WG 3b: Predict the unpredictable. How to ensure the emergency plans are optimal from a radiation protection point of view?

- How to act in unpredictable situations/emergencies?
  
  **In planning:**
  - Detailed emergency planning based on „reasonable worst case“ and detailed hazard assessment (e.g. German approach; allows for „down-scaling“; requires high resources)
  - Extendability (e.g. UK approach; allows for „up-scaling“; requires less resources)
  - Involvement of relevant stakeholders
  - Prepare experts for stressful situation (resilience)
  - Emergency exercises including drills

**During the emergency:**
- Command & control structures could be independent from the situation (all those involved in immediate response, in first hours)
- Communication to the public – communication channels, messages, ... (more or less independent of the emergency situation; needs to be well prepared, training of spokespersons)
- Involvement of local authorities
- In first hours: simply activate emergency plans
- Later: Assessment & prognosis -> Procedures for adapting your emergency response
- Good practice: separate group – including non RP experts - assessing alternative scenarios („worst of the worst“, „how bad could it get“; also used in non-radiological emergencies/terroristic attacks)
We should do more efforts to increase the radiation protection culture of the public:

- Engagement of the population in the preparedness (all stakeholders) and in the recovery phase (“it is a must“) (difficult in the urgent phase)
- in preparedness phase:
  including doctors and nurses (health professionals) would be good practice
  (many countries not doing this, BUT
  Israel: regular course in rad prot, regular participation in exercises for health professionals (for designated hospitals only);
  Portugal: training radiological emergencies (not on regular base)
  France: 2 levels of training:
  1. few „big“ hospitals prepared to treat contaminated patients
  2. for all other health professionals (first around NPP’s, later extend to other areas)

- During/after an emergency:
  including doctors and nurses (health professionals), e.g. as a focus group to link between RP professionals and population

  (example: hospital staff who might be willing to stay during an evacuation, BUT might be not possible in some countries)
Reference level:

- How can this being communicated to the public?
- „RL is made for flexibility“ ->
- It is **too complicated for the public**, there is a demand from the public to make the system of RP more simple e.g. KISS („keep it simple stupid“)
- Is it better not to communicate numbers (mSv), only resulting actions? BUT reference level might be fixed in regulations and well known to public (apps, ...)
- Possible solution: give monitoring tools to public, information how to use it, training how to apply it (and again: health professionals, teachers need to be trained in that)
  - Value of monitoring: people can compare different situations (dose in forest, dose at home, ...) -> relative assessment
  - How to communicate/explain monitoring results: Compare it with medical exposure, exposure in airplane, natural background variations
- Use dose limits instead? „Safe / potentially dangerous / dangerous for health“ (example of speedlimits?) BUT might be difficult to set limits
- „Free to choose“: rad effect are only one of the decision factors
- Exposure is not immediate threat to people’s life
- This requires education/ training in preparedness phase for „key groups“ (e.g. health professionals,
Issues for further discussion (other groups?)

• Justification: e.g. for evacuation (hospitals)
  (Not being exercised/tested in all countries)

• Importance of access to „good“ information (in advance, during the emergency – delivering information on time through different channels e.g. importance of instructions for parents – vulnerable groups -,- )
  -> if not: could increase stress, anxiety, rumours, panic

• Use of decision support system for advise during an emergency