

# Nuclear emergency preparedness and response in Ukraine: A first assessment

NTW WG EP&R INCEPTION  
SEMINAR

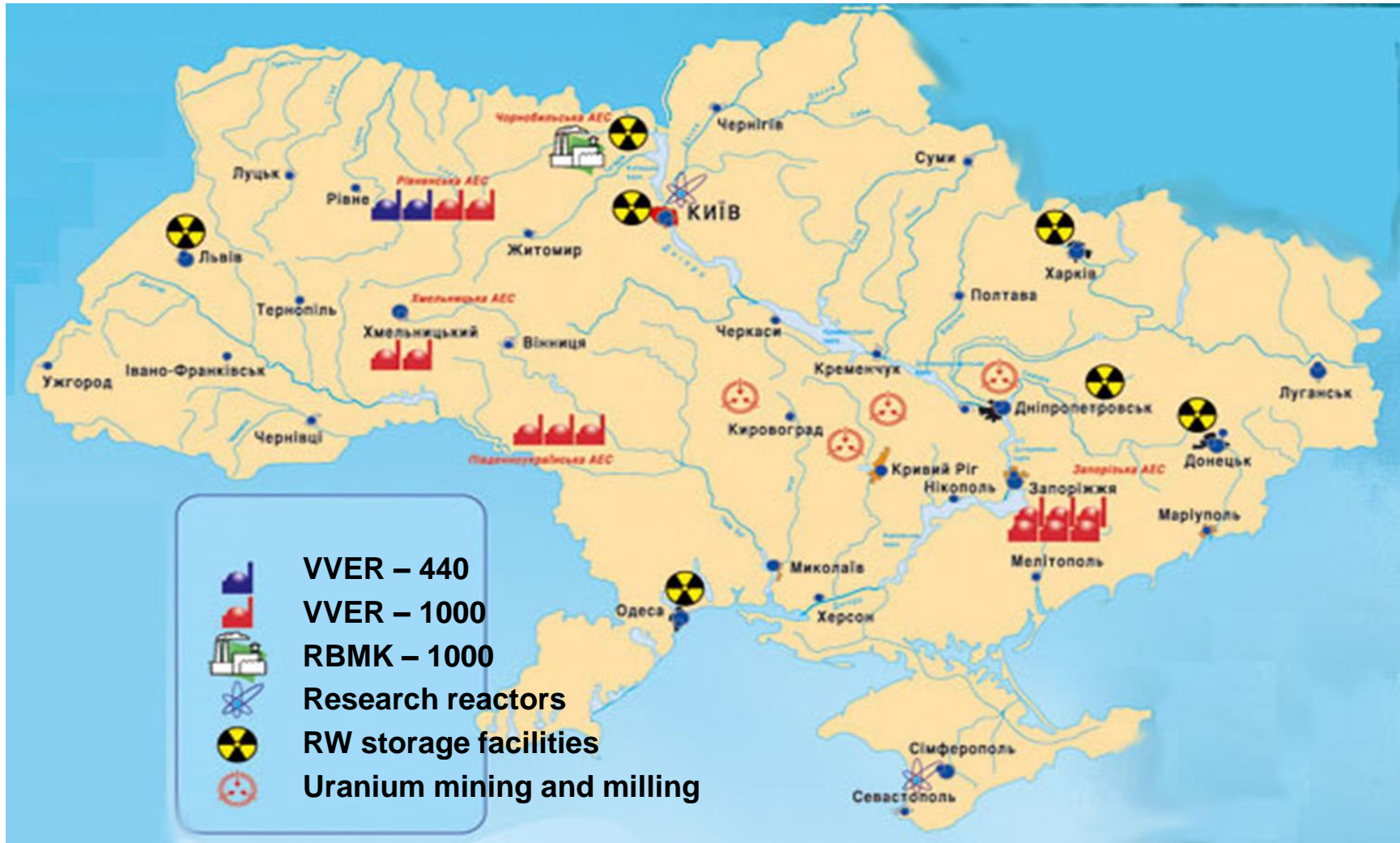
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# The nuclear sector in Ukraine





