

## Improving Regional Capacity for Assessment, Planning, and Response to Aquatic Environmental Emergencies (RCA) (RAS/8/095) H1 Extension

### FOOTNOTE-a/ FINANCING

YEAR	Human Resource Components (US \$)						Procurement Components (US \$)				TOTAL (US \$)
	Experts	Meetings/ Workshop	Fellow- ships	Scientific Visits	Group Training	Sub-Total	Equipment	Sub- Contracts	Misc. Comp.	Sub-Total	
2005	79,300	0	0	0	88,000	<b>167,300</b>	60,000	0	0	<b>60,000</b>	<b>227,300</b>
2006	3,700	0	0	0	67,650	<b>71,350</b>	0	0	0	<b>0</b>	<b>71,350</b>

First Year Approved: 2003

Total expenditure to 31 October 2004:

\$38,211 (EXTRA)

**OBJECTIVES:** To improve the regional capacity for the management of aquatic environmental risks and to develop capacity in the RCA countries to assess, plan, and respond to pollution in coastal aquatic environments.

**BACKGROUND:** Pollutant materials in the aquatic environment may be derived from natural or anthropogenic sources and may be of radionuclide, organic or inorganic origin. These pollutants in large bodies of water can be dispersed by active forces such as wind, tides and currents. The health and livelihoods of populations living in coastal marine environments may be placed at risk as a result.

The growth of the mining and other industry-related activities in the Asia and the Pacific region has increased the level of contamination in receiving waters, leading to reduced populations of the flora and fauna through direct toxic effects, as well as increasing the concentrations of non-radioactive pollutants in staple aquatic foods. For example, arsenic deposits have been found in the Mekong Delta region in association with mining activities in Thailand. The accumulation of contaminants in the water, flora, and fauna can impact local communities' sources of food supply as well as their sources of livelihood.

The project will demonstrate and transfer technologies for the assessment of the impact of contaminants on aquatic organisms. It will also address the problems of water-dispersed pollutants by developing and verifying hydrodynamic models of polluted aquatic environments. The hydrodynamic models can then be used to accurately predict the dispersion of pollutants in the aquatic environment. They provide powerful tools for planners who can then predict if pollutants will reach and affect specific marine resources. They can also use such models to predict the impact of changing the hydrodynamics of an area through the construction of manmade structures.

The project originally planned for 2003–2004 is extended to 2005–2006 because all the activities planned for 2003–2004 could not be completed as scheduled as a result of the unexpected delay in finalizing the Exchange of Letters (EOL) between the Agency and AUSAID, which is funding this project.

### **OUTCOMES:**

1. The expertise and knowledge transferred to the RCA Member States on the use of computer codes for quantitative assessment of ecological risk, associated with the release of contaminants into estuarine and coastal environments.
2. Capability of using hydrodynamic models for analysing dispersion of pollutants in aquatic environments under local environmental conditions established.

### **PERFORMANCE INDICATORS FOR OUTCOMES:**

- 1a. Thirty-five persons trained in two regional training courses in computer modelling of dispersion of pollutants in the aquatic environment before the end of 2006.
- 1b. Four expert missions implemented and 30 persons trained in ecological risk assessments before the end of 2006.

2a. At least five of the RCA Member States will have acquired the capability of using hydrodynamic models to predict dispersion of pollutants in aquatic environment in order to provide data needed by planners to mitigate the effects of aquatic pollutants before the end of 2006.

**EXPECTED PROJECT IMPACT:** The project will enhance the regional and national ability to assess, plan, and respond to aquatic environmental emergencies and therefore reduce the risks to the economic well-being and health of communities in the region. The trans-boundary nature of the problems being addressed underlines the need for a regional response.