Superior Health Council

Nuclear accidents, environment and health in the post-Fukushima era: emergency response

Gilbert Eggermont
president of WG EP&R, SHC

Overview of SHC report n° 9235
General assembly SHC, Brussels 10/5/2017
- 11/03/2011
- Still 80 000 evacuees after 6 years
Key Question of SHC Report n° 9235

How might a process of careful preparation prevent or reduce as much as possible the detrimental effects to man and the environment in the event of a serious nuclear accident?

learning lessons from earlier accidents worldwide considering the population density in Belgium and the density of NPP’s: 20 within 100 km
Highest EU nuclear electricity concentration presents a vulnerability
Our working group initiative and approach stimulated safety authorities to take action

7 experts with minor conflicts of interest (+2*, FANC)

Transdisciplinary (7): risk analysis, nuclear safety, radiation protection, environment, radiobiology, (nuclear )medicine, psychology

Medical subgroup on Iodine profylaxis: 1° advice 2015 (SHC 9275)

Ad hoc meetings with specific experts (4+2+3*)
  • Communication and perception
  • Crisis centre (1) Ministry Internal affairs, SCK.CEN/NERIS (1)
  • International: EC (1), Nl (1), Fr (2, ASN)
SHC approved recommendations but EP & R change process is still ongoing 6 years later

- 120p report with executive summary, 20 transversal messages and conclusions, 200 references
  Presented on 9/3/16 to policy makers, press, scientists

- Precautionary strategy for Nuclear Emergency Planning & Response (EP & R)

- Message: more awareness, preparedness and completeness needed in a cross border dimension
The essence of the problem

1. Serious nuclear accident can happen in EU

2. Radioactive dispersion can affect a large region and create anxiety and a spectrum of health effects (II)

3. Environmental consequences last for many years

4. Psycho-social and health impact to be prevented

5. NPP release accident has cross border international impact
Recommendations of the Superior Health Council in a nutshell
Risk awareness and adequacy of action in a broader health perspective

1. Enlarge **risk analysis and vulnerability analysis**:
   - Complexity of technology and organisation measures
   - Scenarios with low probability and large consequences
   - Mobility, chemical risks and population density

2. **Extend planning zones** (part II P. Smeesters)
   - Sheltering, Iodine distribution, evacuation
EP&R is more than a direct emergency action on Belgian territory

3. Develop **long term recovery and relocation strategy**
   - More attention for psycho-social impact
   - Social tissue can be disturbed over decennia
   - Budget for EP&R and liability for huge costs

4. Reinforce **bilateral and European coordination and support**
   - International collaboration is crucial for cross border impact
   - Reinforce Europe in nuclear safety
5. Pay particular attention to the meaning of risk and the impact of perception

Risk is a situation or event in which something of human value has been put at stake with uncertain outcome

- More than facts
- Coloured differently by experts and citizens
- Crisis risk perception requires trust and dialogue

Risk Communication is a confrontation/attempt to bridge opposing perceptions in an open dialogue
- is more than information
6. Balanced communication should guarantee structured transparency while managing CI

- Construct communication in peace time

- Prepare **bidirectional balanced communication**
  - Proactive approach of social media
  - Structure transparency (RISCOM model), coherent, authentic
  - Address concerns, dilemmas, justification of technology
  - Create perspectives

**Challenge for expert culture and safety authorities** to manage conflict of interests in order to guarantee the common good
7. Organise effective public participation in a precautionary approach

- Involve citizen in emergency planning in due time
- EP is a continuous participative learning process
- Learn from participative experiments

- Public participation creates new opportunities for response by
  - identifying (local) problems through vulnerability analysis
  - better indicating vulnerable people

- Legally structured involvement on nuclear safety: ex. (AN)CLI
  - Requires resources for critical expertise

Who pays?
Conclusion: SHC points out cornerstone and Achilles heal of nuclear safety

EP & R is cornerstone of Nuclear Safety
Communication and involvement shape the result

In nuclear safety and EP&R
• complex questions and interactions arise
• numerous uncertainties confront values of people

The Superior Health Council is opting for a precaution strategy with reliable communication and public involvement. Such approach necessitates independent expertise, a legal frame for dialogue and more EU nuclear safety competence.
Ceci n’est pas le Plan d’urgence du pays de Magritte