



AMGC

Director General's Message



AMGC has received a Certificate for ***ISO 9001:2015 Standard,* Certificate TZ20/90372** following the successful assessment and compliance to the requirements of the Quality Management System. Certificate hand out ceremony was done To Mrs. Nammi Sruthisha from India who has attended a practical training course on Gemstone

Characterization and Identification Techniques for two weeks. The Director General (DG) of AMGC as a member of the Advisory Board of AfricaMaVal Project participated in a consortium meeting June 5th - 6th 2023, Entebbe, Uganda. The Centre received an invitation to join International Raw Materials Observatory (INTRAW) to gain from the services in the minerals value chain that support international cooperation and exchange the best existing practice in the sector. The DG of AMGC paid a courtesy visit to UNECA in Addis Ababa and met Mr. Jean-Paul Adam, the Vice Chairman of AMGC Board of Directors as well the Chairman of the AMGC Standing Committee of Officials. The DG of AMGC paid courtesy visits to some of the esteemed diplomatic missions of AMGC member states accredited in Tanzania i.e. Angola, Comoros Kenya, Mozambique, Sudan and Uganda. He updated Excellences regarding performance of the Centre. He also paid a courtesy visit to the esteemed Embassy of the Kingdom of Morocco in Dar es Salaam, Tanzania. He renewed invitation of the Centre for Morocco to join the Centre. The Centre was visited by Mr. Siyabonga Makunga, Africa Manager-Sales for LECO AFRICA (PTY) LTD, South Africa. AMGC through its Mineralogy, Petrology and Gemmology Department has started one week training course on Basic Gemmology Skills for Mr. Salah Siliman Mohammed from Benghazi, Libya. 49 second year students from BAGAMOYO ARTS AND CULTURE COLLEGE (TaSUBa), Fine Art Department paid a one-day study visit to the Centre at the Industrial Minerals Application Department (IMAD).

