

PanAfGeo

Pan-African Support
to Geological Sciences and
Technology Africa-EU Partnership

Appui panafricain aux géosciences
du partenariat Afrique-UE

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WP-B TRAINING SESSION – MINERAL RESOURCES ASSESSMENT

The WP-B delivered its second training session in Portuguese and took place in Quelimane, Mozambique. It brought together 20 participants from five African Portuguese-speaking countries, i.e. Angola, Guinea-Bissau, Mozambique, Cabo Verde and São Tomé & Príncipe, from PALOP (Países Africanos de Língua Oficial Portuguesa). We also had 3 guests from Mozambique institutions, two trainers from Mozambique and one Co-Leader from Nigeria.

The second training session of WP-B was conducted from 19-29 June 2023. It was jointly organised by LNEG, Portugal (Maria João Batista, WP-B leader) and INAMI (Instituto Nacional de Minas) and DNGM (Direção Nacional de Geologia e Minas). Locally, Mr. Danta Rosse, Vladimiro Manhiça and Faira Jetha from DNGM, INAMI and Provincial Delegation of INAMI, respectively, were very helpful and contributed to the successful organisation of the session.

On June 20th, the welcome address of the opening ceremony was given by Mr. Cândido Rangeiro and Mr. Elias Daúdi, General Directors of DNGM and INAMI. The welcome speech was also given by Director of the Office of the Secretary of State of the Zambezia Province, Mr. Valter Manuel Coelho Muiane, the readed speech of the representative of the Delegation of the European Union to the Republic of Mozambique, Mr. David Sanfiel and the Co-Leader, Mr. Umar Bature from the Geological Survey of Nigeria, followed by the opening remarks of Mrs. Maria João Batista. Maria João Batista presented the PanAfGeo project and introduced the training session dedicated to “Mineral Resources Assessment” and also the Return-to-Work project that the participants have to provide in one year as feedback. The opening day sessions were dedicated to the mineral potential of Mozambique presented by the General Directors of the Direção Nacional de Geologia e Minas and Instituto Nacional de Minas and, the Co-Leader presentation relating to the mineral exploration in Nigeria.



The ten-day training was organized as classroom-type sessions lectures and field visits.

The training related to the theme of lithium rich pegmatites of Alto Ligonha, which took place between the 19nd and 29th of November, had a total duration of 37 hours, parted into presentations of 1:00 h and 1:30 h, with 2 practical classes, and a two-days field trips to visit a Muiane Mine, presently on hold and the ongoing Naípa underground and open pit mine of pegmatitic rocks and tantalum and lithium minerals.

The theoretical training dealt with the subjects described below.

- Geological setting and general knowledge of lithium rich pegmatitic occurrences in Alto Ligonha and also in Mozambique. This theme, given its importance, involved the largest number of training hours, with emphasis being given to the aspects that allow characterizing these the minerals and the viability of the exploitation. The classed also included knowledge of what were the exploration techniques and which were the main exploration tool that lead to discovery. Types of pegmatitic rocks found in the region, their geological origin the minerals most frequently encountered and the most economical in the region. It was made evident that the tourmalines and the berilium found are frequently of gemological charater. The Mozambican trainer, Mr. João Marques was the main teacher for the pegmatite region and the guide of the field trips and field training. The geological formations and the explanations of the deposit itself and also the questions to observe if students understood the classroom previous sessions. From his explations students could observe in the site the diferent zones of a typical pegmatite and where enrichment usually occurs.



- Small scale and artisanal mining was also part of the training and the main teacher was Mr. Salvador Mondlane. Mr. Salvador used group work sessions to discuss the subject of environmental, social and value chain of the industry of small scale and artisanal mining.

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The training also included all phases of mineral exploration with of mineral resources exploration techniques, such as portable XRF the advantages of using it in a early phase of mineral exploration and how to read the data produced. Another lecture of how to use the gamma ray spectrometer, when to use and how to interpret the data. Lectures of data treatment with practical exercises and statistical approaches with different quality of data. A lecture with examples of exploration of lithium resources in the world. Lectures about very important subjects to EU such as circular economy; The conservation of all resources by means of responsible production, consumption, reuse, and recovery of products, with no discharges to land, water, or air that threaten the environment or human health. Mineral reserves classification (UNFC-AMREC) and principles provide the classification framework. the global market for raw materials, supply, the effect of war and pandemic in the mineral market and how it affected the prices in the common products of every country.



