

UNECE Projects on improving mine tailings safety in Central Asia, and introduction to the meeting objectives

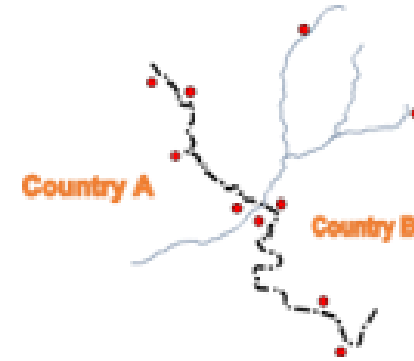
Technical meeting to prepare for the on-site training in Tajikistan and to enhance capacity for governance and policy-making on tailings safety in

Online, 23 April 2021

Claudia Kamke, Project Manager

UNECE Industrial Accidents Convention

- **Adopted in 1992, in force since 2000**
- **41 Parties** in the UNECE region
- Designed to protect **people and the environment** against industrial accidents
- Focus on **transboundary cooperation**
- Active international cooperation between Parties before, during and after an accident
- Covers **mine tailings** and **NATECH** (natural-hazard triggered technological) **events**
- UNECE Safety Guidelines and Good Practices for Tailings Management Facilities (TMFs)

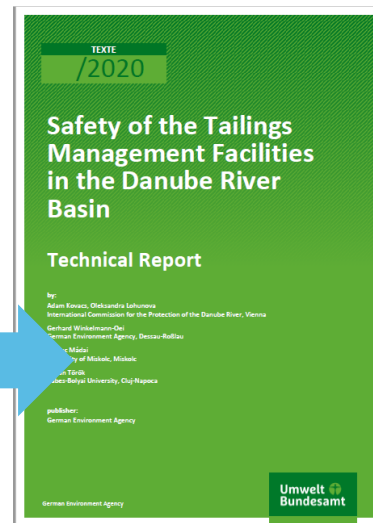
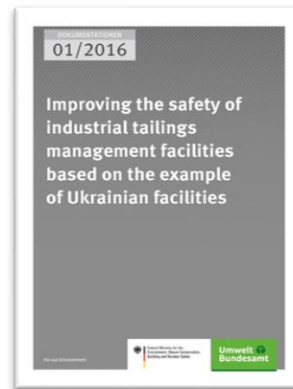


UNECE Safety Guidelines and Good Practices for TMFs and a related Methodology



Tailings Hazard Index (THI) Method

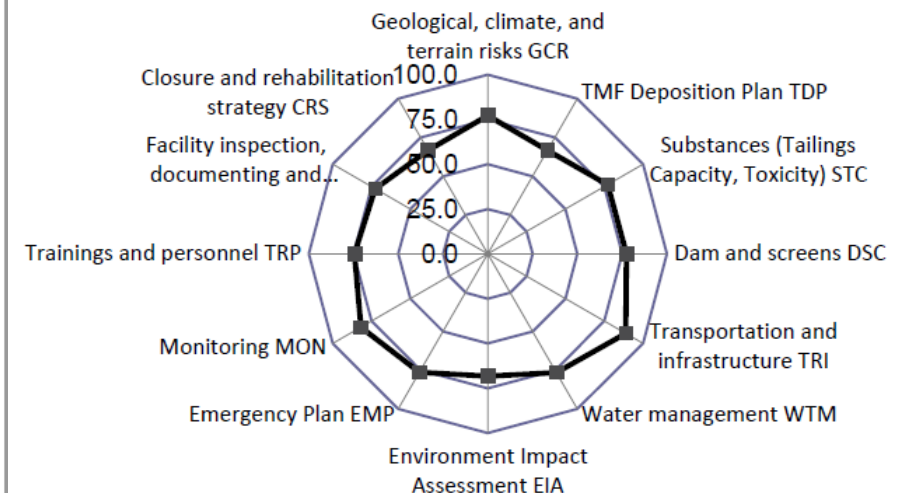
- Ranking TMFs according to their hazard
- Basic data needed (volume, toxicity...)



