

# SURVEY ON PAPER CONSUMPTION IN OFFICES

Consumer Education Research Centre  
ENVIS, Resource Partner  
Ahmedabad, Gujarat

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# INTRODUCTION

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## A global environmental crisis

We urgently need drastic action to address the global crises of climate change and biodiversity loss. To do this we need to reduce greenhouse gas (GHG) emissions, waste and resource use from across all sectors. We are currently locked into a fossil-fuel based, high-waste model that ties growth to resource use. It is vital we change our model of consumption, and do it in a way that supports rather than undermines progress on challenges of poverty, hunger, inequality, poor health and inadequate housing. These problems damage communities across the world and are felt most keenly in the global south – where climate change is having the biggest impact.

This is a global challenge which requires coordinated and global solutions. As a global consumer movement, we can play an important role. Encouraging consumers to consume sustainability is vital, as well as ensuring the infrastructure and choice is in the place for them to do that.

## World Consumer Rights Day

15 March is World Consumer Rights Day, an annual occasion for celebration, impact and global solidarity within the international consumer movement. Each year consumer organizations mark the day by joining together to highlight and raise awareness of an issue that is important to consumers around the world. World Consumer Rights Day is our chance to make the biggest impact possible. Working together, our voices calling for change are far more powerful than they would be alone.

## Consumer power

As individuals, or consumers, we have enormous power, in the purchase choices we make and how we use and dispose of those purchases, but also in our ability to influence the whole system (from production and manufacturing to packaging and disposal) by demanding more from supply chains and calling for more sustainable products and services. We also have the power to ensure that the impact of the sustainable purchases we make doesn't end as we leave the shop. That our sustainable products have the infrastructure behind them to increase their life and usefulness, which not only helps us as individuals but makes sustainability the easier option for other consumers.

## What is sustainable consumption?

Sustainable consumption aims to increase resource efficiency and fair trade while helping to alleviate poverty and enable everyone to enjoy a good quality of life with access to food, water, energy, medicine and more. Sustainable consumption will not only help us ensure that a world exists for future generations, but it can deliver more immediate benefits. For example, supporting people to turn away from poor quality, unsafe biomass fuel will not only benefit the environment but peoples' health.

## Over Consumption

It is a growing problem. Lifestyle of average person have changed with time. As people in emerging economies have increasing disposable income, we are seeing more demand for consumer goods taking further resources out of the planet. Earth Overshoot Day, the day of the year we consume all of earth's resources has been getting earlier and earlier. In 2019 it was 29th July. Everyone needs to reduce the amount they consume and change the ways they do it.

## Moving to a LOW ENERGY, circular economy

An answer to the problem of over consumption is to move to a circular economy model. This moves away from “take, make, dispose” model to one where waste is designed out of the system, and a model of reuse and regenerate is used. This means using less, more efficiently, as well as designing products that can be repaired, reused or remade. If used, this model would help reduce climate change and reverse biodiversity loss. The Waste and Resources Action Programme (WRAP)’s circular economy diagram for a visual representation of this concept.

### Theme: THE SUSTAINABLE CONSUMER

In order to protect the planet and provide fair social conditions for current and future generations, we need to think about the way we produce and consume goods and services. The aim of sustainable consumption is to increase resource efficiency and fair trade while helping to alleviate poverty and enable everyone to enjoy a good quality of life with access to food, water, energy, medicine and more. Sustainable consumption is an important aspect of the Sustainable Development Goals.

#### **Goal 12: Ensure sustainable consumption and production patterns**

“Since sustainable consumption and production aims at “doing more, and better, with less,” net welfare gains from economic activities can increase by reducing resource use, degradation and pollution along the whole life cycle, while increasing quality of life. There also needs to be significant focus on operating on supply chain, involving everyone from producer to final consumer. This includes educating consumers on sustainable consumption and lifestyles, providing them with adequate information through standards and labels, and engaging in sustainable public procurement, among others.” But sustainable consumption should be the easy option, and not down to consumer choice alone. We need to work to reduce the confusion around sustainability by ensuring that producers, retailers and policymakers do all they can to make products safe, durable and resource-efficient; before providing clear, reliable information to guide consumer choice.

## OBJECTIVES

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- World Consumer Rights Day focuses on involving and empowering consumers to make the sustainable choices needed to meet the Sustainable Development Goals.
- To reduce the confusion around sustainability by ensuring that producers, retailers and policymakers do all they can to make products safe, durable and resource-efficient, and sustainability the easy choice.
- To disseminate information on sustainable consumption to students from school, college or university and organize a session with a small group to talk about sustainable consumption.
- To bring the information together from around the world to paint the global picture.

# THE CONSUMER'S ROLE

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People across the globe are starting to understand the urgency of the environment crisis and already see it as one of the major threats to their country, concerns which have risen significantly since 2013. Consumers are an essential component of any system of production and consumption and are critical to the success of any change. The choices you make as a consumer are an opportunity to influence the world around you and drive change. Some key ways consumers can influence the world around them are: through their choices of what products and services to use, how they use them, how they dispose of them when they come to the end of their lifecycle, and pushing for system change from supply chains or changes in regulation. However, even as a powerful economic group within the current model, consumers do not always have the ability to influence the system at the scale required. Understanding and unlocking consumers' ability to influence the system more will help deliver faster and more meaningful change.

## 1. The choices we make

Demand for sustainable products is increasing – particularly amongst younger consumers. A global study by Neilson found that 66% of consumers say they're willing to pay more for sustainable brands (a figure that rises to 73% for Millennials) and 81% of respondents felt strongly that companies should help improve the environment. However, various studies find the actual purchases of sustainable products to be in the 20-30% range. Generally, sustainability is not the easy choice for consumers and requires effort on their part to research or identify the right purchase, changing behavior or requires paying more. Consumer choice has a power outside of the actual purchase. By calling for better infrastructure around your sustainable purchase you can encourage further uptake of sustainable products. For example, if you buy a reusable water bottle, you may then call on your local government or business to provide free water for you to fill it up. Once more places provide free water, more people buy reusable water bottles. Consumers are a powerful piece of the circular economy. Barriers to consumers choosing the sustainable option must be broken down, whether this is increasing access, affordability and meeting consumers' needs.

