

**Application of UNECE tools, guidelines and best practices to prevent accidental water pollution from TMFs in Kazakhstan, including live demonstration of an interactive map of TMFs**

**11 FEBRUARY 2022**

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**UNECE Convention on the Transboundary Effects of Industrial Accidents**

# UNECE project to strengthen the safety of tailings in Kazakhstan (2017-2019)



Supported by the Swiss Federal Office for the Environment




Objective: Strengthen the safety of tailings in Kazakhstan

→ Provide support to Kazakh authorities and operators in the application of the Guidelines and Good Practices for the Operational Safety of Tailings Facilities and related methodology

Beneficiaries: Competent authorities and operators of Kazakhstan; other countries of Central Asia

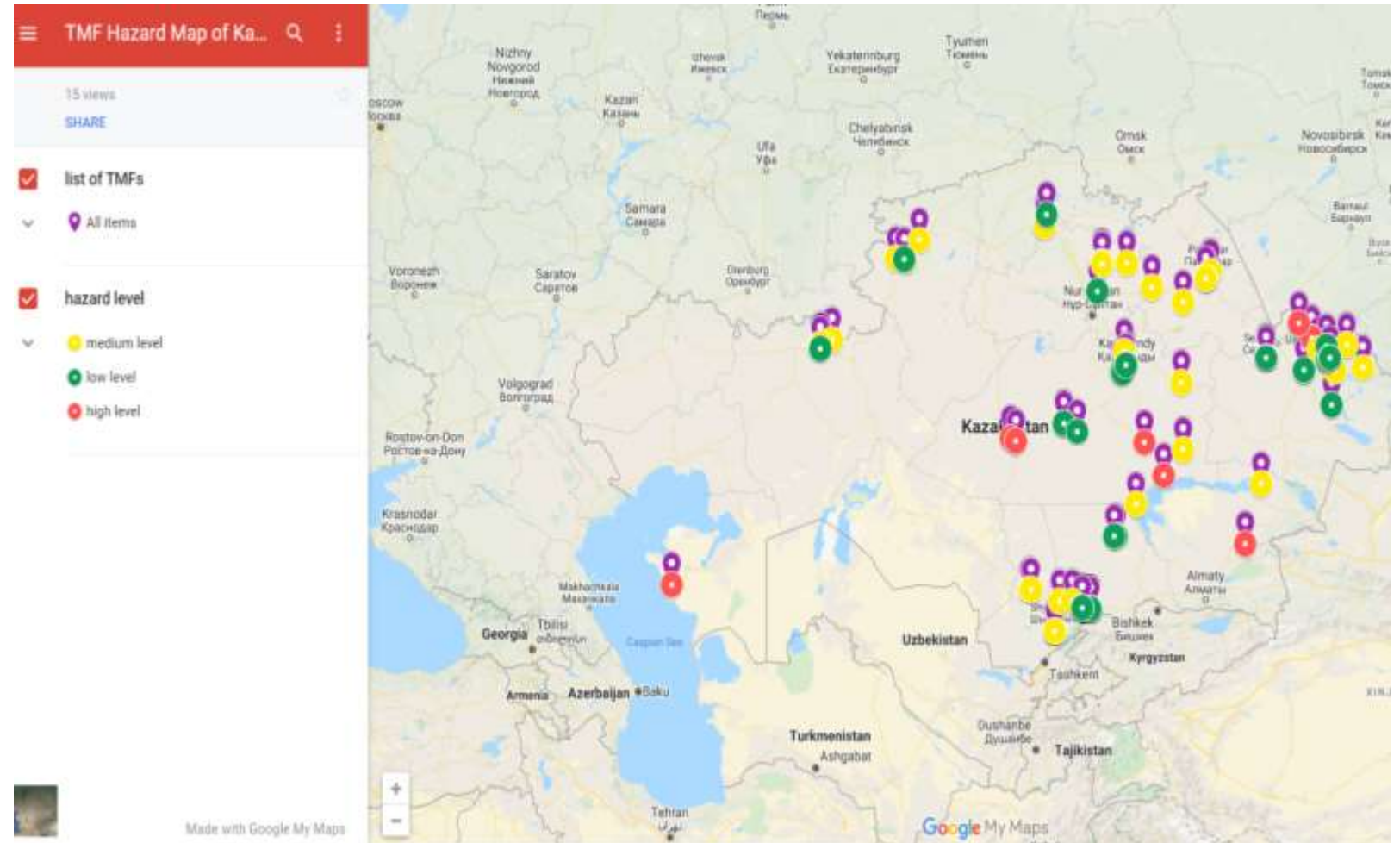
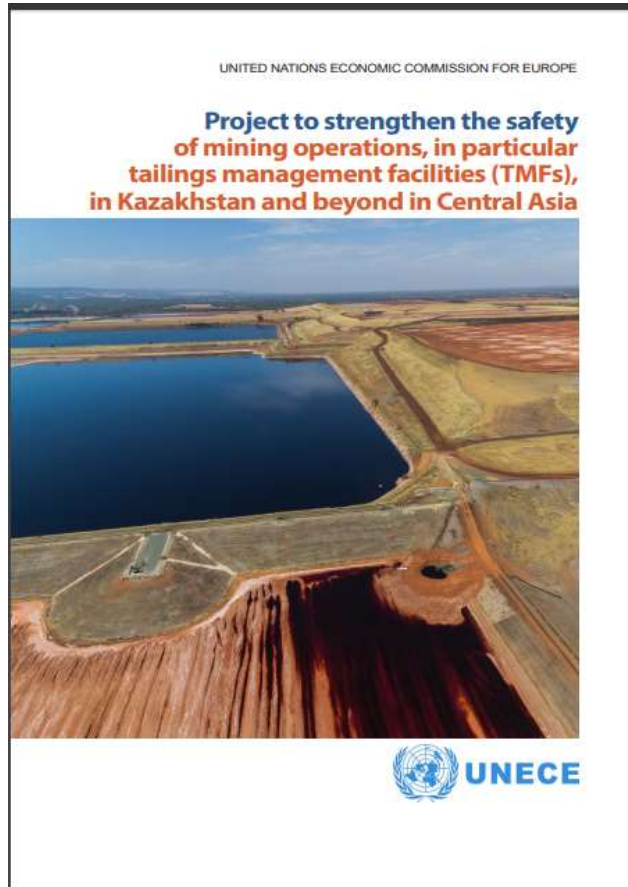


