

Switching to Paper bags: Are You Saving the Planet?

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On a recent Thursday evening, shoppers emerged from brightly lit clothing stores into the wide corridors of The Mall of Qatar, carrying armfuls of purchases. The smell of perfume filled the air as they briefly rejoined the crowded spaces of the mall before they hurried on to other stores. Some held their items in plastic bags, but others prominently displayed H&M, Bershka, Zara, Abercrombie and Fitch, Sephora, Bath and Body Works and Mango on their paper bags.

In an effort to be more environmentally friendly, stores have adopted a campaign to reduce plastic.

“Ever since last year, we use paper bags. We don’t use plastic bags anymore,” said Gretchen Estrella, an employee at Mango, one of the high-end clothing stores in the mall. Mango is trying to finish off its last shipment of plastic packaging, added Estrella.

Shoppers also believe that paper is a good alternative to the environmental impacts caused by plastic. “For the environment, I will use paper. Plastic is harder to decompose, paper is easily sustainable, you can recycle it,” said Farah Islam, a consumer shopping at Bershka.

However, using paper raises significant concerns. Producing and recycling paper takes a lot of energy and creates a lot more waste compared to plastic. Reusing is more environmentally conscious than choosing any single-use bag.

On Manufacturing

A 2011 [study](#) by Suzie Bell and Kristie Camp for the Northern Ireland Assembly found that it takes more than four times as much energy to manufacture a paper bag as it does a plastic bag. While both are made with added toxic chemicals, the study also found that paper generated 70 percent more atmospheric emissions and released up to 50 times more water pollutants compared to plastic.

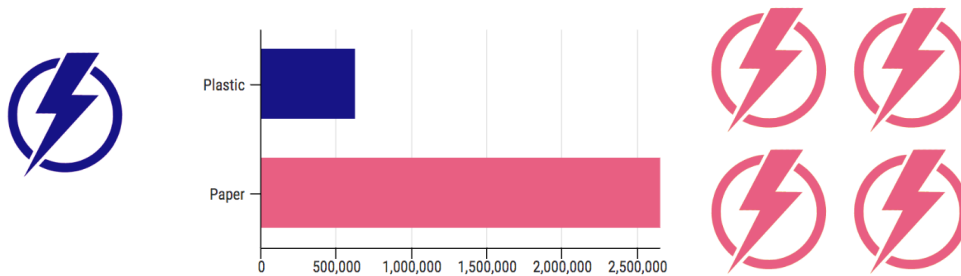


Figure 1: Manufacturing Energy Requirement Plastic vs Paper (in joules) (S. Bell and K. Camp, 2011)

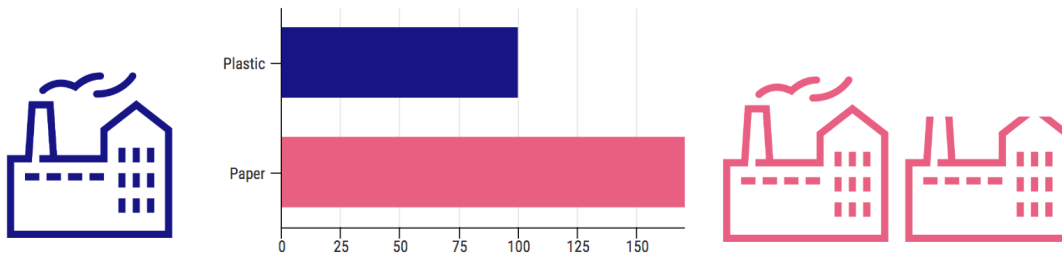


Figure 2: Air Pollution comparison Plastic vs Paper (in ratio) (S. Bell and K. Camp, 2011)

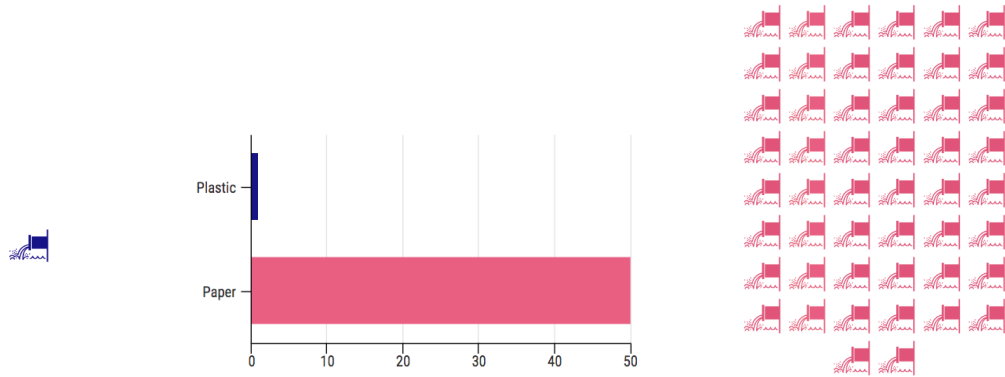


Figure 3: Water Pollution comparison Plastic vs Paper (in ratio) (S. Bell and K. Camp, 2011)

On Recycling

Almost all plastic and paper bags are recyclable. However, plastic bags are recycled less than paper bags. Plastic bags are “significantly more expensive and time-consuming to recycle because they are made from different polymers which have to be separated and sorted through,” said Mariam Al-Sayed, a spokesperson at Elite Paper Recycling in Doha. Elite is the bigger of two paper recycling companies in all of Qatar, collecting 4,500 tons and producing 3,000 tons of paper monthly. It has over 400 private company contracts.

