

HERCA's activities in nuclear emergency planning and response: From Chernobyl to Fukushima



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1. Introduction

The main goal the Heads of the European Radiological protection Competent Authorities (HERCA), with 48 members from 30 European countries, is to improve the practical implementation of radiological protection. The uniqueness of HERCA, as compared to other existing networks in radiation protection, is that it is composed of the Heads of the Authorities, persons who either have decision capacity or can at least have a major influence on policy and decisions within their country. From its very start in 2007, HERCA had identified the lack of a harmonized cross-border approach in response to serious nuclear or radiological events as one of the top priorities. Up till early 2011, the objective of the working group on emergencies has been to identify a uniform way of dealing with any serious radiological emergency situation within Europe. A first achievement was the development of guidance on the practicability of early protective actions. The accident at Fukushima Dai-ichi NPP's made rapidly clear that our national assessments and responses to such "distant" accidents could also dramatically be improved by a more rapid exchange of information. The overall goal of HERCA's new WG-Emergencies, is to study possibilities and to propose practical, operational solutions for a more harmonized approach in response to distant and domestic radiological emergency situations. Members of this working group also participate in other initiatives and thus are able to provide the adequate orientations in order to avoid duplication of work.

2. Guidance on the practicability of early protective actions

To support the development of emergency plans and to react in a proper way in the case of an accident HERCA developed special guidance on implementation of sheltering, evacuation and iodine thyroid blocking. These protective measures have to be considered in the case of a release of a significant amount of radionuclides into the environment, preferably before the release takes place. The practical guidance covers the definition, the aim and the rationale of the three early countermeasures, including linked actions. They give guidance for the planning phase, the intervention and lifting of the protective actions. The limitation and possible complication of the actions are discussed as well as risk/benefit consideration and linked actions. The tasks of the authorities are clearly indicated. The full report can be consulted under: <http://www.herca.org/docstats.asp>

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3. Ongoing work on harmonized approaches with regard to distant accidents

Considering the experience already gained from the Fukushima accident, the objective is to identify the most urgent needs for further harmonization of the reactions in European countries to any such remote event and propose practical solutions to achieve it. Individual tasks include:

- Compare how radiological analyses, including projected risk assessment, were made and used in the early stages for Europe and for Japan.
- List decisions and countermeasures included in the existing manuals for a distant accident and identify decisions taken in European countries.
- Assess the potential influence of decisions taken in European countries on the situation in Japan.
- Collect the main results from national surveys on relevant public reactions and behavior with regard to regulatory decisions.
- Develop recommendations for harmonization or common approach.

Results are expected for December 2012.

4. Outlook on future efforts concerning domestic accidents

The objectives are to identify good examples and to come up with practical and operational recommendations, enabling a uniform way of protecting people in the directly affected area during any serious radiological emergency situation, regardless of national borders. Individual tasks include:

- Identify reference scenarios and dispersion models used in the planning phase and in crisis management.
- Radiological evaluation of an accident that started some time ago, but is still evolving.
- Experience from the implementation of the recommendations of the "Five countries agreement", the Nordic harmonization work and bilateral arrangements.
- Develop recommendations to overcome difficulties and obstacles identified in the HERCA Guidance on the practicability of early protective actions.
- Practical approaches for harmonizing emergency measures in the very early phases of a serious accident.
- Practical approaches for harmonizing emergency measures after the very early phases of a serious accident, in particular of an accident persisting over longer periods.

Results are expected for December 2013.

For further information: www.herca.org