

## AMGC Director General's Message



During the month of November 2023, the Centre received Sudanese kids for one day clay workshop. The Director General of AMGC participated in 4<sup>th</sup> regional workshop of PanAfGeo on Artisanal and Small-Scale Mining held in Bahari Beach Hotel & Resort in Dar es Salaam

during 13-16 November 2023. Participants of the workshop paid a familiarization visit to the Centre on the afternoon of 16 November 2023. The General Director of the Geological Institute of Ethiopia (GIE) as well as the Chairman of AMGC Board of Director accompanied by the General Director of the Mineral Industry Development Institute (MIDI) of Ethiopia paid a familiarization visit to the Centre. Invited by the esteemed Ministry of Mines of Ethiopia, the Director General of AMGC participated in the Mining and technology Expo of Ethiopia, (MINTEX) 2023 in Addis Ababa during 22 November - 4<sup>th</sup> December 2023. AMGC received a professional for training from the National Mining Institute (Instituto Nacional de Minas (INAMI) of Mozambique, the member state of AMGC.

## Contents

AMGC clay workshop for kids Page 1

Annual Conference 2023 of Tanzania Geological Society (TGS) in Zanzibar Page 2

4<sup>th</sup> regional workshop of PanAfGeo on Artisanal and Small-Scale Mining Page 3 - Page 5

AMGC visited by PanAfGeo participants of the 4<sup>th</sup> regional workshop on Artisanal and Small Scale Mining Page 6

A familiarization visit to AMGC by two officials from Ministry of Mines of Ethiopia Page 7-8

Participation of Director General of AMGC in the Mining and technology Expo of Ethiopia, (MINTEX) 2023 in Addis Ababa during 22 November - 4<sup>th</sup> December 2023 Page 9-12

A courtesy visit of Director General of AMGC to the Geological Institute of Ethiopia (GIE), Ministry of Mines of Ethiopia. Page 13

A courtesy visit by Director General of AMGC to Embassy of the Sudan in Addis Ababa, Ethiopia on 28<sup>th</sup> November 2023 Page 14

AMGC received a professional for training from the National Mining Institute (Instituto Nacional de Minas (INAMI) of Mozambique. Page 15

Training Courses Page 16-20

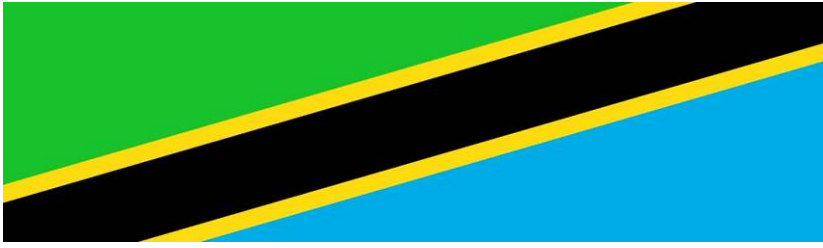






**AMGC does clay workshops for kids and women on request from diplomatic families, local and foreign communities resident in Dar es Salaam, Tanzania. The Centre will be honored to be visited by these families and communities at any convenient day to tour our facilities and have first-hand experience seeing potters behind the potter's wheel forming different shapes. AMGC is ready to assist in establishment of Ceramic Units and Workshops in African states including the member states of the Centre. In this regard, AMGC kindly repeats its request for any such requirements within both the public and private sectors in Africa so that we can provide necessary information and assistance.**





The Director General of the African Minerals and Geosciences Centre was invited by the Tanzania Geological Society (TGS) to participate in its 2023 Annual Conference to discuss the essence of Minerals in Accelerating Blue Economy from Geosciences Perspective. The conference was held during 7<sup>th</sup> - 11<sup>th</sup> November 2023 at Golden Tulip Hotel in Zanzibar, Tanzania. The Director General of AMGC met and interacted with a number of participants including Hon. Aboud Suleiman Jumbe, the Principal Secretary of Ministry of Blue Economy and Fisheries in Zanzibar, Prof. Evelyne Mbede, the first Tanzanian female to obtain Ph. D in geology and Prof. Abdulkarim Hamisi Mruma, the independent director of Tanzanian Royalty Exploration Corporation of Tanzania.





The 4<sup>th</sup> regional workshop in PanAfGeo related to the Work Package “Artisanal and Small-Scale Mining”, which targeted 45 participants from 16 English speaking countries in Eastern and Northern Africa took place at Bahari Beach Hotel, Dar es Salaam; Tanzania during 13-16 November 2023. The participants attended the workshop are from the following countries such as Libya, Egypt, Sudan, South Sudan, Eritrea, Somaliland, Ethiopia, Uganda, Kenya, Tanzania, Rwanda, Malawi, Zambia, Seychelles and Mauritius.

