

1. SUMMARY

This report contains the findings of the study on Plastic Accumulation in the sea undertaken by NARA, subsequent to a request from the Ministry of Fisheries. The objectives set were to ascertain the extent of Plastics debris covering the seabed and beaches off the Colombo Area; To estimate the quantity of plastics drawn in with different types of fishing gear and techniques; To assess the impact of this on the fishery industry; To identify the different sources of plastics inputs to the sea and to recommend methods of reducing the problem.

Three research divisions of NARA collaborated in conducting this survey which included investigations on land as well as the coastal sea off the Colombo area. The study has been completed with several different surveys covering the period March to August 2001 and has estimated the quantities of plastics drawn in with different types of fishing methods in the coastal waters off the Colombo area. *Made/Beach Seine, Lobster fishery and the Prawn/Shrimp Trawl Fishery* were surveyed and the seabed was also inspected for plastic accumulation on the seabed. After the study of the potential sources contributing to plastic accumulation, the Kelani river and Wellawatte Canal have been identified as discharging over 10,000 pieces of plastic material daily into the sea. Further several sites on the shoreline have been found to be dumping grounds of plastic litter which eventually contribute to pollution of the sea and affects the fishery industry in particular.

Several recommendations, within which, a number of methods, which could be used to address the problem, are included in the latter part of this report. A multi institutional and multi sectoral approach is seen as the most appropriate way of protecting the coastal waters from this type of pollution. At policy level it would be appropriate that the ministries in charge of Industries, Environment, Fisheries, Ocean Resources and Policy Planning collaborate in discussion and formulate policy guidelines to curtail the adverse effects and also to control the expected increase of plastic consumption with increased development in the future. Awareness creation among the public through audio-visual methods and print media and education of school children, beach users, fishermen etc may be the best way address the problem. Legislation to protect the sea from plastic pollution (as in the USA) is strongly recommended. Overall supervision of the measures to be undertaken may be under the Ministry of Fisheries and Ocean Resources as this is to be a focussed campaign against plastic pollution of the sea.