

Print & Paper

Myths & Facts



TWO SIDES

www.twosides.org.au
www.twosides.co.nz

As the industry continues to grow to meet Australia's demand for paper and paper products, it continues to recover and recycle ever-larger volumes of fiber resources. In 2016-17, recycling accounted for 3.059 million tonnes of paper and paperboard.

National Pulp & Paper, 2018

What a great, sustainable idea

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



Two Sides is a global initiative with membership across the graphic communications value chain; from forest to print and on to recovery and recycling. Two Sides promotes the responsible use of paper and print which, when sourced from certified or sustainably managed forests, is a uniquely powerful and natural communications medium.

In recent years, the wider business community has evolved. It 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 recognises 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. There is an appetite by those working within the Graphic Communications channel to understand all the environmental issues and thus make more informed decisions about the use of paper and paper products.

Paper and print 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 of Two Sides shows that your organisation regards environmental awareness as an essential part of the business strategy. Benefits of membership include access to materials and information, helping your business to 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.

Find out more

www.twosides.org.au/become-a-member

www.twosides.co.nz/become-a-member



Print and Paper
have a great
environmental
story to tell



www.twosides.org.au
www.twosides.co.nz

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THE MYTH

Making paper destroys forests.



THE FACT

Victoria has 7.1 million hectares of public native forest which covers around 31% of the State. 66% of this forest is reserved in parks and Special Protection Zones. 93% of Victoria's public native forest is currently unavailable or unsuitable for timber harvesting.

AP sustainability report 2017

New Zealand has a total of 10.1 million hectares of forests, covering 38% of the land area. Of this, 8 million hectares are in indigenous forest. The area of plantation forest is 2.1 million hectares, of which 1.7 million hectares is productive area, with the balance being reserves and unplanted areas near water bodies and infrastructure.

New Zealand Planted Forest Portal 2015

In Australia and New Zealand, paper comes from managed regrowth forests or planted forests where the cycle of planting, growing and harvesting is carefully controlled.

- *New Zealand's net stocked planted production forest covered an estimated 1.71 million hectares as at 1 April 2017.*
- *The total planted forest standing volume was estimated to be 519 million cubic metres with an average forest standing age (area weighted) of 17.38 years.*
- *The provisional new planting estimate for the year ending 31 December 2017 is 4,000 hectares.*
- *Radiata pine is the dominant species in New Zealand, making up 90% of the planted production forest area.*

New Zealand forest report 2018

Australia alone has two million hectares of working forests and growing. That equates to over 1,000,000 MCG's in land area covered!

National Waste, 2018

The New Zealand plantation forest and wood products industry is based on wholly renewable resources, producing 100% of its products from plantation forests and recycled waste fibre; is New Zealand's largest biomaterial recycler and has a very low carbon footprint.

Forest Owners Association, 2018

Over 90% of Australia's commercial native forest operations are independently certified to comply with the world's best sustainable forest management practices. This is compared to the global average of 8%, meaning Australia is a leader when it comes to ensuring the sustainability of forest practices

Australian Forest Production Association, 2017

Australia alone has two million hectares of working forests and growing. That equates to over 1,000,000 MCG's in land area covered!

CEPI Sustainability Report, 2018

New Zealand has a total of 10.1 million hectares of forests, covering 38% of the land. Of this, 8 million hectares are in indigenous forest. The area of plantation forest is 2.1 million hectares, of which 1.7 million hectares is productive area, with the balance being reserves and unplanted areas near water bodies and infrastructure. These two classes of forest have different biology, management and values to New Zealanders.

