

Mine tailings safety in the UNECE region and beyond

Mapping and risk management



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UNECE Industrial Accidents Convention

UNECE Convention on Transboundary Effects of Industrial Accidents (the Industrial Accidents Convention)

- Adopted in 1992, entered into force in 2000
- 41 Parties, incl. EU, EFTA, Eastern and South-Eastern Europe, the Caucasus and Central Asia
- Designed to protect people and the environment against industrial accidents (with transboundary effects)
- Active international cooperation between Parties before, during and after an accident, including accidents in tailing management facilities



Prevention

- Hazard identification/mapping,
- Notification
- Risk assessment
- Siting and land-use planning

Preparedness

- **Contingency planning** (on- and off-site)
- Harmonized across borders

Response

- Early warning
- Accident notification
- Mutual assistance

UNECE Safety Guidelines and related methodology

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

Safety guidelines and good practices for tailings management facilities



ЕВРОПЕЙСКАЯ ЭКОНОМИЧЕСКАЯ КОМИССИЯ ОРГАНИЗАЦИИ ОБЪЕДИНЕННЫХ НАЦИЙ

Руководящие принципы и надлежащая практика обеспечения эксплуатационной безопасности хвостохранилищ

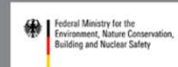


DOKUMENTATIONEN

01/2016

Improving the safety of industrial tailings management facilities based on the example of Ukrainian facilities

