

Information exchange and mutual emergency assistance

The framework for accident response and notification

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The provision of early warning procedures for the timely implementation of measures to protect the public against both natural and man-made hazards and accidents is a well-established practice. Typhoons, dam failure, and high volume storage of toxic gaseous materials are typical of the potential hazards for which pre-established warning and emergency measures exist in many countries. Similar provisions should be expected for any nuclear facility or activity where there exists the possibility of harm in the event of a serious plant malfunction, nuclear accident, or radiological emergency. As with other industrial or natural hazards, it is necessary, when planning an appropriate emergency response and notification system, to take into account the consequences of the event at various distances from its initiating point, including, where relevant, any effect in neighbouring or other countries. The extent and formality of the notification system will be governed by the nature of the potential hazard and the speed at which it may propagate.

In the area of nuclear accident response planning, the concept of prompt notification — including the provision of pertinent information — is by no means new, whether or not transboundary effects may be involved. Nor is the concept of post-accident mutual emergency assistance. A serious nuclear accident may require a substantial response effort to effect the recovery of both the plant and the off-site situation. This effort could tax the resources of the country in which the accident occurs, and in some countries might well be beyond their capability to mount an effective response. Even highly developed countries, with many nuclear power facilities and a large technical supporting infrastructure, could find themselves hard-pressed to cope effectively with such an accident, especially if it involved serious off-site radiological consequences. Arrangements for enhancing the national capability through the provision of advisory, technical, or material assistance from other countries having the requisite expertise appears, therefore, to be highly desirable.

A review of IAEA publications indicates that these concepts have long been discussed; guidance based on them was formulated as early as 1969 in the Agency's Safety Series No.32 *Planning for the Handling of Radiation Accidents*. This was further developed in

1981 in Safety Series No.55 *Planning for Off-Site Response to Radiation Accidents in Nuclear Facilities* and more recently in two Information Circulars, published in 1984 and 1985 respectively as a result of actions placed upon the Agency by its Board of Governors in 1982.* Many Member States have participated, through their experts, in the development of such recommendations and related guidance in the area of emergency planning and preparedness over the past 15 years.

Supported by Agency-sponsored training courses and by advisory missions in emergency response planning and preparedness, such guidance has furthered an awareness of, and conversance with, the requirements associated with implementing an effective emergency response system, particularly those which will apply in the initial stages of a nuclear accident which has the potential for off-site consequences, including significant radiological effects beyond the boundaries of the country in which the accident occurs.

"Institutionalizing" guidance

The question therefore arises as to why countries which could benefit from a structured arrangement for speedy notification and information exchange in the event of a nuclear accident, or for mutual emergency assistance, have been reluctant to enter into formal arrangements for this purpose, either on a bilateral or multilateral basis. Although the question is relatively simple, the answer is complexed by a number of perceptual factors. These relate to problems in disseminating information and concepts to people and the various institutions and organizations concerned, and in seeking optimum utilization by them. Underlying this is the not uncommon view that "guidance is guidance — nice to have", and "should we ever need it, we know that it is available — but we probably will never need it". There is, therefore, an inherent tendency for guidance material to be relegated to the dusty shelves of libraries, offices, and storage rooms. This is not meant to imply that the Agency's technical guidance is never implemented. Its recommendations have been applied, to a varying degree

* *Guidelines for Mutual Emergency Assistance Arrangements in Connection with a Nuclear Accident or Radiological Emergency*, INFCIRC/310, IAEA (January 1984), and *Guidelines on Reportable Events, Integrated Planning and Information Exchange in a Transboundary Release of Radioactive Materials*, INFCIRC/321, IAEA (January 1985). Also see "The Agency's role in emergency planning and preparedness for nuclear accidents", by H.E. Collins and B.W. Emmerson, *IAEA Bulletin*, Vol.25, No.3 (September 1983).

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and in a number of areas, in many countries; however, the extent of implementation has not been uniform.

In matters of substantial impact such as information exchange (including early notification) and mutual emergency assistance in the event of nuclear accidents or radiological emergencies, "institutionalizing" the available guidance through legal instruments would raise the visibility of some types of guidance and make the most important ones binding among the parties to such instruments. There are many precedents for this approach; for example, legislative action taken in the United States after the accident at the Three Mile Island nuclear power plant in March 1979. The legalization of technical guidance has also occurred in other countries and has taken the form of legislative action, or bilateral and multilateral agreements, regarding emergency response planning and preparedness.

