

Gerhard Winkelmann-Oei

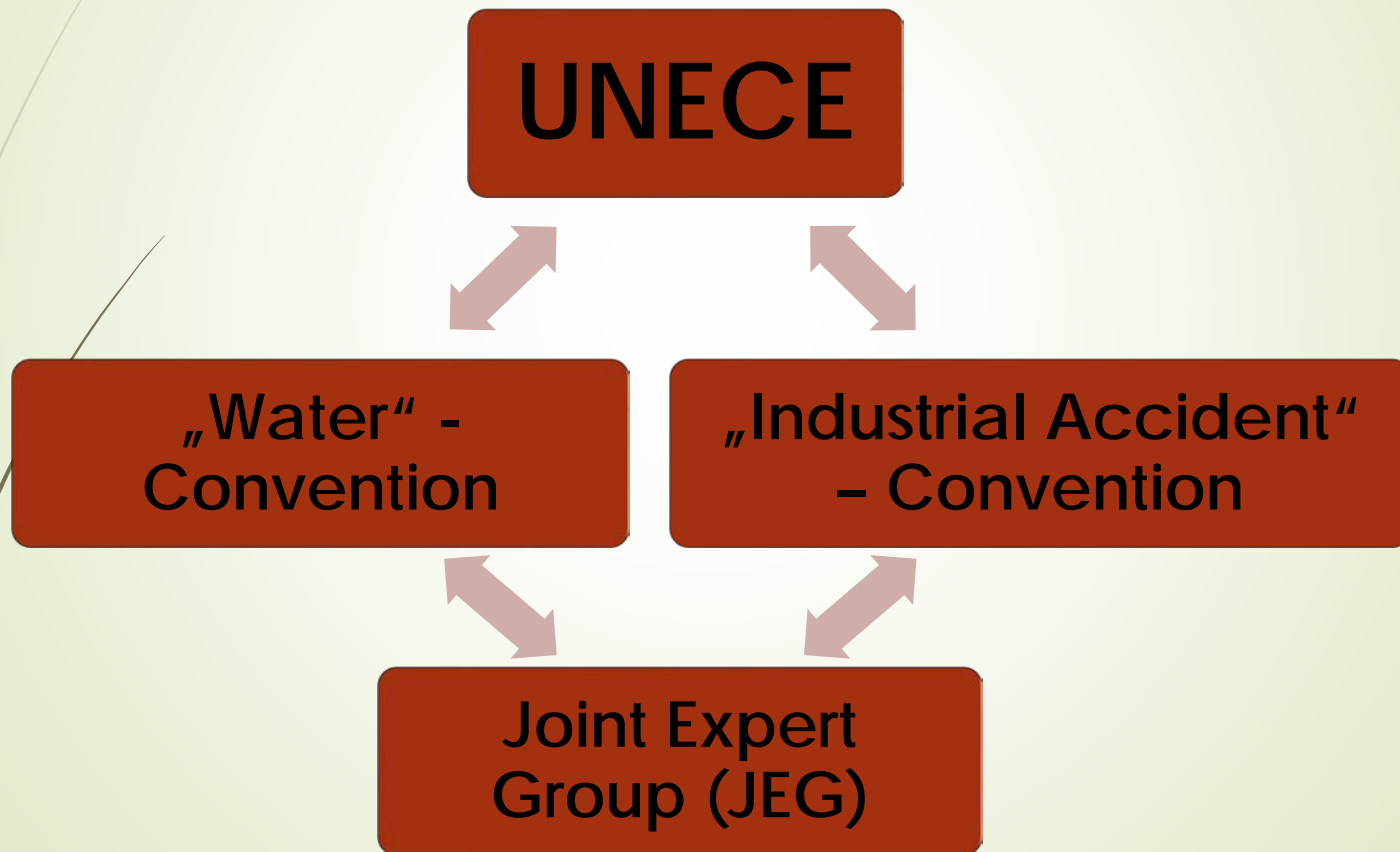
Federal Environment Agency

Dessau, Germany



UNECE Joint Expert Group (JEG)

Prevention of accidental water pollution



Why JEG is important ?

