

The Inception Workshop
of the Project to Strengthen the Safety
of Mining Operations, in particular
tailings management facilities (TMFs),
in Kazakhstan and beyond in Central Asia

Astana (Kazakhstan)
November 7-8, 2018



Presentation of the initial map of
TMFs in Armenia, Georgia,
Kazakhstan and Kyrgyzstan

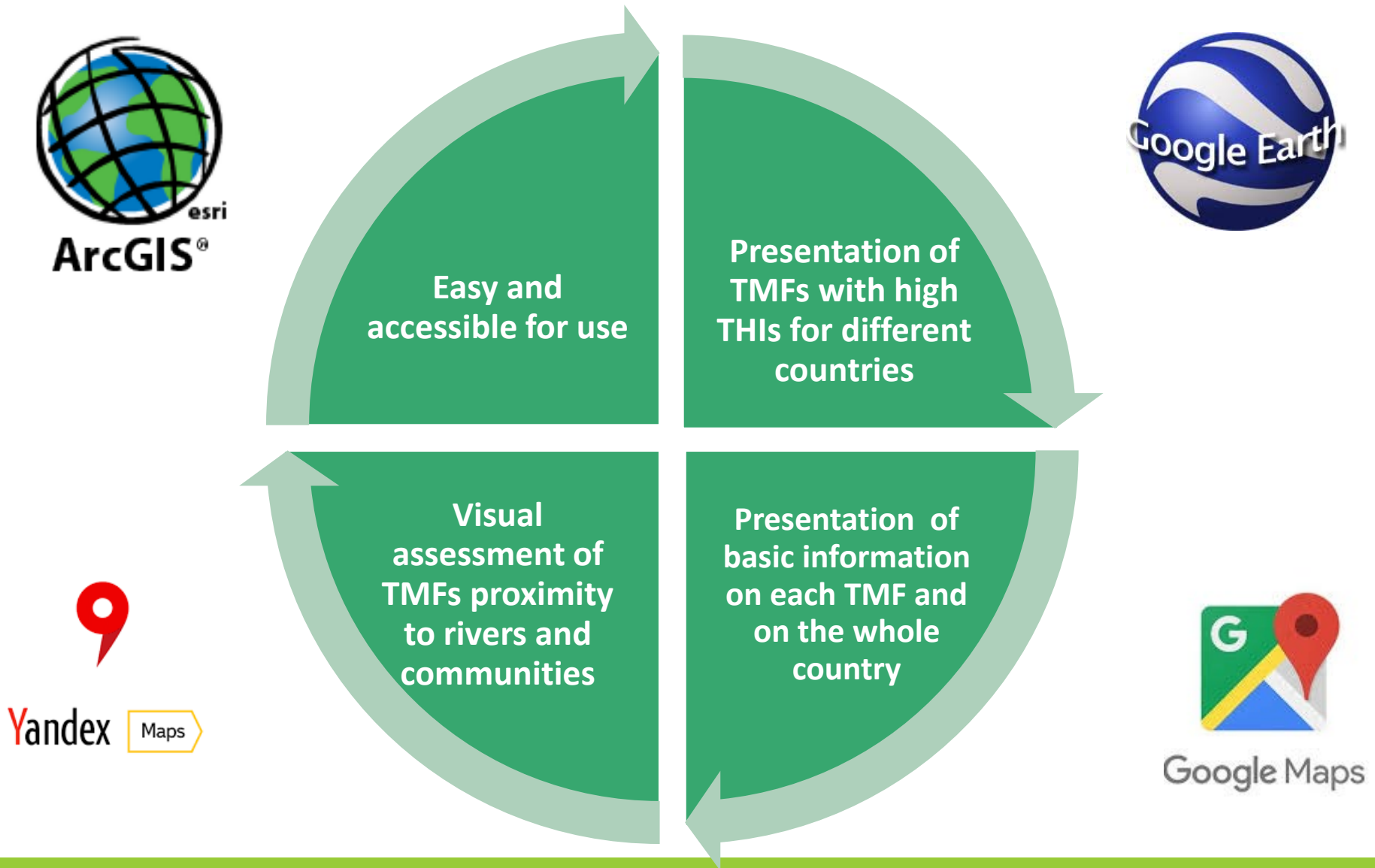
ALEKSANDRA LOGUNOVA

**“SUSTAINABLE DEVELOPMENT PLATFORM”
NCO, DNEPR, UKRAINE**



Organised jointly by the UN ECE Convention on Transboundary Effects
of Industrial Accidents and the Government of Kazakhstan

