



**Namibian
Uranium
Association**

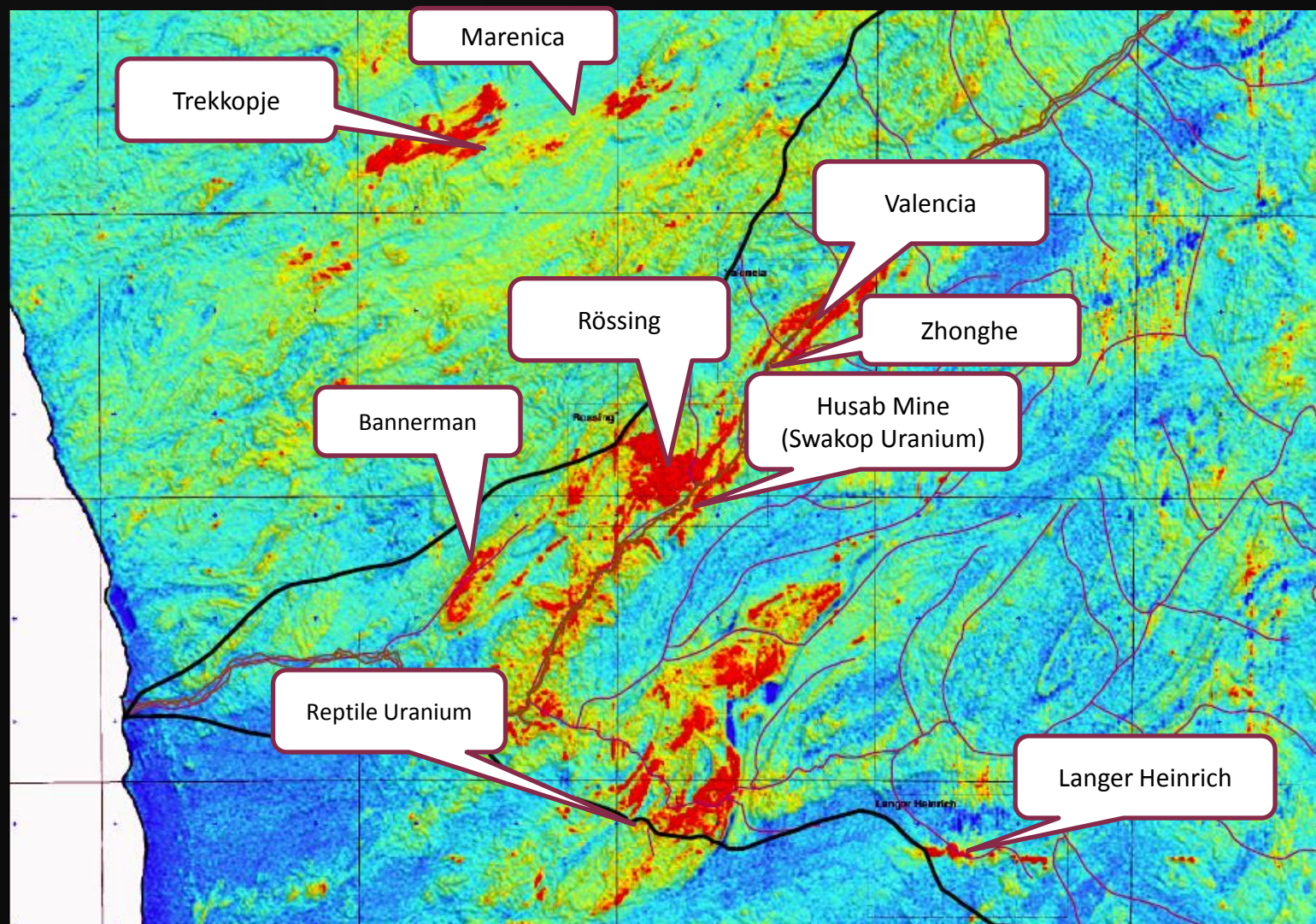
Protecting the Namibian Uranium Brand

The Namibian Uranium Association

Forging success



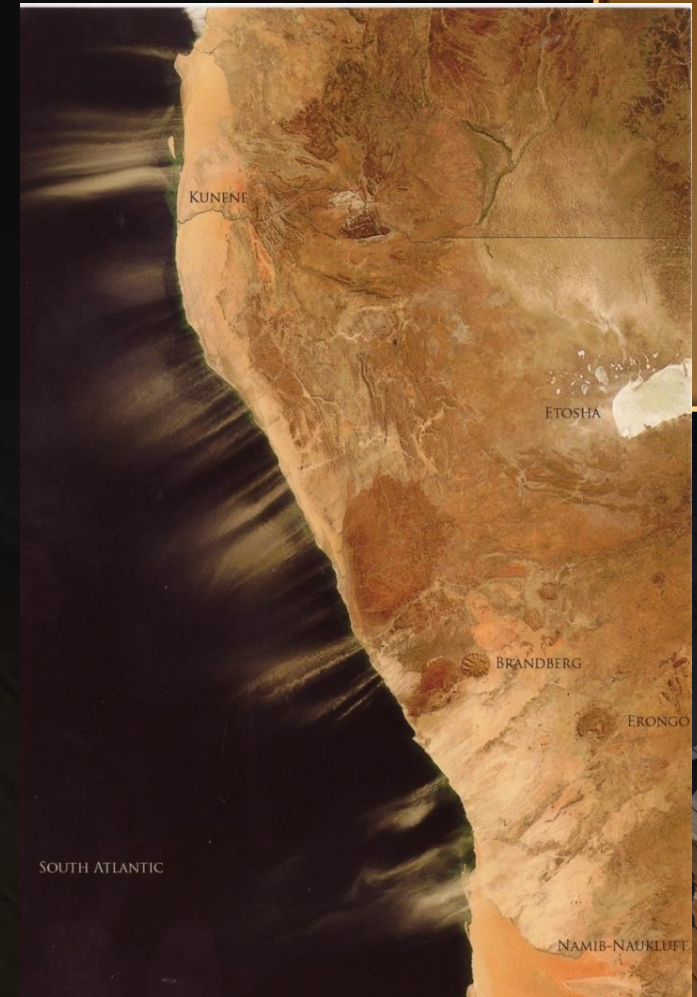
Erongo Region: Uranium Province



Cumulative impact

Public concerns regarding cumulative environmental and health effects of uranium mining in Namibia

- 1.Power** (generation, distribution, consumption)
- 2. Water** (supply, consumption, waste water management, groundwater protection)
- 3.Housing** (regional and local town planning)
- 4.Social infrastructure** (Health facilities, recreation facilities, schools)
- 5.Regional economy** (subcontractors, tourism industry)
- 6.Transport** infrastructure,
- 7.Ecological sensitivities** of Namib environment
- 8.Landscape integrity** of Namib Naukluft National Park and Erongo region
- 9.Mine closure and rehabilitation**



Source: Terra MODIS, NASA Goddard Space Flight Center (2007)

Analyse environmental,
economic and social
aspects of uranium
exploration and mining

Key objectives of the SEA “Uranium Rush”

Assess cumulative,
synergistic and
antagonistic impacts

Formulate and balance
development options to avoid
or minimize negative impacts
and to enhance positive
impacts

Provide recommendations in the
form of a Strategic Management
Plan (SEMP) for sustainable
development



Namibian
Uranium
Association



SEA TEAM

Geological Survey of Namibia (GSN)

Bundesanstalt für Geowissenschaften und Rohstoffe (BGR)

Southern African Institute for Environmental Assessment





“The moral is that having an accurate map (or detailed plan) may be less important than having an imperfect map that overcomes inertia, instils confidence in people, and gets them moving in a general direction”. - Charles A. Schwartz

Government

International Agreements
Comprehensive Legislative Framework

**Institutions (AEB, NRPA,
Environmental Commissioner etc.)**

- Baseline Environmental data
- Strategic Environmental Assessment (SEA)
- Strategic Environmental management Plan
- Land use Strategy

