Questionnaire on emergency preparedness and response provisions from a (practical) perspective of civil society

Introductory remarks from the responders

Answers to below posed questions were compiled by staff members of the Czech Ministry of Interior and State Office for Nuclear Safety from publicly available recent official assessments and reports covering nuclear a radiological emergency matters in the Czech Republic, namely "National Reports of the Czech Republic under the Convention on Nuclear Safety", "National Report of the Czech Republic on Emergency Preparedness and Response under the Convention on Early Notification of Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency", "National Report of The Czech Republic under Article 9.1 of the Council Directive 2009/71/EURATOM of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations", and finally "Report of the IRRS Mission to the Czech Republic". All reports are available on http://www.sujb.cz/en/reports/ . The Czech response to the questionnaire sent under the EC project "Review of Current Off-site Nuclear Emergency Preparedness and Response Arrangements in EU Member States and Neighbouring Countries" was also used, in this regard we would like to draw the attention especially to http://ec.europa.eu/energy/nuclear/radiation_protection/doc/emergencypreparedness/2014_nep_epr_review_2012-474_append.pdf where quite a lot of valuable information can be found.

1. Which **stakeholders** should according to national legislation and regulations in your country be **included in off-site nuclear emergency and response (EP&R) activities** in case of a nuclear accident? Please provide evidence (The name and the paragraph of the relevant law/regulation/decree, date of issuance and by whom it has been issued).

   List of stakeholders included in off-site nuclear emergency and response acitivities according to national legislation (see Appendix 1):
   - Licensee
   - Region and its bodies (governor, regional authority)
   - Municipalities with extended powers and its bodies (municipal office, mayor)
   - Municipalities and its bodies (municipal office, mayor)
   - Members of the integrated rescue system
   - The National Security Council
   - Committee for Civil Emergency Planning
   - Ministries and other central administrative authorities (roles and responsibilities of each are defined by law)
   - Central Crisis Staff
   - Government

- Other stakeholders specified in off-site emergency plans

Which stakeholders should in your own opinion be included, why, in which role and at what stage?
Stakeholder involvement is adequate (in the opinion of responders)

2. What are the provisions regarding **inclusion of civil society** (local initiatives, NGOs) and/or local communities in EP&R activities according to your national legislation and regulations. Which paragraph of which law or which regulation or decree are defining these provisions? When and by whom have they been issued? How are they defining inclusion of civil society and/or local communities?

Main laws in this area:
Act No. 239/2000 Coll., on the Integrated Rescue System and on the modification of certain codes, in latter wording;
Act. No. 240/2000 Coll., on Emergency Management and on the modification of certain codes (Crisis Code), in latter wording
Some civil societies are included on the basis of „agreement on the planned assistance on request" (§ 21, Act No. 239/2000, Coll.).Some civil societies provide their help during response on the basis of „ material aid" or „personal aid" (§ 2, Act No. 239/2000, Coll.).
Roles of civil societies are also described in off-site emergency plans.

3. At what stage –if at all –are local communities and/or NGOs/local initiatives included in EP&R activities:

a) In the preparation of the methodology and the guidelines for EP&R plans of activities at national level;
yes
b) In the approval of the methodology and the guidelines for EP&R plans of activities at national level;
no
c) In the preparatory activities for a detailed off site EP&R plan of activities at the specific location of a nuclear power plant (NPP);
yes
d) In the approval of the detailed off site EP&R plan of activities at the specific location of an NPP;
no
e) In the implementation of EP&R drills and exercises as defined by the local EP&R plan;
yes
f) In the evaluation activities of EP&R drills and exercise as carried out at local level.
yes

4. Are local communities and/or civil society engaged in **cross-border EP&R activities**? In what role and how often?

Not known to responders.

5. How do you assess the provision of **sheltering** in the off-site EP&R plans in your country?

A simple protective measure for mitigating the impact of a passing radioactive cloud is to advise people to stay indoors, preferably in cellars and closed rooms. In order to be informed about the development of the situation, people are asked to listen to the radio or other media. This countermeasure may be combined with the intake of iodine tablets. Staying indoors will reduce the whole-body dose due to external gamma radiation. A substantial reduction of the inhalation dose can be achieved by closing windows, outer doors, and ventilation systems. According to the BSS, the generic optimised intervention level for sheltering is 10 mSv of avertable dose in a period of no more than 2 days.

a) Are the locations and capacities for sheltering adequate?

Fully adequate.

b) If not, what are main weaknesses/problems regarding the provision of sheltering at the specific locations?

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c) How can sheltering be improved at specific locations?

There is no need to introduce any changes in the implementation of this protective measure.

6. How (and by whom) are the stocks of **stable iodine pills** planned in your country?

Iodine pills are distributed to all people in the emergency planning zone, to all schools and nurseries in the emergency planning zone and all objects and organizations in the emergency planning zone. Storage and distribution system is described in detail in the off-site emergency plan.

