

Summary and conclusions of the Subregional Workshop on strengthening mine tailings safety in Central Asia – Almaty, Kazakhstan, 20-21 November 2019 –

1. Background and objectives

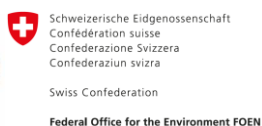
The [subregional workshop](#) for Central Asia was organized as part of the UNECE projects on strengthening the safety of mining operations, in particular tailings management facilities (TMFs), in [Kazakhstan](#) (December 2017 to December 2019), [Tajikistan](#) (December 2018 to December 2020) and beyond in Central Asia. Both projects are implemented under the workplan of the UNECE Convention on the Transboundary Effects of Industrial Accidents (Industrial Accidents Convention), with the financial support of the Swiss Federal Office for the Environment. Project oversight and management is ensured by UNECE.

The objectives of the subregional workshop were the following:

- Strengthen tailings management facilities (TMF) safety in Central Asia
- Foster awareness of persisting disaster risks, including related to accidental water pollution, and ways to address them
- Share information and experiences on mine tailings safety in Central Asia: achievements, lessons learned, challenges and countries' needs
- Provide a forum for national authorities in Central Asia to improve institutional coordination and cooperation on mining/TMF safety: among themselves, with operators and relevant stakeholders, and across borders
- Present the final and interim results of two UNECE projects to strengthen the safety of mining operations, in particular tailings management facilities (TMFs), in Kazakhstan, Tajikistan and beyond in Central Asia
- Share information on UNECE guidelines and tools, further to those of partner organizations, and experiences in their application
- Foster implementation of the Convention on the Transboundary Effects of Industrial Accidents and the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, both serviced by UNECE
- Improve awareness of linkages with the 2030 Agenda for Sustainable Development, its Sustainable Development Goals, and the Sendai Framework for Disaster Risk Reduction 2015-2030

2. Attendees

The subregional workshop brought together representatives of state authorities of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan as well as representatives of international and regional organizations, such as the Organization for Security and Co-operation in Europe (OSCE), the Organization for Economic Co-operation and Development (OECD), the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP), the International Water Assessment Centre (IWAC), the Regional Environment Centre for Central Asia (CAREC) and international



experts from Czechia, the Russian Federation, the European Union and Switzerland. Representatives of operators of TMFs in Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan also participated.

The meeting was organized and serviced by the UNECE secretariat, in cooperation with the Water Initiatives Centre for the logistical arrangements. Its organization was made possible thanks to financial support from the Swiss Federation Office for the Environment as well as co-financing from OSCE, the United Nations regular budget and the Global Tailings Review.¹ The Centre for Emergency Situations and Disaster Risk Reduction hosted the subregional workshop.



3. Programme

The subregional workshop was divided into 5 sessions. It began with an overview of international developments in the area of mine tailings safety and their impact on Central Asia. The second session focused on the experiences and lessons learned in Central Asia from the application of UNECE guidance and methodologies for improving tailings safety within and beyond the UNECE region. It also allowed representatives from Kazakhstan and Tajikistan to present on their key achievements from the application of the TMF methodology. The third session provided an overview of the current international efforts on improving mine tailings safety in Central Asia and beyond. In the fourth session, the results from the projects to strengthen the safety of mining operations, in particular TMFs, in Kazakhstan, Tajikistan and beyond in Central Asia were presented. In the fifth session, tailings needs and challenges in Central Asia were discussed. To this end, authorities and operators shared their experiences; a roundtable discussion on how to scale up joint efforts to improve mine tailings safety in view of the 2030 Agenda for Sustainable Development was held. The key conclusions from the subregional workshop are presented below.

4. Key conclusions of the subregional workshop

SESSION 1 – Setting the scene: International developments in the area of mine tailings safety and their impact on Central Asia

Participants acknowledged the relevance of the workshop topic, also in view of recent major accidents, and stressed the importance of improving mine tailings safety and preventing accidental water and soil pollution in Central Asia, including through transboundary cooperation. Participants recognized tailings safety as a matter of regional concern, incl. with respect to national safety and security.

¹ The subregional workshop was preceded by a consultation for Central Asia on the draft Global Tailings Standard (Almaty, 18-19 November 2019), which was co-convened by UNECE and the Global Tailings Review. The costs for participants attending both the consultation and subregional workshop were shared. Further information on the consultation is available at <http://www.unece.org/index.php?id=52537>.

Participants welcomed recent international developments in the area of mine tailings safety, notably the adoption of the United Nations Environment Assembly (UNEA)-4 resolution on mineral resource governance and the development of the Global Tailings Standard,² including that UNECE co-convened the consultation for Central Asia.

