

**Technical mission to support Montenegro in the implementation of the UNECE  
Convention on Transboundary Effects of Industrial Accidents**

**Industrial safety and the prevention of accidental water pollution:  
work of the Joint Expert Group on Water and Industrial Accidents**

**Speaker: Ms. Claudia Kamke, Secretary of the Joint Expert Group on Water and Industrial  
Accidents, UNECE**

# Joint Expert Group on Water and Industrial Accidents --> Accidental water pollution

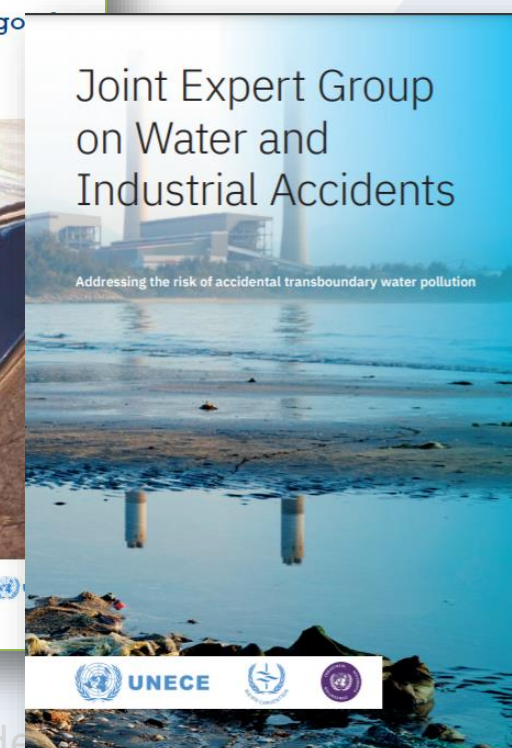
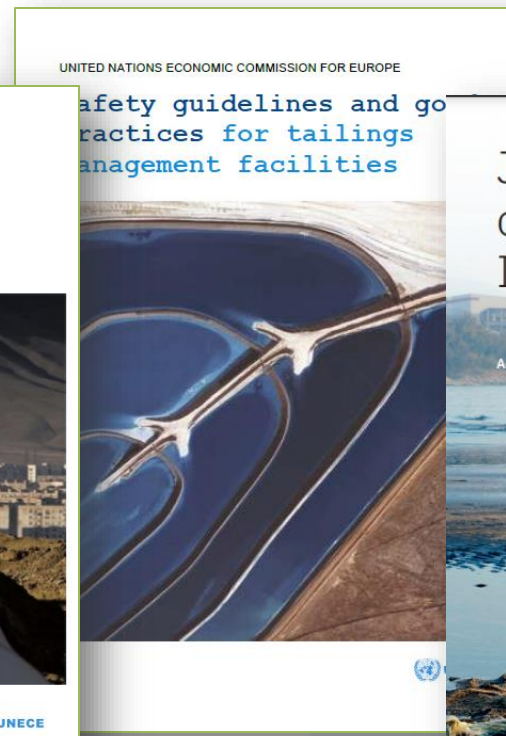
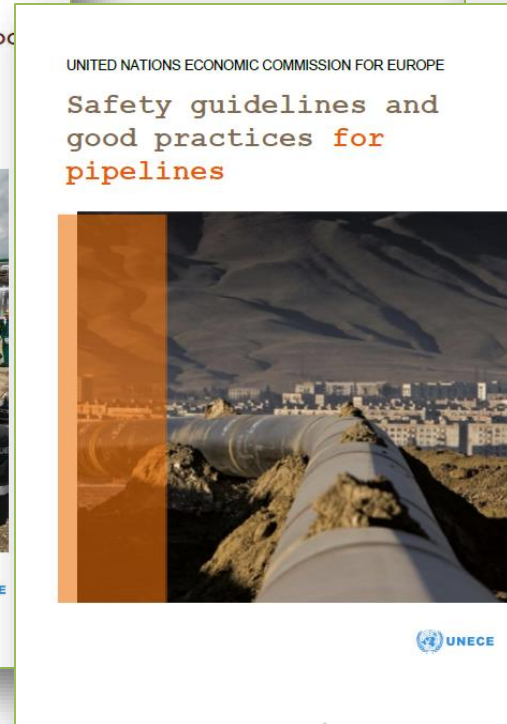
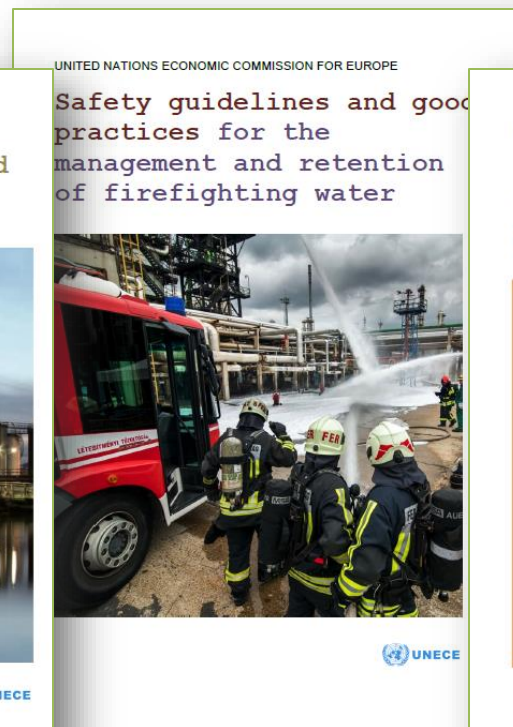
UNECE Water Convention