Lessons learnt!



→ Water Accidents > 95 %
of all transboundary accidents !!

Water and IAs Convention provide the legal framework
for addressing the risk of transboundary water pollution
arising from IAs

JEG Strategy

- A minimum set of requirements to ensure a basic and harmonized level of safety for hazardous activities throughout the UNECE Region
- Application of accepted good practice procedures to ensure conformity with international standards
- Assistance of national authorities and operators in ensuring an adequate safety level by means of trainings and seminars

Tools & Products →

**Safety Guidelines &
Checklists**

JEG - Tools and Products

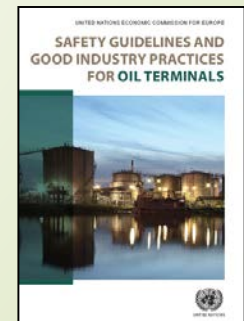
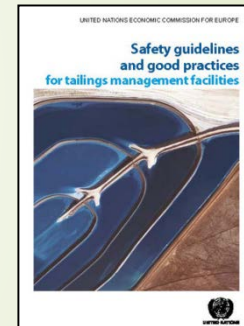
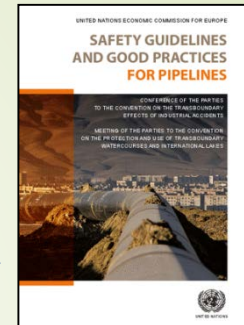
→ Safety Guidelines

Accepted Good Practice
Procedures to ensure Conformity
with International Standards

→ Pipelines

→ Tailings Management Facilities

→ Oil-Terminals



JEG - Tools and Products

→ Checklists

Tools for Assistance (i.e. Training) of national authorities and operators in ensuring an adequate Safety Level

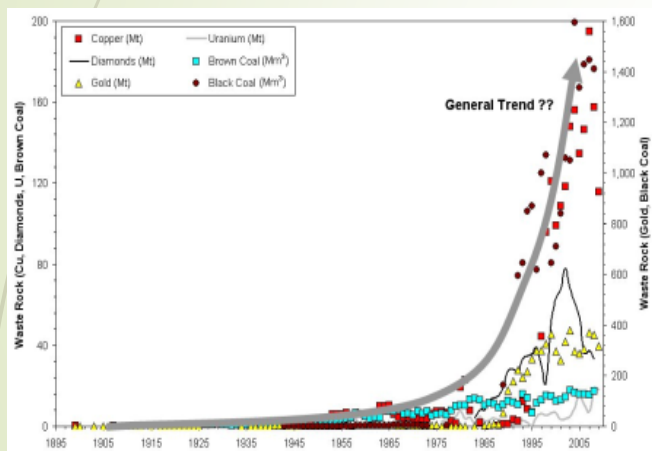
- Waterendangering Facilities
- Hazardous Industries (Seveso)
- Contingency Planning
- Tailings Management Facilities



JEG Workplan 2017 -2018

1. Cooperation with the Ukraine:
 - „Development of a Checklist-Methodology for the Evaluation of the Safety of TMF“
 - „Raising the knowledge to the Safety of TMF at Universities“
2. Safety of TMF in the Caucasian Region
3. JEG Cooperation with the International Commissions for the Protection of the Odra and Danube River
4. Safety Guidelines for Fire Water Retention

- Dramatic growth of mining waste amount in the world last decades.
- Accidents and failures at TMFs in Romania (2000), Hungary (2010), Ukraine (2008, 2011), Finland (2012), Brazil (2015), Kazakhstan (2016).



