



New developments and growing international cooperation in the field of emergency preparedness and response.



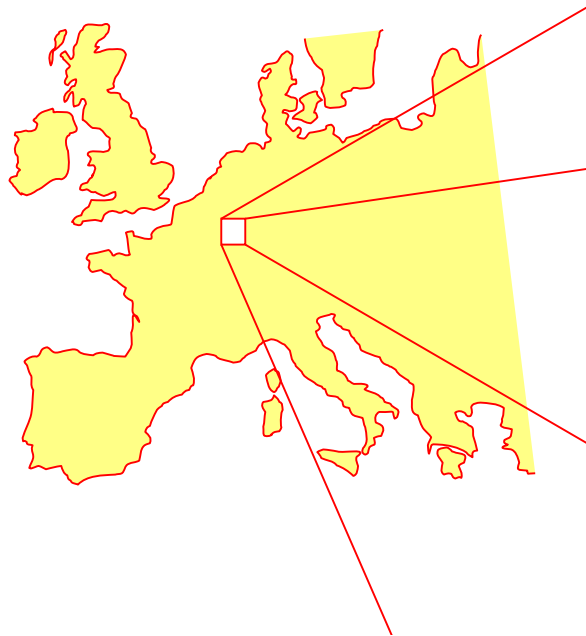
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DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère de la Santé

Direction de la Santé - Division de la Radioprotection

Situation in Luxembourg



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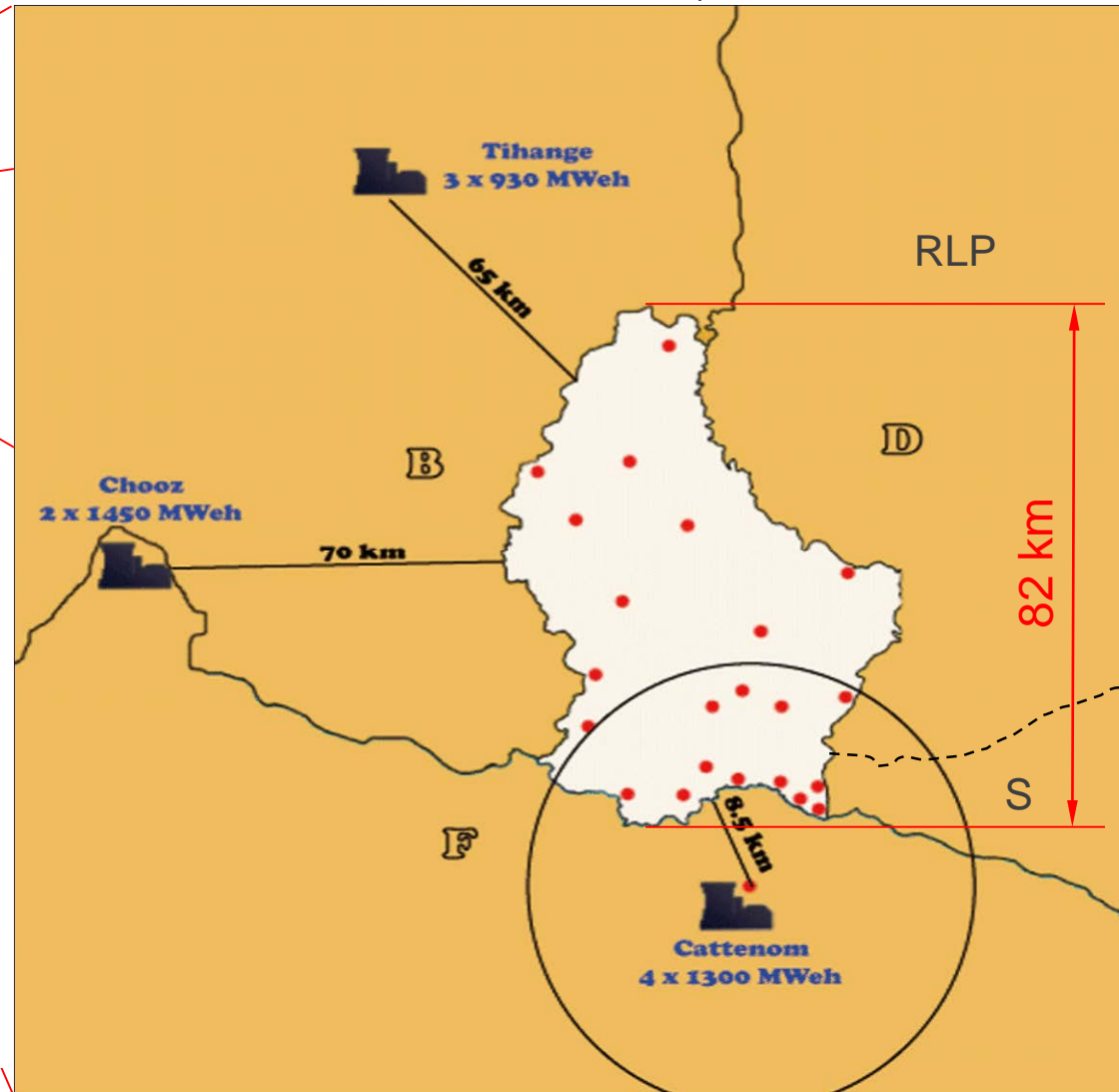