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



## Mission and Key activities

The mission of the Joint Expert Group is to assist countries in drawing up and implementing measures aimed at strengthening the prevention of and preparedness for accidental water pollution, especially in a transboundary context.

JEG's work on strengthening the prevention of accidental water pollution, including its potential transboundary effects, is in line with the Industrial Accidents Convention's long-term strategy until 2030 and the principles of the Water Convention being open for accession to all United Nations members States.

The Joint Expert Group's key activities are:

- Development of guidance materials and checklists,
- Facilitation of international response exercises, workshops and seminars and
- Support to assistance activities and projects on prevention and preparedness measures.

## Promotional materials

A brochure on the Joint Expert Group provides an overview of its history and purpose, why the Group is important, the key areas of work, achievements and outputs, and how to get involved.

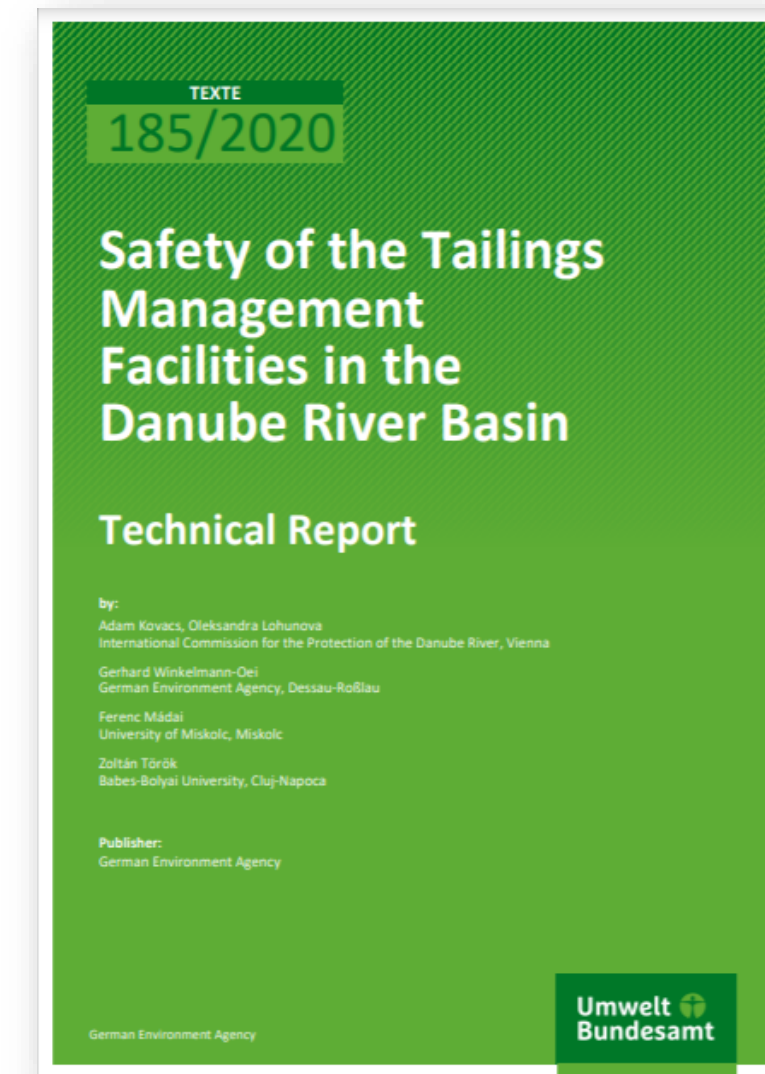
A series of Postcards have been developed, available on the Industrial Accidents Convention's publication webpage, which provide a brief overview of the safety guidelines and good practices developed by the Joint Expert Group, including the:

- Safety Guidelines and Good Practices for the Management and Retention of Firefighting Water
- Safety Guidelines and Good Practices for Oil Terminals
- Safety Guidelines and Good Practices for Pipelines
- Safety Guidelines and Good Practices for Tailings Management Facilities

# In focus: TMFs, guidelines and related checklist



Updated in 2020



See UNECE guidelines at [https://unece.org/DAM/env/documents/2014/TEEA/Publications/132025\\_ECE\\_TM\\_Fac\\_Pub\\_Book.pdf](https://unece.org/DAM/env/documents/2014/TEEA/Publications/132025_ECE_TM_Fac_Pub_Book.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](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-the-danube-river-basin>



Ranking of Risk

- Tailings Hazard Index
- Tailings Risk Index

Checklist

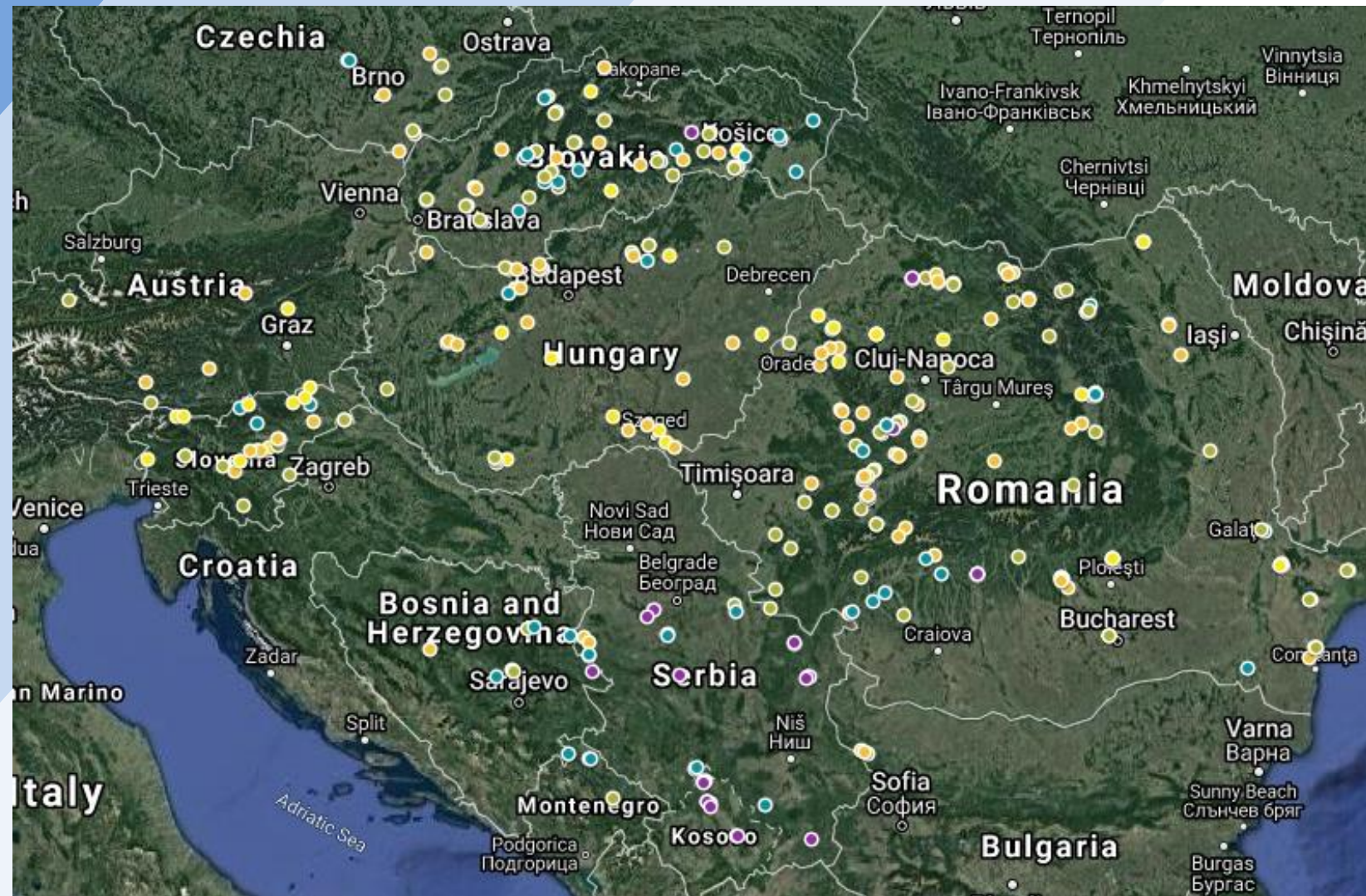
- for individual installations

Measure catalogue

- To address the hazards and risks identified

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

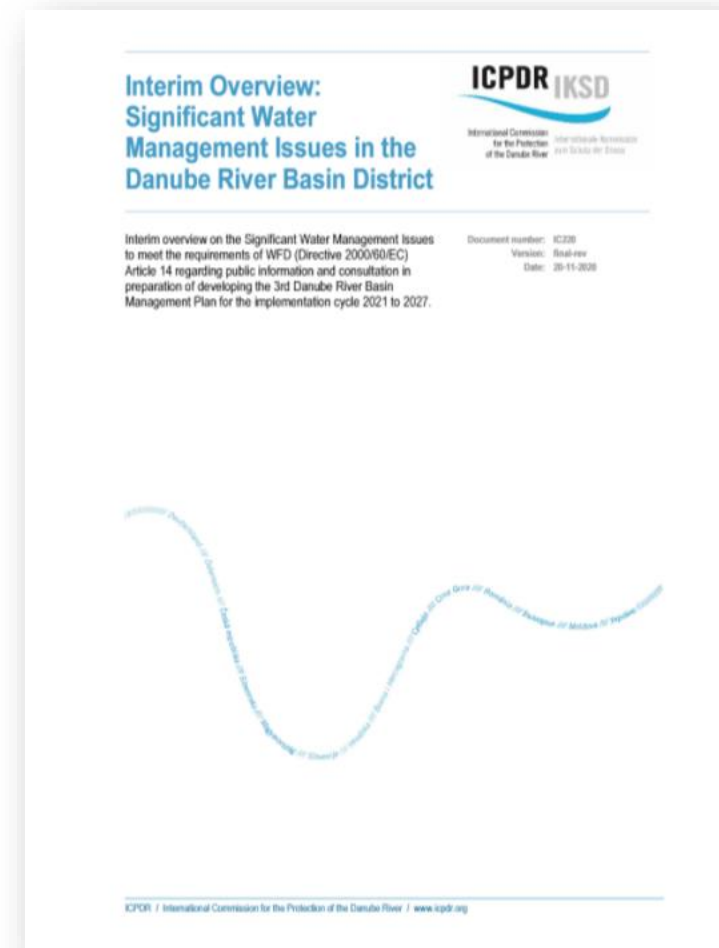
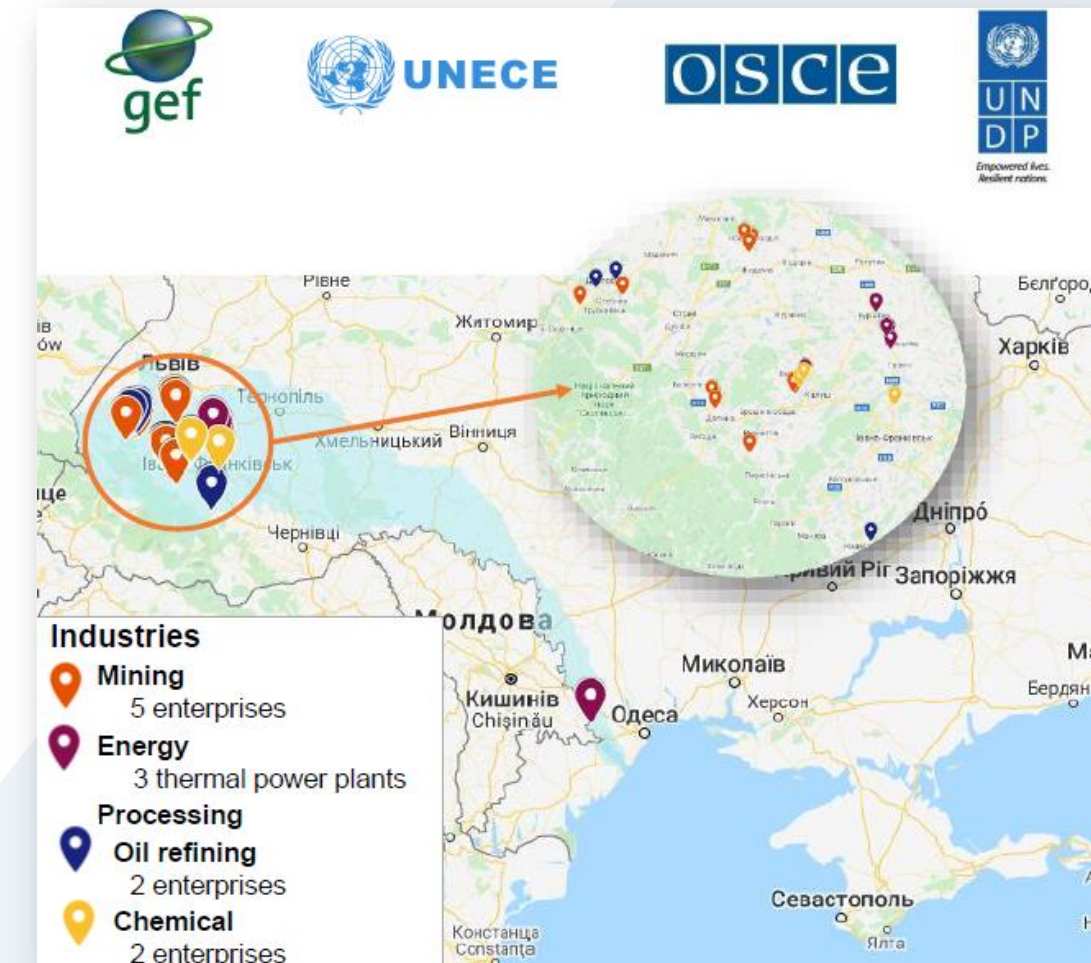
## TMF map of the Danube River Basin countries\*