The objectives set for the map development



The initial map of TMFs in countries - project participants

Project "ASSISTANCE FOR ENHANCEMENT OF TMFs SAFETY IN ARMENIA AND GEORGIA"

Armenia

23 TMFs

Georgia

5 TMFs

Kyrgyzstan

16 TMFs

Romania

119 TMFs

Hungary

35 TMFs

Serbia

23 TMFs

The data necessary for the mapping

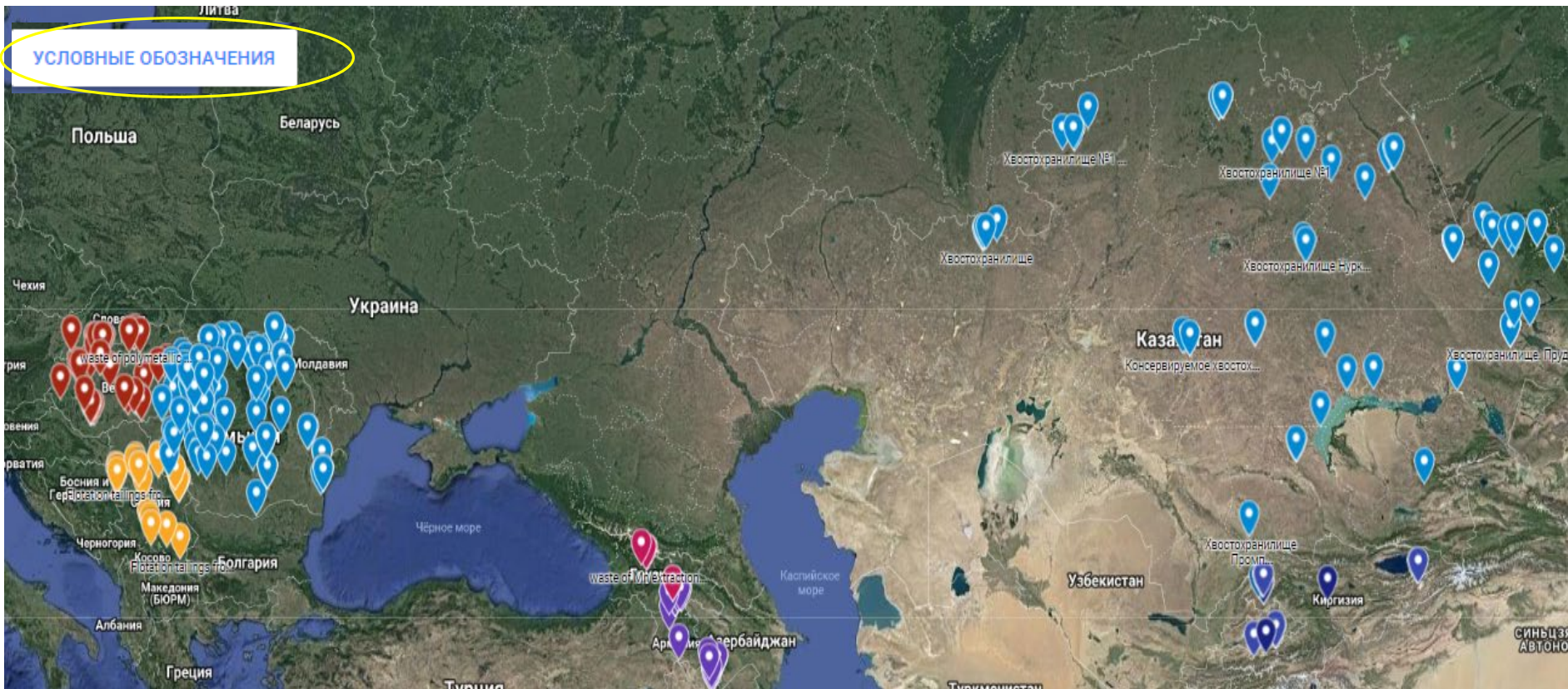
TMF name

**Region, city /
district**

Latitude, longitude

**Volume of the
tailings materials
stored**

The general view of the TMFs map



Sample presentation of TMFs at the map (Armenia)