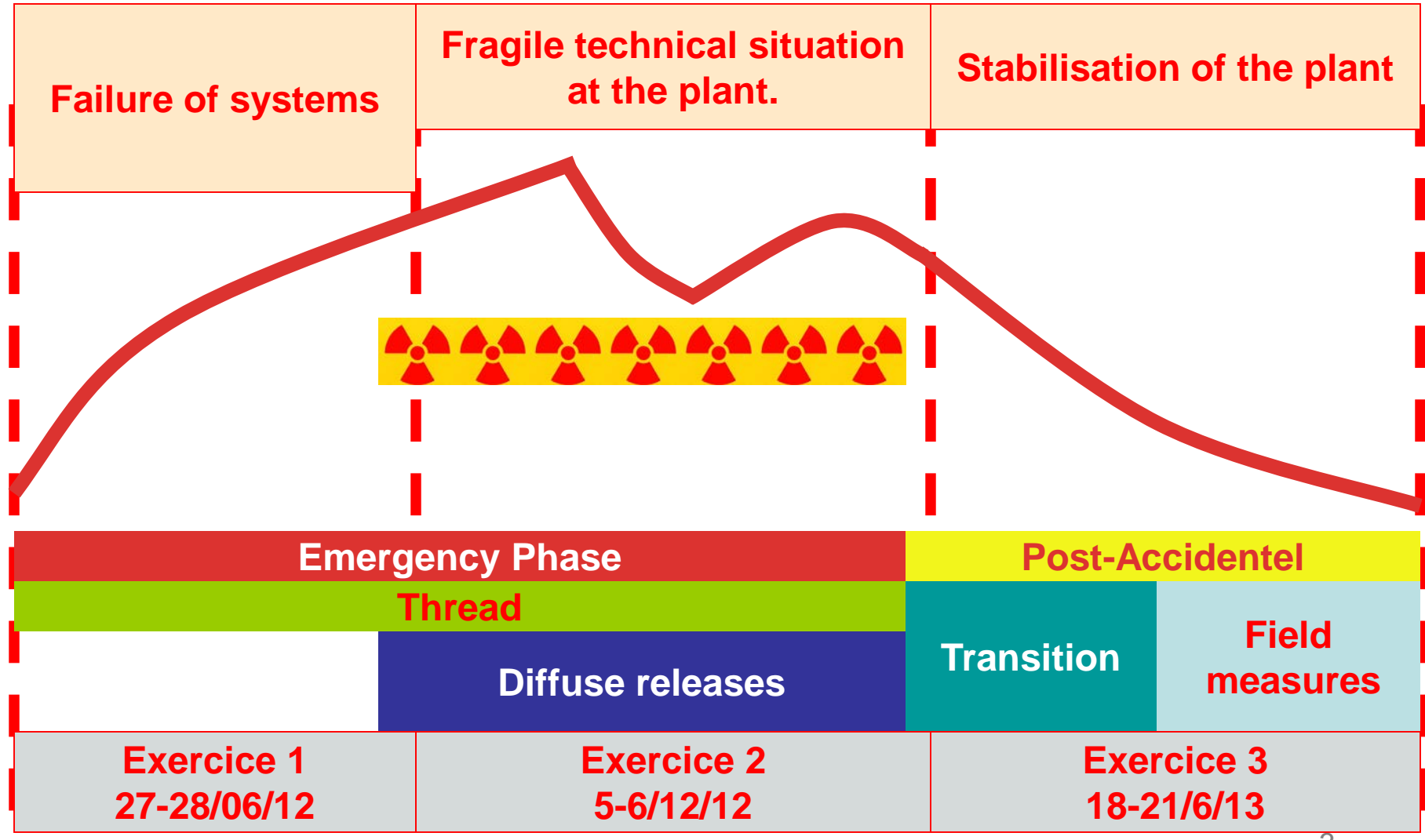
10 NPP's within 250 km

Total population: 537 000
Foreign population: 238 800 (44.5 %)
Approx. 170 nationalities