Participants stressed the need to take urgent action in improving mine tailings safety in Central Asia and managing related disaster risks, in particular also in view of tailings accidents triggered by natural disasters (“NATECH” events) which are expected to increase due to more extreme weather events as a result of climate change. This was in particular important due to the envisaged growth of mineral resource extraction. They agreed that continuing “business as usual” was not an option.

Participants welcomed the organization of a seminar on mine tailings safety as part of the 11th meeting of the Conference of the Parties of the Industrial Accidents Convention (Bonn, 1-3 December 2020) and recommended that the conclusions from this sub-regional workshop for Central Asia will provide relevant input.

SESSION 2 – UNECE guidance and methodologies for improving tailings safety within and beyond the UNECE region: experiences and lessons learned from their application in Central Asia

Participants welcomed the UNECE Safety Guidelines and Good Practices for Tailings Management Facilities (TMFs) and the TMF methodology and acknowledged them as tools to effectively support competent authorities and operators in Central Asian countries in the safe management of mine tailings. They agreed to further proceed with the implementation of the Safety Guidelines, which cover all phase of the lifecycle, incl. also inactive TMFs. Participants highlighted also that tailings safety starts with the design and location of the facility, on which more emphasis needs to be placed.

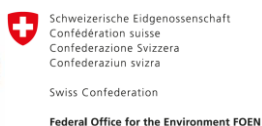
The draft Global Tailings Standard was seen a complementary effort to the Safety Guidelines; in the preceding regional consultation for Central Asia on the draft standard participants agreed to consider the provision of comments to the Global Tailings Review.

The Tailings Hazard Index (THI, which is part of the above-mentioned methodology) was presented as an effective tool to present an overview of mine tailings (active and inactive) at the national and regional level; it shows where the highest needs for strengthening mine tailings safety in Central Asia are.

Participants took note of the inventory of 121 TMFs in Kazakhstan and the draft inventory for Tajikistan. They noted with concern the large number of towns located downstream of TMFs and agreed that all efforts need to be taken to ensure the safe operation of active or maintenance of idle TMFs, so as to safeguard the lives and health of the population living downstream, striving to reduce and avoid any prevalent health effects.

Participants also took note of those TMFs with potential transboundary effects in the scope of the Industrial Accidents Convention. They agreed that all efforts should be made to reduce the risks posed by

² Developed by the Global Tailings Review, a joint initiative by the International Council on Mining and Metals (ICMM), the United Nations Environment Programme (UNEP) and the Principles for Responsible Investment (PRI).



these TMFs to prevent accidental water pollution (of surface or ground-water) and to enhance transboundary cooperation. They welcomed the sub-regional information-sharing on TMF safety across Central Asia and beyond and agreed to further pursue respective cooperation among their countries.

Participants welcomed the available TMF inventory and map for Kazakhstan and Tajikistan, and stressed the importance of continuing these efforts in other Central Asian countries, notably also to identify, and notify affected countries, of those TMFs with potential transboundary effects. They highlighted the need to address institutional, legal and financial challenges in ensuring a safe management of mine tailings. They agreed to consider measures to strengthen cooperation between national and local authorities,³ in order to strengthen safety, build capacity and exchange experiences and lessons learned. Training was considered crucial for operators and competent authorities (national and local levels) to ensure tailings safety.

Participants welcomed the successful application of the UNECE Safety Guidelines and Good Practices for TMFs and the TMF methodology in Armenia, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan and Ukraine, and encouraged all Central Asian countries to apply it.

Central Asian countries committed to continue working in the area of TMF safety, to further strengthen it at the national level and through transboundary cooperation, as part of ongoing and future projects.

SESSION 3 – International efforts on improving mine tailings safety in Central Asia and beyond

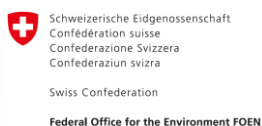
Participants welcomed the implementation of UNECE's and other international projects to strengthen mining operations, including tailings, in Central Asia and expressed their gratitude to Switzerland and other donors. They welcomed existing cooperation and encouraged international organizations to continue strengthening their partnerships in this area, building on their complementarity, expertise and efforts.

Numerous international projects are ongoing to strengthen mining operations, incl. tailings safety, among others those projects presented by UNECE, OECD, UNDP, OSCE and the EU. Cooperation among the various initiatives was ongoing. Participants encouraged international organizations to continue working together to identify further synergies and to support Central Asian countries in improving mine tailings safety, and thus to progress in the implementation of the UNEA-4 resolution on strengthening mineral resource governance.

