

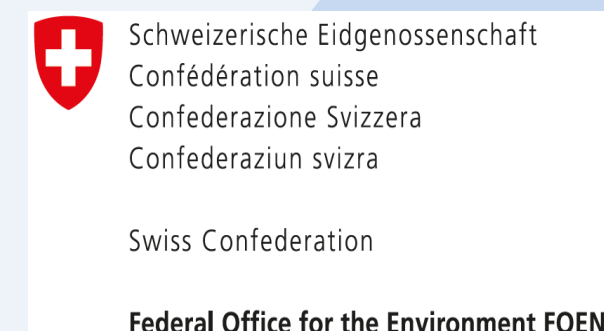
Technical meeting to prepare for the on-site training in Tajikistan and to enhance capacity for governance and policy-making on tailings safety in Central Asia

– Implemented under the UNECE Project to strengthen the safety of mining operations, in particular tailings management facilities (TMFs), in Tajikistan and Central Asia and the UNECE Project on supporting countries of Central Asia in strengthening the safety of mine tailings –

Online via ZOOM
23 April 2021 (10 am-14:45pm CET)

Preventing accidental water pollution from tailings: Joint Expert Group and UNECE decision 2020/1 on strengthening mine tailings safety

Speaker: Mr. Bojan Srdic, co-Chair of the Joint Expert Group on Water and Industrial Accidents from the Republic of Serbia



Accidental (water) pollution from Tailings Management Facilities (TMFs)



Tailings Dam disaster in Brumadinho, Brazil (2019), causing over 250 tragic deaths

Image: 'Catástrofe socioambiental provocada pelo rompimento de barragem da mineradora Vale em Brumadinho (MG)' by Felipe Werneck/Ibama (2019) ([CC BY-SA 2.0](https://creativecommons.org/licenses/by-sa/2.0/)), available at <https://www.flickr.com/photos/ibamagov/321322226>

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Cyanide spill from a tailings plant in Ridder, Kazakhstan (2016), carrying polluted water more than 1,000 km downstream

Image: 'Stinking poisoned water flows towards Siberia from mining city Ridder in Kazakhstan' (*The Siberian Times*, 31 May 2016), available at <https://siberiantimes.com/ecology/others/news/n067-1-stinking-poisoned-water-flows-towards-siberia-from-mining-city-ridder-in-kazakhstan/>



Effects of cyanide spill from a tailings dam breach near Baia Mare, Romania (2000): "Europe's worst environmental disaster following Chernobyl"

Image: 'Tisza cyanide spill in 2000' by Délmagyarország/Karnok Csaba ([CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0/)), available at https://commons.wikimedia.org/wiki/File:Tisza_cyanide_spill_1.jpg

Joint Expert Group on Water and Industrial Accidents --> Preventing accidental water pollution

