

EP&R activities - SLOVENIA

Meeting
9-10 June 2014
Brussels, Belgium

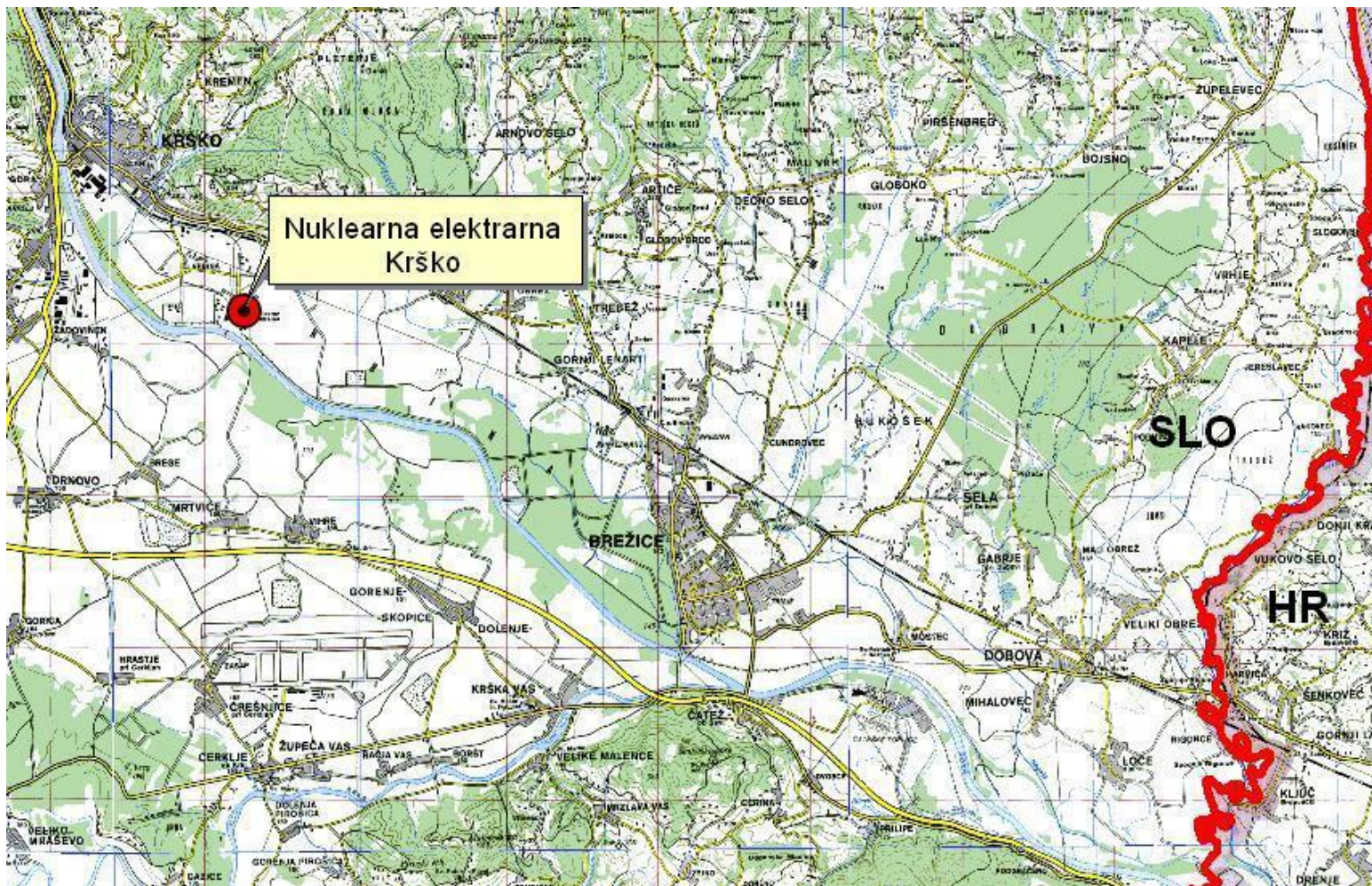
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Nuclear power plant Krško

- NPP Krško:
 - PWR, Westinghouse, app 700 MW electrical
 - Co-owned 50 : 50 % between Slovenia and Croatia
 - Located in SE of Slovenia near city Krško,
 - Cities :
 - Krško (3 km), Brežice (6 km), Brestanica (7 km), Kostanjevica na Krki (13 km), Sevnica (18 km), Novo mesto (32 km), Ljubljane (70 km), in Slovenia
 - Zagreb (35 km) in Croatia
 - On site: 121 FA in core, SF pool with app. 900 spent fuel assemblies (16x16 rods in 1FA, 3.67 m long, UO₂, enrichment up to 5%), damaged FA in the pool.
 - Refueling every 18 months now: app. ½ of core removed.
 - Theoretical prolongation of life time from 2023 until 2043 approved,
 - Plans for LILW repository next to NPP, dry storage for SF on site, new NPP built??,
 - SF and HLW disposal after 2065.