The African Minerals and Geosciences Centre (AMGC) cooperated to hold this workshop with the organizer Dr. John Tychsen, the Director of Artisanal Small-Scale Mining (ASSM) Consultant from University of Aarhus, Denmark. The training was officiated by an EU-diplomat in Dar es Salaam and the Director General of AMGC on 13 November 2023. After the workshop, the Director General of AMGC honored ceremony of the hand over certificates, addressed the closing ceremony and he wrote forward for publication of all the presentations in an” ASM Handbook for Eastern and Northern African Region”.

The workshop presented and described in detail the methods, tools, procedures, and requirements for ASSM operations in English-speaking Eastern and Northern Africa. The workshop also discussed the future role of the National Geological Surveys in the ASSM sector in respective countries. The Director General of AMGC delivered a presentation entitled: AMGC ROLE IN PROVIDING MINERAL SERVICES TO MINING SECTOR & GEOSCIENCE COMMUNITY WITH EMPHASIS ON ASM IN AFRICA









On afternoon 16 November 2023, a certificates hand out ceremony was organized to present certificates to all participants including 34 trainees, 6 co-trainers and 4 guests attending the 4<sup>th</sup> regional workshop in PanAfGeo related to the Work Package “Artisanal and Small-Scale Mining. The ceremony was officiated by; -

- \* Mr. Ibrahim Shaddad, the Director General of AMGC
- \* Ms. Enatfenta Melaku, WPC African Co-lead
- \* Dr. John Tychsen, WPC- leader,

The official closing of the workshop was done by Mr. Ibrahim Shaddad, the Director General of AMGC. Each participants received a hand coffee mug made by AMGC to commemorate the workshop.





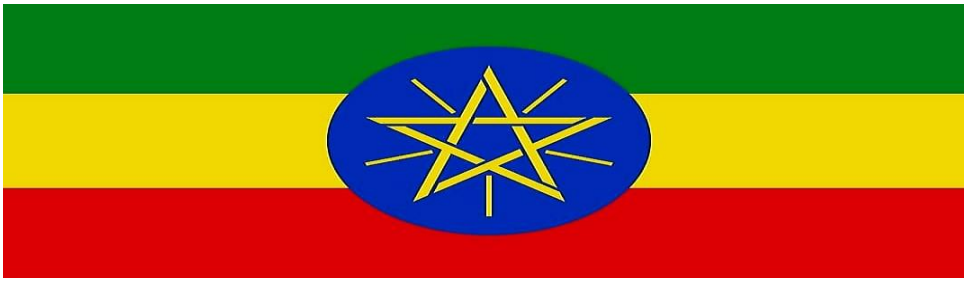
**On the afternoon of 16 November 2023, the African Minerals and Geosciences Centre (AMGC) was visited by participants of the 4<sup>th</sup> regional workshop in PanAfGeo related to the Work Package “Artisanal and Small-Scale Mining. The participants were from 16 English speaking countries in Eastern and Northern Africa and familiarized themselves with mineral services provided by AMGC to the mining sector, geosciences community in Africa and elsewhere. The guests were impressed by the Centre's highly professional mineral services and wide range of various analytical infrastructure available at the Centre.**





**Dr. Degene Hailemariam, the Director General of Geological Institute of Ethiopia (GIE) and the Chairman of the Board of Directors for the African Minerals & Geosciences Centre (AMGC) paid a familiarization visit to AMGC on afternoon 15 November 2023. Dr. Degene was accompanied by Dr. Guta Legesse Tessema, the General Director of the Mineral Industry Development Institute (MIDI). The two Ethiopian officials representing the esteemed Ministry of Mines of Ethiopia were received and escorted by Mr. Ibrahim Shaddad, the Director General of AMGC on a tour to different technical departments providing various mineral services to the mining sector and geosciences community in Africa. AMGC sincerely recognizes the outstanding commitments and obligations of the Government of Ethiopia to the Centre that enabled it to implement its activities to its highest peak. Ethiopia is one of the main founders of the Centre when it was established 46 years ago, in 1977.**





**AMGC is ready to provide whatever Ethiopia needs in mineral services, particularly outreach cost sharing on job specialized trainings to be conducted at premises of Ministry of Mines in Addis Ababa. AMGC is willing to provide assistantship to the Ethiopian Gemological Centre, which is currently under establishment. The Centre is willing to cooperate with GIE and MIDI to provide assistantship in the establishment of its national facilities for chemical & mineralogical analysis as well as the establishment of a simple ceramic technology unit.**





