



CENTER FOR EARTH LEADERSHIP FACT SHEETS

Paying Attention to Plastics

Sixty years ago, plastic, made from petrochemicals, was a relatively new material. Phonograph records, nylon stockings, toothbrushes, and combs were some of the earliest consumer uses. Now plastic has completely infiltrated our lives. It's hard to furnish a home, wear clothes, or buy food without it. It's cheap, and it's versatile. A single plastic resin, for example, can appear as clingy plastic wrap, rigid plumbing pipe, or soft walking shoes.

ENVIRONMENTAL IMPACTS

Unfortunately the cost of plastic does not cover its environmental “wake”: front-end pollution and back-end waste. The production of chemicals that are the building blocks of plastics, such as propylene, ethylene, and polystyrene, generates large quantities of hazardous waste, which flow into the air and water. Workers and those living near the plants suffer the most. In fact an area along the Louisiana border is known as “cancer alley.”

Litter has always been an aesthetic problem, but when litter is plastic, it can actually be lethal to wildlife. Early stories told of birds being strangled in six-pack rings and turtles mistaking plastic bags for food. More recent research has found that the plastic in the ocean breaks down into tiny pieces and is being taken up by all kinds of marine animals. Even if plastic waste gets to the right place, it is not benign. In landfills the toxic additives leach out and may show up in groundwater. When burned in incinerators, some kinds of plastic waste emit mercury, lead, and dioxins.

HEALTH CONCERNS

We're now finding that even the *use* of some plastic consumer products can be hazardous to our health. Common plastic softeners for vinyl (PVC) called phthalates have been shown to leach out of soft plastic toys chewed by small children. Europe has already banned PVC from infant toys. Phthalates, perhaps best known as the chemicals that help create the “new car smell,” vaporize when exposed to heat and may leave a thin film inside a car window. These chemicals have also migrated from PVC film into food. Phthalates are endocrine disrupters that may contribute to declining sperm count and male birth defects.



Other studies show that a hormone-disrupting chemical called bisphenol A leaches from polycarbonate sports bottles and baby bottles.

RECYCLABILITY

Some plastic items, particularly packaging, can be melted down and recycled. However, the material degrades with repeated heating. Instead of “bottles to bottles,” most food containers are “downcycled” into another product. Soda bottles that go back to the store may find

their way into carpets, fiberfill, or clothing. Milk jugs may be made into flower pots, pipe, or park benches. Other containers have less value, and may be transported overseas, where sorting labor is cheaper.

Consumers often assume that the number inside a triangle on the bottom of containers means the material is recyclable. However, the number merely identifies the type of plastic. The symbol does not tell you whether that container is recyclable in your community.

WHAT YOU CAN DO

- Find out which plastics are recyclable in your community. Most communities offer curbside collection of some food and beverage containers or a place where you can take them.
- Avoid purchasing plastic packaging in the first place, especially #3 (PVC) and #7 (polycarbonate or mixed resins). Give preference to glass, metal, and paper.
- Store food, particularly liquids, in glass or ceramic containers.
- Don't heat plastic containers or film in a microwave.
- Avoid vinyl and other synthetics when selecting home building materials or furnishings. The safest materials are natural fibers and wood with no synthetic adhesives or finishes.
- Choose natural fibers for clothing, such as wool, organic cotton, linen, or silk rather than polyester or nylon.

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