## 2. The way consumers use products and services

Energy Access to energy is one of the key drivers of inclusive growth but energy production and use is also one of the major contributors to GHG emissions and climate change. In many less economically developed parts of the world, some consumers have no access to energy, In Africa just over 40% have access, and globally around three billion people rely on health damaging fuel fires. Critical issues include uncertain supply and prices, particularly in places that are heavily dependent on energy imports or where there is the risk of extreme weather. However, renewable energy is growing (7.9% in 2018) – a third of global power capacity is now based on renewable energy. But making the switch to renewable energy can be a daunting task for consumers. Consumers need to have easier access to safe, sustainable and affordable energy, with clear information about ways to reduce their energy use.

## 3. How consumers dispose/ reuse products

On average people generated 0.74 kilogram of waste a day, about the weight of two full cans of soup. Countries with high incomes (16% of the world's population), generate 34% of its waste.

- Global waste is expected to grow to 3.4 billion tonnes by 2050, more than double population growth over the same period.

- 30%- 40% of all food produced worldwide is lost or wasted.
- Globally only 9% of all the plastic ever produced has been recycled, 79% is in landfills, dumps or the environment and 12% has been incinerated.

#### 4. Calling for change

73% of consumers say they would definitely change their consumption habits to reduce their environmental impact, but there are a number of barriers in the way – price, access, information overload. Consumers can call for change on these barriers, they can demand more supply chain transparency, and they can lobby Governments to implement legislation or incentives for better practice. Consumers are already very active on environmental issues – with climate strikes and boycotts of unsustainable brands, and this has huge potential to go further.

# SURVEY ON PAPER CONSUMPTION IN OFFICES

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The pulp and paper industry is a chemical process industry with major impact on the environment. The potential pollutants from a pulp and paper mill can be classified into four categories– liquid effluents, air pollutants, solid wastes and noise pollution (Mohanty & Srivastav, 1998).

The major pollutants in a pulp and paper industry are the various gases like sulfur compounds and nitrogen oxides emitted to the air, and chlorinated and organic compounds, nutrients and metals, which are discharged to the wastewater. Pulp and paper production, consumption and wasting have many negative environmental and social impacts. The pulp and paper industry is among the world's largest generators of air and water pollutants, waste products and the gases that cause climate change. It is also one of the largest user raw materials including fresh water, energy and forest fibers.

Pulp and paper mills use and generate materials that may be harmful to the air, water and land. The pulp and paper industry is the largest industrial process water user in the U.S. (U.S. department of Commerce, 2000). A typical pulp and paper mill used 4000-12000 gallons of water per ton of pulp produced in the US. Pulp and Paper industry has been considered as one of the major polluting industries in the world (Sharma N & Chakravarty H, 2008). Pulp and paper mills pollute water, air and soil.

Papermaking has an impact on the environment because it destroys trees in the process. According to data from the Global Forest Resource Assessment roughly 80,000 to 160,000 trees are cut down each day around the world with a significant percentage being used in the paper industry. The major impact of the constant deforestation is the change in global climatic patterns. Apart from deforestation, the paper manufacturing industry also contributes to air pollution. In the United States, paper industries accounted for roughly 20% of the air pollution in 2015. Paper manufacturing also contributes significantly to water pollution. In 2015, the Canadian government estimated that the nation's paper industry accounted for 5% of the waste disposed into the nation's waterways. Data indicates that the production of 1 ton of paper contaminates nearly 20,000 gallons of water.

Looking at the impact on environment, a survey was conducted on paper usage in offices. A total of 280 individuals participated in the survey consisted of 10 questions prepared by MoEF&CC's CERC-ENVIS Resource Partner.

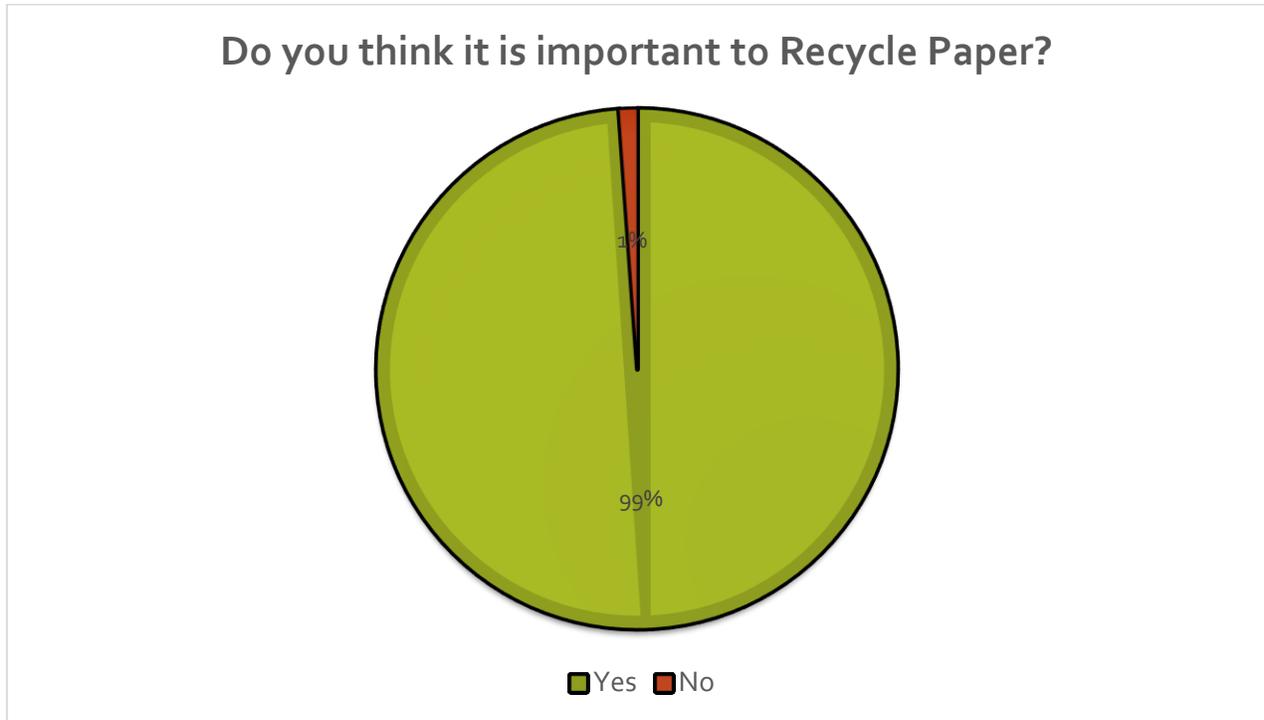
The survey was conducted online using following link which lasted for a week:

<https://docs.google.com/forms/d/1olgzL6kHIFAGZKLZMdGSIFkVKmY9HuLgW-ZQytPh3nI/edit>