The image shows a screenshot of a map application interface. On the left, there is a sidebar with a search bar and a list of locations. The 'Armenia' section is expanded, showing several locations. The 'Nahatak of Akhtala Ore Processing Plant...' is circled in red. A red arrow points from this entry to a detailed view of the same location. The detailed view shows the name of the TMF, its region and district, latitude and longitude, capacity, and volume of stored tailings materials. The 'Nahatak of Akhtala Ore Processing Plant CJSC' is circled in red. On the right, there is a satellite map of the region with several location pins. One pin is circled in red, corresponding to the detailed view.

Карта хвостохранилищ

- Armenia
 - Tukhmanuk of Mego Gold LLC
 - Ararat gold extraction plan of GeoProMi...
 - Nahatak of Akhtala Ore Processing Plant...**
 - Explosive substances gorge of Akhtala ...
 - и ещё 19
- Georgia
 - Copper-pyrite tailings of the Madneuli, Ri...
 - Barite tailings of the Madneuli, Rich Met...
 - Tailings of agglomerates of Georgian ma...
 - Chiatura site 1 "Ghurgumela" of Georgia...

← Nahatak of Akhtala Ore Pr...

Name of TMF
Nahatak of Akhtala Ore Processing Plant CJSC

Region, district
Lori, Mets Ayrum village

Latitude, Longitude
41.17249, 44.82076

Capacity, mln m3, Design
3.75

Volume of stored tailings materials, Mio m3
3.3500

Status

Sample presentation of TMF information

← Nahatak of Akhtala Ore Pr... 

Name of TMF
Nahatak of Akhtala Ore Processing Plant CJSC

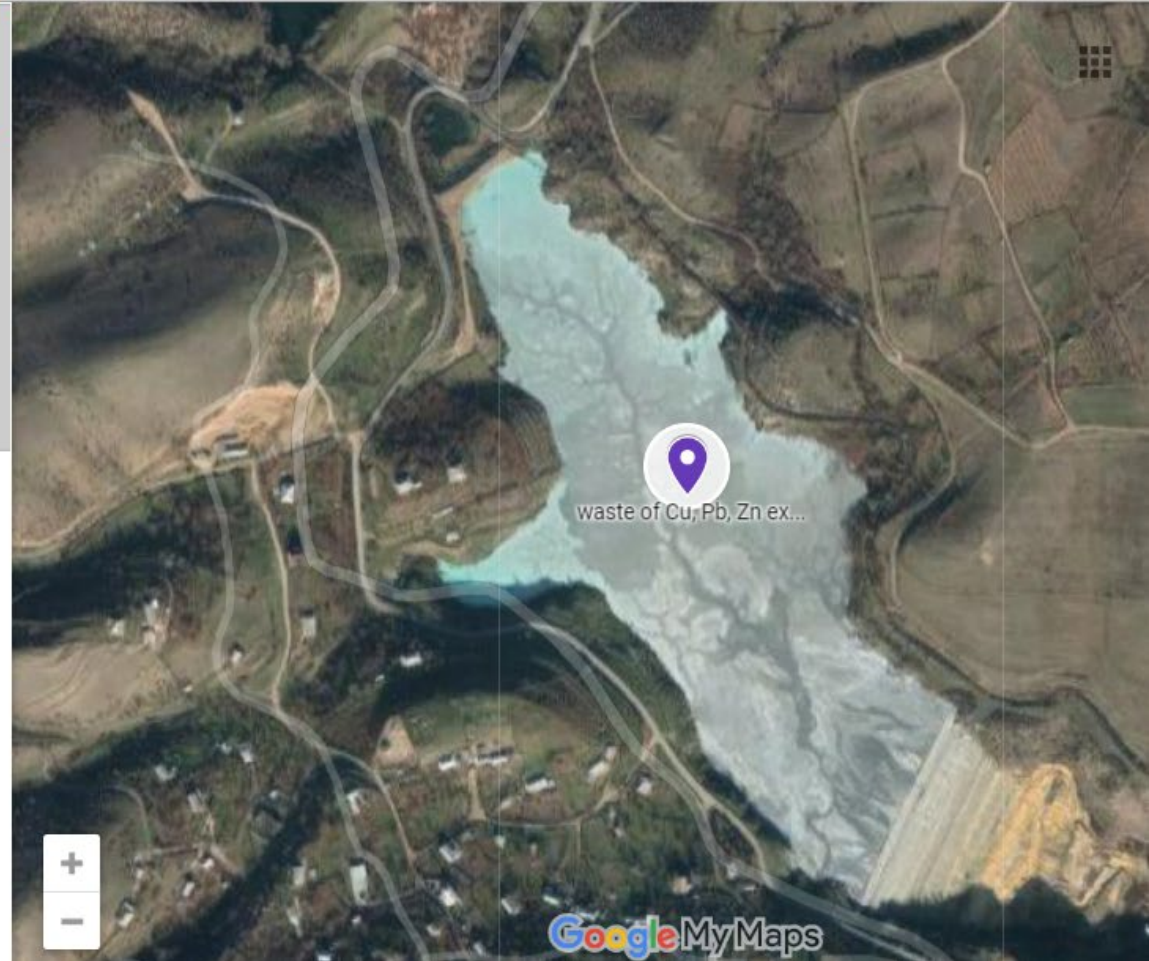
Region, district
Lori, Mets Ayrum village

