

# Paper: Fostering Friendship with Environment



**Dilip Chandarana**  
CII GreenCo Assessor,  
Corporate Trainer, Coach &  
Counsellor DC Career Plus

**Abstract:** *There has been a myth and distorted view prevailing that Paper is a polluting product and causes havoc to the environment. Paper is being treated with other consumer materials, and words like “disposable” or “single-use” are being misused to tarnish paper’s unique and uniquely sustainable life cycle. In the context, an effort has been made to highlight that paper and paper-based packaging are made from a renewable raw material and are the most-recycled materials; they come from responsibly managed forests that help absorb carbon from the atmosphere. A comparison of Paper vs. Plastic and also Paper vs. Electronic media has been discussed.*

## Introduction

I scroll back in memory to my school days when after graduation to the next class, we would get a complete set of new textbooks and notebooks. The distinctive fresh smell of the paper was so very seductive which always enhanced the excitement of attending the new class. The memory remains fresh and everlasting and always gives you a huge nostalgia. Similar feelings would surface when years later I would buy a paperback and excitedly try finish reading it fast. And then of course the various certificates I received during the life’s journey on education and various other fields which were so carefully preserved and nurtured. The charm continued with scores of other paper products viz. the first Cheque book issued by the Bank, Paper bags and Gift packaging, usage of scores of paper hygiene products to diapers for your children ... and the list goes on. The daily Newspaper reading was always an integral



Figure 1

part of our routine and still continues. Though there is plenty of digital content so easily available on a click, I still wait eagerly for my copy of Readers’ Digest every month.

I am sure these sentiments and feelings match with most of the people particularly with those, associated with Paper Industry in some or the other role; directly or indirectly. As the fate would have it, I got associated with Paper as my career option and admittedly had a wonderful and exciting engagement with this versatile product.



Figure 2

## Discussion

“The paper is inherently sustainable.” However, there are scores of myths and misconceptions about paper being polluting in nature and being branded as wasteful. When it comes to the sustainability of Paper, it’s important to separate the Facts from the Myths. The paper industry uses sustainably sourced raw materials from the farm-forestry, a huge effort done by the mills during the past

## Paper Day write-up

decades. The enhanced usage of 'renewable energy' and impressive 'recycling of water' and other resources have amply depicted industry's march towards reducing the carbon footprint.

Paper industry has always been criticised for destroying forests and precious trees. However, 90 per cent of the demand for wood in India for the paper industry is met with farm forestry or using trees specifically planted for the industry. Paper Industry in India is not a forest-based industry, but an agro-based industry, providing jobs and income to lakhs of farmers. The agro forestry initiative of paper industry spreads across approximately nine lakh hectares and over 90 per cent of the demand for wood by the industry is sourced from these trees.

India ranks number ten in the world for forested area. The Forest Survey of India (FSI) conducted in 2019 estimates a total of 8,07,276 square kilometres of forest and tree cover, which makes up 24.56% of the land area. The 2019 forest area represents an increase of 78,852 (2.4%) square kilometres over the past two decades, with the 1997 Forest Survey of India (FSI) reporting 6,33,397 square kilometres (19.27%).

The Raw Material Mix of the Indian Paper Industry depicts that only about 14 % of the requirement is met through the wood, which too is a source from the Farm Forestry efforts undertaken by the mills; others being Agricultural Residue and Recycled fibre.



Figure 3

Yet the myths around paper are still prevalent amongst consumers. Often the source of these misconceptions is the abundance of misleading information about paper and its impact on the environment. Paper has been the preferred communications medium for over 2,000 years. Even in today's digital world, it continues to be highly effective and, produced, used and disposed of responsibly, is inherently sustainable.

The paper fibre loop can serve as a model for circularity. Paper is based on wood, a natural and renewable material. As trees grow they absorb CO<sub>2</sub> from the atmosphere. Furthermore, as a wood product, paper

also continues to store carbon throughout its lifetime. The paper industry uses recognised certification schemes to ensure that the paper we use originates from a sustainable forest source. Forest Stewardship Council (FSC), the certification of forests to credible, independently verified standards of responsible forest management, and focus on conserving the natural habitats of plants and animals and respecting the rights of forestry workers and local communities.



Figure 4

### Is Paper manufacture the major cause of Green House Gases emissions?

The paper and printing sector is one of the lowest industrial emitters of Green House Gases (GHG), accounting for less than 1% of all manufacturing emissions. With many Paper plants opting for the GreenCo Certification, the GHG and Green Supply Chain have been accorded due importance within their operations and the methodology has brought in a significant gain in terms of overall improvement and the work culture within organizations. It is a matter of pride that one of the Indian Paper Plant is certified as 'GreenCo Platinum Plus', a great achievement indeed.

### Does Paper manufacture consume large volume of water?

There has been a remarkable work done by Indian paper Industry on Water Usage in the last few years. As water is a crucial resource for the industry, most pulp and paper mills have adopted innovative schemes to conserve and recycle water and the specific consumption has gone far below 50 KL/T for many mills. Improvements in papermaking techniques and water treatment have had a dramatic effect on the cleanliness of effluent leaving the mill. Since inception of CREP, there has been a significant reduction in AOX levels (a measure of the toxicity due to chlorine compounds) and COD (Chemical Oxygen Demand – how much oxygen is consumed by the decomposition of organic matter).