Industry

International Framework-
WNA

Code of Conduct and
Agreement with the NXS

Uranium Institute

- Communication platforms
- Uniform Environmental Standards Industry/E3/IFC)
- Training
- Medical facilities

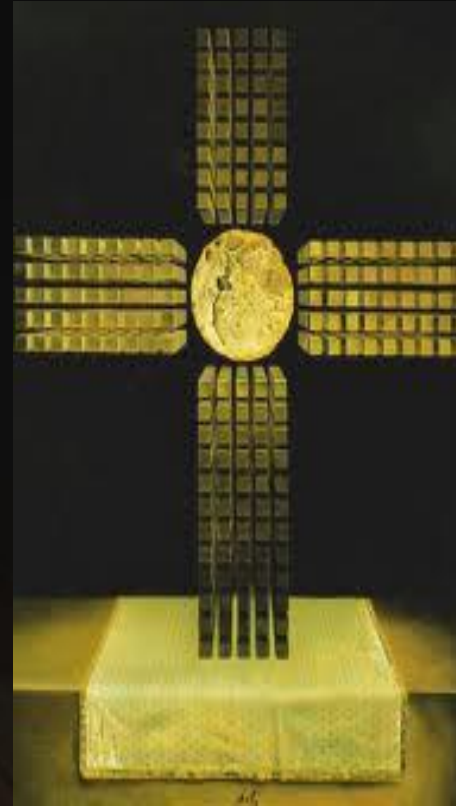


Uranium Mining controversy

Well orchestrated political opposition to the nuclear industry, fuelled by public perceptions of risk crucified the nuclear industry.

Nuclear perceptions are deeply rooted in images of fear and dread and linked to nuclear weapons and our perceived inability to deal with radioactive wastes.

This has contributed towards creating a profound state of distrust that cannot be erased quickly or easily.



Nuclear Cross - Salvador Dali (1952)

"We are not in the mining industry, we are in the uranium industry"

John Borshoff
Paladin



Three Picture Story

1. The price crash that followed Fukushima
2. Selling of ex-Soviet Union weapons-grade nuclear material
3. Economic slowdown
4. Cheap natural gas in the US.



We did the following

Economics
Radiation Safety
Radiophobia

Economize
Standards
Educate

We need a
supportive
environment to
survive

Water & Power
Acid & Transport
Taxes

Three Picture Story

EPL Holders & ML holders

AREVA, Valencia
(NORASA) &
Zhonghe,Bannerman,
Deep Yellow

- Redefined their resources
 - Economized
 - Restructured
 - Retrenched workers
- Improve extraction
“Care and Maintenance”

Miners

Rössing and Langer Heinrich Mine

- Economized
- Restructured
- Retrenched



Under construction

Husab Project
Going ahead as
planned

- Water and Power challenges
 - Capacity of contractors severely stretched





The NUA is a member of the World Nuclear Association (WNA) and associated with the Chamber of Mines of Namibia.

1. Proactively protect the interests of member organisations.
2. The primary function of the Namibian Uranium Association (NUA) is an **advocacy** and “**voluntary regulatory**” organization.
 - a. Observe international conventions and ensure positive development of Namibia’s reputation as a uranium mining nation in a sustainable manner.
 - b. Uphold mining and radiation protection practice in Namibia to the highest standards



The NUA Board of Directors



Hilifa Mbako
Areva Resources



Deon Garbers
Swakop Uranium



Werner Duvenhage
Rössing Uranium

**NAMIBIAN
URANIUM
ASSOCIATION**
BOARD MEMBERS



Len Jubber
Bannerman Resources



Peter Christians
Reptile Uranium



**Simon
Solomons**

The Namibian Uranium Association (NUA) is the advocacy body that represents the uranium industry *exclusively*.

The Association was established with the aim of enabling senior executives in Namibia's uranium industry to shape the context in which their industry operates.

It argues for policy change that will let uranium compete on its merits as an energy source appropriate for the needs of the twenty first century through research, factual information and advocacy.