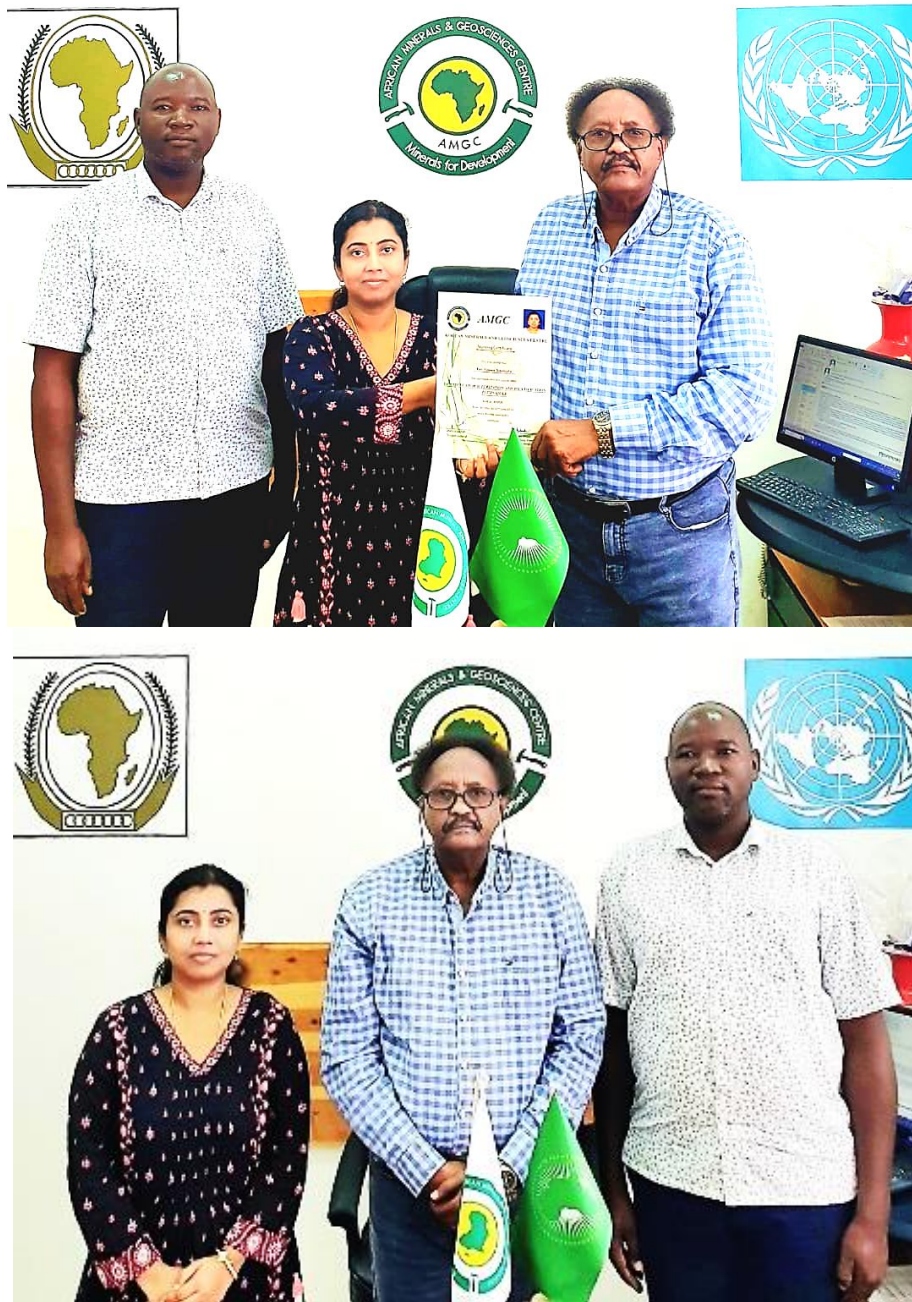
Contents

AMGC Received a Certificate for ISO 9001:2015 Standard certificate TZ20/90372	1
Certificate hand out ceremony to Mrs. Nammi Sruthisha	2
AMGC Director General participation in AfricaMaVal Consortium Meeting June 5-6 2023, Entebbe, Uganda	3
AMGC joining International Raw Materials Observatory (INTRAW)	4
Director General courtesy visit to UNECA	5
Director General Courtesy visits to some diplomatic missions of AMGC member states in Tanzania i.e. Angola, Comoros Kenya, Mozambique, Sudan and Uganda 6,8,9,10,12, & 13	
Appreciation & Congratulations of incoming & outgoing Ag. Director of Geological Surveys and Geo-information Management (Medini) of Kenya	7
Director General courtesy visit to Embassy of the Kingdom of Morocco in Dar es Salaam, Tanzania	11
A visit to AMGC by Mr. Siyabonga Makunga, Africa Manager-Sales for LECO AFRICA (PTY) LTD, South Africa	14
A training course on Basic Gemology Skill to Mr. Salah Siliman from Libya	14
A visit to AMGC by 49 Second year students from BAGAMOYO ARTS AND CULTURE COLLEGE (TaSUBa)	15
Seasonal greeting of Eid Adha	15
Appreciation & Gratitude to AMGC member states who fulfilled financial commitments	16
Event	17
New Courses	18
New Trainings	19-20
Training List	21-22





Issuance of a Certificate to the African Minerals and Geosciences Centre (AMGC) for *ISO 9001:2015 Standard,* Certificate TZ20/90372 following the successful assessment and compliance to the requirements of the Quality Management System. The certificate is valid from *02 April 2023 until 02 April 2026* subject to satisfactory surveillance audits on various activities at the Centre such as laboratory services, research and development on Industrial minerals and gemstones, generation, collection, processing and dissemination of geo-information, specialized training and production of ceramics. This event has been officiated on Friday 02 June 2023 by Mr. Ibrahim Shaddad, the Director General of AMGC and Mr. Charles Buteta, the Quality Manager/Manager of Chemical and Environmental Department.



Certificate hand out ceremony for Mrs Nammi Sruthisha, Tanzania Resident from India, who has attended a practical training course on Gemstone Characterization and Identification Techniques for two weeks starting from Monday 22 May 2023 till 02 June 2023 in Petrology, Mineralogy and Gemmology Department of the African Minerals and Geosciences Centre (AMGC).



The Director General of the African Minerals and Geosciences Centre (AMGC) as a member of the Advisory Board in the AfricaMaVal Project participated in a Consortium Meeting June 5th - 6th 2023, Entebbe, Uganda. The AfricaMaVal Project is to build forthcoming EU and Africa business network on the whole Critical Raw Materials (CRM) value chains, to develop a strategy on the integration of identified and emerging raw materials value chains for the energy and digital transition and to assess the 100 responsible investment opportunities in Africa proposed at the end of the project.