Invited by the esteemed Ministry of Mines of Ethiopia, the Director General of AMGC participated in Ethiopia International Mining and Technology Expo (MINTEX) 2023 in Addis Ababa during 22 November - 4<sup>th</sup> December 2023. Considerable numbers of local and foreign companies participated in MINTEX 2023. Mining companies, Jewelry manufacturers, importers, exporters, mining technology manufacturers, and financial institutions all took part. The participation of foreign mining companies in the MINTEX 2023 gave them an opportunity to observe the mining investment opportunities in Ethiopia, engaged in mining investment and created an opportunity to promote new technological options for the mining sector in Ethiopia. The opening ceremony of MINTEX 2023 was attended by H.E. Eng. Habtamu Tegagn, Minister of Mines of Ethiopia, H.E. Million Marhewos, State Minister of Mines of Ethiopia, Excellences Ministers, Head of Regional States, and invited guests. The guest of honor was H.E. Dr. Abiy Ahmed, the Prime Minister of Ethiopia.

The Director General of AMGC delivered a presentation entitled:

**WOMEN-YOUTH EMPOWERMENT IN APPLICATION OF SOME DEVELOPMENT MINERALS WITH EMPHASIS ON CERAMIC & SEMIPRECIOUS GEMSTONES FOR CREATION OF COTTAGE INDUSTRY.**

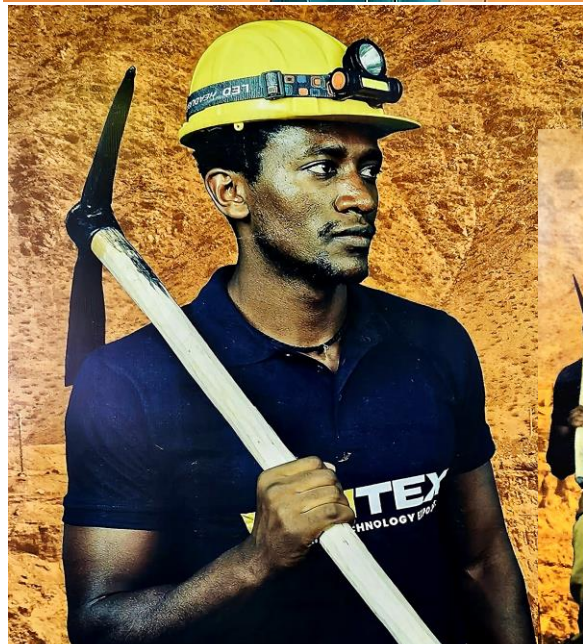
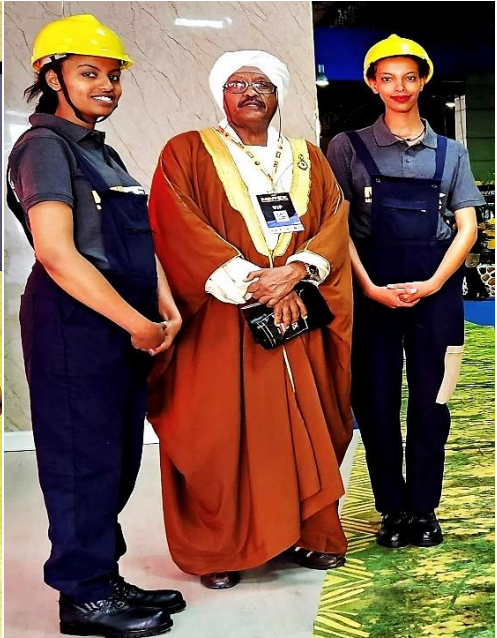
Invited as one of the honorable guests, the Director General of AMGC attended Recognition and Appreciation Program organized by the Ministry of Mines of Ethiopia at Marriott Hotel is on the evening of 4<sup>th</sup> November 2023.





Early morning on day-1 of MINING AND Technology Expo2023 (MINTEX), the Director General of African Minerals and Geoscience Centre was surprised but happy to meet H.E. Eng. Habtamu Tegagn, the Minister of Mines of Ethiopia in informal dress checking exhibition of MINTEX before the official opening almost two hours later. The Director General of AMGC does admire H.E. Eng. Habtamu's humble and energetic character and the way he is taking his ministerial assignment with full heart and will to serve and develop the Mining Sector in Ethiopia.







