

International Conference on Environmental Radioactivity : From Measurements and Assessments to Regulation

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SESSION 1: REGULATION

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An international framework of safety standards exists for controlling the radiation exposure of the public due to radionuclides in the environment. The standards, issued mainly by the IAEA, have a solid foundation based on the UNSCEAR scientific reviews and assessments and the recommendations of the ICRP. Nevertheless, the presentations in Session 1 indicated that there is a need for evolution and adaptation of some of the standards, especially those concerned with environmental aspects of emergency and existing exposure situations. The experience gained since some of the basic concepts were established more than ten years ago has shown that they can be difficult to apply and often do not obtain acceptance by the public, in particular, the concept of ‘action levels’ can be seen as being inflexible and not consistent with the ALARA requirement. In this context, some specific national developments were reported:

- Experiences of elevated discharge levels have led to proposals for the refinement of national regulatory criteria (Hungary);
- There is a need to take account of social factors in the regulatory process (Russia and Australia) ;
- New information which may affect regulations should be taken into account (Italy);
- Derived regulatory limits for application to NORM contamination have been developed (Spain).
- Some gaps were identified in the framework of IAEA standards related to protection of non-human biota, environmental impact assessment and the monitoring of radionuclides in food.

Several papers indicated that the generic guidance given in the international standards may not be directly applicable at the national level and that there is often a need to take account of local circumstances and social aspects in national standard setting.

The language used in regulatory documents should be clear and unambiguous. Care should be taken to avoid the use of colloquialisms and words that may not be understood or be open to various interpretations. There have been several instances where words in international documents have caused confusion when translated into other languages; examples are ‘clearance’ and ‘staple’ foods.

The new ICRP recommendations were mentioned during the session and the papers presented and the subsequent discussion indicated that many of the ICRP improvements being made are consistent with points raised during the session: they include:

- Redefinition of the target of dose assessment; the movement away from a critical group to a range of representative individuals, taking into account the habits of the most exposed individuals as defined with, among others, the interested parties;
- The need to take account of both radioactive and other toxic pollutants when present together;
- Emphasis on reducing exposure as much as possible - using the concept of dose constraint (for planned situations) and reference level (for existing and emergency situations);
- Being exhaustive in the assessment of exposure pathways (real and perceived) but, at the same time, being realistic in establishing representative exposure scenarios;
- Establishing, on a case by case basis, proper endpoints for remediation and the release of sites contaminated with radioactive materials taking into account local conditions; and
- Involving all interested parties in the regulatory process from beginning to end and taking account of differences in their interests and perceptions.