

Print and Paper Myths and Facts



Print and Paper
have a great
environmental
story to tell



www.twosidesna.org

When it comes to the sustainability of print and paper, it's important to separate verifiable facts from opinion and misleading information. This booklet is designed to provide you with relevant and balanced information – we call it informed choice.

Two Sides is an organization which is committed to promote the responsible production, use and recovery of print and paper and dispel common environmental misconceptions by providing users with verifiable information on why Print and Paper is an attractive, practical and sustainable communications medium.

'Paper has been an integral part of our cultural development and is essential for modern life. Paper helps to increase levels of literacy and democracy worldwide and plays an important role in protecting goods and foodstuffs during transit. Paper is made from renewable resources, and responsibly produced and used paper has many advantages over other, nonrenewable alternative materials.'

World Wildlife Fund, Guide to Buying Paper

What a great sustainable idea



'For sheer flexibility, style and effectiveness, print and paper can be the natural and recyclable choice for sustainable and powerful communications.'



TWO SIDES IS A GLOBAL ORGANIZATION WITH MEMBERSHIP SPANNING THE ENTIRE GRAPHIC COMMUNICATIONS INDUSTRY, FROM FOREST TO PRINT AND ON TO RECOVERY AND RECYCLING. THE INFORMATION IN THIS BOOKLET IS DRAWN FROM MEMBERS AND MANY OTHER STAKEHOLDERS, WORKING TOGETHER TO SHARE KNOWLEDGE.

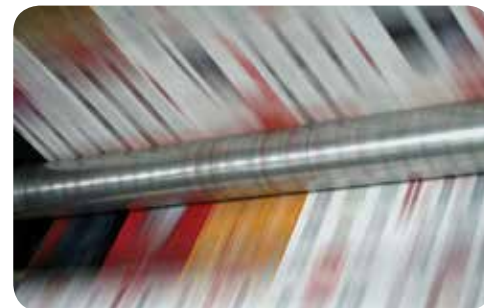
In recent years, the wider business community has developed an increased awareness of corporate responsibility issues and assumed its share of responsibility and accountability for maintaining standards of ethical, social and environmental performance.

Two Sides recognizes that the industry has a responsibility to continually improve its environmental credentials and address customer concerns, which are often the result of misleading or inaccurate information.

The Two Sides initiative sets out the facts in a clear and straightforward manner, addressing some of the inaccuracies and issues that surround the industry, enabling more informed decisions about the use of print and paper products.

Print and paper has been the preferred communications medium for 2,000 years. In a multimedia world, it continues to be highly effective and, used responsibly, is inherently sustainable.

Two Sides seeks to ensure that, by fostering a better understanding of our industry's environmental credentials, print and paper, through its myriad of uses from commercial applications to the basis of learning and creativity, remains an essential communication medium of choice.



Membership

Membership in Two Sides shows that your organization regards environmental awareness as an essential part of its business strategy. Benefits of membership include access to materials and information, helping your business communicate its sustainability to clients and staff, as well as participating in an initiative which sets out to dispel many of the myths that surround our industry.

Please go to www.twosidesna.org and find out how to participate.

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- 2 **The myth:** Making paper always destroys forests
- 4 **The myth:** Paper is bad for the environment
- 6 **The myth:** Making paper uses a lot of energy and has a high carbon footprint
- 8 **The myth:** Only recycled paper should be used
- 10 **The myth:** Print and paper is wasteful
- 12 **The myth:** Electronic communication is more environmentally-friendly than print and paper
- 14 **The myth:** People want to switch to digital
- 16 **The myth:** Packaging is wasteful and unnecessary



THE MYTH:
MAKING PAPER
ALWAYS DESTROYS
FORESTS.

THE FACT:
PAPER PRODUCTION
SUPPORTS
SUSTAINABLE
FOREST
MANAGEMENT.

THE NORTH AMERICAN PAPER INDUSTRY PROMOTES SUSTAINABLE FORESTRY AND DEPENDS ON SUSTAINABLE FOREST GROWTH TO PROVIDE A RELIABLE SUPPLY OF WOOD FIBER.