For our Environment

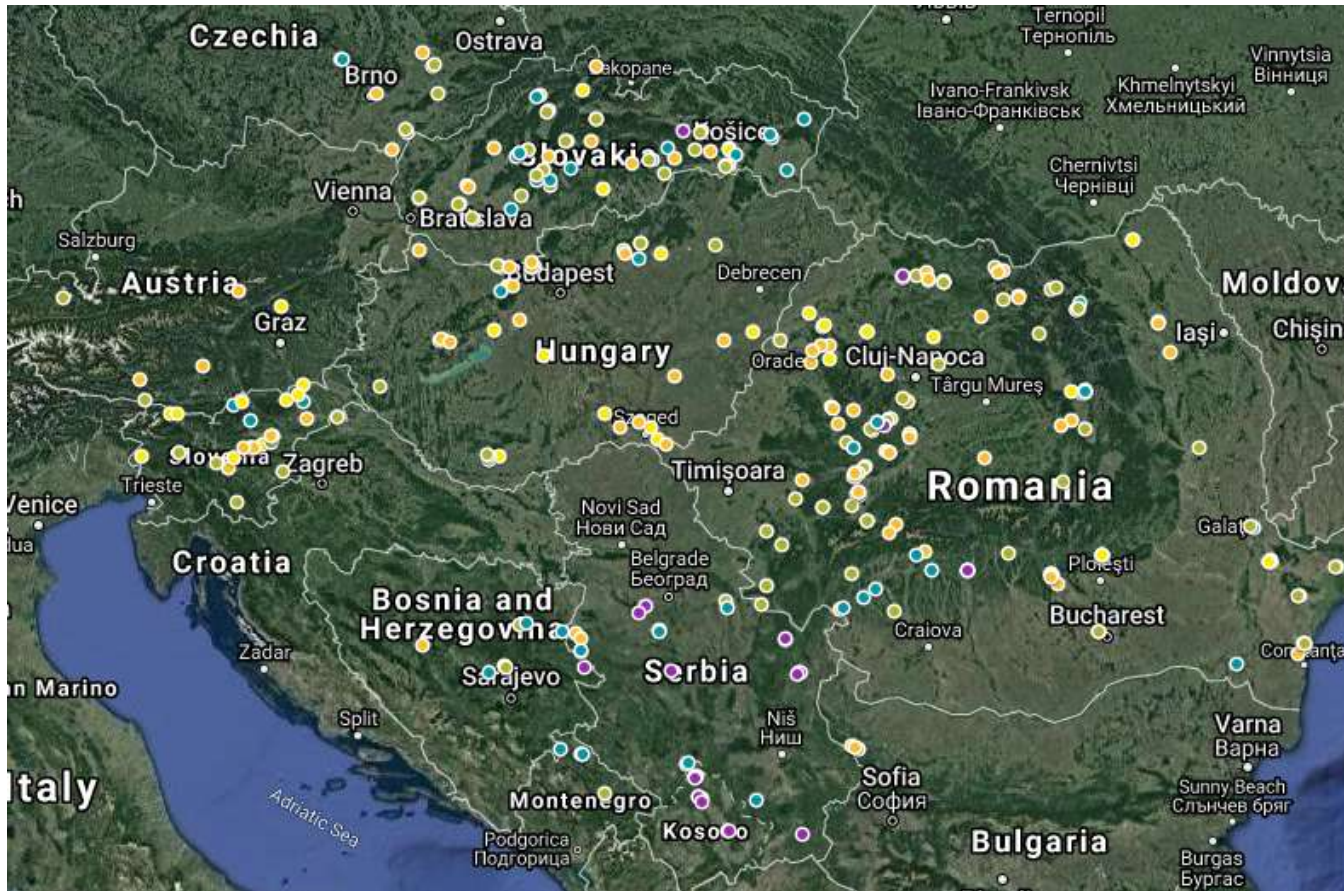


Umwelt
Bundesamt

See UNECE guidelines at https://unece.org/DAM/env/documents/2014/TEIA/Publications/1326665_ECE_TMF_Publication.pdf

See methodology at https://www.umweltbundesamt.de/sites/default/files/medien/378/publikationen/doku_01_2016_improving_the_safety_of_industrial_tailings_management_facilities.pdf

TMF map of the Danube River Basin countries*



Colour scheme:

- lilac – very high hazard ($THI^{**} > 14$)
- blue – high hazard ($12 < THI \leq 14$)
- green – medium hazard ($10 < THI \leq 12$)
- orange – low hazard ($8 < THI \leq 10$)
- yellow – very low hazard ($THI \leq 8$)