A 2019 [research](#) by John N.Hahladakis and Hareb Aljabri from Qatar University’s Center for Sustainable Development found that most plastic or paper doesn’t get recycled in Qatar. It found that in 2015, Qatar consumed approximately 240,000 tonnes of plastic, but only recovered 30,000 tons for recycling.

“Paper is not a good alternative because a lot of the companies that use paper [do not recycle], so at the end, we’re cutting a lot of trees,” said Aisha AlMaadeed, founder of Greener Future, a sustainability initiative in Qatar that began in 2018.

Although high-end clothing stores such as Zara and Bershka have adopted recyclable paper bags made from sustainably managed forests, the energy cost of recycling paper is still very high.

The [study](#) by Bell and Camp found that it takes 98 percent more energy to recycle a pound of paper than to recycle a pound of plastic.

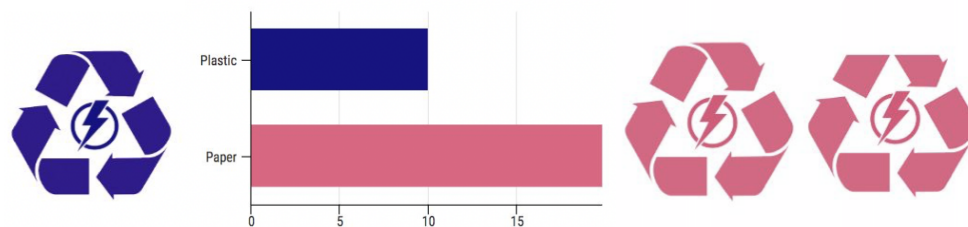


Figure 4: Recycling Energy Requirement Plastic vs. Paper comparison (in ratio) (S. Bell and K. Cam, 2011)

On Landfills and Space

Mountains of paper and plastic waste litter Umm Al-Afai and Rawda Rashed, Qatar's two major landfills, forming a compressed mess.

The [research](#) from Hahladakis and Aljabri showed the usage of landfilling instead of recycling. The availability of land and low cost of landfills in the Gulf Cooperation Countries (GCC) makes it easier to dump paper and plastic waste.



Figure 5: Domestic Waste at [Umm Al-Afai](#) Landfill

Usually plastic takes centuries to degrade, but paper in landfills also takes a significant amount of time. A 2017 [study](#) by Dana Adamcová from Mendel University showed that the anaerobic design of landfills restricts contact of paper and plastic bags to oxygen, air, water, and light. Without these elements, degradation is difficult.

Paper also takes significantly more space in landfills because of its weight per volume, while plastic doesn't take up as much space_ as it can compress upon itself. Even in transportation, a [research](#) from the Environmental Agency in Britain found that seven trucks filled with paper bags transport the same number of units as one truck filled with plastic bags.

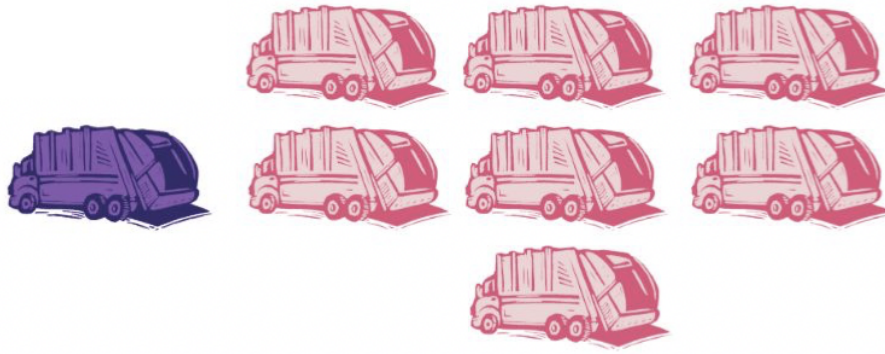


Figure 6: Volume of space taken by Plastic vs. Paper comparison (in ratio) (Source: Environmental Agency in Great Britain, 2006)

On Reusable bags

“Getting a reusable bag is better than using plastic or paper,” said Ruba Hinnawi who is a technical specialist at Qatar Green Building Council, which is a non-profit, sustainable organization for green building design in Qatar.

However, it is important to find a carrier bag that is more durable than plastic or paper and can be reused many times. Purchasing a high-quality reusable bag has a positive environmental impact as it is not using up raw material or energy.

“I prefer to stop offering paper bags or plastic bags and let everyone bring their own bags or they can sell reusable bags with their logo,” said AlMaadeed.

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Sources:

Gretchen Estrella | Employee at Mango | +974 7713 6319

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