



Guidance for Bilateral Arrangements

November 2015

Executive Summary

Even though the European framework clearly attributes the competences of EP&R solely to the national states, it is important for national authorities to accept that cross-border issues are of a shared concern. In particular in those cases, where NPP's are sited close to national borders, a close cooperation of those neighboring states is of prime importance.

The "HERCA-WENRA Approach" for better cross-border coordination of protective actions during the early phase of a nuclear accident contains overarching principles and provides an incentive for joint actions between neighboring countries with the aim to align protective actions along borders.

One of the elements needed for a successful implementation of the HERCA-WENRA Approach consists in the establishments and/or update of effective mutual or bilateral arrangements with the overall objective of coordinating activities in a wider area. The present document aims at giving guidance on the elaboration and implementation of such arrangements.

Bilateral arrangements are understood as an integrated set of agreed elements between the parties adhering the bilateral arrangements. These elements may include agreement, procedures, protocols and other documents.

The present guidance contains general principles with regard to bilateral cooperation. It further considers the emergency situations and lists issues, so called "complete shopping lists" that should be exchanged in the various phases of an accident. Guidance is also given on cooperation in preparedness in order to increase the knowledge of each other's EP&R system and to establish operational arrangements for effectively exchanging during response, including in case of discrepancies.

The items listed in the guidance document are not to be understood as mandatory. Bilateral arrangements cannot be too rigid and need to leave margins of freedom to the concerned authorities involved. It shall encourage appropriate cross-border exchanges in a given situation. Arrangements need also to be adapted to regional features and may well differ from one site to another. They need to be robust and flexible to provide highest beneficence under unpredictable circumstances.

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1. Introduction

At the joint meeting in Stockholm on 21 October 2014, the Western European Nuclear Regulators Association (WENRA) and the Heads of the European Radiological protection Competent Authorities (HERCA) 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 HERCA-WENRA Approach contains overarching principles and provides an incentive for joint actions between neighboring countries. The main mechanism for the coordination of the response is independent of the scenario of the accident.

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

A prerequisite for a successful implementation of the HERCA-WENRA Approach is, among others, a consistent mutual or bilateral arrangements with the objective of coordinating activities in a wider area. The present guidance shall assist HERCA member states in the implementation process of the HERCA-WENRA Approach, by up-dating existing or establishing new bilateral arrangements.

Since rapid exchange of direct information between authorities of neighboring countries in case of a nuclear or radiological accident to complement the international agreements (IAEA convention/EMERCON, EU/ECURIE) is of paramount importance in case of an accident in nuclear installations near borders, priority should be given to those near border sites.

Bilateral arrangements are understood through the present document as an integrated set of agreed elements between the parties adhering the bilateral arrangements. These elements may include agreement, procedures, protocols and other documents. An ideal situation is considered to consist of a bilateral framework agreement, completed by procedures, protocols and other documents.

The present guidance comprises complete “shopping lists” concerning the various aspects that need or may need to be dealt with. At the same time, it is recognized that bilateral arrangements can be implemented easier if their degree of complexity is small. Therefore, the items listed in the guidance document are not to be understood as mandatory. Bilateral arrangements cannot be too rigid and need to leave margins of freedom to the concerned authorities involved. It shall encourage appropriate cross-border exchanges in a given situation. Arrangements need also to be adapted to regional circumstances and may well differ from one site to another. They need to be robust and flexible to provide highest benefice under unpredictable circumstances.

Mutual trust of the involved authorities is an absolute must for the elaboration and application of bilateral arrangements. The present document shall be used in conjunction with the document “HERCA-WENRA Approach for a better cross-border coordination of protective actions during the early phase of a nuclear accident”.

The present guidance uses as much as possible technical terms from the IAEA safety glossary.

2. Objective and scope of the arrangements

a. Objective

In European countries, efficient emergency preparedness and response (EP&R) arrangements have been established since many years and are tested and exercised regularly. They allow authorities to issue recommendations for effective public protective actions. In the development of such arrangements, each European state defines its own priorities and objectives in planning for nuclear emergencies directly affecting its own territory.

