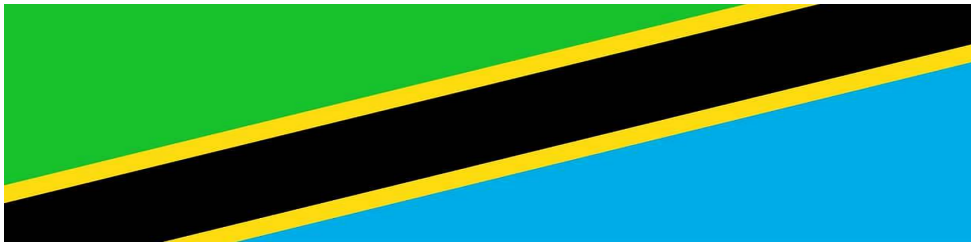
**As a member of the Advisory Board of AfricaMaVal Project, the Director General of AMGC represented the Centre in AfricaMaVal Consortium meeting held in Rabat from 4<sup>th</sup> to 6<sup>th</sup> June 2024. The AfricaMaVal Project is for Building EU-AFRICA partnerships on sustainable raw materials value chain. The ice breaking and the meeting are hosted at the hotel Ibis Rabat Agdal, Rabat Morocco.**



On 5<sup>th</sup> June 2024 Mr. Ibrahim Shaddad, the Director General of the African Minerals and Geosciences Centre (AMGC), paid a courtesy visit to the esteemed Embassy of the Sudan Republic in Rabat, Morocco. The Director General of AMGC met H.E. Madam Mawada Omar Hageltoam El Badawi, the Ambassador of the Sudan Republic in the Kingdom of Morocco. The meeting attended by H.E. Murtada Hassan Abuobeida Sharif, the Minister Plenipotentiary. The Director General of AMGC expressed gratitude and appreciation for Sudan's sustainable support through both the Ministry of Foreign Affairs and the Ministry of Minerals, which enabled the Centre to implement its activities to its highest peak. The two senior Sudanese diplomats were briefed, among other issues regarding the current work visit of Mr. Ibrahim Shaddad to Rabat, Morocco invited and sponsored by the AfricaMaVal project for building EU-Africa partnerships on sustainable raw materials value chain. Mr. Ibrahim Shaddad represents the African Minerals and Geosciences Centre (AMGC) in the Advisory Board of AfricaMaVal Consortium meeting in Rabat from 4<sup>th</sup> to 6<sup>th</sup> June 2024. It is worth mentioning that the Sudan joined the Centre in 2010, becoming the 8<sup>th</sup> member state, chaired the AMGC Governing Council, and hosted the Policy Organ Meetings two times in Khartoum (2012 and 2019).



**On 6<sup>th</sup> June 2024 the Director General of AMGC was the chief guest at the dinner invitation held by H.E. the Sudanese Ambassador in Rabat, for the guest of honour, who was Hon. Minister for Industry of the Sudan on an official visit to the Arab Industrial Development & Mining Organization (AIDMO) in Rabat, Morocco.**

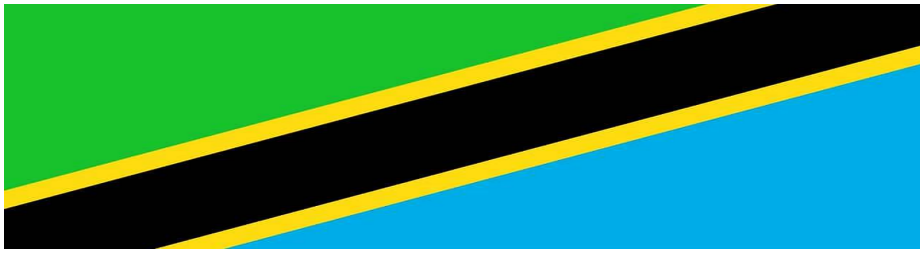


**On 7<sup>th</sup> June 2024 the African Minerals and Geosciences Centre (AMGC), an ISO 9001:2015 Certified was visited by 10 First Year Undergraduate students taking BSc. Environmental Laboratory Science and technology at Ardhi University (ARU). The visit aimed at complementing theoretical skills gained in class to the hands-on practical skills. The students were accompanied by their lecturer, Dr. Mhondwa. The Centre has continued to provide such service free of charge so as to build capacity to young scientists and engineers in the field of mineral resources and environmental management for sustainability.**