Amounts of mining wastes
in the world
(G.V. Mudd, 2007)



The TMF at Ajkai
(Hungary) after
the dam failure
(2010)



The river after
dam failure at
the TMF of Ridder
in East Kazakhstan
(2016)

The Project to Develop the TMF Methodology

Contractor

- International HCH and Pesticides Association (IHPA), Denmark

Executors

- Ukrainian project team (5 people)
- A group of international experts from 10 countries including Armenia, Austria, Czech Republic, Georgia, Finland, Germany, Hungary, Romania, Sweden, Switzerland, and the World Bank.

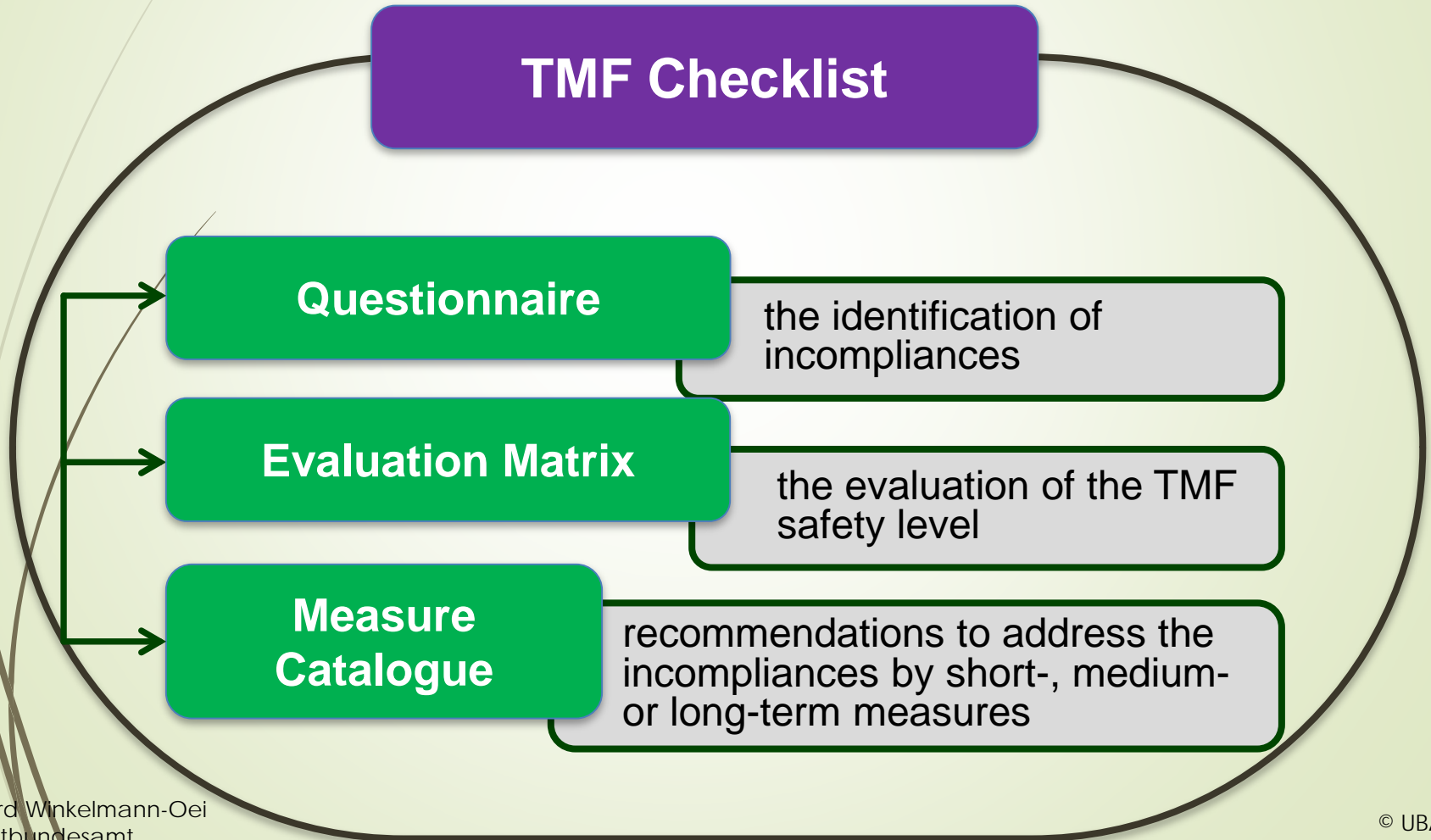
Host country

- Ukraine



Project Products - TMF Checklist

TMF Checklist is based on minimum safety requirements adopted in the UNECE «**Safety guidelines and good practices for tailings management facilities**»



Intended Use of Project Products

Methodology to improve TMF safety

Method of Evaluation “Tailings Hazard/risk Index” (THI)

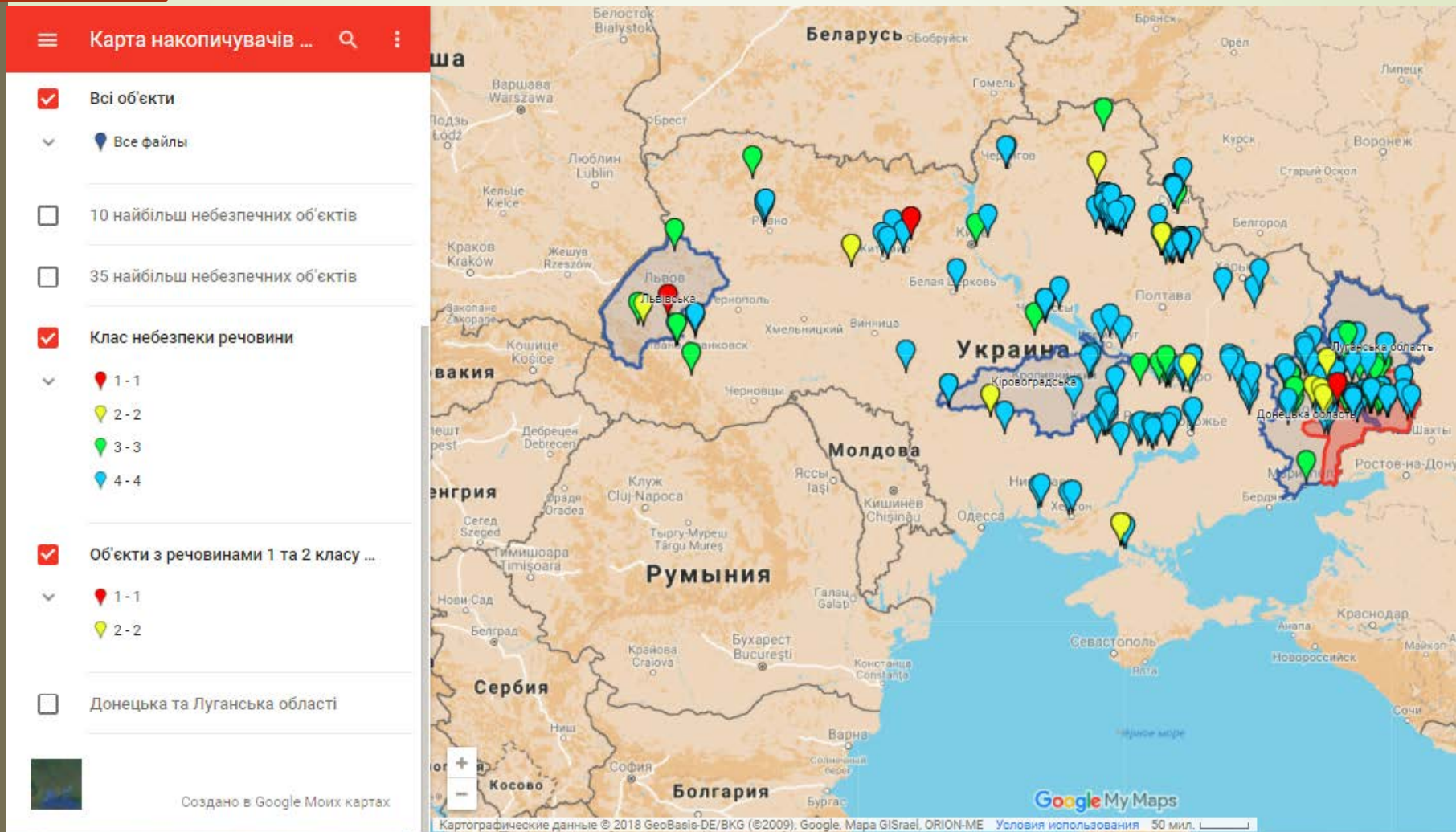
is intended for fast preliminary
evaluation of tailings hazard
for large amount of TMFs on
the national/regional level