Location of NPP Krško



EP&R arrangements in Slovenia

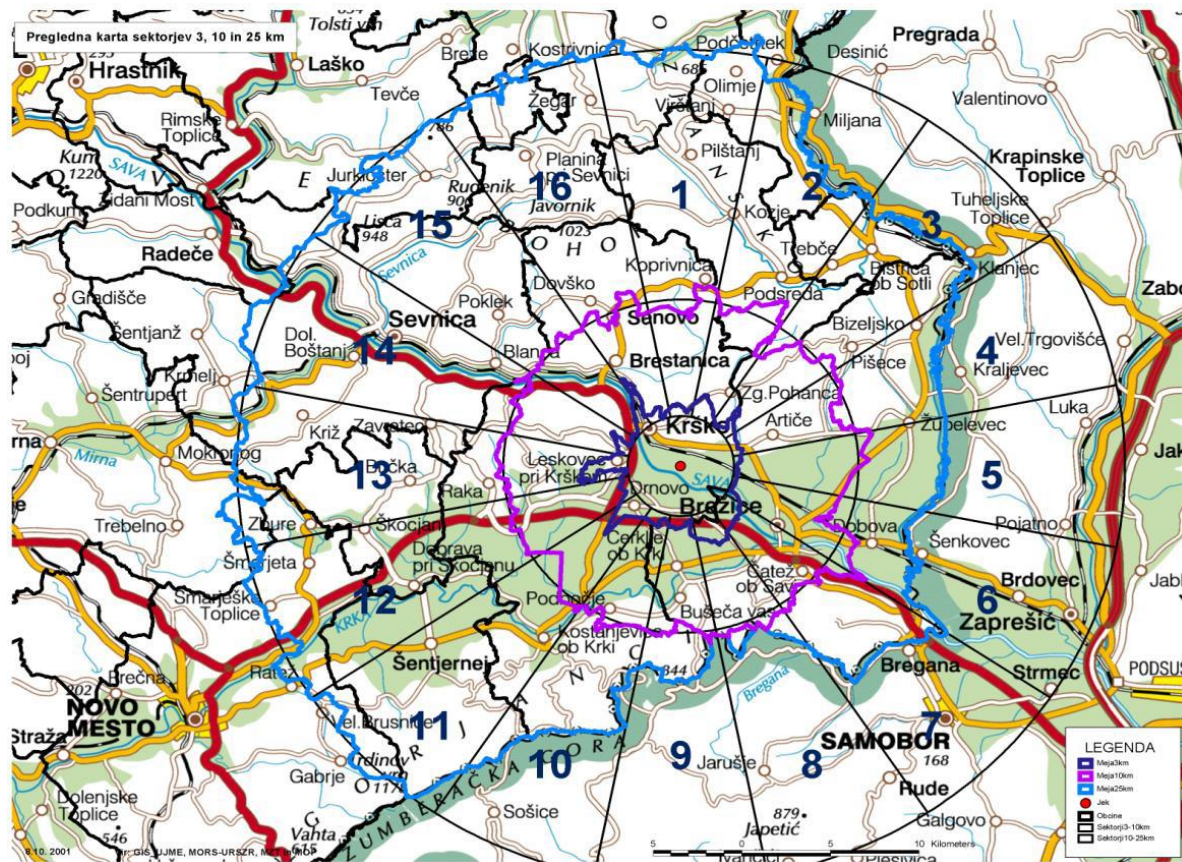
- State emergency preparedness and response plan in case of nuclear or radiological accident, version 3, 2010, novelation 11/2013
- Municipality Krško EP&R plan, version 3, October 2012
 - Mayor of Krško Franc Bogovič: „... In independent Slovenia there is less attention for this as in previous times.“ (2008)
 - But Krško successfully implemented the EU project „Preparedness on the evacuation in case of nuclear accident“ connecting 3 cities of Krško, Zagreb and Cernavoda (Romania) and a number of institutions
- Municipality Brežice EP&R plan, version 3, December 2013
 - Majority of population in radius 10 km, prevailing wind direction
- Regional EP&R plan for Posavje, version 3, 2011
- Plans at SNSA, NPP, other nuclear operators

