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1. Abstract
Niger signed the Comprehensive Nuclear Test Ban Treaty (CTBT) on 3 October 1996 and ratified it on 9 September 2002. It hosts two stations of International Monitoring System (IMS), one primary seismic station (PS26 or TORD) and one radionuclide station (RN48 or NEP48). It takes part effectively in the treaty's implementation activities and commits itself for the respect of the treaty's clauses. To better participate in the activities of treaty, to popularize the treaty's benefits and derive profits from treaty, Niger established a national data center (NDC) in 2014. Niger, through its NDC, has established a multidisciplinary team of potential users of IMS data and IDC products. Niger will create conditions to build capacity of this team in order to better use these data and products for all useful purposes. Niger receives in its NDC data from PS26 (TORD) stations and soon data from the RN48 (NEP48), which is under installation. Niger makes public awareness activities relating to treaty and the benefits of accessing and using IMS data and IDC products, through regular organization of workshops; sessions; seminars and open days. The Niger authorities are committed to the entry into force of the treaty and become ambassadors of effective entry into force of the treaty

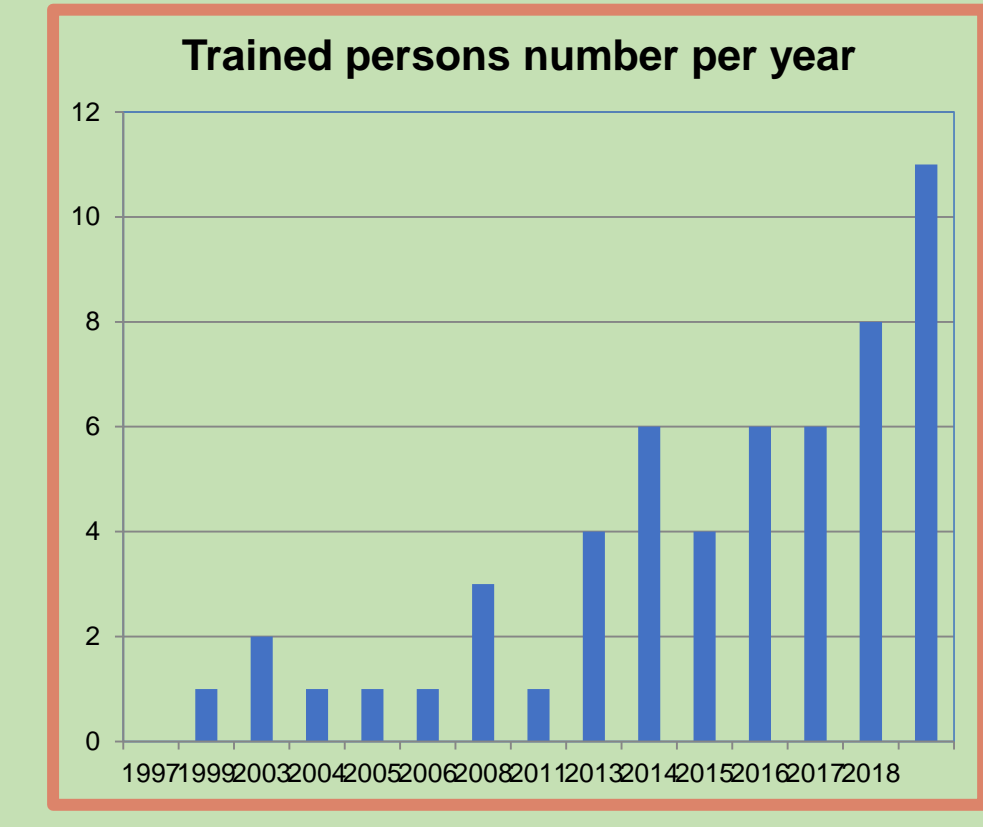
2. BACKGROUND
 • Niger signed the CTBT on 3 October 1996;
 • Niger ratified the Treaty on 9 September 2002;
 • Niger signed agreement with CTBTO to Install two IMS stations on 24 November 2002
 • one primary seismic station, PS26 or TORD, with is operational since 2005
 • one Radionuclide station (RN48 or NEP48), which is in testing and evaluation since January 2019 and will be certificated soon.