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# Successful application in Kazakhstan (2018-2019)

Inventory and mapping of 121 tailings



# Identification of tailings with transboundary impact in Kazakhstan

## 7 Tailings that can cause transboundary impact in Kazakhstan

No	Name of TMF	Region, district	THI	transboundary effect
16	TMF nr.1 of LLC "Aktjubinsk Copper Company"	Aktobe region, Khromtau district, town settlement Koktau	10.17	
41	TMF of Orlovsky dressing plant of LLC "Vostoksvetmet"	East Kazakhstan region, Borodulikhinsky district, town settlement Zhezkent	12.03	Near to the border with Russia (3 km)
103	Sludge storage nr. 1 of JSC "Aluminium of Kazakhstan"	Pavlodar region, Pavlodar city, industrial zone "Vostochnaya", building 65	11.61	Irtys River
104	Sludge storage nr. 2 of JSC "Aluminium of Kazakhstan"	Pavlodar region, Pavlodar city, industrial zone "Vostochnaya", building 66	11.52	Irtys River
105	Sludge storage nr. 3 of JSC "Aluminium of Kazakhstan"	Pavlodar region, Pavlodar city, industrial zone "Vostochnaya", building 67	11.00	Irtys River
107	Ash sludge storage nr. 1, Aksu Ferroalloy Plant	Pavlodar region, Aksu city	10.60	Irtys River
108	Ash sludge storage nr. 2, Aksu Ferroalloy Plant	Pavlodar region, Aksu city	10.95	Irtys River