# Nuclear security risks increasing

- The lifetime of 12 out of 15 NPP blocks will expire until 2020 (general decision to extend it)
- Decisions to extend the lifetime/build new NPPs are taken with violations of international good practices and Ukrainian commitments under the Aarhus and Espoo conventions
- Khmelnytsky – two new blocks on the basis of old constructions
- Yuzhno-Ukrainsk – lifetime extension of the 1<sup>st</sup> NPP (30 years of operation, 180 accidents, planned measures to improve security not fulfilled)



# EP&R normative ~~mess~~ base

## General conclusions:

- There are many dispersed acts (by-laws) sometimes contradicting each other – no systemic approach
- Some acts were developed in late 80ies after the Chernobyl catastrophe but still valid
- Some acts that are needed are not developed/adopted (not a priority or there is a confusion over the responsibility)

## **But most important**

- Existence of acts  $\neq$  implementation



# EP&R state

- ❑ No comprehensive assessment of the EP&R normative base and the actual implementation/state of preparedness
- ❑ Official reports claim everything is fine (systems are working, emergency plans at hand, trainings conducted)
- ❑ Unofficially experts/public servants say preparedness and response systems are weak (technical means of response, human resources, shelters, forecast systems ?)
- ❑ Failure to establish proper monitoring and warning systems (lack of money), the existing ones are obsolete
- ❑ No EPR awareness-raising among the population of



# EP&R state

- Lack of coordination and clear division of roles among responsible authorities
  - EP&R Department of the State Inspectorate of Nuclear Regulation
  - Ministry of Health
  - State Sanitary and Epidemiology Service
  - State Emergency Service
  - EP Department of Energoatom (operator)
  - EP&R Departments of NPPs
  - Regional/local administrations
- Local actors (self-governance bodies, education institutions, etc.) not aware of their roles
- United state system of executive authorities for man-made EP&R



# Case study: iodine provision

- ❑ Chernobyl accident – failure to provide iodide resulted in a serious increase of thyroid diseases (100 times in affected regions, 8000 thyroid cancer operations of children)

Today:

- ❑ Provision of potassium iodide is alarming:
  - ❑ Rivne region near Rivne NPP - 53 %;
  - ❑ Volyn region near Rivne NPP – 11 %;
  - ❑ Rivne region near Khmelnytsky NPP - 33,7 %;
  - ❑ Khmelnytsky region (Netishyn town near NPP) – 0%;
  - ❑ Zaporizhzhya, Kherson and Dniepropetrovsk region - 100 % but the shelf life of the stock has expired



# Case study: iodine provision

- During alarm tests the timing of the iodine distribution is not examined (Smolensk NPP tests showed that iodine prophylaxis in the zone beyond 25 km started only 10 hours after the “accident”)
- Emergency planning zones are not defined in principle (various documents mention 10km, 15 km, 30 km zones of iodide distribution)
- Instructions on iodide provisions are confusing:
  - 1989 MOH order – pregnant women should not be given iodide (WHO – it is obligatory)
  - 2007 MOH instructions on the use of potassium iodide - infants below 2 years old should not be given iodide
  - SDNR order says it is a priority to provide pregnant women and infants
  - Doses in 3 documents vary and do not comply with those recommended by WHO





# What should be

# done

- A thorough scrutiny of the Ukrainian legislation and its implementation
- Comparison with the EU legislation and good practices
- Encouraging a national/local multi-stakeholder dialogue to discuss the state of affairs
- Focus on information provision:
  - examining emergency communication plans and public awareness-raising programs;
  - polls in the communities close to nuclear sites on their awareness of EP&R measures and sufficiency of the available information, etc.;
  - a national ACN Roundtable on the creation of the national system of nuclear information units (CLIs), including discussion of their role in EPR;
  - Pilot project on nuclear information unit establishment
- Considering Regional NTW Roundtable on EPR



**Thank you for your attention!**  
**We are looking forward to new  
partnerships and further exchange of  
ideas**

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