Paper manufacturers encourage forest sustainability through their purchase and use of certified wood fiber and by promoting sustainable forest management policies and practices at home and around the globe. By providing a dependable market for responsibly grown fiber, the paper industry encourages landowners to manage their forestland instead of selling it for development or other non-forest uses.

- Claims like “go paperless – save trees” create a false impression that forests are a finite resource, being destroyed. In truth, North American forests are a renewable resource that is continuously replenished using sustainable forest management.¹
- Over the last six decades, the net total U.S. forest area has increased by over 3% and the net volume of trees on timberland has increased by 58%.² In Canada, the forest cover has remained stable over the last two decades³ and less than 0.5% of Canada’s forest resource is harvested each year.⁵
- Most pulpwood harvested in the U.S. (89%) comes from private land. The income landowners receive for trees grown on their land encourages them to maintain, sustainably manage and renew this valuable resource.⁴
- Avoiding the use of wood is not the way to protect forests for the long term. It is precisely the areas of the world that consume the least wood that continue to experience the greatest forest loss.¹

“Continued use of paper and other wood products may be a key factor in maintaining a forested landscape for future generations.”

Dovetail Partners¹



THE MYTH:
PAPER IS BAD FOR
THE ENVIRONMENT.

THE FACT:
PAPER IS ONE
OF THE FEW
TRULY SUSTAINABLE
PRODUCTS.



PAPER IS MADE FROM WOOD, A NATURAL RESOURCE THAT IS RENEWABLE AND RECYCLABLE.

These features, combined with the North American paper industry's advocacy of responsible forestry practices and certification, use of renewable biomass and advances in efficient papermaking technology, make paper one of the most sustainable products on earth.

- Paper is based on wood, a natural and renewable resource that can be planted, grown, harvested and replanted. Each year forests in the U.S. and Canada grow significantly more wood than is harvested.^{4,5}
- In North America, paper is recycled more than any other commodity and the benefits include: extending the wood fiber supply; reducing greenhouse gas emissions by avoiding

methane emissions (released when paper decomposes in landfills or is incinerated); contributing to carbon sequestration; reducing energy needed for paper production; and saving landfill space.⁶

- Most paper in North America is made from sawmill residues and recovered paper. Only 36% of the U.S. timber harvest is used each year in manufacturing paper and paperboard,¹ and in Canada only 13%.⁷
- The paper industry has a number of respected certification schemes ensuring the paper you use has come from a sustainable forest source. These include the Forest Stewardship Council (FSC); the Sustainable Forestry Initiative® (SFI®) program; the American

“Responsible pulp and paper operations can bring many benefits to forests, local economies and people, particularly in rural areas.”

World Wildlife Fund¹⁰



Tree Farm System (ATFS) and systems endorsed by the international Program for the Endorsement of Forest Certification (PEFC).⁸

- Globally, only about 10% of the world's forests are certified – the majority of which are in North America. By sourcing certified products, from a variety of credible standards, buyers are sending a message that they support sound forestry and buy responsibly.⁹

THE MYTH:
MAKING PAPER
USES A LOT OF
ENERGY AND HAS
A HIGH CARBON
FOOTPRINT.

THE FACT:
MUCH OF THE
ENERGY USED IS
RENEWABLE AND THE
CARBON FOOTPRINT
IS SURPRISINGLY LOW.



MORE THAN 65% OF THE TOTAL ENERGY USED BY NORTH AMERICAN PULP AND PAPER FACILITIES COMES FROM RENEWABLE FOREST BIOMASS.

A look across the entire life cycle shows that paper's carbon footprint can be divided into three basic elements: greenhouse gas emissions, carbon sequestration and avoided emissions.

Each of these elements is influenced by important characteristics that make paper's carbon footprint smaller than might be expected: it's made from a renewable resource that stores carbon, is recyclable and is manufactured using mostly renewable energy including biomass, biogas and hydroelectricity.