Working population: 365 400
Commuters: 161 000

® STATEC 2013

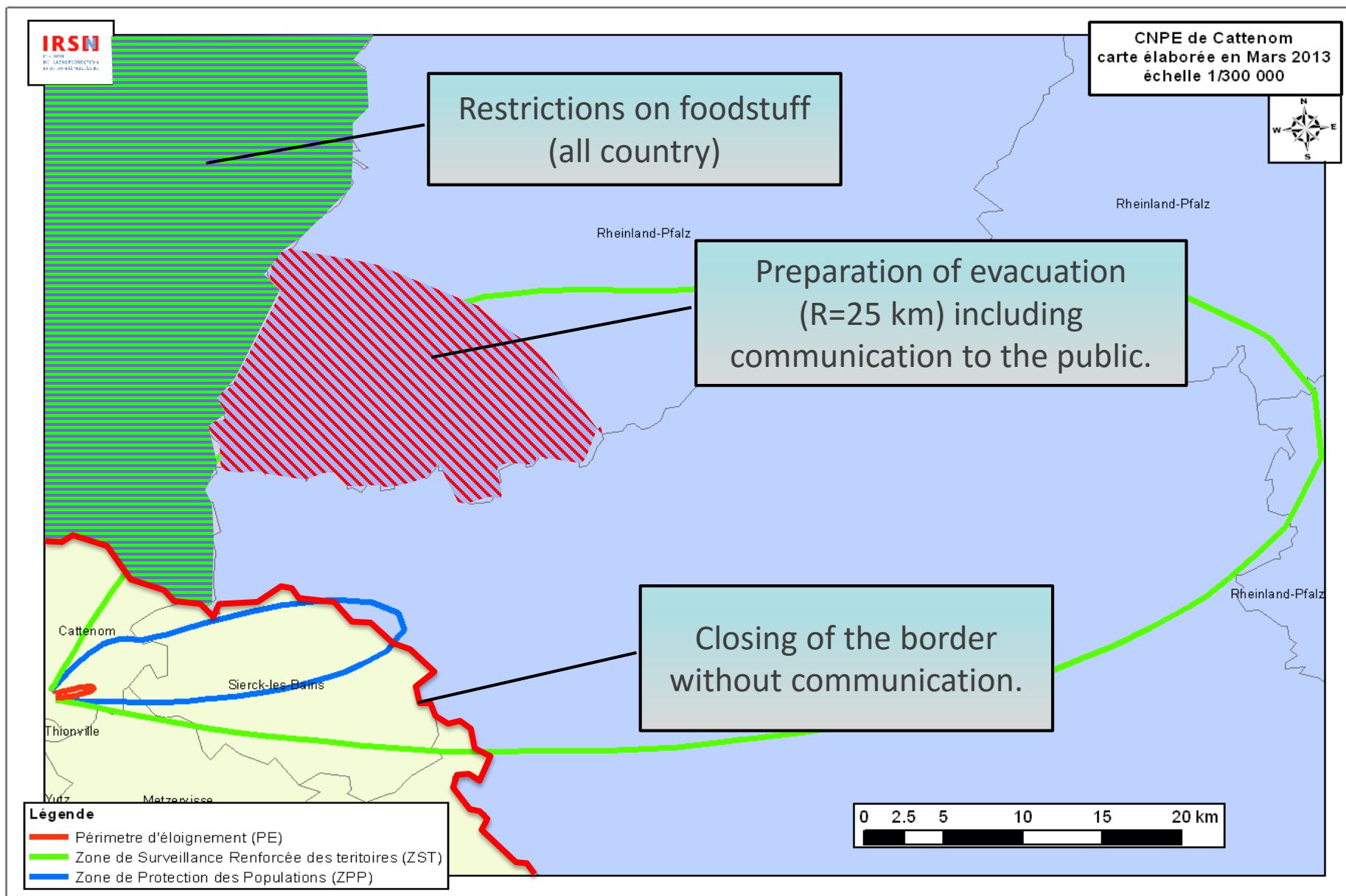




Experiences from exercises (negative)



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In preparedness

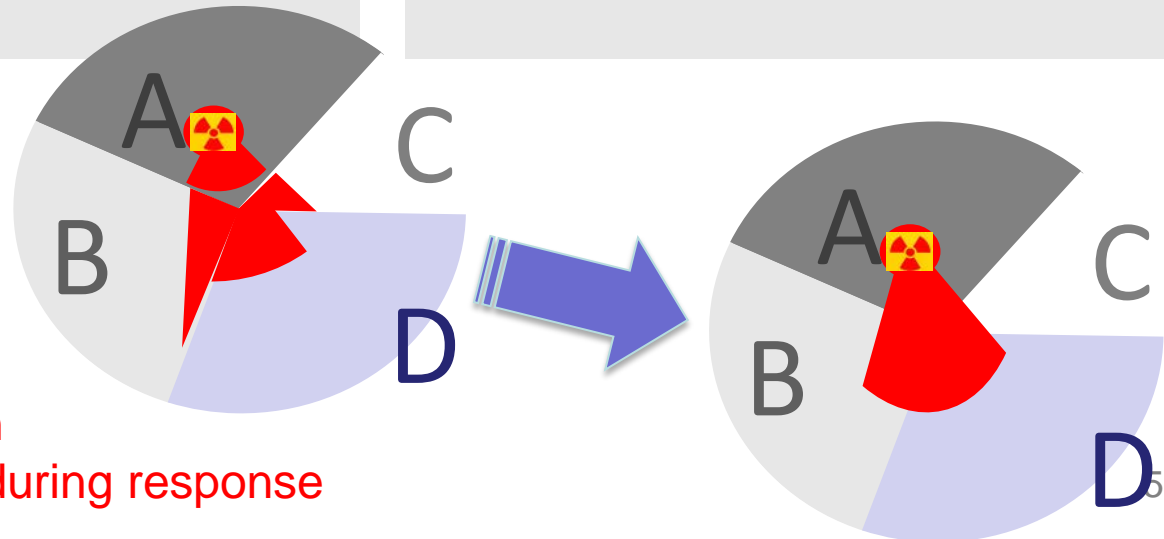
- Different strategies
- Different intervention criteria (level and definitions)
- Different types of protective actions
- Different planning radii
- Different crisis management structures
- Different assessment tools

During response:

- Different appreciation of uncertainties.
- Different radiological assessment results.
- Mistrust.
- Language barriers.
- Inflexible communication channels.

