REVIEW OF CURRENT OFF-SITE NUCLEAR EMERGENCY PREPAREDNESS AND RESPONSE ARRANGEMENTS IN EU MEMBER STATES AND NEIGHBOURING COUNTRIES

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Background and objectives

Background:

DG ENER- launched study: Follow up on the EU 'stress tests', to review off-site emergency preparedness and response arrangements in EU MS and neighbouring countries

Objectives :

- Assess the status of existing off-site EP&R arrangements, identifying best practice, gaps, overlaps and inconsistencies
- Assess how current arrangements and capabilities could be made more effective
- Make recommendations on potential areas for improvement
- Identify potential areas for future Community-policy actions

Scope and the approach

Scope:

- 28 EU Member States plus CH, NO and AM
- EP&R for NPPs (findings applicable to other radiological emergencies)

Approach:

- Info on arrangements and capabilities via Questionnaires
- Info evaluated against international benchmarks (IAEA requirements/guidance, EU legislation)
- Mapping of arrangements and capabilities
- Findings/recommendations discussed in two SG workshops

Benchmarking results - NPP countries

	BE	BG	CZ	FI	FR	DE	HU	NL	RO	SK	SI	ES	SE	UK	AM	CH
Requirement (IAEA GS-R-2)																
General requirements																
1. Basic responsibilities																
Functional requirements																
2. Establishing emergency management and operations																
3. Identifying, notifying and activating																
4. Taking urgent protective action																
5. Providing information and issuing instructions and warnings to the public																
6. Protecting emergency workers																
7. Assessing the initial phase																
8. Managing the medical response																
9. Keeping the public informed																
10. Taking agricultural countermeasures, countermeasures against ingestion and longer term protective actions																
11.Mitigating the non-radiological consequences of the emergency and the response																
12.Conducting recovery operations																
Requirements for infrastructure																
13. Authority																
14.Organization																
15.Coordination of emergency response																
16.Plans and procedures																
17.Logistical support and facilities																
18.Training drills and exercises [Questions 7.1, 7.2]																
19.Quality assurance programme [Questions 6.3, 7.1, 7.2, section 11]																
EU Requirements (Basic Safety Standards Directive, Public Information Directive, Regulations on food intervention levels)																
BSS Directive (96/29/Euratom)																
Article 50. Intervention preparation																
Article 51. Implementation of intervention																
Article 52. Emergency occupational exposure																
Article 53. Intervention in cases of lasting exposure																
Public Information Directive (89/618/Euratom)																
Article 5. Prior information																
Article 6. Information in the event of an emergency																
Article 7. Information of persons who might be involved in the organization of emergency assistance																
Article 8. Information procedures																
Regulation laying down maximum permitted levels of radioactive contamination of foodstuffs (Council Regulations 3954/87 and 2218/89 and Commission Regulation 944/89)																

Benchmarking results - non-NPP countries

	AT	HR	CY	DK	EE	GR	IE	IT	LV	LT	LU	MT	PL	PT	NO
Requirement (IAEA GS-R-2)															
General requirements															
1. Basic responsibilities															
Functional requirements															
2. Establishing emergency management and operations															
3. Identifying, notifying and activating															
4. Taking urgent protective action															
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Main findings of benchmarking

Most countries generally compliant with most requirements (better for countries with NPP)

Compliance with EU legislative requirements generally good

Compliance with IAEA requirements more patchy, particularly for:

- managing the medical response
- taking agricultural countermeasures, countermeasures against ingestion and longer term protective measures
- conducting recovery operations
- quality assurance programmes

Mapping

Visualising responses to questions on arrangements and capabilities EP&R

22 different areas mapped: support key findings, identify potential shortfalls and best practices, areas needing additional analysis

Reg. framework for protection of the public	Countermeasures for farm animals
Emergency Planning Zones	Early warning and radiation monitoring systems
Intervention Levels (IL) and OIL	National capabilities for off-site EP&R
Plant status	Public information and communication
Reg. fmwk for protection of personnel/rescuers	Mutual assistance
Institutional arrangements	Extendibility of arrangements
Cross border arrangements	Robustness with a major loss of infrastructure
Licensee's arrangm. & coordination with off-site	Arrangements in protracted emergencies
Coordination of off-site EP&R –key stakeholders	Commitment of licensee
Exercising of off-site EP&R arrangements	Funding
Practical aspects of protective measures	Liability

