

Mine tailings safety in the UNECE region and beyond



UNECE

Online seminar on mine tailings safety in the UNECE region and beyond

1 December 2020



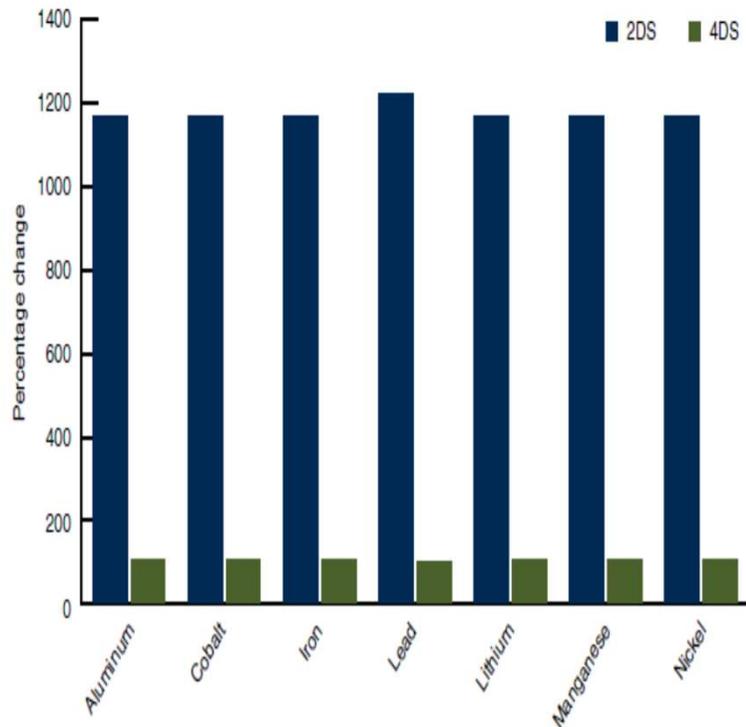
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Vice chair of the Industrial
Accidents Convention

1 December: an online seminar on mine tailings safety

Basic framework for the seminar

- **Growing concern** on the hazard caused by failures of tailing management facilities (TMFs) storing large amounts of mining waste after the Baia Mare case in 2000
- The question of the relationship between the **Industrial Accidents Convention and TMF accidents** was clarified in 2014, TMFs are considered as a part of the Convention's scope
- Various activities initiated by UNECE, namely the development of **safety guidelines and a checklist** methodology
- Numerous **past TMF accidents** and the experiences from UNECE activities give reason for more attention to the subject
- An analysis of available data shows that the **likelihood of TMF failures is much higher than the likelihood of big “loss of containment”** events in other technical areas

Mine tailings safety and the future of mineral resources



Change of around 1200 % of the worldwide demand for certain metals until 2050 for energy storage technologies



The number of mining activities and related installations will increase significantly

Figure taken from a World Bank Document on the growing role of metal demand for low carbon supporting technologies, available at: <http://documents1.worldbank.org/curated/en/207371500386458722/pdf/117581-WP-P159838-PUBLIC-ClimateSmartMiningJuly.pdf>

Factors influencing mine safety

- Increasing number of TMFs because of **higher demand** for specific resources
- **Natech**: New or more severe natural hazards triggering TMF failures such as extreme weather conditions
- „Old“ but often neglected **causal factors** like choice of siting, no or improper monitoring of abandoned TMFs, insufficient dam material, inadequate design or low standard of the safety management system
- Increasing vulnerability of sites because of **urbanization** in the vicinity
- **Re-use of abandoned sites** because of improved market situation

Why a seminar on mine tailings safety?

