

----- **THE ENVIRONMENTAL IMPACTS OF PLASTIC BAGS** -----

Production and distribution	<i>Energy consumptions</i>	The energy used to make one high-density polyethylene (HDPE) plastic bag is 0.48 megajoules (MJ). To give this figure perspective, a car driving one kilometre is the equivalent of manufacturing 8.7 plastic bags (Australian Bureau of Statistics, 2004).
	<i>Health impacts</i>	Toxic emissions are produced during the extraction of materials for the production of plastic grocery bags. The manufacturing and transportation of such materials contribute to acid rain, smog, and numerous other harmful effects.
	<i>Air and Water Pollution</i>	Without enhanced processes, the manufacturing of two plastic bags produces 1.1 kg of atmospheric pollution, which contributes to acid rain and smog, and 0.1 g of waterborne waste, which has the capability of disrupting associated ecosystems, such as waterways and the life that they support. Following manufacturing, the plastic grocery bags are subsequently shipped all over the world. Container ships used to transport these bags to each consumer country use fuels which produce high levels of pollutants, such as sulfur.
Disposal	<i>Land Pollution</i>	Lightweight plastic grocery bags are additionally harmful due to their propensity to be carried away on a breeze and become attached to tree branches, fill roadside ditches, or end up in public waterways, rivers, or oceans. In one instance, Cape Town, South Africa, had more than 3000 plastic grocery bags that covered each kilometer of road.
	<i>Impact on wildlife</i>	Most distressing, over a billion seabirds and mammals die annually from ingestion of plastics (Baker, 2002). In Newfoundland, 100,000 marine mammals are killed each year by ingesting plastic (Brown, 2003). However, the impact of plastic bags does not end with the death of one animal. When a bird or mammal dies in such a manner and subsequently decomposes, the plastic bag will again be released into the environment to be ingested by another animal.
	<i>Marine Pollution</i>	The North Pacific Tropical Gyre, also known as the Garbage Patch, is seven million tons of floating plastic waste spanning an area twice the size of Texas. There is six times as much plastic in the gyre than there is plankton. Plankton is the area's most abundant food source. Animals mistake this waste for food, dying either from plastic poisoning or blockage of their digestive system. This plastic absorbs, transports, and releases hydrophobic pollutants (PCB,DDE,DDT) not only harming the oceans food chain, but us as well.