Participants from Central Asian countries acknowledged that it was important to include into the national self-assessments and action plans developed under the Assistance and Cooperation Programme of the Industrial Accidents Convention information related to tailings safety, and measures to strengthen it accordingly.

Participants took note of the mine tailings related recommendations in the UNECE Environmental Performance Reviews for Central Asia.

³ In Kazakhstan, for example, local authorities are responsible for the management of inactive sites, while active sites are under the responsibility of the national authorities.



SESSION 4 – Results from the projects to strengthen the safety of mining operations, in particular TMFs, in Kazakhstan, Tajikistan and beyond in Central Asia

Participants took note of the achievements under the UNECE Pilot project to strengthen the safety of mining operations, in particular TMFs, in Kazakhstan and beyond in Central Asia, notably of the following:

- Establishment of a national inventory and map with 121 TMFs, ranked by their hazard degree and showing potential transboundary effects
- Establishment of an interinstitutional working group on tailings safety and water management
- Improved cooperation among competent authorities at the national and regional levels and between competent authorities and operators of mine tailings facilities
- Enhanced implementation of the UNECE Industrial Accidents Convention, its Safety Guidelines and Good Practices for TMFs and a related checklist methodology

Participants took note of the progress made to date under the UNECE project to strengthen the safety of mining operations, in particular TMFs, in Tajikistan and Central Asia, notably to establish a draft inventory and hazard map with 11 TMFs to date, and encouraged Tajikistan to further build on its efforts until the end of the project.

Representatives of Tajikistan and Kazakhstan:

- Recognized the need to further strengthen their national legislation and governance to ensure the safety of existing and future TMFs
- Agreed to present the results of both projects to their respective competent government authorities and to compare the TMF methodology with existing national methodologies in order to consider its adaptation and uptake in the national legislation for both active and inactive TMFs.
- Agreed to form inter-institutional working groups addressing TMF safety and accidental pollution, recognizing that these working groups can serve as platforms to discuss the project results, their possible adaptation and uptake of the TMF methodology
- Encouraged other Central Asian countries to also apply the TMF methodology and consider ranking and mapping their TMFs following the same approach.
- Agreed to proceed with efforts to further align national industrial safety regulations with international good practices and standards to make tailings facilities safer.
- Welcomed the support provided by members of the UNECE Joint Expert Group on Water and Industrial Accidents in the implementation of the projects.

Participants welcomed this sub-regional workshop as timely and addressing a pressing need to improve the cooperation among Central Asian countries. They appreciated UNECE's readiness to further support Central Asian countries in their efforts to improve tailings safety and thanked Switzerland for the provision of additional funding to continue this work.

SESSION 5 – Tailings needs and challenges in Central Asia: experiences from authorities and operators, and how to scale up joint efforts in view of the 2030 Agenda for Sustainable Development

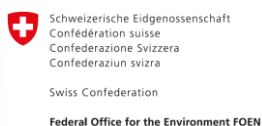
Participants welcomed the open sharing of experiences, challenges and needs in managing mine tailings among representatives from competent authorities and TMF operators in Central Asia.

Several **challenges** in the area of mine tailings safety in Central Asia were expressed by competent authorities and operators, among others:

- Safe management of TMFs, incl. uranium legacy sites, in view of capacity constraints (human, financial)
- Lack of local expertise in designing and managing tailings dams according to international good practices and safety standards
- Knowledge and data available regarding risks related to NATECH accidents at mine tailings, incl. lack of data to consider NATECH risks in the design and management of TMFs
- Long approval processes for operators to receive a permit for a TMF (at least 12 months)
- Prevention of accidental water pollution and its transboundary effects from tailings
- Determination of transboundary effects in the framework of the Industrial Accidents Convention
- Transboundary cooperation and information sharing on tailings with potential transboundary effects, notably the notification of hazardous activities to affected countries
- Interinstitutional coordination both at the national level and between the national and local levels

Participants took note of several **needs** in the area of mine tailings safety in Central Asia, as expressed by competent authorities and operators, among others, of the following:

- Review and update of national regulations and safety standards on the design and management of tailings in Central Asia to align with international good practices and safety standards
- Development of harmonized regional safety standards for Central Asia for the management of active and inactive tailings facilities, including for the design of new TMFs, based on current international good practices and safety standards in this area
- Further support for the implementation of the UNECE Safety Guidelines and Good Practices for TMFs and the related methodology, as a harmonized approach for managing TMFs in Central Asia
- Further sharing of information, good practices and lessons learned at the subregional level, involving representatives from both competent authorities and operators across Central Asia, and beyond
- Support to the establishment of sustainable national coordination mechanisms on mine tailings safety and the prevention of accidental water pollution
- Strengthening transboundary cooperation on mine tailings safety and preventing water pollution, including by notifying affected countries about TMFs with potential transboundary effects.
- Raise awareness of and strengthen the implementation of the Industrial Accidents and Water Conventions, and of the mine tailings related recommendations from the UNECE Environmental Performance Reviews
- Enhancing the expert capacity and risk management related to tailings accidents triggered by natural disasters, in view of elevated risks due to climate change causing more extreme weather events
- Conduct regular trainings both for operators and competent authorities (national and local level)



- Improve community awareness of tailings risks in order to avoid any health impacts on the population, and engage with them

Participants recognized the importance of the Sustainable Development Goal (SDG) 6 (Ensure access to water and sanitation for all) to achieving all other SDGs and stressed the need to prevent water pollution from tailings and related transboundary effects, in particular in Central Asia where water is scarce. They took note of and welcomed the following strategies and projects:

- Regional Environmental Plan for Sustainable Development in Central Asia until 2030⁴
- New EU Strategy for Central Asia (2019)⁵
- Efforts by ICM, UNEP and PRI to develop a Global Tailings Standard⁶
- EBRD's Environmental Remediation Programme and related Account (ERA),⁷ funded by the European Union and other partners
- The "Blue Peace"⁸ programme, implemented by the Swiss Development Cooperation, in cooperation with partners
- The planned development of a roadmap on ensuring industrial safety, including for tailings, in the Russian Federation as of 2020
- Capacity-development projects in the framework of the UNECE Industrial Accidents Convention, to strengthen tailings safety in Central Asia and advocacy/outreach efforts, including the organization of a seminar on tailings safety at the 11th meeting of the Conference of the Parties (Bonn, Germany, 1-3 December 2020).⁹

Participants considered strengthened national, transboundary and international cooperation as crucial for the safe management of mine tailings and the prevention of related transboundary water pollution.

Numerous proposals were made during the round-table discussion in order to scale up international efforts to improve mine tailings safety, among others:

- Further foster the exchange of knowledge and experiences on TMF safety across Central Asia and beyond, increasingly involving neighbouring countries, such as Mongolia and China
- Focus on the implementation of UNECE and other existing international legal instruments and guidance in improving tailings safety in Central Asia
- Mainstream efforts to improve to improve tailings safety into all ongoing and future cooperation efforts on water resource management in Central Asia to keep river basins safe
- Enhance inter-institutional cooperation and creating sustainable coordination mechanisms on TMF safety and the prevention of accidental water pollution from hazardous activities/mine tailings, linked with the National Policy Dialogues (NPDs)

4 Further information available at <http://www.mkurca.org/>.

5 Further information available at https://eeas.europa.eu/sites/eeas/files/factsheet_centralasia_2019.pdf.

6 Further information available at <https://globaltailingsreview.org/>.

7 Programme to remediate the 7 priority Uranium Legacy Sites in Central Asia. Further information available at <https://www.ebrd.com/what-we-do/sectors-and-topics/nuclear-safety/era.html>.

8 Further information available at <https://www.thebluepeace.org/regional-initiatives-central-asia.html>.

9 Further information available at <http://www.unece.org/index.php?id=53220>.

- Further strengthen the identification of transboundary risks and foster transboundary cooperation among neighbouring and riparian countries in Central Asia
- Increase preparedness for new challenges due to global warming and climate change (i.e. more frequent and severe floods, rain, landslides, etc.) and respective up-to-date data
- Undertake trainings of competent authorities and operators at the local/regional levels, incl. possible regional trainings organized by the Centre for Emergency Situations and Disaster Risk Reduction, in cooperation with UNECE
- Increasing international efforts and funds to remediate Uranium Legacy Sites in Central Asia
- Provide respective input to the Ninth Environment for Europe (EfE) Ministerial Conference (Cyprus, fall 2021) which will address the theme “Greening the Economy in the Pan-European region: working towards sustainable infrastructure.”

Participants welcomed the proposals made and the existing cooperation among international organizations; they recommended enhancing the cooperation in order to support Central Asian countries in the strengthening of mine tailings safety and the prevention of accidental water pollution in the sub-region, and beyond.

5. Evaluation of the subregional workshop and further information

More information on the subregional workshop, including workshop **presentations** and an **evaluation summary**, are available on the Convention’s [website](#). More information on the **UNECE projects**, including their activities and outputs, is available [here](#) for Kazakhstan and [here](#) for Tajikistan.

