Protection of the Environment - Activities of ICRP Committee 5

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Protection of the environment is integral to the system of radiological protection as outlined in *Publication 103* The 2007 Recommendations of the International Commission on Radiological Protection; the Commission's activities in this area are mainly being pursued within Committee 5. The approach to environmental radiation protection and its alignment with environmental protection more broadly was outlined already in *Publication 91*, the cornerstones of the environmental protection system and relevant databases were provided in *Publications 108* and *114*, and its application in planned, existing and emergency exposure situations was outlined in *Publication 124*. In short, the system centres on 12 reference animals and plants (RAPs) with broad relevance in terms of environmental protection based on their ubiquity and significance, using a multitude of criteria as described in *Publication 108*. The databases comprise general biology of the RAPs, transfer parameters, dose conversion factors and effects data. Derived Consideration Reference Levels (DCRLs) were established for each RAP, representing a band of dose rates within which there is likely to be some chance of deleterious effects of ionising radiation for individuals of that type of RAP. The system has demonstrated its robustness and applicability in a number of assessments. Current work looks at consolidating the databases through improved dosimetry and understanding of dose-effects relationship. A newly established Task Group compiles RAP-specific reference information into 'monographs', with the view of updating information, improving flexibility and supplementing data where such are currently missing. For certain scenarios, more precise and ecosystem-specific protection benchmarks (e.g. reference values of dose rate for environmental protection as outlined in *Publication 124*) may be justified, which would have to be informed by consideration of *representative organisms* (i.e. *representative* of a particular ecosystem and relevant to the assessment context). The Committee's future programme of work includes development of principles for generation of relevant databases based on existing generic databases for *reference* animals and plants for consideration of ecosystem characteristics more broadly, and application of the methodology in a limited number of scenario.