

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

# REGIONAL TRAINING COURSE ON RADIATION PROTECTION AND MONITORING IN THE URANIUM PRODUCTION CYCLE

**Country presentation**

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**Environmental monitoring lab.**

## Historical background

- Environmental Monitoring laboratory (EML) is part of SAEC, which is established in 1998 and equipment were brought through various IAEA coordinated projects
- The main objective of the EML is to monitor natural and anthropogenic radioactivity

# Techniques currently available at SAEC

- Alpha- Spectrometry
- Gamma spectrometry –HPGe (software problem)
- Gamma spectrometry NaI
- Radon meter
- XRF
- AAS (acquired recently, not installed)

## Uranium in sudan

- The work established in 1990s concerning the uranium content of the phosphate rocks besides dose measurement, water and plant uptake
- Several studies have been conducted to measure uranium as part of the feasibility study of rock phosphate mining.
- Areas of study lie mainly in kordfan state noba mountain ,

- Highest activity concentration were measured in grey-colored rock phosphate
- External radiation exposure over agricultural areas was estimated
- Studies on uranium from phosphate were carried out mainly to estimate radiation dose and environmental studies.

- No uranium mining activities in Sudan
- There is another activity mining in Sudan such as gold mining, chromium, cement industry
- The radiation dose calculated and found to be below the WHO reference dose level of 0.1 mSv/y
- In Sudan, studies showed that there is no radiological risk associated with mining

The background of the slide is a solid, warm brown color. Overlaid on this background are several faint, stylized outlines of autumn leaves in various shades of brown and tan. The leaves are scattered across the frame, creating a subtle, seasonal pattern.

*thanks*