



Coordination Group
for Uranium
Legacy Sites
CGULS



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Perspectives and challenges to sustainable remediation of uranium legacy sites in Africa

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REMPLEX
CENTER FOR THE REMEDIATION
OF COMPLEX SITES
@PNNL





Coordination Group for Uranium Legacy Sites (CGULS)

- Established in 2012 in response to concerns raised by Member States and the international community
- Uranium mining from 1940s to 1990s in Central Asia left behind:
 - Abandoned mines and degraded infrastructure
 - Physical hazards affecting people and animals
 - Elevated exposure to radioactive and toxic materials
- Seismically active region, increasing risk of tailings dam failure and transboundary contamination.
- Central Asian Member States often lack the resources to remediate these legacy sites.

Coordination Group for Uranium Legacy Sites

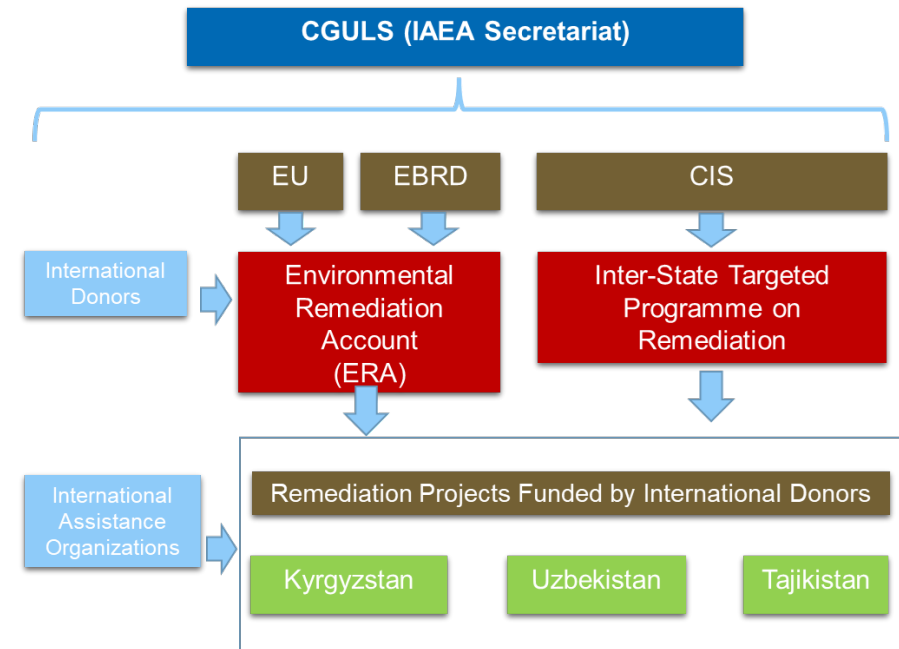
....to facilitate cooperation among IAEA Member States affected by uranium legacies and national and international organizations involved in the management, remediation or regulatory oversight of ULS.



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Coordinated international efforts

Implement an **integrated, coherent, systematic, and transparent approach**, as outlined in the **Strategic Master Plan (SMP)**:

- **Strengthen national infrastructure:** policies, strategies, regulations
- **Facilitate capacity building** activities for regulatory bodies, implementers and technical support organizations
- Ensure remediation **aligns with IAEA safety standards**, international good practice and UN Sustainable Development Goals
- **Promote engagement** of communities and individuals in decision-making



Progress in Central Asia

Kyrgyz Republic

- Mailuu-Suu (2023 - **2032**)
- Min-Kush (2020 - **2025**)
- Shekaftar (2020 - **2022**)



Uzbekistan

- Charkesar (2023 - **2024**)
- Yangiabad (2023 - **2025**)



Tajikistan

- Degmay (TBC + 5y)
- Istiklol (2022 – **2023**)
- (TBC+4y)



Strategic Master Plan 2025-2030

New plan aims to:

- Address funding gap to **complete remediation of priority sites**
- Increase **focus on post-remediation** to ensure long-term protection and sustainability
- **Enhance national frameworks, capacity building and stakeholder engagement**
- Advance international and bilateral agreements to **initiate remediation of lower priority sites**

Strategic Master Plan

for Environmental Remediation of
Uranium Legacy Sites in Central Asia
2025—2030

Third Edition
Revised and Updated

Presented at the Annual Meeting of the
Coordination Group for Uranium Legacy Sites
6 October 2025 Tashkent, Uzbekistan



