

TMF safety and the prevention of accidental water pollution in the context of the Sendai Framework for Disaster Risk Reduction

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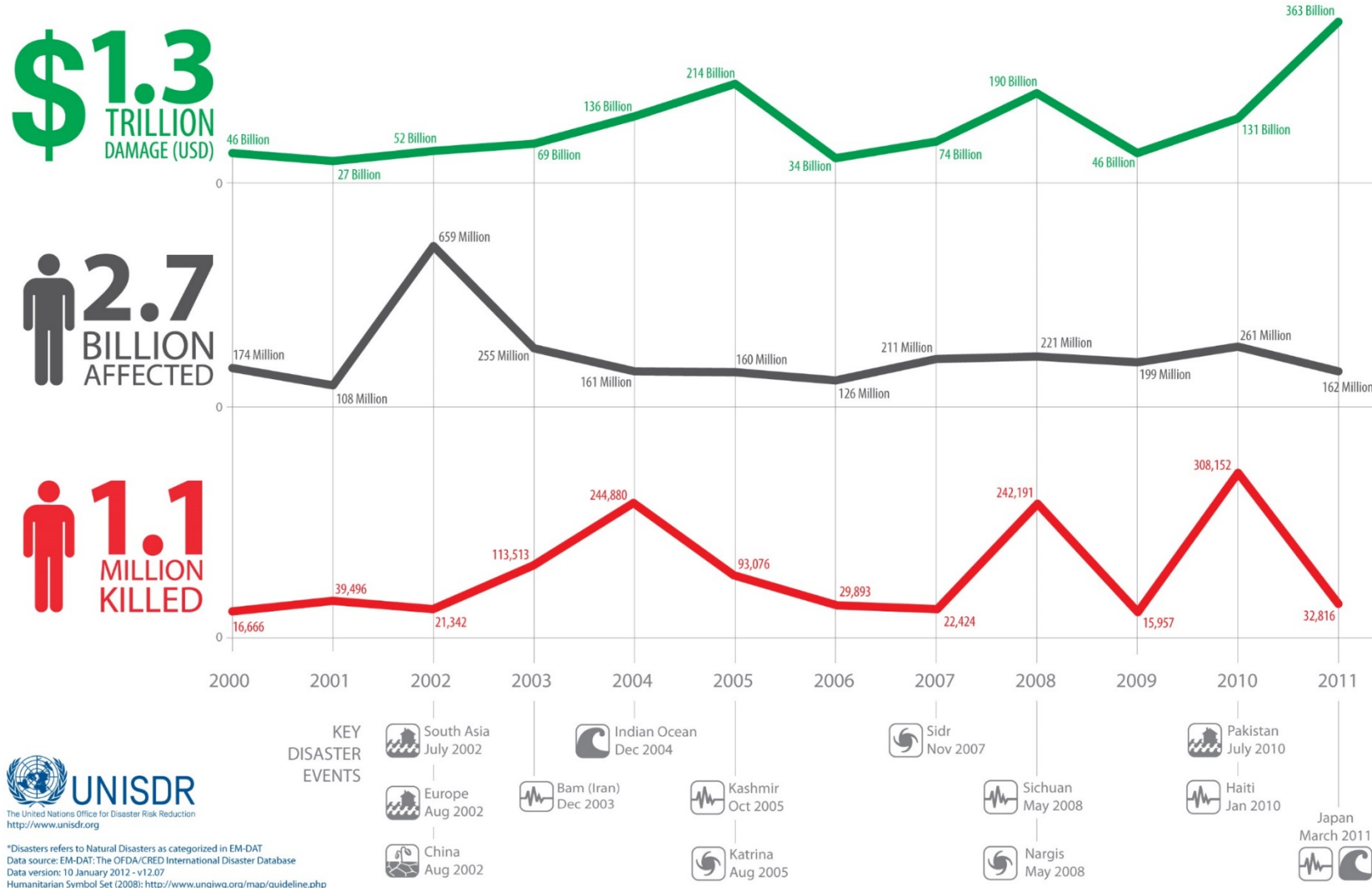
Astana, 7.-8.11.2018

What will be this presentation about?