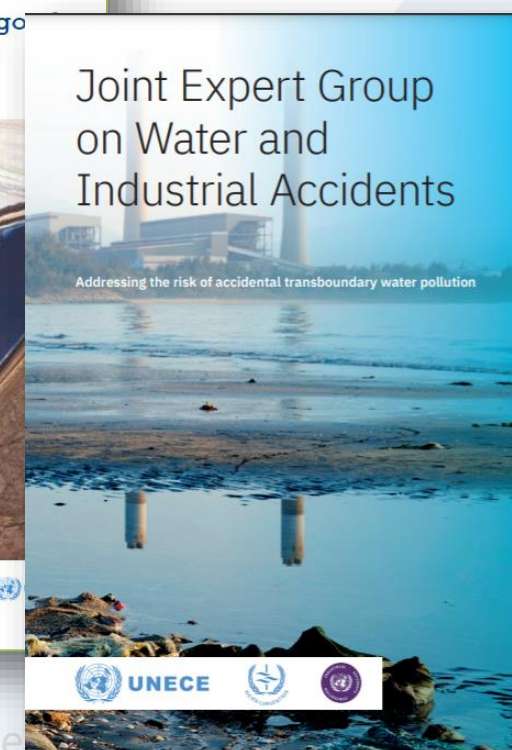
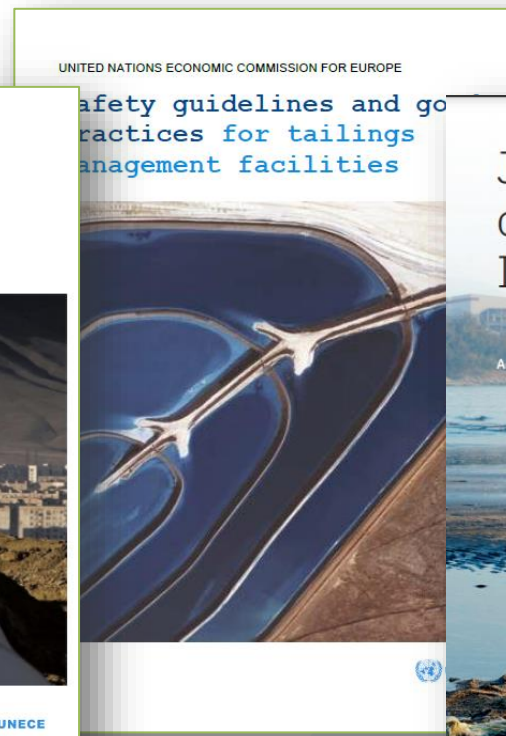
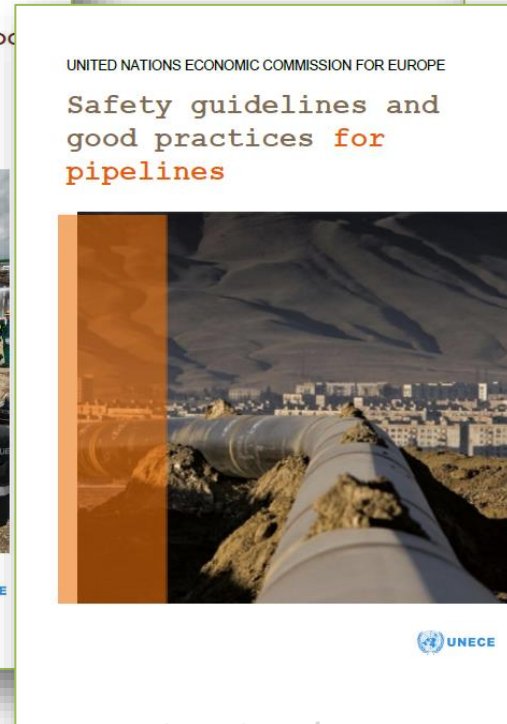
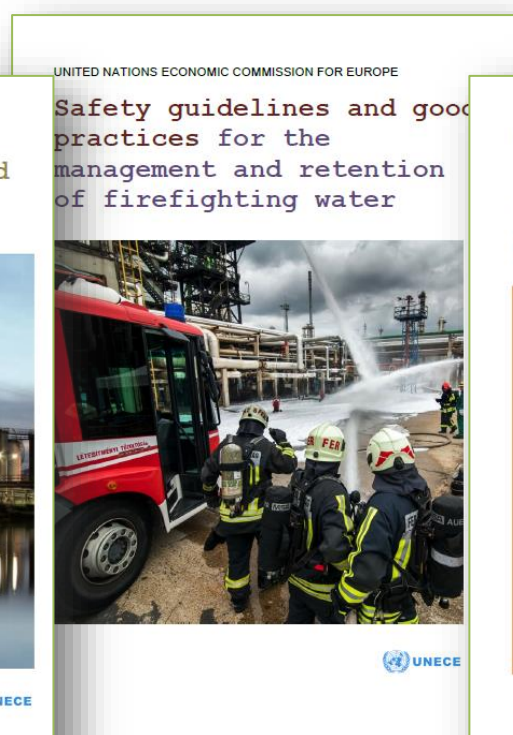
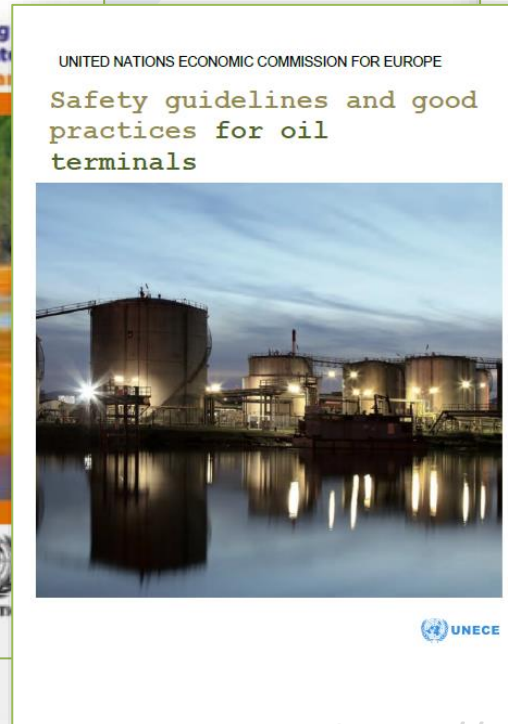
UNECE Water Convention

