

# Short presentations regarding EP&R national priorities, national action plans and possibilities of trans-boundary/regional activities - SLOVENIA

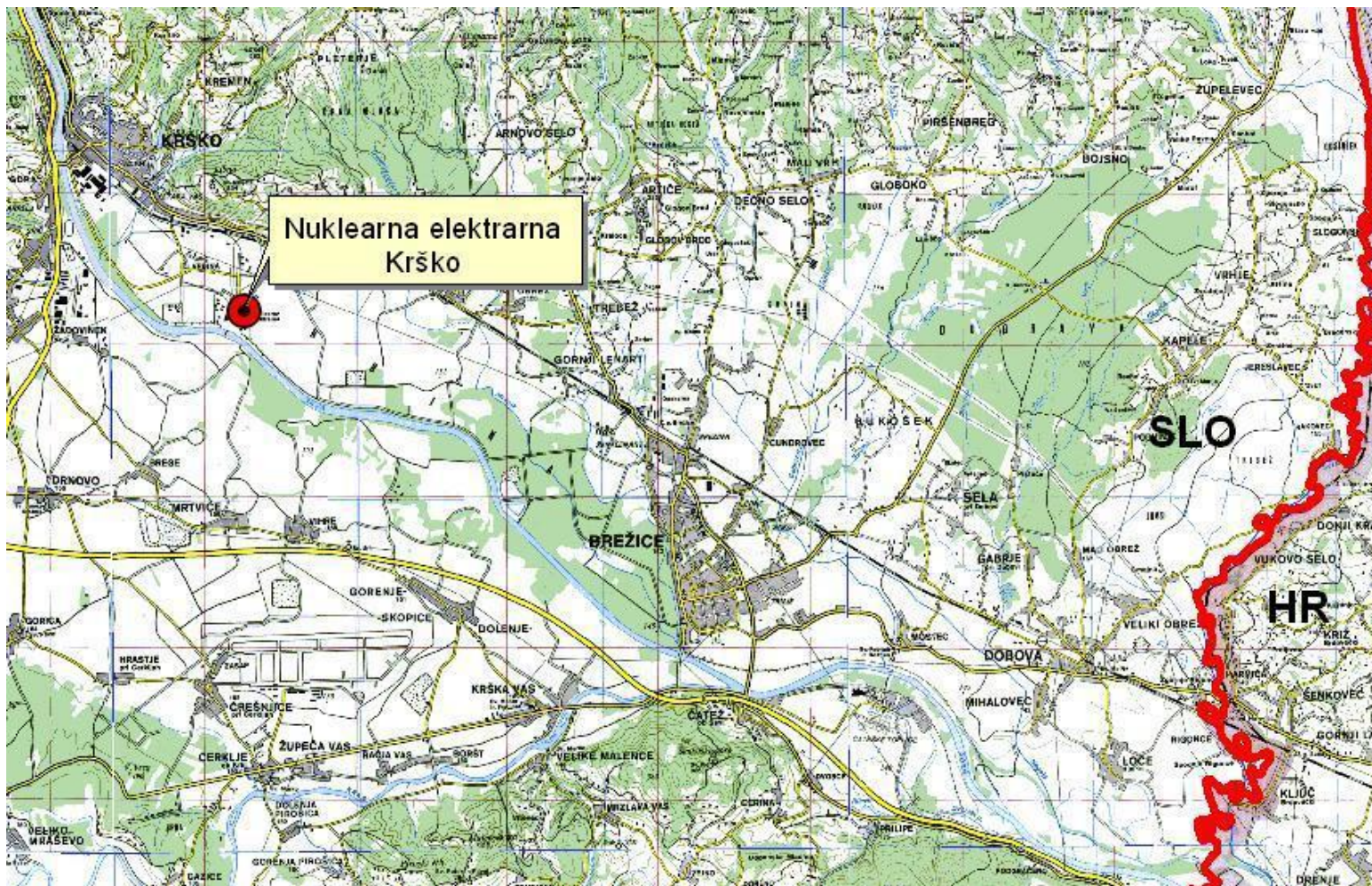
Inception seminar  
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Paris, France

