

European Commission Radioactivity Environmental Monitoring Database REMdb: A Law (Art. 36 Euratom Treaty) Transformed in Environmental Science Opportunities

Authors : M. Marín-Ferrer, M. A. Hernández, T. Tollefsen, S. Vanzo, E. Nweke, P. V. Tognoli, M. De Cort

Abstract : Under the terms of Article 36 of the Euratom Treaty, European Union Member States (MSs) shall periodically communicate to the European Commission (EC) information on environmental radioactivity levels. Compilations of the information received have been published by the EC as a series of reports beginning in the early 1960s. The environmental radioactivity results received from the MSs have been introduced into the Radioactivity Environmental Monitoring database (REMdb) of the Institute for Transuranium Elements of the EC Joint Research Centre (JRC) sited in Ispra (Italy) as part of its Directorate General for Energy (DG ENER) support programme. The REMdb brings to the scientific community dealing with environmental radioactivity topics endless of research opportunities to exploit the near 200 millions of records received from MSs containing information of radioactivity levels in milk, water, air and mixed diet. The REM action was created shortly after Chernobyl crisis to support the EC in its responsibilities in providing qualified information to the European Parliament and the MSs on the levels of radioactive contamination of the various compartments of the environment (air, water, soil). Hence, the main line of REM's activities concerns the improvement of procedures for the collection of environmental radioactivity concentrations for routine and emergency conditions, as well as making this information available to the general public. In this way, REM ensures the availability of tools for the inter-communication and access of users from the Member States and the other European countries to this information. Specific attention is given to further integrate the new MSs with the existing information exchange systems and to assist Candidate Countries in fulfilling these obligations in view of their membership of the EU. Article 36 of the EURATOM treaty requires the competent authorities of each MS to provide regularly the environmental radioactivity monitoring data resulting from their Article 35 obligations to the EC in order to keep EC informed on the levels of radioactivity in the environment (air, water, milk and mixed diet) which could affect population. The REMdb has mainly two objectives: to keep a historical record of the radiological accidents for further scientific study, and to collect the environmental radioactivity data gathered through the national environmental monitoring programs of the MSs to prepare the comprehensive annual monitoring reports (MR). The JRC continues his activity of collecting, assembling, analyzing and providing this information to public and MSs even during emergency situations. In addition, there is a growing concern with the general public about the radioactivity levels in the terrestrial and marine environment, as well about the potential risk of future nuclear accidents. To this context, a clear and transparent communication with the public is needed. EURDEP (European Radiological Data Exchange Platform) is both a standard format for radiological data and a network for the exchange of automatic monitoring data. The latest release of the format is version 2.0, which is in use since the beginning of 2002.

Keywords : environmental radioactivity, Euratom, monitoring report, REMdb

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