UNECE Industrial Accidents Convention

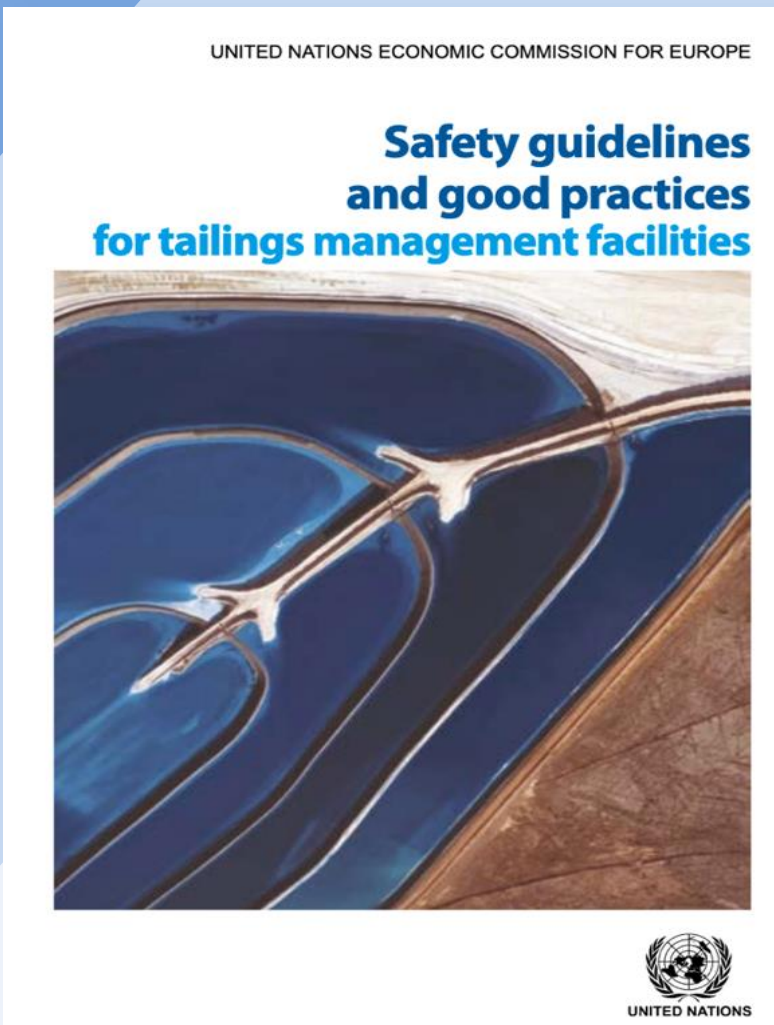
JEG

Joint Expert Group (JEG)

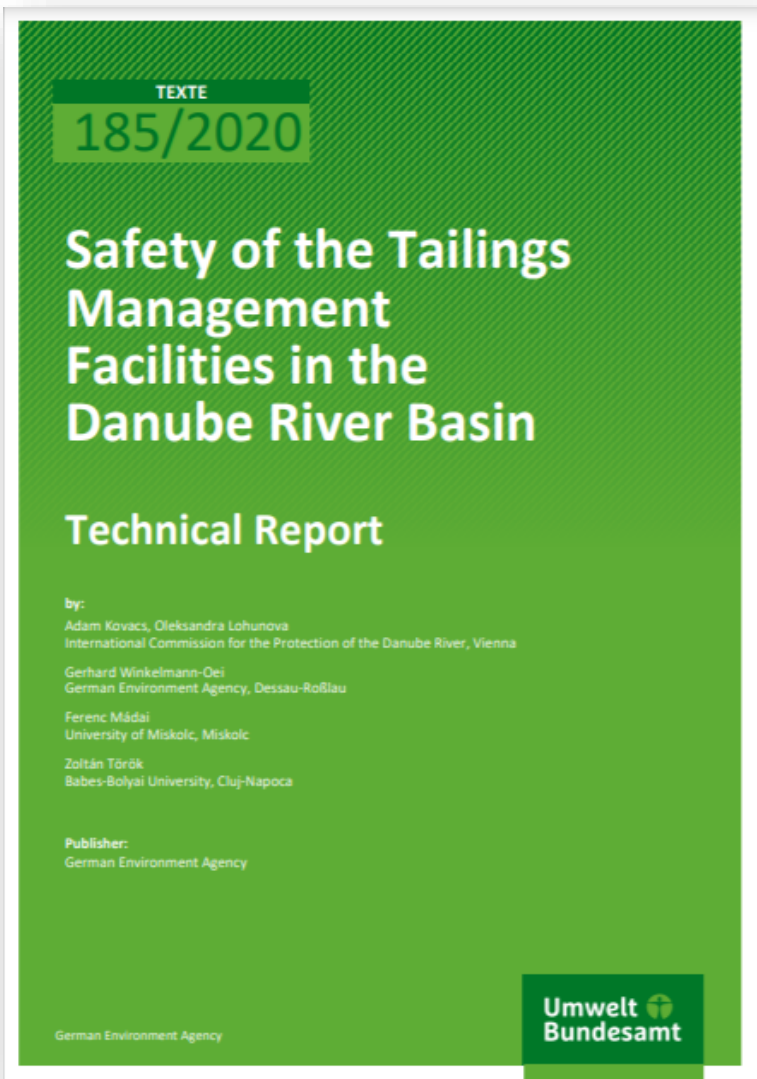
- Established in 1998
- Focus on prevention of accidental water pollution and its consequences
- Linking integrated water resources management to industrial safety