This has led to differences in EP&R between countries. Should a nuclear emergency occur in Europe, these differences could potentially have a significant effect, especially if the location of the emergency is close to a national border. Internationally, populations would feel unequally protected, depending on where they live.

Even though the European framework clearly attributes the competences of EP&R solely to the national states, it is important for national authorities to accept that cross-border issues are of a shared responsibility. In particular in those cases, where NPP's are sited close to national borders, a close cooperation of those neighboring states is of prime importance. This cooperation has to include the emergency phase, for which arrangements need to be in place that allow the states to anticipate and prepare for decisions with the goal to align them along national borders as illustrated in Figure 1.

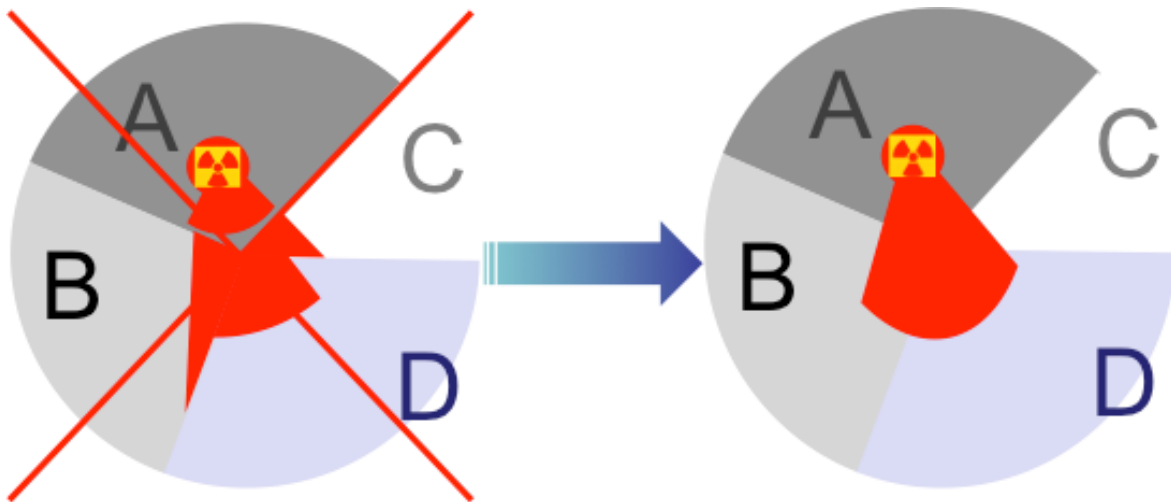


Figure 1: Country A has a nuclear emergency close to the borders of three other countries. All four countries are affected. Each country decides on a particular protective action individually. The protective action applies to the areas marked in red, for each country. The aim is to align protective actions.

The report “General Presentation of the HERCA-WENRA Approach for a better cross-border coordination of protective actions during the early phase of a nuclear accident” as it has been adopted by both associations, HERCA and WENRA, on October 2014 in Stockholm provides the general principles for enhancing the coherence of protective actions between neighboring states in case of a nuclear emergency. More guidance is needed to assist the national authorities to implement those principles. The present document gives guidance for the elaboration of bilateral arrangements to support the implementation of the HERCA-WENRA Approach.

The overall objective is to reach a:

- Comparable protection level of the populations on each side of the border,
- Alignment of protective actions along borders,
- Coordination of actions and communication,
- Sharing of resources/capabilities,
- Increase the knowledge of each other's EP&R system.

b. Type of situations considered

The scope of the bilateral arrangements and the criteria for exchanging information should be in line with the following concepts:

1. Transnational emergency, as defined in the IAEA safety glossary, 2007 Edition, is a nuclear or radiological emergency of actual, potential or perceived radiological significance for more than one State. This includes:
 - a. A significant trans boundary release of radioactive material (however, a transnational emergency does not necessarily imply a significant trans boundary release of radioactive material);
 - b. A general emergency at a facility or other event that could result in a significant trans boundary release (atmospheric or aquatic) of radioactive material;
 - c. Discovery of the loss or illicit removal of a dangerous source that has been transported across, or is suspected of having been transported across, a national border;
 - d. An emergency resulting in significant disruption to international trade or travel;
 - e. An emergency warranting the taking of protective actions for foreign nationals or embassies in the State in which it occurs;
 - f. An emergency resulting or potentially resulting in severe deterministic effects and involving a fault and/or problem (such as in equipment or software) that could have serious implications for safety internationally;
 - g. An emergency resulting in or potentially resulting in great concern among the population of more than one State owing to the actual or perceived radiological hazard.
2. Alert or advisory level communication as defined in the ECURIE Communication Instructions (version 3.0, 2012)

3. Principles for the elaboration of bilateral arrangements

a. Shared principles

Bilateral arrangements are developed for a wide range of situations. As a consequence, these arrangements cannot be too rigid but need to allow for flexibility in order to enable involved authorities to react appropriately in a given situation. As an example, communications need to be made when the situations changes unexpectedly, not (only) on a regular basis, such as every two hours. Therefore, bilateral arrangements should be based on the following shared principles that are accepted by the parties who elaborate the arrangements:

- Reciprocal trust between the parties (e.g. responsible use of information)
- Mutual knowledge
- Shared/Common emergency culture
- Alignment of protective actions along borders is a key factor in decision-making.

b. Key statements for achieving the objectives

In order to achieve the objectives, as listed in chapter 2, the above-shared principles should be reflected through key statements within the set of documents that form the bilateral arrangements. In particular the following statements can be used:

- The parties commit to coordinate actions taken in response.
- The parties will aim at the alignment of protective actions along borders.
- The parties will consider the whole affected area, independent of a national border, when making decisions.
- The parties will consider the emergency situation over time (early and later phase).
- The parties will define a clear attribution of responsibilities (e.g. for coordination, for decision taking, for exchange of information).

c. Implementation of bilateral arrangements

In each country, responsibilities, roles and legal status of the authorities directly involved in nuclear EP&R differ. Therefore, the elaboration and approval of bilateral arrangements have to be adapted accordingly and may well differ from one site to another. Care needs to be taken to establish provisions that take into account the differences, particularly legal aspects when arrangements are made between independent authorities and public administrations. Within these boundaries the aim has to be to provide for arrangements that are robust with well-defined responsibilities while still remaining sufficiently flexible to be effective in unpredictable situations.

Bilateral arrangements are understood through the present document as an integrated set of agreed elements between the parties adhering the bilateral arrangements. These elements may include agreements, procedures, protocols and other documents. An ideal situation is considered to consist of a bilateral framework agreement, completed by procedures, protocols and other documents. Legal binding provisions will thus in most cases rather be the exception than the rule.

4. Nuclear Emergency Situation

a. Alerting and notification

The international framework defines alerting and notification obligations. Worth mentioning are the following two systems:

- Within the framework of the IAEA, the parties to the Convention on Early Notification of a Nuclear Accident have pledged that, in the event of a nuclear accident that may have trans boundary radiological consequences, they will notify countries that may be affected and the IAEA, and provide relevant information on the development of the accident. The IAEA, via its Incident and Emergency Centre (IEC), forthwith informs States Parties, Member States and other States that may be physically affected and relevant international organizations of a notification received and promptly provides other information on request.
- Within the European Community, the Council Decision 87/600/Euratom on Community arrangements for the early notification and exchange of information in the event of a radiological or nuclear emergency requires from the Member States that they promptly notify the European Commission (EC) and all the Member States potentially affected when they intend to take protective actions. The exchange is implemented on a technical level through the European Community Urgent Radiological Information Exchange (ECURIE) system.

Those systems provide for rather rapid and complete information of the various states. Inevitably, however those systems rely on information exchange through various steps, (operator, competent authority or warning point, international organization, warning point, competent authority) who assure the distribution.