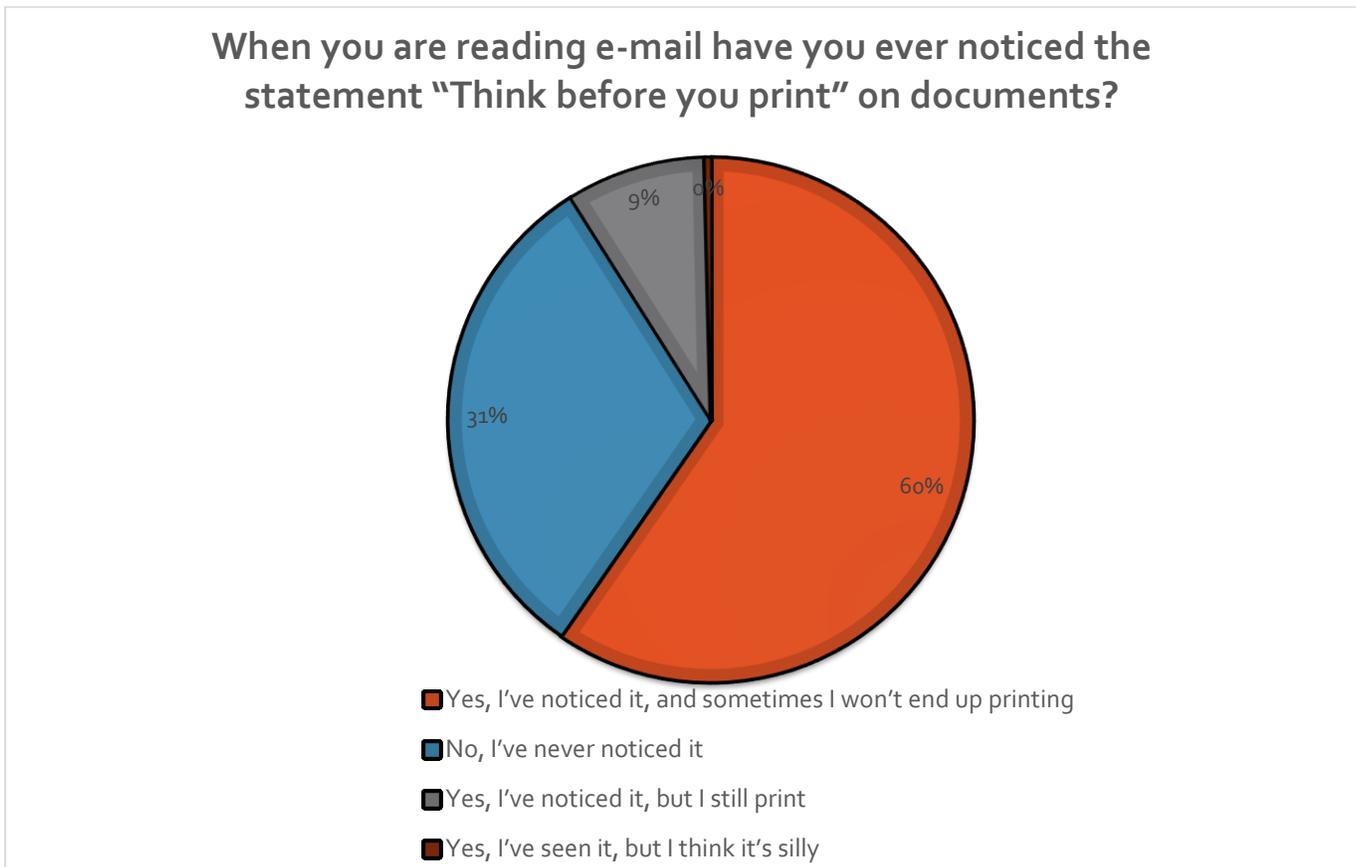
# RESULTS & CONCLUSIONS

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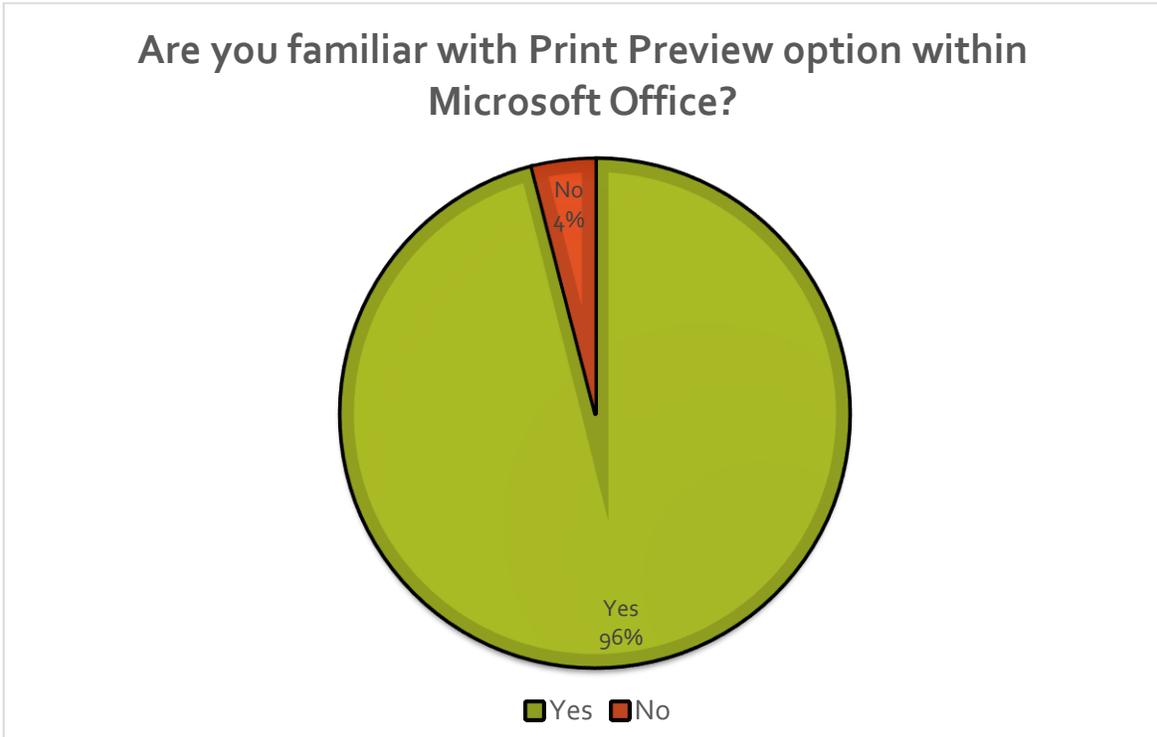
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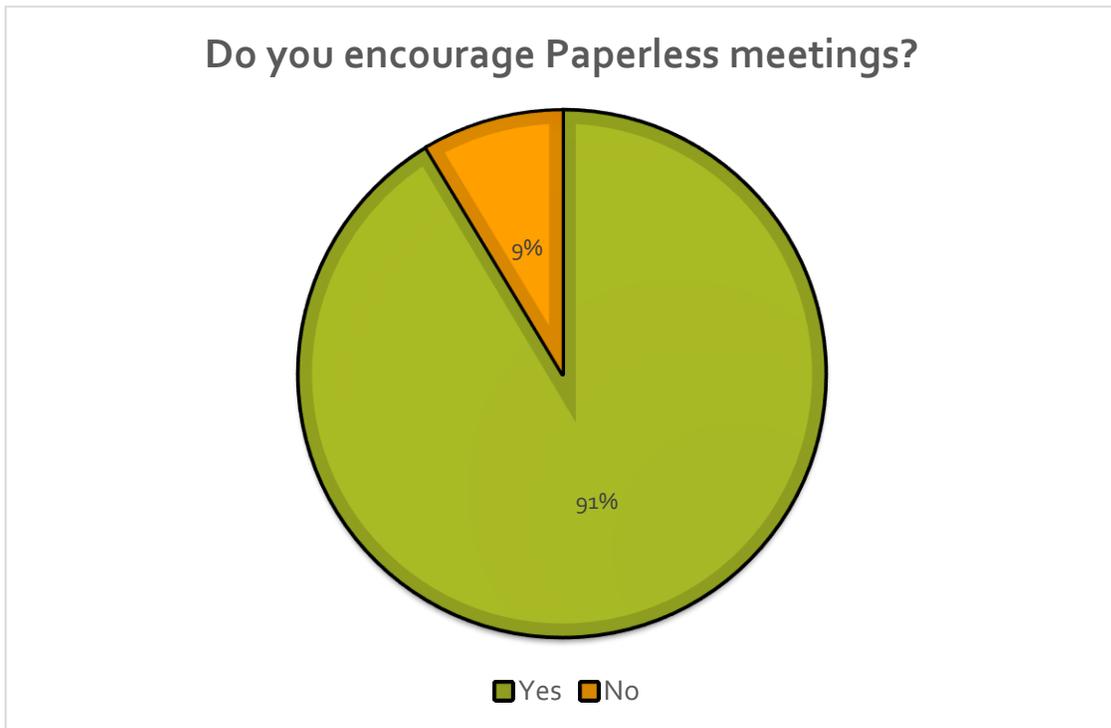