The Czech Republic has the most widespread pre-distribution of stable iodine tablets to residences, businesses, pharmacies, schools and other locations. Around the nuclear power plant Dukovany, about 110 000 people living in the emergency planning zone have already received the tablets. Around the Temelin nuclear power plant, about 40 000 people living in the emergency planning zone received the tablets. Anybody willing to do so may also get stable iodine tablets in pharmacies.

a) Are they planned as individual countermeasures or are they connected with sheltering?

It depends on situation, can be combined with sheltering, people will be advised to take iodine if needed.

b) Are these stocks sufficient also in case of a severe (beyond design) nuclear accident with a large emission of radioactive iodine?

Yes, stocks are sufficient (are planned with sufficient reserve).

c) How and by whom is the delivery of iodine pills organised?

The licensee has the main responsibility for purchase and delivery of iodine pills. Storage and distribution system is described in detail in the off-site emergency plan.

d) Are there clear instructions in place when the pills should be distributed and consumed by people (potentially) exposed to radiation?

Yes, clear instructions are in place.

7. How do you assess the provisions of the **evacuation** plans in case of nuclear accidents in your country?

In 1997 and 2002, floods affected nearly a third of the area of the Czech Republic. At that time, villages, some parts of towns, facilities, hospitals, schools and offices amounting to some ten thousand people were evacuated. An evacuation was also carried out when there was a threat of an oil-well explosion. These experiences were used for the preparation of the EPZ off-site emergency plan of the NPP Temelin, and are currently used during the revision of the EPZ off-site emergency plan of the NPP Dukovany. They are also used for the development of district/regional emergency plans and plans for chemical facilities, for which serious accidents cannot be excluded. In the Czech Republic, evacuation was exercised in practice during the verification of the emergency plans in areas potentially or actually affected by radiological, chemical or natural emergencies and accidents. Knowledge and experience from these exercises were used to improve the activities of decision makers and exercise participants.

a) What are their strengths and weaknesses?

Strengths: everything planned and prepared and regularly practiced (verified by exercises), experience from other emergencies (flooding)
Weaknesses: a lot of unforeseen circumstances which cannot be planned fully in advance

b) Have the evacuation plans been updated after the accident in Fukushima or are there plans update them? In case there are plans for an update, before when?

Emergency plans (including evacuation) are updated regularly.

c) How can evacuation be improved in general and on specific sites?

Not known to responders, no specific need.

8. Is there a clear strategy regarding **decontamination** in your country?

a) Are decontamination sites clearly defined and accessible?

yes

b) Is there sufficient well trained staff and equipment for effective decontamination?

yes

c) How much additional staff would be needed to assure sufficient capacities in case of a severe (beyond design) nuclear accident with considerable emissions of radioactive substances? Is this staff available and if so, where?

No additional staffs are supposed to be needed above the provisions in emergency plans. Mainly staff members from the Fire and Rescue Service and of the Army of the Czech Republic will be called for duty.

9. How are EP&R plans in your country addressing the issue of **relocation**?

According to the Czech Republic legislation relocation is not a part of any plan.

a) Have these plans been updated after the accident in Fukushima or are there plans to update them? In case of the latter, before when?

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b) What major changes have been made (respectively are planned) to be undertaken?

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10. How are **food and drinking water restrictions** managed under the EP&R plan at national level?

Plan of control of distribution and consumption of food, feed and water is a part of the off-site emergency plan.

a) How will quality control be assured? Are there adequate capacities to assure an effective control?

Quality control system is described in detail in the off-site emergency plan. Capacities to assure planned and effective control are adequate.

b) How is the provision of non-contaminated food and drinking water to the affected population assured? Are there sufficient stocks of non-contaminated water and food also in case of a severe (beyond design) nuclear accident?

The way of providing non-contaminated food and drinking water is described in detail in the Plan of emergency survival, which is a part of each regional emergency plan.

c) Have there been changes after the Fukushima accident or are there any changes planned? In case of the latter, before when? What are these changes?

Regional emergency plans are regularly updated.

11. Are there in the EP&R plans clear criteria under which circumstances people will be allowed to **return** (to their homes and work places) **from evacuation or relocation**?

There are no exact criteria in the EP&R plans, all operations are carried out on the basis of on-going monitoring of radiation situation and State Office for Nuclear Safety recommendation which are based namely on the monitoring results.

a) How will this return be organised?

The return will be organised in the same way as when people return after floods or other crisis situation. All operations are carried out on the basis of instructions of the responsible authorities.

b) Are there clear instructions to people what to do and what not to do after return?

yes

c) Are there sufficient information channels and capacities to distribute these instructions in time?

yes

12. How are people in the emergency protection zone **informed about EP&R activities**?

Licensee distributes to all the inhabitants in the emergency planning zone guidelines on how to behave in case of a nuclear accident. More information can also be obtained on the website of the fire brigade, at the information center of nuclear power plant or at the municipal office of the respective municipality.

a) What are the basic means/media of informing people on what they should and shouldn't do in case of an accident in a nearby NPP?

In case of a nuclear accident, people are warned by sirens, which are part of warning and informing system. The warning signal is followed by (spoken) information about what is happening and how to behave.

b) Are there any additional media/forms of communication and if yes which?

