



Why Print?



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Why Print?

Against all the hype that is out there, the fact is that print on paper is vastly more environmentally friendly than online resources.

Big banks and Utility suppliers tell us to go green and get rid of paper statements and bills and to go online and help the environment. The majority of these claims are unsubstantiated. The term “paperless” is also disingenuous as the paper, currently used within an organisation to generate a traditional bill or statement, is now being replaced by home or office printing, which is necessary for many users who still need a hard copy. Recent research reveals that some 43% of Banks, 70% of Telecomms and 30% of Utilities risk greenwash sanctions as they are flouting advertising regulations and risk reporting to the Advertising Standards Authority. Print on paper is truly sustainable and can be recycled. It is biodegradable at end of life. Although energy intensive to produce, it is far less power guzzling than the computer world where massive server farms run 24 hours a day 7 days a week to keep the online world serviced – even when your computer is turned off. Disposing of a computer at end of life causes major environmental consequences, and even after what can be recycled is taken out, there are still certain parts that end up in landfill, leaching harmful elements into the soil for generations.

Forests occupy 42% of the territory in the European Union and forest cover has grown 30% since 1950, an increase equal to 1.5 million soccer stadiums per year. Trees absorb carbon dioxide from the atmosphere as they grow and produce the wood used to obtain cellulose fibre for manufacturing paper. Stored carbon is not released when trees are cut, but remains inside paper products. For this reason, we talk about authentic carbon dioxide sinks.

Did you know that...?

The wood used in paper manufacturing is neither fine wood nor exotic tropical species but fast-growing wood species, mostly pine and eucalyptus, cultivated for this purpose. Plantations of fast-growing species serve as carbon dioxide sinks, helping to mitigate climate change.

The paper industry is a relatively small user of wood. Globally, 53% of the wood obtained from forests annually is used for energy production, 28% is used by sawmills and only around 11% is used directly by the paper industry.

Chain of Custody Certifications, of which PEFC and FSC® are the most recognized, make it possible to verify, via traceability, that the wood used in the production process comes from forests managed according to sustainability criteria.

The European paper industry invests an average of 56 billion Euros a year in new installations and environmental improvements. As a result, 83% of the pulp and paper manufactured in Europe comes from mills where widely-recognized environmental management systems (ISO or EMAS) are in place.

In the last ten years, the paper industry has lowered its CO₂ emissions by 42% per ton of paper produced and is the biggest user and producer of renewable, low carbon energy in Europe. The paper and printing industry represent only 1% of greenhouse gas emissions globally.

In the paper production process, only 5% of the water used is consumed, while the remaining 95% is returned to the environment after being treated.

The European paper industry is a driving force in cogeneration, a highly efficient energy system that simultaneously produces electricity and heat for industrial use with a very high output, thereby avoiding the need for primary energy and reducing greenhouse gas emissions.

More than 30% of the paper we use today is for new applications which did not even exist ten years ago.

9 out of 10 European consumers prefer paper packaging and wrapping for food and drinks because it is more environmentally friendly than other products.

Reading a printed newspaper has a lower impact on global warming than viewing the news online for 30 minutes.

The use of printed textbooks as teaching aids contributes to global warming ten times less than the use of electronic teaching aids.

Paper recycling rates in Europe have surpassed 70%. The paper industry is a leader in paper recovery and recycling. Used paper and cardboard are recycled and made into new paper, making efficient use of resources, avoiding greenhouse gas emissions, and reducing the volume of landfills. Moreover, paper is 100% biodegradable.

The 4.5 million tonnes of used paper collected for recycling in Spain alone in 2009 account for a saving on landfill volume equivalent to 45 large football stadiums filled to the brim.

Cellulose fiber can be reused an estimated six times.

Only 18% of electronic devices are recycled. Around 20-50 million tones of electronic products are discarded every year

SUMMARY

FACT AND FICTION

Papermakers rip down forests

No they don't. This would be a very bad business move since trees are an important raw material and if they despoiled the world's supply of timber, there would be no papermakers in the future. For every logged tree in managed forests, 3 to 4 are replanted.

Print is dirty

Print is clean – its biggest consumable – paper – is truly sustainable and can be recycled. Print technology is leading edge and helps to reduce power consumption, water usage and lessen waste. Increasingly the use of chemicals within the process is being cut to the minimum, and inks and coatings are being developed that are more environmentally friendly with many now being offered with a vegetable base rather than chemical. Other consumables such as plates are easily recycled whilst pressroom chemicals and cleaning solutions are being offered in easy to access eco friendly versions.

Packaging is not environmentally friendly

Certain products will always need to be protected by some form of packaging – for security, for convenience [you could hardly buy soup without any form of packaging], for cleanliness, to keep food fresh or for transportation. Paper based packaging is made from a renewable resource and the vast majority is made from recycled fibres. Packaging is a great way of using up those recycled fibres that are not suitable for the production of high white paper.

Paperboard is the most environmentally friendly form of packaging – far superior to plastics for instance.