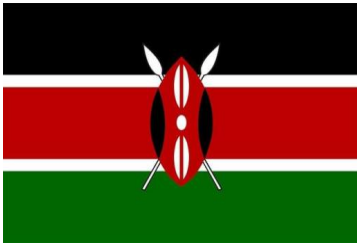
The African Minerals and Geosciences Centre (AMGC) received an invitation to join International Raw Materials Observatory (INTRAW) to gain from the services in the minerals value chain that support international cooperation and exchange the best existing practice in the sector. INTRAW is non-profit organization in the City of Brussels, Belgium. AMGC agrees to go into partnership with INTRAW Observatory deals with contemporary and future challenges in raw mineral supply and demand on global scale (with focus on regional context if necessary or needed). INTRAW's experts are specialized in the minerals value chain to support international cooperation and exchange of best practice. On 24th March INTRAW had the annual General Assembly and Observatory status was presented updated with an ambitious plan for the forthcoming 3-5 years. INTRAW now is involved in 3 EU funded projects that provide us with sufficient resources to develop, perform and facilitate various focused activities in the domain of raw material.



On 13 June 2023, Mr. Ibrahim Shaddad, the Director General of the African Minerals and Geosciences Centre (AMGC) paid a courtesy visit to the United Nation Economic Commission for Africa (UNECA) headquarter based in Addis Ababa, Ethiopia. The Director General of AMGC met Mr. Jean-Paul Adam Director, Technology Climate Change and Natural Resource Management Division. Mr. Jean is the Vice Chairman of AMGC Board of Directors (BoD) as well the Chairman of the AMGC Standing committee of Officials (SCO). The meeting was attended by Mr. John Robert Sloan, the Economic Affairs Officer of Green and Blue Economy Section, Technology Climate Change and Natural Resources Management Division (TCND) at UNECA. Mr. Shaddad briefed the two UNECA officials regarding current challenges and developments in the Centre as well as arrangements for holding the AMGC Policy Organ Meeting, which is expected soon to be hosted and chaired by Kenya the member state of AMGC in Nairobi.



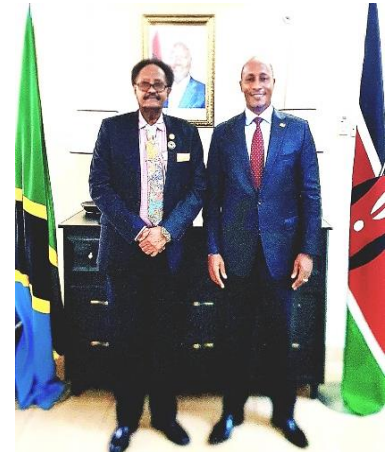
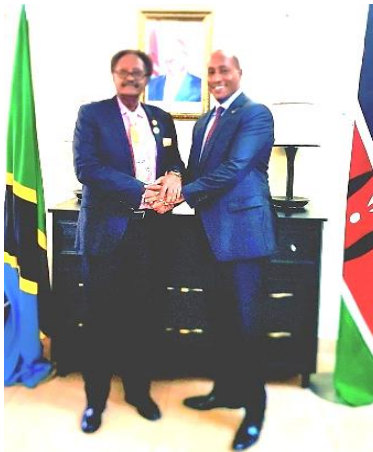
On 16 June 2023, the Director General of the African Minerals and Geosciences Centre (AMGC) paid a courtesy visit to AMB. HON COL (RTD) Fred Mwesigye, the Uganda High Commissioner to Tanzania to express AMGC gratitude to the much-appreciated commitments of the Government of Uganda through its esteemed Ministry of Energy Oil and Minerals Development which enables the Centre to implement its activities to its highest peak. The Director General of AMGC updated H.E. the Uganda High Commissioner among other issues the challenges and developments at the Centre Uganda has joined the Centre since January 1980 chaired and hosted the AMGC 25th Governing Council on 26 May 2005 in Kampala Uganda The Minister for Energy and Minerals Development by then was Hon. Syda N.M. Bbumba. Out of the six Directors General for the Centre the late Mr. James Kagule-Magambo was the 2nd Director General from 1986-1994.