Range of the THI
High Level
Medium Level
Low Level

# Индекс опасности хвостохранилищ в Казахстане

Range of the THI

**High Level**  
(15%)  
**18 – Kazakhstan**

**Medium Level**  
(50%)  
**61 – Kazakhstan**

**Low Level**  
(35%)  
**42 – Kazakhstan**

**Average THI for the country**

**Kazakhstan**  
**10.3**

## *Tailings in Kazakhstan (with high level THI)*

Slag collector № 6 LLP "Tioline"	Tailing dump of the Balkhash Concentrating Plant "PO Zhezkazgantsvetmet", branch of LLP "Corporation Kazakhmys"
Slag collector № 5 LLP "Tioline"	Tailing dump of the Tekeli Concentrating Plant
Slag collector № 3 LLP "Tioline"	Tailing dump of the Nikolaev concentrating plant LLC "Vostoktsvetmet"
Slag collector № 4 LLP "Tioline"	Tail storage LLC "Nova Zinc"
Canned tailings of Zhezkazgan concentrating factories No. 1,2. Enrichment production complex LLP "Corporation Kazakhmys"	Tailing dump of the Belousovsky enrichment plant
"Koshkar-Ata" Tailings Reservoir	Active tailing dump of Zhezkazgan concentrators No. 1,2. Enrichment production complex LLP "Corporation Kazakhmys"
Tailing dump of the Zhezkazgan concentrating plant No. 3. Concentrating production complex of LLP "Corporation Kazakhmys"	Tailings repository of "SGKK" LLP, section № 1
Tailings repository of "SGKK" LLP, section № 2	Tailing dump containing pyrites of the Nikolaev concentrating plant LLC "Vostoktsvetmet"
Talovskoye tailing dump of the enrichment plant LLP "Kazzinc"	Tailing dump of the Oryol Concentrating Plant LLC "Vostoktsvetmet"

# Training at a tailings facility in Kazakhstan



Training in Altyntau, Kokshetau (June 11-13, 2019),  
together with Kyrgyzstan and Tajikistan



Photos credit: UNECE

# Sub-regional seminar on improving the safety of tailings in Central Asia (November 20-21, 2019, Almaty)



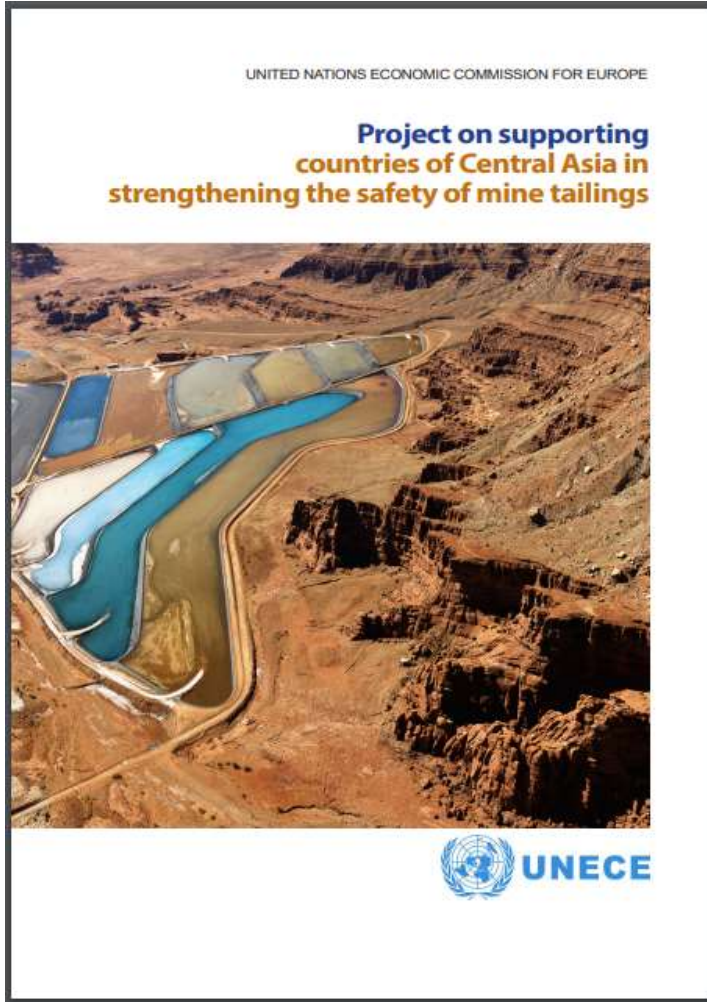
# Conclusions and lessons learned from application practice

- Tailings safety is a matter of regional importance → a call for closer cross-border cooperation on the issue
- Outdated security standards and management practices → the need to update national regulations and policies
- Recommendation to apply the UNECE Safety Guidelines and tailings methodology in all countries of Central Asia to ensure harmonized safety standards and approaches
- The need to improve interagency cooperation and coordination, as well as a holistic management approach to the safe management of mine tailings and the prevention of accidental water pollution
- The representatives of Tajikistan and Kazakhstan agreed to form inter-ministerial working groups dealing with tailings safety and accidental pollution issues, recognizing that these working groups can serve as platforms to discuss the results of the project, their possible adaptation and application of the methodology for tailings
- Taking urgent measures to manage the risks of tailings and accidents caused by natural disasters (Natech risks)