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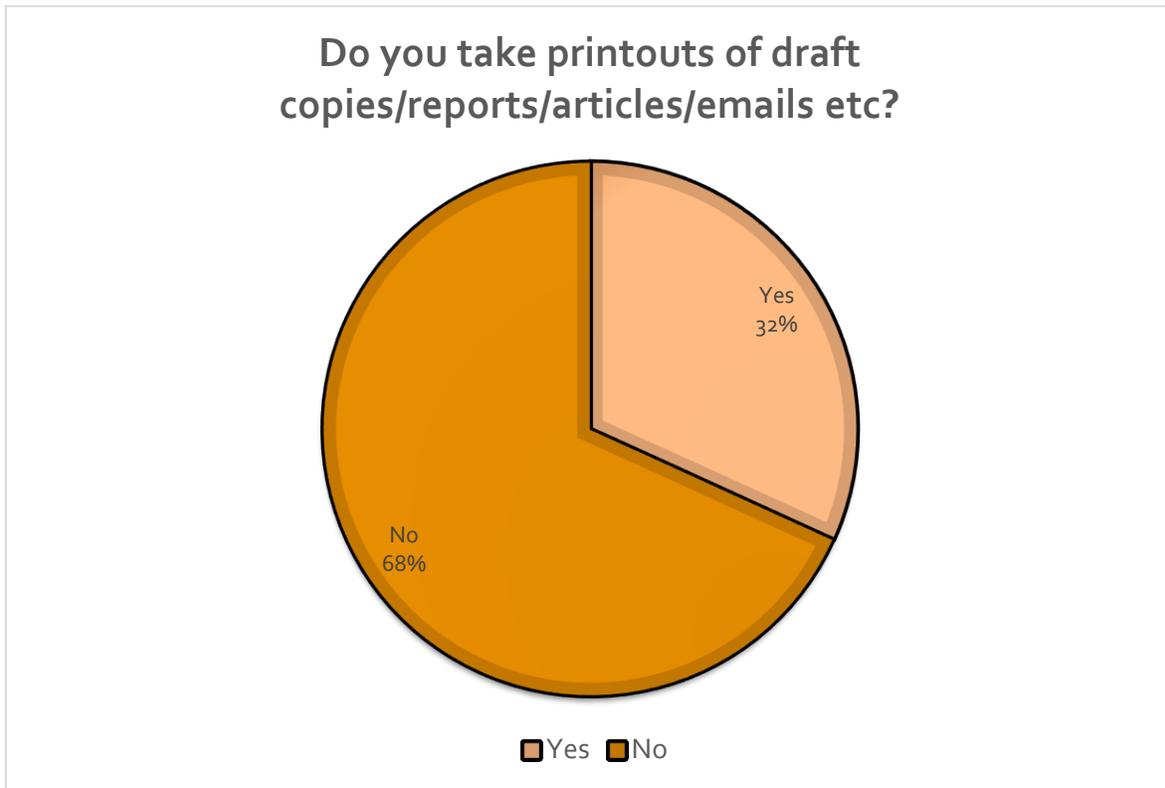
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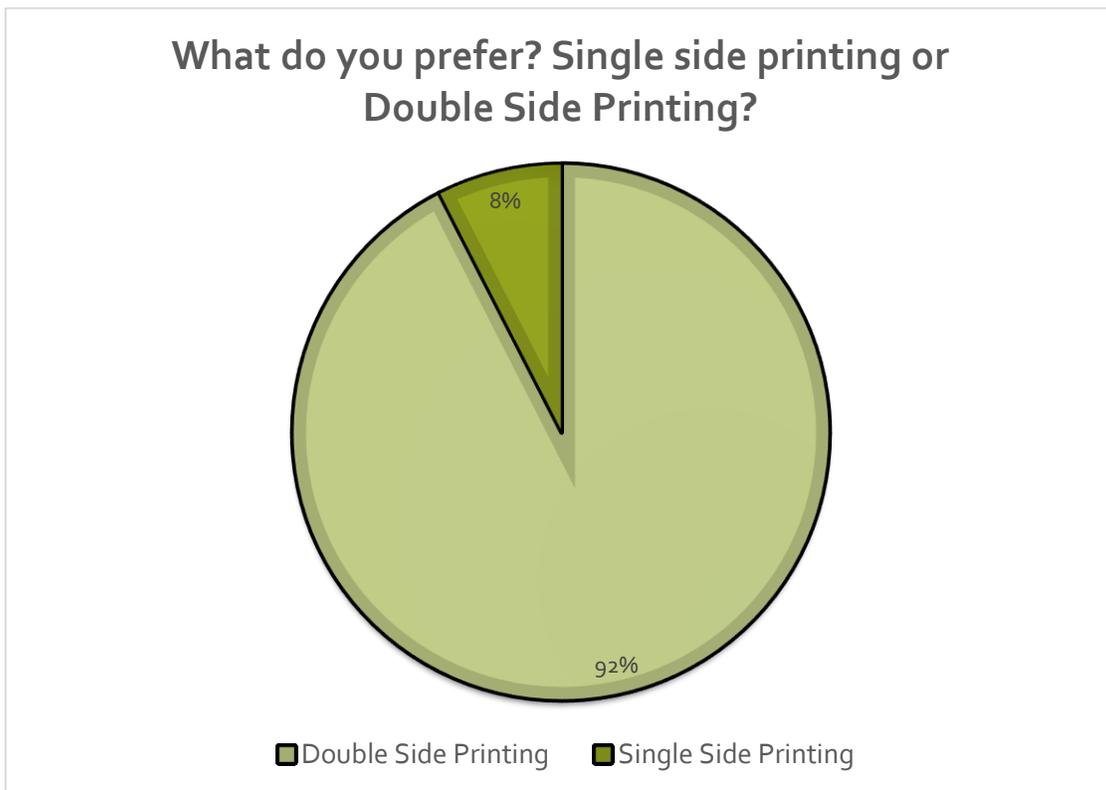
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