Updated in 2020

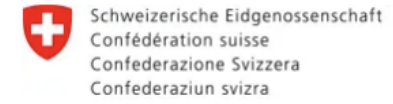
TMF Checklist

- Questionnaire
- Evaluation Matrix for the TMF safety level
- Measure Catalogue



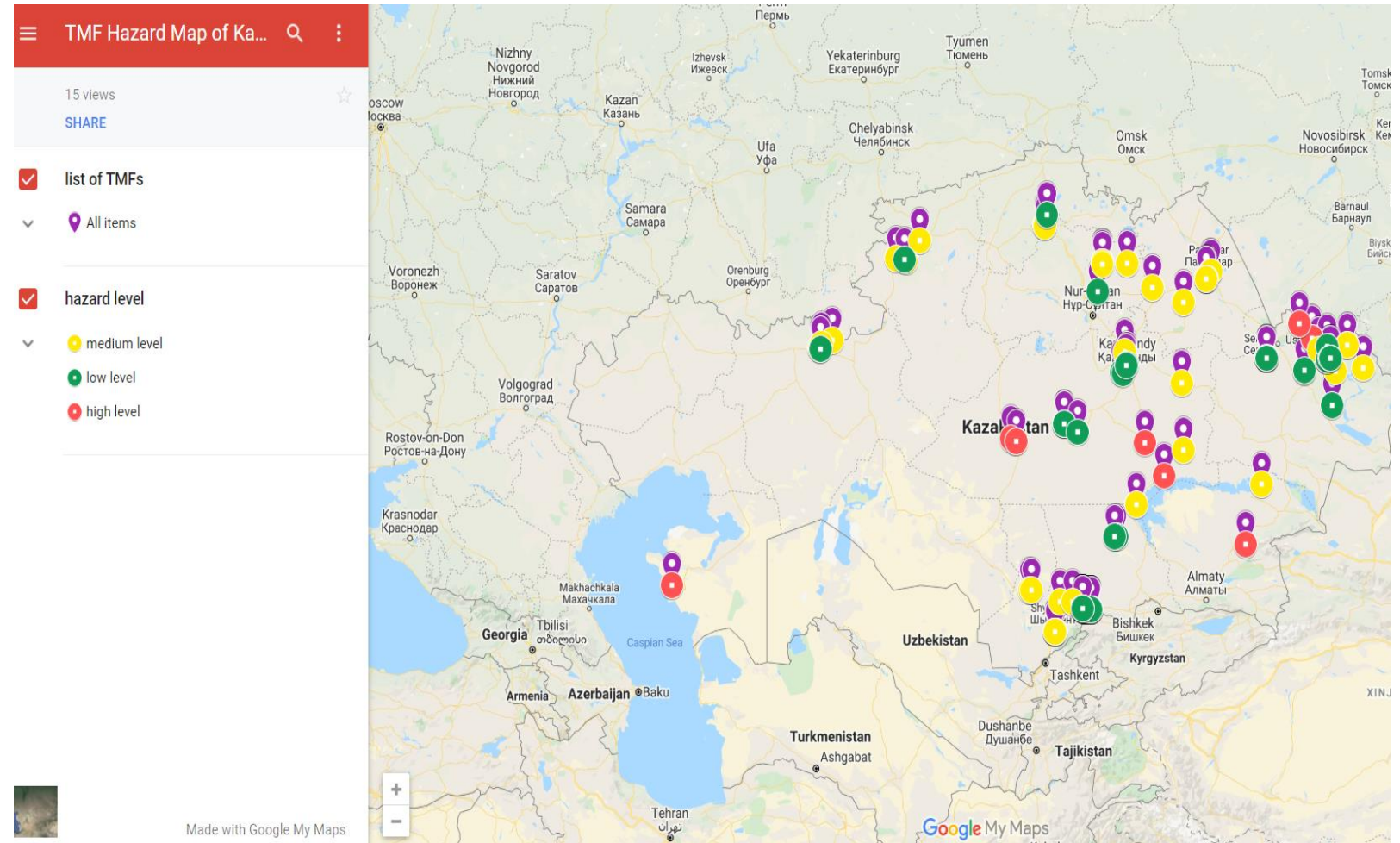
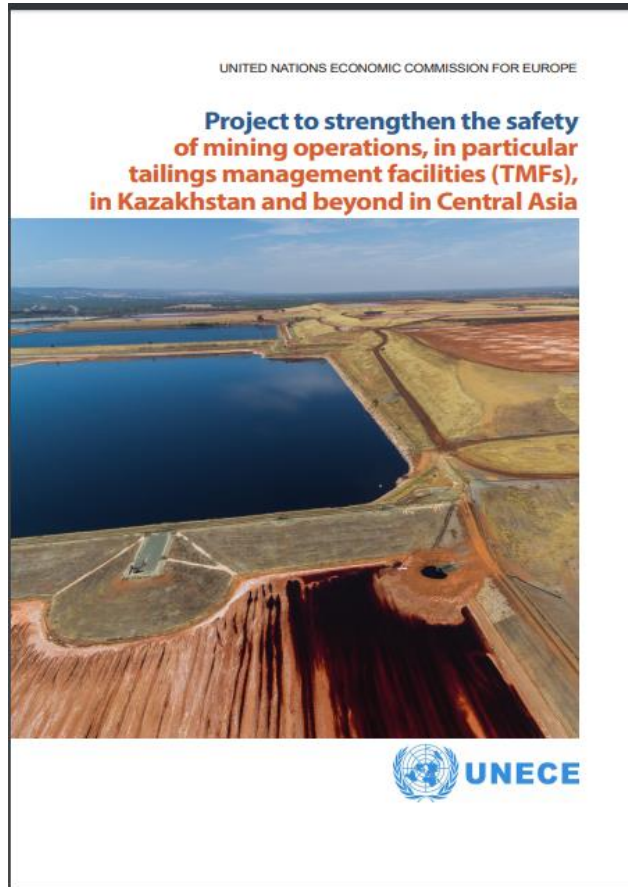
Successful application in Kazakhstan (2018-2019)

