



Environmental Fact Sheet

THE FACTS ABOUT PLASTICS IN THE MARINE ENVIRONMENT

FROM EPA'S *REPORT TO CONGRESS ON METHODS TO MANAGE AND CONTROL PLASTIC WASTES*

Discarded plastic products and packaging make up a growing proportion of municipal solid waste. By the year 2000, the amount of plastic we throw away will increase by 50 percent. Current volume estimates for plastic waste range from 14 to 21 percent of the waste stream. By weight plastics contribute seven percent, and less than one percent of plastic waste is currently recycled. Additionally, some plastic items end up as litter that poses ecological risk to the marine environment and aesthetic and economic loss. The identification of the types, sources and impacts of plastic marine debris is necessary for the evaluation of solutions.

Plastics Found in the Marine Environment

The majority of items collected during EPA's harbor surveys and beach cleanups are plastic. These efforts have identified a wide variety of plastic items, including plastic pellets (the raw materials plastic processors use to make plastic products); plastic bags and sheeting; fishing gear (e.g., nets, traps, and monofilament lines); tampon applicators, condoms, beverage ring carriers, plastic straps, and a variety of plastic packaging.

Where Does this Plastic Come From?

Plastic wastes come from both marine-based and land-based sources. Possible land-based sources include plastic manufacturers and processors, sewage treatment systems, stormwater runoff, solid waste

disposal activities (e.g., barges), and litter. Marine-based sources include: intentional waste disposal from vessels (now prohibited by Coast Guard regulations); waste disposal from off-shore oil and gas platforms; and accidental loss of fishing gear.

The major sources vary from region to region. For example, fishing gear loss is a major concern in the North Pacific, while plastic from sewer-related activities is a problem in the Northeast.

Problems Caused by Plastic Wastes

The major impacts of marine plastics are entanglement and ingestion by marine animals, and aesthetic and economic losses caused by lost fishing gear and by litter on beaches.

Entanglement affects seabirds, seals, whales, turtles, fish and crustaceans, and may have an adverse impact on the populations of endangered species. Fish continue to be caught and killed by lost "ghost" nets.

Ingestion of plastic wastes is particularly serious among birds and turtles, who mistake plastic items for food. Impacts include injury to the digestive tract, intestinal blockage and starvation.

Aesthetic and related economic losses associated with marine debris may be severe (e.g., loss to the tourism and fishing industries). For example, beach debris incidents in New Jersey and New York in 1987 and 1988 cost an estimated \$1 billion.

Where Can I Find Additional Information?

Call EPA's RCRA/Superfund Hotline for a free copy of the Executive Summary of the *Report to Congress on Methods to Manage and Control Plastic Wastes* (EPA/530-SW-89-051A). The toll-free number is 1-800-424-9346, or TDD 1-800-553-7672 for the hearing impaired. In Washington D.C., the number is 382-3000 or TDD 475-9652. The Hotline is open from 8:30 a.m. to 7:30 p.m. EST, Monday through Friday. Ask the Hotline for information on ordering the full report.