In cases of NPP's next to national borders, the establishment of additional direct communication and alerting channels provides advantages, since the speed of information exchanges can be increased and an option for direct coordination can be established. Such systems should also allow sharing information that helps neighboring countries to anticipate possible developments. Concerning the alerting, a direct alert by the operator of the NPP to the authorities of neighboring states can be very helpful, as it allows neighboring states to activate its response mechanisms in a timely manner. The relevant authorities of the accident country can provide follow-up information. This type of direct bilateral information is mostly not exchanged via the international platforms.

Therefore, in addition to those international systems, additional bilateral protocols should be established in line with Article 9 of the Convention on Early Notification of a Nuclear Accident in order to:

- Allow a fast information of directly concerned actors (including directly by the operator).
- Cover accident scenarios for which very rapid information is needed.
- Allow for rapid clarification and coordination (for example when information is incomplete, unclear or illogical).

During the alerting, the following elements should be addressed, if available, in the first message:

- Installation, location coordinates
- Technical description of the event
- Expected technical evolution
- Local meteorological conditions
- Consequence assessment (actual, expected)
- Protective actions envisaged and/or decided
- Information on protective actions that may be necessary for the territory of the neighboring country, in view of the alignment of the protective actions along the borders
- Judgment of the severity of an emergency, i.e. to decide if an emergency is to be considered as a severe accident requiring rapid decisions for protective actions, while very little is known about the situation, including for those cases Judgment Evaluation Factors (JEFs).

Speed is more important than completeness! For the first message, it is not very probable to have this information available in a comprehensive way. The above points should be seen as indicative. Depending on the scenario the level of precision will vary.

It will be essential for the accident country¹ to follow-up with the first message and complete information as it becomes available. Neighboring countries have to be aware of those principles and not wrongly interpret initial incomplete messages. In case of doubt, authorities of the neighboring countries need to have the possibility to get clarification in a pragmatic manner. This minimizes the risk that neighboring countries unilaterally decide uncoordinated protective actions.

Concerning the necessary decisions for protective actions in neighboring countries, bilateral arrangements need to contain specific mechanisms for rapid exchange of relevant information assuring that relevant authorities needing it, including the decision taking body, will get it in time. If the notification provided by the accident country provides elements affecting parts of the territory of the neighboring country, the neighboring country should aim to align the response along the borders. In the same spirit, neighboring countries shall share their intentions and decisions in a proactive way with the accident country.

¹ By definition, the "accident country" is the country where the nuclear or radiological emergency has taken place (see Definitions section of "HERCA-WENRA approach for a better cross-border coordination of protective actions during the early phase of a nuclear accident", Stockholm, 22 October 2014)

b. Arrangements for emergency response

The below subchapters apply to events requiring the activation of the nuclear emergency plan(s).

Urgent phase

During an emergency, the elements contained in chapter 4.1 should be updated and made available. Additionally, the following elements should be made available:

- Consequence assessment, including forms, maps, technical and radiological data, projected and measured. (actual, expected, degraded situation)
- Protective actions envisaged, decided or implemented (including the rationale)
- Information on protective actions that may be necessary for the territory of the neighboring country, in view of the alignment of the protective actions along the borders
- Public information releases (ideally before they are released to the media)
- Key conclusions from monitoring public reactions

Information updates should be made at intervals not exceeding 2 hours. Key messages, such as important changes of the situation or decisions, should be communicated immediately, e.g. via a short message system or through liaison officers.

Information exchanges need to be bidirectional, as appropriate.

Early phase.