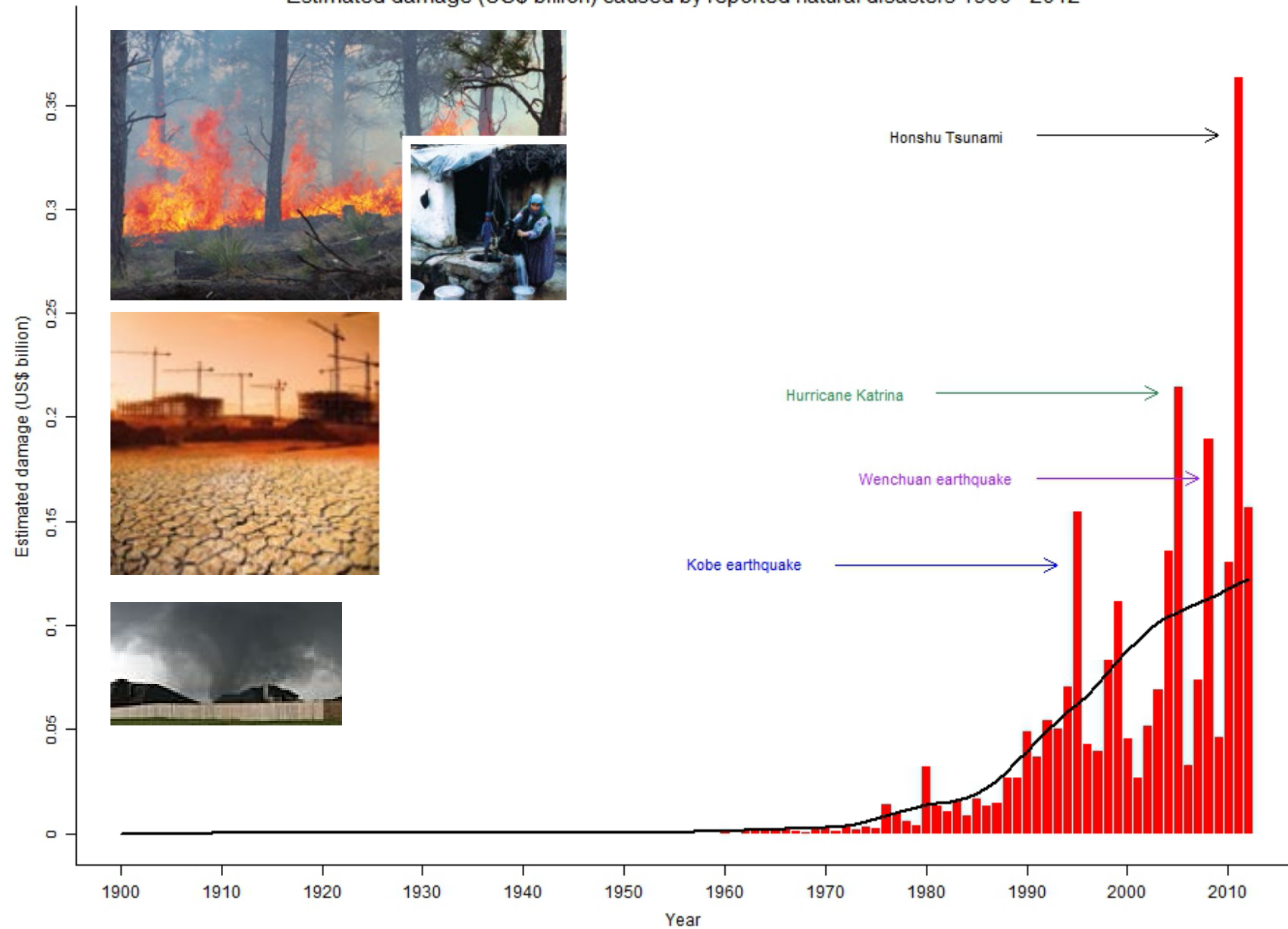
- Why disaster risk management?
- Development in global strategy of disaster management
- Sendai Framework
- Natural and technological disasters combination
- Tailing accidents as so called NATECHs
- Conclusions

Why disaster risk reduction?