Inventory and mapping of 121 TMFs

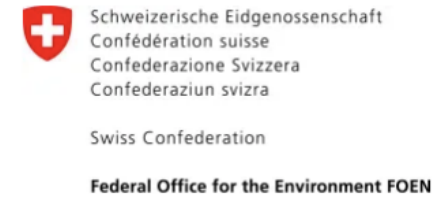


Swiss Confederation

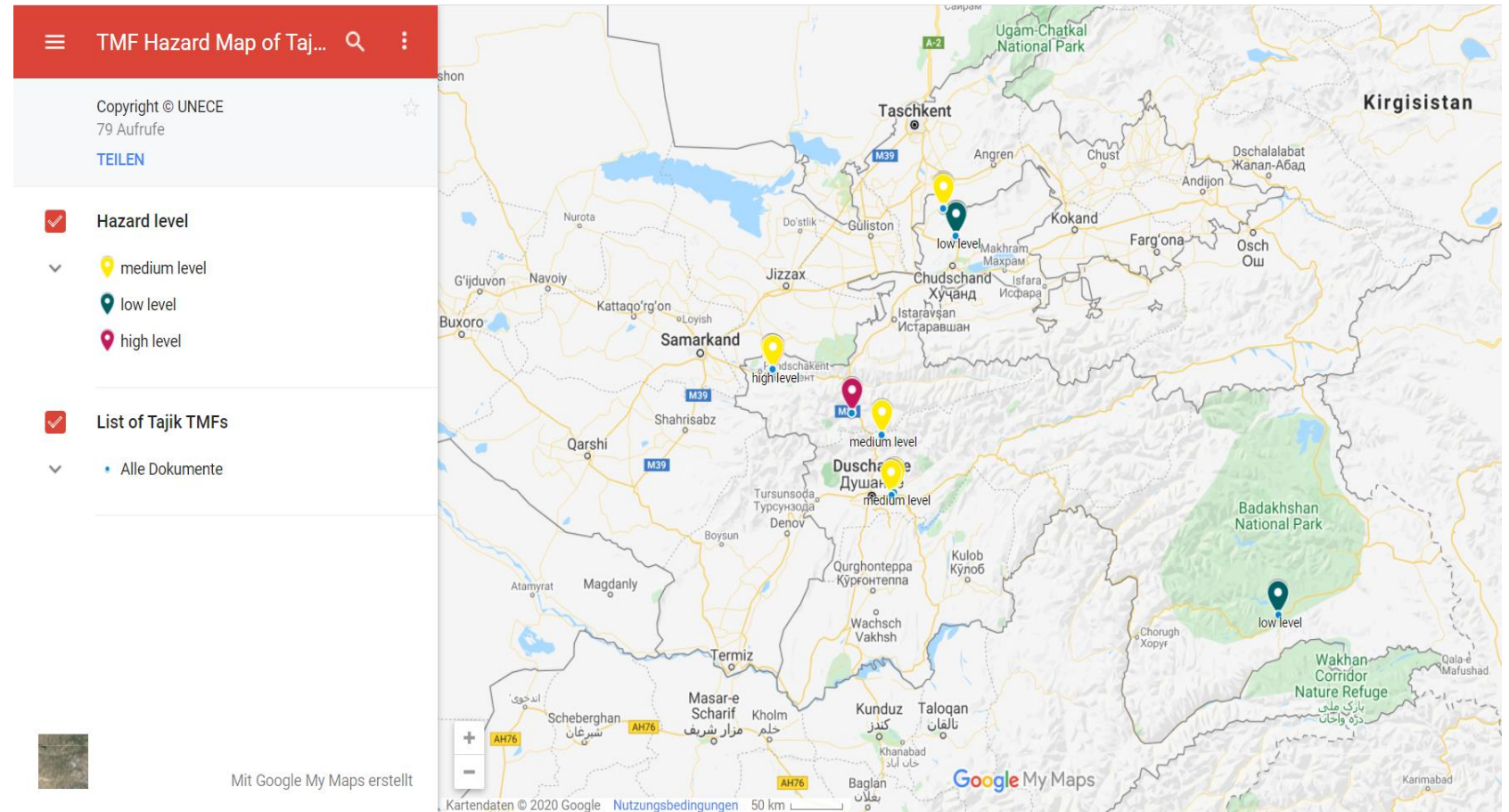
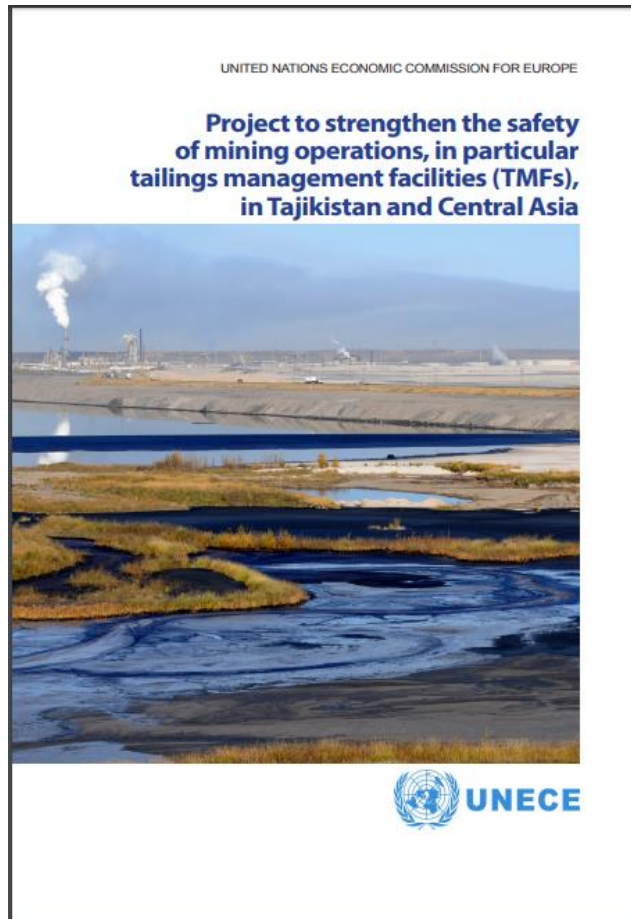
Federal Office for the Environment FOEN



