Radiological Protection

Committee on Radiation Protection and Public Health (CRPPH)

The CRPPH is contributing to the definition of new directions and approaches for the international system of radiological protection in order to achieve a clearer and more streamlined framework. The ultimate objective is to achieve a system that will better address regulator and practitioner needs, and will more appropriately position scientific radiological protection considerations within the broader context of social judgement and risk governance.

Highlights

- Based on the CRPPH 50th Anniversary discussions in May with national regulatory authorities and international organisations involved in radiological protection, and on two forward-looking reports on emerging social and scientific challenges to radiological protection, the CRPPH has identified its strategic direction for the coming years.
- With the approval of the new ICRP general recommendations in March, and following seven years of collaborative discussions, the CRPPH began to consider aspects of the recommendations' implementation.
- Preparations were made for a workshop to be held in January 2008 to discuss how science and values contribute to the formation of policy judgements, to elaborate the scientific and policy processes involved in decision making and to identify priority science areas needed to support policy decisions.
- Several expert groups were established to address identified needs in post-accident management based on the results of the INEX-3 emergency exercises series.

Evolution of the international system of radiological protection

In March 2007 the International Commission on Radiological Protection (ICRP) approved its new general recommendations, which will replace those contained in ICRP Publication 60 issued in 1990. This draws to a conclusion the efforts that were begun in 1999, and to which the CRPPH has significantly contributed. The NEA actively participated in the process by providing a forum and opportunities for interaction with interested authorities of member countries as well as a dialogue with other stakeholders. Since 1999, the CRPPH has organised eight international workshops, performed four detailed assessments of ICRP draft texts, and has issued, in addition to conference proceedings, seven expert group reports proposing innovative approaches to the evolution of the ICRP's system of radiological protection. These actions have been complemented by direct interactions with the ICRP. The final report on CRPPH work in this area will be published in 2008. The CRPPH will also continue its engagement with the ICRP in developing supplemental recommendations.

In terms of the application of the system of radiological protection, the NEA, as a co-sponsoring organisation of the International Basic Safety Standards for Protection Against Ionizing Radiation and for the Safety of Radiation Sources (BSS) has been working with the other co-sponsoring organisations to revise the BSS. This work is expected to continue for two to three years, and the CRPPH, taking the lead in this work on behalf of the NEA, will continue to actively contribute the expertise of its members and its Secretariat to this work.

Stakeholders and radiological protection

The CRPPH has long been at the forefront of developing stakeholder involvement in radiological protection issues. Given the evolution that has taken place, the Committee decided to take stock of current practice and tasked a scoping group with examining how radiological protection institutes have adjusted their activities to working with stakeholders. Based on eight case studies in member countries and one outside, the group concluded that an increasing number of activities were engaging stakeholders beyond the usual players (typically public authorities and industry), and highlighted the real gains being made by both the institutes and stakeholders. This work will be disseminated as an NEA publication. The group and the CRPPH nevertheless felt that more effort on consolidating good practices is required and therefore, over the coming year, the newly formed Expert Group on Stakeholder Involvement and Organisational Structure will investigate concrete changes in the activities of radiological protection institutes. The CRPPH will subsequently support the development of a guidance document for radiological protection professionals by the International Radiation Protection Association (IRPA), the global association of professional radiological protection societies.

Radiological protection and public health

In a very broad sense, the notion of public health is inherently all-inclusive, not focusing on any single risk or group of risks. In this context, questions of risk prioritisation and resource allocation are important. In a more technical sense, however, this broad perspective suggests that there should be common ground among the approaches taken to risk assessment and risk management. To address the related

issues, the CRPPH created the Expert Group on the Public Health Perspective in Radiological Protection (EGPH) in 2006 and began studies and exchanges of national experience. The group's ongoing activities and proposals for topics that could usefully be explored in more depth were reported to the CRPPH during its 2007 annual meeting. The CRPPH agreed that the EGPH shall develop case studies in four areas: 1) radon, 2) justification of medical exposure, 3) public health judgement in decision making based on new scientific evidence, and 4) management of individual differences.