3. Activities relating to the CTBT
 Niger is effectively involved in the monitoring and control of the respect of the clauses of the CTBT. In order for Niger to become more involved in activities and better benefit from the CTBT, HANA:

- Informs about the existence of the NDC
- sensitize all potential users on the NDC;
- popularizes NDC data;
- creates the conditions to build and / or strengthen the human resource capacity of all sectors using NDC data;

 Niger can access data from around the world and will create the conditions to eventually exploit it for all purposes. Niger NDC receives data from PS26 station and and in the near future from RN48 station.

6. Capacity Building
 • E-learning Course on NDC Capacity Building
 • Training Course on NDC Capacity Building: Access and Analysis of Radionuclide IMS Data and IDC Products (nbre de personnes formées)
 • Technical Training for Station Operators of Manual Radionuclide Stations
 • Technical Training for Station Managers
 More than one hundred and ten (110) Niger officials have been trained by CTBT in Niger and abroad, in face-to-face training, in many areas related to the Treaty and various technologies of the International Monitoring System. To these is added other people who have followed online training. Indeed, officially twenty eight (28) received access codes to the online training system on the Vienna-based CTBTO server



4. CTBT Infrastructure in Niger

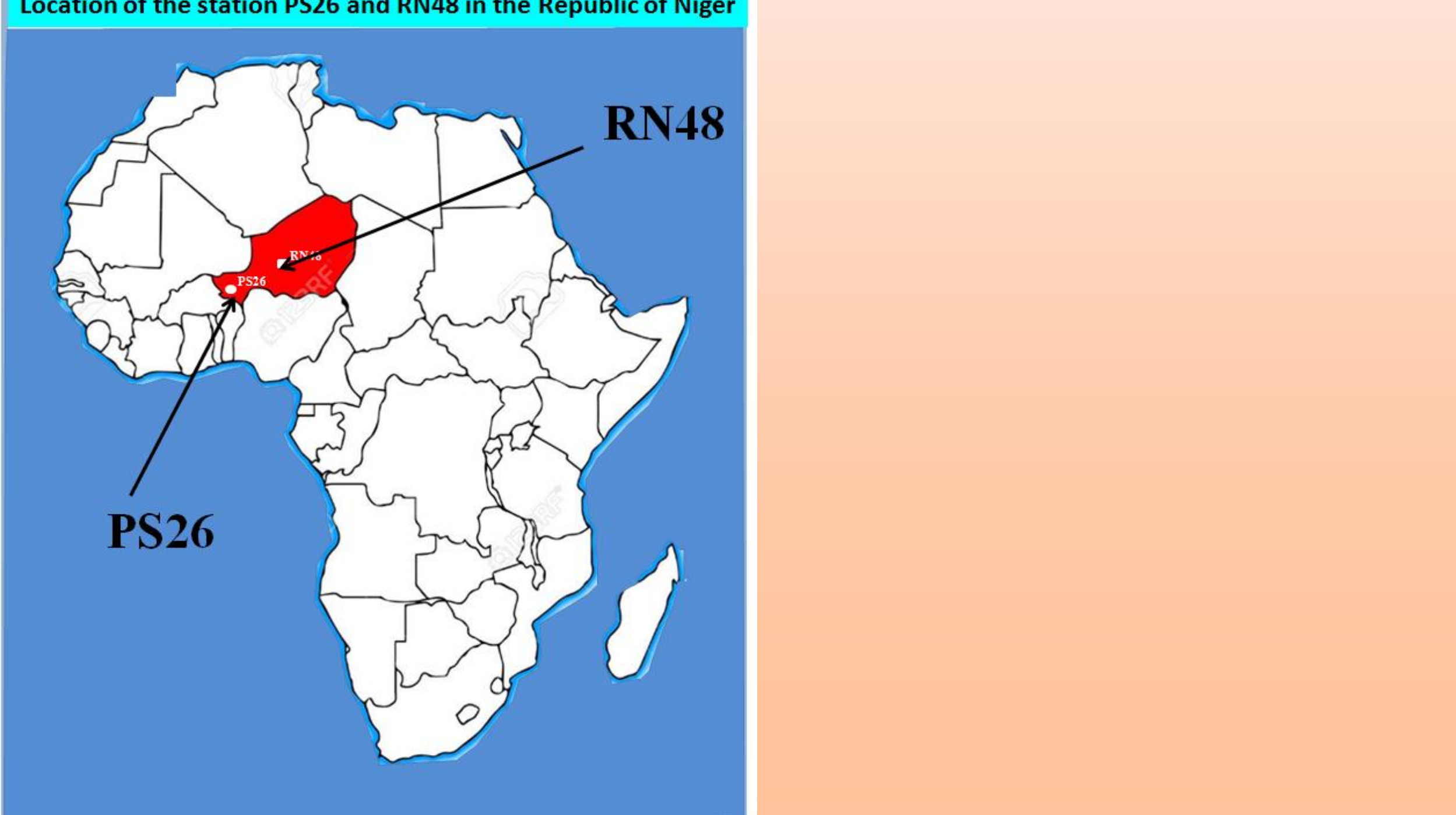
a. Torodi seismic station, PS26 / TORD
TORD is Located on the stable West African craton since 2.6 billion years and local granite context