Latitude, Longitude
41.17249, 44.82076

Capacity, mln m3, Design
3.75

Volume of stored tailings materials, Mio m3
3.3500

Status
Active



Information on TMFs

TMF name

**Region, city /
district**

Latitude, longitude

**Volume of tailings
materials stored**

Materials stored

Hazard class

Status

**Peak ground
acceleration**

**Flood frequency
(HQ-100)**

Dam: material

Dam: crest width

**Year of
commissioning**

THI extended

THI range

THI range

Country	THI min.	THI max.
Armenia	11.9	16.6
Georgia	12.2	16.5
Kyrgyzstan	11.5	15.9
Hungary	8.0	12.9
Romania	6.3	14.8
Serbia	11.3	16.3

General THI for countries

Country	General THI for country
Armenia	14.00
Georgia	14.00
Kyrgyzstan	13.38
Hungary	10.80
Romania	11.53
Serbia	14.13

Presentation of information on the map

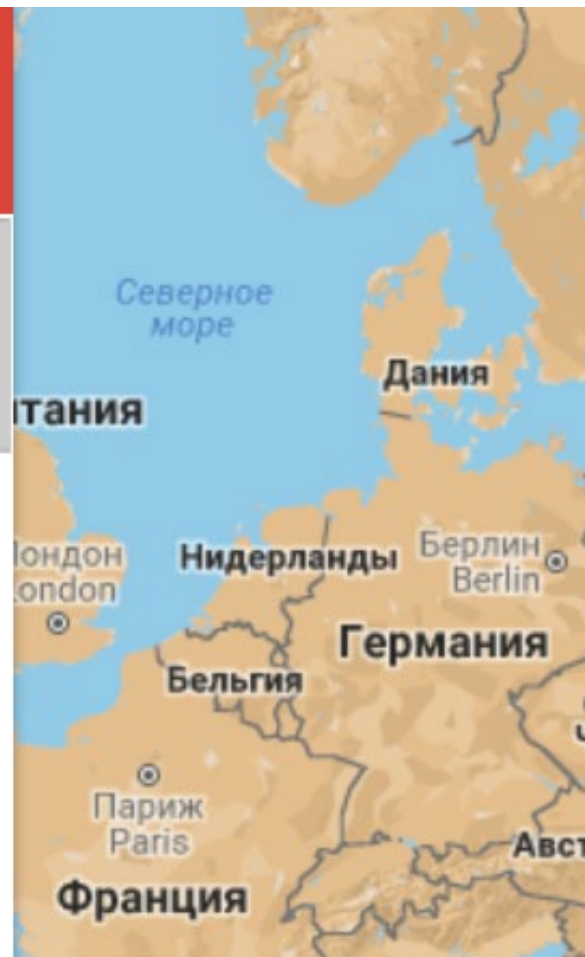
☰ Карта хвостохранилищ 🔍 ⋮

^ Total THI for countries: ★

- Armenia - 14.00
- Georgia - 14.00
- Kyrgyzstan - 13.38
- Hungary - 10.8
- Romania - 11.53
- Serbia - 14.13