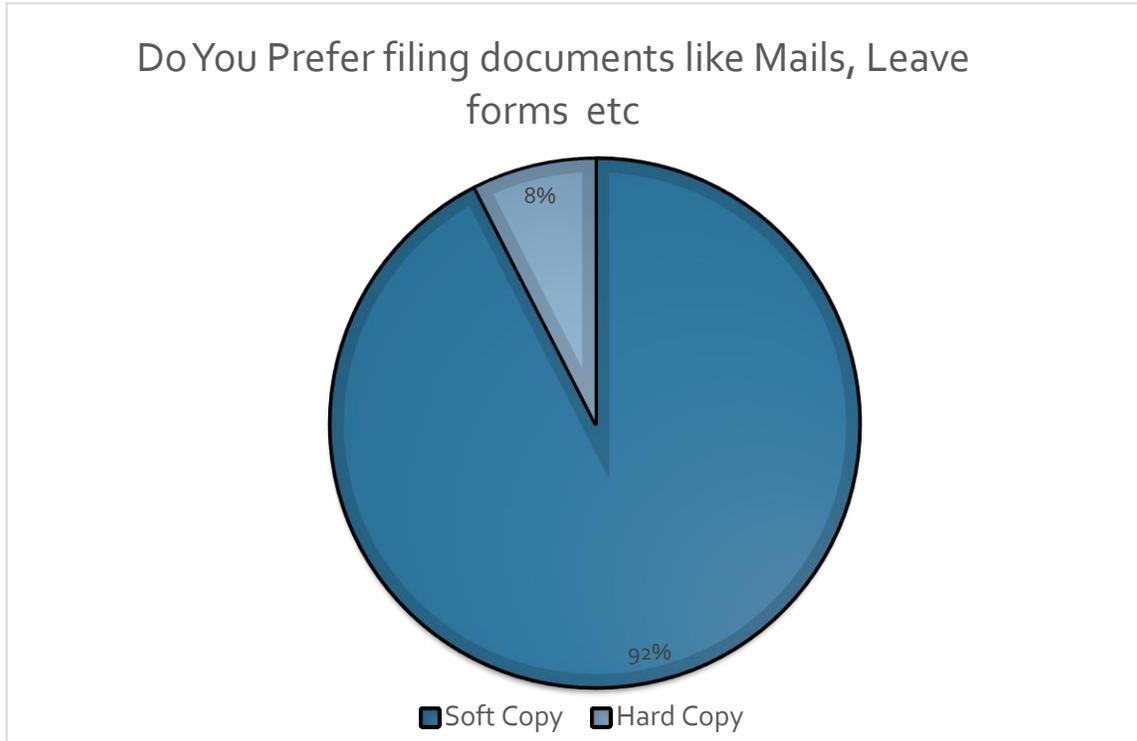
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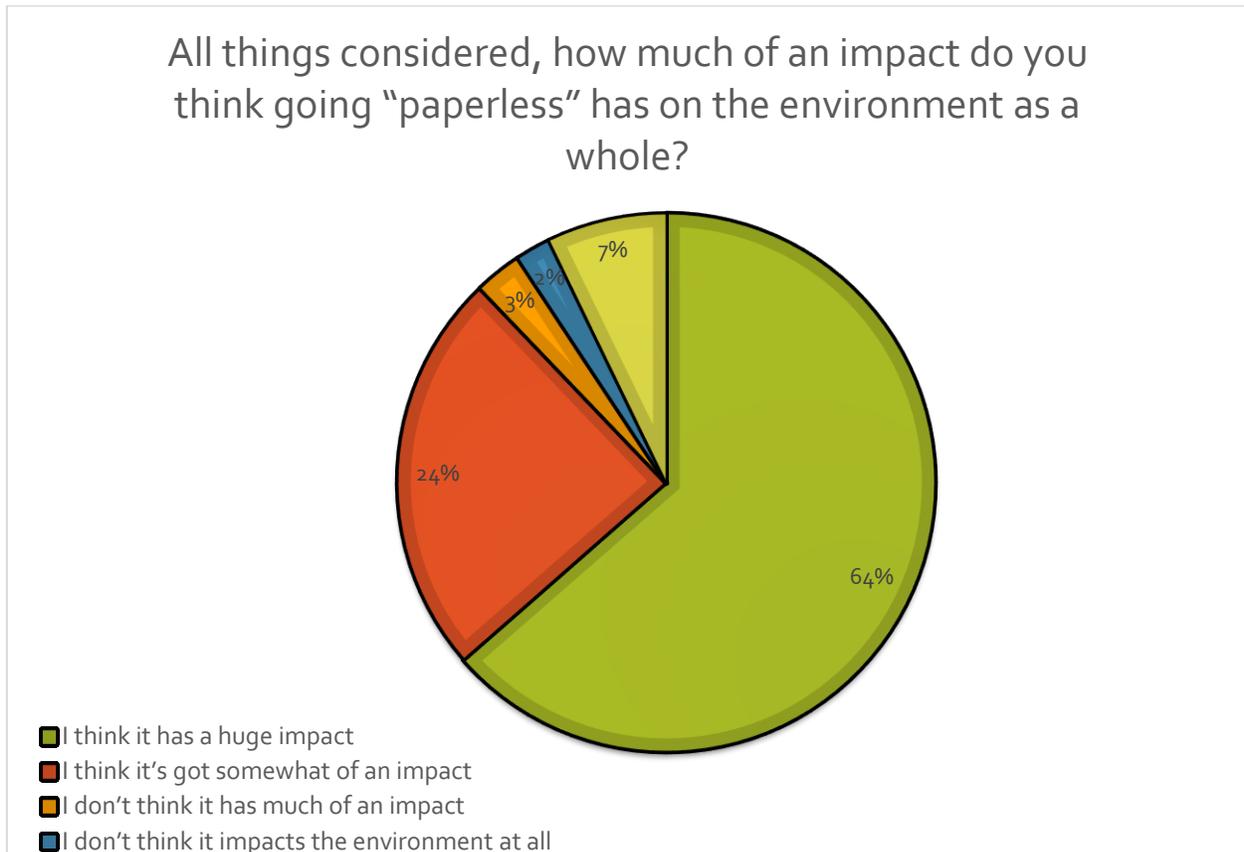
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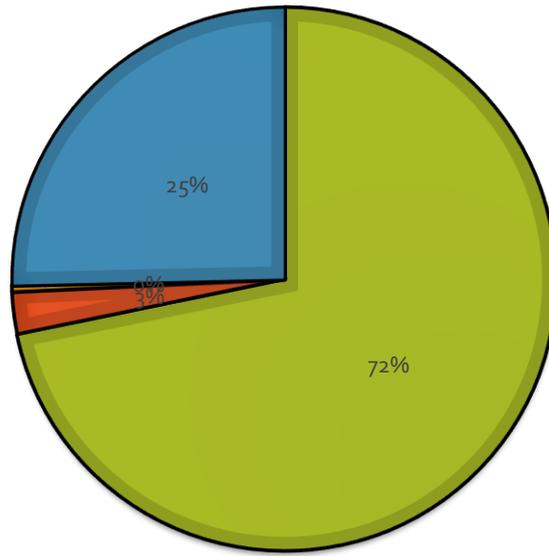