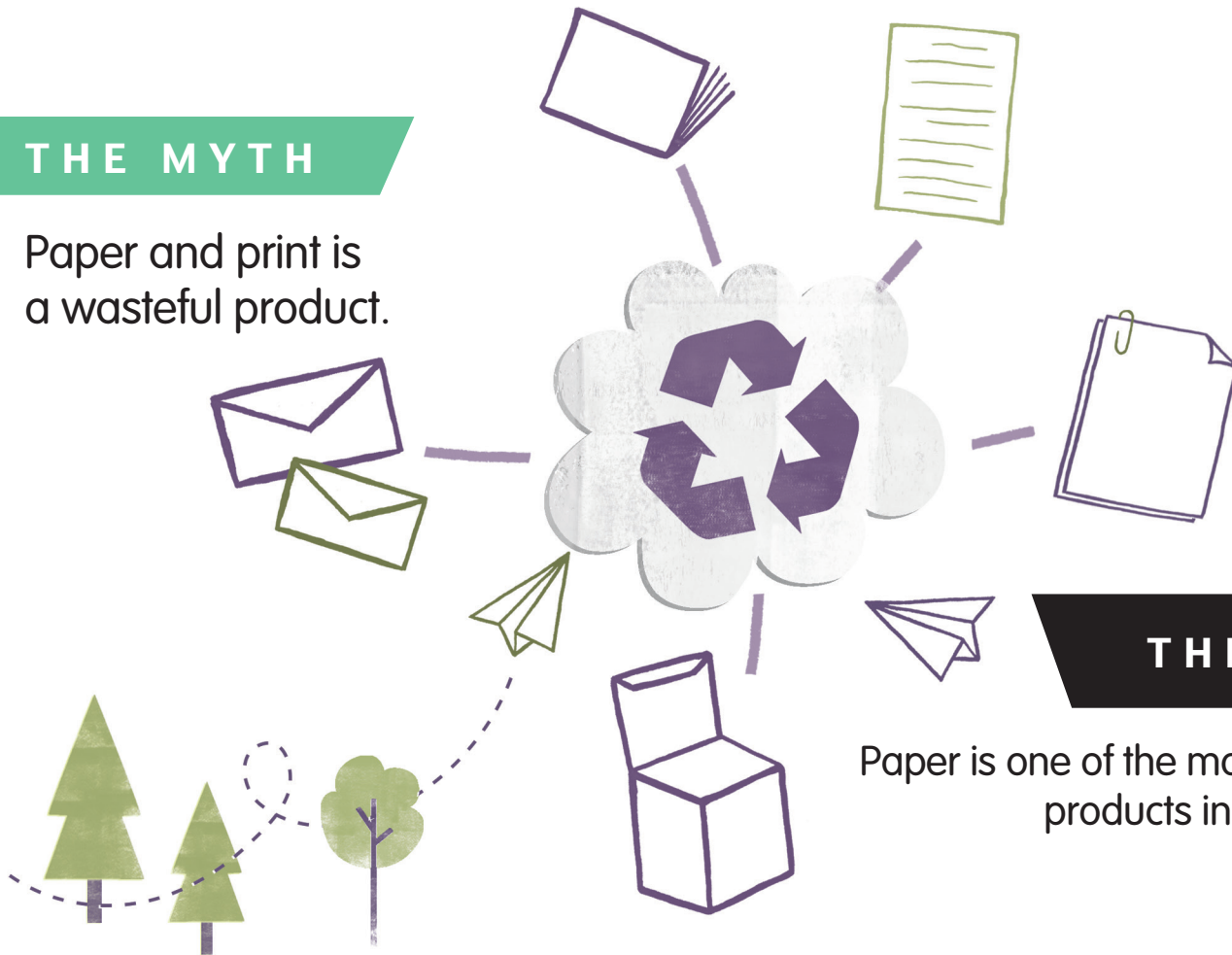
New Zealand Planted Forest Portal, 2015

With the increasing standing volume, the amount of carbon sequestered has also increased to 454m tonnes in 2012. 94% of the plantation forest estate is in some form of private ownership, with the principal management objective being the commercial production of timber construction not paper supply.

EEA, European Forest Ecosystems – State and Trends, 2016

THE MYTH

Paper and print is a wasteful product.



THE FACT

Paper is one of the most recycled products in the world.

While the EU is discussing how to transition to a circular economy, the paper fibre loop can serve as a model for circularity. It prolongs value creation and creates job opportunities in Europe from a renewable, predominantly European resource.

