



**PanAfGeo**

*Geoscientific Knowledge & Skills  
in African Geological Surveys*



## Call for Applications for a PanAfGeo Training

### « **WP4 – Environmental Management of Mines** »

3<sup>rd</sup>-14<sup>th</sup> July 2017, Dakar, Senegal  
in English

#### 1. MAIN CONTEXT OF PANAFGEO

“PanAfGeo” for “Pan-African Support to the EuroGeoSurveys-Organisation of African Geological Surveys (EGS-OAGS) Partnership” is a project which supports the training of geoscientific staff from African Geological Surveys through the development of an innovative training programme that includes the acquisition and development of important professional skills that complement their qualifications and technical skills. The training programme is carried out by world-class geoscientific experts coming from African and European Geological Surveys.

PanAfGeo is co-funded by the European Commission (Directorate-General of Development and International Cooperation) and by a Consortium of 12 European Geological Surveys coordinated by the French Geological Survey (BRGM).

This programme allows trainees to acquire a state-of-the-art tool kit that contains methods and/or field work from eight geoscientific domains:

- WP1 – Geoscientific Mapping;
- WP2 – Mineral Resources Assessment;
- WP3 – Artisanal and Small-Scale Mining;
- WP4 – Environmental Management of Mines;
- WP5 – Geohazards;
- WP6 – Geoheritage;
- WP7 – Geoinformation Management;
- WP8 – Communication and Promotion.

The “PanAfGeo Charter for Trainees” provides the general quality framework for selection of trainees who will attend the training sessions carried out in the frame of the PanAfGeo Project. This Charter is awarded for the full duration of the PanAfGeo Project. Implementation of the Charter will be monitored and violation of any of its principles and commitments may lead to its withdrawal by the PanAfGeo Project Coordination.

The overall objective and impact of PanAfGeo is to improve the governance and sustainable use of African mineral resources and related infrastructures. The specific objective and outcome is to strengthen the knowledge and skills in Africa’s mining sector and specifically of African Geological Surveys, to make them able to contribute – in their respective countries – with their expertise and data to informed decision-making and good governance as well as sustainable use of mineral resources and reinforcing the capacity of the Organisation of African Geological Surveys (OAGS).



Co-funded by the  
European Union



THE AFRICA-EU PARTNERSHIP  
LE PARTENARIAT AFRIQUE-UE

## 2. CONTENT & METHODOLOGY OF THE “WP4 – ENVIRONMENTAL MANAGEMENT OF MINES” TRAINING

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“WP4 – Environmental Management of Mines” aims to bring solutions for managing environmental problems related to mining by using geosciences to understand, predict and prevent environmental impacts caused by mining activities.

“WP4-Environmental Management of Mines” is coordinated by the Geological Survey of Sweden (SGU) with the close technical and scientific assistance of Botswana Geoscience Institute and the Geological Survey of Senegal (MMI-DPPM).

- Number of Attendants: max 20.
- Length: 12 days.
- Trainers: 2 European trainers + 2 African trainers.
- The programme contains issues as defined in 'The Description of the Action' of the PanAfGeo Project:
  - Assessment and evaluation of the situation and status, with relation to mining and the affected environment;
  - Assessment and evaluation of resources and measures suitable and available for remediation, rehabilitation and sustainability in relation to mining operations;
  - Risk analysis of mining operations and various means and methods it implicates that can affect the environment;
  - Promotion and marketing of environmentally friendly practices for mining;
  - Sustainable management of environmentally sound mining.

**Also, the course comprises the following in more detail:**

- (1) Environmental monitoring of mines
    - mining and the environment – history and future
    - Principles of mining and the environment. Global policy and framework.
    - legislation – an overview
    - trends and technologies
  - (2) Mine waste and mine water management;
    - mine waste – numbers, history and future
    - waste characterisation
    - waste management – strategies and methods
    - mine water – dewatering, processing, recirculation and discharge
    - water management – techniques
    - mine water monitoring.
  - (3) Acid rock drainage prediction and prevention;
    - geochemistry of ARD
    - environmental impacts of ARD
    - techniques for ARD prediction
    - principles and strategies for ARD prevention
    - site assessment and sampling
    - legislation – an overview
    - interpretation and presentation of results.
  - (4) Cyanide and gold extraction;
    - principles of cyanidation of gold
    - gold ore processing (heap leach, CIC, CIP)
    - cyanide and the environment
    - cyanide destruction.
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The training comprises lectures, group discussions and presentations of current research and projects. The training offers the opportunity to participants to work with current examples and site specific situations (trainee day).

Site visits are an important tool for learning and discussing mining and the environment. Site visits will be integrated in training, during the course or as post- training excursions. The extent of site visits will be decided depending on season and logistics.

