



The CTBT and Africa

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Define tomorrow.

UNISA





Africa and nuclear weapons testing

CTBT of special significance to Africa

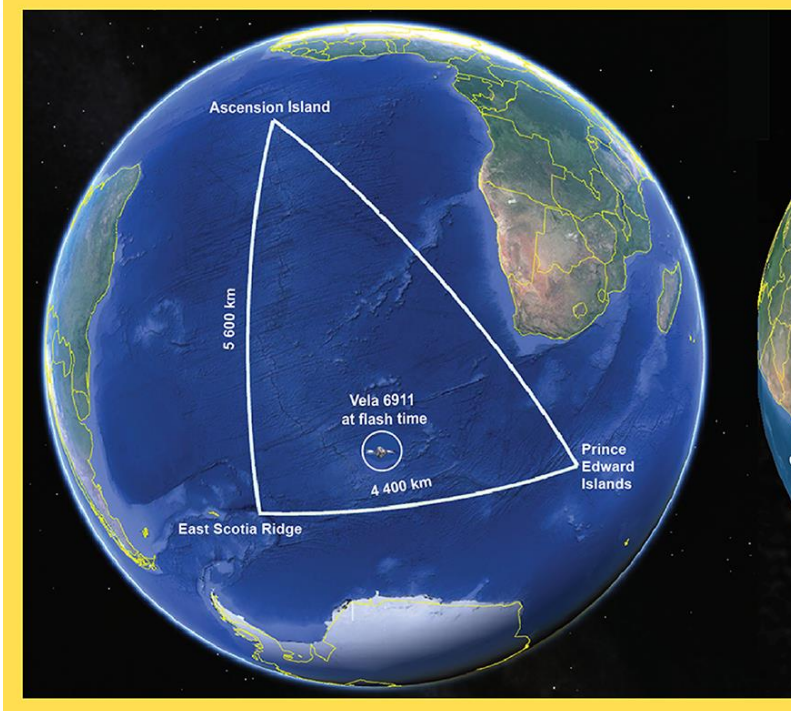
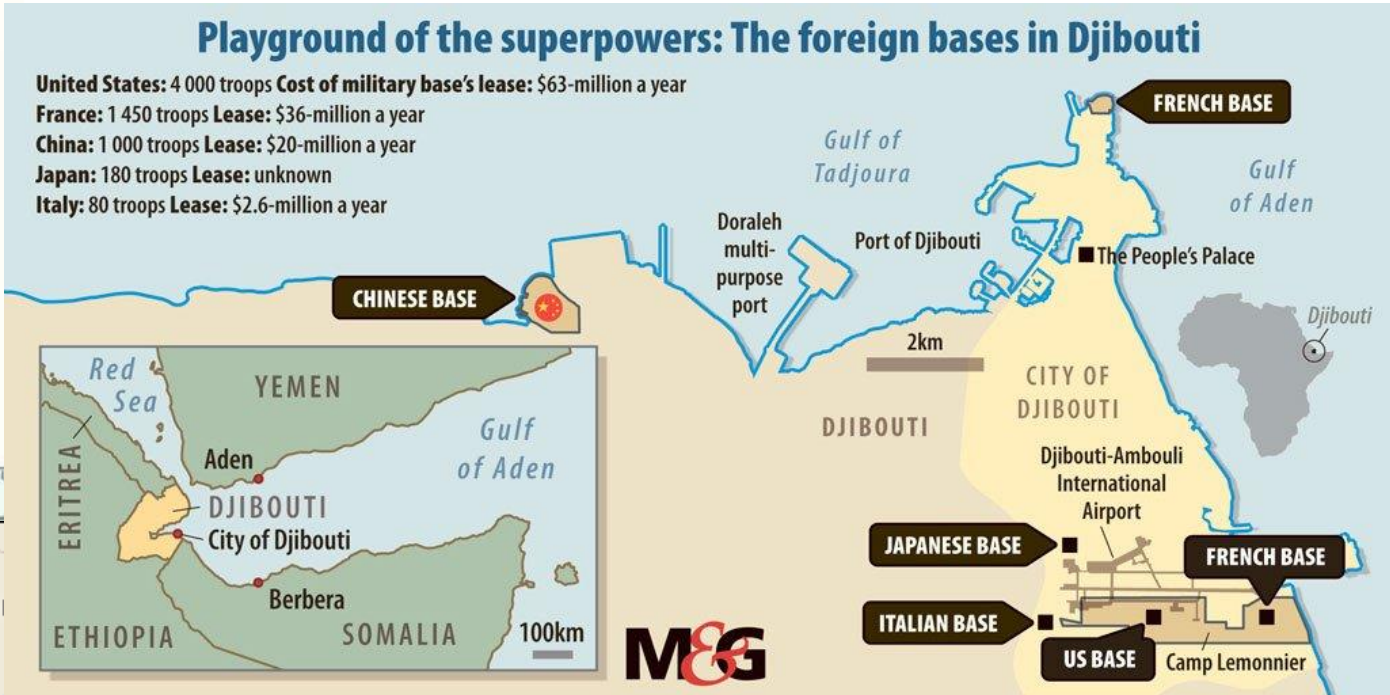
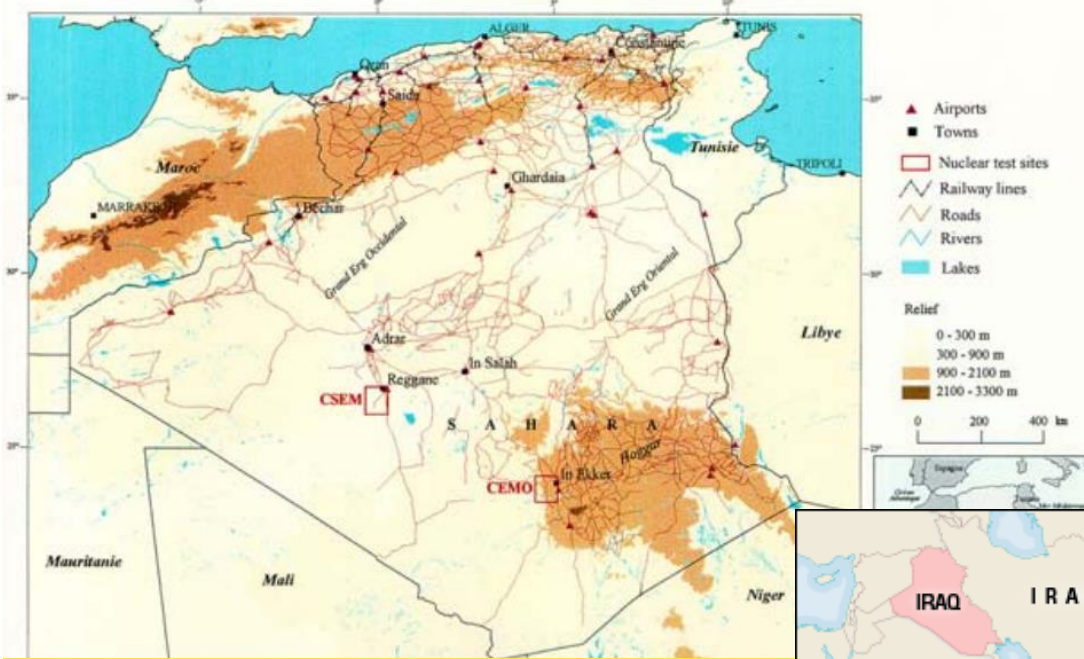
France conducted 17 nuclear tests in Algeria in the Sahara Desert (1960-1966)