The Economic and Human Impact of Disasters* in the last 12 years



Estimated damage (US\$ billion) caused by reported natural disasters 1900 - 2012



Technological disasters reported 1900 - 2012



Short history of global DRR

- Yokohama Strategy and Plan of Action for a Safer World 1994
- Hyogo Framework for Action (2005-2015)
- Sendai Framework (2015 – 2030)

Yokohama Strategy principles(1994)

1. Risk assessment is a required step for the adoption of adequate and successful disaster reduction policies and measures.
 2. Disaster prevention and preparedness are of primary importance in reducing the need for disaster relief.
 3. should be considered integral aspects of development policy and planning at national, regional, bilateral, multilateral and international levels. Disaster prevention and preparedness
 4. The development and strengthening of capacities to prevent, reduce and mitigate disasters is a top priority area to be addressed
 5. Early warnings of impending disasters and their effective dissemination using telecommunications, including broadcast services, are key factors to successful disaster prevention and preparedness.
- + 5 others...

Hyogo Framework for Action (2005-2015) priorities

- Making **disaster risk reduction** a priority;
- Improving **risk information and early warning**;
- Building a **culture of safety and resilience**;
- Reducing the risks in key sectors;
- Strengthening preparedness for response.



Sendai Framework (2015-2030)

- **Implementation of Sendai Framework priorities:**
 - 1. Understanding disaster risk;
 - 2. Strengthening disaster risk governance to manage disaster risk;
 - 3. Investing in disaster risk reduction for resilience;
 - 4. Enhancing disaster preparedness for effective response
- **Both fast-onset (crisis management) and slow-onset (sustainability) involved**
- **National and international activities**

SENDAI Framework – Following actions

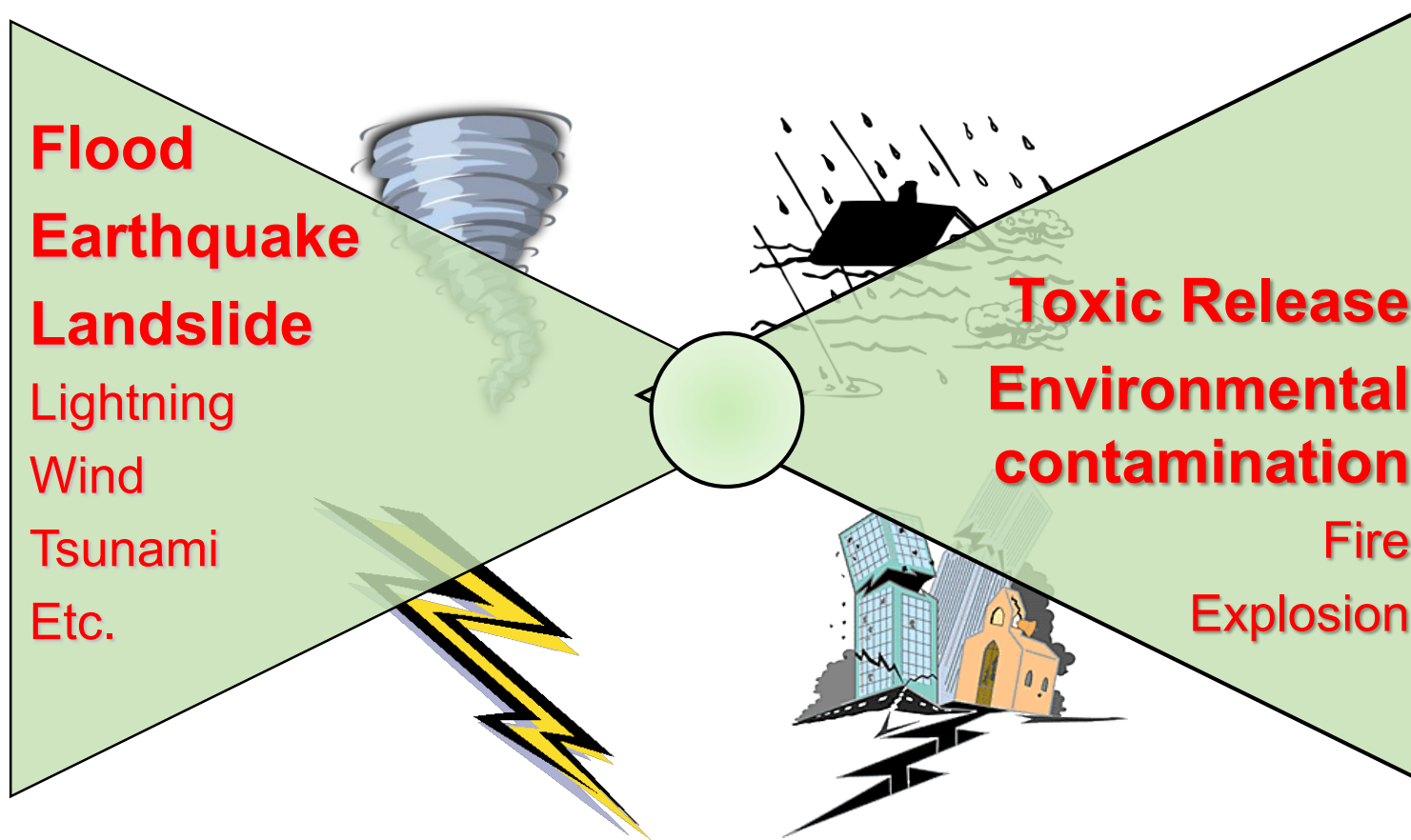
OEIWG – Open-Ended Working Group on Terminology and Indicators for DRR

