



**PanAfGeo**

*Geoscientific Knowledge & Skills  
in African Geological Surveys*



## Call for Applications for a PanAfGeo Training

### « WP1 – Geoscientific Mapping, part WP1E1 – Remote Sensing »

20-30 November 2017, Bishoftu, Ethiopia  
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  
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## 2. CONTENT & METHODOLOGY OF THE “WP1 - GEOSCIENTIFIC MAPPING” TRAINING

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Geological map is a scale-down interpretation of the structure of the selected area of the upper part of the Earth crust usually drawn on a topographic map.

Geoscientific mapping is a step-by-step process during which geological map is compiled as a base for the state and public administrations, in particular for making decisions when planning civil works, and formulating policies on energy, minerals and environmental protection.

“WP1 – Geoscientific Mapping” aims to implement geological, GIS (Geographic Information System) and organisational techniques from preparation phase to finalisation of geological map and explanatory notes in the conditions of the African Geological Surveys.

“WP1 – Geoscientific Mapping” is coordinated by the Czech Geological Survey (CzGS) with the close technical and scientific assistance of the Geological Survey of Ethiopia (GSE) and the Geological Survey of Malawi (GSD). More support comes from the French Geological Survey (BRGM), the Geological Survey of Spain (IGME), the Geological Survey of Slovenia (GeoZS) and the Geological Survey of Poland (PGI-NRI).

Training for Geoscientific Mapping is planned in two main topics:

- Introduction to remote sensing (WP1-E1, one training in Ethiopia)
- Field training in geological mapping (e.g., WP1-E2, WP1-N3; 4 trainings will be held in English language in Ethiopia, Namibia, and 2 trainings in French language in Morocco or Senegal or Congo-Brazzaville, to be specified).

### 2a. Introduction to remote sensing (WP1-E1)

This first part of the training aims to introduce local geologists into available sources of remote sensing (RS) data in philosophy of geological mapping, basic steps of preparation of satellite data as basis for field campaign, and using of remote sensing data for detecting important geological structures.

- Number of Attendants: 25
- Length: 10 days
- Trainers: 3 lecturers + 1 assistant
- Preliminary programme:
  - Principles of remote sensing (RS); overview on RS data with a focus on open-access RS data (e.g., Copernicus: Sentinel modules, Landsat time series);
  - RS and GIS software: Introduction to ENVI and SNAP and QGIS software;
  - RS processing and analysis: basic techniques for multispectral data analysis, generation of Digital Elevation Model (DEM) and its derivatives, geological interpretation of satellite images and DEM;
  - Mineral mapping using optical satellite remote sensing data;
  - Processing of RADAR data: introduction to radar interferometry, generation of displacement maps, geological interpretation of data;
  - Multi – thematic synergic compositions – GIS and RS data.

### 2b. Field geological mapping

This second part of the training aims to do practical exercise on field techniques used during the geological mapping, collecting of data, interpreting petrological, geophysical, structural, stratigraphic and geochronological data in terms of compiling geological map, summarising the data and preparation of geological map. Trainings will take place in 2018 and 2019, separate calls will be announced for each course WP1 of field geological mapping.

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

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“**WP1 – Geoscientific Mapping**” aims to raise level of skills of African staff in terms of field geology mapping so as to African geologists can make geological maps to finally better cover the continent at different scales with good-quality data. Thus, good-quality geological maps at multiple scales will match better with requirements of potential investors of the public and private sectors, especially in the field of mining and exploration. Consequently, such assumptions fulfil the overall objective of the action. The first segment, the WP1-E1 remote sensing course will introduce local geologists into principles of remote sensing, available sources of remote sensing data and advanced processing applied to (i) optical satellite data to map geology/minerals, and (ii) radar processing to detect deformations and vertical movements. Practical basis of remote sensing as a necessary preparatory phase of field mapping will be included in the programme of each subsequent field mapping course.

### 4. TIME SCHEDULE

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<b>Date of training session</b>	From 20 to 30 November 2017
<b>Location</b>	Bishoftu, Ethiopia
<b>Application deadline</b>	30 May 2017

### 5. WHO CAN APPLY?

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The PanAfGeo “*WP1a – Remote Sensing in Geoscientific Mapping*” training session is open to all persons who are eligible according to the conditions of the “**PanAfGeo Charter for Trainee**”. Good computer skills are expected.

### 6. FUNDING OF THE TRAINING

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The PanAfGeo “*WP1a – Remote Sensing in Geoscientific Mapping*” training session is supported through funds of the European Commission.

The following expenses will be covered:

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

The technical equipment for the work will be provided at the place as a part of the course.

## 7. APPLICATION AND SELECTION PROCEDURE

In order to be considered, applicants for the PanAfGeo Training Session entitled “WP1 – Geoscientific Mapping” must complete the documents listed hereafter:

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

Please complete these documents and send them by email to:

- WP1 Leader Dr Veronika Stedra (CzGS) [veronika.stedra@geology.cz](mailto:veronika.stedra@geology.cz),
- WP1 Co-Leader Mr Hundie Melka Yadete (GSE) [hundiemelkay@yahoo.com](mailto:hundiemelkay@yahoo.com),
- WP1 Deputy Co-Leader Mr Nathan Banda (GSD) [nathanbanda99@gmail.com](mailto:nathanbanda99@gmail.com).

before the **Application Deadline: 30 May, 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 during the first **half of June 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 e-mail addresses: [veronika.kopackova@geology.cz](mailto:veronika.kopackova@geology.cz) or [veronika.stedra@geology.cz](mailto:veronika.stedra@geology.cz).



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**WE ARE LOOKING FORWARD TO YOUR APPLICATIONS.**

**ON BEHALF OF THE PANAFGEO PROGRAMME**

**DR VERONIKA STEDRA**

WP1 – Geoscientific Mapping Leader  
Senior Geologist  
Czech Geological Survey (CGS)

**MR MASRESHA GEBRE SELASSIE**

WP1 – Geoscientific Mapping Co-Leader  
Director  
Geological Survey of Ethiopia (GSE)

**MR NATHAN BANDA**

WP1 – Geoscientific Mapping Deputy Co-Leader  
Chief Geologist  
Geological Survey of Malawi (GSD)

April 27, 2017