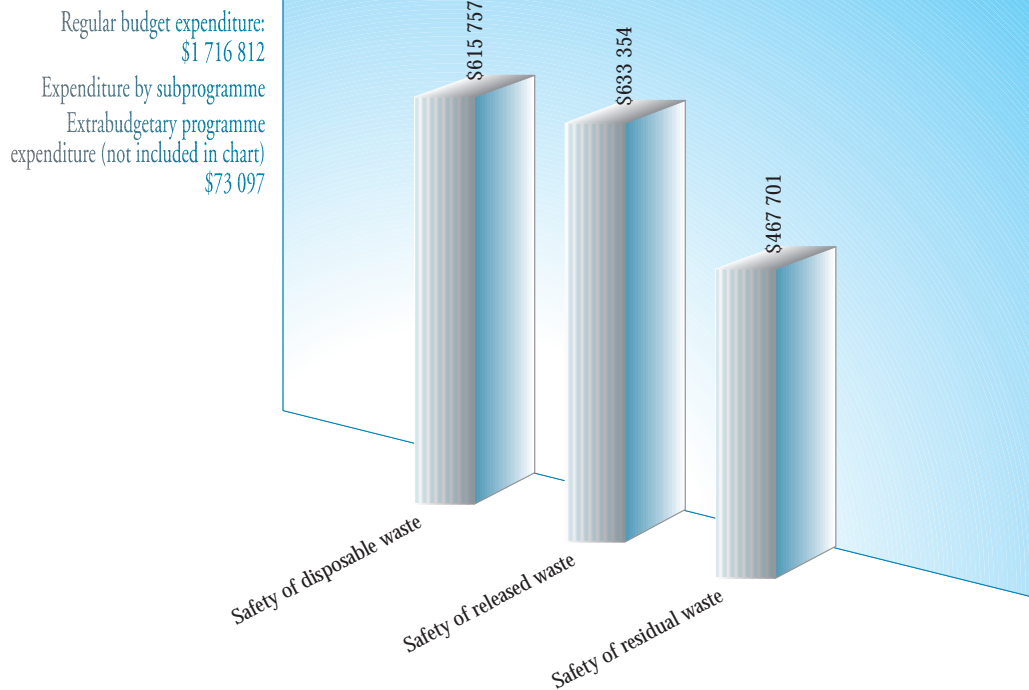


RADIOACTIVE WASTE SAFETY



The programme on waste safety is focused on the establishment of a comprehensive set of internationally agreed safety standards with the active involvement of Member States and under the supervision of an international advisory committee. The other elements in the programme are mainly aimed at providing guidance and assistance to Member States in the implementation of these standards. An important step towards reaching the goal of an international safety regime in the area of radioactive waste safety was the adoption in 1997 of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (the 'Joint Convention'), for which the Agency serves as the secretariat.

Safety of disposable waste

Discussions on reaching international agreement on procedures for releasing previously regulated facilities and materials from control were held as part of a specialists meeting entitled 'Application of the Concepts of Exclusion, Exemption and Clearance:

Implications for the Management of Radioactive Materials'. This continues to be an issue in many countries, and also between countries, as increasing numbers of nuclear facilities reach the end of their useful lives. Among the many topics discussed were the: regulatory control of exposures from low levels of naturally occurring radionuclides; lack of clarity over different types and values of clearance levels; management of the disposal or reuse of materials containing very low levels of radionuclides; and problems associated with the transboundary movement of such materials.

Progress was made on several documents being developed within the Radioactive Waste Safety Standards (RADWASS) programme. The most important is one on the safety requirements for the near surface disposal of radioactive wastes and an accompanying Safety Guide on safety assessment. These documents were approved by the Waste Safety Standards Advisory Committee (WASSAC) after formal consultations with Member States. The next step in the approval process is review by the Agency's senior review body on safety documents, the Advisory Commission on Safety Standards (ACSS) before submission to the Board of Governors for approval.

Other documents at an advanced stage in the approval process give safety guidance on the pre-disposal management of wastes, the decommissioning of nuclear reactors and other facilities and on the control of discharges of radionuclides to the environment.

The RADWASS programme is supported by a number of ad hoc working groups whose aim is to encourage consensus between experts in Member States on new and difficult topics. Documents were published on issues relevant to establishing the long term safety of underground waste repositories (IAEA-TECDOC-975), on criteria for guiding the restoration of areas affected by residual wastes (IAEA-TECDOC-987), and on the clearance of material from regulatory control (IAEA-TECDOC-1000). It is expected that many of the concepts generated through this informal process will be incorporated into RADWASS documents.

Safety of released waste

In response to increasing global concern over the state of the environment, consideration is being given for the first time to the development of an Agency safety standard on the protection of the environment from ionizing radiation. The current approach of assuming that protecting people to an acceptable degree will also provide adequate protection of the environment has attracted criticism from several quarters since it could be seen as treating the environment in a secondary way and is different from the approach being adopted for most other pollutants. Moreover, separate criteria for environmental protection are being developed in some countries while others are reviewing the situation. A discussion paper was prepared on the subject for consideration by the Radiation and Waste Safety Standards Advisory Committees and a decision on whether to develop a safety standard will be taken in 1998.

Reflecting environmental concerns, work began on a database of worldwide discharges of radioactive materials in liquid and gaseous forms. This will supplement the existing database of solid waste disposals in the marine environment. The information is intended as an input to the United Nations Global Programme of Action for the Protection of the Marine Environment from Land-Based Sources, in which the Agency has a leading role in relation to radioactive substances.

Safety of residual waste

Several reports on assessments of the radiological conditions resulting from past nuclear activities were completed. The publications, part of the new Radiological Assessment Reports Series, cover reviews at Bikini Atoll (a former nuclear weapon testing site) in the Marshall Islands, at the Semipalatinsk test site in Kazakhstan and in the Kara Sea, where high level radioactive waste was dumped in shallow waters.

The Bikini Atoll study was completed earlier, but when the draft report was presented to the Government of the Marshall Islands in October 1996, the Agency was requested to carry out corroboratory measurements at Bikini Island. An expert team was sent in May 1997 to make direct measurements of external radiation dose rates at representative locations and take samples of soil and foodstuffs for subsequent analysis. The results confirm the previously published data on which the assessment was based. An addendum was included with the original report summarizing the results of the corroboratory mission.

A study of the radiological situation at the Mururoa and Fangataufa Atolls commissioned by the French Government and initiated by the Agency in 1996 is nearing completion. In 1997, the last series of measurements at the atoll were made by Agency experts.