Electronic media is more eco-friendly

Oh no it isn't! Your desktop computer may not seem too harmful [using anything between 60 to 250 W and a little extra for your monitor, say an extra 15 to 70 W plus peripherals and plug ins – [laptops use considerably less by the way]. But add your computer to the millions of others around the world and it all starts to add up. However, the piece of paper on your desk uses zero. [And that is without even getting into comparing the production processes of manufacturing the hardware elements that you need for a computer and papermaking plus printing].

There are a lot of statistics that claim the energy use of server farms and data centres are not pretty. Estimates state that a fairly large data centre would use the equivalent of 4 megawatts of power a day [that is the equivalent of 57 barrels of oil a day]. Now consider that there are 4.9 million new servers installed each year and that the numbers are growing.

“A PC monitor on standby uses 51kWh per year of electricity”

- that's equivalent to 500 boiling kettles

“The global IT industry accounts for roughly 2% of global emission

- that's about the same as the much vilified aviation industry

Source: The CarbonNeutral Company

Recently, one part of the WWF launched an “unprintable” version of a PDF file under the banner that it was environmentally friendly.

How is saving a file with a given file extension going to save a tree exactly? Let's look at the facts. An average tree produces about three tonnes of wood (when dried) which can be manufactured into about 2.5 tonnes of paper. An A4 sheet of 130 gsm paper weighs in at c. 8.1 grams, so 2.5 tonnes of paper would therefore yield in excess of 300,000 of these sheets!

Paper is about 50% carbon and therefore a single sheet of a reasonable quality A4 130 gsm paper has about 4 grams of carbon in it. This is equivalent to about 7.5 grams of atmospheric CO₂ that is locked up in it (a carbon credit if you will). Believe it or not this means that we can consume - or spend - 8 watts of power on this paper (printing on it, say) before the carbon credit in the paper is depleted to zero.

About 4 watts were used in the manufacture of the paper itself, so we have about 4 watts remaining to play with. A 500 watt desktop printer that takes 10 seconds to print out a document would consume (500 watts / 60 minutes / 60 seconds x 10 seconds) = 1.4 watts per sheet. Add this to the initial paper manufacturing energy cost and you have a total energy spend of 5.4 watts to print out one sheet of paper. There is 3.6 watts of energy/carbon credit remaining.

On the other hand, an electronic document has exactly zero carbon credit to fall back on. Unlike a sheet of paper, no CO₂ was removed from the atmosphere in the creation of a computer chip - but plenty was dumped into it! Moreover, it has been calculated that an email sent with a modest sized attachment consumes 2.5 watts. With nothing to fall back on, if the file created in WWF format were emailed (or even saved on a hard drive) the effect on atmospheric CO₂ is far more devastating than if it is printed out on a sheet of paper - where a carbon credit DOES exist.

Therefore, if 25% of these 300,000 files created in the WWF format are emailed, there is an energy cost of 187 kilowatts. This is 168 kg's of CO₂ emitted into the atmosphere for no return. On the other hand, if 25% of them are printed out onto paper, there will be a net credit remaining of 270 kilowatts - equivalent to 243 kg's of CO₂ still locked up, safe and sound in the paper. And it will stay locked up until it is disposed of or recycled. Nature's very own green answer, right there. How ironic.

Source: FOPAP – Friends of Print and Paper – www.fopap.org

Making recycled paper is more polluting than making new paper.

Fiction: Pulping, bleaching and manufacturing virgin paper requires more chemicals and is often more polluting than making recycled paper. Recycled paper processes uses up to 50% less water than virgin paper and fewer chemical processes.

The production of recycled paper also reduces carbon emissions. When compared to the production of virgin paper, one tonne of recycled paper can save 1.32 tonnes of CO2 equivalent.

Making recycled paper requires a lot of bleaching

Fiction: Most recycled papers require little if any bleaching. Where bleaching is used, almost always chlorine free agents are used.

Trees are a renewable resource – what’s so wrong about using them to make paper?

Fact: Provided that they are grown in a sustainable and ecologically responsible way, trees are a valuable source of raw materials for papermaking. They are grown as a renewable “crop” and more trees are planted than those that are used.

Make sure though that the paper you buy carries a credible eco symbol such as FSC or PEFC which is a guarantee of good forestry management.

It is better to incinerate waste paper than to recycle it

Fiction: There are some paper products that can’t be recycled [hygiene products, contaminated packaging] and here, yes, it is better to incinerate and make use of the calorific value rather than send to landfill. However, incineration causes its own pollution. There is still a lot of good quality paper going to waste and in this case it is obviously better to recycle it rather than burn it.

- Once print is produced it requires no more energy to access it, use it, store it or share it.
- It can be easily recycled and reused; much harder to do with hardware such as computers, PDA’s, mobiles, e-readers and e-pads.
- Print is benign; it doesn’t leach chemicals into the soil, it is easily biodegradable, it is sustainable.
- With digital printing technology, it can be personalised, allowing one to one communications that are highly relevant to the receiver rather than blanket mailing or websites that rely on a huge amount of traffic to make a return on investment.
- Digital also allows on-demand output to the exact amount required meaning no redundant stock and little waste.
- You can use and access a printed document wherever you are; electronic devices are not always so helpful.
- It is not costly so if you do mislay it or damage it, it is not the end of the world; with electronic forms of communication it can be more problematic.