48 просмотров

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THI range for the international level

THI range

Low level

5.5-9.4

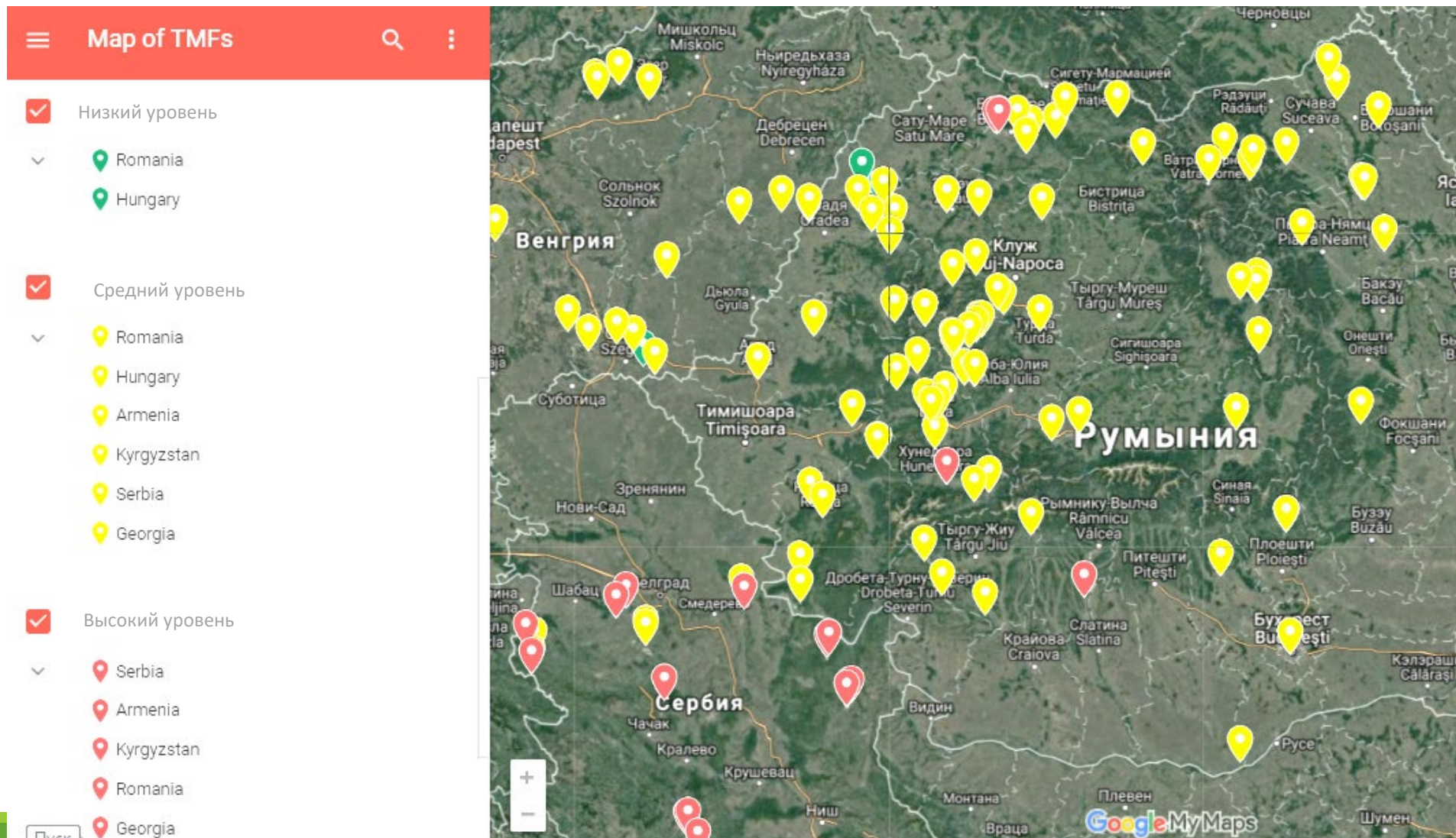
Medium level

9.5-13.4