UNECE Safety Guidelines for TMFs and related checklist



Updated in 2020



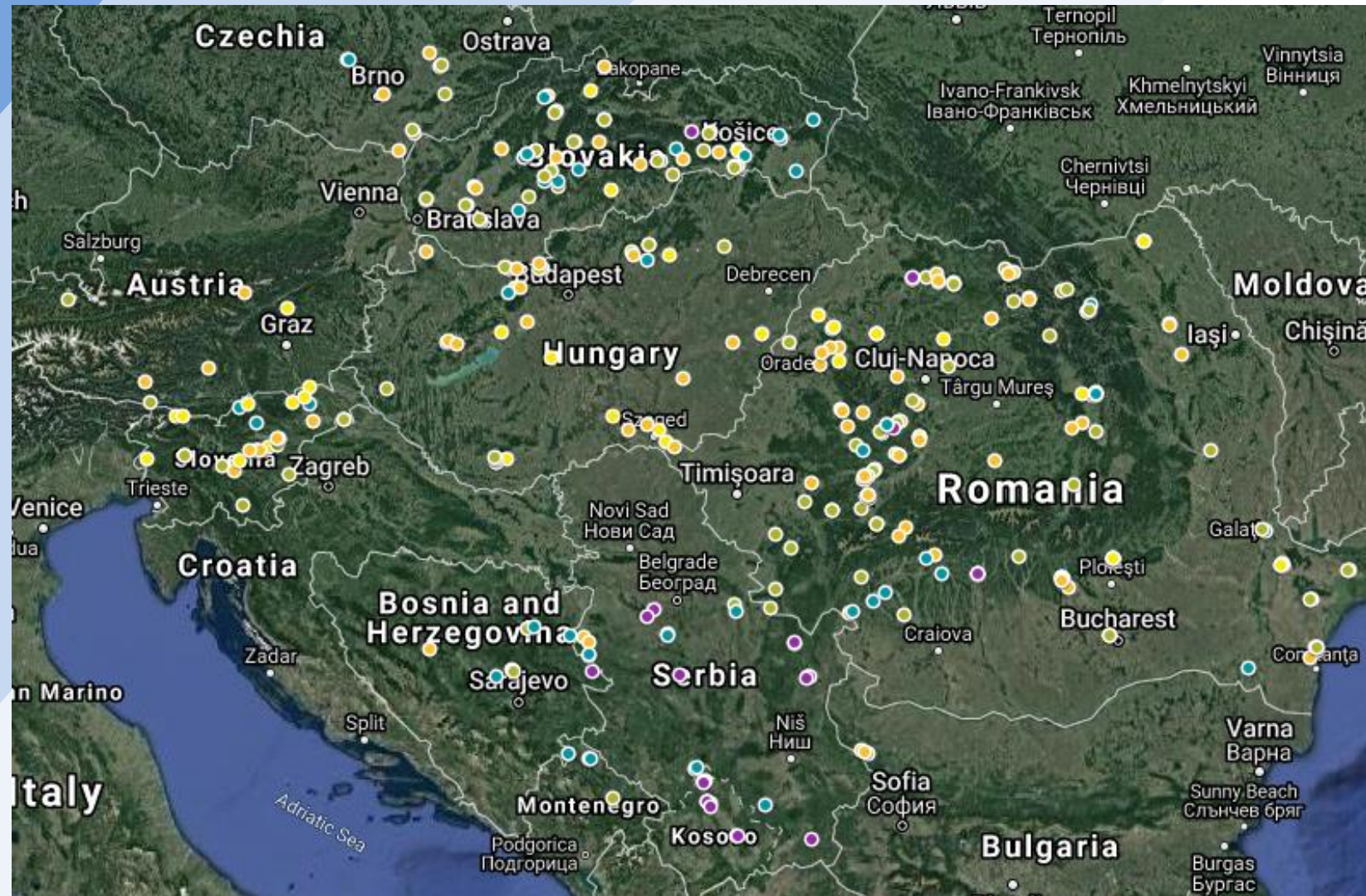
See UNECE guidelines at https://unece.org/DAM/env/documents/2014/TEU/Publications/13201405_ECE_TMFD_Guidelines.pdf
See the updated methodology at https://www.umweltbundesamt.de/sites/default/files/medien/378/publikationen/doku_01_2016_improving_the_safety_of_industrial_tailings_management_facilities.pdf
See the updated methodology at <https://www.umweltbundesamt.de/publikationen/safety-of-the-tailings-management-facilities-in-the-danube-river-basin>