### 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).



## 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

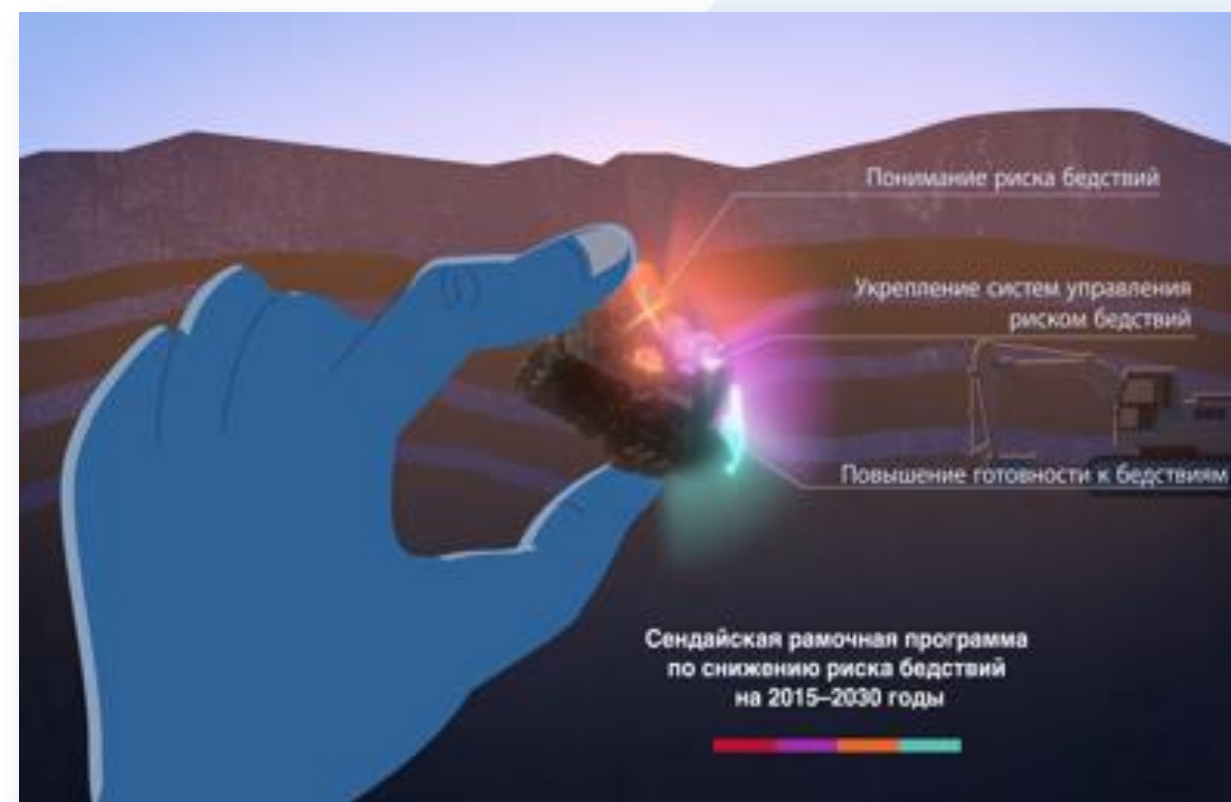
SENDAI FRAMEWORK  
FOR DRRAS FOR DISASTER RISK REDUCTION 2015-2030

SUSTAINABLE DEVELOPMENT GOALS

## Online Toolkit and Training for Strengthening Mine Tailings Safety

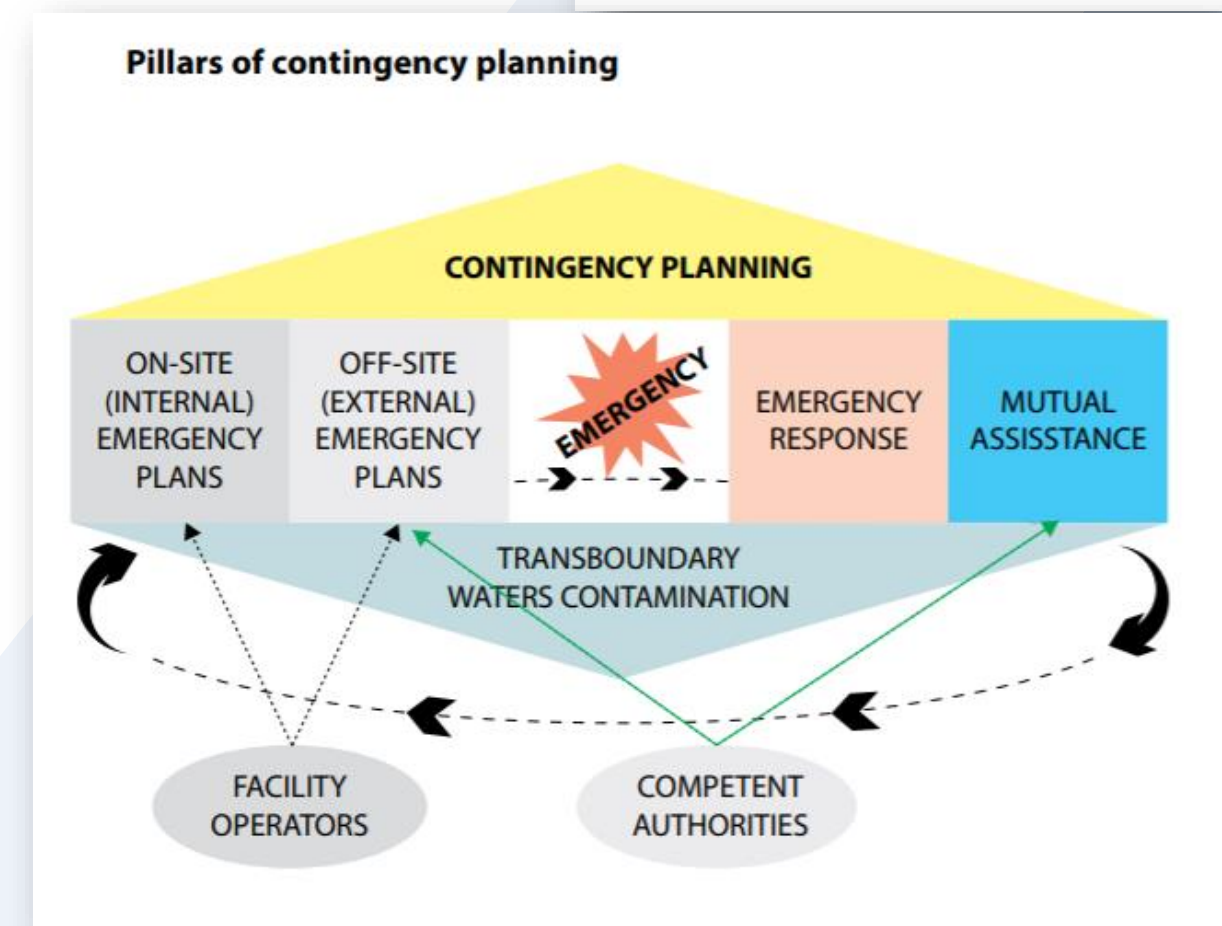
- Practical training → 3-step approach
- Available at <https://unece.org/environment-policy/industrial-accidents/online-toolkit-and-training-strengthening-mine-tailings>

## Training Video on Mine Tailings Safety (ENG, RUS)



## Recent outputs: UNECE checklist for Contingency Planning

- Aims to limit the number of accidents causing water pollution and the severity of their consequences
  - Mitigate consequences of industrial accidents affecting transboundary water courses for human health and the environment
- Tool for harmonized contingency planning between neighbouring or riparian countries (applied in the Danube Delta and Armenia)
- Includes recommendations on legislation, early warning/alarm/notification systems, joint bodies and financial mechanisms in place; exchange of information and consultations between countries





## Examples of transboundary response exercises

- 2015 Giurgiulesti, Republic of Moldova  
(First ever trilateral exercise between the Republic of Moldova, Romania and Ukraine on the Danube River)
- 2017 Slubice, Poland  
(Transboundary response exercise between Germany and Poland on the Oder River)
- 2018 Százhalombatta, Hungary  
(Accidental water pollution mitigation exercise on Danube River)
  - Ministry of Interior of Hungary,
  - UNECE Joint Expert Group on Water and Industrial Accidents
  - International commission for the protection of the Danube River (ICPDR)



## 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>