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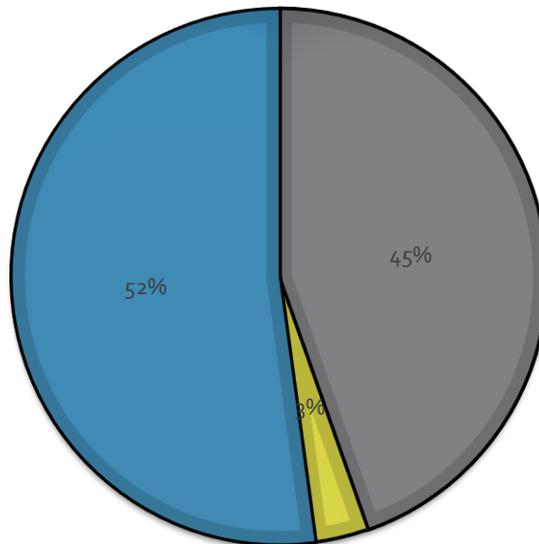
Amidst everything you have to juggle from day to day, how important is "going paperless"?



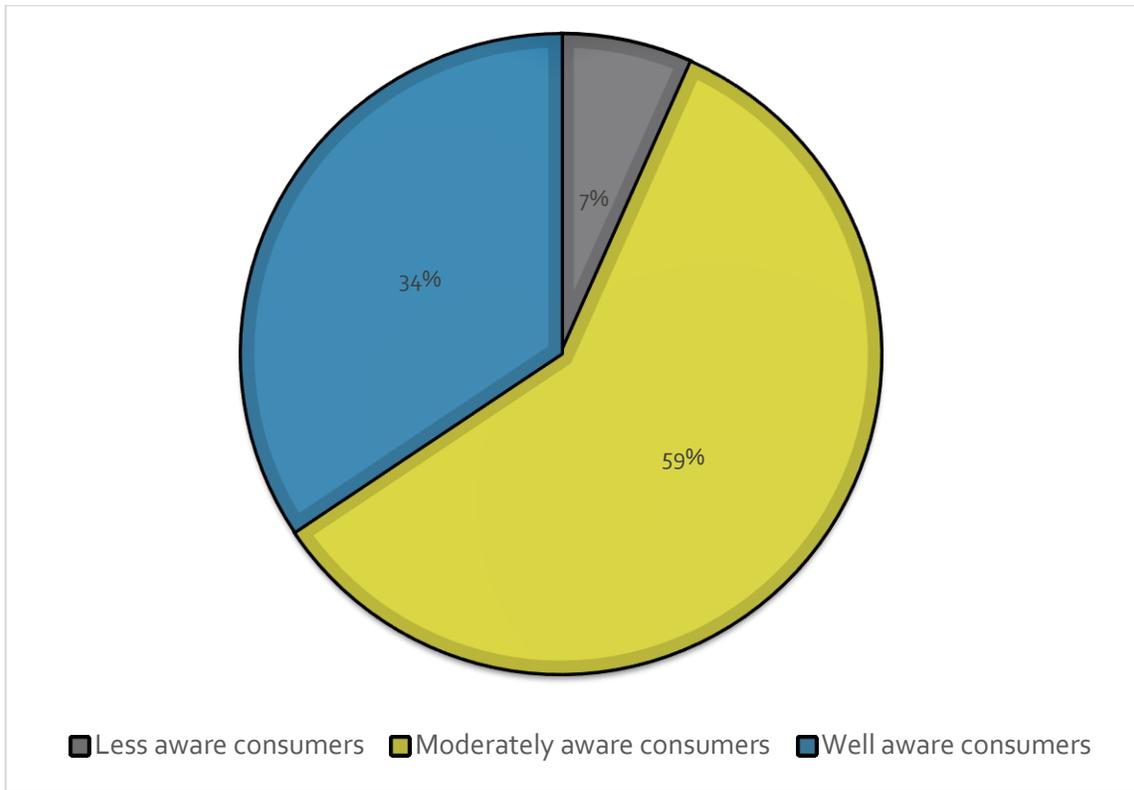
Very important Somewhat unimportant Somewhat unimportant Neutral