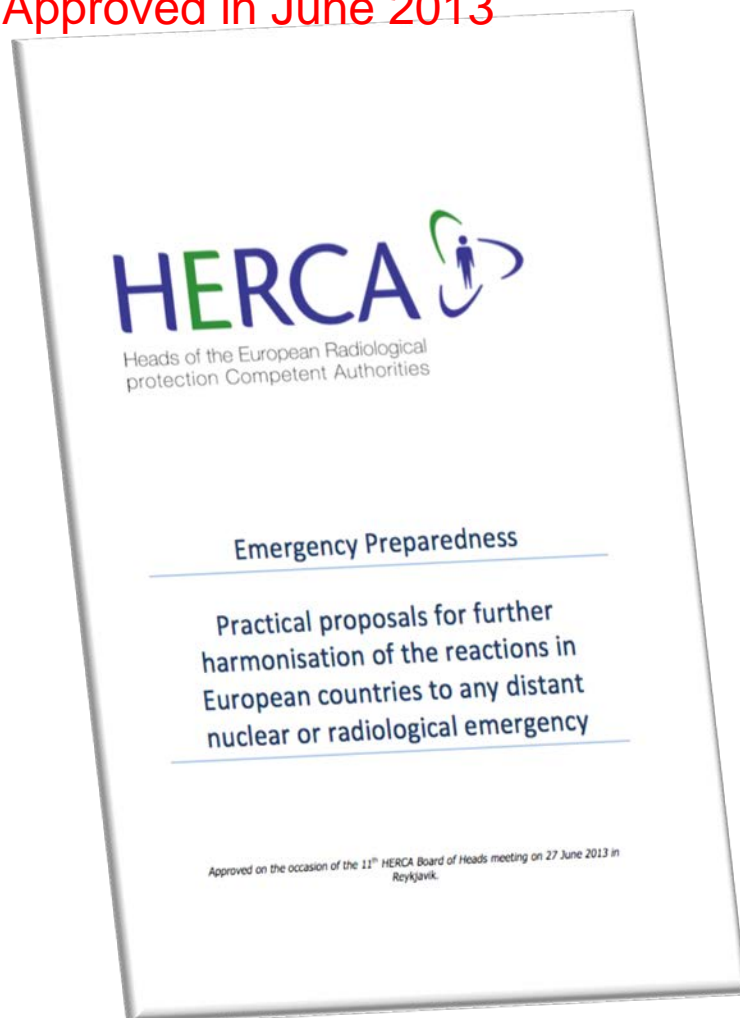
Ideal Solution:

- 1) Harmonization
- 2) Coordination during response

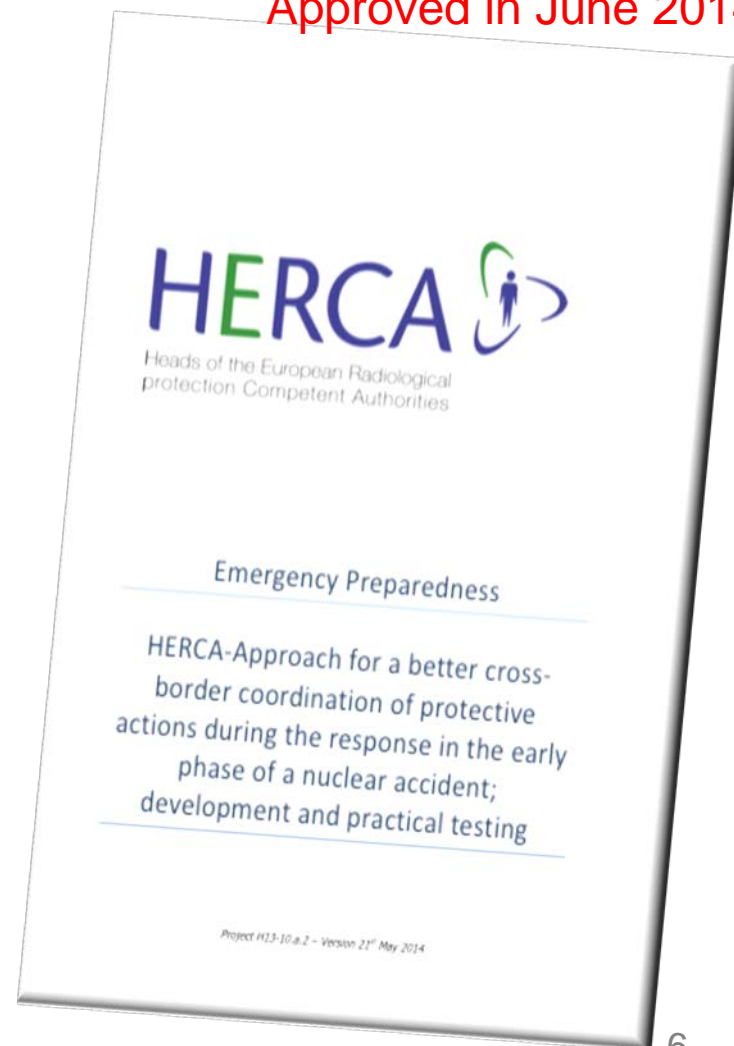




Report 1: Approved in June 2013



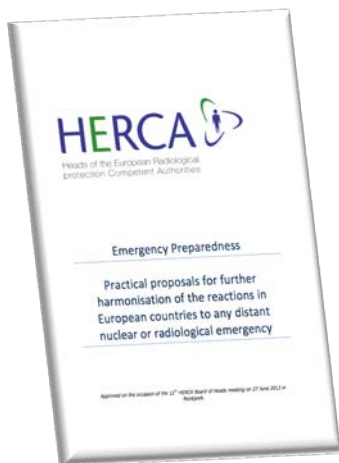
Report 2: Approved in June 2014



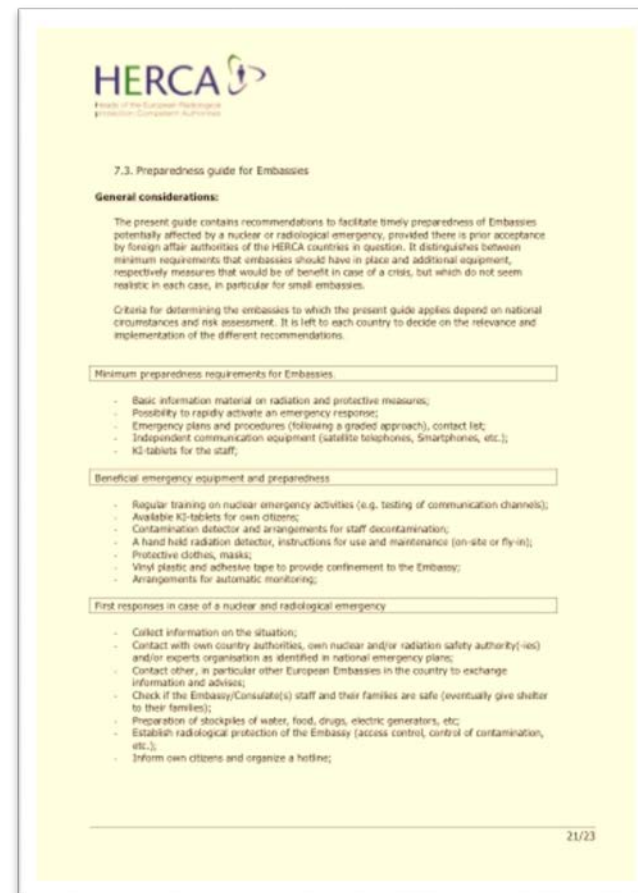
Main results concerning distant accidents (report 1)



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1. Increasing of awareness concerning the perception in the accident country
2. Collection of good practises concerning crisis communication.
3. Check list with key recommendations for radiation protection authorities
4. Organizing the return of people
5. Preparedness guide for Embassies



This report should be in your hands whenever such an emergency happens in future!