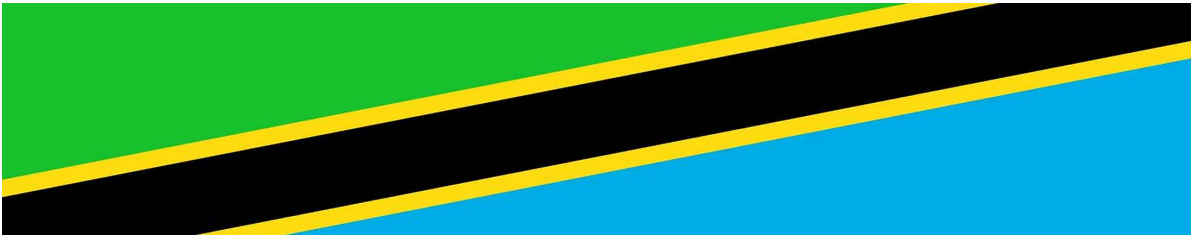
## CONDOLENCES

**The African Minerals and Geosciences Centre (AMGC) heard with great shock of the Malawi's Vice President, Dr. Saulos Klaus Chilima death in a plane crash along with nine others around the remote Chikangawa forest in Malawi on Monday 10<sup>th</sup> June 2024. On behalf of the staff and the management of AMGC the Director General of AMGC wish to extend our deepest condolences to the Government of Malawi on this terrible heartbreak incident. We pray that their souls rest peacefully in the hands of our Lord.**



**The African Minerals and Geosciences Centre (AMGC) participated in the yearly occupational safety and health inspection**

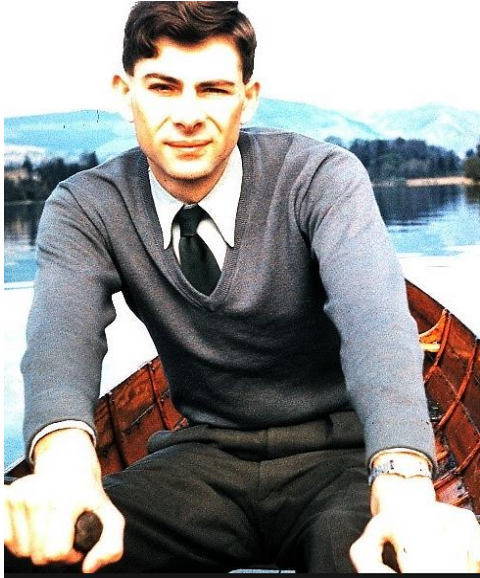
**conducted by Occupational Safety and Health Authority (OSHA) Tanzania on 11<sup>th</sup> June 2024 for quality compliance on the daily working infrastructure such as Laboratories, offices, equipment and human resource. The Inspection was led by Madam Jamila Kiroga, who is an Industrial Health Inspector. The Centre is an ISO 9001:2015 certified and operates to the optimal quality standard on all the services provided for customer satisfaction.**



**On 26<sup>th</sup> June 2024 a farewell ceremony held at African Minerals and Geosciences Centre (AMGC) for Mr. Muhidin Mwinyimkuu, Lab Assistant in Chemical and Environmental Department and Mr. Said Hassani, Ceramic Potter in the Industrial Minerals Applications Department, who have successfully completed their two years extension contracts after their retirement time. The 2 staff worked for over 25 years at the Centre and have contributed significantly to the mineral services provided by the Centre. The management of AMGC wishes them all the best in their new life.**



UNIVERSITY OF  
PORTSMOUTH



## CONDOLENCES

The African Minerals and Geosciences Centre (AMGC) heard with great shock on the demise of the outstanding geologist Prof. John Randolph Vail, who passed away peacefully on 3<sup>rd</sup> June

2024, aged 93 years. Prof. Vail was the first head and professor of the Geology department at Portsmouth Polytechnic (now Portsmouth University) from 1974 until his retirement in 1996. He contributed honorably by very extensive studies and research regarding the geology of Africa, particularly the Sudan, which were published in the Journal of the Geological Society. Prof. John Vail has recently donated a vast number of geological books, reports and maps; all in support of the Main Library of the University of Khartoum, Sudan. On behalf of staff, management of AMGC and geosciences community in Africa, I would like to convey our deepest condolences to his family, friends, neighbors, colleagues, post graduate students on this very sad occasion. We pray his soul rests peacefully in the hands of Almighty God.