- Ranking of Risk**
 - Tailings Hazard Index
 - Tailings Risk Index
- Checklist**
 - for individual installations
- Measure catalogue**
 - To address the hazards and risks identified

UNECE Safety Guidelines for TMFs and related checklist: examples and maps

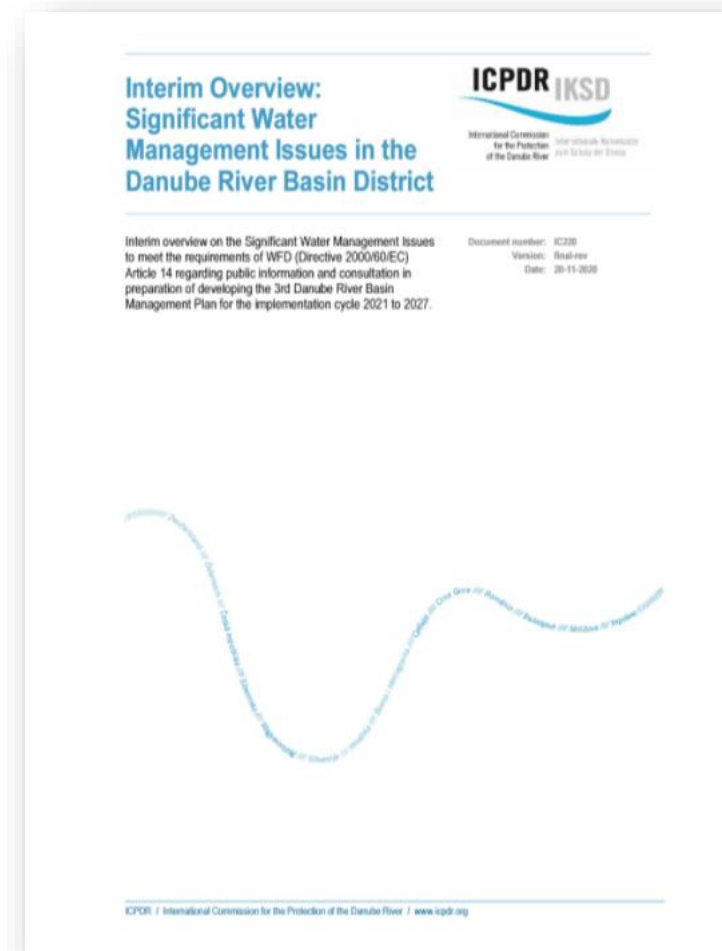
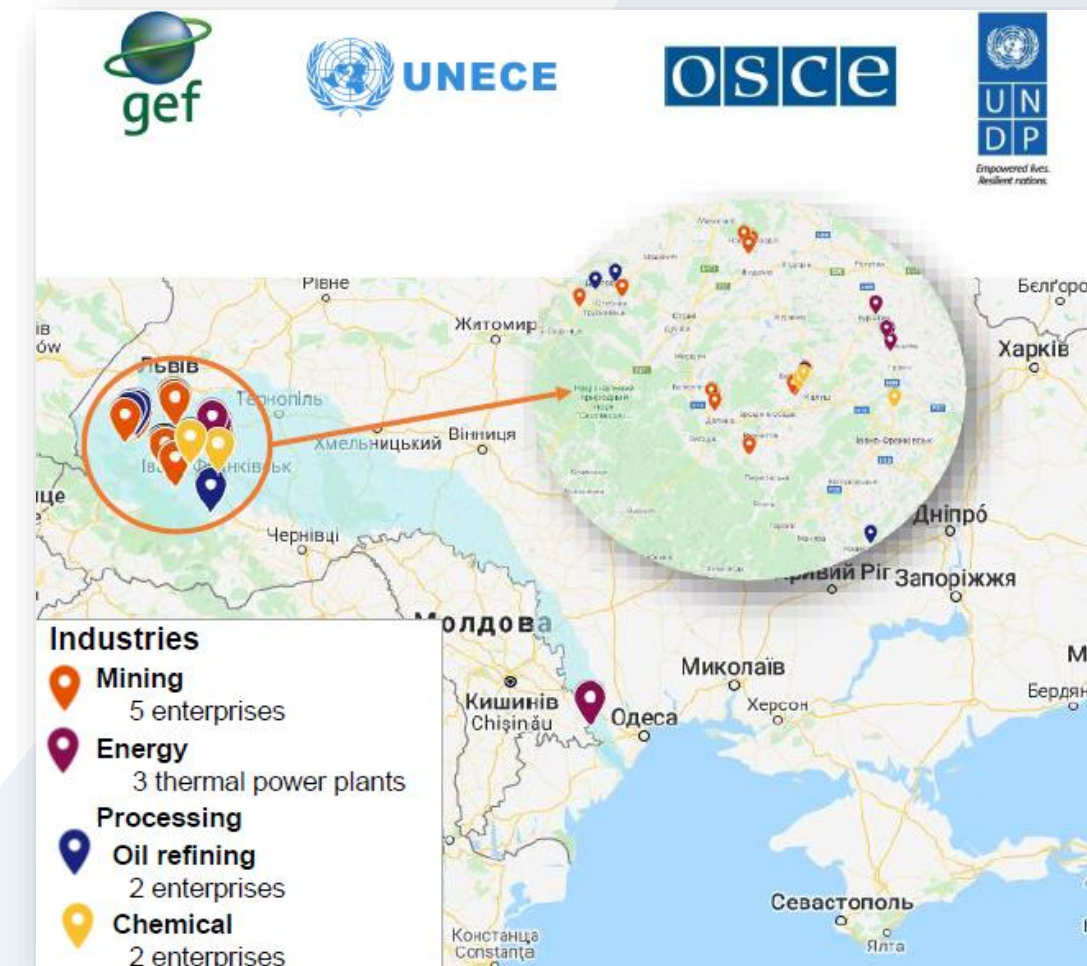
TMF map of the Danube River Basin countries*