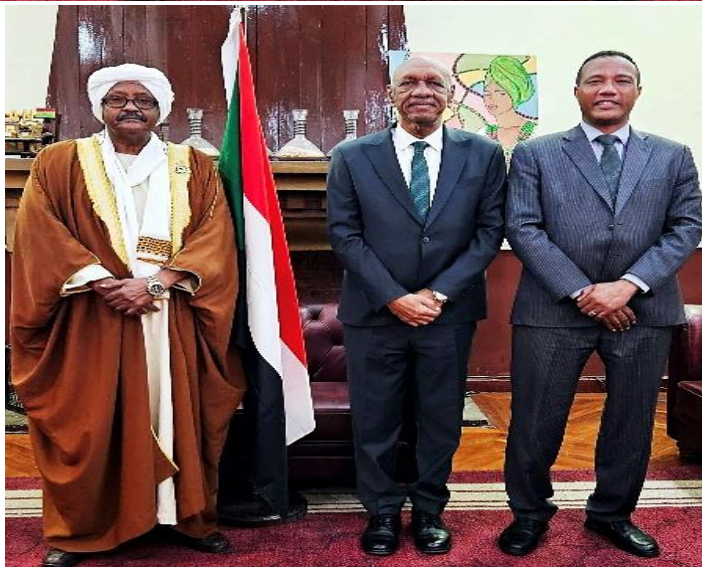
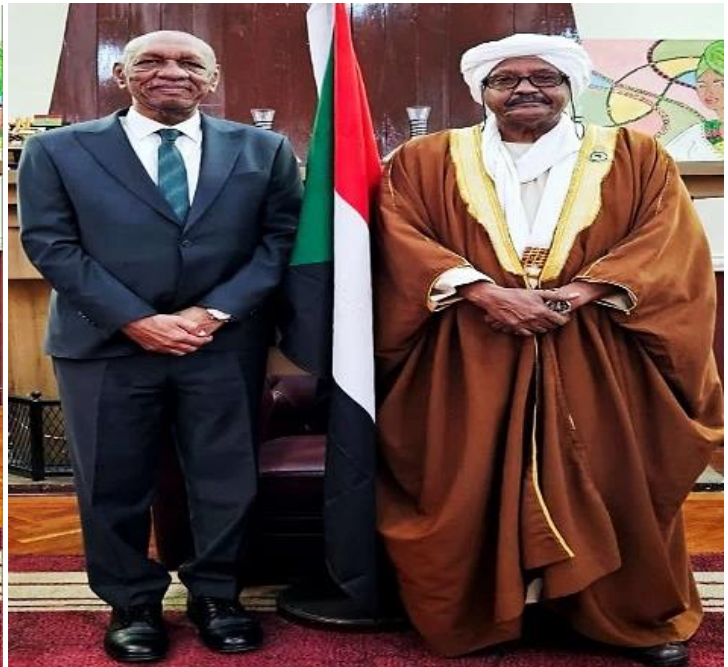
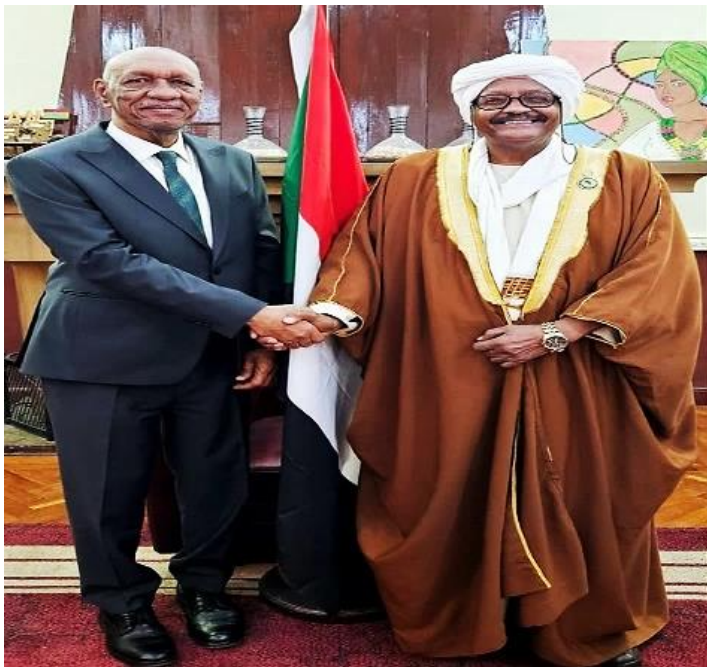






