

# Environmental Revolution: How We Are Recycling the Non-Recyclable

We moan, groan, and complain about pollution and rightfully so. Landfills are overflowing; plastic waste chokes our lakes, rivers, and the oceans. Cigarette butts litter the roadways; old vehicles, appliances, and unwanted items clutter forested areas. Not only is all this garbage an eyesore, but it's also detrimental to the environment.

The overabundance of trash is a serious problem demanding our immediate attention. It's not going to go away on its own. Humans made the mess; we have to clean it up. For millions of years, Mother Earth pretty well took care of all our planet's waste, but nature cannot reclaim manmade, non-organic materials on land or in the sea.

Our forefathers invented new machines and materials but never imaged 'progress' could result in such a plight. Since the Industrial Revolution and especially during the last century, humans have continuously created more and more items that last long beyond their useful lives.

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After World War II, mobility and convenience became the preferred mode of life. We became a throwaway society where items were not made to last. The idea of 'toss it away and buy another' applied to nearly all consumer products. It was cheaper to buy a new kitchen appliance or a children's toy than to fix it. In the last 50-75 years, durable and reusable items like glass milk and soda bottles have been replaced with plastic. We are now left with figuring out how to get rid of all the garbage.

According to the EPA, in 2014, the United States produced about 258 million tons of waste. Approximately 35 percent of it was recycled; the remaining 136 million tons were dumped into landfills.

Much of that garbage consisted of materials that have limited recycling programs available like tires, electronics, batteries, appliances, and cigarette butts. These items along with the rest of all the consumer and industrial waste products add up to a massive amount of trash with nowhere to go.

How Do We Dispose of Non-Recyclables in a Responsible Manner? Burning or burying garbage is not the answer. It just compounds the problem by poisoning the land and water as well as the air. What the world needs is a way to correct the imbalance in a responsible way.

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As conscientious citizens, we do our part by recycling some of our plastic, glass, and cardboard as well as taking steps to lessen our carbon footprint. But are we doing enough? What do we do about items that are not recyclable? Is it possible to make a dent in all the accumulated garbage while keeping up with the waste we are creating now?

I asked that last question to Lauren Taylor, Global Vice President of Communications at an innovative recycling company named TerraCycle. She says,

*People are finally realizing the past 40-50 years are catching up with us, and there's a real crisis. I don't think it's possible [to catch up with the waste problem] unless we start changing some things. If we don't, it's not going to get better."*

# TerraCycle

TerraCycle is making this insurmountable task a little easier by providing a way to recycle the unrecyclable. They have become an international leader in converting non-recyclable waste into raw materials or useful affordable products.

In partnership with major corporations, they run free collection programs. Individuals, groups, schools, and businesses sign up for one or more programs to recycle items such as cigarette waste, used oral care products, contact lenses, energy bar wrappers, and used water purification products. During the past 15 years, over 100 million people in 21 countries have collected and recycled over four billion used products and packages. In turn, the recycled plastics, metals, fibers, and wood have been reused, composted, or upcycled into new products.

## Earth911

There is another chapter in the recycling the unrecyclable story that needs to be addressed—E-cycling. Computers, monitors, telephones, and other electronic gadgets are left in limbo when it comes to recycling. Some retailers like Best Buy, Office Depot, and Staples have a drop-off service for used electronics, and most cell phone providers offer recycling programs. Some of these services are free, some charge a fee. By using Earth911, you can find an e-cycle center near you, whether it be a store or a recycling center specializing in electronics.

This website also has listings for recyclers of other waste such as tires, automotive parts, paints, batteries, construction materials, and metals that need to be disposed of. Earth911 has a database of 100,000+ recycling centers across the United States, and their blog has interesting articles to help answer questions about green living.

