UNECE’s work and perspectives on strengthening mine tailings safety and governance in Central Asia and beyond

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Convention on the Transboundary Effects of Industrial Accidents

- **1986** Negotiated following Sandoz chemical accident at Schweizerhalle
- **1992** Adopted
- **2000** Entered into force

- **42 Parties** in the UNECE region (Kazakhstan only Party in Central Asia)

Designed to protect **people and the environment** against industrial accidents by preventing, preparing for and responding to accidents

Covers **Natech** (natural-hazard triggered technological) events and **tailings management facilities (TMFs)**

![Sandoz spill, Schweizerhalle, Switzerland (1986)](image)
Assistance and Cooperation Programme

2004 Created (AP)
2018 Renamed and rebranded (ACP)

The Tenth Conference of the Parties:
• Rebranded to ensure that the Programme remains an effective instrument for delivering assistance and increasing capacity at all levels

- Support countries of South-Eastern and Eastern Europe, the Caucasus and Central Asia in the implementation of the Convention.
- Beneficiaries cooperate increasingly and support each other, taking full ownership for activities carried out.
- Implementing multi-year, multi-country projects.

Focus on Transboundary Cooperation

Assistance and Cooperation Programme

Preparatory phase
- High-level commitment declaration
- Fact-finding missions
- Awareness-raising missions

Implementation phase
- Needs-driven capacity building activities, identified based on the Strategic Approach
Joint Expert Group on Water and Industrial Accidents and Its Guidelines

- Founded: 1998
- Focused on preventing accidental water pollution, including in the event of Natech accidents, and its consequences.
- Combining integrated water resources management with industrial safety.

Guidelines, Methodologies and Checklists

Water Convention
Industrial Accidents Convention

UNECE
Addressing Natech risks & climate change impacts

Managing Natech risk is a priority under the Industrial Accidents Convention and enshrined in its Long-Term Strategy up to 2030

Recent:
• COP-12 adopted Decision 2022/1 on Strengthening Natech risk management in the UNECE region and beyond
• UNECE/OECD Seminar on effective management of technological risks of accidents triggered by natural hazards
• OECD/UNECE brochure on The Impact of Natural Hazards on Hazardous Installations
• Member of the OECD Natech Steering Group

Forthcoming in 2024: Joint OECD/UN/EU JRC Guidance Managing Natech Accident Risk: A guide for senior leaders in industry and public authorities
• Aim to provide high-level support for governing Natech risk and long-term sustainable development at hazardous installations, including for adaptation to climate change
2030 Road Map for action to strengthen mine tailings safety within and beyond the UNECE region

Contains 5 key objectives:

A. Understanding TMF-related risks within and across national borders

B. Addressing TMF risks through policy and governance

C. Prevention and preparedness for accidental water pollution from TMFs to ensure water quality

D. Prevention of natural hazard-triggered industrial accidents (Natech events) and adaptation to climate change

E. Exchange of information and knowledge and capacity-building

For each objective:
- Objective summary
- Proposed approach to achieve objective
- Actions for Parties and MS within the ECE region and beyond
- Actions by ECE-secretariat
- Joint or complementary actions by ECE secretariat and other international organizations

→ Road Map available in ENG, FRE and RUS.
2030 Road Map for Action on Tailings Safety in the UNECE Region and Beyond

**NEXT Steps**

**2023–2024**
- Promote understanding of the risks associated with tailings
- Review and update existing measures and legislation
- Use existing and create new working groups and national coordination mechanisms
- Report tailings as a hazardous activity (10th reporting cycle)

**2025–2026**
- **Prepare an overview:** tailings facilities in the UNECE region, possible existing threats, risks and hot spots
- **Improve shared understanding and risk management across countries**
- **Facilitate multi-stakeholder dialogue on existing benefits and challenges in the UNECE region and beyond**
Inventories and maps of 237 TMFs in Central Asia

- **TMF mapping in Uzbekistan**
  - ✓ Inventory and mapping of 41 TMFs

- **TMF mapping in Kazakhstan**
  - ✓ Inventory and mapping of 121 TMFs

- **TMF mapping in Kyrgyzstan**
  - ✓ Inventory and mapping of 62 TMFs

- **TMF mapping in Tajikistan**
  - ✓ Inventory and mapping of 13 TMFs

- **TMF mapping in Syr Darya river basin**
  - ✓ Inventory and mapping of 61 TMFs

All TMFs were assessed using the TMF **Methodology**, incl. Tailings Hazard (THI) and Tailings Risk (TRI) Indexes.
59 TMFs in Central Asia with potential transboundary effects

- TMF mapping in Uzbekistan: 7 TMFs could have transboundary effects
- TMF mapping in Kazakhstan: 7 TMFs could have transboundary effects
- TMF mapping in Kyrgyzstan: 38 TMFs could have transboundary effects
- TMF mapping in Tajikistan: 4 TMFs could have transboundary effects
- TMF mapping in Syr Darya river basin: 33 TMFs could have transboundary effects → 19 in KYR, 10 in TAJ and 4 in UZB

59 out of 237 TMFs may have potential transboundary effects → 25%
Strengthened Tailings Governance in Central Asia

Establishment of and support to the Interinstitutional Working Groups on Tailings Safety and the Prevention of Accidental Water Pollution (IIWG)

To improve inter-institutional coordination and cooperation among industrial safety, water, and other relevant authorities and institutions as well as with operators, academia and NGOs on preventing accidental water pollution from tailings management facilities, including those with potential cross-border effects.

Kazakhstan

1st IIWG meeting held on 11 February 2022, led by MES in cooperation with Ministry of Ecology and Natural Resources.