TORD station structure TORD station top view One of TORD station the components

Description:
 PS26 is located at 13 km in western of TORODI village. It is, as shown on the above images a network of sixteen sites. Four sites in particular TOA0, TOC2, TOC4 and TOC6 have three (3) components and the twelve other site have one component. The seismometers are installed in drill holes at roughly 50 m deep. The station's elements cover around 43 km².

Geographical location of the stations :
Location of the station PS26 and RN48 in the Republic of Niger



b. Station radionucléide : RN48 /NEP26

This station is locate at Agadez 1000km from Niamey, the Headquarter
NB: It should be noted the RN48 radionuclide Station has been installed and put into Operations by local Experts



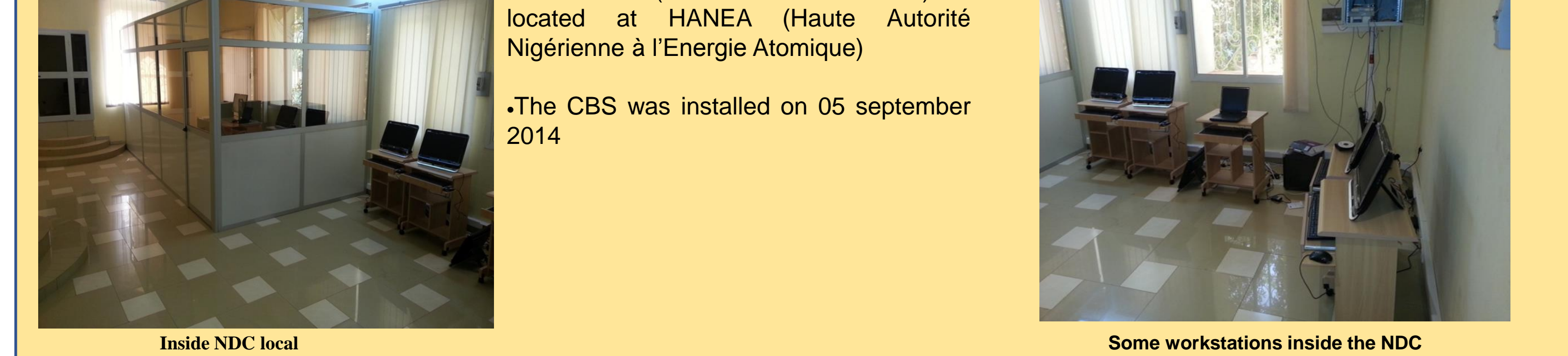
Local of the station NR48 Station RN48 air sampler system inside the station RN48