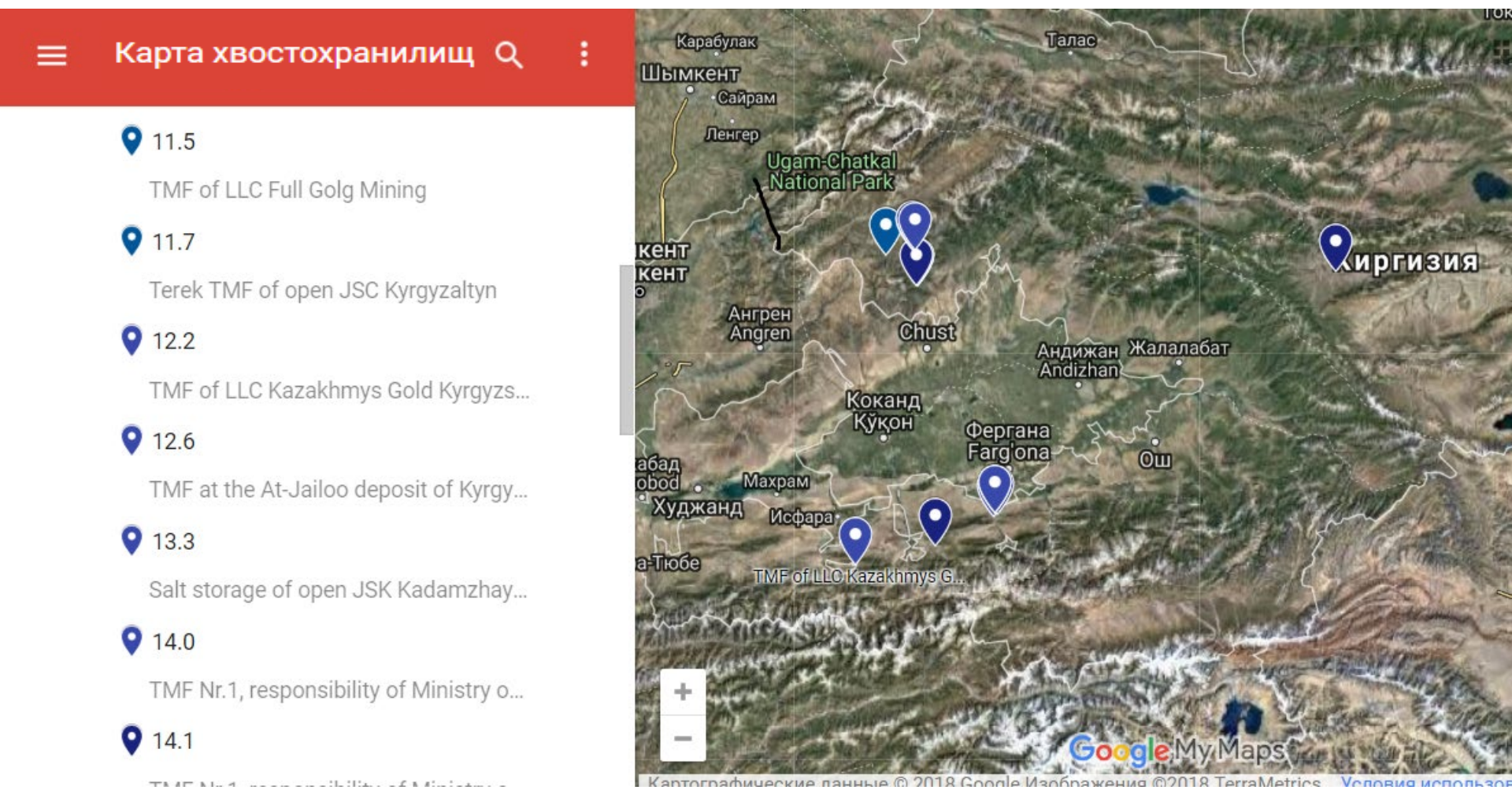
High level

13.5-17.5

Visualisation aspects: the case of European TMFs



THI assessment at the national level: the case of Kyrgyzstan



The initial map of Kazakhstan TMFs (76 TMFs)