10)

How do you typically organize your documents?



just save them as is... paper as paper, electronic files as electronic files  
tend to print everything and save as a hard copy  
try to scan/convert my paper documents to save them electronically as often as I can



Looking at the survey we can say that 59% of the participants are moderately aware, 34% of the participants are well aware whereas 7% are less aware. For achieving the target we need to aware mass about the sustainable consumption and reduction in paper consumption in offices. Details of methods and tips to reduce paper consumption in offices is provided in the following section.

## How to reduce paper consumption in your office

*(Save money at the same time!)*

There are many easy ways for businesses and organizations to reduce their paper use and costs. Reductions of 20 percent or more are possible in most offices. Here are practical tips to help your company implement a cost-saving, paper reduction program:

### 1) Think before you print

- It is simply too easy to push the print-button. For example, much paper is wasted by printing out single line emails or printing out unnecessary copies of documents. Departments should carefully assess their needs before ordering bulk print copies of information materials, like annual reports or brochures. In many cases hundreds if not thousands of un-used copies end up in storage rooms clogging up storage space.

The golden rule of saving paper: Think twice if you really need to print or if it is necessary to print make sure you print on both sides (duplex). This is a really easy way to reduce paper consumption by half.

## Easy ways to reduce wasteful paper use:

a) Post in-house reminders near the copy machine or at individual desktops.

- Use catchy slogans, for example: “Do you really need to print that?” or “Do you know how many sheets of paper you used last month?”

b) Track the personal printing footprint in your office

- Create systems that allow staff to measure how many print copies they are personally responsible for each month. Most people are shocked to find out their individual cumulative number of copies. This knowledge will motivate people to reduce their personal paper footprint.
- By tracking individual printing quantities, staff will be able to measure changes over time.

*One way to promote less printing is by running in-house competitions for “Paper Saving Champion” of the month - i.e. who printed the least copies.*

c) Reduce print runs

- Undergo an inventory to identify past printing jobs for which too many copies were ordered. This will help ensure that the quantity ordered matches demand for printing jobs in the future.
- Publicize the results of your inventory in-house, for example on your office notice board or in your company newsletter, and encourage people to be more mindful of the number of copies ordered.

**Create a checklist for those departments which order informational materials. The checklist should include question such as:**

- a) Please identify the target group for the brochure. Verify the number of required recipients and the number of back-up copies needed.
- b) Are you sure these target groups will need a hard copy of the report or is it enough to point them to a website?
- c) Do they need to be proactively sent the hard copy or is it sufficient to make it available upon request?
- d) Do you need in-house copies for all staff or can copies be held in communal areas/on notice boards?
- e) How many reserve copies do you require and why - for what events or purposes?
- f) Who will distribute or oversee the distribution of the reserve copies?

*Simply by addressing these questions, it is highly likely that the quantity of future print runs will be more realistic.*

d) Review distribution lists frequently

- Eliminate outdated or unnecessary recipients.
- See if destinations with many recipients can make do with fewer copies.

## e) Conduct paper-less meetings

- When you hold a meeting, do you really need to have hard copies of preparatory materials available for each participant?
- Encourage people to use their computers for reviewing documents and note-making
- Make sure meeting participants have electronic access to all the materials beforehand encourage those using computers not to print out copies. If you must supply additional materials at the meeting, consider burning CDs for all participants.
- Make copies “as needed” rather than in large batches at one time. Frequently, extra copies of important internal documents become outdated quickly and only end up being discarded. Making copies as needed can reduce this problem significantly.

## 2) Use paper more efficiently

Duplexing, i.e. copying images onto both sides of a sheet of paper, can save up to 50% of paper costs. Duplexing saves money on paper purchasing, as well as on storage and mailing. Duplex copies are also easier to fold and staple. While some prints and copies need to be single-sided, most do not.

### a) Set defaults on computers

- Set defaults to double sided - select one-sided printing only when really needed.
- Print double-sided for bills, applications, licenses, and other paper-intensive activities.
- If your printer cannot double-side then find out whether your printer can be fitted with a duplexing unit to enable it to print double sided.

### b) Change your computer’s default settings so that you can put more text on each page.

- In MS Word, go to File, then to Page Setup. Then choose reduce the Margins and set your margins to smaller numbers. Compared to the normal settings, you could use up to 14% less paper.
- When you are printing, reduce font size to 10 point to decrease the amount of paper required.

### c) Post in-house reminders about efficient paper use near the copy machine and/or each workstation

- Use both sides of the sheet of paper, whether for copying or printing.
- Print only the pages you need by using the “Print Selection” function.
- Print documents 2-UP OR 4-UP per page for archival purposes and where possible.
- Customized software can increase the document-per-page capabilities of your printer.
- Reduce margins.
- Use the print preview function before printing any word or excel document to avoid copy mistakes.
- Use a small font size to reduce the number of pages printed

- Use efficient fonts like Times New Roman or Arial –these fonts use significantly less space. See: <http://office.microsoft.com/en-us/assistance/HA010347461033.aspx>

#### d) Use your fax effectively

- Send a fax or word document without printing first! Simply use the menus in Word: choose File, then Send to, then Fax recipient, and then follow the instructions. This allows faxes to be sent from computers without the need to print first. Also allows faxes to be received in an e mail rather than printed copy format.
- When sending a paper fax, eliminate cover sheets and use fax stick-on labels instead.
- Program your fax to eliminate confirmation sheets

#### e) Practice Image Reduction

- The ability to reduce or enlarge images is common on copiers. Image reduction is also possible with printing.  
For example, when copying a book, one can often get two original pages on to one side of the copied sheet. Because reduction works in two dimensions, you only need to reduce by 30% (to 70%) to cut in half the area of an image
- While reproducing entire standard pages requires a 35% reduction (to 65%), books often have smaller than standard pages and most documents have larger than necessary margins, so the reduction can usually be less than this.

