

## **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 forrest, dose at home, ...) -> relative assessment
  - How to communicate/explain monitoring results:  
Compare it with medical exposure, exposure in airplane, natrual 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