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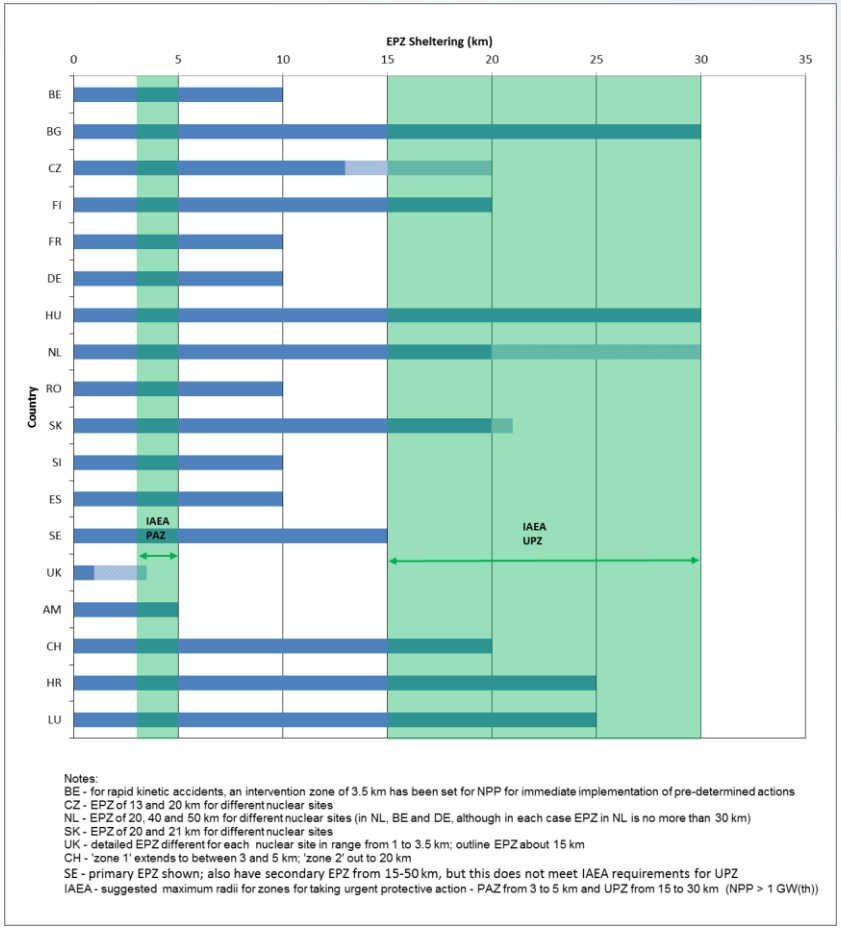
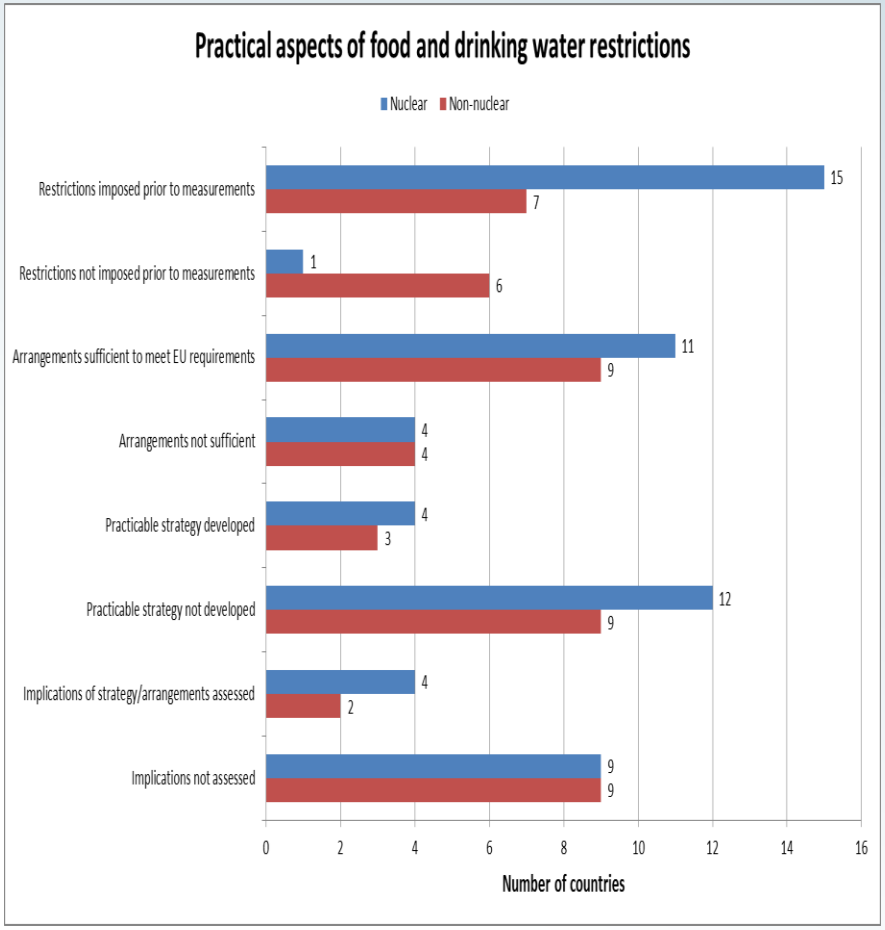
Mapping-examples





