

Effects of using Plastic Bags on Environment

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Abstract: *Thousands of plastic factories are producing tons of plastic bags which are very popularly used by the people for shopping purposes because of its ease, cheapness and convenience of use but their very hazardous negative impact is never highlighted or, at the very least, openly discussed in a more serious tone.*

This study examines the level of awareness about pollution caused by plastic bags, its adverse impact and the measures taken by the government and society to control plastic pollution. Primary data has been collected from 30 respondents through a questionnaire survey. The study emphasizes burning need for spreading awareness about harmful impacts of plastic bags and strengthening policy initiatives and measures for controlling plastic pollution.

I. INTRODUCTION

A plastic bag, polybag, or pouch is a type of container made of thin, flexible, plastic film, nonwoven fabric, or plastic textile. Plastic bags are used for containing and transporting goods such as foods, produce, powders, ice, magazines, chemicals, and waste. It is a common form of packaging.

Most plastic bags are heat sealed at the seams, while some are bonded with adhesives or are stitched. Many countries are introducing legislation to phase-out lightweight plastic bags, because plastic never fully breaks down, causing everlasting pollution of plastics and environmental impacts. Every year, about 1 to 5 trillion plastic bags are used and discarded around the world.

Plastic products are everywhere and are used every day in our homes, schools, offices, and during our travels in between places. Our modern world has become so dependent on the convenience of mass-produced, readily available plastic products — like disposable bags, bottles, and cups — that it's surprising to consider that the world was once plastic-free.

In just a single generation (roughly from 1940 to the present), our overwhelming reliance on plastics has created environmental problems such as crowded landfills, groundwater contamination, and ocean debris that future generations will still be cleaning up.

Plastic products have a very large impact on marine life as it is noticed that some marine animals are found to have parts of plastic products in their stomach. Plastic product intake blocks their digestive tracts and which may kill them.

The human life is also adversely affected by the plastic products as their daily food supplies are packed with plastic materials. Thus plastic products including plastic bags have wide ranging adverse impacts across environment and different segments of living beings. Figure 1 portrays various aspects of single use plastic bags.

Impact of plastic Bags on environment:

- Plastic bags don't biodegrade, they photo degrade – breaking down into smaller and smaller toxic bits.
- A plastic bag can take between 400 to 1,000 years to break down in the environment.
- As it breaks down, plastic particles contaminate soil and waterways and enter the food web when animals accidentally ingest them.
- In the ocean, these particles eventually end up in massive whirlpool-like currents in the oceans called gyres. Our planet has five major gyres.
- In some locations, there is 46 times more plastic than available food for marine animals.
- Plastic bags cause over 100,000 sea turtle and other marine animal deaths every year.
- Nearly 89% of the debris in our oceans is plastic.
- Plastic debris accumulates persistent organic pollutants (POPs) like PCBs and DDT at high concentrations. Many of these pollutants are known endocrine disruptors.
- When fish and other marine animals ingest plastic debris, they are also ingesting these toxins.

II. REVIEW OF LITERATURE

Jalil and Mian (2011) examined the use of plastic bag and its damaging impact on environment and agriculture and suggested alternatives to the use of ever harmful plastic bags for ensuring the sustainable agricultural and economic development in Malaysia and other countries by finding out alternatives.

The study which examined the plastic bags ban status in Chandigarh, Delhi and Sikkim, found that the ban has found limited or mixed responses. Though in the state of Sikkim, alternatives like paper are being used more widely, vendors in Delhi and Chandigarh are still largely dependent on plastic carry bags. Larger brands/shops in all the three areas have chosen to go the alternative route, but many of them have opted for non-woven bags, which are not an alternative as these are also made of plastic.

Sarwat Afzal (2012) explained consumption of plastic bags and its impact on environment. The objective of the research was to know whether consumption of plastic has any impact on the environment. Result showed that there was a positive relationship of consumption of plastic bags and its impact on environment, which correlation and regression techniques were used to test the hypothesis.

Jalil, Rahman and Mian (2013) examined the usage of plastic bags and its damaging impact on environment and agriculture, and suggested ways for the sustainable agricultural and economic development by finding out alternatives to the use of ever harmful plastic bags.

Mohram and Maqtari (2014) studied the impact of plastic bags on the environment in the city Of Sana'a and the surrounding areas in Yemen, and examined the causes and effects and proposed a range of solutions for a clean environment for us and our future generations. Derraik (2002) studied the pollution of the marine environment by plastic debris, and highlighted that the problem of plastic debris in the oceans is a difficult task, and a variety of approaches are urgently required.

P. Pavani (2014) explained the impacts of plastic on environmental pollution. He concluded the study to raise public awareness, the regional and national different levels of educational curriculums must include the waste management systems from the grass-roots as information resources. In addition to creating public awareness on the importance of a healthy environment, mechanisms of controlling the generation of wastes at the source, alternative disposal ways, establishing additional drop-off areas (landfills) and incineration mechanisms, plastic recycling facilities are also recommended. Helping communities to reduce their exposures to health toxicants will increase the likelihood for a healthy society and clean environment for the coming generations.