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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,
  - Other 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, UO<sub>2</sub>, enrichment up to 5%). Also LILW storage.
  - Refueling every 18 months now: app. ½ of core removed.
  - Teoretical prolongation of life time from 2023 until 2043.
  - 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

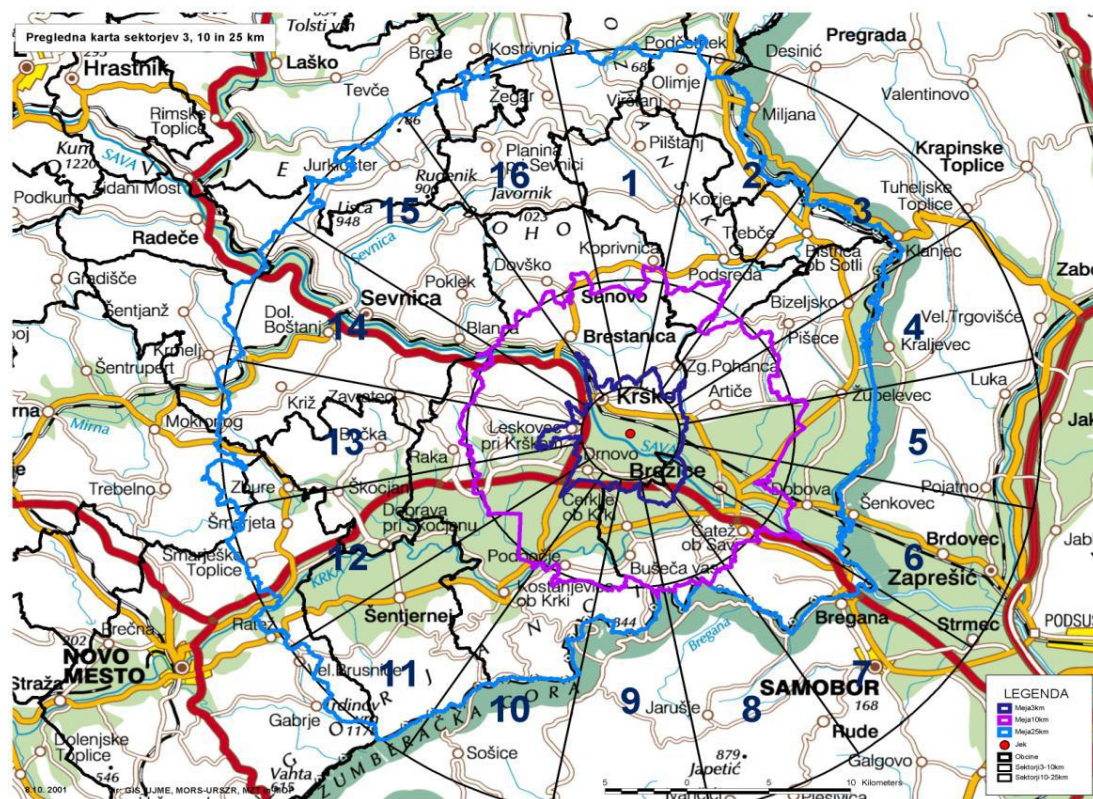


# EP&R arrangements in Slovenia

- State emergency preparedness and response in case on 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 sucsefully implemented the EU project „Prepardness 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, preveiling wind direction
- Regional EP&R plan for Posavje, version 3, 2011