European Paper Recycling Council, 2018

The proportion of waste paper recycled increased from 28% in 1990 to 85% in 2016, while the proportion of paper disposed of in landfill has declined since the mid-2000s.

Australia's State of the Forests Report, 2018.

New Zealanders consume about 735 thousand tonnes of packaging each year 58% of which is recycled.

Recycle.co.nz

Paper recycling rates in Australia are amongst the highest in the world with over 87% of all paper and paperboard being recovered.

CEPI Sustainability Report, 2018

Australia's only local newsprint producer recycles 100,000 tonnes of old newspapers and magazines each year as part of its production of newsprint.

CEPI Sustainability Report, 2018

Australia's only local copy paper producer recently invested in a recycled paper production facility for office paper which diverts up to 80,000 tonnes of waste paper per annum from landfill.

CEPI Sustainability Report, 2018

Two Sides encourages responsible paper consumption. Double-sided printing in the office and separate collection schemes will reduce costs and improve sustainability.

“Two Sides’ members support the implementation of effective recycling schemes and the minimisation and eventual elimination, of print and paper waste in landfill.”

Two Sides Membership Charter, 2019

THE MYTH

Planted Forests
are bad for the
environment.



THE FACT

Well-managed production forests reduce the pressure on primary forests and can provide many other environmental benefits.

Forests are essential for the transition to the green economy. Well managed production forests are a vital element in the global forestry mix.

Initiatives such as forest certification and voluntary guidelines can help maintain ecosystems and biodiversity, protect high conservation values, involve multiple stakeholders and aid economic development.

Responsible forest management, motivated by a commercial interest in maintaining wood supply, can help protect vulnerable forests from illegal logging, encroachment or conversion to farmland. Forest management that is environmentally sound, socially just and economically viable, can help meet society's needs without depleting natural capital - WWF, Forest Solutions Platform, 2018.

Forests are essential for the transition to the green economy. Well managed production forests are a vital element in the global forestry mix. Initiatives such as forest certification and voluntary guidelines can help maintain ecosystems and biodiversity, protect high conservation values, involve multiple stakeholders and aid economic development.

Planted forests:

- In Europe, are not replacing primary (native) forests,

Note: Primary forests are forests of native tree species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed. To ensure ongoing forestry strength, planted and native forests should be supported.

- Can be more productive and can grow faster than primary forests,
- Can be independently certified,
- Can provide new recreational facilities,
- Can prevent soil degradation and erosion,
- Provide new habitat, shade and shelter for wildlife.
- Contribute to rural development

90% of forests owned or managed by the European pulp and paper industry are forest management certified. 83% of pulp purchased by the European pulp and paper industry is certified. 71% of wood, woodchips or residues from saw mills come from forests that are certified.

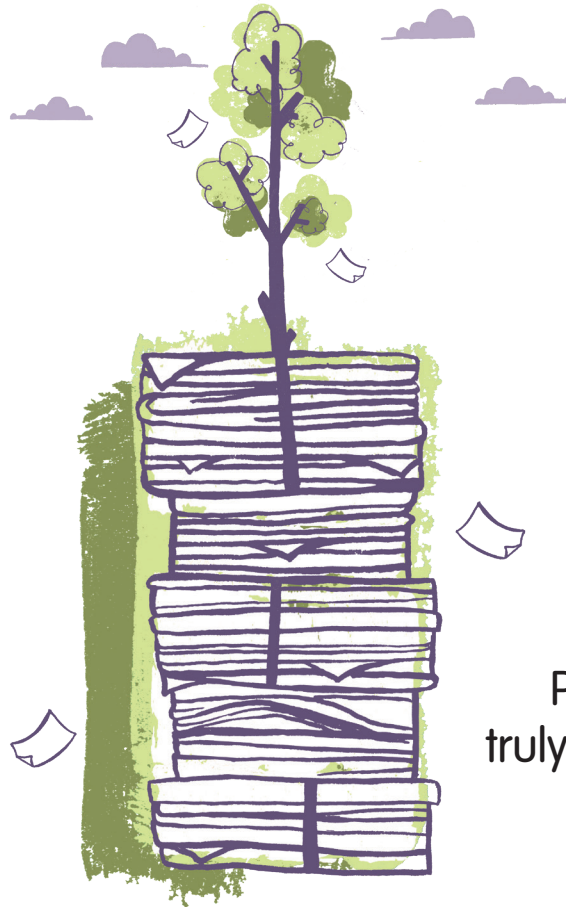
CEPI, Sustainability Report, 2018.