- 4 underground
- 13 atmospheric nuclear tests

South Africa

- Discovery of test site in Kalahari Desert (1977)
- Double Flash/Vela incident (1979)

Diego Garcia and presence of nuclear armed states in **Djibouti**





Objective

- Position the CTBT in the Africa development agenda
- Outline and assess Africa-CTBTO PrepCom cooperation
- Areas of potential and closer cooperation
- Application of CTBT regime for selected uses (e.g. disaster management, detection and management of nuclear waste, and management of the legacy of nuclear tests in Africa, and its territorial waters)

African commitment to the peaceful use of nuclear energy



Universal support of the nuclear non-proliferation, disarmament and the peaceful uses of nuclear energy regime

Examples of Africa's Treaty commitments

- Pelindaba Treaty (African Nuclear-Weapons-Free-Zone Treaty)
- NPT
- TPNW
- CTBT etc. (Somalia's announcement on Monday latest)

Africa's development agenda and the peaceful uses of nuclear science and technology



- African Union *Agenda 2063*
- UN Sustainable Development Goals
- Peaceful use of nuclear science and technology during Covid-19 pandemic has highlighted the significant developmental role of peaceful nuclear technology in Africa and elsewhere.
- African Commission on Nuclear Energy (AFCONE): CTBT, IAEA, AFRA, FNRBA, OPANAL etc.

