Larsson An overview of the ERICA Integrated Approach JER 99

Larsson, C.M.
An overview of the ERICA Integrated Approach to the assessment and management of environmental risks from ionising contaminants.
J. Environ. Radioact., 99, 1364-1370.

The ERICA project (environmental risks from ionising contaminants: assessment and management, EC contract no. FI6R-CT-2004-508847) concluded with the publication of two main outputs: the ERICA Integrated Approach to the assessment and management of environmental risks from ionising radiation, of which also introduces the user to the second main output, the ERICA Tool, which is a software programme with supporting databases, that together with its associated help will guide users through the assessment process. More than 60 European scientists contributed to the ERICA Integrated Approach. In addition, a large number of experts, policy makers, and decision-makers in different areas have contributed views on the ERICA Integrated Approach and its associated Tool from the user's perspective, through participation in the End-Users Group set up under the ERICA project. Databases on transfer, dose conversion coefficients and radiation effects on biota have been developed specifically for the purpose of the Integrated Approach, and incorporated into, or interacting with, the Tool. Species sensitivity distributions of biological effects data have been performed and did not reveal, for chronic exposure, any statistical grounds for separation between terrestrial, marine and freshwater ecosystems in terms of species sensitivity to radiation; on the basis of such analysis a universal screening dose rate criterion of 10 Gy h^{-1} incremental dose rate is suggested for exiting the assessment procedure while being confident that environmental risks are negligible. This criterion is used for the two first tiers (conservative assessment with limited data requirement and various possibilities of incorporating user-defined parameter values, including the screening dose rate criterion) of the assessment methodology. Exposure situations of concern are carried through a third tier, making use of all relevant databases and with a number of issues and options listed to support and guide decision-making. This article provides an overview to the ERICA Integrated Approach, whereas further articles of this special issue describe in-depth different vital aspects of the Integrated Approach.

http://dx.doi.org/10.1016/j.jenvrad.2007.11.019