“There aren't many industries around that can aspire to becoming genuinely sustainable. The paper industry, however, is one of them; it is inherently

sustainable.” Paper is recycled, on average, four times, certified according to the internationally recognised environmental management standards ISO 14001 and source it’s Raw Material from own Farm Forestry efforts.



Figure 5

### Is Electronic Communication better for environment?

Electronic communication is better for the environment than paper based communication is a myth. Electronic communication also has environmental Impacts. These misleading messages give the impression that electronic communication is more environmentally friendly than traditional, paper-based communication.

The IT industry accounts for around 2.5-3.0 % of global Green House Gas emissions and this is predicted to rise to 14% by 2040. Businesses and individuals are increasingly using ‘cloud’ services. These mega data-centres store almost everything we do online; including our web searches, our social media posts and our online statements. By 2040, the ICT carbon footprint could account for as much as 14% of the total worldwide footprint, hence exceed the current relative footprint of the Agriculture sector (9%), and almost half of the current total footprint of the industrial sector (29%).

As per ‘Journal of Cleaner Production’, 2018, the electronic waste problem is colossal, and it’s growing. In 2016 alone, 44.7 million tonnes of e-waste were generated globally, of which 435 thousand tonnes were mobile phones, representing more than the mass of the Empire State Building. “Go Paperless”, “Go Green” and “Save Trees” are common messages seen these days as many organisations encourage their customers to switch to electronic transactions and communications. But are these appeals based on fact? Many consumers value paper-based communication.

There are many tangible benefits that paper-based documentation can bring and its preference as a means of communication by many consumers must be at the forefront. “Print and Paper in A Digital World”, an international survey of over 10,700 consumers

worldwide reveals that consumers prefer to read the printed version of books (72%), magazines (72%) and newspapers/news (55%) over digital options. Many respondents also indicated that reading in print is more enjoyable than reading electronically. More consumers believe they gain a deeper understanding of news stories when reading from print media (65%) over online news sources (49%).

### Waste Paper Recovery:

Collection (of paper and board): Separate collection of paper and paper products from industrial and commercial outlets, from households and offices for recycling and transport to the sorting/processing or recycling plant/paper mill will go a long way towards efficient Raw Material handling.

A systematic segregation and collection of waste as initiated under WOW scheme in some parts of the country has been a wonderful step and shown some positive results; the efforts need to be spread across the country to reach the target of recovery beyond 70 % as being achieved by various developed nations.

### Forest Restoration:

Laudable efforts have been made by the Paper Industry in the last decades towards Farm Forestry, development of high yielding varieties of clones and helping the farmers with new techniques and technological interventions to grow plantation and to be self-sufficient in their Raw Materials requirement. The effort has yielded positive gains and mills have adequate and sound supply chain in place for their Raw Material on a long term basis.

Renewing a degraded, damaged, or destroyed forest ecosystem through active human intervention is a novel idea. The Paper Industry Associations have been pursuing and following up with the concerned Governmental agencies for quite some time now. Allotment of such land could give a major boost to the industrial plantation of species for captive consumption by Paper Industry.



Figure 6

### Paper vs. Plastic:

Paper bags are always a better, eco-friendly solution. The carbon from a paper bag ultimately goes into air or soil and finally integrates into a living tree. Plastic bags are made from carbon which is fossil and does not integrate into the next cycle.

Furthermore, plastics have serious long-term effects on animals, and they break down into micro plastics. Micro plastics are in virtually every imaginable drinking water source, and that they cause health problems for all creatures. Micro plastics float around our bodies, attach to cells and cause all sorts of health issues. They absorb toxins, and then release those toxins in the body.....Scary, right!



Figure 7

That makes paper the most sustainable material we can get. Paper products are very compostable and you have a “green” packaging material like no other. The use of durable materials for single use and throw away packaging is just not correct. The durable materials add extra loads in the waste management stream without returning any nutrients back to the environment. Plastic is made from oil, which is a non-renewable resource. This has an obvious detrimental effect on the environment. Plastic also requires a great deal of energy to produce.

### Conclusion

#### The way forward:

To create awareness about Paper and its sustainable nature, we need to educate the general masses, starting from the schooling to remove the myths and misconceptions in the minds. The Paper Industry needs to market its Green Efforts in a befitting manner and create a clean image of an environmentally responsible industry sector. Our goal should be to explain and propagate to the public that when you want to think sustainable, when you want to think renewable, when you want to think responsible, when you want to think about the future of the planet, you should think paper.

While the Farm Forestry efforts are laudable, recovery of waste paper certainly needs a boost and schemes like WOW can be a boost to enhance the recovery percentage at par with some other nations.

A tablet may store hundreds of e-Books; I would still prefer to carry a Paperback in my hand to fortify my engagement with a versatile product that is PAPER.

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