TMF Checklist - Questionnaire, - Evaluation Matrix, - Measure Catalogue;

is developed for
evaluation of
the TMF safety level
using the test question
method for individual TMF

- The method of Tailings Hazard Index (THI) is intended for the use by state competent authorities in order to create an overview of potential hazards/risks posed by TMF or a large number of TMFs as hazardous facilities.
- The THI evaluation can be performed based on the documentation available within a short time period.
- In the first instance, the THI has to be applied to a large number of TMFs on the national level.

Project Products - Map of Ukrainian TMFs Ranked by THI_{Basic}



<https://www.google.com/maps/d/viewer?amp%3Busp=sharing&mid=1RFomCn9uKponcHnFrK3XG997AEU&ll=48.74972991354908%2C30.694941406249995&z=6>

JEG Workplan 2017 -2018

1. Cooperation with the Ukraine: „Raising the Knowledge to the Safety of TMF at Universities“

- ➔ **Follow-Up Project in cooperation with the National Mining University, Dnipro, Ukraine**
 - Practical Training of Students with the Checklist-Methodology on the Safety of TMF
 - Elaboration of an Online Training Tool
 - Checklist-Methodology becoming integrating part of the curricula
 - International Workshop „Safety of TMF“, Dnipro, 16/17 May 2017

UBA Project on TMF Safety at National Mining University (Ukraine)

**Raising Knowledge among Students and Teachers on
Tailings Safety and its Legislative Review in Ukraine**

Contractor

- National Mining University
(Dnipro, Ukraine)