# Emergency planning zone

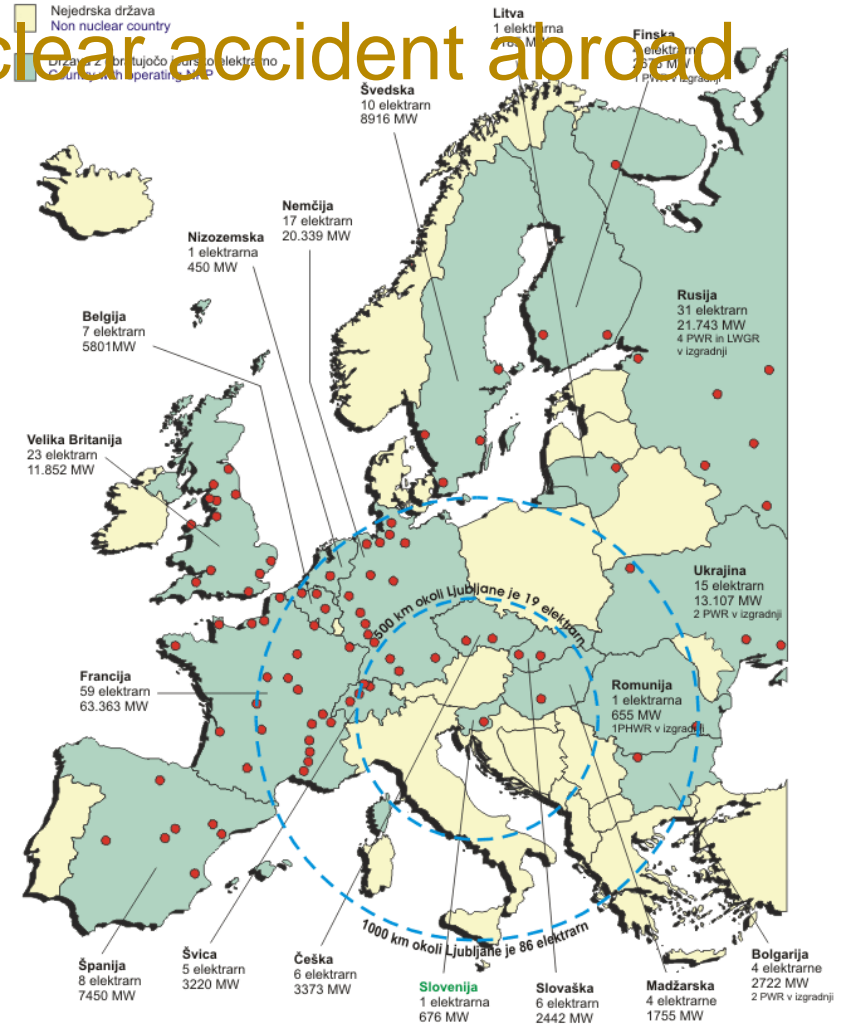
- Precautionary action zone (PAZ) = 3 km
- Urgent protective action zone (UPZ) = 10 km
- Long term protective action zone (LPZ) = 25 km
- Transboundary effects
- A lot of population in Croatia within LPZ



# Jedrske elektrarne v Evropi

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# EP&R in case of nuclear accident abroad



- Long term protection measures:
  - evacuation,
  - decontamination
- Food restriction measures
- Prompt measures:
  - Measurements of radiation,
  - Use of protection equipment
  - Decontamination
  - Iodine prophylaxes

Stanje avgusta 2006 po podatkih Mednarodne agencije za atomsko energijo.  
Status as of August 2006 as reported to IAEA.

Na eni označeni lokaciji je lahko tudi več reaktorjev.  
Each indicated location can represent several reactors.



# 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 authorised 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)
  - 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 profilaxes – leaflet distributed in summer 2013 (after 30 years of NPP operation), only 16 % of population took the tablets in 10 km zone



# Challenges -2

- Problems:
  - 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
    - First discussions on cross border cooperation in January 2014
  - Medical support:
    - At Clinical center in Ljubljana proper equipment for only few people
    - No agreement with other medical centers
  - 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)