There are many companies, organizations, and projects doing a commendable job of collecting and recycling the waste piling up on the land, but that is only a part of the problem. How about the seas? The oceans cover nearly two-thirds of the surface of our planet and play a vital role in producing oxygen and providing food. Millions of tons of plastic and other debris pollute these waters endangering the sea life and in turn, endangering our own.

## Garbage in the Oceans

Ocean plastic can be found everywhere from the coastal regions to the deep sea, even buried in Arctic ice. In an article on National Geographic's website, Laura Parker reports,

*In 2010, eight million tons of plastic trash ended up in the ocean from coastal countries—far more than the total that has been measured floating on the surface in the ocean's 'garbage patches.'"*

According to the Worldwatch Institute, the amount is now approximately 10–20 million tons of plastic ending up in the oceans each year.

*A recent study conservatively estimated that 5.25 trillion plastic particles weighing a total of 268,940 tons are currently floating in the world's oceans. This plastic debris results in an estimated \$13 billion a year in losses from damage to marine ecosystems, including financial losses to fisheries and tourism as well as time spent cleaning beaches. Animals such as seabirds, whales, and dolphins can become entangled in the plastic matter; and floating plastic items—such as discarded nets, docks, and boats—can transport microbes, algae, invertebrates, and fish into non-native regions, affecting the local ecosystems."*

Some of the plastic is tossed from vessels sailing the high

seas, but a majority of the trash originates from coastal outflow. With larger populations along the coastlines, more trash is being produced with an increasing percentage of that winding up in the water. So, a logical solution to curbing ocean pollution is to catch the trash before it floats out to sea. That's the principle behind the Seabin and Plastic Bank projects.

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## **The Seabin Project**

The Seabin is a floating trash receptacle located at marinas, docks, yacht clubs, and commercial ports. It is connected to a submersible water pump cycling water through the trash bin. The floating debris is captured in catch bags located inside the Seabin. It collects trash, oil, fuel and detergents, as well as micro-plastic and micro-fiber debris before it flows into the ocean. Seabins collect three-quarters of a ton of debris per year including plastic bottles, plastic utensils, disposable cups, cigarette butts, plastic particles, and surface pollutants. The trash is either disposed of properly or recycled.

## **The Plastic Bank**

The Plastic Bank impacts high poverty areas by turning plastic waste into money. It is a fairly simple process—people collect plastic, take it to a recycling center and in return receive money, items, or services. This stops the flow of plastics into the oceans while providing a positive future for impoverished people.

The recycled plastic collected through the Plastic Bank is sold to companies to use in the place of virgin plastic for their products or packaging. The collectors have a source of income to provide a better life for their families. It is a

win-win for everyone.

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## **Where Does the Recovered Ocean Plastic Go?**

- In France and Germany, Proctor & Gamble started using reclaimed beach plastic to make bottles for Head and Shoulders shampoo. In the coming years, they plan to expand the beach plastic repackaging to other P&G products in the United States and the United Kingdom.
- Adidas uses yarn made from ocean plastic in a line of tennis shoes and athletic shorts.
- The Ahi Performance Cruiser Skateboard contains 50 square feet of abandoned fishing nets.
- The bottles used to package Method's Dish and Hand Soap are made from recycled beach plastic.
- Bionic Yarn creates a line of textiles that are used in consumer products ranging from boat covers to furniture to high-end clothing.
- Sunglasses, jewelry, luggage, art, and sculptures also contain recycled plastic. The list is endless.

## **What Can We Do?**

We can play a role in recycling. See trash along the side of the road? Pick it up and dispose of it properly. Separate your garbage into cardboard, plastics, glass, and paper and take them to a recycling center. Find programs that accept other items that need to be disposed of. Take a walk on the beach and collect the litter. There are hundreds of ways to show your respect for our environment.

We can do our part by making wise decisions in the products we purchase and how we dispose of the waste. It does not require

a major life change. It can be a small step—recycle something you haven't before, purchase less of something, change the brand of an item you purchase because they do something different with their packaging. Small steps lead to big steps toward change.