Host country

- Ukraine

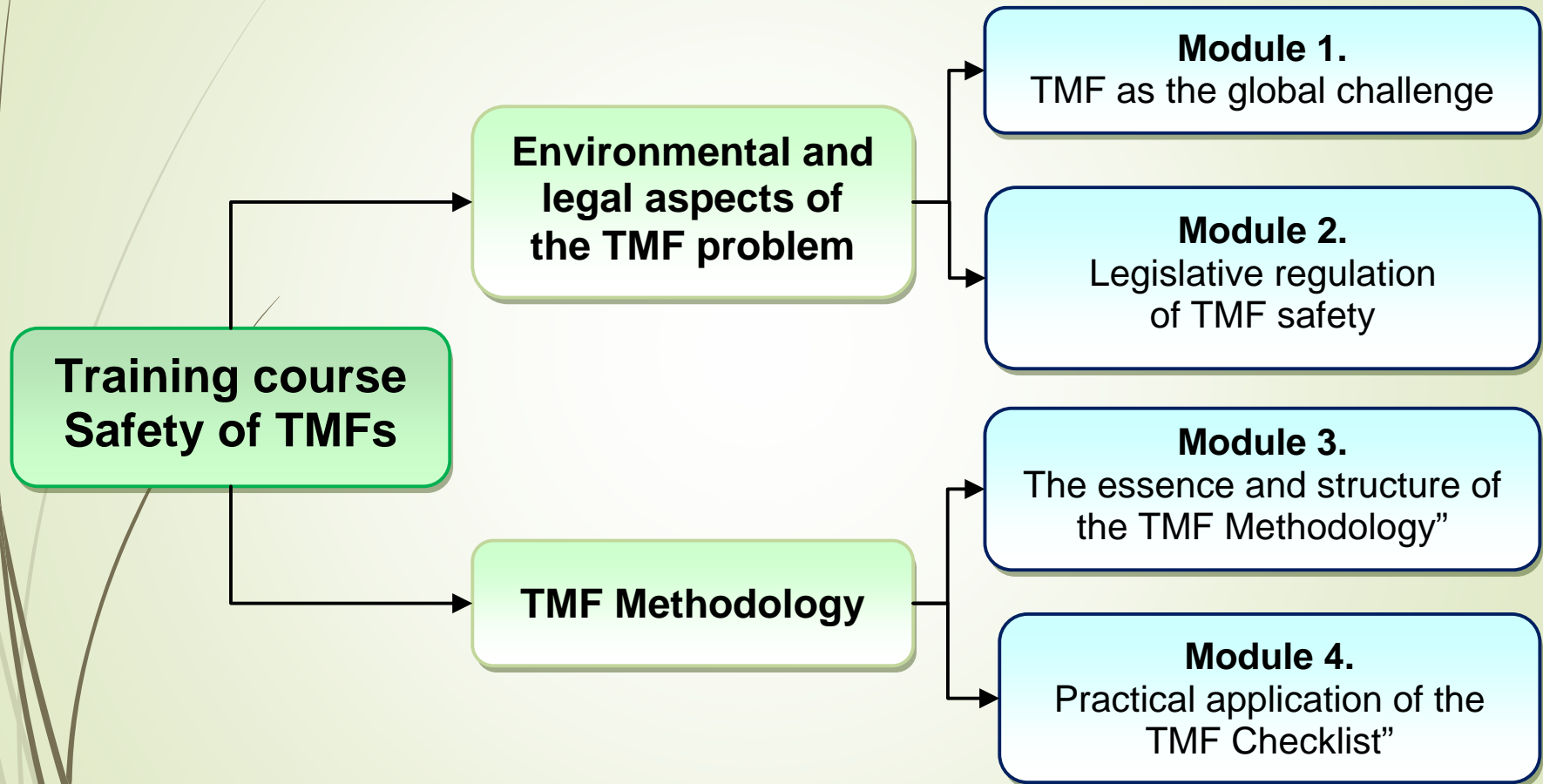


Duration

- June 2016 – November 2017

Educational course content

16



JEG Workplan 2017 -2019

2. Safety of TMF in the Caucasian Region

- Follow-Up Project in cooperation with Georgia and Armenia
- Ukrainian Experts:
 - Practical Training of Inspectors and operators with the Checklist-Methodology on the Safety of TMF
 - Proposal for the Legislative Implementation
 - TMF Risk-Inventory

JEG Workplan 2017 -2018

3. JEG Cooperation with the International Commissions for the Protection of the Danube River

- The ICPDR APC Expert Group proposing a follow up on TMF safety in the ICPDR countries, led by Ukrainian Experts
- Project Proposal (2019 – 2020) to the German Environment Agency

Summary ongoing Activities

- **Response Exercises**
 - Odra, Germany/Poland (4 September, 2017),
 - Danube, Hungary (May, 2018)

- **Raising knowledge at Universities**
 - (NMU, Dnipro, – Final Workshop, 16/17 May, 2017)
 - On-line training methodology

- **On-site Trainings (TMF) in Georgia, Armenia 2018 - 2019**
 - Caucasus Region (authorities and operators)

- **Guidance for Fire Water Retention**



Thank you for Listening!