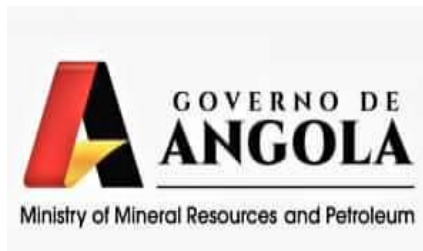
APPRECIATION & CONGRATULATIONS

The African Minerals and Geosciences Centre (AMGC) wish to take this opportunity to:-

- Thank Mr. Evans Masachi for the leadership during his tenure as Acting Director of the Directorate of Geological Survey & Geo-information Management (Madini) at the State Department for Mining in Ministry of Mining, Blue Economy and Maritime Affairs, Kenya, the member state of AMGC. We are looking forward to continued working relationship with him as well as seeking his advice especially on mining issue.
- Congratulate Mr. Enock Kipsembe, the newly appointed Acting Director of the Geological Surveys and Geo-information Management (Medini) of Kenya KE, the member state of AMGC. The Ag. Director will represent Kenya in the Board of Directors (BOD) of AMGC, which include other representatives of member states. We are confident that Mr. Enock will ensure that Kenya realizes its mineral potential through aggressive exploration work. AMGC will be glad to cooperate with him for the betterment of the Kenya minerals and mining sector and improvement of knowledge and skills of its Geo-scientific community. The Centre is committed to provide mineral services including capacity building to the Kenyan professionals to empower them and support technically the enhancement and performance of the esteemed Madini of Kenya.



On 20 June 2023, Mr. Ibrahim Shaddad, the Director General of the African Minerals and Geosciences Centre (AMGC) paid a courtesy visit to H.E. Isaac Njenga, the Kenya High Commissioner to Tanzania. Mr. Ibrahim Shaddad discussed with H.E. Isaac Njenga a tentative programme regarding the expected soon visit to AMGC by Hon. Salim Mvurya, Cabinet Secretary (CS) of Mining, Blue Economy and Maritime Affairs of Kenya, who is the current Chairman of the Governing Council of AMGC. H.E. the CS will be accompanied by the Principal Secretary for Ministry of Mining, Blue Economy and Maritime Affairs and other officials from the esteemed Ministry. The programme in respect of the visit will be coordinated with both Tanzania, Ministry of Minerals and Ministry of Foreign Affairs and East Africa Cooperation. It is worth mentioning that Kenya joined the Centre in July 2006 becoming the 7th member state, chaired the AMGC Governing Council and hosted the Policy Organ Meetings three times (May 2011, June 2014 and May 2015) and the coming one will be hosted by Kenya under the chairmanship of Hon. Salim Mvurya, the CS for Mining, Blue Economy & Maritime Affairs, of Kenya, who is the current Chairman of the Governing Council of AMGC.

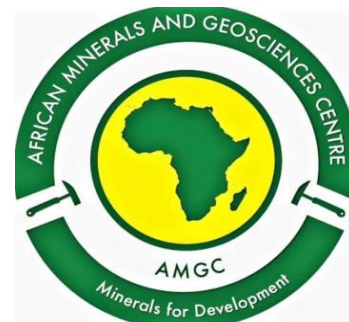
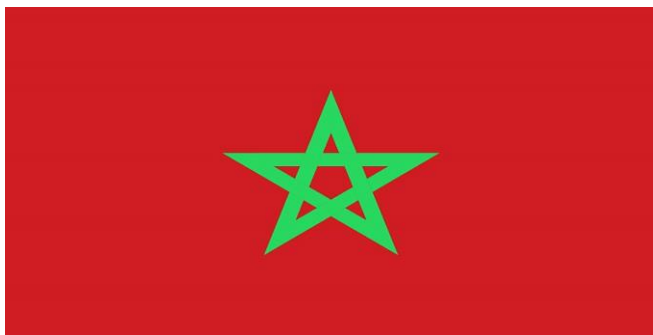


On 22 June 2023, Mr. Ibrahim Shaddad, the Director General of the African Minerals and Geosciences Centre (AMGC) paid a courtesy visit to the esteemed Embassy of Angola in Dar es Salaam, Tanzania. Mr. Ibrahim Shaddad met and updated H.E. Ambassador Sandro de Oliveira regarding performance of AMGC and arrangement for the familiarization visit soon to the Centre by the current chairman of AMGC Governing Council Hon. Salim Mvurya, Cabinet Secretary, Ministry of Mining, Blue Economy and Maritime Affairs of Kenya.