**As part of empowering women and youth, the African Minerals and Geosciences Centre (AMGC) congratulated a young Tanzanian Ms. Heriethana Christomoo Tenga who had successfully completed her 9 months internship program for capacity building at the Centre. She has acquired ceramic skills in the Industrial Minerals Application Department at the Centre for 6 months and Gem Identification Techniques as well as Mineralogy and Petrology Sample Preparations in the Mineralogy, Petrology and Gemology Department for 3 months.**

## UPCOMING EVENT:



08<sup>th</sup> AFRICA 2024  
**MINEXP**   
Int'l. Mining & Machinery Trade Fairs  
25 - 27 September, Dar-es-Salaam, Tanzania

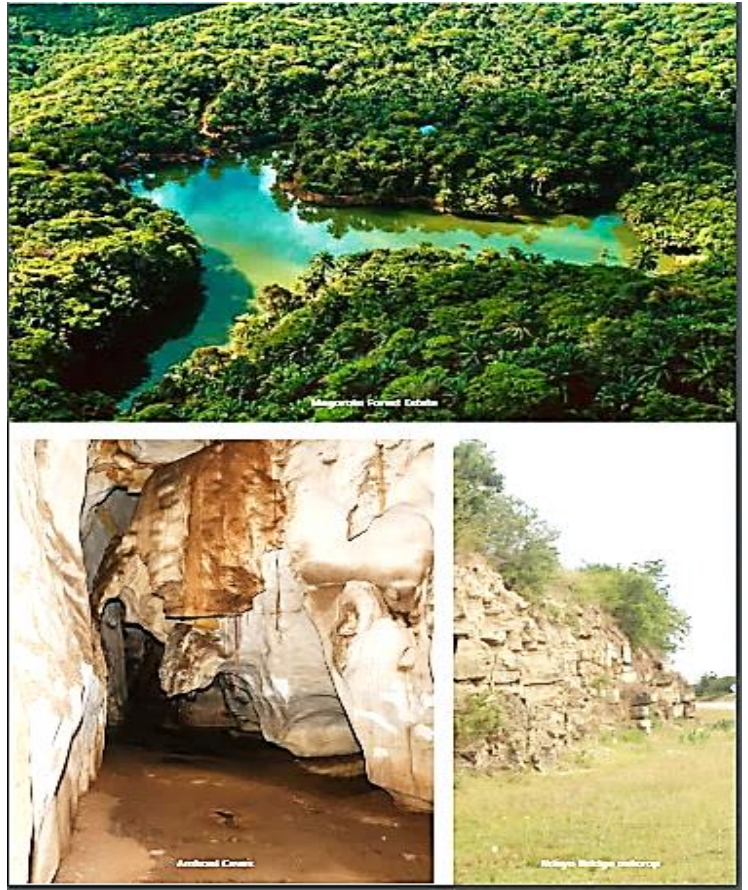
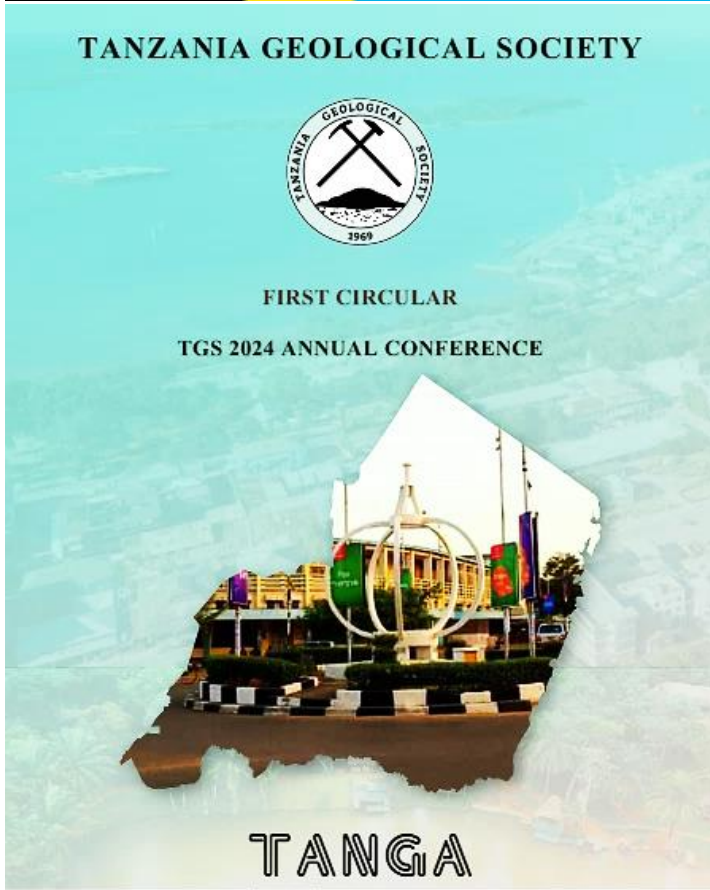
**08<sup>th</sup> MINEXPO TANZANIA 2024 - International Trade Exhibition on Mining & Machinery, Dar es Salaam from 25<sup>th</sup> to 27<sup>th</sup> September 2024**