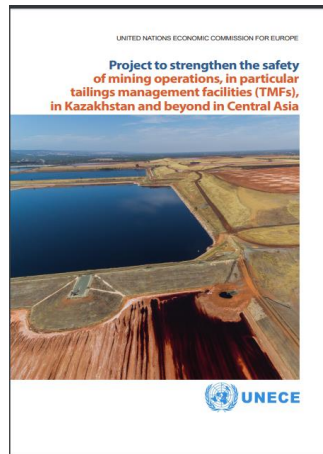
Successful application in Tajikistan (2019-2021)



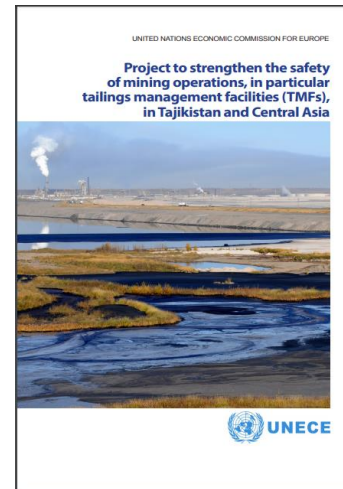
Inventory and mapping of 13 TMFs



Identification of TMFs with transboundary effects in Kazakhstan and Tajikistan



7 TMFs capable of causing transboundary effects in Kazakhstan



4 TMFs capable of causing transboundary effects in Tajikistan

No	Name of TMF	Region, district	THI	transboundary effect
16	TMF nr.1 of LLC "Aktymbinsk Copper Company"	Aktobe region, Khromtau district, town settlement Koktau	10.17	
41	TMF of Orlovsky dressing plant of LLC "Vostoksvetmet"	East Kazakhstan region, Borodulikhinsky district, town settlement Zhezkent	12.03	Near to the border with Russia (3 km)
103	Sludge storage nr. 1 of JSC "Aluminium of Kazakhstan"	Pavlodar region, Pavlodar city, industrial zone "Vostochnaya", building 65	11.61	Irtys River
104	Sludge storage nr. 2 of JSC "Aluminium of Kazakhstan"	Pavlodar region, Pavlodar city, industrial zone "Vostochnaya", building 66	11.52	Irtys River
105	Sludge storage nr. 3 of JSC "Aluminium of Kazakhstan"	Pavlodar region, Pavlodar city, industrial zone "Vostochnaya", building 67	11.00	Irtys River
107	Ash sludge storage nr. 1, Aksu Ferroalloy Plant	Pavlodar region, Aksu city	10.60	Irtys River
108	Ash sludge storage nr. 2, Aksu Ferroalloy Plant	Pavlodar region, Aksu city	10.95	Irtys River

No	Name of TMF	Region, district	THI	transboundary effect
1	Old TMF of JV "Zeravshan" LLC	Sughd region, Penjikent district, urban village Sujina	12.52	Zarevshan River (app. 0.5 km)
2	TMF of JV "Zeravshan" LLC, Dam nr. 1	Sughd region, Penjikent district, urban village Sujina	11.21	Zarevshan River (app. 1.5 km)
3	TMF of JV "Zeravshan" LLC, Dam nr. 2	Sughd region, Penjikent district, urban village Sujina	11.09	Zarevshan River (app. 0.5 km)
11	TMF nr.2 "Zarnisor"	Sogd region, Gulistan city, settlement Zarnisor	10.83	13 km to the border with Uzbekistan

Tailings Hazard Index in Kazakhstan and Tajikistan

Range of THI
High level (15%) 18 – Kazakhstan 2 – Tajikistan
Medium level (50%) 61 – Kazakhstan 6 – Tajikistan
Low level (35%) 42 – Kazakhstan 3 – Tajikistan