Overall conclusions

Current arrangements & capabilities broadly compliant with EU legislative requirements and (non-binding) int'l recommendations

Gaps or inconsistencies exist: most significant are lack of strategies for longer term and coherence in cross border arrangements

MS employ different approaches, though follow same principles. Those might be source of misunderstanding and undermine trust in arrangements

Resource requirements for EP&R significant, particularly for smaller MS. Sharing resources & capabilities, integrating arrangements for nuclear EP&R with other types of emergency would help

The new BSS Directive goes much further in addressing EP&R matters

Transposition of New EU BSS (2013/59/Euratom) might be the opportunity to address some of the findings

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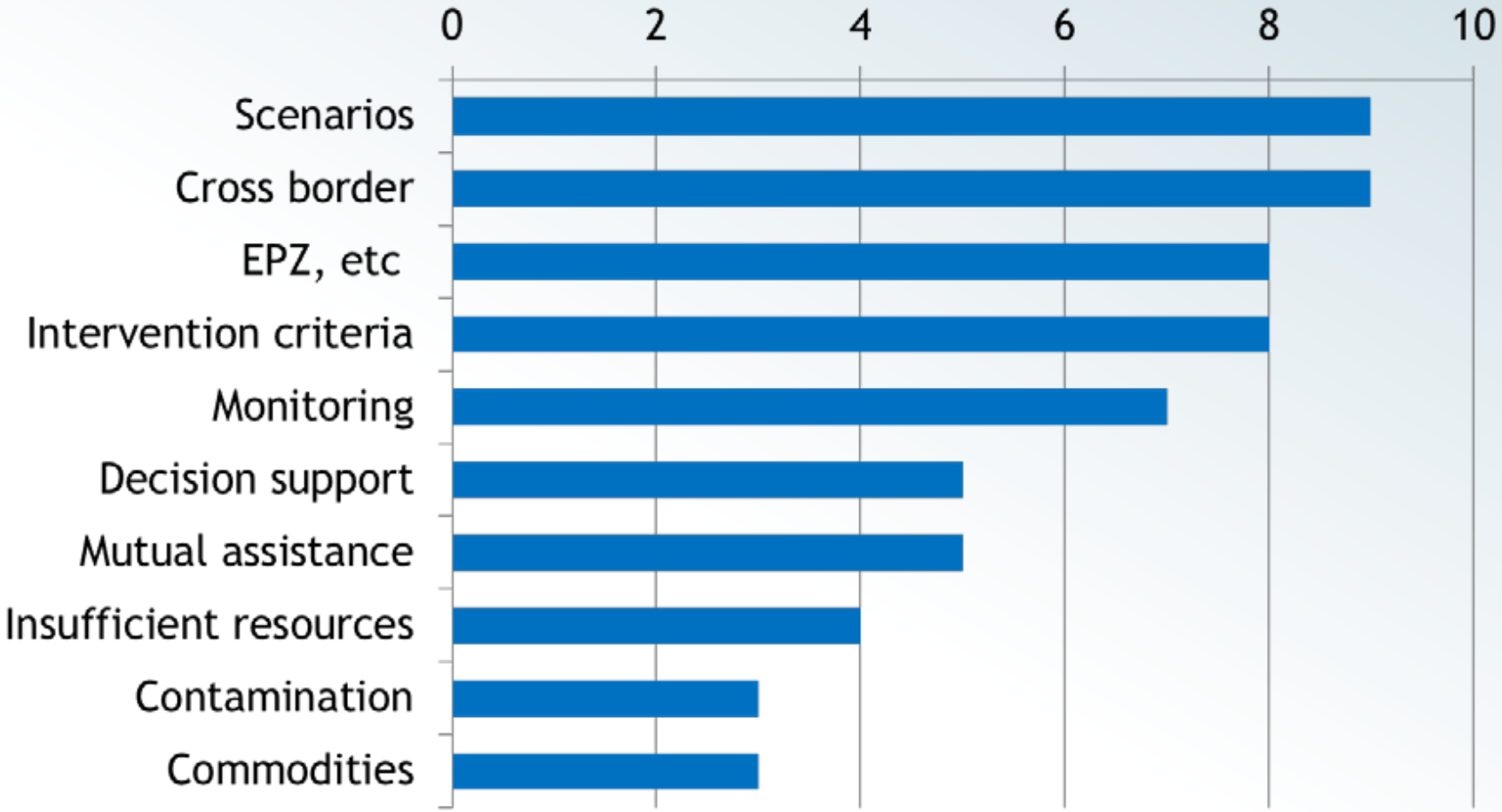
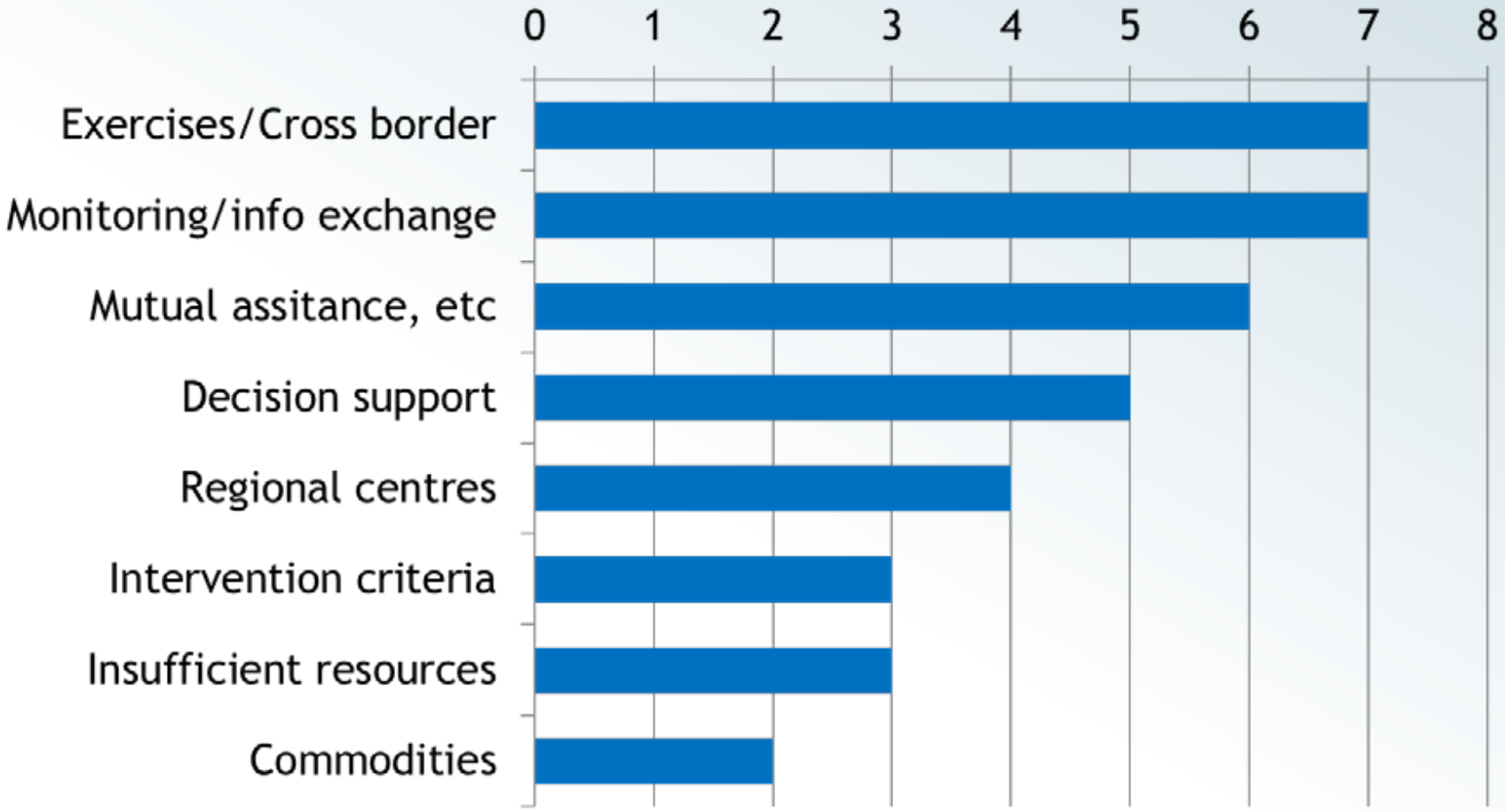
EP&R areas needing improvement - countries with NPP



