# Public assessment of the emergency preparedness and response in the nuclear field
# An overview of the NTW analysis

Virtual Workshop

"10 years of EP&R improvements from Fukushima accident impacts to transborder European harmonisation and current state

17 and 18 Novembre 2021

# The post-Fukushima context : what has changed in Europe?

- The Fukushima accident in March 2011 has intensified European concerns about EP&R:
  - The EC & ENSREG initiated stress tests (safety) and off-site EP&R?
  - At this occasion civil society organisations pointed out the need to assess the off-site EP&R,
  - HERCA formed a working group on “Emergencies” in June 2011,
  - In 2012, the Aarhus Convention & Nuclear (ACN) process organised 2 European roundtables respectively on post-accident (February 2012) and on nuclear safety (December 2012),
  - In 2013 DG ENER commissioned a “Review of current off-site nuclear emergency preparedness and response arrangements in EU member States and neighbouring countries”.
  - In November 2013 NTW decided on EP&R WG,
  - In late 2014 WENRA and HERCA published new AtHLET approach : extension of EP&R provisions.

# Emergency Prepardness and Response (EP&R) Working Group (WG)

- EP&R working group was established with creation of NTW in November 2013
- The aim of EP&R WG is:
  - to carry out an evaluation of EP&R provisions from the civil society point of view,
  - identify main needs for improvements of existing EP&R provisions
  - to provide guidance for further activities of the interested public

- 10 countries (Belgium, Bulgaria, Czech Republic, France, Germany, Ireland, Luxembourg, Ukraine, Sweden and Slovenia) and 21 participants from 15 organisations.

# Information collection and analyses of EP&R

a) **international seminars** with expert institutions and international associations,

b) **desk work** to review the national provisions and international requirements,

c) **interviews and questionnaires** with representatives of responsible institutions and members of local populations,

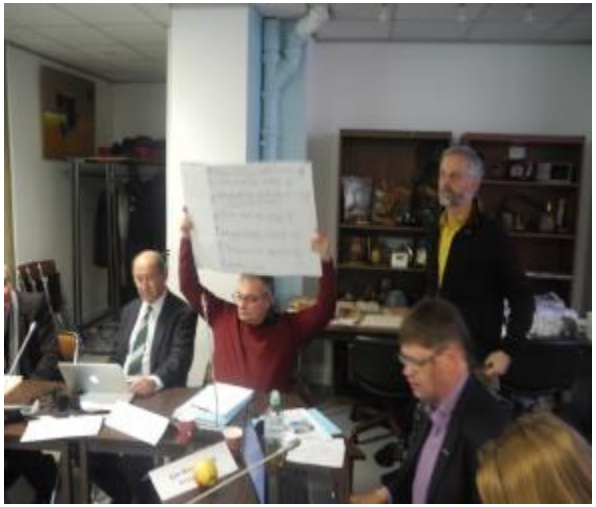
d) **the organisation of trans-boundary roundtables** involving the participation of responsible institutions and civil society,

e) the **investigations performed by the EU institutions** (i.e. the "Review of current off-site nuclear emergency preparedness and response arrangements in EU member states and neighbouring countries" study).

# Main results of Seminars

- **Seminars:**
  - Current EP&R is in practice at best a bureaucratic list of good intentions since plans are not realistic
  - Citizens are insufficiently informed and involved
  - Exercise scenarios are not realistic
  - Plans need to integrate the feedback of Fukushima in order to be realistic
  - National arrangements are too different : in methods, algorithms, models, appreciations of uncertainties, intervention levels and definitions, etc…
  - This lead to distrust in the decisions of the authorities that amplify the seriousness of an eventual crisis situation.
  - Not prepared for communication challenge : multiple sources of information, presumably conflicting, will develop even in the short term. How to communicate?

# WG Inception Seminar
Paris, February 6&7, 2014



# Main results of Desk Work

- **Desk top and interviews/1:**
  - Many different approaches in EU on Emergency Planning Zones, Sheltering, Iodine Prophylaxis, Evacuation, Restrictions to Food and Drinks, Information Provision, Termination of Emergency, Trans-boundary Issues,
  - Almost no real involvement and public participation of civil society organisations in planning
  - Almost no cross-border cooperation in place with some exceptions, but public is not involved,
  - No special sheltering sites are envisaged, possible problems with food supply (48 h) and conditions in houses (ventilation),
  - Law percentage of people in emergency zones (20-50 %) has iodine tablets with theme,
  - Very different levels for evacuations (from 30 mSv to 350 mSv),
  - Evacuation is a challenge (how, in which direction, availability of info, multiple sources of info), but not realistically addressed in drills,

# Main results of Desk Work

- **Desk top and interviews/2:**
  - Decontamination seen as not problematic, but no real proves (the number of people in millions, how to do it, contaminated material management, standards, …)
  - Possibilities for multiple relocation still present, the duration of relocation is underestimated (as learned from Fukushima accident),
  - Possible capacities for food and drinks monitoring are not sufficient in case of large contamination,
  - Communication strategies are to passive and there is a lack of public discussions on the issues,
  - Language barriers for information distribution and dissemination (within the authorities and journalists to the citizens),
  - Trust to the information sources is a challenge all over Europe – more needs to be done.