It is worth mentioning that Angola, one of the founding member states of AMGC, has been unreservedly supporting the Centre since joining the Centre on 23 May 1985. Angola shouldered more than once (in 2001 and 2009) hosting the Policy Organ Meetings of the Centre as well as chairing the Governing Council of the Centre. Out of the six Directors General managing the Centre since 1977, Angola was elected to manage the Centre from 2002 to 2006 by H.E. Dr. Diamantino Pedro Azevedo, the current Minister for Mineral Resources, Oil and Gas in Angola. H.E. Dr. Diamantino is the current Vice Chairman of the AMGC Governing Council. Angola was elected Chair of the Board of Directors (BOD) of AMGC from 2006 to 2014 by Dr. Luis Antonio, the then Advisor of the Minister of Geology and Mines of Angola and now Director of Exchange Office at the Ministry of Mineral Resources, Oil and Gas of Angola. Currently Dr. Luis is the representative of Angola in AMGC Standing Committee of Officials. Mr. Canga Xiaquivuila, the Director General of the Geological Institute of Angola is the representative of Angola in AMGC Board of Directors.



On 23 June 2023, Mr. Ibrahim Shaddad, the Director General of the African Minerals & Geosciences Centre (AMGC) paid a courtesy visit to H.E. Dr. Ahamada El Badaoui Mohamed Fakih, the Extraordinary and Plenipotentiary Ambassador of Comoros KM in Dar es Salaam, Tanzania. H.E. Dr. Ahamada El Badaoui is also the Dean of the Diplomatic Corps in Tanzania. The Comoros is one of the founder states of AMGC and it was the state which signed the Centre's Establishment Agreement on behalf of the other member states Mr. Ibrahim Shaddad briefed H.E. Dr. Ahamada El Badaoui regarding performance of AMGC and arrangement for the familiarization visit soon to the Centre by the current chairman of AMGC Governing Council Hon. Salim Mvurya, Cabinet Secretary, Ministry of Mining, Blue Economy and Maritime Affairs of Kenya. The Comoros represented by the H.E. Minister of Economy, Planning, Energy, Tourism, Private Sector of the Investments, and Land Affairs including Petroleum-Mining will attend coming 40th Governor Council Meeting of AMGC in Nairobi which will be hosted by the Hon. Cabinet Secretary, Ministry of Mining, Blue Economy and Maritime Affairs of Kenya.



Mr. Ibrahim Shaddad, the Director General of the African Minerals & Geosciences Centre (AMGC) paid on 23 June 2023 a courtesy visit to the esteemed Embassy of the Kingdom of Morocco in Dar es Salaam, Tanzania. The Director General of the AMGC had the honor of meeting H.E. the Head of Mission Ambassador Zakaria El Goumiri and the meeting was attended by H.E. Lahoucine Rahmouni, the Minister Plenipotentiary and Deputy Head of Mission. Mr. Ibrahim Shaddad briefed the two distinguished Moroccan diplomats regarding AMGC as a diplomatic, multinational, intergovernmental Pan-African Centre of Excellence providing mineral services to Mining Sector and Geo-scientific community in Africa. AMGC had been inviting the esteemed Moroccan Ministry of Energy, Mines, Water and Environment (MEMWE) to join the Centre so as to be among its driving force.

It is worth mentioning that the MEMWE is one of the regional leaders in the Mining Sector of Africa. Morocco has an ancient history of mining for enhancing its economy. The mining industry of Morocco is contributing honorably in the national economy. The technical know-how is developed and Morocco is the world's largest producer of phosphate, and contains about 75% of the world's estimated reserves. Mining contributes more than 35% of exports and 5% of GDP. Foreign investors have found the investment climate, the infrastructure, fiscal situation, and political stability very favorable to continue business in the country in this sector.

The Director General of the AMGC has the honor to invite Excellences the Ambassador and his Deputy to visit the AMGC on any day and time convenient so that they could familiarize themselves with the Geoscientific - Mining services being provided by the Centre.