CTBTO regime

Unique compared to other nuclear regimes, real-time science in the service of humanity



- Unique and extensive global monitoring system
- Effectively a global public/common good from which non-signatory/ratifying states also benefit
- CTBTO regime confirms the use of science and technology for the benefit of humanity
- CTBTO regime: prohibitory and monitoring, but significant developmental utility and prospects
- Civilian applications of CTBTO data and science benefit humanity (tsunami, monsoon, disasters etc.)



CTBTO-Africa cooperation



Example 1

Africa's normative commitment to CTBT


(cf. Somalia announcement on 19 June 2023)


Not ratified: Egypt, Mauritius & South Sudan

STATUS OF SIGNATURE AND RATIFICATION




Latest State Signatory:

 Rwanda

 30-Nov-2004

Latest Ratifying State:

 Equatorial Guinea

 22-Sep-2022

Annex 2

CTBT Signatory

CTBT Ratified

CTBT Notified

Africa

Factory

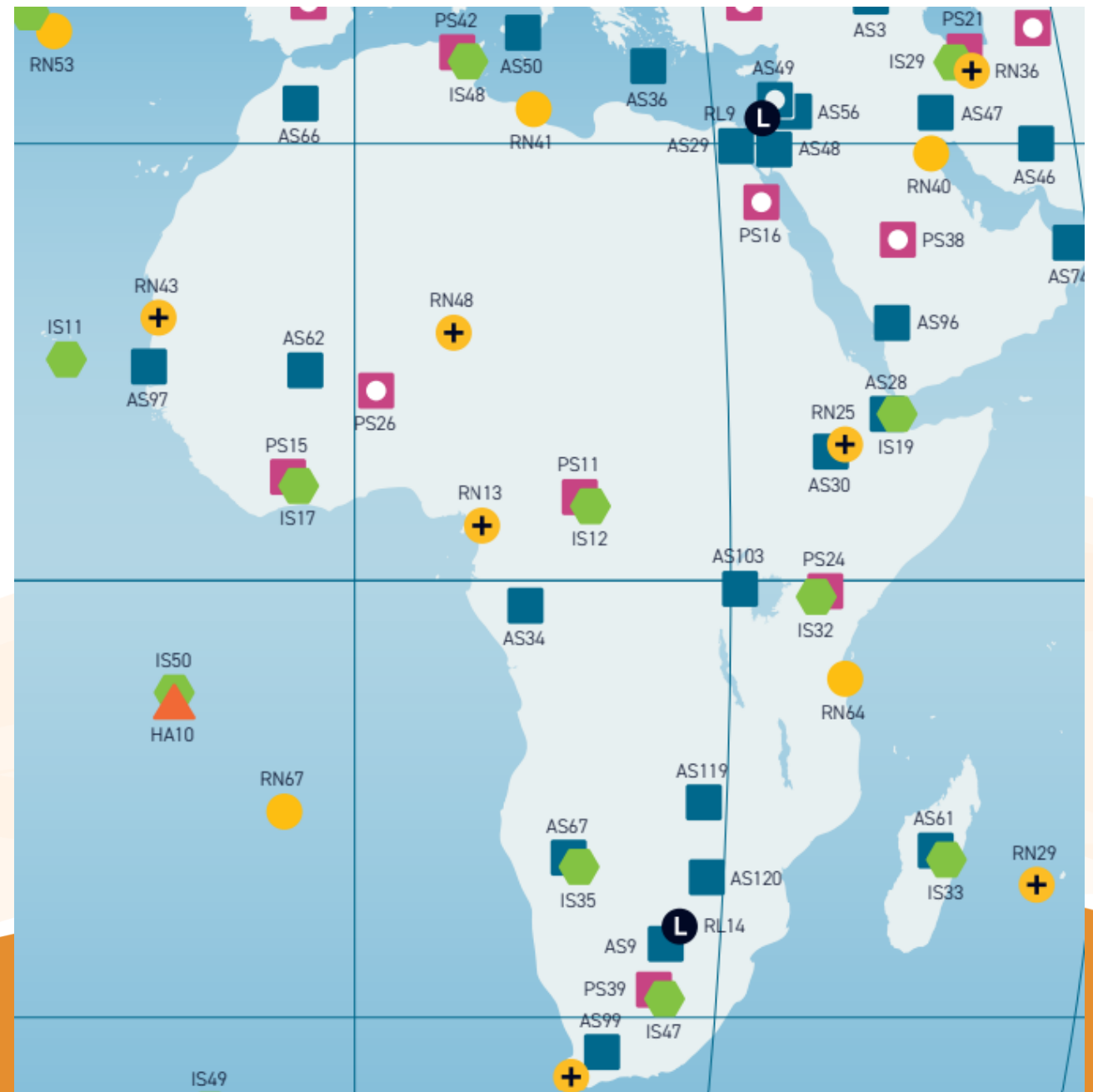
Example 2

CTBTO's presence in and around Africa



Africa's integration into CTBTO monitoring regime

- Primary and auxiliary seismological stations
- Radionuclide stations, some with Noble Gas monitoring capabilities
- Infrasound stations
- Hydroacoustic stations