Located in the right places, managed in the right fashion, plantations can make a positive contribution on many levels and in many ways. By meeting a large proportion of the growing global demand for wood fibre, they take pressure off primary forests.

New Generation Plantations, Plantations for People, Planet and Prosperity, 2017.

THE MYTH

Paper is bad for the environment.



THE FACT

Paper is one of the few truly sustainable products.

Forests help to mitigate climate change — over a single year, a mature tree will take up approximately 22 kg of CO₂ from the atmosphere, and, in exchange, release oxygen. Each year, 1.3 million trees are estimated to remove more than 2500 tonnes of pollutants from the air. - EEA, European Forest Ecosystems – State and Trends, 2016

Catalogue, brochure, magazine and newsprint production results in 20% less direct CO₂ emissions, thanks to a major investment at Australia's largest catalogue and magazine paper production plant in Tasmania.

Australian Forest Production Association, 2017

Australia's forests provide a range of ecosystem services in regards to biodiversity, carbon, soil and water. The extent to which these ecosystem services are delivered varies with forest growth stage, with the degree of fragmentation of the forest area, and as a result of the impacts of fire, climatic conditions, and pests and diseases

Australian State of the Forests Report 2018

The paper industry utilises respected certification schemes to ensure that the paper you use has come from a sustainable forest source. The two most recognisable certifications are the Forest Stewardship Council® (FSC®) and the Programme for the Endorsement of Forest Certification (PEFC™

FSC helps take care of forests and the people and wildlife who call them home. It runs a global forest certification system with two key components: Forest Management and Chain of Custody certification. This system allows consumers to identify, purchase and use wood, paper and other forest products produced from well managed forests and/or recycled materials. FSC's "tick tree" logo is used to indicate that products are certified under the FSC system. When you see the FSC logo on a label, you can buy products with confidence that you are helping to ensure our forests are alive for generations to come. For more information see www.fsc.org.

PEFC is an independent, non-profit, non-governmental organisation founded in 1999 which promotes sustainably managed forests through independent third-party certification. PEFC™ provides an assurance mechanism to purchasers of wood and paper products that they are promoting the sustainable management of forests. For more information see www.pefc.org.

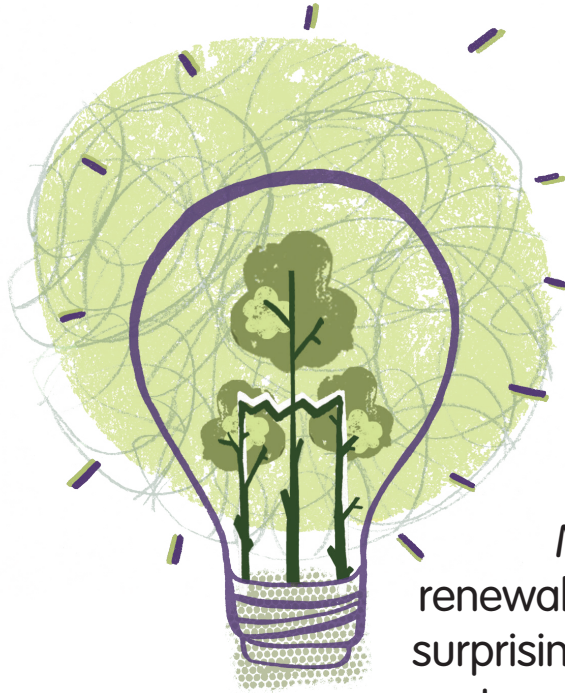
Sustainability Facts

- Paper is made from wood, a truly renewable and sustainable resource
- Forest certification ensures wood comes from well managed forests
- Responsible wood, pulp and paper production ensures healthy growing forests
- Between 2005 and 2015, European forests grew by an area the size of Switzerland
- 71% of wood and 83% of pulp purchased by the European pulp and paper industry is FSC or PEFC certified.
- 91% of production capacity is certified or registered according to the internationally recognised environmental management standards ISO 14001 and EMAS

CEPI, Sustainability Report, 2018.