Members

Broad-based industry representation

While still expanding, the Association's membership includes all the Namibian uranium mining operations and most of Namibia's leading exploration companies and associated contractors.

- Rössing Uranium Limited
- Langer Heinrich Uranium (Pty) Ltd
- Swakop Uranium (Pty) Ltd
- Areva Resources Namibia (Pty) Ltd
- Bannerman Mining Resources (Namibia) (Pty) Ltd
- Valencia Uranium (Pty) Ltd
- Reptile Uranium Namibia (Pty) Ltd
- Zhonghe Resources (Namibia) Development (Pty) Ltd
- Marenica Energy Limited
- Rio Tinto Exploration



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Strategic Partners

- Government of Namibia-Epangelo
- Regional Governor and Erongo Development Foundation
- Regulators
- NamWater
- NamPower
- TransNamib
- NamPort
- **Chamber of Mines**
- NIMT
- NUI & PoN
- NEI



Providing Public Acceptance: NUA's Approach & Experience



Phase 1

**Understanding Public and Customer expectations
& focused Communication**

Phase 2

**Clear Standards & Leading practice Guidelines
combined with high level training**

Phase 3

**Corporate Social Responsibility as a core
business interest**

Phase 4

**Adherence to Sustainable Development
principles as the basis for decision making**

Phase 5

**"Smart Partnerships" with Namibian
Government
Institutions and Companies**



NUA Sustainable Development Committee & Working Groups



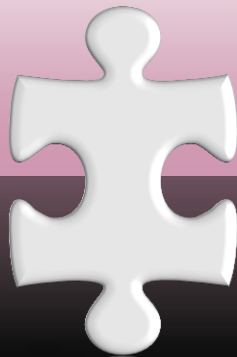
The SD Committee is a standing committee which can appoint Working Groups to investigate any potential issue which could negatively impact on Sustainable Development.





Safety

- Safety culture
- Zero Harm
- Plan, Check, Do
- Safety Officers
- Safety Representatives
- Accident investigation
- Continuous improvement



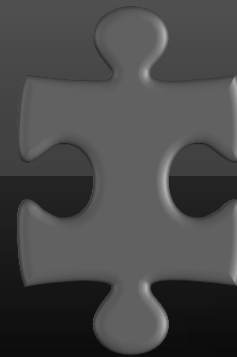
Radiation

- Radiation Management Plan
- Radiation Safety training
- No overexposure
- Commitment to ALARA.
- Exposure records management system
- Regular inspections
- Feed back to workers and public
- **Supports a National Radiation Exposure register.**



Environment

- EIA.
- Environmental Management Plan
- ISO 14001 compliant
- **An Erongo based Air Quality Management System is needed**
- **Developing an Erongo based Water Quality Management System.**



Health

- Risk based approach- Occupational Hygiene.
- Preventative Health
- PPE ad Training
- Wellness
- Specialized medical examinations
- Accurate recording and storage of data
- Epidemiological surveys
- Rehabilitation and disability Insurance
- Medical insurance
- **Independent HIA underway**



Rehabilitation

Your text goes here.

- The Chamber of Mines “Mine closure framework for Namibia” should be **reviewed to align the most recent approaches to sustainable land use including appropriate management of avoidance areas (in particular those with ore beneath them), rehabilitated areas and biodiversity offset sites.**