Global Capacity Development Strategy in support of the implementation of the Sendai Framework for Disaster Risk Reduction



What is it „NATECH“?

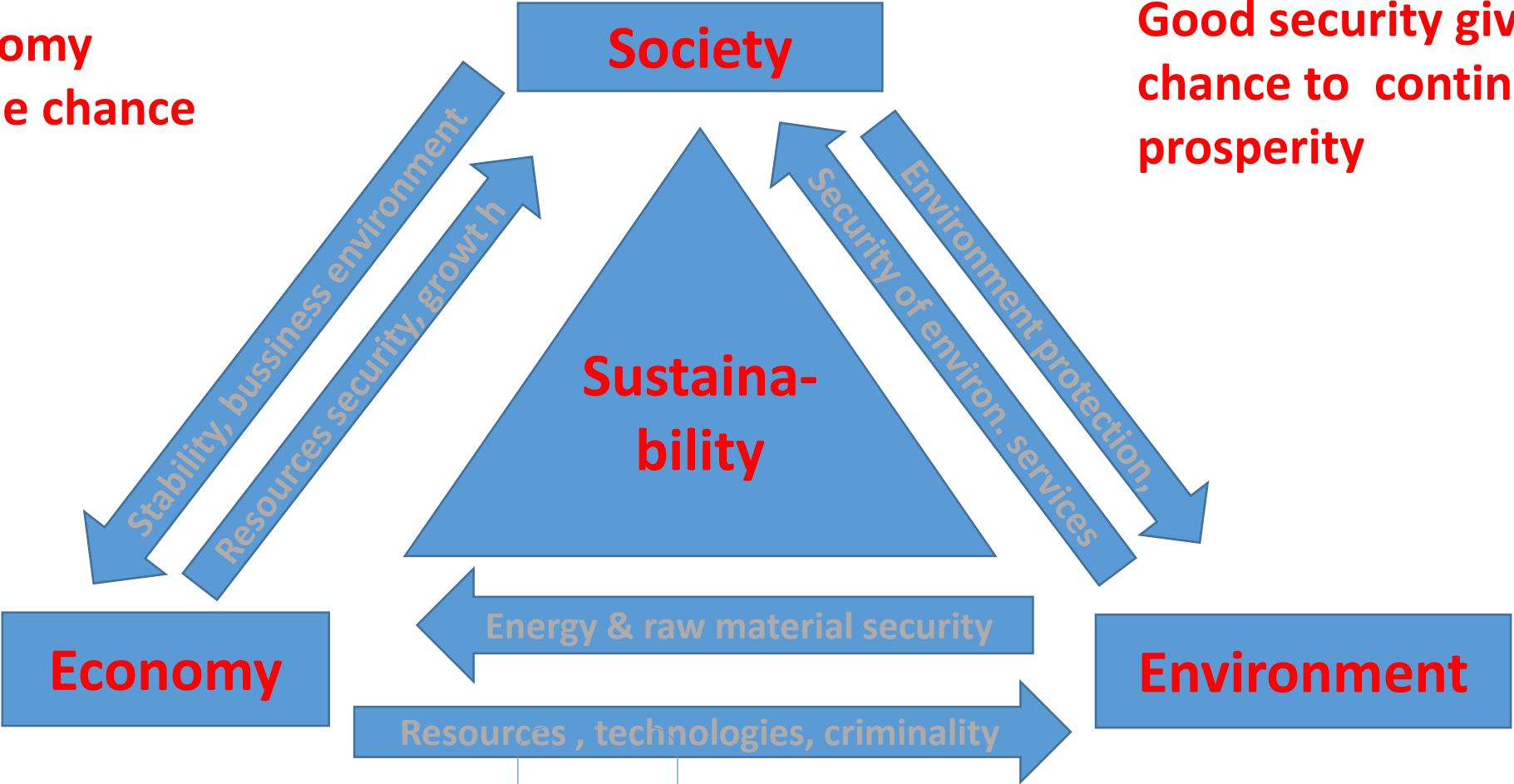
Natural hazard triggered technological accident