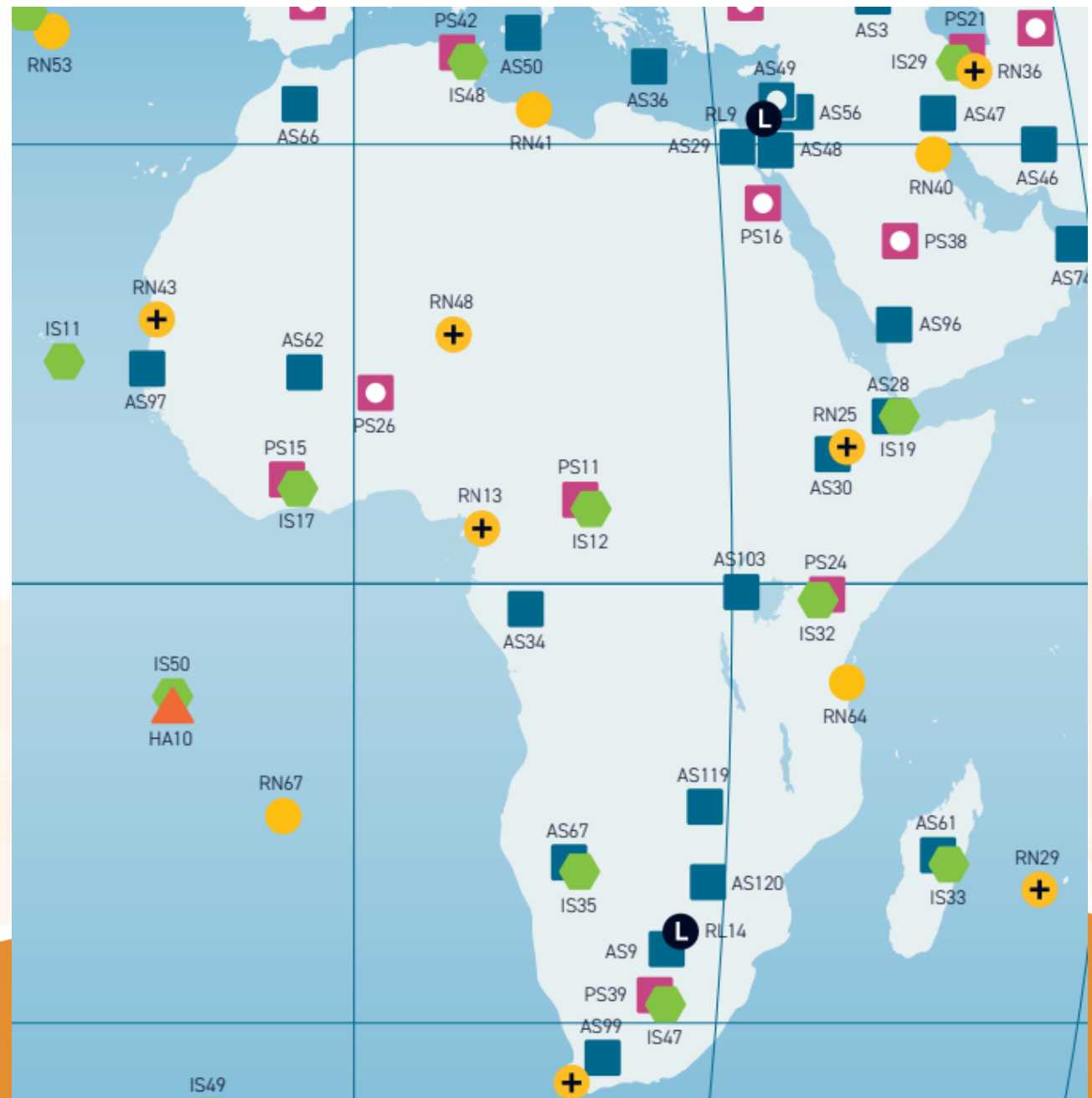


Example 3

CTBTO recognition of Africa's role

‘Africa plays a key role in CTBT verification as the region with the largest number of States hosting International Monitoring System (IMS) facilities. Once complete, there will be 38 IMS facilities located in 24 African States – 21 seismic stations, 9 infrasound stations, 7 radionuclide stations and 1 radionuclide laboratory’.

<https://www.ctbto.org/news-and-events/news/africa-and-ctbto>



Example 4

Closer political cooperation between CTBTO and Africa



Multilateral: AU

Bilateral

Functional: AFCONE (cf. AFCONE's growing integration into AU architecture)

Leadership: SG Zerbo and employment of Africans at CTBTO

Cooperation and support: Training programmes in Africa

Areas for closer cooperation

An evolving 'developmental' organisation Africa should access



CTBT does not have a specific developmental mandate BUT its scientific and technological capabilities can and had been of significant human developmental impact.

CTBTO's democratic nature (e.g. data sharing) means all ratifying states have access to all data for assessment, planning, early warning, disaster mitigation and disaster response purposes. This is a significant developmental aspect of the CTBTO Africa should access. Thus, rather than establish new infrastructure, access existing CTBTO infrastructure.

Areas for closer cooperation (cont.)

Enhance Africa's role in CTBTO regime



Notwithstanding direct access to CTBTO science and technology, Africa can benefit from an enhanced role. Why? The continent's integration efforts aim to achieve development. Institution-building and strengthening is an important aspect of the integration and development process. Hence, AFCONE could have a permanent seat at the CTBTO Commission, working groups and advisory group.



Areas for closer cooperation (cont.)

CTBTO proactive outreach to Africa

- Several Africa states are in various stages of collapse, failure or conflict. This undermines human development and human security. Ultimately, it also prevents African states and governments to participate in, contribute to and benefit from the CTBTO monitoring and verification regime, and its civilian applications.
- The civilian application of the CTBTO's science and technology has a developmental dividend that African governments and the AU should use in peace-making and -building efforts.
- CTBTO engagements with the AU is imperative, and should also be mindful of Africa's changing geo-political realities: the inauguration of the African Continental Free Trade Area, the presence of nuclear armed militaries in Africa (cf. Djibouti), the safety and security of nuclear installations in Africa, and changing global geopolitics.



Areas for closer cooperation (cont.)

Selected applications

- The legacies of French and South Africa-Israel tests: monitoring, verification and human development
- Movement of nuclear powered ships and submarines
- Radioactive marine waste and pollution
- Disaster management
- Rift Valley: seismology
- Artificial intelligence and the CTBTO regime
- Communication beyond governments but also with global civil societies



Thank you for your attention.

Selected sources consulted



Britannica (2023)

Burr et al. (2019)

CNS (1999)

CTBTO (2021)

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IAEA (2005)

Mail & Guardian (2018)