- When discussing „emerging risks“ in the Bureau of the Industrial Accidents Convention, the combination of
 - a) the **high risk** of TMF failures and
 - b) the **increasing number** of TMFs to be expectedjustified the need for further action in this field.
- The Bureau decided in September 2019 to organize a seminar dedicated to mine tailings safety at COP-11 in December 2020;
 - this is held now as a separate event because of the COVID situation
- A small group was tasked to prepare this seminar; this group established the objectives for the seminar and prepared the programme

Objectives of the seminar

- Explain the **relevance** of mine tailings safety
- Raise **awareness** among competent authorities and decision-makers
- Explain and discuss the **impact** of respective developments such as increasing mineral demand or climate change
- Present the role of the **Industrial Accidents Convention** and other legal instruments for increasing mine tailings safety
- Identify input for **further work**
- Initiate a broad discussion on mine tailings safety involving all **stakeholders** in order to achieve „sensitization“
- Propose action by means of a draft **Decision** on strengthening mine tailings safety, to be adopted by the Conference of the Parties

Mine tailings safety at COP-11



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Consultant environmental
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From the seminar to COP-11

- The seminar conclusions and recommendations will be presented
 - At the end of the seminar
 - At COP-11 for the Conference of the Parties to take note – the seminar conclusions will be available in English only
- A draft decision on strengthening mine tailings safety in the UNECE region and beyond will be presented for adoption
 - It is available here: <https://www.unece.org/index.php?id=53220> under ‘Official documents’
- Background document on mine tailings safety in the UNECE region and beyond (ECE/CP.TEIA/2020/2)
 - available here: <https://www.unece.org/index.php?id=53220> under ‘Official documents’

The draft decision on strengthening mine tailings safety: reasoning

- **frequency** of serious tailings dam failures over recent decades
- far-reaching and potentially **transboundary** nature of accidental water pollution caused by tailings dam failure
- calling for **joint prevention and management** approaches
- a limited number of human **causes**, notably a lack of management continuity and inadequate resources
- economic importance of the mining sector and its role in the **transition** to low-carbon economy
- projected increase in global **demand** for mineral extraction and mining activities in and beyond the ECE region
- increase in the frequency and intensity of **climate-related** extreme weather events
- **communities**, tailings management operators and competent authorities: disaster resilience and disaster risk reduction measures
- **synergies** Industrial Accidents Convention, the Sendai Framework for Disaster Risk Reduction 2015–2030 and the Sustainable Development and the Paris Agreement (adaptation)
- Convention’s **Long-Term Strategy** until 2030 (hot spots)
- Safety **guidelines** and good practices for tailings management facilities
- United Nations Environment Assembly **resolutions** L.6 on sustainable infrastructure and L.23 on mineral resource governance
- challenge for **countries** in Eastern and South-Eastern Europe, the Caucasus and Central Asia, managing tailings facilities and preventing related accidents
- **preventing** mine tailings accidents and their disastrous effects on human lives, the environment, infrastructure, regional security and economic development, and to **enhancing transboundary cooperation** to that effect.

The draft decision on strengthening mine tailings safety: action

1. Conclusions and recommendations of the [online seminar](#) on mine tailings safety in the ECE region and beyond which took place on 1 December 2020
2. Use the [Safety guidelines](#) and good practices for tailings management facilities and the Methodology for improving TMF safety
3. [Facilitate the application](#) of the abovementioned Safety guidelines and Methodology and other good practices
4. Improve inter-institutional and stakeholder [coordination](#) at the national and local levels and across borders, and increase transparency
5. Review [legislation and policies](#) on mine tailings storage and management against international good practices such as the Safety guidelines; work towards setting a standard for good practices for tailings management facilities
6. Use the tools under the Strategic Approach, notably the [self-assessments and action plans](#), to signal needs and to request support in overcoming capacity constraints
7. Make available [funds](#) to support the implementation of capacity-building activities in countries of Eastern and South-Eastern Europe, the Caucasus and Central Asia
8. Identification and notification of hazardous activities shall comprise mine tailings facilities (as far as under the scope of the Convention) - [report](#) on these as part of their national implementation reports
9. Make information available, on [location-specific](#) tailings management hazards and risk, to competent authorities, operators of tailings management facilities and communities
10. Increase efforts to strengthen tailings safety and [prevent](#) failures, in view of the elevated risk of such accidents posed by the increasing frequency and severity of [extreme weather](#) events as a result of climate change.

Thank you

- Comments on the draft Decision until **9 November 2020**
- Register for the seminar at

<https://www.unece.org/index.php?id=55197>