Security aspects of environment and economy in sustainability

Good economy
gives us the chance
to prosper

Good security gives us the
chance to continue in
prosperity

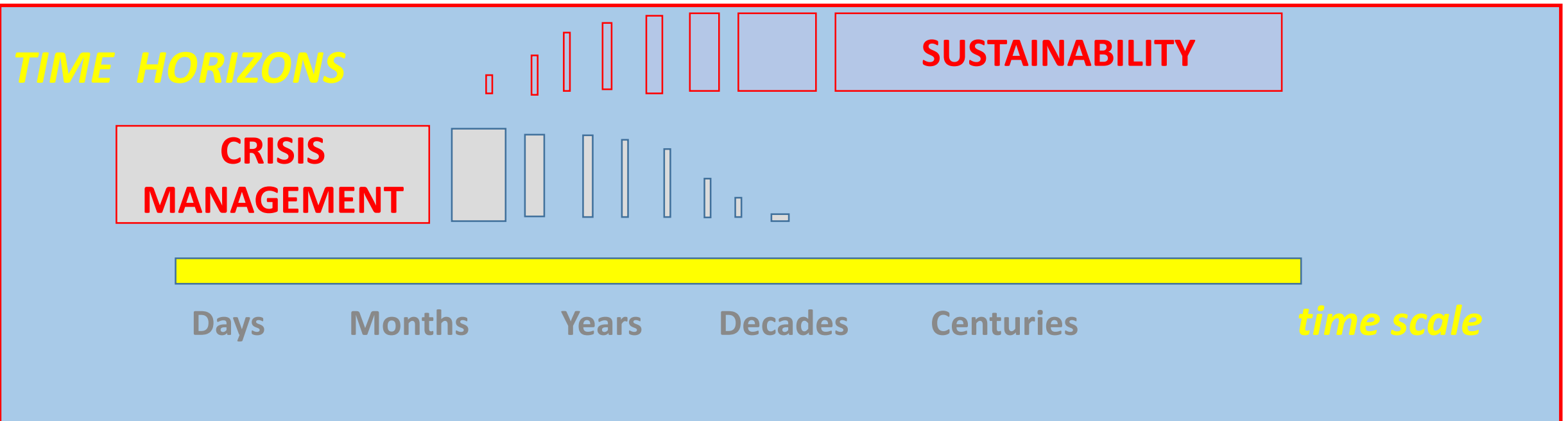


Time/space/competence horizons of environmental security

SPACE HORIZONS

local → state → international dimension

global → state → local dimension



COMPETENCE

Ministries of Interior, environment

Counties, municipalities

Ministries of reg. development, industry, agriculture, health, environment, local governments...