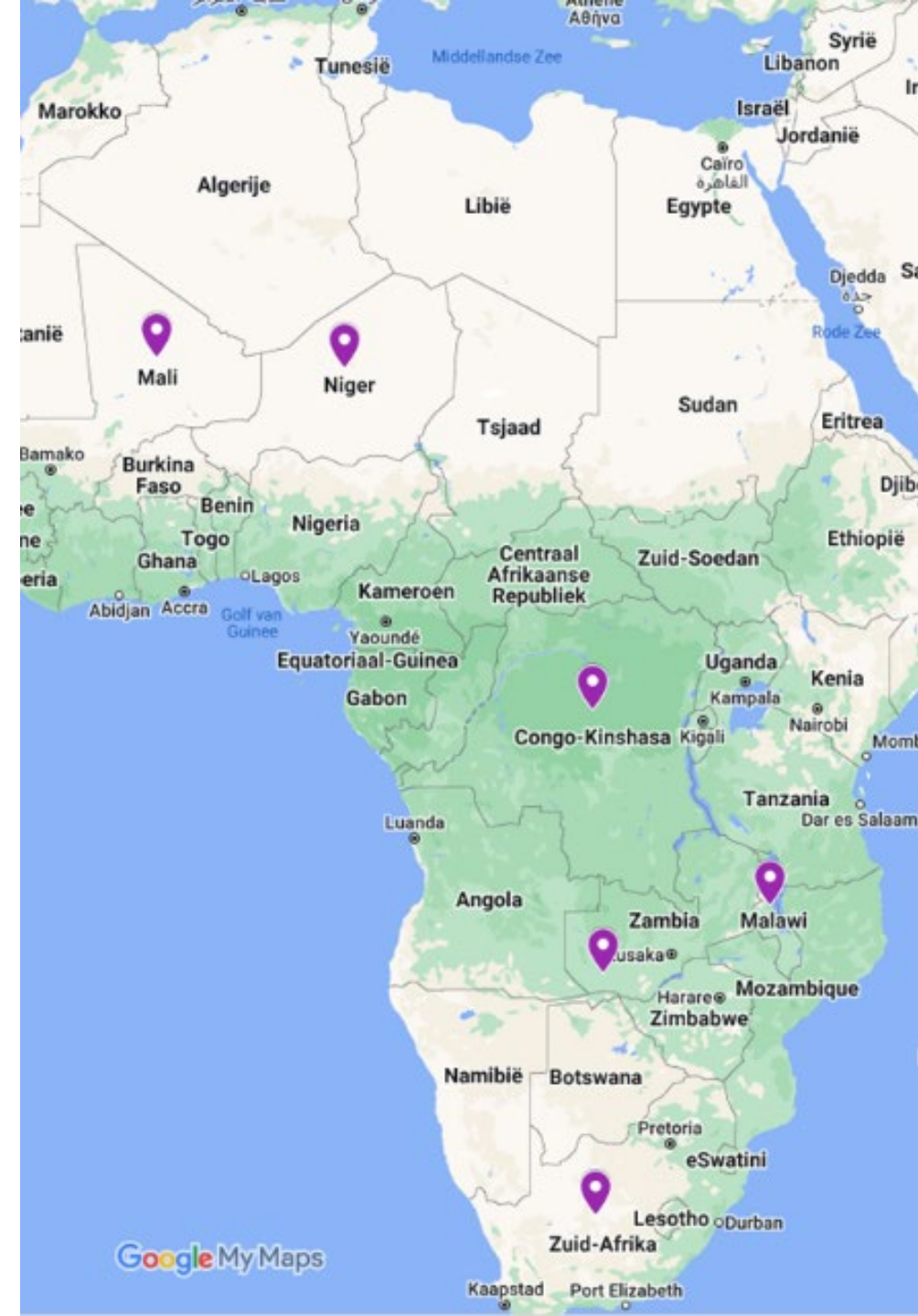
Extension of CGULS to Africa

2024 - First CGULS Africa Meeting (Lusaka, Zambia)
to establish:

- “Terms of Reference” for CGULS Africa
- Status and experience in African Member States
- Main challenges to African Member States on the remediation of uranium legacy sites

2025 – Development of “Technical Baseline Document” (Centurion, South Africa)

- Overview of uranium mining in Africa
- Identification of potential uranium legacy sites
- Assessment of risks to people and environment



Africa's challenges

- Uranium in Africa since the 1940s
- Different types of sites, of history of exploitation and legal status of ownership/liability
 - Uranium mining
 - Gold and uranium co-mining
 - Other NORM mining
- Variable geological, hydrogeological, climate and geography characteristics
- Distinct social and economic conditions
- Need for **stronger national frameworks and capacity** of regulators, implementers and TSOs



Perspectives for Africa

- **Adopt a tailored approach to consider regional, national and local** prevailing circumstances
- Establish **transparent processes and engagement** with communities to build trust in decision-making
- **Explore innovative technologies** (e.g. AI, remote detection) and “reuse” of secondary raw materials
- **Consideration of low-tech/low maintenance solutions** leveraging indigenous knowledge and local supply chains
- Integrate **post-remediation planning** early in the decision-making process
- Develop **cooperation framework** to raise **awareness** and secure **funding** locally, nationally and internationally (e.g. CGULS, UN Global Legacy Fund).



Lessons Learned



Evolution of standards

- ICRP Publication 103 published 2007
- GSR Part 3, International Basic Safety Standards published 2014
- GSG15 on remediation strategies and process published 2022
- Recommendations on long-term post remediation management (DS544)

Implications

- Broader adoption of “existing exposure situations” and “reference levels”
- Increasing application of clearance levels and circularity principles, promoting recycling and reuse of sites and materials
- Integrating environmental, social and economic to optimize safety and promote sustainable remediation

Lessons learned from CGULS activities have informed drafting of IAEA Safety Standards

Conclusion

CGULS's integrated approach with the international community, experts and Member States has:

- Ensured protection of people and the environment
- Enabled beneficial land use and community recovery
- Addressed historical injustices and rebuilt trust

Respecting Africa's prevailing circumstances and applying lessons learned will ensure continued success





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Thank you!

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