EP&R areas needing improvement - countries without NPP



Recommendations

Some 48 recommendations covering technical, organisational, legal & other issues, to be addressed by different actors

- Harmonization of EPZ and intervention levels
- Better use of resources and mutual assistance
- Long(er) term protective measures
- Adequacy of EP&R arrangements 'in practice'
- Deeper integration of nuclear within EP&R for all emergencies

Report: http://ec.europa.eu/energy/sites/ener/files/documents/2014_nep_epr_review_2012-474_main.pdf
Appendices: http://ec.europa.eu/energy/sites/ener/files/documents/2014_nep_epr_review_2012-474_append.pdf

Harmonization of EPZ and intervention levels

Differences contribute to loss of trust and confidence in EP&R arrangements

Numerous attempts to resolve differences at scientific/technical level in Europe have failed

Action at a political level needed to overcome current impasse

Need to focus on the benefits of harmonized approaches in terms of trust and confidence, rather than technical pros and cons of different approaches

Better use of resources and mutual assistance

Pooling or sharing assets and capabilities for EP&R within EU (or in regions within it) would

- avoid and/or minimize duplication and allow cost savings
- make better use of expensive & rarely (if ever) used assets
- enhance quality of EP&R in countries where assets and capabilities are currently less well developed

Some reluctance to do so from those wishing to maintain full independence/autonomy of action

- may require action at a political level for opportunities to be fully exploited

Longer term protective measures

Most significant gap was a lack of strategies and arrangements

- longer term protective measures (e.g. relocation)
- the return to normality following an emergency

Absence of well conceived, practicable and broadly accepted strategies could have lasting, social, economic and political consequences in countries affected by an accident (i.e. Chernobyl and to a lesser extent Fukushima)

Adequacy of EP&R arrangements 'in practice'

'Desk study' showed EP&R arrangements to be broadly compliant with European legislation, etc. Practice needs to be confirmed by investigations, *inter alia*, of

- actual effectiveness of organizational and decision making structures and coordination of EP&R at all levels
- sufficiency of resources and capabilities for responding to scenarios adopted as the basis for planning
- appropriateness of objectives, scope and content of exercising off-site EP&R at all levels
- sufficiency of monitoring capabilities to meet needs in emergency and their foreseeable extension

Peer reviews and/or other verification mechanisms could enhance public and political confidence in arrangements

Integrating nuclear EP&R with other emergencies

Nuclear EP&R often treated separately from that for other emergencies, largely for historical reasons

Reinforces public/political perceptions that nuclear emergencies are special and require separate treatment

Integrating nuclear fully within EP&R arrangements for all emergencies would:

- achieve greater clarity of structures and consistency of response
- contribute to more effective use of resources
- promote more inclusive and accountable governance