Bussines, NGOs,

International dimension

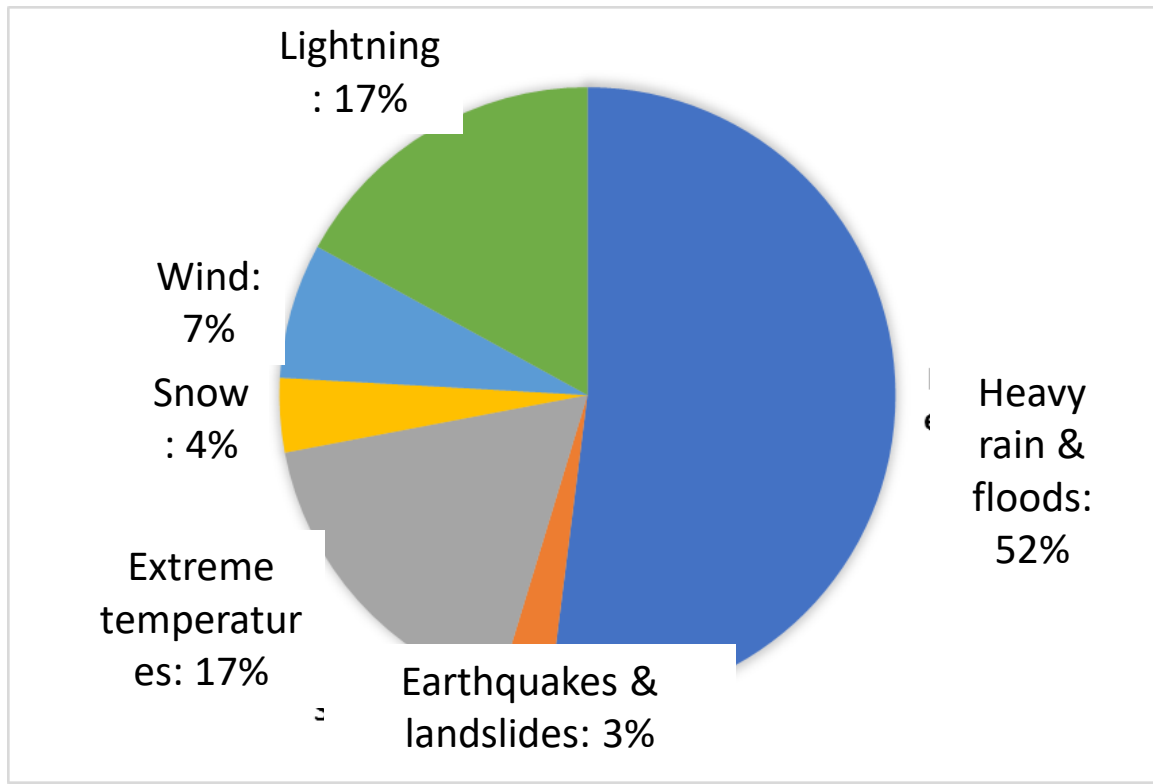
- Environment problems do not respect borders, frequently are between countries and conflicting → Increased security concern



- OSCE environment and security priority areas (2016)

French experience – database BARPI /MoE

- Natural events trigger about 5% of the known industrial accidents in France
- The BARPI lists 920 NaTech accidents between 1992 et 2012 in its ARIA database.