Hosted and organized by the Government of the Tanzania, through the Tanzania Geothermal Development Company (TGDC) in partnership with UN Environment Programme (UNEP), African Geothermal Association (AGA), and other international partners

**SECOND CIRCULAR:**

**10<sup>th</sup> African Rift Geothermal Conference (ARGeo-C10), that will take place on 21<sup>st</sup> to 27<sup>th</sup> October 2024 at Julius Nyerere International Convention Centre, Dar es salaam, Tanzania**



## **TANZANIA GEOLOGICAL SOCIETY (TGS) ANNUAL CONFERENCE 2024**

**This year annual meeting will be held in Tanga, Tanzania from 1<sup>st</sup> to 06<sup>th</sup> of December 2024 with the leading theme “Harnessing Tanzania Mineral Wealth for Sustainable Economic Growth and Smooth Energy Transition”.**

# New Courses




# AMGC

# New Courses

The Mineralogy, Petrology and Gemology Department is happy to announce the following new training courses

1

Gemstone/Mineral Estimation and Valuation

2

Jewelry Design

3

Gemstone Exploration & Gem Safari's

[www.seamic.org](http://www.seamic.org)

More Info  
[matokeo@seamic.org](mailto:matokeo@seamic.org)



## NEW Training Courses

**African Minerals and Geosciences Centre (AMGC)** is pleased to announce the introduction of four new courses Geostatistics, Petroleum Sciences and Resource Estimation in collaboration with Khartoum based Consulting firm called **Knowledge and Training Centre (KTC)**. The course shall be facilitated by the Director of KTC, Dr. M. Zayed Awad, an eminent specialist in the areas of Geostatistics, resource evaluation, stratigraphy, reporting, training and mentoring, risk and decision analysis, petroleum economics, project management. The training course will be organized in Dar es Salaam at the AMGC training facilities. The following training courses are going to be offered through this collaboration.

### 1. Fundamental of Petroleum Economics

**Duration:** One Week

**Course fee:** US\$ 1,200

This course introduces the participants to requirements for conducting petroleum economics; different stages of the petroleum industry life cycle involving upstream, mid-stream and downstream sectors will be explained. Participants will learn how to construct a Cash Flow Model for oil and gas investment decision. They will also learn how to deal with the different financial components of petroleum cost, and classification of costs into OPEX and CAPEX. Net Cash Flow Stream analysis and computation of economic indicators (Yardsticks) such as NPV, IRR, PBP, MCE and DPI, and their interpretations are essential for petroleum investment decision-making. Cash Flow Adjustment using discount rates is also considered. Types of fiscal regimes will be explained, participant will also learn how to incorporate the fiscal parameters into a cash flow stream.