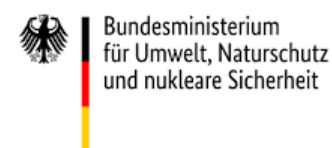
Colour scheme:

- 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 ($THI \leq 8$)

Methodology applied in Dniester River Basin



The 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).



A few (recent) steps forward for safer Tailings Management Facilities

- UNECE Convention on the Transboundary Effects of Industrial Accidents - Decision on Strengthening mine tailings safety in the UNECE region and beyond, adopted at Eleventh meeting of the Conference of the Parties, 7-9 December 2020
- Online seminar on Strengthening mine tailings safety in the UNECE region and beyond, 1 December 2020
- UNECE Online Toolkit and Training for Strengthening Mine Tailings Safety
- Global Industry Standard on Tailings Management launched in August 2020

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

- Adopted at Eleventh meeting of the Conference of the Parties, 7-9 December 2020.
- A huge step forward for ensuring mine tailings safety.
- The decision urges Parties to review their legislation and policies on mine tailings storage and management against the Safety guidelines and good practices for tailings management facilities, which were published by UNECE in 2014.
- The decision also further advances the Convention's long-term strategy until 2030 by recognizing the importance of establishing a high level of mine tailings safety by addressing regional hotspots.

For more information please see: <https://unece.org/environment/press/conference-parties-industrial-accidents-convention-helps-strengthen-mine-tailings>

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

- Seminar in online format due to Covid-19 pandemic.
- 43 countries, 115 participants, 37 organisations, 12 speakers.
- Conclusions of seminar emphasize connection between:
 - Sustainable development,
 - Green economy,
 - Increasing extraction of minerals and metals,
 - Mine tailings safety and
 - SDGs and the Sendai Framework for Disaster Risk Reduction.
- Accidents at TMFs often have transboundary effects thus making mine tailings safety a regional issue, not just a national matter.
- Preparedness and response are important but prevention is key – examples show how national policies are adapting to acknowledge the importance of prevention, but more needs to be done.

For more information please see: <https://unece.org/environmental-policy/events/seminar-mine-tailings-safety-unece-region-and-beyond>

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.



This online toolkit assists countries in strengthening TMF safety and management practices. It serves as a hub for anyone wishing to learn about the importance of and work and tools on mine tailings safety under the Convention. At the same time, it provides online training for countries, without physically meeting, to improve their knowledge about the impacts and challenges of mine tailings and to apply existing guidelines, including UNECE's tools, to improve tailings safety. Through the drop-down menus below, this online toolkit and training includes four sections: background information on mine tailings safety; a 3-step practical training for countries to enhance safe management practices; a summary of UNECE's mine tailings work and partners; and further reading on key reports and references.

Improving the management and safety of mine tailings increases countries' understanding and governance of disaster risks, including through inter-institutional and cross-sectoral cooperation. As such, the work contributes to accomplishing the objectives of Agenda 2030, with its Sustainable Development Goals and the Sendai Framework for Disaster Risk Reduction. It also strengthens mineral resource governance, sustainable infrastructure and disaster resilience, both within and across countries.