**FINALLY, PLEASE, NOTE:**

- PanAfGeo WP4 will organise altogether seven (7) training sessions in Environmental Management of mines across Africa during 2017-2019. Four (4) training sessions will be run in English, two (2) in French, and one (1) in Portuguese (*depending on the number of Portuguese speaking applicants*).
- While the first one takes place in **Senegal**, there will be six (6) more sessions to come. The next one will take place in **Botswana**, in **October-November 2017**.
- Thereafter in 2018-2019 it is proposed to organise training sessions in **Tanzania (April? 2018)**, **Zambia (August? 2018)**, **Rwanda in French (October? 2018)**, **Mozambique in Portuguese (March? 2019)** and **Nigeria (June 2019)**. These, however, have not been confirmed to date.
- It is recommended that the applicants consider their language/country preferences when choosing to which of the seven training sessions to apply for.

### 3. MAIN EXPECTED LEARNING OUTCOMES OF THE COURSE

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The “**WP4 – Environmental Management of Mines**” aims to fill the lack of knowledge of African Geological Surveys staff on how mining and quarrying effects the environment (e.g. release of toxic substances in water and in air, health issues for the surrounding population, geotechnical stability problems, loss of biodiversity, production of acid drainage waters, etc.). WP4 aims to promote a better governance as well as sustainable use of mineral resources in Africa.

### 4. TIME SCHEDULE

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<b>Date of training session</b>	From 3 July 2017 To 14 July 2017
<b>Location</b>	Dakar, Senegal
<b>Application deadline</b>	15 April 2017

### 5. WHO CAN APPLY?

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The PanAfGeo “**WP4 – Environmental Management of Mines**” training session is open to all persons who are eligible according to the conditions of the “**PanAfGeo Charter for Trainee**”.

### 6. FUNDING OF THE TRAINING

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The PanAfGeo “**WP4 – Environmental Management of Mines**” training session is supported through funds of the European Commission.

The following expenses will be covered:

- Travel costs: Flights and ground travel in Africa, according to the programme of the training;
- Accommodation, breakfast, catering and joint meals during the training session;
- A daily training allowance of 30 EUR.

## 7. APPLICATION AND SELECTION PROCEDURE

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In order to be considered, applicants for the PanAfGeo Training Session entitled “WP4 – Environmental Management of Mines” must complete the documents listed hereafter:

- 1 - Applicant Form for a PanAfGeo Training;
- 2 - Letter of Commitment signed by applicants employer;
- 3 - Letter of Motivation.

Please complete these documents and send them to WP4 Leader Berndt Pettersson (SGU) [berndt.pettersson@squ.se](mailto:berndt.pettersson@squ.se) and WP4 Deputy Co-Leader Lamine Diouf (Geological Survey of Senegal (MIM-DPPM) [laminodiouf@yahoo.fr](mailto:laminodiouf@yahoo.fr)

**Application Deadline: to be received before 15 April 2017.**

The selection process will take into account regional-national representation and a gender balance following the aim of strengthening skills of African Geological Surveys geoscientific staff.

All applicants will be informed about the result of the selection process approximately in the beginning of May 2017. The Invitation Letter will be sent out immediately in order to allow time for Visa processing and delivery.

Information about the PanAfGeo Programme can be found via the internet address:  
<http://panafgeo.eurogeosurveys.org>

Questions regarding PanAfGeo should be addressed to EuroGeoSurveys via the email address:  
[info@eurogeosurveys.org](mailto:info@eurogeosurveys.org)

Or to the Organisation of African Geological Surveys (OAGS) via the email address:  
[oags@geoscience.org.za](mailto:oags@geoscience.org.za)

Questions regarding practical issues of the course should be addressed to the course coordinators via the email addresses: [berndt.pettersson@squ.se](mailto:berndt.pettersson@squ.se) (in English, WP4 Leader); [laminodiouf@yahoo.fr](mailto:laminodiouf@yahoo.fr) (in French, WP4 Deputy Co-leader)



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**MR BERNDT PETERSSON**

WP4 – Environmental Management of Mines Leader  
Senior Geologist  
Geological Survey of Sweden (SGU)

**MR MOLATLHEGI MOSEKI**

WP4 – Environmental Management of Mines Co-Leader  
Senior Geologist  
Botswana Geoscience Institute

**MR LAMINE DIOUF**

WP4 – Environmental Management of Mines Deputy Co-Leader  
Geological Engineer  
Director, Regional Department of Industry and Mines, Thiès, Senegal  
Geological Survey of Senegal (MIM-DPPM)

*Ingénieur Géologue de Conception*

*Chef du Service Régional du Ministère de l'Industrie et de Mines de Thiès, Sénégal  
Service géologique du Sénégal (MIM-DPPM)*