### 2. Geostatistical Mineral Resource Estimation

**Duration:** One Week

**Course fee:** US\$ 1,700

The course will focus on the fundamentals of Geostatistical application in mining that are required for domain specification that are required for mineral resource estimation and will include hands-on training with Geostatistical software. Geostatistical conditional Simulations may be used to assess the uncertainty associated with the Reserves Evaluation at exploration, feasibility, and production stages. The simulations provide a range of potential reserves for the ore body's Tonnage, Metal Quantity and Recovered Grade.



### 3. Introduction to Oil and Gas Industry

**DURATION:** One Week

**Course fee:** US\$ 1,200

This course is designed for a wide-ranging of petroleum industry personnel. It is designed to provide green-hands technical, and non-technical personnel with practical petroleum industry life cycle. The course covers the key phases of the exploration, development and production industry as well as transportation and refining of crudes oils.

### 4. Geostatistics for Mining - foundation Course

**Duration:** Two Weeks

**Course fee:** US\$ 2,000

Geostatistics, in combination with other statistical methods, offers a wide range of mathematical tools that can be used to analyze, model, provide estimates and assess uncertainties, for different types of spatial phenomena, for example, grades or geological features. The course will focus on the fundamentals of Geostatistics and statistics and will include hands-on training with Geostatistical software.

#### THE INSTRUCTOR



**Dr. M. Zayed Awad**, the former Sudanese Minister for Oil and Gas (September 2014-May 2017) BSc (Hons) from University of Khartoum, Sudan, MSc (Geol) from Technical University of Berlin (TU), PhD (Stratigraphy) from Technical University of Berlin (TU). Dr. Zayed is a university instructor with postgraduate qualifications in petroleum geology, stratigraphy, economic geology, Geostatistics, and relevant application soft wares. He has more than 35 years' experience in university teaching and more than 25 years worldwide experience in

the petroleum industry and training. He has supervised many MSc and PhD research students and reviewed several reports and research papers. He is the founder of Knowledge & Training Center (KTC) in Sudan, and he is active as a trainer since 2003. He worked on many projects and given training courses to hundreds of attendees on many aspects of geology. Dr. Zayed's skills are in Geostatistics, resource evaluation, stratigraphy, reporting, training and mentoring, risk and decision analysis, petroleum economics, project management. Dr. Zayed was the initiator and editor-in-Chief of the book titled "Petroleum Geology and Resources of the Sudan" published by Geozone (Berlin) in 2015.



## LIST OF TRAINING COURSES

Training Topics	Duration	Fee
<b>Finance and Administration Department (FAD)</b>		
<b>Leadership and Management Skills</b>	2 Weeks	\$1,500
<b>Financial Management Skills</b>	2 Weeks	\$1,500
<b>Executive Secretarial Skills</b>	2 Weeks	\$1,500
<b>Chemical and Environmental Department (CED)</b>		
<b>Spectrometric Methods of Analysis.</b>	2 Weeks	\$800
<b>Analysis of Gold and Other Base Metals</b>	2 Weeks	\$800
<b>Modern Laboratory Management Method</b>	2 Weeks	\$1,500
<b>Quality Management Section (QM)</b>		
<b>Laboratory Certification and Accreditation</b>	2 Weeks	\$1,500
<b>Modern Laboratory Management Methods</b>	2 Weeks	\$1,500
<b>Quality Control and Quality Assurance in Laboratories</b>	2 Weeks	\$1,500
<b>Laboratory Safety and Security</b>	2 Weeks	\$1,500
<b>Mineralogy, Petrology and Gemology Department (MPGD)</b>		
<b>Mineralogical and Petrological Sample Preparation and Analytical Techniques</b>	2 Weeks	\$800
<b>Gemstone Identification Techniques</b>	1 Week	\$400
<b>Gemstone Value Addition Techniques</b>	2 Weeks	\$800
<b>Usage of Benchtop X-ray Diffraction (XRD)</b>	2 Weeks	\$800
<b>Gemstone formation, mode of occurrences and mining methods</b>	2 Weeks	\$800
<b>Industrial Minerals Application Department (IMAD)</b>		
<b>Pottery for Beginners</b>	2 Weeks	\$800
<b>Mould Making</b>	2 Weeks	\$800
<b>Forming Techniques</b>	2 Weeks	\$800
<b>Decorations in Pottery and Ceramics</b>	2 Weeks	\$800
<b>Bricks &amp; Tiles Manufacturing [Clays]</b>	2 Weeks	\$800
<b>Glaze Formulation</b>	2 Weeks	\$800
<b>Body Composition Formulation</b>	2 Weeks	\$800