The Nordic Mutual Emergency Assistance Agreement of 1963 was the first of this kind and the only one concluded to date between the Agency and Member States. At its 8th regular session in 1964, the IAEA General Conference adopted a resolution requesting the Board of Governors "to take the necessary steps to stimulate the conclusion of emergency assistance agreements between two or more Member States and the Agency as a means of ensuring more effective international mutual emergency assistance". In response to that resolution, draft provisions for such agreements were prepared by an expert committee in 1965 and reviewed by a Committee of the Whole of the Board in 1966. Draft model bilateral and multilateral agreements were presented to the Board in February 1967 and, at its request, were circulated to Member States in June 1967 for use as guidance material.*

In 1977 the Agency concluded with the United Nations Disaster Relief Office (UNDRO) an agreement for close co-ordination of their activities in providing assistance in connection with nuclear accidents. In recent years, many bilateral agreements have been signed between neighbouring countries in Europe providing, in particular, for speedy notification, information exchange, and mutual assistance in the event of a nuclear accident or radiological emergency with potential transboundary effects.** In this context, it is worth noting that, though all such agreements deal with emergencies arising from peaceful nuclear activities, those concluded by France — which is a nuclear-weapon State — with Switzerland and the Federal Republic of Germany in 1979 and 1981, respectively, also provide for the supply of information on any occurrence that

may have transboundary radiological effects, with the only exception of information subject to secrecy for military reasons.*

Post-Chernobyl agreements

In the wake of the Chernobyl accident, one of the requests to the Director General of the IAEA by the Board of Governors at its Special Session on 21 May 1986, was to convene open-ended governmental expert groups to draft, on an urgent basis, two international agreements taking into account the Agency's guidelines set out in documents INFCIRC/321 and INFCIRC/310 respectively. One agreement would deal with early notification and provision of comprehensive information about nuclear accidents with potential transboundary effects, and the other with the co-ordination of emergency response and assistance. To this end, a meeting of governmental experts open to all Member States was convened by the Agency from 21 July to 8 August 1986, to which various international and regional organizations concerned were invited. (See *News in brief* for highlights of the Conventions.)

Obviously, it is not necessary to formalize all technical guidance produced by the Agency. However, to achieve a greater awareness and better implementation of technical guidance outside of, and supplementary to, formalized frameworks requires an increase in several of the activities already launched by the Agency, particularly those initiated in the last few years. In the nuclear safety area, these activities fall within two basic categories:

- Special assistance missions such as Operational Safety Review Teams (OSART) and Radiation Protection Advisory Teams (RAPAT), which are provided at the request of Member States
- Training programmes in a variety of technical areas.

Both types of activities, if conducted on a more expanded and comprehensive scale, can assist in bringing the Agency's already extensive technical guidance out of the closet into which it is sometimes relegated. Ultimately, the success of this depends upon two essential factors:

- The will of Member States to fully participate in the relevant assistance and training programmes
- The provision of adequate resources to enable the Agency to expand and implement its programmes for the strengthening of international co-operation in nuclear safety.

The key to enhancing the successful implementation of the Agency's technical guidance is through the provision of special assistance missions coupled with relevant training programmes, which, in turn, are linked to related technical co-operation projects.

* The Nordic Agreement is reproduced in document INFCIRC/49. The Agreement entered into force for Denmark, Norway, and Sweden in 1964; for Finland in 1965. The IAEA resolution in 1964 was GC(VIII)/RES/177. The draft model agreements are reproduced in document GOV/INF/392, Attachment.

** During 1977-82, a number of bilateral agreements were entered into by Austria, Belgium, Czechoslovakia, Denmark, France, the Federal Republic of Germany, Luxembourg, The Netherlands, Portugal, Spain, and Switzerland.

* Article 12 of the Agreements of 18 October 1979 between France and Switzerland, and of 28 January 1981 between France and the Federal Republic of Germany, on the Exchange of Information about Accidents with Potential Radiological Consequences.