Severo-Kazakhstanskaya oblast
1 TMF

Akmolinskaya oblast
10 TMFs

Zhambylskaya oblast
4 TMFs

Kostanayskaya oblast
7 TMFs

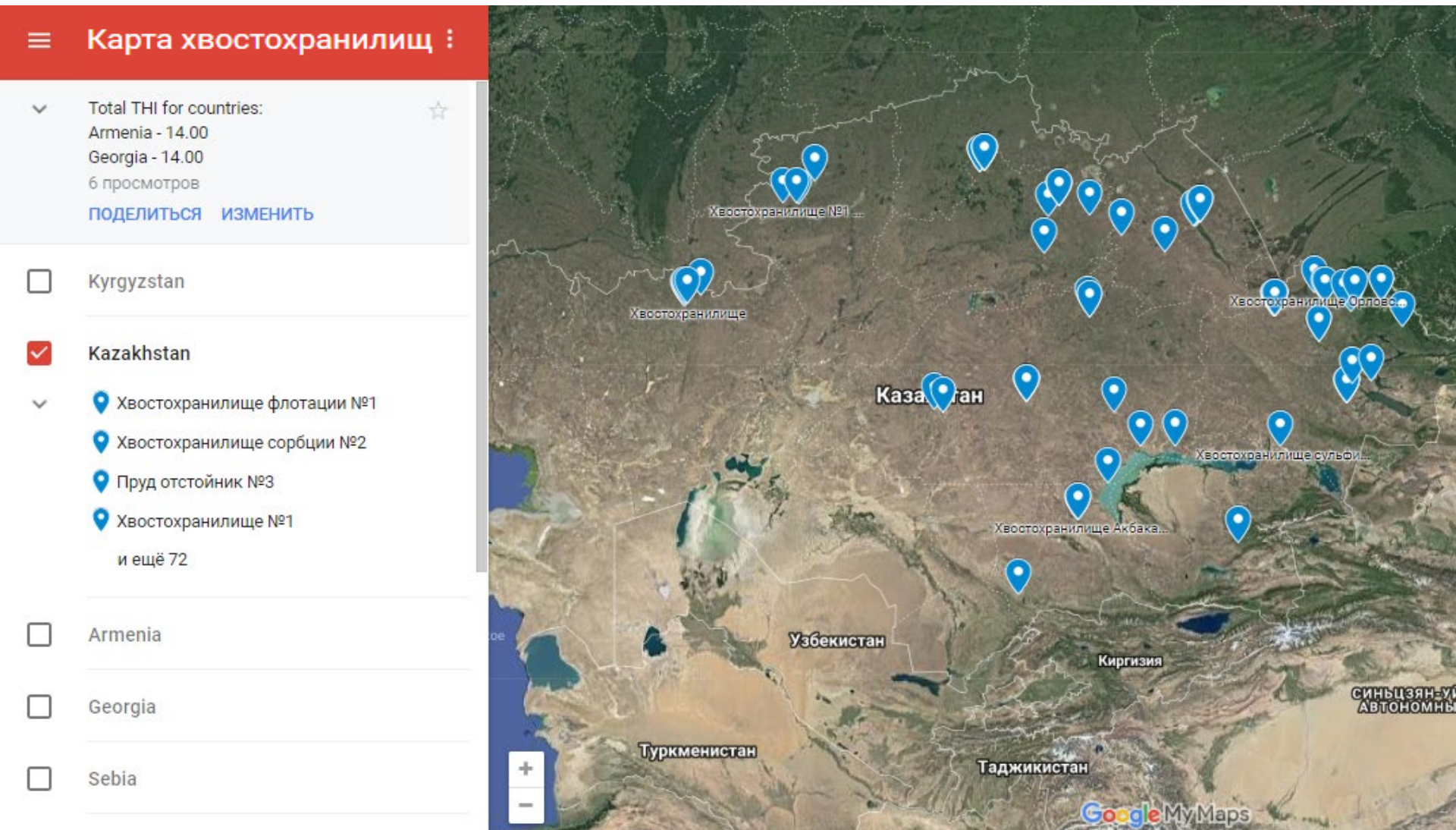
Vostochno-Kazakhstanskaya oblast
25 TMFs

Pavlodarskaya oblast
8 TMFs

Karagandinskaya oblast
15 TMFs

Aktyubinskaya oblast
6 TMFs

Sample visual presentation of Kazakhstan TMFs on the map



Sample visual evaluation of TMFs proximity to the river (Kazakhstan)

← Постоянное хвостохрани...