<b>Mineral Processing and Small-scale Mining Department (MPSSMD)</b>		
<b>Practical Mineral Processing and The Basic Mineral Processing Flowsheet</b>	2 Weeks	\$800
<b>Sampling and Sample Preparation for Laboratory Testing</b>	2 Weeks	\$800
<b>Artisanal and Small-Scale Mining Activities</b>	2 Weeks	\$800
<b>Techniques of Gold Cyanidation</b>	1 Week	\$800
<b>Mineral Economics</b>	2 Weeks	\$800
<b>Metallurgical Balance and Process Evaluation</b>	2 Weeks	\$800
<b>Extractive Metallurgy – Metallic Ore Deposits, Metal Extraction and Purification Processes</b>	2 Weeks	\$800
<b>Environmental Management in Mining</b>	1 Week	\$400
<b>Geo-information Department (GID)</b>		
<b>GIS and Remote Sensing for Mineral Exploration and Geological Mapping</b>	2 weeks	\$800
<b>Best Practices in Mineral Resource Estimation</b>	1 week	\$400
<b>Geodatabase Development for Web mapping</b>	2 weeks	\$800
<b>GIS and Remote Sensing Application for Geohazards</b>	1 week	\$400
<b>Integrated Mineral Exploration Techniques</b>	2 weeks	\$800
<b>GIS and Remote Sensing for Hydrological Applications</b>	1 week	\$400
<b>Open-Source GIS</b>	2 weeks	\$800
<b>Geochemical Exploration and Mapping</b>	2 weeks	\$1,200
<b>Structural Geology and Geotectonics in Mineral Exploration</b>	2 weeks	\$1,200
<b>Fundamental of Petroleum Economics</b>	1 week	\$1,200
<b>Geostatistical Mineral Resource Estimation</b>	1 week	\$1,700
<b>Introduction to Oil and Gas Industry</b>	1 week	\$1,200
<b>Geostatistics for Mining - foundation Course</b>	2 weeks	\$2,000
<b>Prospect Evaluation: Volumetric and Risk Analysis</b>	2 weeks	\$2,000



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***Minerals for  
Development***

**Find us on the Web:**

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## **MINERALOGY, PETROLOGY AND GEMMOLOGY SERVICES**

The Mineralogy, Petrology and Gemmology Department utilizes the skills of its staff to address crucial issues in the mineral sector such as lack of technical knowledge on mineral testing and identification, evaluation, grading and value addition techniques.

### **EXPERTISE**

- ✓ Mineralogical and petrological sample preparation and analysis
- ✓ Mineralogical evaluation of industrial minerals, ore minerals and clays
- ✓ Gemstone identification and grading
- ✓ Specialized training in Gemmology, Gemstone Cutting and Polishing and Mineralogical and Petrological Sample preparation and Analytical Techniques.



Petrography and Gemmological Microscopes

### **ANALYTICAL SERVICES**

- ✓ Preparation of standard thin sections and polished sections
- ✓ Rock slabbing and polishing
- ✓ Rock core splitting
- ✓ Petrographic examination of thin sections and polished sections
- ✓ Evaluation of industrial minerals, ore minerals and clays
- ✓ Gemstone testing and identification
- ✓ Diamond grading
- ✓ Consultation and Expert opinion



Polishing Machine for Polished Mount Preparation

### **TRAINING SERVICES**

- ✓ Mineralogical and petrological sample preparation and analytical techniques
- ✓ Gemstone Characterization, Identification and Value Addition
- ✓ Gemstone Identification Techniques
- ✓ Gemstone Value Addition Techniques (Gem Cutting)
- ✓ Gemstone Cabochon making and Carving
- ✓ Gemstone Faceting
- ✓ Gemstone Identification, Value Addition and Trading



## **Contacts**

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