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

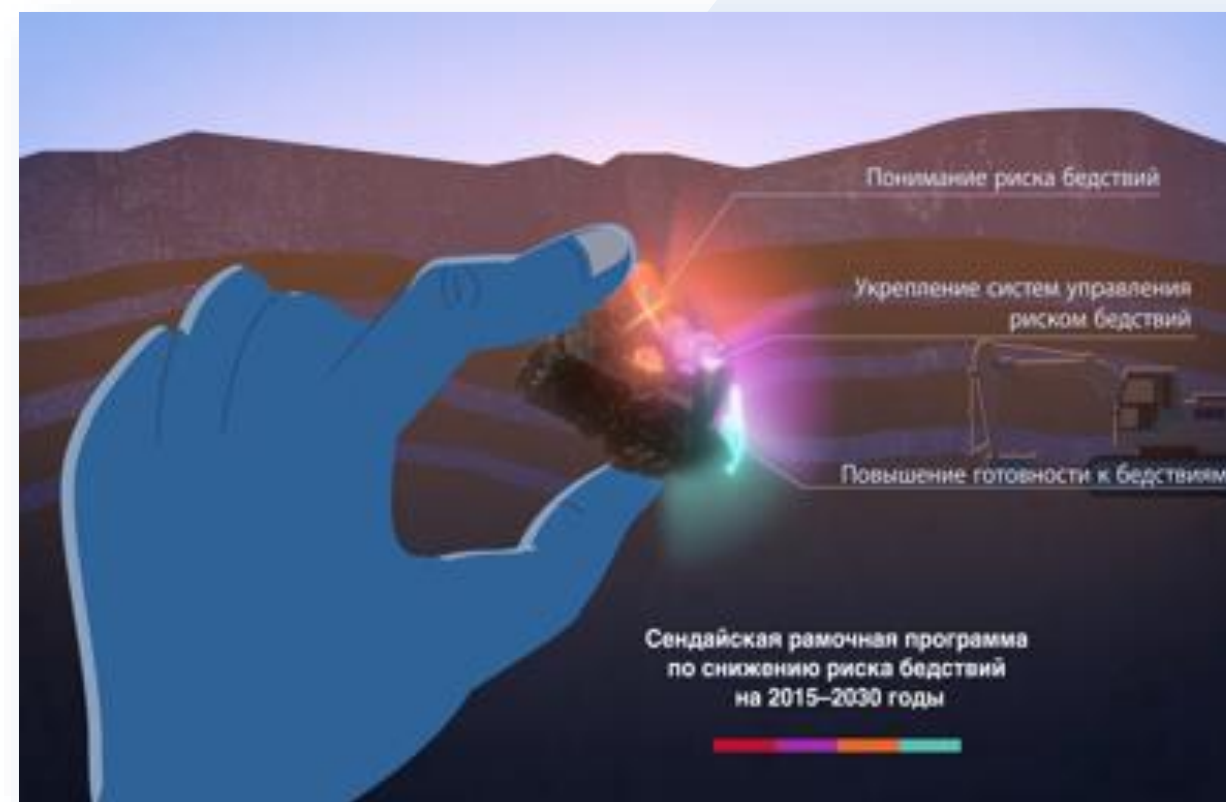

SENDAI FRAMEWORK
FOR DRRAS FOR DISASTER RISK REDUCTION 2015-2030


SUSTAINABLE DEVELOPMENT GOALS

Online Toolkit and Training for Strengthening Mine Tailings Safety

- Practical training → 3-step approach
- Available at <https://unece.org/environment-policy/industrial-accidents/online-toolkit-and-training-strengthening-mine-tailings>