Usual way of warning: sirens, radio, TV
Alternative way of warning: hand sirens, megaphone, church bells etc.

13. How (by which media) and by whom will the people in the emergency planning zone **be informed about a nuclear accident** in a nearby NPP? How and by whom will **the general public be informed** about a nuclear accident?

People in the emergency planning zone- sirens, radio, TV
General public – radio, TV, web sites, social networks, etc.

a) What – if anything – should be improved in this respect in the first and/or in the second case?

Not known to responders.

14. Would people consider **information** on the level of exposure to radiation, sheltering measures and evacuation activities **provided by authorities to be reliable, sufficient and trusted**?

Responders think so. In the frame of preventive and educational activities are carried out a number of activities to increase the awareness and preparedness of people to similar events.

a) Do you believe that in the case of an emergency people would behave according to the instructions provided by authorities?

yes

b) If not why and what should be improved to enhance the effectivity of the provided information and instructions?

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15. Are there in your country enough calibrated measurement devices to assure an adequate **measurement of levels of radiation** in case of a severe nuclear accident?

Responders think so. Results of monitoring are available to anybody at http://www.sujb.cz/monitorovani-radiacni-situace/

a) Are there enough skilled and trained people to provide measurement?

Responders think so.

b) How could the situation be improved?

Not known to responders

16. Which **civil society organization(s) and/or independent experts and/or institute(s) have a potential to provide trustful, credible and effective information** on EP&R in case of a severe (beyond design) accident in an NPP in your country?

Fire Rescue Brigades are trusted by public at the level of 95%, their staff is trained to provide information to people also in case of nuclear emergency. In addition there is academic community capable to provide credible information.

a) What would be needed to increase capacities of those organizations/individuals to provide reliable, timely and quality information on nuclear EP&R?

Not known to responders.

b) What channels of distribution of that information would be most useful in case of an emergency situation?

see above (Q12)

17. Are there special provisions for **vulnerable groups** (disabled people, pregnant women, children, elderly, hospitals, clinics, pensioner homes and other social and health institutes)? Are there special regulations for staff of hospitals, clinics, pensioner homes and other social and health institutes?

Yes (eg. these groups are evacuated with priority), to these groups is paid attention in the emergency plans and instructions for residents in the emergency planning zone

There are no special regulations for staff (evacuation is the same as in other emergencies, so there is no need for special regulations).

18. What is the advice how to deal with **pets**? Is this information known by the population? Who has decision power about and who has the responsibility for necessary culling and disposal?

There are two ways to handle pets – leave them in place or owner will take them with him. These two possibilities are described in detail in the off-site emergency plan. Responsible authority is Regional Veterinary Administration, which proposes measures on the basis of documents issued by Sate Office for Nuclear Safety.

19. **Cattle and cows** in evacuated areas will need food and water and will have to be milked. Who has this responsibility? Who has decision power about and who has the responsibility for necessary culling and disposal?

This activity will be dependent on the measured values of radiation levels in accordance with the recommendation of State Office for Nuclear Safety. Various options on how to proceed are described in the off-site emergency plan. Responsible authority is Regional Veterinary Administration, which proposes measures on the basis of documents issued by Sate Office for Nuclear Safety.

20. Who is responsible **for the recruitment of** on-site emergency workers and off-site decontamination workers after an emergency (**liquidators**)? Which groups of the population are foreseen for these functions?

Not planned, it will be solved ad hoc.

21. Who is responsible to pay for and who will have to cover the costs for EP&R **outside the officially defined** emergency and evacuation zones? Including casualties?

Polluter pays principle is applied.

Appendix 1

Legislative basis of nuclear EP&R arrangements in the Czech Republic

Act No. 18/1997 Coll. on Peaceful Utilisation of Nuclear Energy and Ionising Radiation (the Atomic Act), in latter wording

Act No. 239/2000 on the Integrated Rescue System and on the modification of certain codes, in latter wording

Act. No. 240/2000 on Emergency Management and on the modification of certain codes (Crisis Code), in latter wording

Decree No. 318/2002 Coll. on details for emergency preparedness assurance at nuclear installations and workplaces with ionizing radiation sources and on requirements for the content of On-site emergency plans and of emergency rules, as amended by Decree No. 2/2003 Coll.

Decree No. 319/2002 Coll. on function and organisation of the National Radiation Monitoring Network, as amended by Decree No. 27/2006 Coll.

Decree No. 195/1999 Coll. on Requirements on Nuclear Installations for Assurance of Nuclear Safety, Radiation Protection and Emergency Preparedness

Decree No. 215/1997 Coll. on Criteria for Sitting of Nuclear Facilities and Very Significant Ionising Radiation Sources

Decree No. 307/2002 Coll. on Radiation Protection, as amended by Decree No. 499/2005 Coll., and Decree No. 389/2012 Coll.

Government Order No. 11/1999 Coll. on emergency planning zone

Decree No. 380/2002 Coll. of the Ministry of Interior on the preparation and execution of the tasks of population protection

Decree No. 328/2001 Coll., on some details in ensuring of the integrated rescue system, as amended by the Decree No. 429/2003 Coll.,

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