#### g) Practice Preventive Copier Maintenance.

- Keep copiers and printers in good repair and make it your company's policy to only buy copiers and printers that make reliable double-sided copies.
- Let your copier maintenance person know when a copier is performing poorly (toner is low, jams frequently, etc.). Regular copier maintenance is important, especially if the toner is low. Many times copiers are used until all the toner is gone and that wears down machines. A copier that works well is less likely to jam and this helps save paper.

### 3) Use thinner paper

The thickness of paper we use makes a big difference both in terms of cost as well as the amount of paper used. You can find the reference to the thickness of paper on the package, mostly ranging from 60 gsm or g/m<sup>2</sup> (grams per square meter) to 100 gsm. Use lower grammage paper for your printing, copying etc. Obviously heavier weight

sheets use more fiber, cost more per sheet and cost more to post. Most printers work well with 70 and 80 gsm. Using thinner paper most often does not change the performance and can save money for you too.

Paper with a basis weight of

- 60gsm uses and costs 20% more than 50gsm;
- 70gsm uses and costs 15% more than 60gsm;
- 80gsm uses and costs 12% more than 70gsm;
- 100gsm uses and costs 20% more than 80gsm.

#### 4) Reduce unwanted mail to your office

Contact mail senders to take your company's name off their mailing lists, or mark unwanted first class mail "Refused, Return to Sender." For more information, see Reducing Unsolicited Mail at Your Business.

**<http://www.webofcreation.org/BuildingGrounds/Forestpaper%20and%20wood.htm>**

For country specific way to reduce unsolicited mail, type « unsolicited mail » into a Google search.

#### 5) Reuse paper

##### a) Put adequate paper collection systems in place

- Provide clearly labeled recycling bins near copiers, shipping and receiving areas, and in employee eating areas to collect white paper, mixed paper, newspaper, magazines, cardboard as well as non-paper products (glass, aluminum, plastic, etc.)
- Provide desktop recycling containers for employees.
- Advise your cleaning staff on where to place collected paper without polluting it through contact with other waste.
- Estimate how much waste paper your office produces and arrange to have it picked up by your waste hauler or a recycler.
- If your office is small, consider combining your recyclables with other small offices nearby.

##### b) Encourage staff to reuse papers

- Use the blank sides of unneeded single-sided copies for printing drafts.
- Use outdated letterhead for in-house memos.
- Designate a printer for draft printing, and use only used paper in its paper tray.

##### c) Don't buy paper that is a contaminant in recycling

Don't buy paper that have the following contaminants: thermal fax paper, glossy/plastic coatings, and plastic windows, bright colors including goldenrod, laser printer inks, and adhesive products.

## 6) Use less paper by effectively using computers and other technology

Today's information and communication technologies provide many opportunities for businesses to function with far less paper. Electronic mail, Intranets, Internet and document scanners can radically reduce paper use, while also saving time and money. Estimates show that 10-30% reduction in paper usage is possible with appropriate use of available technology

Examples for how to use your computer to eliminate paper:

- Use electronic means to communicate with customers, for press release/media relations
- Use e-mail instead of memos and faxes for inter-office memos, announcing meetings, and targeted communications. Use group e-mail lists to "broadcast" important messages efficiently and inexpensively.
- For editing and reviewing of larger documents, transfer documents on disk or by e-mail rather than sending a printed copy.
- Use electronic communications for directories, forms, bulletins, manuals, reports, and storage when possible (don't print them unless absolutely necessary);
- Develop an Internet web page for frequently requested information.
- Store documents in electronic archives using data compression software. This saves on filing cabinets and floor space
- Employ office intranet solutions that allow open or password-protected access to important documents, presentations, or databases
- Use electronic data interchange (EDI) technologies like web-based secure credit card transfers and order forms to reduce the need for cumbersome paper invoices, transaction records, and confirmation letters
- Use Revision Features in Word Processing Software. Take advantage of onscreen editing features when making changes to draft documents, then send the new draft electronically.
- Have several people edit the same copy of a document using different colored inks, or edit computer documents on-screen using different fonts, or learn to use the commentary function in word.

**See <http://support.microsoft.com/kb/305216>.**

### Special paper saving features in Microsoft Excel

- Use the Fit to Page feature in Microsoft Excel: This feature automatically re-scales output to print evenly on one or several pages. Let's assume you have a spreadsheet that's 10 columns wide, but when you used Print Preview it shows that nine columns will be printed on one page and one column on the next page. Sounds like a reformatting nightmare, but there is a simple solution:
  - Just use the Fit to Page feature. From the File Menu, select Page Setup, then select Scaling-Fit to.
  - You can force the document to print out on a single page or multiple pages in a specific width or length. Excel takes care of all the scaling for you.
  - You can then use the Print Preview feature to make sure the document prints on just one page.

- You may also want to change the paper orientation (portrait vs. landscape) for large Spreadsheets to get more columns on a page.

## Special paper saving features Microsoft PowerPoint

- In PowerPoint, print Handouts not Slides. Text in PowerPoint is generally large, so if you print using the Slides option, it will print one slide per page. If you need to make overheads, that is the way to go, but otherwise, the best and fastest way is to print Handouts. The default setting prints 6 pages/handouts. If you need more detail for a given slide, such as an important graphic, you can print that particular page individually.
- For example if a lecture has 60 slides, printing handouts will save 83% of the amount of paper, and it will print 6 times faster!
- Printing it in duplex as well would save 92% of the paper.

## 7) Use better information systems

Often paper related costs are closely related to the organization of information in an office. Great savings are possible when a company things through its information management. For example, companies can save money by

a) Centralizing files, reducing distribution lists and consolidating forms

b) Routing Memos and Newsletters

- If it is inappropriate to communicate a message by e mail, instead of making a copy for each person, route one copy around the office.
- Ask originators to send fewer copies to your office.
- Provide half-size sheets for short memos and letters.

c) Using two-way envelopes

This saves paper, inventory, and warehousing, handling, printing and labelling costs. Print directly on envelopes rather than using labels.

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- 5) <https://www.nielsen.com/us/en/insights/report/2018/finding-success-through-sustainability/>

**GO GREEN**  
KEEP IT ON THE SCREEN!



... and if printing cannot be avoided remember to:

- ▣ **PRINT DOUBLE-SIDED** and in black/white
- ▣ Set the printer/copy machine to **ENERGY SAVING** modus when done
- ▣ **RE-USE** single-sided printed paper for internal documents or as note paper
- ▣ **RECYCLE** toner cartridges



For more information visit  
[www.cercenvi.nic.in](http://www.cercenvi.nic.in)

**GREENING  
THE BLUE.** 