# Main results of Transboundary RT

- Trans-boundary EP&R Round Tables:
  - EP&R of **NPP Catenom**; Remich , Luxembourg, May 17 2014
  - EP&R of **NPP Temelin**; Hlobuka nad Vltavom, Czech Rep, September 27 2014
  - EP&R of **NPP Krško**; Brežice, Slovenia, October 20, 2014
  - EP&R of **NPP Kozloduy**, Sofia, Bulgaria, January 19 2015
  - EP&R in **Ukraine,** Kyiv, Ukraine, January 26 2015

- Objectives:
  - To **bring together key stakeholders** to discuss state of the art of national and trans-boundary provisions, practices and challenges
  - To **encourage concerned citizens, citizen‘s initiatives and NGOs** in respective countries and provide them basic information, also on lessons learned from Fukushima and on-going EU activities in the field
  - To **support the cross border cooperation on trans-boundary EP&R issues** between citizens and authorities

# RT Krško, Brežice, October 20



# Main findings from the RTs

- **Lack of participation of local inhabitants and municipalities (RT** Cattenom, Temlin)
- **Good collaboration with official institutions (**although low level of information about the provision in Slovenia and even lower in Croatia has observed)
- **EP&R plans are based on rationality** of a planned top down administrative actions that **does not match with the chaotic reality**
- **Information strategies and capacities seems to be the weakest point of EP&R activities**
- There is **question of reality of scenarios** upon which the responses are based**, limited exercises.**
- **Trans boundary EP&R provisions are few and hampered by inadequate procedures and/or languages skills of responsible personnel**

# Main findings in investigations performed by EU

- Evaluation of national EP&R provisions
  - EP provisions remains outdated, inadequate, delusional
  - Evacuation (large scale) not possible in many cases
  - Lack of efficient radiation monitoring devices
  - Lack of local authorities (and local population) awareness and training
- Assessment of Plans, including involvement of Citizens
  - Lessons of Emergency exercises & drills are limitedly taken into account
  - Lack of radiological expertise among frist responders, late transfer of data or lack of it, operational rooms for comand,…
  - Poor mantainance of Emergency plans
  - No independent review or evaluation of plans
  - CS not involved in planning
- Emergency information
  - Total lack of communication between different concerned administration
  - No use of new media for information dissemination
  - Communication and notification lines for responsible are not entirely working.

# Main findings in investigations performed by EU

- Trans-boundary dimension of nuclear accidents
  - EP&R is dealt at national level, with little trans-boundary cooperation
  - Difficulty to  bring together all the players across boardes in order to discused EP&R
- Post-accident consequences
  - Nuclear accidents have (very) Long Term complex consequences that need to be addressed
  - Post-accident situations necessitates complex recovery processes involving the population
  - Only addressed by very few countries today (like France), with minor scenario – difficulties of local implementation, especially in case of trans boundary situation
  - Need for clarification of food standards and their harmonisation
- On-site emergency management
  - Questions on the availability of human resources
  - Protection of workers which was evident during Fukushima accident
  - Availability of technical tools

# Main findings in investigations performed by EU

- Nuclear liability
  - Abyssal gaps between accident costs and existing insurance provisions
  - Need for investigations on actual costs of accidents based on recent Fukushima experience (compensation)
  - Public liability replaces private liability?

# Main recommendations

- Need for detailed CSO evaluation of EP&R provisions in each country
- Need for CSO and public engagement in planning and management at local, national and trans-boundary levels
- Harmonise emergency provisions (emergency zoning on evacuation, sheltering, iodine distribution)
- Need for developing a legal framework involving CSOs at preparation and decision
- Develop a EU wide policy on EP&R – EC should take the lead (like for updating of nuclear safety after Stress Tests)
- Need for appropriate resources for CSO and local communities to be involved
- Need for quality control procedures (QA/QC) including feed-back of new events, exercises & drills (learning process)
- Reconsider evacuation process in the case of large urban area
- Integrate rescue and radiation experts in civil protection staff
- Train medical staff
- Finance research activities in this area
- Develop Medium - Long Term post-accident policies
- Create a CS-EP cooperation to investigate liabilities for NPPs accident

# Conclusions

- Usual top-down approach in EP&R should be changed and local populations and interested CSOs should be involved in this development.
- Public participation would increase the scope, reduce the use of false or outdated presumptions and/or data, steepen the learning curve necessary after the Fukushima experiences and overcome cross-border obstacles.
- The EU Parliament, the EC, national governments and authorities should therefore together with nuclear operators provide access to relevant information as well as support participation in emergency preparedness and response planning of interested citizens CSOs.

The aims is that people (and CSO) are partners in EP&R since they are really those who are in nuclear events affected.