Objectives of the Study

- To understand the usage of plastic bags by the people.
- To analyze the impact of plastic bags on environment.
- To suggest the areas of improvement.

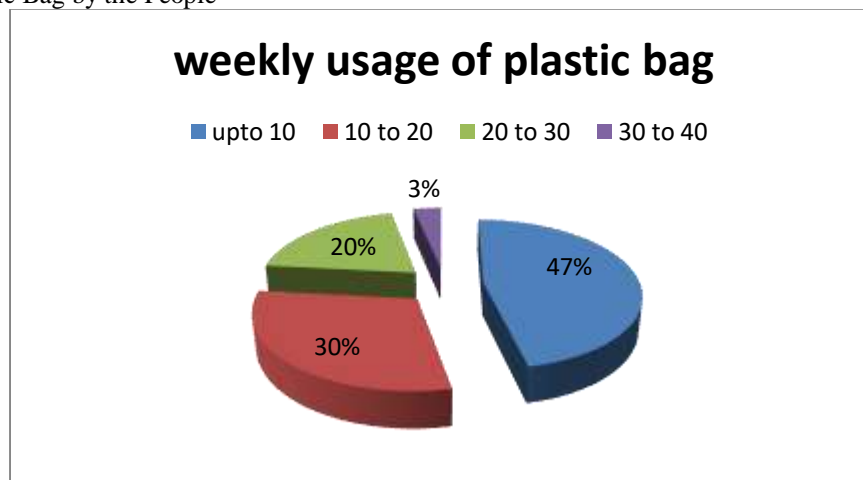
III. RESEARCH METHODOLOGY

This paper is based upon primary source of data. It is a descriptive and quantitative research. In this study, Questionnaire is used as a tool for collecting the primary data. Interviews are taken by filling the questionnaire which was sent to 30 respondents and data was collected.

IV. DATA ANALYSIS AND INTERPRETATION

Findings and analysis are done on the basis of data collected through questionnaire. The charts/figures are given below clearly explain our analytical section.

Usage of Plastic Bag by the People

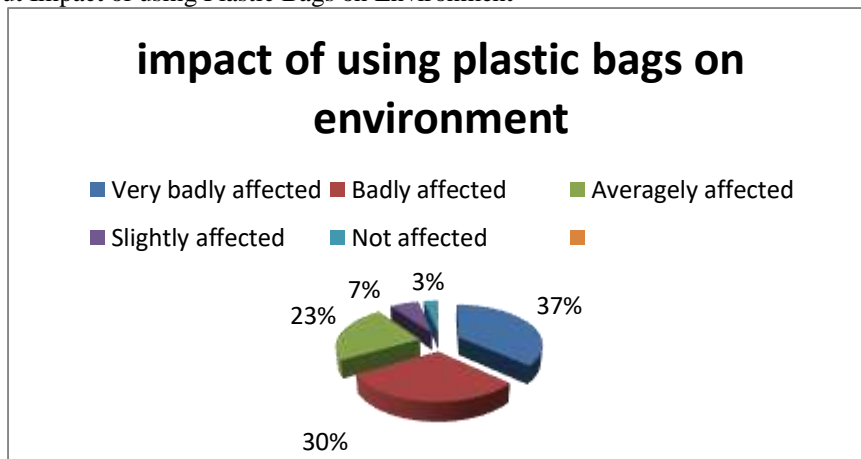


This figure shows that 47% people use up to 10 plastic bags in a week, 30% of people use 10-20 plastic bags. 20% people use 20-30 plastic bags and only 3% use more than 30% plastic bags. Practice of carrying Bag from home



Above Figure shows that 43% of the people are in the habit of sometimes carrying plastic bag from home while 20% people always carry bag from home.17% people carry plastic bag very often, 13% people rarely carry while 7% people never carry bag from home.

Awareness about Impact of using Plastic Bags on Environment



Above Figure shows that 37% people are aware that environment is very badly affected by using plastic bags.30% people says that it is badly affected environment, 23% agrees that plastic bags are averagely affected environment and 7% people says that it is slightly affected. 3% people are not aware about impact of using plastic bags on Environment.

Alternative to Plastic Bags



Above figure shows that 44% people says that jute bags are the best alternative of plastic bags.20% people go for Paper bags, 13% go for Biodegradable bags and 23% people go for Reusable Bags.

V. CONCLUSION

In conclusion we can say that Plastic bags tend to disrupt the environment in a serious way. They get into soil and slowly release toxic chemicals. They eventually break down into the soil, with the unfortunate result being that animals eat them and often choke and die. Plastic bags are extremely harmful to the environment because we use them in massive quantities. The respondents have recommended implementation of strict measures including ban on usage of plastic bags. Strict legal action should be taken against them who are using it or selling it as it is a major source of pollution. There is burning need to spread awareness about detrimental effects of plastic bag usage and take proactive measures to control plastic pollution by all stakeholders i.e. manufacturers, users, government and society at large. All the stakeholders need to speed up their action for controlling and eradicating the increasing problem of plastic pollution.

VI. REFERENCES

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