On 26 June 2023, Mr. Ibrahim Shaddad, the Director General of AMGC paid a courtesy visit to H.E. Mr. Asm Mustafa, the Charge' d'affairs of the Sudan Embassy in Dar es Salaam, Tanzania. Mr. Shaddad updated H.E. the Charge' d'affairs regarding current challenges facing the Centre and its performance from 2012 to 31 May 2023. Mr. Shaddad further highlighted important topics to be deliberated among member states in the coming soon Policy Organ Meetings, which will be hosted by Kenya as well as will be held in Nairobi, under the chair ship of H.E. Salim Mvurya, the Cabinet Secretary (CS) for Mining, Blue Economy and Maritime Affairs of Kenya in his capacity the current Chairman of AMGC Governing Council.

Mr. Shaddad expressed much appreciation, gratitude and sincere recognition of the outstanding commitments and obligations of the Government of Sudan to the Centre that enable it to implement its activities to its highest peak. The Sudan has been unreserved supporting the Centre in overcoming repeated financial constrain that the Centre is facing. The Government of Sudan is one of the leading member states of AMGC fulfilling timely their financial contributions to the Centre. In fact the Sudan is the only AMGC member state, which has already paid 50% advance payment of its subscription for Financial Year 2023/2024. It is worth mentioning that the Sudan is ranking the second after Tanzania the host country of AMGC in utilizing the AMGC's mineral services and in this regard the Sudan sd contributes honorably in the 40% annual operational budget to be generated by the Centre.

The Sudan is leading also in injecting additional funds through maximizing its beneficiation from mineral services particularly paid training courses provided by the Centre. Since Mr. Ibrahim Shaddad, the current Director General of

AMGC has been fully on board in 15 July 2015, a total of 486 paid training opportunities were provided to Sudanese professionals from Geological Research Authority of Sudan sd (GRAS), Sudanese Mineral Resources Company (SMRC), Ariab Mining Company (AMC) and Sudan's Gold Refinery. The Sudanese professionals have been trained in various on-job-training courses at the AMGC based in Dar es Salaam, Tanzania and one paid outreach training course held at the premises of GRAS in Khartoum.

H.E. Mr. Asm Mustafa assures the sustainable support of the Sudan to AMGC and expressed his high concern to enhance the existing excellent and fruitful relationship and cooperation that the Sudan sd and AMGC share for strengthening beneficial partnerships to push for the Centre's mission and mandate in serving the Mining Sector and Geosciences community in the Sudan and African Countries. It is worth mentioning also that the Sudan is the last member state to join the work force of AMGC in August 2010. The Sudan chaired the AMGC 33rd and 39th Governing Council Meetings hosted in Khartoum in 2013 and 2019 respectively.



On 28th June, 2023, Mr. Ibrahim Shaddad, the Director General of the African Minerals and Geosciences Centre (AMGC) paid a courtesy visit to H.E. Ricardo Mtumbuida, the High Commissioner of Mozambique in Tanzania in his esteemed office. Mr. Shaddad briefed H.E. Mtumbuida among other issues, challenges facing the Centre and arrangement for the familiarization soon visit to the Centre

by the current chairman of AMGC Governing Council Hon. Salim Mvurya, Cabinet Secretary, Ministry of Mining, Blue Economy and Maritime Affairs of Kenya. The coming soon Policy Organ Meetings will be hosted by Kenya as well as will be held in Nairobi, under the chair ship of H.E. Salim Mvurya, the Cabinet Secretary (CS) for Mining, Blue Economy and Maritime Affairs of Kenya in his capacity the current Chairman of AMGC Governing Council.

H.E. the High Commissioner of Mozambique assured the sustainable support of Mozambique to the Centre. Mozambique one of the founding member states of AMGC, has been unreservedly supporting the Centre since its establishment in 1977. Mozambique has been also among the leading member states that are using the Centre's mineral services and training.

Due to Mozambique's significant contribution to the running of the AMGC as continental Centre of Excellence, has shouldered three times hosting Policy Organ Meetings of the Centre (i.e. 8th Governing Council Meeting held on 2-3 October 1987, 18th Governing Council Meeting held on 5 August 1998 and 27th Governing Council held on 31 May 2007) as well as more than four times the responsibility of chairing the Governing Council of the Centre.

