REN TiTAN

Can safe mining residues be used to mitigate the building sand shortage?

- Training of Vietnamese authorities and master's and doctoral training
- Workshops and Final Conference

- Radiological, chemical and soil mechanical characterization of the NORM residues from the titanium ore processing
- Database
- Life cycle assessments
- Economic feasibility study including market analysis and risk analysis
- Life Cycle Sustainability Assessment
- Guideline "Cleaner Production in Titanium Ore Mining in Vietnam"

- Comparison of the legal and normative bases
- Catalogue of possible applications of NORM residues
- Development of quality assurance and measurement routines and SOPs for the NORM residues

Options for NORM utilization & implementation mechanisms

Environmental assessments of mining & utilization options

Titanium Extraction

- How to ensure radiological protection?
- How to close material loops?
- How to increase recycling and resource efficiency?
- How to make resource extraction more sustainable?
- How to reuse NORM residues?

Process engineering implementation of suitable disposal and recycling options

- Identification & assessment of options
- Selection of binders
- Method development
- Test program for the proof of long-term stability
- Immobilization / Integration of NORM residues in building materials

- Industrial University Ho Chi Minh City
- Institute of Public Health
- Vietnam Atomic Energy Institute, Institute of Nuclear Science and Technology

- G.E.O.S Freiberg/ WISUTEC GmbH
- IAF Radioökologie GmbH
- University of Applied Sciences Magdeburg-Stendal

SPONSORED BY THE
Federal Ministry of Education and Research

04//2023 - 03/2027

Funding reference:
033R276A-C

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