* To be approved by the Danube countries

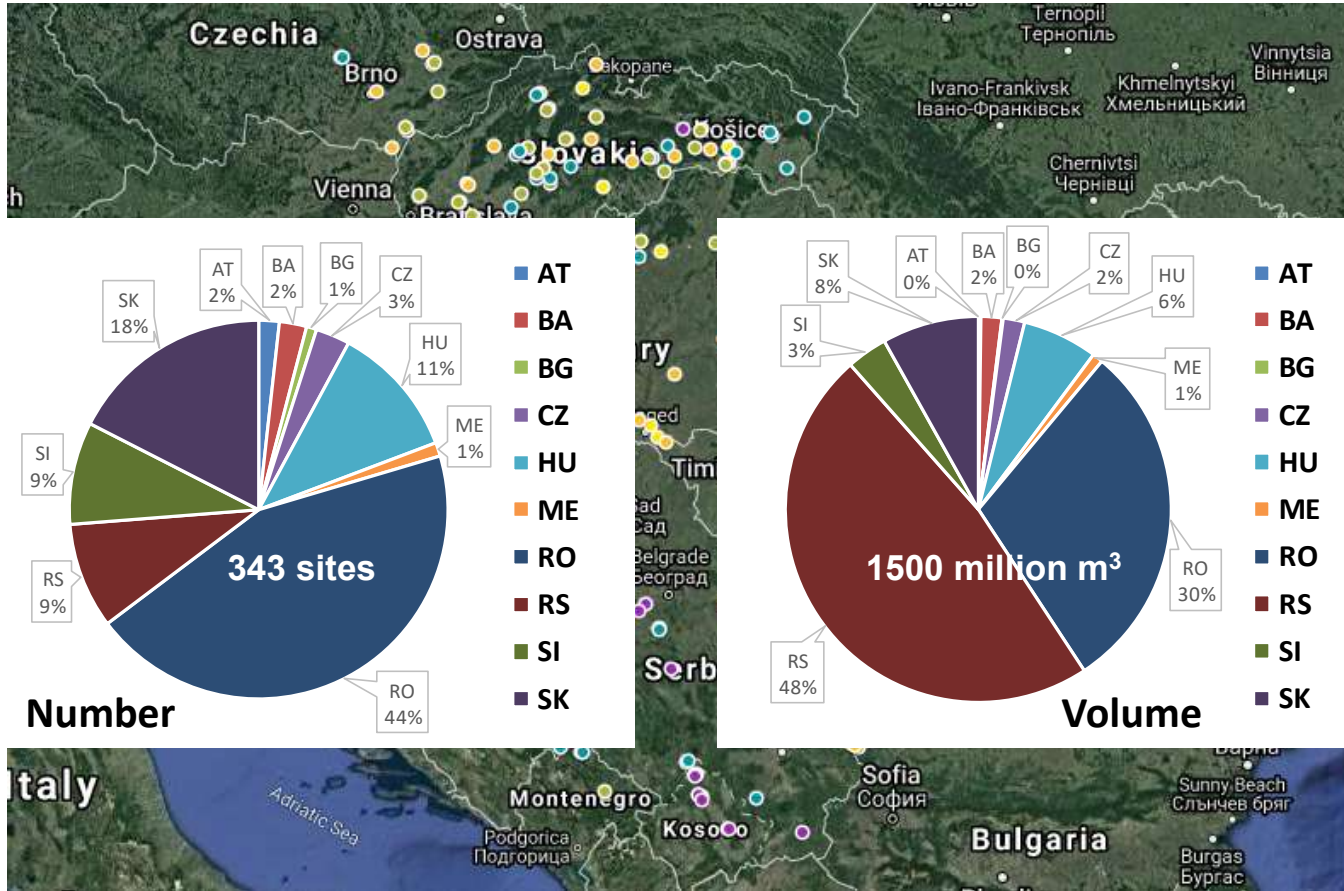
** THI: Tailings Hazard Index

The draft map was developed in the frame of the project "Capacity development to improve safety conditions of tailings management facilities in the Danube River Basin – Phase I: North-Eastern Danube countries" (Reference number: Z6 - 90 213-51/79, Project number: 118221). The project is funded by the German Federal Environment Ministry's Advisory Assistance Programme (AAP) for environmental protection in the countries of Central and Eastern Europe, the Caucasus and Central Asia and other countries neighbouring the European Union. It was supervised by the German Environment Agency (UBA).



Bundesministerium
für Umwelt, Naturschutz
und nukleare Sicherheit

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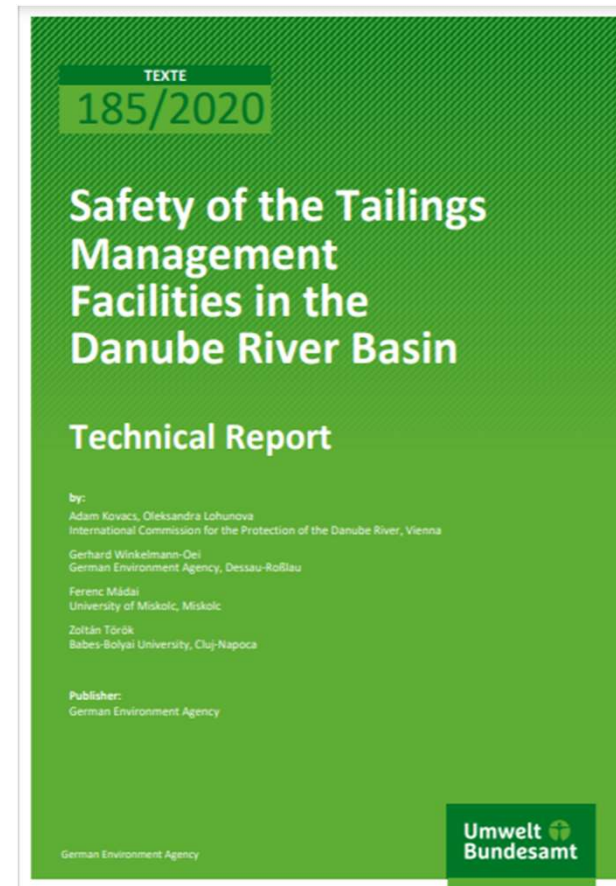
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UNECE Safety Guidelines and related methodology, developed by Germany