Emergency planning zone

Slovene provisions

- Precautionary action zone (PAZ) = 3 km
- Urgent protective action zone (UPZ) = 10 km
- Long term protective action zone (LPZ) = 25 km
- Transboundary effects
- A lot of population in Croatia within LPZ

Croatian are now starting with defining limits



Challenges -1

- Discussions with responsible at Slovene nuclear safety administration (regulatory body), at Administration for protection and rescue (state responsible administration at Ministry of defense), at regional administration.
- Many exercises – 700 working hours in 2013 – from very simple (telephone connection drills), to real exercises of on- and off- site EP&R
- Problems:
 - Monitoring preparedness:
 - only 1 team of authorized and competent persons, in case of long term needs, there would be a problem,
 - Sufficient equipment for measurements (calibrated and certified)
 - Decision making system is not in place (transfer of data)
 - No GIS in support
 - Management of response without expert (radiological)
 - Communication and notification:
 - Changes in the field (based on measurements) and transfer of information (1 h delay)
 - Notification from state responsible administration
 - No constant operational room for EP&R at premises (in Ljubljana)
 - Wrong contacts on the list (yesterday example)

Challenges -2

- Problems:
 - EP&R at municipalities Brežice and Krško
 - No proper preparedness, no local media (radio) for informing
 - 1 person for 5 EP plans in 1 municipality
 - Iodine prophylaxes – leaflet distributed in summer 2013 (after 30 years of NPP operation), only 16 % of population took the tablets in 10 km zone
 - Exercises
 - Many remarks, but problems with implementations
 - Conclusions are not taken in the novelation of plans
 - Only limited to Slovenia territory, although in LTZ a lot of population in neighboring Croatia
 - Medical support:
 - At Clinical center in Ljubljana proper equipment for only few people
 - No agreement with other medical centers
 - Trans boundary arrangements
 - First discussions on cross border cooperation in January 2014
 - case of refusal of „contaminated“ person to be taken to Zagreb hospital
 - QA/QC (maintaining the plans, or new plans)
 - Poor maintenance,
 - No improvement based on drills and exercises
 - Some plans are missing (Ministry of Agriculture and Environment, Ministry of Health)

Preparedness on the evacuation in case of nuclear accident: NPP Krško - results

- Opinion survey conducted in October 2012, University of Ljubljana:
 - random in the population within 3 km from NPP with N=502
 - additional interviews with 12 directors/heads of Krško institutions and companies
- Material in the survey:
 - Perception of threats
 - Assessment of the probability of a nuclear disaster
 - The preparedness to evacuate
 - Response to warning
 - Behaviour during evacuation
 - Transportation and temporary housing
 - Trust in institutions

[Some results from survey]

- Perception of threat of nuclear accident: 2.59 out of 4 (more women, married, family members with disabilities)
- Evaluation of likelihood of nuclear disaster: 52.6 % believe that such a disaster is unlikely (30 % likely or probably - lower education, income)
- Knowledge of protective measures in the event of nuclear disaster: only partly familiar with measures (more than 50 % not or only partly)
- Preparedness to evacuate: more than half do not have knowledge of basic key information (distributed by municipality in 2008), 71 % do not know the place of their reception, 66 % do not know the evacuation routes
- Preparedness in local institutions: organisation of evacuation would be a problem, not included in drills, no protective equipment

[Round table]

- Cross border aspects – Krško NPP and all near communities including Croatia
- October 2014, in Krško or Brežice
- Invited:
 - Official institutions: civil protection responsible, regulatory bodies in Slo and Cro, police, fire protection,.....
 - municipalities,
 - NGO,
 - Civil society
 - Guests (NTW,...)
- To obtain responds for EP&R arrangements from the civil society and to improve the system in the future
- Costs: some minor amounts for travel expenses of representatives from civil society, coffee, 1000 €

Activities

- Review of status of preparedness with evaluation of plans, discussion with responsible organization and responsible individual – analyses and interviews
- Review of research already performed – surveys results
- Obtain respond from the questionnaire developed in the EP&R methodology
- Round table on Trans boundary issues Slovenia, Croatia,
- Preparation of report according to the format for Slovenia:
 - analyses of the situation, results from discussions,
 - results from questionnaire,
 - comparison of the EC study - examining the reality of EP&R by national investigations with involvement of responsible and affected people (experts, fire brigades, mayors, local population, NGOs, citizens, etc.),
 - Outcomes from the Round tables,
 - Suggestions and recommendations,