- Wood stores carbon indefinitely, even as a finished product, helping to reduce the effects of greenhouse gas emissions over the long term. Growing trees also releases oxygen into the atmosphere, thereby supporting life on our planet.¹²
- Since 1990, U.S. pulp and paper mill purchased energy (from fossil fuels) use per ton of production has been reduced by 25.4%, and 14.6% since 2000.¹²
- Greenhouse gas emissions by the Canadian pulp and paper sector have dropped 79% since 1990 by decreasing its reliance on fossil fuels, increasing energy efficiency and reducing energy use.¹³
- In Canada, 98% of wood residue is now being used for either energy generation or composting. More than 66% of mills' wastewater sediment is being used for either energy generation, composting or land application.¹⁴

"In 2011, U.S. forests and wood products captured and stored roughly 16% of all carbon dioxide emitted by fossil fuel consumption in the United States."

American Forest & Paper Association⁸



- With 1% of the world's greenhouse gas emissions, the value chain of pulp, paper and print is one of the lowest industrial emitters.¹⁵

THE MYTH:
ONLY RECYCLED
PAPER SHOULD
BE USED.

THE FACT:
RECYCLED FIBER
AND WOOD FIBER
FROM WELL
MANAGED FORESTS
ARE BOTH ESSENTIAL
TO SUSTAIN THE
PAPER LIFE CYCLE.



WHILE IT'S TRUE THAT COLLECTING USED PAPER AND RECYCLING IT INTO NEW PRODUCTS IS GOOD FOR THE ENVIRONMENT, THERE ARE MANY OTHER FACTORS IN THE LIFE CYCLE OF PAPER WHICH INFLUENCE ITS ENVIRONMENTAL FOOTPRINT.

Paper can be recycled up to 7 times before the fibers become too short and weak and break down. That's why we need a continuous supply of fresh fiber harvested from responsibly managed forests. In the U.S. and Canada the majority of this fresh fiber comes from sawmill chips which are a by-product of lumber production.

North America also benefits from a good supply of recycled fiber which should be used locally to manufacture paper products. The re-use of this fiber is a sound environmental solution.

- Globally, 82% of recovered paper is used in tissue, container boards, and other packaging or board products. Approximately 6% of the recovered paper supply is used in printing and writing grades.¹⁶

“To make the global fiber cycle work, a continual input of 35% to 65% of fresh wood fiber is needed depending on the grade of the paper manufactured.”

Metafore (now GreenBlue)¹⁷



- Without fresh wood, the production of paper will cease within 6 to 18 months depending on the paper grade.¹⁷
- At least 15% of paper products are permanently removed from the fiber cycle, such as one-time use products (ex: tissues, sanitary products, medical supplies) and books or files that are stored for long periods of time.¹⁸

THE MYTH:
PRINT AND PAPER
IS WASTEFUL.

THE FACT:
PAPER IS ONE
OF THE MOST
RECYCLED PRODUCTS
IN THE WORLD.



ONE OF THE KEY ENVIRONMENTAL ATTRIBUTES OF PAPER IS THAT IT CAN BE EASILY RECYCLED AND USED TO MAKE NEW PRODUCTS.

Since tracking paper recovery rates began back in the 1990s, paper recycling has increased dramatically. We're not only recovering more, but we now know how to get the most environmental and economic benefits from using recycled paper in new products. In addition to the sustainable advantage of being made from a renewable resource, paper and its supporters are leading the way when it comes to implementation of effective recycling and the minimization and eventual elimination of print and paper waste in landfills.

- In 2013, 50 million tons or 63.5% of the paper used in the United States was recovered for recycling.¹⁹ This is far higher than the 28% of glass and 9% of plastic recovered.¹¹ In Canada 73% of the paper is recovered.¹⁴
- Worldwide recovered paper demand will increase by approximately 40 million tonnes from 2012 to 2016. Most of the new demand growth will be in developing countries, with China accounting for about 60% of expansion.²⁰

“Besides easily recognizable paper products (e.g. writing paper or paper towels), more than 5,000 products can be made from recycled paper.”