Operational radiological protection from a policy perspective

In order to explore operational aspects of radiological protection that have or could have policy and regulatory implications, and to facilitate better interaction with the Information System on Occupational Exposure (ISOE), the Expert Group on Occupational Exposure (EGOE) was formed in 2006 and its programme and list of studies were approved in 2007. These studies shall explore in stepwise manner: 1) criteria for new build, 2) implementation of the ICRP recommendations, and 3) radiological protection policy and operational issues. The formal involvement of the ISOE programme in this activity has allowed it to take advantage of the operational experience of the ISOE membership.

Radiological protection science and policy judgement

The recent CRPPH assessment of ongoing research in radiation biology has indicated that there could be significant impact on the current system of radiological protection should research outcomes challenging current radiological protection assumptions continue to emerge. While none of these outcomes is at this point certain, regulatory authorities appreciate being kept informed of possible outcomes so that their practical implications can be assessed and preparations undertaken where appropriate. As such, the CRPPH, in co-operation with the Radiation and Nuclear Safety Authority (STUK) of Finland, will be organising the International Workshop on Science and Values in Radiological Protection, to be held on 15-17 January 2008 in Helsinki. This workshop will discuss how regulatory and policy judgements can best be made in the context of emerging scientific challenges and continuing scientific uncertainties. It will also help radiological protection (RP) policy makers, regulators and practitioners to better understand developments coming from RP science, and will help the scientists to better understand the broad processes of RP decision making, thereby leading to better interaction overall.

Radiological protection of the environment

The Secretariat's desk study reviewing national regulations and international instruments related to the radiological protection of the environment was published in early 2007. Following this, the CRPPH released a parallel study of national regulations and international instruments related to protection of the environment from chemical toxins, which assessed the regulatory implications of different approaches. The CRPPH also approved a paper discussing approaches to integrating radiological protection of non-human biota into the current system of radiological protection that was subsequently published in the December issue of the *Journal of Radiological Protection*. In order to further develop thinking on radiological protection of the environment, the CRPPH is organising a session on environmental protection, covering regulatory and policy issues as well as current practice, at the International Conference on Radioecology and Environmental Radioactivity to be held in Bergen, Norway in June 2008.

Nuclear emergency and recovery management

During 2005 and 2006, fifteen countries investigated the later-phase decision-making processes in International Nuclear Emergency Exercises (the INEX 3 table-top exercises) by using a common scenario to examine how they might, in the wake of a contamination, implement agricultural countermeasures and food restrictions, adopt "soft" countermeasures such as travel, trade and tourism controls, communicate with the public and move towards recovery. To evaluate the results of this exercise series, the CRPPH Working Party on Nuclear Emergency Matters (WPNEM) held a workshop on the INEX 3 consequence management exercises in 2006. Participants from 22 countries shared their national experiences of the exercise, collectively analysed their approaches to consequence management and the implications of any differences on decision makers. They also identified issues needing additional examination at the international level. The NEA finalised a synthesis report of the exercise series, workshop and follow-up activities in 2007. The WPNEM established several expert groups to address key needs in consequence management and recovery arising from the exercise series, particularly in the areas of post-accident countermeasures, impacts of nuclear indemnification and good practices in decision making.

Occupational exposure at nuclear plants

Occupational exposure at nuclear power plants continues to be an important issue for the CRPPH. The sharing of operational lessons and experience, as well as the collection, analysis and exchange of occupational exposure data continues to be addressed by the NEA joint project: the Information System on Occupational Exposure (ISOE). In support of CRPPH efforts to facilitate improvement of members' operational radiological protection capabilities, ISOE continued to collect, evaluate and disseminate occupational exposure data and trends, and to share operational experience through its information exchange network and international symposia. Important enhancements in ISOE value were undertaken in 2007 through ongoing improvements to the ISOE web-based information exchange system, and the creation of a new Expert Group on Work Management looking at optimisation of radiological protection in the nuclear power industry. Further details on the ISOE programme are provided on page 34.

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