

Chapter 4

Building an 'East Asian Manual' and the Way Forward

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Chapter 4

Building an 'East Asian Manual' and the Way Forward

As noted in the previous section, Nordic countries developed practical guidelines in the form of the 'Nordic Manual' to exchange information and cooperate in cases of nuclear emergencies. These cooperation activities and the improvement of the manual are continuing successfully.

Of course, it is easy to find consensus on the importance of cooperation on emergency preparedness and response (EP&R) in East Asian countries, but more difficult to gain consensus on developing mechanisms that involve many duties. To improve the effectiveness of emergency preparedness and response in East Asian countries, it is important to continue improving activities with as many members as possible. Therefore, to attract a larger number of members, the items to be described in the draft guidelines must be carefully selected.

In this section, we describe the items required in the draft guidelines based on the Nordic Manual and the proposals from working group members, and the activities required after creating the draft guidelines.

The key principles to develop the draft guidelines reported in the 2nd Working Group Meeting are as follows:

- East Asian Working Group of Emergency Preparedness should be established and it must be a permanent entity.
- In the draft guidelines, the items should be the minimum required (minimum obligation), but misinterpretations in the guidelines for a nuclear emergency should be avoided.

4-1. Draft Guidelines for an 'East Asian Manual'

Proposed items to be described in the draft guidelines in the 2nd Working Group Meeting are as follows:

1. Objectives

2. Membership

3. Operational Procedures

- Working Group
- Training
- Information tool
- Fax, Group website, E-mail, phone, Satellite-based communication system
- Language

4. Resources

5. Next Steps

The proposals from working group members in the final country reports also suggested the following for the draft guidelines:

- It is important to utilise existing communication networks/channels rather than create new ones. For example, these are regulators through the ASEAN Network of Regulatory Bodies on Atomic Energy (ASEANTOM) network, the TRM (Northeast Asian Top Regulators' Meeting on Nuclear Safety).
- In an emergency, the member (the personnel in charge of a country contact point) directly involved may be busy obtaining information. Therefore, one-way tools (e.g. fax or e-mail) are appropriate for information sharing in an emergency.
- Redundancy is important for information-sharing tools in an emergency.

The details of the provisional 'draft guidelines' are attached as follows:

**Co-operation, Exchange of Information and Assistance between East Asian Countries in
Nuclear or Radiological Incidents and Emergencies
(Provisional)**

1. Objective

There are many nuclear facilities in the East Asia Region. Severe nuclear or radiological emergencies like the Fukushima Accident (2011) might give a direct or indirect impact on many countries. To minimize the impact, the members must improve the effectiveness of preparedness through co-operation in nuclear emergency.

2. Membership

List of Members organizing the working group for cooperation in nuclear emergency Indonesia, Malaysia, Republic of Korea, Philippines, Singapore, Thailand, Viet Nam, Japan

3. Operational Procedures

- Working Group

-Working Group members should held the annual meeting and discuss about the revision of the guidelines.

- Training

-Communication training should be held every year.

- Information tool

-Fax and E-mail are recommended as an initial notification in emergency.

- Information to be shared in emergency

-To be determined in the Working Group

- Information to be shared as a routine work

-The locations and specs of nuclear facilities in members' countries

- Language

-English shall be the official language of this activity except otherwise agreed.

4. Resources

The contribution of resources to carry out working activities is voluntary by members.

5. Next Steps

This document will be revised promptly.

4-2. Actions to Be Recommended

As described in 4-1, the initial draft guidelines will include only minimum items. To improve the effectiveness of the guidelines, the working group must conduct continuous reviews and revisions, and it is desirable that additional items and contents are discussed through training and discussion sessions. This section lists potential actions to be recommended after developing the draft guidelines. The steps to reach the regional level are as follows:

- Step 1: Draft guidelines
- Step 2: Brush up
- Step 3: Training
- Step 4: Detailed guidelines similar to the 'Nordic Guidelines and Recommendations' and establish a 'Centre of Excellence' (if needed)
- Step 5: Keep improving information exchange and effectiveness of coordinated response to an emergency if it happens.