# Project on supporting countries of Central Asia in strengthening the safety of mine tailings (since 2020)



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- Establishment and operation of an inter-institutional working group on mine tailings safety and prevention of accidental water pollution in Kazakhstan and Tajikistan
- Preparation of a hazard rating list and map of tailings in Uzbekistan
- Strengthening sub-regional and cross-border cooperation
- Continued engagement and strengthened partnerships with other international organizations, such as with UNDP, UN Environment, OECD and others

# Inter-institutional working group on mine tailings safety and prevention of accidental water pollution

Currently established in **Kazakhstan** and Tajikistan

- Purpose:
  - Serve as a platform for improved inter-agency coordination and cooperation between authorities and institutions in the field of industrial safety, water supply and other relevant authorities and institutions, as well as with operators, academia and NGOs on the prevention of accidental water pollution by tailings, including transboundary impacts
- Draft terms of reference developed in 2021 in **Kazakhstan** and Tajikistan
- The working group is officially established in Kazakhstan and the first meeting will be held on February 11, 2021



Technical meeting (online, April 23, 2021) on preparation for training and strengthening of tailings management in Central Asia

**The countries of Central Asia agreed, in particular:**

- Work with UNECE to develop an Action Plan to implement their EPR recommendations related to tailings
- Update national Natech/tailings risk integration self-assessments and action plans

Participants (22)

Find a participant

- K Kamila\_Sabyrrakhim... (Host)
- DR Dmitry Rudakov
- TM Talaibek Makeev
- UH UNECE\_Franziska Hirsch
- UN UNECE\_Sarangoo Radnaaragchaa

Invite Mute Me

Chat

Уважаемые участники! Мы надеемся, что встреча была для Вас полезной. Напоминаем о короткой оценочной форме с тем, чтобы помочь нам улучшить качество наших мероприятий и улучшить понимание Ваших предложений. Все ответы конфиденциальны. Спасибо.

<https://www.surveymonkey.com/r/M6NT2L9>

From Sharifa Khudobakhsh to Everyone: Dear Colleagues,

From Sharifa Khudo... to Me: (Direct Message) thanks a lot for the opportunity to have listen to you. I was glad to see you and to hear you. Good luck everyone

To: Shari... (Direct Message) File ...

Type message here...

# Development of Action Plans for Environmental Performance Reviews for 2021

To support the implementation of recommendations under the Convention through Country Environmental Performance Reviews

The EPR Action Plans specifically define the implementation of the EPR recommendations on the Industrial Accidents Convention



Identification

Coordination  
(in + between  
countries)

Natural and  
Technological  
Emergencies (NTE)

Industrial Accident  
Notification  
System (IAN)

Accession (not  
for KAZ)

UNECE

## Kazakhstan

### Environmental Performance Reviews



Third Review



### **EPR Recommendation 11.3**

*The Government should enhance the implementation of the Convention on the Transboundary Effects of Industrial Accidents in order to improve industrial safety, in particular by:*

- a) *Taking full advantage of the two projects implemented under the Convention and facilitating the implementation of project activities;*
- b) *Ensuring coordination between designated competent authorities for the purposes of the Convention...;*
- c) *...*

**Kazakhstan  
Environmental Performance Review  
Third Review (2019)**

***Draft* Action Plan to Strengthen Implementation of the Industrial  
Accidents Convention and Mine Tailings Safety (2021)**

**Introduction**

Kazakhstan's 3rd UNECE Environmental Performance Review (EPR)<sup>1</sup> was developed to take stock of progress made by Kazakhstan in the management of its environment since 2008 and to provide expert recommendations for further progress. The present document was prepared to outline specific actions that Kazakhstan can take to implement several of its EPR recommendations with a focus on strengthening implementation of the Convention on the Transboundary Effects of Industrial Accidents (Industrial Accidents Convention) and strengthening mine tailings safety. The UNECE secretariat, in cooperation with Kazakhstan, formulated this action plan taking into account the country's legal obligations under the Convention, as well as existing projects, tools and guidance materials. This action plan provides concrete actions that Kazakhstan can take to implement its EPR recommendations to that effect.