Tailing accidents as combined risk:

- Tailing is endangering environment – water pollution, soil pollution,
- Nature is endangering TMF – overtopping, slope stability, earthquakes, landslides

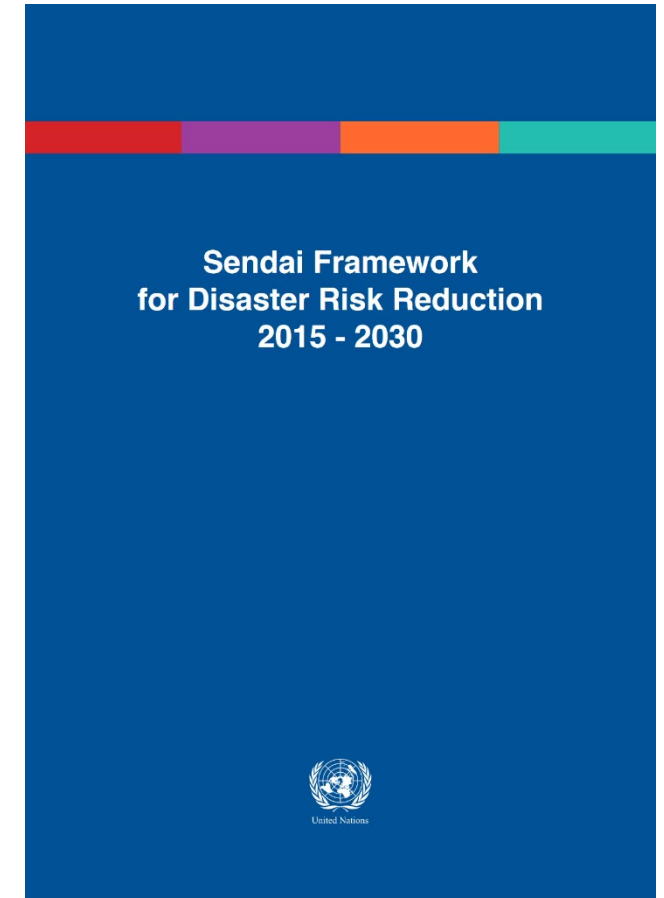


Near-miss in Czech : Ostramo waste (liquid + mud) oil deposit



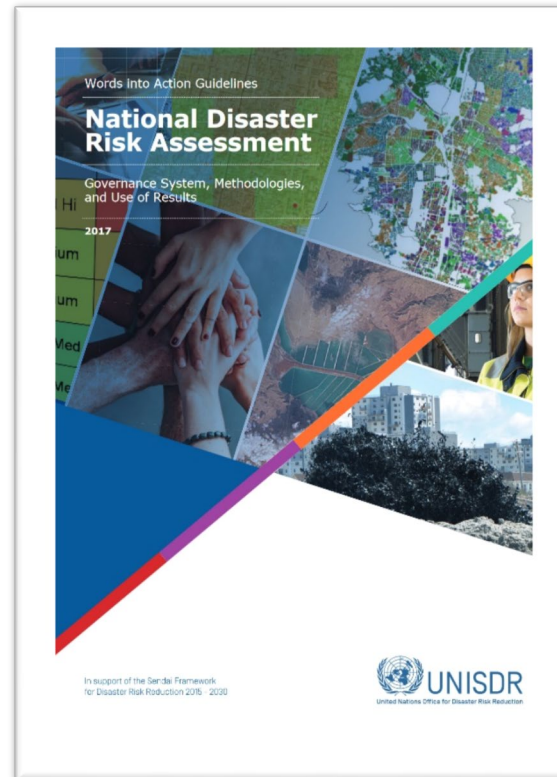
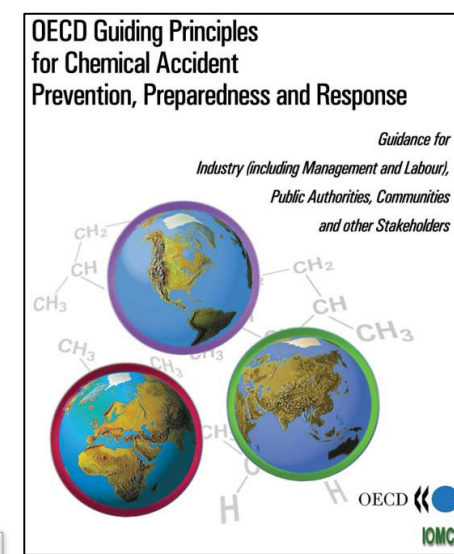
The Sendai Framework and TMF accidents

