

Media Release

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New European Approach for cross-border Emergency Preparedness

The heads of the national nuclear and radiation safety regulators in Europe have developed and agreed on a new approach to further improve the response and cross-border coordination for all types of possible accident scenarios including severe accidents, like the one in Fukushima. It contains overarching principles and provides an incentive for joint actions between neighbouring countries. The regulators have committed to engage a cooperation at national level with the competent authorities in charge of civil protection for the implementation of the corresponding measures.

At the joint meeting in Stockholm on 21 October 2014, HERCA (Heads of the European Radiological protection Competent Authorities) and WENRA (Western European Nuclear Regulators Association) agreed on an Integrated/Common “HERCA-WENRA Approach for better cross-border coordination of protective actions during the early phase of a nuclear accident.”

The paper presents the general mechanism for a common European emergency preparedness and response (EP&R) approach on coordination, which is independent of the scenario of the accident. It also includes a simplified scheme for coordination in the highly unlikely event of a severe accident in one or more nuclear power plants, requiring rapid decisions for protective actions while little or no confirmed information is available.

The need for better cross-border coordination

Efficient EP&R arrangements have been established in Europe since many years and are tested and challenged regularly. They allow authorities to issue recommendations for effective public protective actions. This emergency planning has evolved in all states, mostly without giving great priority to cross-border issues. This has led to sometimes significant differences. In case of a nuclear emergency in Europe, these differences can potentially create significant difficulties in emergency management, especially if the location of the emergency is close to a national border. Coordinated protective actions along adjacent national borders are therefore highly desirable.

During the very early phase of a nuclear accident, the status of the reactor and the estimation of the amount of radioactivity released (the source term) are likely to be difficult to assess correctly. Thus, uncertainties in terms of dose estimation and overall radiological impact cannot be excluded. Also in such situations with much uncertainty, the decision-maker must be able to take appropriate health

protection measures. This inevitably leaves room for flexibility in decisions, even where there is a rigid national framework. The HERCA-WENRA Approach makes use of this freedom for coordination between neighbouring countries in order to align early decisions across borders. As a result, the respective national arrangements do not necessarily need to be changed. Instead, the prevailing differences are respected and taken into account, and the response is based on 'compromise' solutions, which are understandable and explainable in each given situation.

The principles

The new approach relies on the following principles: shared technical understanding, coordination and mutual trust. It does not propose a uniform cross-border framework. The main strategy is to aim at an alignment of the response between neighbouring countries or neighbouring territories. This is supported by early information exchanges using existing bilateral and international arrangements as far as possible.

A three-step approach

The HERCA-WENRA Approach is divided into 3 steps: the preparedness phase, the early phase and the later phase.

- **Step 1**
The aim of the preparedness step is to achieve and maintain a shared understanding of the existing national emergency arrangements by developing or improving already existing bilateral and multilateral arrangements, to test these arrangements and implement improvements.
- **Step 2**
In the early phase of an accident, the proposed HERCA-WENRA Approach foresees rapid information exchange through existing bilateral and international arrangements. If the response is thought consistent, the neighbouring countries can recommend their governments to follow these recommendations, i.e. adopt the principle "We do the same as the accident country" in the first hours of the accident.
- **Step 3**
In the later phase a common situation report, accepted by all impacted countries, including the accident country, will further support coordinated protective actions.

Emergency preparedness for severe accidents

The general mechanism of the new approach is independent of the accident scenario and includes severe accidents like Fukushima.

The Fukushima accident was a reminder that a severe nuclear accident cannot be completely excluded anywhere in the world, including Europe. Considering the safety level of European nuclear power plants and their improvements resulting from the lessons learned from various events (including the Fukushima disaster), the probability of such a severe accident is very low. But, as improbable such an accident might be, emergency preparedness and response (EP&R) arrangements must be prepared for such cases, too.

The initial stage of a severe accident might require rapid decisions for protective actions while very little is known about the situation and reliable dose calculations are not yet available. Recommendations of protective actions need to be formulated rapidly, leaving very limited time for cross border coordination during the first phase of the accident. Therefore, the HERCA-WENRA approach contains pre-defined simplified schemes for protective actions that may be applied in these cases, as improbable they might be.

According to the current studies and international standards and methods used for EP&R, an accident comparable to Fukushima would require protective actions such as evacuation up to 20 km and sheltering up to 100 km. These actions would be combined with the intake of stable iodine.

In this framework the national nuclear and radiation safety regulators propose a methodology for a common European approach allowing to recommend urgent protective actions as well as a minimum common level of preparation for these actions:

- evacuation should be prepared up to 5 km around nuclear power plants, and sheltering and iodine thyroid blocking (ITB) up to 20 km;
- a general strategy should be defined in order to be able to extend evacuation up to 20 km, and sheltering and ITB up to 100 km;
- nuclear and radiation safety authorities in Europe should continue attempts to promote compatible response arrangements and protection strategies amongst the European countries.

The need for rapid decisions using the simplified schemes for protective actions will only apply during an initial phase. As soon as the accident country is in a position to present a more elaborate assessment of the plant status and the expected off-site impact, it will take the necessary steps to align its decisions and cross-border coordination mechanisms accordingly.

Links:

http://www.herca.org/herca_news.asp?newsID=41

<http://www.wenra.org>

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HERCA (Heads of the European Radiological protection Competent Authorities) is a voluntary association created in 2007. Its main objective is to contribute to a high level of radiological protection throughout Europe by building and maintaining a comprehensive European network of chief radiation safety regulators in Europe and developing a common approach to significant radiological protection issues of common interest. HERCA is working on topics generally covered by provisions of the EURATOM Treaty.

HERCA brings together the heads of regulators in radiation protection from 31 European countries, including the 28 EU-members, Iceland, Norway and Switzerland.

WENRA (Western European Nuclear Regulators Association) is an association created in 1999. Its main objectives are to develop a common approach to nuclear safety, to provide an independent capability to examine nuclear safety in applicant countries and to be a network of chief nuclear safety regulators in Europe exchanging experience and discussing significant safety issues.

WENRA brings together the head of regulators for nuclear safety from 17 within the European Union and Switzerland.