Name of the TMF site
Постоянное хвостохранилище Карагайлинской обогатительной фабрики. Обогажительный производственный комплекс ТОО «Корпорация Казахмыс»

Location of the TMF site, Region, district
Казахстан, Карагандинская область, Каркаралинский район, поселок Карагайлы пром. зона

Latitude
48.504713889

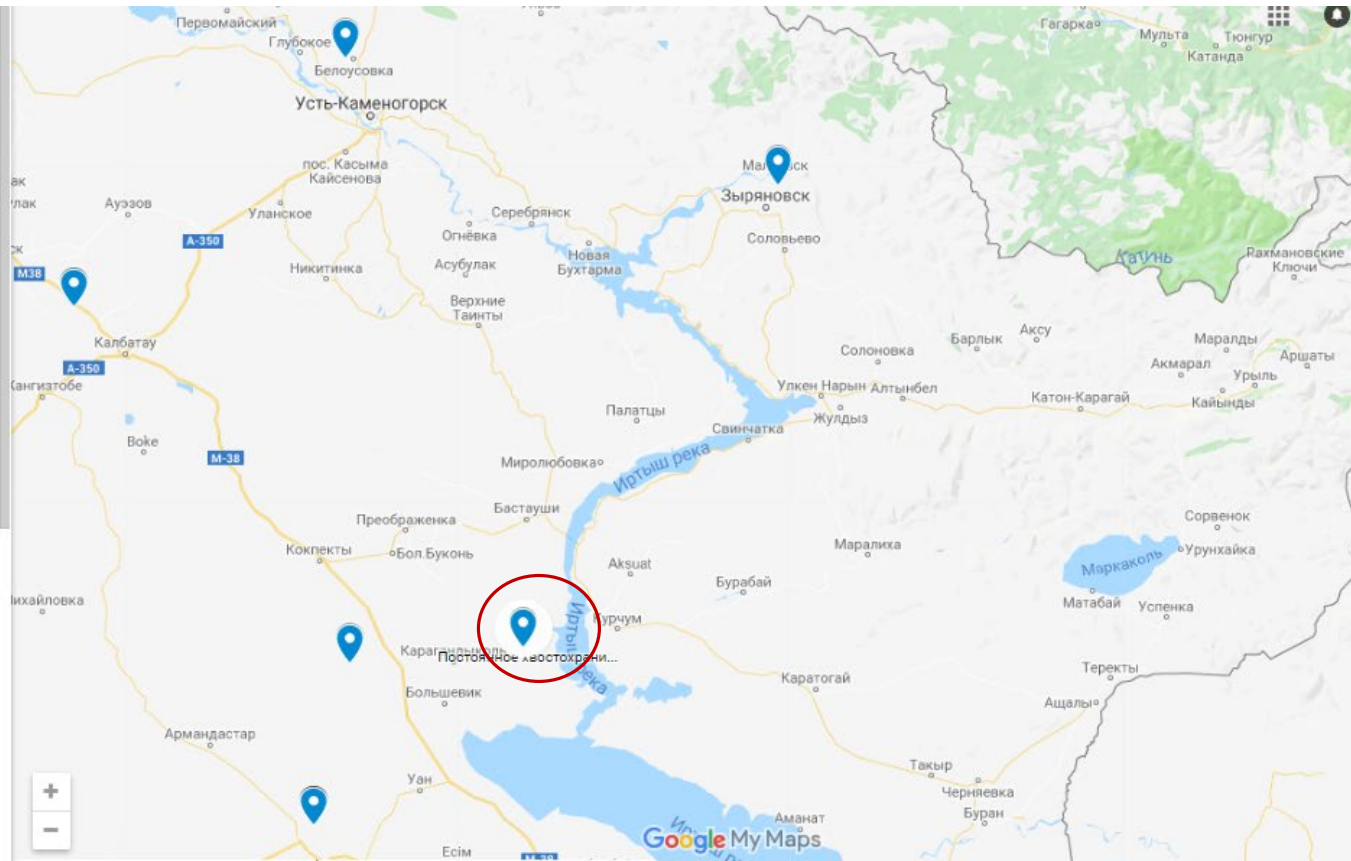
Longitude
83.250869

Volume of stored tailings materials, Mio m3
4.9160

Tailings materials, Material stored
хвосты обогащения

Hazard Class
4

Status



Thank you for your attention!

