



Print, Paper and
Paper Packaging
have a great
environmental
story to tell

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Is going digital really more environmentally sustainable than using paper?

Your readers were recently warned (“The sustainable argument for going paperless,” August 16, Benedikt Dischinger) that there is a “Code Red for Humanity” caused by human-caused climate change, and that one response to this legitimate threat to the future of humankind is...use less paper.

What Mr. Dischinger wants us to believe is that we should toss overboard the only form of communication rooted in a truly circular paper industry that relies on biobased energy, an infinitely renewable resource and some of the highest recycling rates in favor of more electronic communication, which is rooted in an industry that scours the planet for finite rare earths and other diminishing resources, relies almost exclusively on fossil fuels to meet its increasingly greedy demands for energy, and features embarrassing recycling rates.

The author does concede that “going digital does lead to increased electricity usage” and “the generation of e-waste,” adding that more sustainable electronic communication is possible and consequently preferable to paper use. But the trend is heading in the opposite direction.

The figures don’t lie. It’s estimated that North America will have 5 billion networked devices in 2023, up 40% from 2018. These electronic devices and the growing number of server farms that support them are made with non-renewable raw materials (iron, copper, rare earths, petroleum for plastics, etc.) that require environmentally invasive mining and drilling for extraction and processing.

Going digital – manufacturing and operating electronic devices and the massive server farms that support them – requires huge amounts of electricity which today is generated mostly by fossil fuels, which in turn results in greenhouse gas emissions that contribute to climate change. The energy consumption required for digital technologies is increasing by an estimated 9% each year. Depending on the level of energy efficiency achieved, the ICT (information communication technology) sector could use as much as 51% of global electricity in 2030 and contribute up to 23% of globally released greenhouse gas emissions.

Mr. Dischinger worries about the chemicals and water used in the production of paper. But data centers consume immense amounts of water. For example, [Google’s global data centers alone](#) consumed 4.3 billion gallons of water in 2021, more than 78% of the total water withdrawn from various sources. As for chemicals, more digitization means more electronic devices and servers with more bromines, phthalates and heavy metals.

And finally, the U.S. and Canada generate 7.7 million metric tons of e-waste annually, but only 15% of this e-waste gets recycled – the rest is landfilled, burned or dumped. As levels of e-waste increase, so does improper and unsafe treatment and disposal, posing significant threats to the environment and human health.

That’s only half the story. The author’s sustainability comparison is upside down.

Paper is, in fact, one of the few products on earth that *already* has an environmentally sustainable, circular life cycle. It’s made from an infinitely renewable natural resource – trees that are purpose-grown, harvested and regrown in



sustainably managed forests. It's manufactured using mostly renewable bioenergy in a process that uses a great deal of water, but in reality consumes very little of it. And more than two-thirds of paper in the U.S. get recycled.

The U.N Food and Agriculture Organization (FAO) and other credible environmental organizations specifically state that sustainably harvesting trees to make products that benefit society [including paper] is not considered deforestation because the trees will grow back. According to the U.S. Forest Service (USFS), U.S. forests grow approximately two times more tree volume than is harvested each year. In its most recent Global Forest Resources Assessment, the UN FAO reported that net forest area in the U.S. increased by approximately 18 million acres over the past 30 years. That's an area equivalent to 1,200 NFL football fields every day.

And far beyond simply replanting trees, the sustainable forestry practices and forest management certification systems advocated by the paper industry are designed to protect the entire forest eco-system, from wildlife and habitat to water and soil quality. Sustainable forestry yields benefits for the climate as well. In addition to enhancing forest ecosystem services, the USFS reports that sustainable forest management can actually increase the ability of forests to sequester atmospheric carbon. Planting new trees and improving forest health through thinning and prescribed burning are some of the ways to increase forest carbon in the long run. Harvesting and regenerating forests can also result in net carbon sequestration in wood products and new forest growth.

Contrary to the idea that paper use results in forest loss, strong demand for sustainably sourced paper products provides a powerful economic incentive for millions of landowners to keep their land forested and sustainably managed rather than converting or selling it for non-forest uses like urban development, which according to the USFS is the leading cause of deforestation in the United States.

Because paper is manufactured using mostly renewable bioenergy (64% on average in the U.S), the U.S. Environmental Protection Agency (EPA) reports that the pulp and paper industry is responsible for less than 0.6% of total U.S. greenhouse gas emissions. In fact, the paper and forest products industry produces more renewable bioenergy than any other industry in the United States.

While it's true that papermaking manufacturing uses a great deal of water, very little of it is consumed in the process. In a typical paper mill, process water is recycled 10 times or more, then it's cleaned to meet strict government water quality standards and approximately 90% is returned to its source. About 1% remains in the manufactured paper, and the rest simply evaporates back into the environment. Roughly 90% of chemicals used in the kraft pulping process are recovered and recycled. And with a recovery rate of 68%, paper products are recycled more than any other material in the U.S. municipal solid waste stream.

There is a case to be made, and Mr. Dischinger makes it, that some businesses can find efficiencies by moving more communications to electrons. We're not opposed to electronic communication. But the foundation for that case shouldn't be grounded in data-free, anti-paper environmental myths that do more to defeat sensible solutions to climate change than to advance them.

Kathi Rowzie, President
Two Sides North America

Readers can find facts cited in this article with linked sources at www.twosidesna.org/two-sides-fact-sheet.

About Two Sides North America

Two Sides North America (www.twosidesna.org) is part of the non-profit Two Sides global network which includes more than 600 member companies from across the paper and paper-based packaging value chain in North America, South America, Latin America, Europe, Australia and South Africa. Our mission is to dispel common environmental misconceptions and to inspire and inform businesses and consumers with engaging, factual information about the inherent environmental sustainability and enduring value of print, paper and paper-based packaging.

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