The average value of THI for the country
Kazakhstan 10.3
Tajikistan 10.7

<i>TMFs of Kazakhstan (with high level)</i>	
Sludge storage nr. 6 of LLP «Tioline»	TMF of Balkhash dressing plant "PO Zhezkazgantsvetmet", branch of LLP "Kazakhmys Corporation"
Sludge storage nr. 5 of LLP «Tioline»	TMF of Tekeli Enrichment plant
Sludge storage nr. 3 of LLP «Tioline»	TMF of Nikolayievsky dressing plant of LLC "Vostoktsvetmet"
Sludge storage nr. 4 of LLP «Tioline»	TMF of LLC "Nova Zinc"
Conserved TMF of Zhezkazgan dressing plants nr. 1,2. Enrichment manufacturing complex of LLP "Kazakhmys Corporation"	TMF of Belousovsky dressing plant
TMF "Koshkar-Ata"	Active TMF of Zhezkazgan dressing plants nr. 1,2. Enrichment manufacturing complex of LLP "Kazakhmys Corporation"
TMF of Zhezkazgan dressing plant nr. 3. Enrichment manufacturing complex of LLP "Kazakhmys Corporation"	TMF of LLP "SGKC", section nr. 1
TMF of LLP "SGKC", section nr. 2	TMF containing pyrits of Nikolayievsky dressing plant of LLC "Vostoktsvetmet"
Talovskoye TMF of the enrichment plant of LLP "Kazzinc"	TMF of Orlovsky dressing plant of LLC "Vostoktsvetmet"

<i>TMFs of Tajikistan (with high level)</i>	
Old TMF of JV "Zeravshan" LLC	TMF of JV "Aznob"

On-site training in Kazakhstan

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Office for the Environment FOEN

On-site training in Altyntau, Kokshetau in Kazakhstan
(11-13 June 2019), with Kyrgyzstan and Tajikistan



Photos credit: UNECE

On-site training in Tajikistan

On-site training in Zarafshan, Tajikistan

- 23 April – technical/preparatory meeting
- Mid-May – on-site training and back-to-back online evaluation workshop



Subregional workshop on strengthening mine tailings safety in Central Asia (20-21 Nov 2019, Almaty)

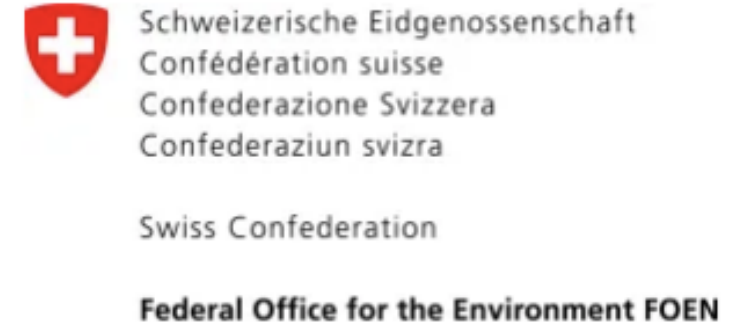
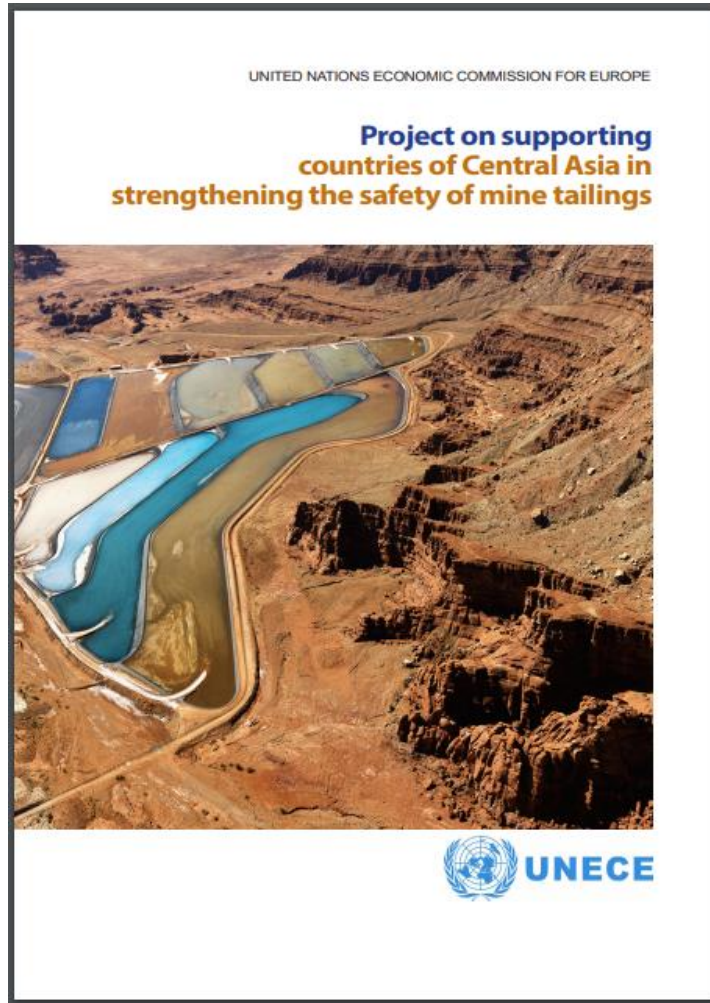