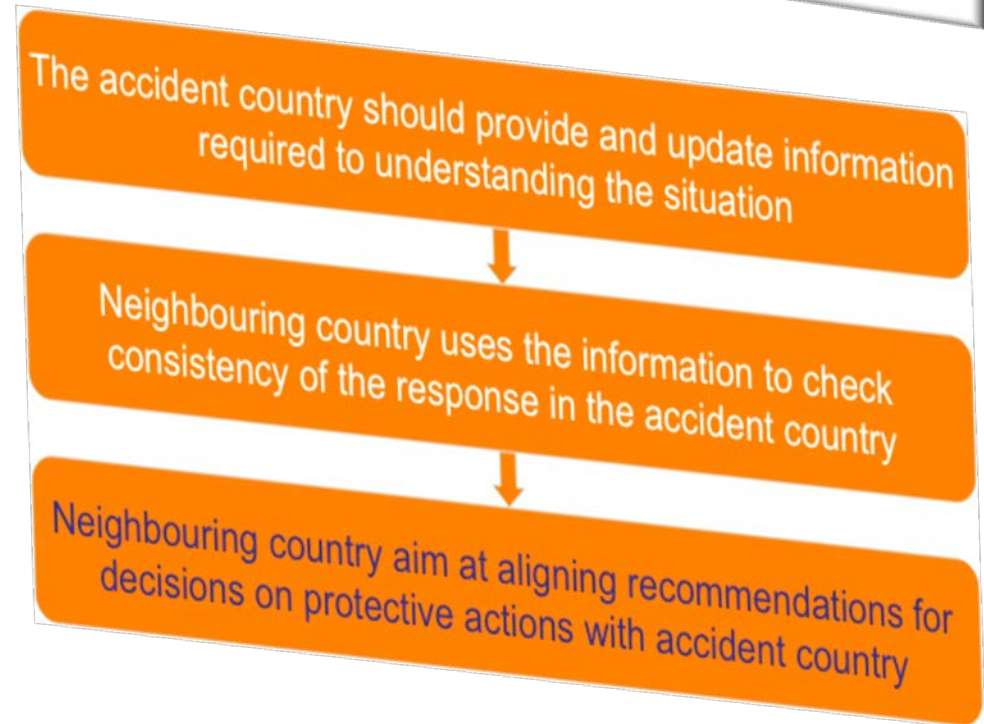


➤ Before an accident

- Enhance mutual understanding

➤ In case of an accident

- Early phase of an accident (first hours)
Do the same as the country where the accident occurred
- Mid-term (after the first hours)
Development of a common situation report

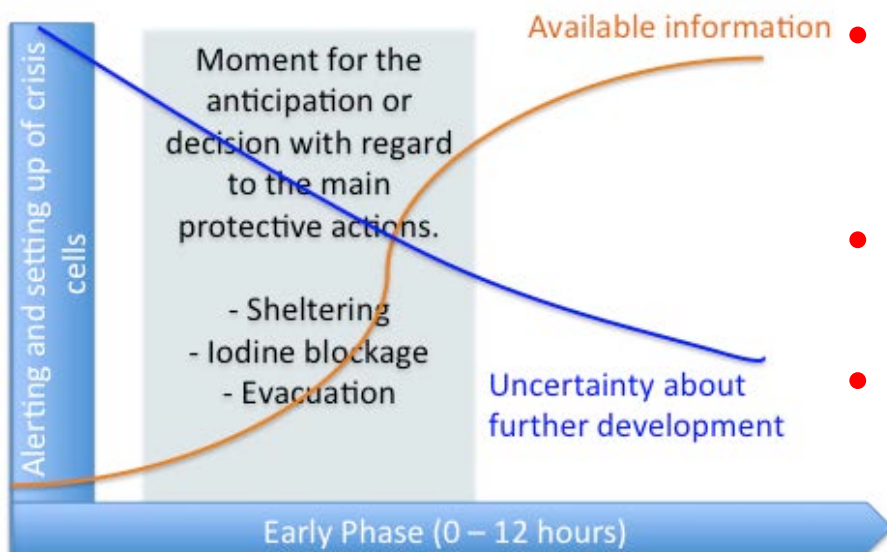
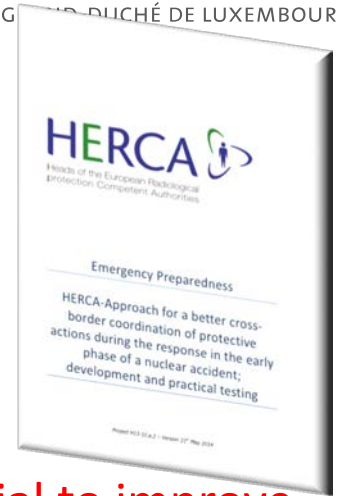




➤ Workshop in Cologne

- 18 participants attended from 10 countries
- 3 scenarios (Loviisa-1, Cattenom, Emsland)

➤ Main results



➔ **Full harmonization ≠ essential**

➔ **Reduction of differences in EP needed!!!**

- The approach has the potential to improve the coherence of the response in case of a nuclear accident
- Mutual knowledge of EP&R arrangements is essential
- Frequent information updates by the accident country on the situation are most important
- Differences in EP need to be smaller than uncertainties



Scenario:

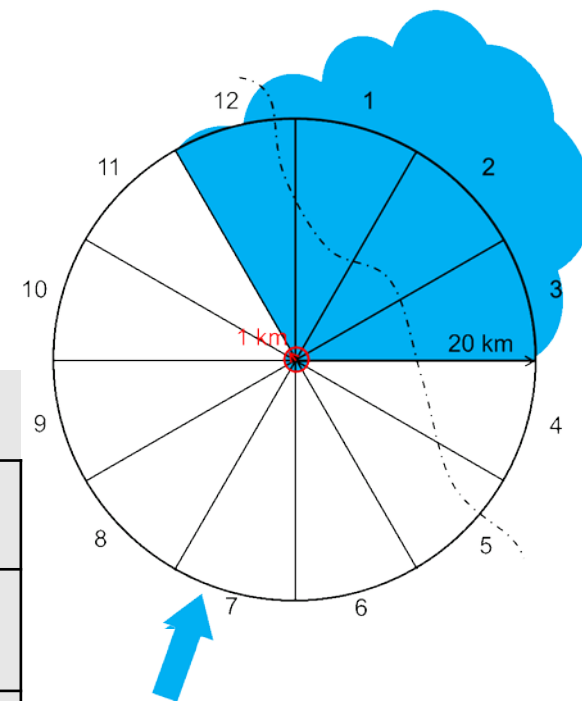
- Extreme event with a risk of core melt and large radioactive release
- Lack of sufficient information
- Necessity for fast decisions