- **Move from disaster management to disaster risk management**
- **All-hazards and multi-stakeholder approach**
- **7 Global Targets**
- **4 Priorities for Action**
 1. Understanding disaster risk
 2. Strengthening disaster risk governance to manage disaster risk
 3. Investing in disaster risk reduction for resilience
 4. Enhancing disaster preparedness for effective response and to “build back better” in recovery, rehabilitation and reconstruction

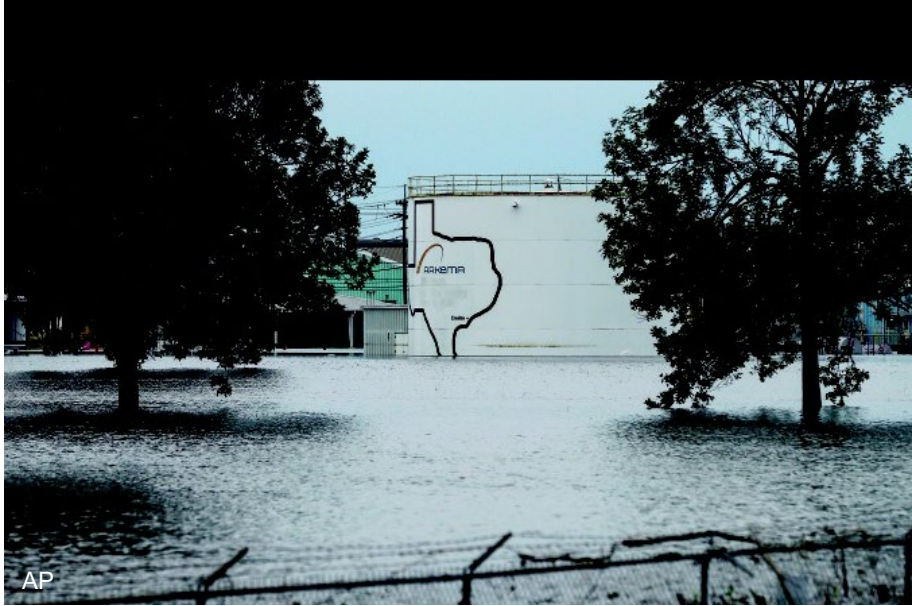


Other international actions

- **UNECE TMF Guidelines** (to be discussed later)
- The OECD Guiding Principles on Chemical Accident Prevention, Preparedness and Response: Chapter 18 Natechs (2nd Addendum 2015)
- UNISDR actions



Influence of the climate change?



“Certainly, we didn’t anticipate having six feet of water in our plant.”

Arkema President



Source: US CSB

Development of UNECE guidance materials

- Guidance on Land-Use Planning, the Siting of Hazardous Activities and related Safety Aspects
- Overview of Methodologies for Hazard Rating of Industrial Sites
- Sectoral Checklist for Preparation and Inspection of a Safety Report
- Guidelines (to the Sectoral Checklist) for Preparation and Inspection of a Safety Report
- Safety Guidelines and Good Practices for Tailings Management Facilities and Oil terminals
- Improving the safety of industrial tailings management facilities based on the example of Ukrainian facilities



Conclusions

- Risk management is today one from the most important tools of disasters risk reduction
- TMF are included inherently to the disaster risk reduction
- TMF accidents are frequently „combined risks“ or NATECHs
- UNISDR Sendai Framework fully involves TMF risks, as well as UNECE and UNISDR

Thank you for your kind attention