Sampling locations along the alluvial aquifers of Swakop and Khan rivers

Groundwater sampling

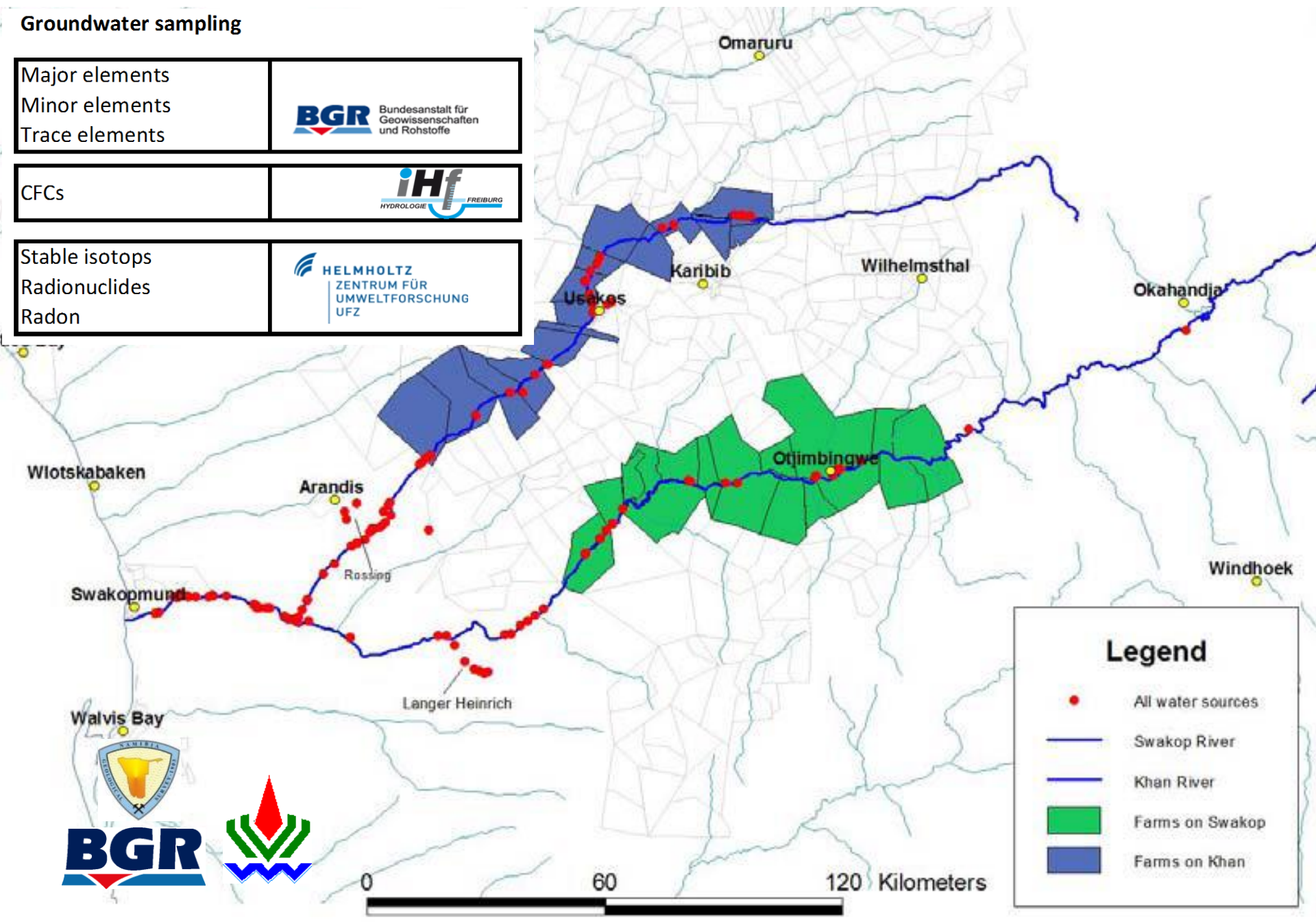
Major elements
Minor elements
Trace elements



CFCs



Stable isotops
Radionuclides
Radon



Legend

- All water sources
- Swakop River
- Khan River
- Farms on Swakop
- Farms on Khan