Out of the six Directors General managing the Centre since 1977, Mozambique was elected in 1996-2002 to manage the Centre by Dr. Antonio Maria Pedro, the current Acting Executive Secretary of the Economic Commission for Africa (UNECA). Mr. Elias Xavier Daudi, the National Director of the Directorate of Geology and Mines of Mozambique at the Ministry of Mineral Resources and Energy in Mozambique is a member of the AMGC Standing Committee of Officials and Mr. Horacio Belengueze, the Mineral Processing Engineer at the Ministry of Mineral Resources and Energy of Mozambique is a member of the AMGC Board of Directors.





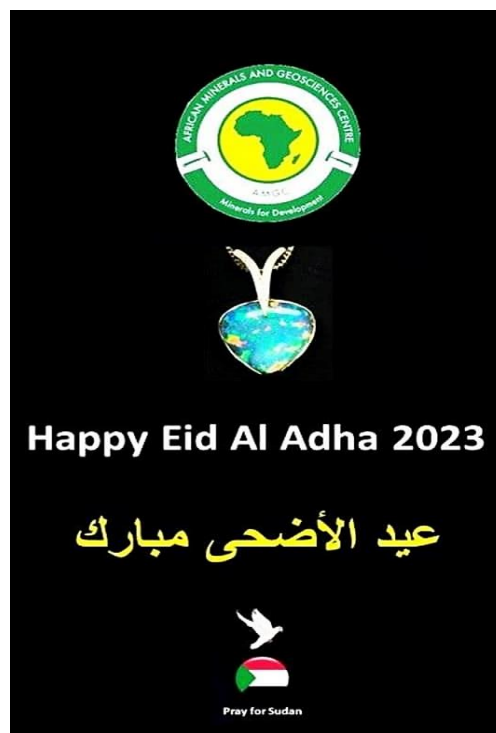
The African Minerals and Geosciences Centre (AMGC) through its Mineralogy, Petrology and Gemmology Department conducted one week training course on Basic Gemmology Skills for Mr. Salah Siliman Mohammed from Benghazi, Libya.



The African Minerals and Geosciences Centre (AMGC) was visited by Mr. Siyabonga Makunga, Africa Manager-Sales for LECO AFRICA (PTY) LTD, South Africa. Mr. Siyabonga was accompanied by Mr. Francis Msonde, who is a LECO Representative in Tanzania. The main focus of the visit was to discuss how to mutually benefit from the procurement of modern analytical instruments from LECO Africa for testing strategic minerals such as coal, graphite etc.



49 Second year students from BAGAMOYO ARTS AND CULTURE COLLEGE (TaSUBa), Fine Art Department paid a one-day study visit to the African Minerals & Geosciences Centre (AMGC) at the Industrial Minerals Application Department (IMAD).



APPRECIATION & GRATITUDE

The African Minerals and Geosciences Centre (AMGC) would like to express its much appreciation and gratitude to Tanzania, Angola, Sudan, Kenya and Uganda for fulfilling their financial commitments to the Centre.



EVENT

CAG29 Second Circular

SECOND CIRCULAR



29th Colloquium of African Geology

"The earth sciences and Africa's development: current realities, future projections"

26 – 29 September 2023 | Windhoek, Namibia

CALL FOR ABSTRACTS



The Lion's Claw, a distinctive rock formation at the World Heritage site of /Ui-//aes, also known as Twyfelfontein in the Kunene Region, Namibia

"Namibia the World's Geological Paradise"

Spearheaded by the Geological Survey of Namibia

New Courses



AMGC

New Courses



The Mineralogy, Petrology and Gemmology 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

More Info

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 a 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
Finance and Administration Department		
Leadership and Management Skills	2 Weeks	\$1,500
Financial Management Skills	2 Weeks	\$1,500
Executive Secretarial Skills	2 Weeks	\$1,500
Chemical and Environmental Department		
Spectrometric Methods of Analysis.	2 Weeks	\$800
Analysis of Gold and Other Base Metals	2 Weeks	\$800
Quality Management Section		
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
Mineralogy, Petrology and Gemology Department		
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
Industrial Minerals Application Department		
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

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



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Development***

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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



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