Following the urgent phase, that warrant the performance of response actions that must be taken promptly, further response actions are required in order to assure that situation is under control, the off-site radiological conditions have been characterized sufficiently well to identify where food restrictions and temporary relocation are required, and all required food restrictions and temporary relocations have been implemented. During this phase, the following elements should be made available:

- Technical description (how is assured that the technical situation is under control)
- Consequence assessment, including forms, maps, technical and radiological data (actual – based on deposits, projected and measured)
- Protective actions decided/lifted (including rationale)
- Definition of the “post-accident zoning” and timing for setting it up (including rationale)
- Information on protective actions that may be necessary for the territory of the neighboring country, in view of the alignment of the protective actions along the borders
- Contact information for follow-up
- Public information releases (ideally before they are released to the media) and key conclusions from monitoring public reactions

More work is done internationally with regard to the management of the transition towards a situation that is under control. When developing bilateral arrangements covering this late phase of an emergency, parties should take advantage IEAE safety guides, as presently developed, and existing national documents, such as the CORDIRPA.

Transition phase

Coordination between the concerned countries needs to continue after the emergency has been terminated, although it cannot be planned to the same degree of detail. Indeed, discussions have to take place in function of the issues that arise during that situation for enabling adequate decisions. For some particular questions, discussion can be organized through workshops with the aim to get concerted decisions and actions (e.g. waste management, decontamination, long term displacement of people or the return of populations evacuated during the emergency, public acceptance questions).

However mechanisms should be established in order to assure that continued coordination between the countries is ensured, even if actors and responsibilities in the national context change. One should know actors, responsible for the various issues that need to be dealt with beforehand. Communication lines should be established.

During the post accidental phase, at least the following elements should be exchanged:

- Updates of the consequence assessment (actual)
- Protective actions decided/lifted
- Public information releases and public reactions
- Organization of medical follow-up

5. Preparedness

a. General consideration

An effective exchange between countries during an emergency, including the coordination of decisions, requires inevitably planning and preparation. The preparation between countries may vary and certainly needs to be adapted to national circumstances. Therefore the present document can only aim at presenting a set of elements that countries may need to share as part of their preparedness. The overall goal is to get a shared and better understanding of the internal functioning of the neighboring country and its EP&R arrangements.

Since responsibilities for crisis management are organized rather differently within the countries, the setting up of bilateral arrangements needs to follow a “who needs what” – approach. The involvement of the operator of the concerned NPP is recommended.

b. Exchange of information

The following items should be considered, as applicable, for exchange between the parties as part of their preparedness arrangements:

- Reference to main aspects of legal and regulatory framework
- Crisis management structure & national organizations *)
- Contact information
- The specific national arrangements concerning severe accidents requiring rapid decisions for protective actions, while very little is known about the situation.
- Site/installation characteristics/technologies *) **)
- Accidental scenarii & Potential source term **)
- National expertise:
 - Assessment methods and tools (diagnosis, prognosis, environmental impact, etc.), **)
 - Additional background Information needed to understand correctly the national products of expertise
 - Monitoring network and strategy
- Protection strategy
- Response plans and criteria:
 - Reference levels
 - Intervention criteria for the population *)
 - Intervention criteria for the first responders
 - Intervention criteria for the food chain
 - Intervention criteria for non-food items
 - Intervention criteria for the rehabilitation
 - Planning zones for protective actions *)

- Extendibility of protective measures beyond EPZ's from an operational point of view
- Action zones and response times (if exist)
- Description of activating emergency response, e.g. triggers
- Stable Iodine pre-distribution and stockpiles *)
- other
- Assistance capabilities
- Public information on EP&R
- Public information mechanisms in crisis situation
- Information exchange templates
- Tests & exercises (including joint exercises)
- Updating mechanisms and frequency

*whereas items marked with *) can be found in country fact sheets and items marked **) do not apply to neighboring countries that are not potential accident countries.*

These exchanges can be done by documents, the participation at joint seminars, the exchange of personnel, etc. In order to facilitate the exchanges and to enable regular updates, the parties should set up a permanent exchange platform. Such a platform could consist of one of the following models:

- Bilateral Commission with annual meetings
- A standing bilateral working group
- A multilateral group, such as the Nordic Working Group of Emergency Preparedness (NEP)

c. Operational arrangements to support a coordinated response

The parties should establish operational arrangements, such as:

- Trans border coordination mechanisms for protective actions in the response phase
- Arrangements regarding information exchange (what kind of information, ways to exchange it) during the accident and the deliverables (contents and frequency)
- A short message information exchange system for the response
- Access to restricted websites
- Exchange of liaison officers, including definition of profile and responsibility
- Exchange observers in exercises
- Direct bilateral requests for assistance
- Cooperation of first responders
- Automated transfer of measurement data
- Organisation of joint exercises and drills
- Joint public communication campaigns.
- Specific mechanisms for rapid exchange of relevant information between appropriate authorities in case of a severe accident requiring rapid decisions for protective actions, while very little is known about the situation.

Such agreements should be operational, as applicable, in normal and in emergency situations.

d. Arrangements for the case of discrepancies

The HERCA-WENRA approach puts its focus on situations where the response of the affected country is thought consistent and accepted by all. The ideal case would be when neighboring countries can recommend following the recommendations i.e. adopt the principle that in the first hours, "we do the same as the accident country". Alternatively, one can imagine a situation, in particular when sufficient time is given by the kinetics of the accident development that two or

more affected countries agree on a compromise response. In both cases, discrepancies can be avoided.

However, situations where this is not possible remain, basically for two possible reasons:

1. The differences of the national emergency arrangements are too important and cannot be overcome.

In this case, the inconsistency of the response can be anticipated beforehand. All possible efforts should be taken by the countries concerned to reduce the known differences in their emergency arrangements. For as long as the differences remain, the countries concerned should elaborate at least a common communication strategy to explain the differences and the basis of those differences to the concerned population. Communication should take place both before and during the emergency.

2. In one of the affected countries, either the accident country or the neighboring country, the response is highly inconsistent.

In this second case, it will be important that the parties to the bilateral arrangements maintain operational communication channels. Before a decision that is thought to be inconsistent is taken, at least parties should be aware of it. The counterpart in the other country should remind the responsible decision taker of the negative consequences. This may lead the decision taker to reconsider. Otherwise, at least the communication to the public should be coordinated and the differences well explained. However, all parties need to be aware that such a situation is highly undesirable. A good communication will not permit to avoid massive distrust of the population following this kind of discordant decisions.

If additionally, communication to the public cannot be coordinated with the country where the response is highly inconsistent, the other countries involved will urgently try to agree on an alternative position in cooperation with the IAEA-IEC, taking advantage of the "Assessment and Prognosis" process at the IEC.

6. Communication principles

a. Exchange of information between parties

The following is to be considered as part of the preparedness for facilitation of the communication between authorities during incidents and emergencies:

3. Information is communicated without prior request (push) to all parties of the arrangement simultaneously, indicating that the authorities of other than the states involved are also informed.
4. Communication is not dependent on "personal" contacts but on official emergency contact points or mutually agreed channels. It is the responsibility of each authority to communicate any change of contact information details without delay.
5. Responsibilities for coordination, for decision taking, for exchange of information, etc.
6. Contacts of urgent information are quick and simple, independent of the time of day and compatible for all parties.
7. To avoid misunderstanding and misinterpretations:
 - a. relevant and important information is delivered in writing; the use of video conference technique, telephone or other means of communication are only complementary,
 - b. information delivered to the other authorities are processed, focusing on conclusions and decisions; detailed information is made available,
 - c. the language used in communication between the authorities regarding incidents and emergencies shall be agreed upon beforehand.

8. Unverified and rough data, not yet suitable for publication (declared as such) shall be shared under the condition that it is not made available to a third party without the consent of the author.

7. References

The present guidance is based on and derived from the following existing documents available internationally or in in the HERCA member states:

The Nordic Manual (NORMAN): Co-operation between the Nordic Authorities in Response to and Preparedness for Nuclear and Radiological Emergencies and Incidents; 20 June 2006; Revised August 2014

HERCA-WENRA Approach for a better cross-border coordination of protective actions during the early phase of a nuclear accident - Stockholm, 22 October 2014