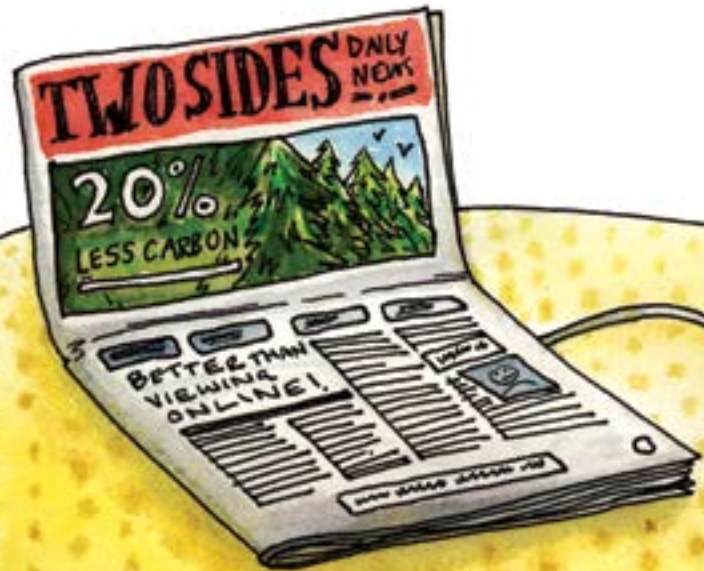
U.S. Environmental Protection Agency²²



- All available recovered fiber is currently being used in the global marketplace. Recovered paper is sold to the highest bidder and shipped all around the world. In fact, many Canadian companies backhaul waste paper from the U.S. in the same trucks that deliver new paper to their American customers.²¹
- In 2012, the average global recovery rate of paper products was 57%. For corrugated cardboard it was 84%, old newsprint and magazines, 67% and paper overall 36%.²⁰

THE MYTH:
ELECTRONIC
COMMUNICATION
IS MORE
ENVIRONMENTALLY-
FRIENDLY THAN
PRINT AND PAPER.

THE FACT:
NOT NECESSARILY.
E-MEDIA ALSO HAS
ENVIRONMENTAL
IMPACTS.



IT IS NOT BLACK-AND-WHITE TO SAY “DIGITAL COMMUNICATION IS GREEN” AND “PRINT COMMUNICATION IS NOT.” BOTH FORMS OF COMMUNICATION HAVE ENVIRONMENTAL IMPACTS.²³

“Go Paperless,” “Go Green” and “Save Trees” are common themes these days as many corporations and governments encourage their customers and employees to switch to electronic transactions and communications. Our research shows that more than 8 in 10 U.S. consumers believe that cost savings are the driving force behind the ‘go paperless’ marketing hype, and many are suspicious of marketing claims that going paperless will ‘save trees’ or ‘protect the environment.’²⁴

- It is estimated that small network equipment in America’s homes consumed more than \$1 billion worth of electricity in 2012, equivalent to the output of three large (500 MW) coal fired power plants. This resulted in 5 million metric tons of CO₂ emissions or the annual tailpipe emissions of 1.1 million vehicles.²⁵
- Data centers are one of the largest and fastest growing consumers of electricity in the United States. In 2013, U.S. data centers consumed an estimated 91 billion kilowatt-hours of electricity – enough electricity to power all the households in New York City twice over – and are on-track to reach 140 billion kilowatt-hours by 2020.²⁶

“It is estimated that globally, 20-25 million tonnes of e-waste are generated each year and the amount is still growing very rapidly.”

Alias et al.²⁷




- A study by Two Sides found that half the leading Fortune 500 telecommunications companies, banks and utilities were making unsubstantiated claims about the environmental benefits of electronic billing. In response, Two Sides initiated a campaign to educate senior executives on the sustainability of print and paper and to encourage them to abandon misleading environmental claims. To date, over 30 companies have removed their environmental claims and several more are working with Two Sides to develop language that does not contain misleading or factually incorrect environmental claims about the use of online transactions and communications.²⁸

THE MYTH:
PEOPLE WANT TO
SWITCH TO DIGITAL.

THE FACT:
MANY CONSUMERS
VALUE PAPER-BASED
COMMUNICATIONS.



SWITCHING TO DIGITAL IS NOT ALWAYS WELCOMED BY CONSUMERS AND MANY WISH TO RETAIN THE FLEXIBILITY OF PAPER-BASED, POSTAL AND ELECTRONIC COMMUNICATIONS.