Simplistic assessment:

Is there a risk of core melt?	Yes	No	Unknown
Is the containment integrity maintained?	Yes	No	Unknown
Is the wind direction?	Steady	Variable	Unknown

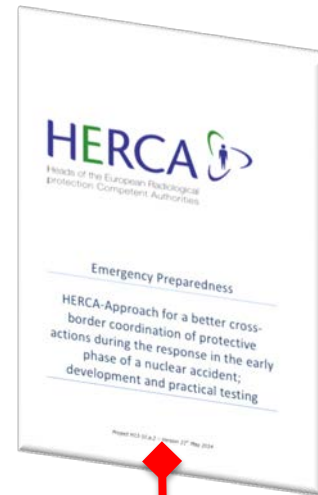
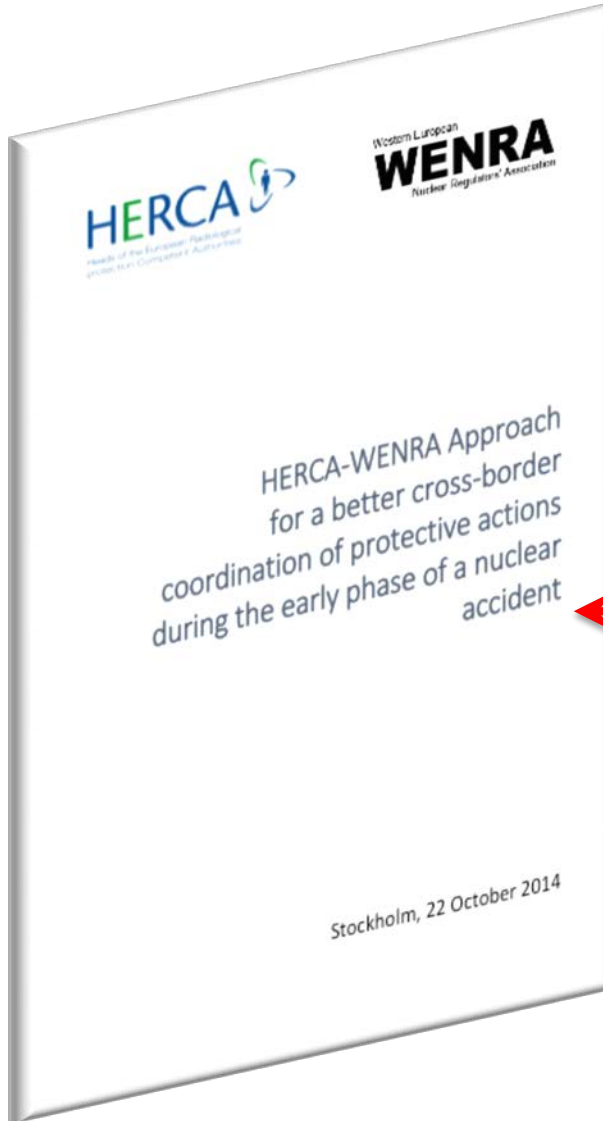
Preparedness requirements:

Protective Action	Min. Planning Zone	Strategy for extension
Evacuation	5 km	20 km
Sheltering + ITB	5 to 20 km	100 km



Coordination
mechanism:

➔ **HERCA**



<http://www.herca.org/>
<http://www.wenra.org/>

<http://www.herca.org/uploaditems/documents/HERCA-WENRA%20approach%20for%20better%20cross-border%20coordination%20of%20protective%20actions%20during%20the%20early%20phase%20of%20a%20nuclear%20accide.pdf>

Implementation of the HERCA-WENRA Approach

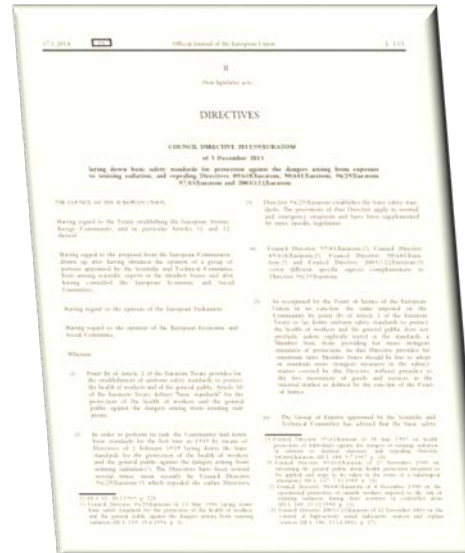


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Country fact sheets



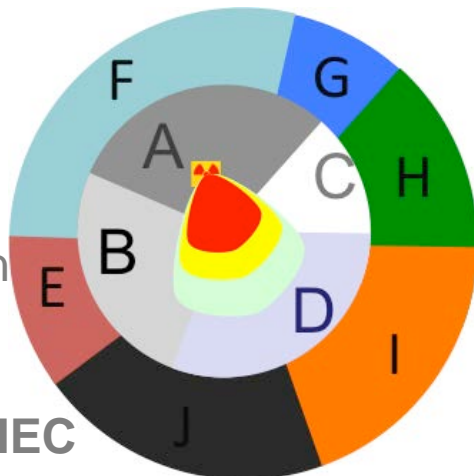
EU-BSS:
Common understanding
of reference levels