Updated in 2020



See the updated methodology at [https://www.umweltbundesamt.de/publikationen/safety-of-the-tailings-management-facilities-in-the-Danube River Basin](https://www.umweltbundesamt.de/publikationen/safety-of-the-tailings-management-facilities-in-the-Danube-River-Basin)

Contingency planning

- Large-scale study on the state of tailings storage facilities in the Dniester River Basin:

(Transboundary) emergency preparedness and response is a matter of attention

Especially for the 3 facilities at high risk

- UNECE has published guidance on contingency planning

UNECE

Checklist for contingency planning for accidents affecting transboundary waters,
with introductory guidance



Decision on strengthening mine tailings safety in the UNECE region and beyond

- **Discussed during online seminar on mine tailings safety in the UNECE region and beyond**
 - With inputs from OSCE on TSF in Dniester River Basin
 - Participants' suggestions for future action
- **Adopted at the eleventh meeting of the Conference of the Parties to the Convention on the Transboundary Effects of Industrial Accidents (December 2020)**
- All presentations, background information and documentation available here: <https://unece.org/environmental-policy/events/seminar-mine-tailings-safety-unece-region-and-beyond>



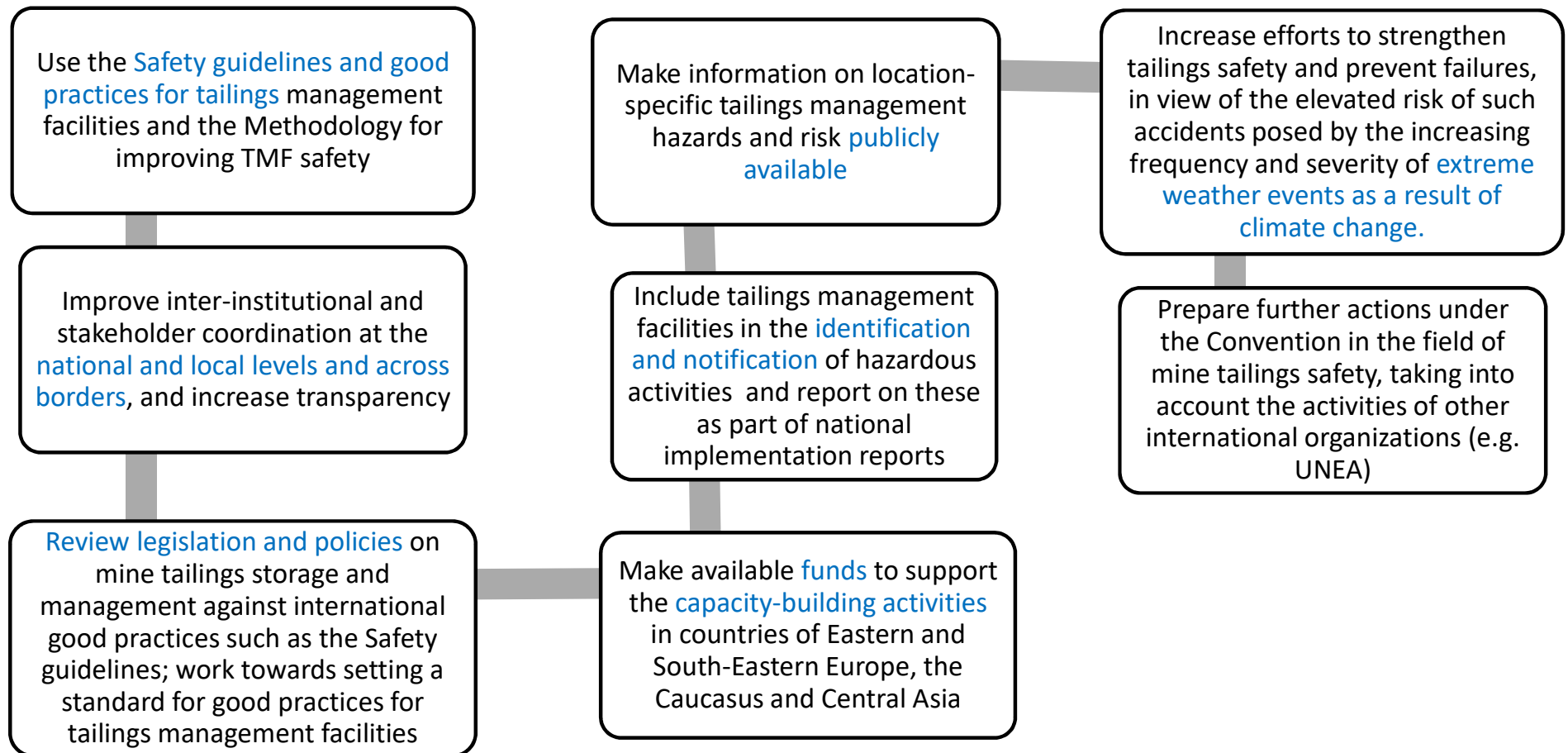
Online seminar
1 December 2020
9.30-12.30 CET