As North America becomes more digital every day, it is assumed that digital will replace paper. However, research shows that paper still has a place in today's society and many people want to be able to choose their preferences, and even prefer print over electronic communications in many instances.²⁴

- 70% of Americans, including 69% of 18- to 24-year-olds, say they prefer to read print and paper communications rather than reading from a screen.²⁴
- 87% of adult Americans agree that “The main reason companies want to shift customers to electronic delivery formats is to save money, not to be environmentally responsible.”³⁰

- 89% of adult Americans believe that “Shifting customers / clients to online-only documents disadvantages some groups, such as the elderly, disabled, low income, and poorly educated.”³⁰
- 81% of parents believe it is “very important” that their child read print books, citing the importance of print’s unique sensory and tactile experience.³¹
- Millennials overwhelmingly say they prefer paper. In fact, 60 out of 66 students preferred paper to computer when studying. Even though it is thought that this generation of students may have adapted to new technology, nearly everyone expressed a preference for paper, usually saying

“More than 90% of young people share the belief that paper options should be preserved, and more than half prefer to receive paper bills and statements.”

InfoTrends³⁰



they felt they performed better when reading on paper rather than a screen.³²

- Even today, not everyone is computer savvy or has access to a computer. An integrated marketing strategy that includes both print and on-line components spans preferences and generations, allowing all to get the message.³³
- “Research shows that consumers value the physical mailpiece as a record-keeping tool and reminder to pay.”³⁴

THE MYTH:
PACKAGING IS
WASTEFUL AND
UNNECESSARY.

THE FACT:
PAPER BASED
PACKAGING
PROTECTS GOODS,
REDUCES WASTE
AND IS RECYCLABLE.



PAPER BASED PACKAGING IS NOT ONLY MADE OF RECYCLED MATERIAL, IT CAN ALSO BE RECYCLED AND HAS AN EXCELLENT ENVIRONMENTAL RECORD.

The primary function of packaging in all its forms; plastics, tins, glass and paperboard is to protect goods while in transit, storage and distribution. It prevents waste through breakage, spoilage and contamination, and extends product shelf life. A secondary, but important purpose is to provide consumer information about the product and help with brand identity and differentiation. Minimizing waste, particularly food, is a vital global challenge. As a result of efficient packaging, product damage in transit remains below 5% in the developed world whereas, in the developing world wastage rates can be as high as 30%.³⁵

- Cardboard boxes are derived from a renewable resource and their strength-to-weight ratio provides superior product protection along with cost-savings and efficiencies throughout the supply-chain.³⁶
- Today, more corrugated packaging is recovered for recycling than any other packaging material according to the U.S. Environmental Protection Agency (EPA), with supermarkets leading recovery efforts. Most stores recover nearly all of their used corrugated packaging in backroom balers. Bales of corrugated are then sold to generate revenue.³⁷
- Over 76% of paper and paperboard containers and packaging was recycled in the U.S. in 2012.³⁸

“Today, more than half of the products on supermarket shelves are packaged in recycled paperboard.”

Paperboard Packaging Council²⁹



- A study which compared the life cycle environmental impacts of plastic and corrugated cardboard boxes (CCB) for bread delivery concluded that the recyclable CCB box system was a more environmentally friendly option than the reusable HPDE plastic crate system.³⁹
- “Most corrugated boxes manufactured in Canada are made from 100% recycled material: old boxes collected from the back of supermarkets and factories or from curbside.”⁴⁰
- Greenhouse gas emissions of U.S. corrugated products declined by 32% between 2006 and 2010 due to increased recycling and more renewable energy use at paper mills.⁴¹

From newspapers to magazines, from photocopies to flyers, we believe print and paper cannot be beaten for sheer flexibility, impact and sustainability.

As you have read, there are two sides to paper and you should feel confident about using it. Paper is made from renewable resources, recyclable and produced by a responsible industry whose future depends on planting more trees than it consumes, and which is progressively improving standards in the whole supply chain.

This booklet can only scratch the surface of all the issues surrounding the responsible use of paper, print and packaging.

To learn more about the production and consumption of paper and its impact on the environment, go to the Two Sides website and discover more facts about our industry.

www.twosidesna.org



‘Forestry, paper and packaging are among the most sustainable industries in existence.’

CLICK. SHARE. BUST SOME MYTHS!



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