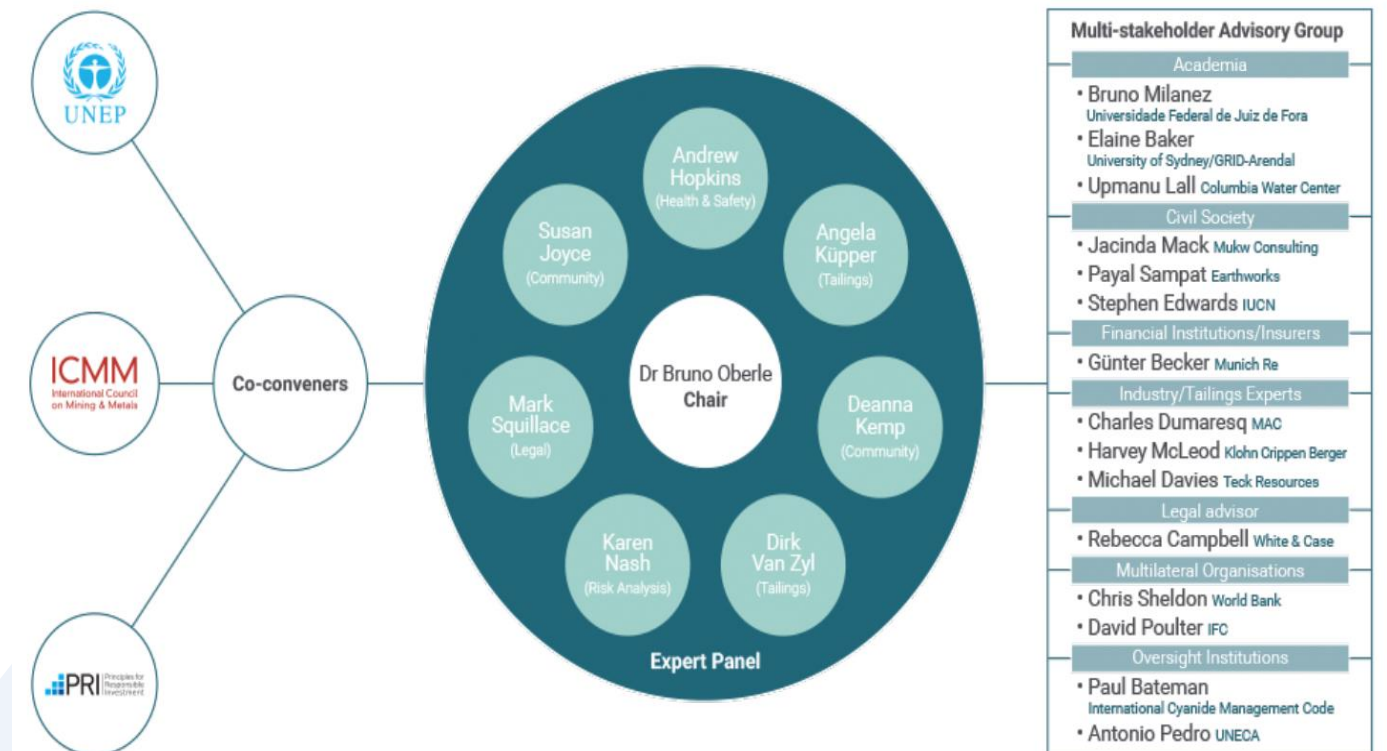
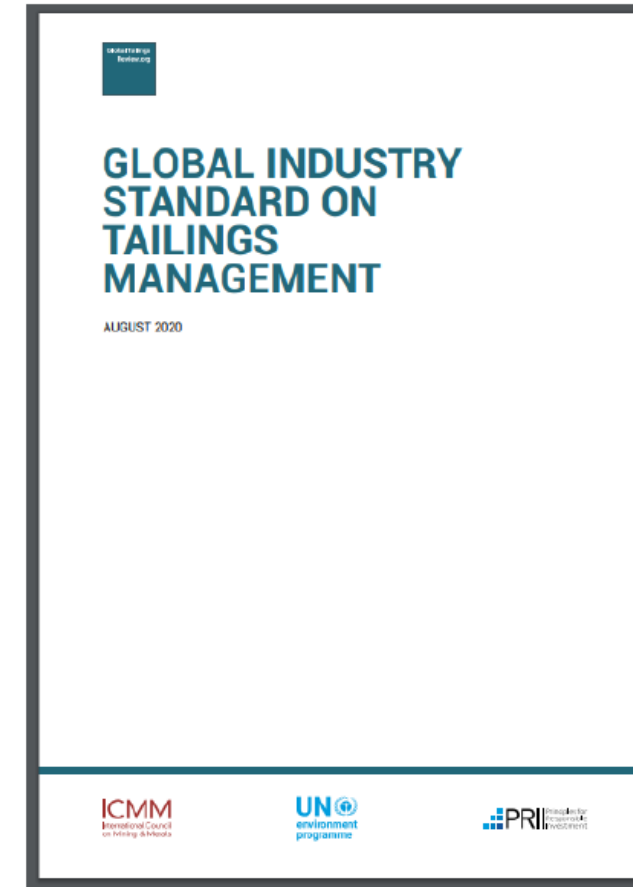
Training Video on Mine Tailings Safety (ENG, RUS)



New Global Industry Standard on Tailings Management

- Launched in August 2020, it is the first global tailings standard that can be applied to existing and future tailings facilities.
- The Standard was developed through a co-convened and independent process.
- Endorsed by all 3 co-conveners – ICMM, the United Nations Environment Programme (UNEP) and Principles for Responsible Investment (PRI).

For more information please see:
<https://www.unep.org/resources/report/global-industry-standard-tailings-management>



Thank you

For more information on the Joint Expert Group on Water and Industrial Accidents:

<https://unece.org/joint-expert-group-water-and-industrial-accidents>

For more information on JEG guidance and good practice:

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

A brochure on the Joint Expert Group and its outputs is available at:

<https://unece.org/environment-policy/publications/brochure-joint-expert-group-water-and-industrial-accidents>

Online Toolkit and Training for Strengthening Mine Tailings Safety; Mine tailings video:

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