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After the training certificates were formally handed over to each participant, the concluding remarks were given by Maria João Batista, the Co-Leader of Nigeria and the Director of Mineral Resources Department of INAMI. It was concluded that the network now constituted with this group of participants needs to be developed in future cooperation to help raising subjects less developed in African countries like the ones related with climate change and energy transition and the raw materials needed for these challenges.



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News in the press:

Jornal de Notícias, 23rd of June.

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Garimpeiros chamados à formalização da actividade

Notícias, 23/06/23

Mineração artesanal poderá ser formalizada

O GOVERNO quer formalizar a mineração artesanal no país, de modo a promover uma exploração sustentável bem como oportunidades de investimento no sector mineiro.

O director nacional de Geologia e Minas, Cândido Rangeiro, falou, no seminário de avaliação, do potencial em recursos minerais e exploração artesanal de pequena escala, que junta especialistas dos Países Africanos de Língua Oficial Portuguesa (PALOP), nomeadamente Moçambique, Angola, Cabo Verde, Guiné-Bissau e São Tomé e Príncipe, com vista a debater formas sustentáveis de exploração dos minérios em países africanos.

Apontou que o Governo está a buscar experiências de outros países africanos com vista a controlar a mineração artesanal, tendo concluído pela necessidade de licenciar os mineradores artesanais, como forma de combater os aliciamentos

e o branqueamento de capitais.

“Apoiamos a mineração artesanal organizada, por isso tem havido brigadas de sensibilização”, disse.

Acrescentou, sem avançar dados estatísticos, que os exploradores artesanais de minerais têm lesado o Estado em somas avultadas. Por esta razão, segundo indicou, a Geologia e Minas, tem levado a cabo actividades de sensibilização para que os mineiros deixem de realizar as suas actividades na clandestinidade.

Entretanto, Maria Baptista, coordenadora do laboratório de Energia e Geologia de Portugal, que orientou o seminário, disse que com esta formação, os técnicos dos serviços geológicos e da área de recursos minerais dos PALOP vão melhorar a sua capacidade de gestão de matérias-primas para a transição energética.

Explicou que a esco-

lha de Moçambique, em especial a província da Zambézia, para acolher a reunião, se deve ao seu potencial em recursos minerais.

“Escolhemos a província da Zambézia dada a sua riqueza em pegmatites e Moçambique por ser considerado um dos países mais ricos em recursos minerais”, indicou.

Por seu turno, Valter Muíanga, director do gabinete da secretária de Estado na Zambézia, disse que o seminário vai munir os profissionais da área de conhecimentos sobre gestão de recursos minerais na província.

O evento tem a duração de dez dias (de 19 a 29 de Junho) e enquadra-se no projecto Pan-African Support to Geological Sciences on Technology Africa-EU-Partnership, PanAfGeo 2. A formação inclui a visita da mina de pegmatites do Alto-Ligonha, no distrito de Gilé.

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Trainees:

JANUARIO	JUSTINO MACUBI BERNARDO
SIMAO	GODINHA AMADA MAVUNZA DIYAWA
MONTEIRO	MONICA PATRICIA FRANCISCO
KIVOVA	LUA CELESTINA PEDRO
DJALO	MAKIA MASSIMA SINENY
INFANDA	DOMINGOS VANGHE
LAZARO	FILA JOAO RAIMUNDO
SUBUANA	WILSON LUCIANO
VILICHANE	IVANOR TAULA
CHIRRUTE	ISABEL LUCAS
DE SOUSA RANGEL	ISALINA TELMA
ADRIANO	TEMOTEO ERNESTO
ZANDAMELA	HILARIO SIMAO
MAGENGE MUNGUAMBE	ANASTÁCIA LUCAS
MUCUSSETE	ANTONIO
CATARINA FERNANDES ALVES	SEVERINA



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QUARESMA SOARES DOS RAMOS	GILMAR
VAZ ANDRADE	VANILDA CARLINA
COSTA DA GRACA	CICER
SAGUATE	CESARINA DA LUCILDA FRANCISCO MOROSSENE
ROSSE	DANTA
MANHIÇA	VLADIMIRO
JETHA	FAIRA