The RN48 station includes, among others:

- The electrical box with its circuit breakers labeled with different connected equipment;
- The rack containing electronic devices, such as the data loading system, the digital analog signal converter, the detector cooling system (Xcooler), the Xcooler voltage controller;
- The workstation of the operators;
- The bar code printer;
- Barcode readers;
- Air conditioners and their control systems;
- The operator session table;
- The filter cassette;
- The filter compressor;
- Sources of quality control and calibration tests;
- The storage cabinet for control and calibration sources;
- Auxiliary sensors, namely the door opening and closing detectors, the motion detector;
- Instruments for measuring meteorological data;
- Maintenance toolboxes;
- The air sampler

5.3. Department of OTICE./National Data Center (NDC)

a. NDC local



Inside NDC local Some workstations inside the NDC

- The NDC (National Data Center) is located at HANA (Haute Autorité Nigérienne à l'Énergie Atomique)
- The CBS was installed on 05 september 2014

d. NDC activities

- stations operatio and maintenance
- Participation in the PTS activities
- Participation in experiment 2 exercice, Test VT-IDC-5.4.3 (SHD-68491) organized by PTS
- National Data Center Preparedness Exercise (NPE) 2017

5.1. Decree of HANA creation
 Decree N ° 2013-490 / PRN of 04 December 2013 establishing the Niger High Authority for Atomic Energy (HANA)

5.2. HANA building



Photo in Front of HANA Building

b. Designated establishments:

- Ministry of Interior
- Ministry of Mines and Geology
- Ministry of defense
- Ministry of Energy
- Directorate of International Organizations
- HANA
- Technical and Sciences Faculty
- Direction on National Meteorology
- Direction of Nuclear Application and Electricity
- Institute of Radioisotopes (IRI)
- National Center of Salar Energy (CNES)

c. NDC staff

- Geophysicists
- Physicists
- Stations operators,
- electronics,
- computer scientists
- managers,
- Other support staff: drivers, guards

CHALLENGES/NEEDS

- Strengthening the capacities of NDC by the regular training of the staff;
- To train and strengthen the resource of all sectors using NDC data;
- Sensitize all potential users on the NDC.
- Entry into force of the treaty; country commitment
- The implementation of all skills in relation to the needs of the pay

7. Public awareness
 Several workshops and sensitization seminars were organized by HANA:

- National Seminar; organized by HANA in collaboration with CTBTO; **19 to 22 December 2014**; Niamey, Niger



Presentation made by CTBTO Expert (Ms.Ms. Misrak Fisseha) during the National Seminar Presentation made by CTBTO Expert (Mr. Mr. Dale Roblin) durinduring the National Seminar Photos of National Seminar participants

Information meetings and sensitization of the Members of Government led by the Prime Minister at its office



Information meetings and sensitization of civil society and journalists Photos of the participants during the sensitization of civil society and journalists

Information meetings and sensitization of Security and Defense Forces



Presentation made by the Presidente of HANA during Sensitization during the sessions of CTSC Photo of Participants during the sessions of CTSC

Visit of the CTBTO Executive Secretary (SE) in Niger



CTBTO Executive Secretary meeting the President of Niger Republic mass media interventions conducted by the President of HANA and the Executive Secretary of the CTBTO during his visit in Niger

• Governmental seminar
 • Visits to the sites of the PS26 station
NB: The open days and visits to the PS26 sites have been regularly scheduled but not yet completed

Disclaimer: The views expressed on this poster are those of the author and do not necessarily reflect the view of the CTBTO