Conclusions and lessons learned from the application

- Tailings safety is a matter of regional concern → call for closer transboundary cooperation on this matter
- Outdated safety standards and management practices → need to update national regulations and policies
- Recommendation to apply the UNECE Safety Guidelines and TMF methodology in all Central Asian countries to ensure harmonized safety standards and approaches
- Need to improve inter-institutional cooperation and coordination, as well as a holistic management approach towards the safe management of mine tailings and the prevention of accidental water pollution



UNECE Project on strengthening mine tailings safety in Central Asia (since 2020)



- Establishment of inter-institutional working groups on tailings safety in Kazakhstan and in Tajikistan
- Mapping of tailings facilities in Uzbekistan
- Strengthening subregional and transboundary cooperation
- Continued engagement with partner organizations (UNEP, OECD, OSCE, UNDP) and policy dialogue (mineral resource governance, sustainable infrastructure)

Objectives of this meeting

- **Prepare the Tajik participants for the on-site training**, notably for applying the UNECE Safety Guidelines and Good Practices for Tailings Managements Facilities (TMFs) and a related TMF methodology
- **Support Central Asian countries in their implementation of tailings related recommendations arising from the UNECE Environmental Performance Reviews (EPRs), incl. the update of their national self-assessments and action plans**
- **Review the progress made in the implementation of the UNECE project on supporting countries of Central Asia in strengthening the safety of mine tailings, notably the establishment of Inter-Institutional Working Groups on Tailings Safety and the Prevention of Accidental Water Pollution in KAZ and TAJ**
- **Identify next steps** for the implementation of the UNECE project on supporting countries of Central Asia in strengthening the safety of mine tailings



Agenda for today

SESSION 1: Opening and setting the scene (10h00-11h00)

Moderator: *Mr. Ardasher Mirzozoda, Deputy Chairman of State Supervision of Safe Work in Industry and Mining Supervision Service under the Government of the Republic of Tajikistan*

SESSION 2: Preparation for the on-site training in Zarafshon, Tajikistan (11h10-12h35)

Moderator: *Mr. Farkhat Seifulov, Head of the Department for State Supervision of Nuclear Facilities of the Industrial Safety Committee, Ministry for Emergency Situations of Kazakhstan*

SESSION 3: Enhancing capacity for governance and policy-making on tailings safety in Central Asia using UNECE's instruments and tools (13h00-14h45)

Moderator: *Ms. Sarangoo Radnaaragchaa, Regional Advisor for the Environment, UNECE*

Breaks: *11h00-11h10 and 12h35-13h00*

Thank you for your attention!

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Transboundary Effects of Industrial Accidents
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