

PanAfGeo+

The Pan-African Support to Geological Sciences and Technology

Call for Applications for PanAfGeo+ WP7 Training Session

WP7 – HYDROGEOLOGY

- 8 – 19 March 2027
- Windhoek, Namibia
- In English

MAIN CONTEXT OF PANAFGEO+

“PanAfGeo+” for “Pan-African Support to Geological Sciences and Technology, Africa-EU Partnership” is a project which supports the training of geoscientific staff from African geological surveys through the development of an innovative training programme. This programme includes the acquisition and development of important professional skills that complement existing qualifications and technical skills. The training programme is carried out by world-class geoscientific experts coming from African and European geological surveys.

PanAfGeo+ is funded by the European Commission (DG INTPA). The consortium of PanAfGeo+ consists of EuroGeoSurveys (EGS) and Organisation of African Geological Surveys (OAGS) 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 or work packages.

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.

CONTENT & METHODOLOGY OF THE “WP7 – HYDROGEOLOGY - WATER BALANCE COURSE” TRAINING SESSION:

Water consumption and availability are influenced by natural processes and human activities. The hydrological cycle plays a key role in the distribution and circulation of water on Earth, including evaporation, precipitation, infiltration and runoff. Climate change affects these processes by altering precipitation patterns, increasing temperatures and intensifying droughts and floods. Human activities, such as agriculture, industry and domestic water use, further influence water resources and their availability. Understanding the interactions between water consumption, the hydrological cycle and climate change is essential for sustainable water management and the protection of water resources.

SET-UP OF THE PROGRAM:

The overarching aim of this course is twofold: 1. to provide participants with fundamental insight into hydrological cycle and groundwater balance; 2. to make students familiar with typical groundwater quantity problems. A quantitative approach is followed to reach the first aim. Different kinds of hydrogeological processes are taught with illustrative environmental examples.

The learning objectives are as follows:

- obtain insight into the water quality aspects of groundwater management;
- obtain quantitative insight into the hydro(geo)logical processes that determine the groundwater quantities for combinations of anthropogenic activities and geological settings;
- obtain insight into the typical examples of water balance and use of water resources.

THE TOPICS FOR THE LECTURE AND TUTORIAL SESSIONS ARE AS FOLLOWS:

1. Welcome and Introduction; Familiarize the people to each other: groundwater problems encountered in own situation; Groundwater quantity management and groundwater analysis;
2. Water cycle – Recharge, discharge, flow routes;
3. Groundwater hydrology – aquifer, aquitard, porous media, fractured rocks, etc.;
4. Groundwater mapping, Preparations for fieldwork, forms, systematic data collection;
5. Data processing and organizing data;
6. Introduction to modelling, basic modelling in excel; ground water balance;
7. Assessment of groundwater resources;
8. Parallel flow and radial flow;
9. Groundwater head variation, seasonal changes, temporal changes;
10. Sustainable GW management, ownership of GW, governance, licensing, sustainable development goals.

Spare topic: Field inventory; contaminant transport, advection/diffusion/dispersion processes, advanced modelling.



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COURSE PROGRAMME (8 MARCH – 19 MARCH 2027):

- 10 Lecture & Tutorial (L&T) sessions (4h mornings; 2–3h afternoons).
- Three full-day field trips on groundwater sampling (integrating hydrochemistry, geology, and hydrogeology).
- Q&A sessions for discussion of exercises and course wrap-up; final session and closing on Day 9.

During the training session, participants develop skills to analyze hydrogeological processes controlling groundwater quantity.

They should be able to assess groundwater resources and interpret groundwater monitoring data.

They must also gain practical skills in groundwater inventory, field interpretation, and basic hydrogeological modeling.

Training session jointly organized by Ondrej Nol (CGS, CZ), Grzegorz Olesiuk (PGI-NRI, PL) & local expert.

→ 10 days (8-19 March 2027)

→ Windhoek, Namibia

→ In English

→ **Application deadline: 20 November 2026**

RETURN-TO-WORK PLAN:

Each trainee must prepare and present a work-back plan during the session - i.e., a short-term application of the newly acquired knowledge via a project relevant to the geological survey and implementable on an ongoing basis.

KEY LEARNING OUTCOMES OF THE COURSE:

The **overall goal** is the participant will be more effective in:

- Understand and quantitatively evaluate the hydrological processes controlling groundwater quality;
- Assess natural groundwater resources, including ground water balance;
- Apply groundwater inventory techniques in field conditions;
- Integrate geology, hydrology and hydrogeology for groundwater quantity interpretation;
- Interpret monitoring data and apply basic water balance concepts for groundwater management.

WHO CAN APPLY?

The training session is open to all individuals eligible under the “**PanAfGeo Trainee Charter.**”

Additionally, to fully benefit from the training, candidates must meet the following education and experience requirements:

- Good computer skills
- Some knowledge of online communication, writing, and scientific communication
- Experience presenting results to various types of audiences
- Basic knowledge of hydrogeology and hydrology.

NOTE PLEASE:

The Letter of Commitment should be officially approved by the **directorate** of your institution. The maximum of 2 **applications** from any geological survey or adequate state geological institution will be accepted to the WP-7 selection process for the training.

All incomplete applications with missing passport number and data confirming its validity for **at least 6 months after the end of the training** will be automatically excluded, please check your passport validity expiration.

FUNDING OF THE TRAINING:

The PanAfGeo+ “WP7 – Hydrogeology” training session is fully supported through funds of the European Commission. The following expenses will be covered:

- International travel costs: flight to and from African country from international airport
- Entrance visa fee against a receipt (please request a clear copy bearing your name);
- Accommodation, breakfast, catering and joint meals during the training session;

PLEASE NOTE THAT NO ALLOWANCES AND NO HEALTH INSURANCE REIMBURSEMENTS ARE PROVIDED IN THIS PHASE OF THE PANAFGEO PROJECT.

Possible arrangements of your travel to the international airport, and coverage of the international health insurance (in case of need) sort out please with your employer who confirms your Letter of Commitment.

APPLICATION AND SELECTION PROCEDURE:

In order to be considered, applicants must complete and submit the following documents:

- 1) Application Form for this training;
- 2) Letter of Commitment signed by your employer;
- 3) Letter of Motivation;
- 4) A copy of passport (valid for at least six months after the date of entry into Namibia).



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Make sure you rename of all the application parts in attachments with your family name and a number, using Latin letters.

After preparing these documents, please register here: <https://panafgeo-courses.eurogeosurveys.org/> and upload the documents as four separate PDF files (all file names must include the candidate's first name in Latin letters) before the deadline: **20 November 2026**.

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

Acceptance letters will be sent promptly to facilitate visa processing and delivery.

For practical questions about the course, please contact:

- **Ondřej Nol:** ondrej.nol@geology.cz
- **Grzegorz Olesiuk:** grzegorz.olesiuk@pgi.gov.pl

For general enquiries, travel arrangements and visas, please contact

- **Antti Pasanen:** antti.pasanen@gtk.fi
- **Elmira Brooshan:** elmira.brooshan@gtk.fi

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

Questions about PanAfGeo can be sent to:

- EuroGeoSurveys: panafgeo@eurogeosurveys.org
- Organisation of African Geological Surveys (OAGS): info-oags@oagsafrica.org

WE ARE LOOKING FORWARD TO YOUR APPLICATIONS.



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