Guidance for
bilateral
or multilateral
arrangements



Common
situation
report
➔ IAEA-IEC



Discussion with
national Authorities
in charge of Civil
Protection





The HERCA-WENRA work builds on other existing tools and systems:

Communication and information exchange

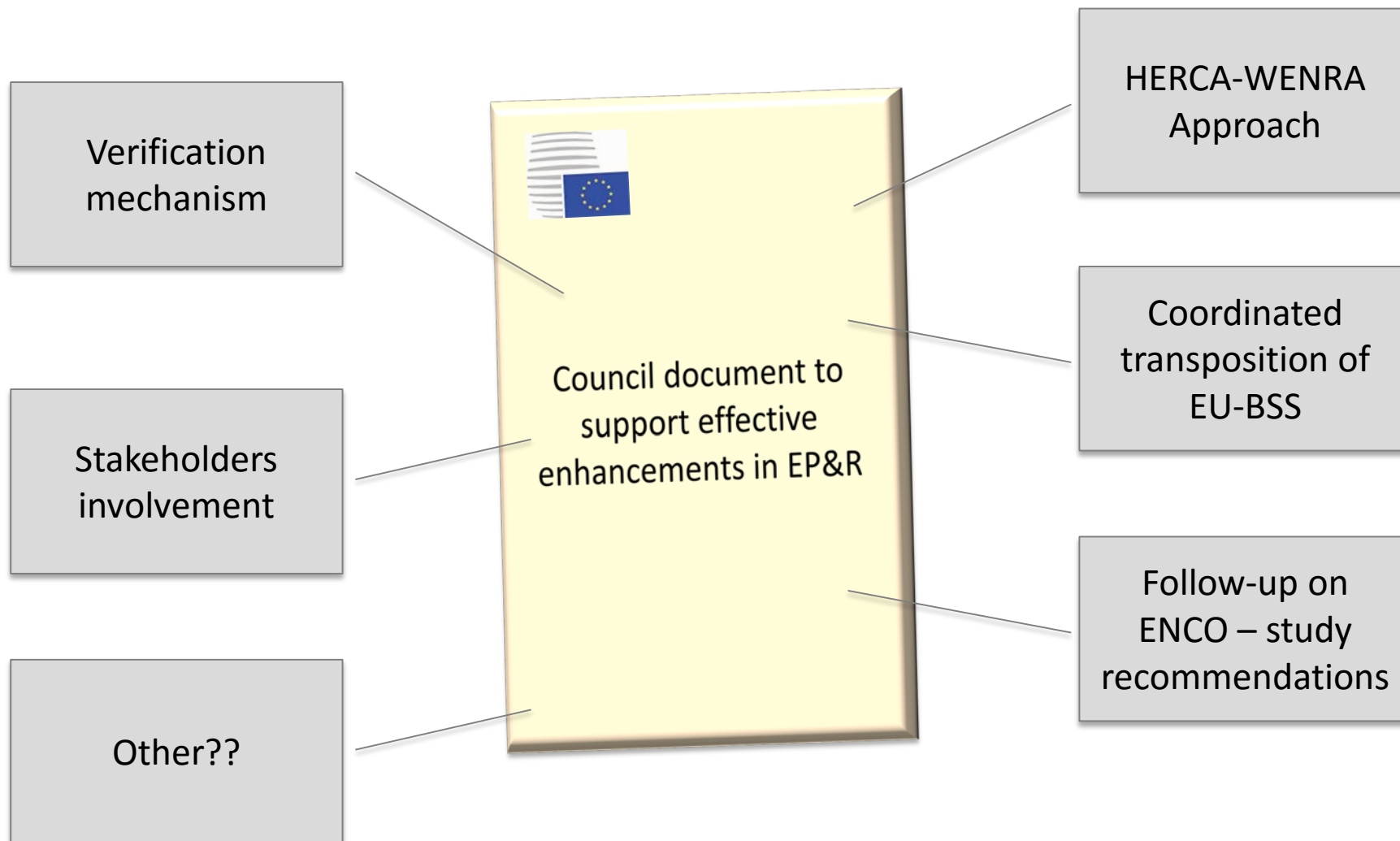


Scientific and technical tools



Stakeholder Involvement







- Efficient EP&R arrangements in Europe, regularly challenged and tested
- Cross-border issues not sufficiently considered.
- Important work has been done in recent years.
- Efforts on implementation are on-going