**Mr. Ibrahim Shaddad, the Director General of the African Minerals & Geosciences Centre (AMGC) paid on afternoon of 28<sup>th</sup> November 2023 a courtesy visit to the Geological Institute of Ethiopia (GIE); Ministry of Mines of Ethiopia. A meeting was held with Dr. Hijara Tesfaye, the newly assigned General Director of GIE as well as the Chairman of AMGC Board of Directors. The meeting was attended by Dr. Bisrat, the newly assigned General Director of the Mineral Industry Development Institute (MIDI). Mr. Shaddad briefed the two officials regarding Ethiopia working relationship with AMGC, the need to maximize Ethiopia's benefits from the mineral services provided by the AMGC and smoothing payment of Ethiopia to its financial commitments to the Centre through UNECA as previously used to be. AMGC is ready to provide assistantship to the Ethiopian Gemological Centre, which is currently under establishment. Dr. Hijara and Bisrat will be formally invited to pay a visit to AMGC for familiarizations of themselves with mineral services provided by AMGC.**

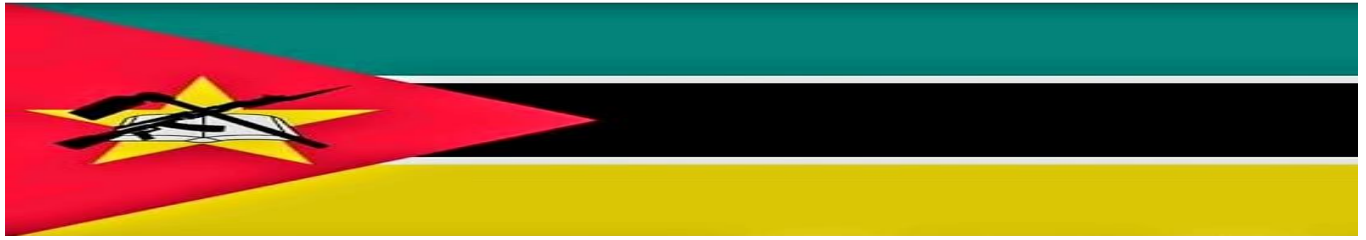




**Mr. Ibrahim Shaddad, the Director General of the African Minerals and Geosciences Centre (AMGC) paid a courtesy visit to the esteemed Embassy of the Sudan in Addis Ababa, Ethiopia on 28<sup>th</sup> November 2023. The Director General of AMGC met with H.E. Jamal Elsheikh Ahmed, the Ambassador of the Republic of the Sudan to Ethiopia and Permanent Representative to the AU and UNECA. The Meeting was attended by H.E. Awad Mergani, the Counsellor. The Director General of AMGC expressed**

**gratitude and appreciation for Sudan's sustainable support through both Ministry of Foreign Affairs and Ministry of Minerals, which enabled the Centre to implement its activities to its highest peak. H.E. Jamal Elsheikh was briefed among other issues regarding the current work visit of Mr. Ibrahim Shaddad to Addis Ababa, Ethiopia invited by the esteemed Ministry of Mines of Ethiopia to participate in MINTEX23. 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).**





**The African Minerals and Geosciences Centre (AMGC) received a professional Mr. Alberto Fernando Manuel from the National Mining Institute (Instituto Nacional de Minas (INAMI) of Mozambique. Mr. Alberto was attending a training course on Environmental Management in Mining which conducted by the Mineral Processing and Small-Scale Mining Department of AMGC from 27 November 2023 to 08 December 2023**



# 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

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





## African Minerals and Geosciences Centre

**Kunduchi Beach  
Area  
P.O. Box 9573  
Dar es Salaam  
Tanzania**

**+255 22 2650347**

**Fax: +255-22-2650319**

**seamic@seamic.org**

***Minerals for  
Development***

**Find us on the Web:**

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



## 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

**Ibrahim Shaddad** Director

General

[ibrahimshaddad@seamic.org](mailto:ibrahimshaddad@seamic.org)

**Charles Buteta** Quality

Manager/ Manager,  
Chemical and  
Environmental Department

[charles@seamic.org](mailto:charles@seamic.org)

**Alex Mkama**

Manager, Mineral Processing and  
Small-Scale Mining Department

[mkama@seamic.org](mailto:mkama@seamic.org)

**Matokeo Simba**

Manager, Mineralogy, Petrology &  
Gemmology Department

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

**Bashiri Juma**

Ag. Manager, Industrial Minerals  
Department/ Ag. Finance &  
Administration Department

[bashiri@seamic.org](mailto:bashiri@seamic.org)