IIWG formally established through a decree of the Ministry of Emergency Situations (MES) in January 2022.

2nd IIWG meeting, held on 15 March 2023 in Astana.

Tajikistan

IIWG formally established under the government on 31 October 2022.

2nd IIWG meeting, held on 4 April 2023 in Dushanbe.

Inception meeting on IIWG establishment and its draft ToRs held on 27 April 2023 (online).

Uzbekistan

IIWG Inaugural Meeting in 2 Dec 2021.

Development of Terms of Reference in first half of 2023.
Development of a study on pollution sources and the identification of accident risks the Syr Darya River Basin

General Information

Beneficiary Countries:

- Kyrgyzstan, Kazakhstan, Tajikistan and Uzbekistan

Duration:

- June 2021 – February 2023

Objectives

- To reduce and prevent pollution of the water resources of the Syr Darya river basin

Results

- An in-depth report examining the state of water resources, water quality issues, issues related to policies and institutions in the field of water management, industrial safety and prevention of accidental water pollution. It contains specific recommendations to be implemented by riparian countries
- Inventory and mapping of 61 tailings and 133 other hazardous enterprises in the Syr Darya River Basin
- Infographic and Executive Summary with key takeaways
Some key findings

- **Sources of water pollution** of the Syr Darya River: Industry, agriculture, municipal sewage (in all 4 countries)
- **Need to develop a Joint Contingency Plan** to prevent, prepare for and respond to emergency situations in the Syr Darya River Basin
- **High Natech risks in Central Asia**: Necessary to continue work on improving industrial safety and eliminating the risks of accidental water pollution.

- For example, in **Tajikistan**, most tailings dumps are located near settlements and near rivers. A comprehensive assessment of the territory is required - seismic hazard, landslides, floods, flooding of territories and sites, mudflows, and secondary consequences of earthquakes.
- And in **Kyrgyzstan**, extreme weather events can cause accidents at tailings dams. On the territory of Kyrgyzstan there are tailings dumps with a high risk of accident.
- In **Uzbekistan**, in the basin of the Syr Darya River, almost all branches of heavy and light industry are represented. In the event of accidents, a full range of pollutants can get into the river (from petroleum products and heavy metals to reagents for the processing of agricultural products).
Subregional workshop on strengthening mine tailings safety in Central Asia
(Dushanbe, Tajikistan, 25-26 May 2023)

- **70 participants** (online&in-person) from 5 Central Asian countries, incl. from authorities, operators, academia, NGOs & regional/IOs
- **High-level session** with the Vice-Minister of Emergency Situations of Kazakhstan, the Vice-Minister of Natural Resources of Kazakhstan, the Deputy Minister of Energy and Water Resources of Tajikistan and the Deputy Minister of Emergency Situations of Uzbekistan
Key needs and recommendations for follow-up

1. Kazakhstan suggested establishing a joint working group (at a technical level) on the monitoring and control of the transboundary TMFs in Central Asia.
2. Tajikistan suggested setting up a coordination council (at the political level) between Central Asian countries to explore the potential risks related to TMFs and the prevention of accidental water pollution.
3. Uzbekistan pointed out the need to develop joint contingency plans, notably in river basins, in Central Asia and several Central Asian countries recommended to develop a joint Contingency Plan for the Syr Darya River Basin.
4. IWAC proposed launching a pilot project on assessing the impacts of climate change on TMFs in Central Asia to study the impacts and adaptation measures.
5. CESDRR highlighted the need to establish a sustainable early warning and alert system at the national and regional levels, e.g. to detect seismic movements, to help countries to prepare for hazardous climate-related events.
6. Participants stressed the vital role of the IIWGs as multi-stakeholder platforms for the exchange and coordination on mine tailings safety and recommended the establishment of such groups in other Central Asian countries.
Future activities by UNECE in Central Asia

Plans for 2024:
• Encourage implementation of the recommendations by Kyrgyzstan and Tajikistan
• Promote the results of the projects in all Central Asian countries
• Support Uzbekistan in the establishment of an IIWG and organization of an on-site training at a tailings management facility
• 2024: Start a three-year project on the prevention of accidental water pollution in the face of climate change in Uzbekistan (tbc)
• Support to the Joint Uzbek-Kazakh Working Group on Environmental Protection and Water Quality in the Syr Darya River Basin
• 2025: Start a four-year project on improving climate knowledge and disaster risk governance for mine tailings facilities in Central Asia, with ESCAP (tbc)

Meetings in 2024:
• Support Kazakhstan, Tajikistan and Uzbekistan in the holding of IIWG meetings
  IIWGs serve as platforms to discuss Natech risks, exacerbated due to climate change, among relevant stakeholders
• 13th meeting of the Conference of the Parties (planned for Nov/Dec 2024):
  • Will include a round-table on the implementation of the 2030 Road Map for Action on Mine Tailings Safety and an exchange of information on InSAR
Future activities by UNECE of interest

Plans for 2024-2025:
- OECD, UNECE, EU JRC will finalize and launch guidance on Natech risk management

Meetings & Events in 2024:
- A workshop hosted by Slovakia organized by JEG on increasing capacities to prevent, prepare for and respond to accidental water pollution from tailing facilities on 23 April 2024.
- A site visit to a TMF may be organized on 24 April 2024.
Online Toolkit & Training for Improving Tailings Safety

- Promotes knowledge of tailings safety through online training on the application of relevant safety guidelines and methodology

Consists of:
- Reference information on the safety of tailings
- Practical training → 3-step approach
- Brief information on UNECE work related to tailings and partners
- Further reading (main reports and links)
- Available in ENG and RUS

Includes tailings safety training video (ENG, RUS)
Thank you for your attention!

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