

MARINE ENVIRONMENTAL ASSESSMENT OF THE BLACK SEA REGION (RER/2/003)

F1

CORE FINANCING

YEAR	Experts		Group Activity	Equipment	Fellowships		Scientific Visits		Group Training	Sub-Contracts	Misc. Comp.	TOTAL
	m/d	US \$	US \$	US \$	m/d	US \$	m/d	US \$	US \$	US \$	US \$	US \$
1997	1/0	13,200	0	140,000	12/0	37,800	0/0	0	0	0	0	191,000
1998	0/15	6,975	0	70,000	0/0	0	0/0	0	0	0	0	76,975

First Year Approved: 1995

Total expenditure to 30 September 1996:

\$619,323 (TCF)

OBJECTIVES: To improve regional capabilities in the Black Sea area to assess marine environmental pollution using nuclear techniques.

BACKGROUND: This project was approved as part of the 1995-96 programme with footnote-a/ status. It was upgraded from Agency resources in mid-1995 and has now been extended to the 1997-98 cycle. The 1992 Convention on the Protection of the Black Sea Against Pollution classified radionuclides as "hazardous substances and matter" owing to their toxicity, persistence in the environment and bioaccumulation characteristics. The countries in the Black Sea region ranked radionuclides as a priority issue amongst marine pollutants on the basis of public concern related to the Chernobyl accident, the high risk associated with some of the nuclear facilities in the Black Sea basin, and possible waste-related problems. In addition to the interest they present as contaminants with potentially harmful effects on environmental and human health, radionuclides are important tools for assessing the fate of pollutants. An evaluation of the current status of Black Sea radioactivity is required for assessing any radiological effects and, with a view to future studies, for establishing a baseline record and identifying the gaps in knowledge which need to be further addressed.

PROJECT PLAN: In response to the needs of participating Member States to establish indigenous capabilities for assessing the relevant radionuclides in the Black Sea marine environment, the Agency will continue to provide expert services, training and equipment. Georgia, not being a Member State during the first phase of the project, did not participate in these activities and received no assistance from the Agency. Special attention will be paid to Georgia's needs and capabilities in this second phase. The capability to analyse alpha-emitting radionuclides in marine samples is being developed in laboratories in Bulgaria, Romania and Turkey, and upgraded in Georgia and Ukraine. Once established, this capability should be applied to provide data on anthropogenic and natural alpha emitters. Within the scope of the project, capabilities for analysing tritium, C-14 and gamma emitters will also be upgraded and used for measurement of environmental levels and for tracer studies. Commissioning of new equipment and analytical methods for alpha-, beta- and gamma-emitting radionuclides will extend the limits of detection. This should allow the use of radioisotopic signals to identify the sources of contaminants. Low energy gamma spectrometry will complement alpha spectrometry for Pb-210 analyses. Sampling and sample preparation techniques will be developed which will ensure that data from the various institutes can be compared. Commonly accepted methods must be adopted for water, sediment and biota. Dating techniques will be applied for evaluating the input chronology for radioactive and non-radioactive pollutants. Some split sample analysis will be conducted for quality control. Recommendations/guidelines will be developed for an adequate monitoring strategy at a regional level. The participating Member States are Bulgaria, Georgia, Romania, the Russian Federation, Turkey and Ukraine.

NATIONAL COMMITMENT: The Governments of the participating countries are committed to a regional approach to the environmental protection and management of the Black Sea. The 1992 Convention on the Protection of the Black Sea Against Pollution establishes the institutional, legal and technical framework for sustaining regional co-operation. The 1993 Ministerial Declaration on the Protection of the Black Sea provides the political framework for the rehabilitation, protection and preservation of the Black Sea. Participating Member States will support the participating laboratories by releasing appropriate staff for training and fellowships and will ensure their continued assignment upon their return. They are also expected to host expert missions and cooperate in the organization of workshops.

AGENCY INPUT: Equipment and expert services to monitor and assess radioactive pollution by measuring radionuclides in the environment; training.

PROJECT IMPACT: Participating laboratories in the Black Sea area will be capable of analysing marine samples for all significant radionuclides and of applying radiotracer techniques to study the fate of non-radioactive pollutants.