4-2-1. Information Sharing by Regular Meetings and Workshops (Brush up)

As a result of the Fukushima accident, all members learned that a large amount of useful information should be shared in the case of a serious nuclear emergency. This information not only covers the accident itself but also basic information, such as the

location of the facilities and the technical specifications of the facilities, etc. First, the working group should collate all the information to be shared in an emergency. Then, working group members should share the basic information in a workshop and practice information sharing in the emergency.

Specifically, information that should be shared during an emergency should include the following:

(Basic Information)

- The contact point that would be active during a nuclear emergency
- The location and specifications of nuclear facilities (most of the information has already been shared in this report. However, more detailed items, for example, the inventory of fuels, should be also included).
- The supervisor of the nuclear facilities, etc.

(Information on the accident)

- International Nuclear Event Scale (INES) level
- The possibility of radioactive material release
- Wind direction
- Necessity for evacuation
- Intake restrictions, etc.

4-2-2. Training

There are two approaches to training. The first is training conducted on the Internet by each member in his own country (web training), whereas the second is joint training. Although web training is more realistic, in order to improve the guidelines, joint training is also recommended. For example, observing the disaster prevention training in a nuclear facility may raise particular implications for certain members and numerous issues could be discussed, such as:

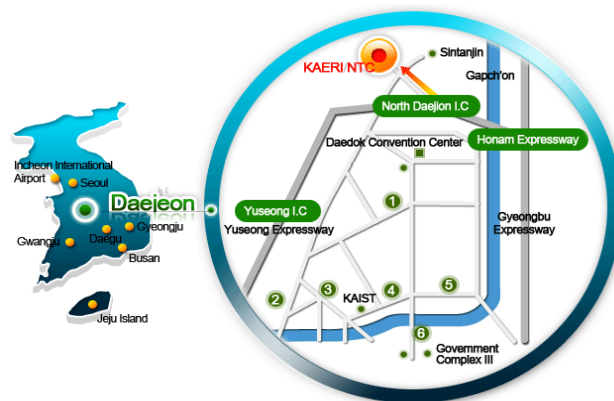
- How often should the working group hold the joint training?
- How should the type of training facilities for working group members be decided upon?
- How should members select those who should participate joint training?

As described above, although remaining issues should be discussed before implementing joint training, the following proposal was provided to the 2nd Working Group as a possible joint training facility.

Daejeon (Korea) would be one of the potential cities for joint training because

- the emergency response facilities of Korea Institute of Nuclear Safety (KINS) are located in Daejeon;
- there are many national institutes in Daejeon (KAERI, Korea Advanced Institute of Science and Technology, etc.); and
- Daejeon has good accessibility, being only one hour from Seoul by KTX.

Figure 4-2-1. Map of Daejeon



Source: KAERI website, https://www.kaeri.re.kr/english/sub/sub01_08.jsp

4-2-3. Centre of Excellence

The Centre of Excellence (CoE) is expected to promptly provide additional information, such as time, location and the nature of the event, facility or activity involved,

assumed or established cause, general characteristics of radioactive release, meteorological conditions, monitoring data, protective actions, and predicted behaviour of radioactive release in the case of a radioactive emergency. The CoE should be established, if necessary, in a country that has already commercialised nuclear power, such as:

- China (Beijing)
- Korea (Seoul or Daejeon)
- Japan (Tokyo)

The factors to be considered as conditions for establishing the CoE were discussed in the Working Group meeting. First, the CoE should be equipped with abundant human resources and knowledge in nuclear engineering. Second, a certain level of industrial infrastructure, such as electricity, transportation, buildings, computers, and so on, should be prepared so that they could be used in an emergency. Third, the official language should be English.

4-3. The Way Forward

More detailed and comprehensive discussion is necessary to improve the draft guidelines on regional collaboration in the case of a nuclear emergency in East or Southeast Asian countries. These initial draft guidelines for the EP&R in Asia are proposed, and any comments or further recommendations would be welcome in order to revise, confirm, and put into practice the draft guidelines.