**Background**

Kazakhstan acceded to the Industrial Accidents Convention on 11 January 2001. It remains the only country of Central Asia that is a Party to the Convention. The Convention aims to protect human beings and the environment through the prevention of, preparedness for and response to industrial accidents capable of causing transboundary effects.<sup>2</sup> Its measures apply to hazardous activities at, among other installations, tailings management facilities (TMFs), which are prevalent in Kazakhstan. Parties also have obligations to report on their implementation of the Convention. The country has regularly reported on the Convention's implementation, including for the:

- First reporting round (2000-2001)
- Third reporting round (2004-2005)
- Fourth reporting round (2006-2007)
- Fifth reporting round (2008-2009)
- Sixth reporting round (2010-2011)
- Seventh reporting round (2012-2013) (late submission)
- Eighth reporting round (2014-2015)
- Ninth reporting round (2016-2018) (late submission)

<sup>1</sup> Kazakhstan's full EPR is available in English and Russian at <https://unece.org/environment-policy/publications/3rd-environmental-performance-review-kazakhstan>, UN Doc. ECE/CEP/185.

<sup>2</sup> The full Convention text is available in English and Russian at <https://unece.org/more-1>.

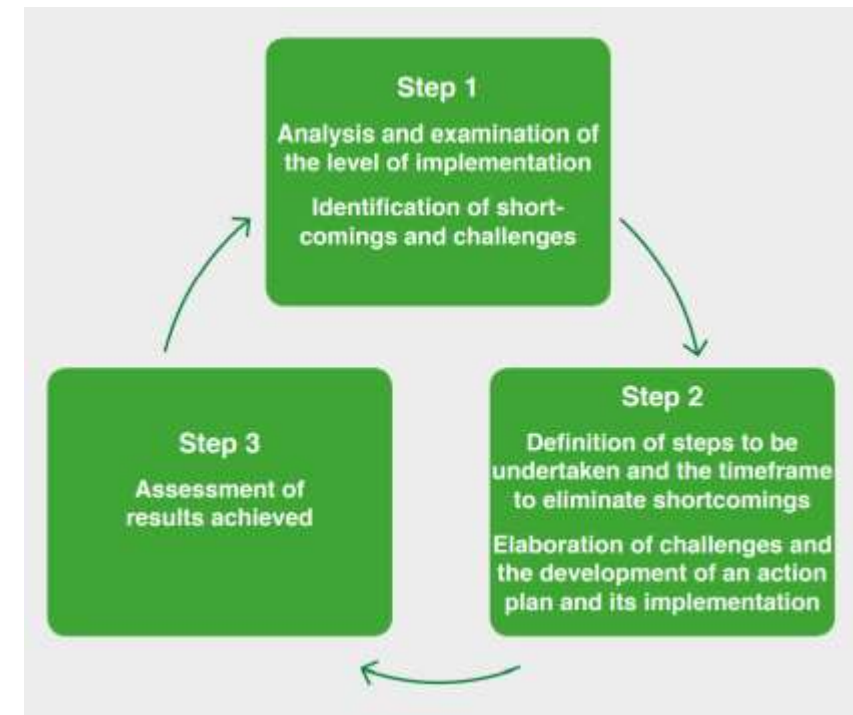
## **Measures to implement recommendation 11.3 (a) and (b)**

- *Lead the organization of consultations with UNECE to establish National Dialogues on Industrial Safety followed by the signing of an appropriate agreement such as a Memorandum of Understanding or an exchange of letters*
- *By whom? Ministry of Emergency Situations, Ministry of Ecology, Geology and Natural Resources and all relevant stakeholders*
- *When? December 2021 → June - October 2022*
- *Enhance transboundary cooperation and joint planning with neighboring countries, including by strengthening relationships with partners during UNECE assistance activities and by organizing meetings, developing joint action plans and conducting exercises with them on transboundary issues such as accidental water pollution in as a result of tailings failures/accidents*
- *By whom? Ministry of Emergency Situations and Ministry of Ecology, Geology and Natural Resources*
- *When? July 2022 and beyond...*