Register here: <https://indico.un.org/event/35252/>

Mine tailings safety in the UNECE region and beyond: Online seminar

The seminar aims to strengthen mine tailings safety and provide support to countries in the implementation of the [UNECE Industrial Accidents Convention](#). The main focus of the seminar will be on the UNECE region; interested representative of neighbouring and other countries are invited to attend. Supported languages are English and Russian.

Actions in the decision - summarized



Use the **Safety guidelines and good practices for tailings management facilities** and the Methodology for improving TMF safety

Improve inter-institutional and stakeholder coordination at the **national and local levels and across borders**, and increase transparency

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

Make information on location-specific tailings management hazards and risk **publicly available**

Include tailings management facilities in the **identification and notification** of hazardous activities and report on these as part of national implementation reports

Make available **funds** to support the **capacity-building activities** in countries of Eastern and South-Eastern Europe, the Caucasus and Central Asia

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**.

Prepare further actions under the Convention in the field of mine tailings safety, taking into account the activities of other international organizations (e.g. UNEA)

Online toolkit

Online Toolkit and Training for Strengthening Mine Tailings Safety

Overview

Industrial accidents at tailings management facilities (TMFs) have led to environmental catastrophes with devastating effects on humans and the environment within and across countries. Major industrial accidents in the UNECE region and beyond have motivated countries to develop and implement tools under the UNECE Convention on the Transboundary Effects of Industrial Accidents to strengthen mine tailings safety and to prevent such accidents in the future.



Background information - A call for an urgent action

Practical training (3 steps)

UNECE's mine tailings work and partners

Further reading - Key reports and references on mine tailings safety

Step 1: Watch UNECE's video on mine tailings safety



Step 2: Read UNECE's Safety Guidelines and Good Practices for TMFs

Step 3: Apply the TMF methodology

<https://www.youtube.com/user/UNECE>

<https://unece.org/environment-policy/industrial-accidents/online-toolkit-and-training-strengthening-mine-tailings>



Thank you

<https://unece.org/environment-policy/industrial-accidents>

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