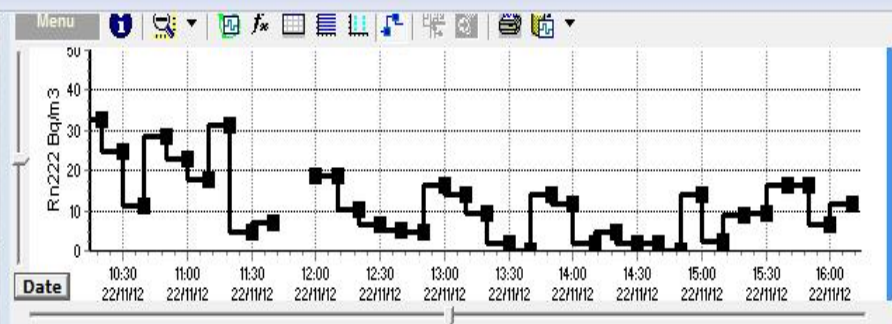
- ☐ Nuclear alarms
☐ Technical Alarms and Events

Alarms

| Event | A | Measured | Point |
|-------|---|----------|-------|
| | | | |

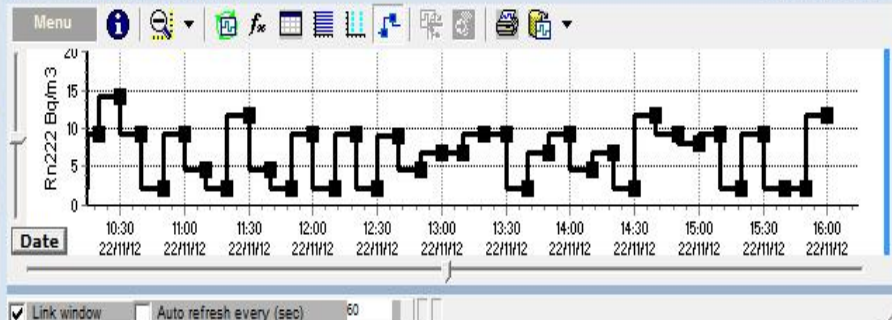


Air quality Monitoring WG



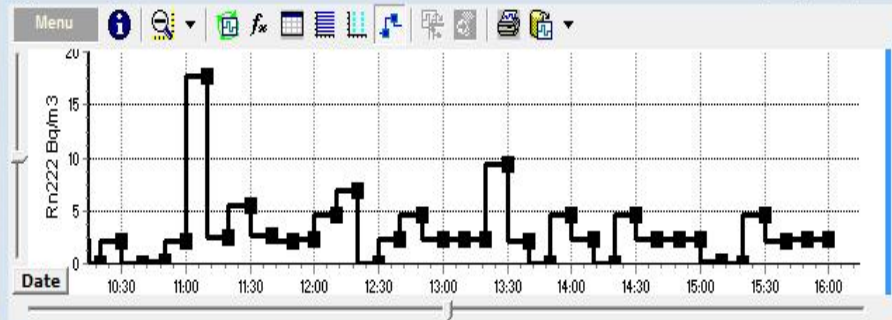
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Swakopmund AlphaGUARD



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Walvis Bay AlphaGUARD



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Administrator/0

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Namibian Uranium Institute



Mission Statement:

To promote education, research and collaboration on issues related to uranium exploration and mining in Namibia.

- 1. Uranium Information Centre:** Ensure effective communication, advocacy and correct information dissemination for and about the Uranium Industry
- 2. Uranium Training Centre:** Ensure coordination and implementation of accredited Health, Environment and Radiation Safety and Security Standards and training courses for the Uranium Industry
- 3. Occupational Medical Centre:** Coordinate and ensure Occupational health care of the highest order



Namibia is a Member State; Namibia ratified the NPT & Additional Protocol & Pelindaba Treaty

MME

MHSS

SD Council

AEB

MLS

MFA

Environmental
Commissioner

NRPA

Commission
Science &
Technology

Universities

NEI

- Energy
- Renewable, Oil & Gas,
Nuclear & Electricity.

NIOH

- Occupational Health
Institute

SEMP

- Strategic Environmental
Plan



Constitutional Directive
Atomic Energy & Radiation Protection Act
& Regulations
Environmental Management Act
& Regulations
Minerals Act & Labour Act & Regulations
COID

NUA

- Stewardship
- Implementation
Standards
- Risk evaluation
- Risk management

NUI

- Communication
- Training
- Medical
Services
- Auditing

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NUA
leading
the
way