# Updated assessment systems and action plans

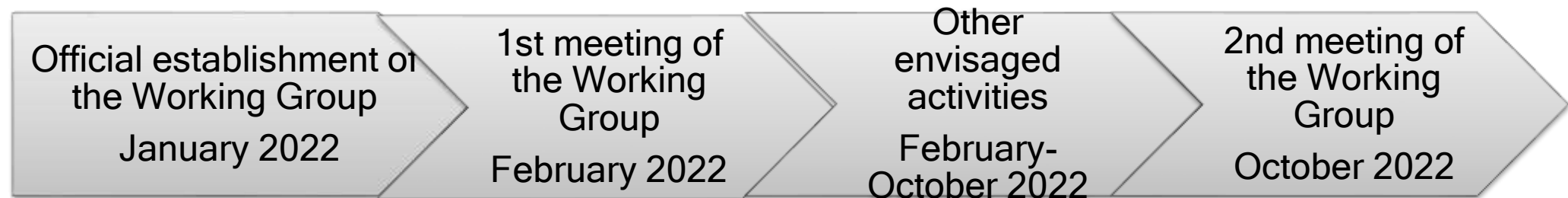
Includes specific needs and actions related to tailings safety and Natech risk management

- 2021 (April): Commitment to prepare updated assessment systems and action plans expressed at the technical project meeting for capacity building in the management and policy development of tailings in Central Asia (online, April 23, 2021)
- 2021 (June): Draft assessment systems and action plans discussed at the assessment workshop (online, June 3, 2021). The following assessment frameworks and action plans have been submitted to UNECE:
  - Kazakhstan: self-assessment and action plan
  - Kyrgyzstan: self-assessment and action plan
  - Tajikistan: self-assessment → updated action plan pending
  - Uzbekistan: action plan
- 2021 (October): Convention's Working Group on Implementation agreed to provide feedback



## Establishment of the Working Group on Tailings Safety and Prevention of Accidental Water Pollution

- Kazakhstan has included the establishment of a Working Group on Tailings Safety and Prevention of Accidental Water Pollution in Kazakhstan in the Action Plan for the implementation of recommendations 11.3 (a) and (b) of the EPR, as well as in the Action Plan for the implementation of the UNECE Convention on the Transboundary Effects of Industrial Accidents - implementation of this task until the end of 2021
- => January 2022 - **DONE**



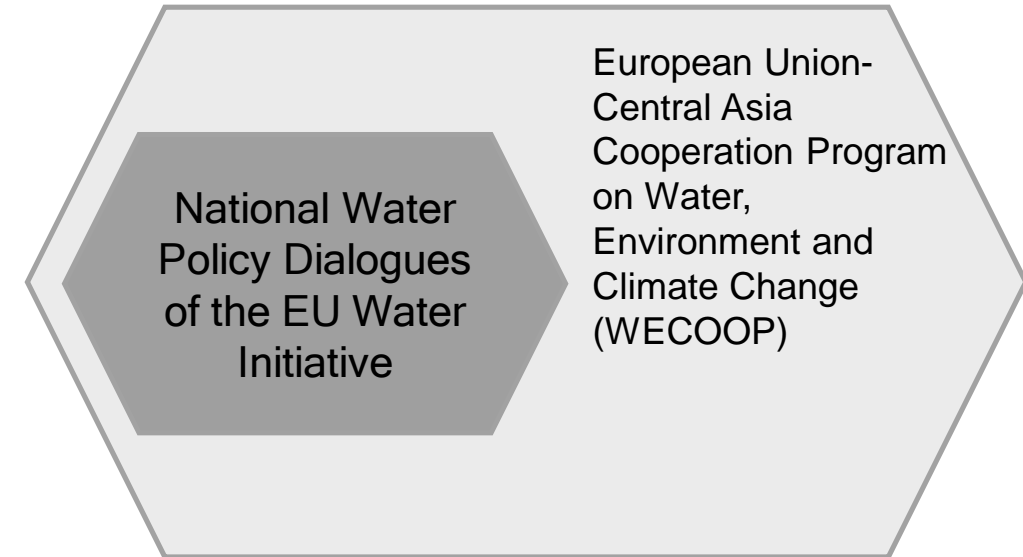


# Syrdarya Project (Phase I)

- Dates: June 2021-June 2022 (Phase I) -> Sub-regional workshop May 17-19, 2022
- Objective of the project
  - General overview of pollution sources in the Syrdarya river basin
  - Development of **joint recommendations** on pollution prevention measures
  - Concentration on **identifying risks** of accidental pollution in the Syrdarya river basin and **developing coordinated measures** to prevent and respond to accidental pollution of the water resources of the Syrdarya river



funded by the EU and implemented by the UNECE



**Thank you for attention!**

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# Interactive map of TMFs in Kazakhstan(ENG, RUS)