THE MYTH

Paper production is a major cause of global greenhouse gas emissions.



THE FACT

Most of the energy used is renewable and carbon intensity is surprisingly low . About 5.6 million tonne of paper and cardboard waste was generated in 2016-17, or 229kg per capita. 60% was recycled.

The environmental impact of our personal paper consumption may not be as high as you think either. In Europe, they each use an average of 125kg of paper every year. This amount of paper produces 84kg of CO₂ which is equal to driving about 500 miles in the average European car. By buying paper from sustainably managed forests and always recycling, we really do not have to feel guilty about using this natural and renewable product

New Zealand's total emissions are low compared with our major trading partners and are approximately 0.15 percent of total world emissions

New Zealand is committed to playing its part in a global response to climate change. New Zealand has a broad range of measures to address climate change, on both a domestic and an international level, and focuses efforts where it can make the greatest contribution.

TMFE New Zealand , 2015

Over the period 2000–01 to 2015–16, the annual plantation hardwood pulp log harvest increased from 0.9 million cubic metres to 9.6 million cubic metres

Wood is the world's most renewable raw material For this reason, forests and the wood, they provide are vital in the fight against climate change.

The direct CO₂ emissions of the European pulp and paper industry reduced by 25% between 2005 and 2017.

CEPI, Key Statistics, 2017.

As the effects of global warming impact on our environment, the use of renewable and sustainable building materials has never been so important. Wood, however, has absorbed a net 1.7 tonnes of CO₂ from the atmosphere, over and above the energy expended in growing, harvesting and processing.

New Zealand Plantation Forest Industry, 2018

Approximately 60% by volume of the total plantation log harvest in the period 2011–16 was sawlogs, and 39% by volume was pulp logs. These types of wood are used to build domestic products like houses and buildings. Planted forests help reduce the stress on native forests, they also increase the amount of clean air, shelter and habitat, food and biodiversity.

Australia's State of the Forests Report, 2018

Forestry is a major employer in regional New Zealand and contributes around \$6.4 billion a year to the economy in export earnings. A flourishing forestry sector will be uniquely positioned to deliver sustainable, future-proofed jobs, while helping New Zealand transition to a low-emissions economy through carbon sequestration and the development of a new bio-economy.

In 2018, New Zealand launched the One Billion Trees programme, with the goal of seeing a billion trees planted over the next decade. At the heart of the programme is the recognition that to guarantee a successful future for forestry, we need to get the right tree, in the right place and for the right purpose.

New Zealand Plantation Forest Industry, 2018

The paper, paper products and printing sector is one of the lowest industrial greenhouse gas emitters. Manufacturing industries account for 24% of all EU greenhouse gas emissions:

- Non-metallic mineral products 5.6%
- Basic metals 4.8%
- Chemicals and chemical products 4.3%
- Coke and refined petroleum 4.0%
- Food, beverages and tobacco 1.7%
- Paper and paper products 0.9%
- Printing and recorded media 0.1%
- Other manufacturing 2.3%

Based on Eurostat data, 2016.

THE MYTH

Only recycled paper should be used.



THE FACT

Virgin fibres from sustainably managed forests are needed to maintain the paper cycle.

The paper making process really is a sustainable cycle. Recycled fibres are used as effectively as possible, whilst new fibres are constantly brought in to replenish and maintain the process.

The paper making process really is a sustainable cycle. Recycled fibres are used as effectively as possible, whilst new fibres are constantly brought in to replenish and maintain the process.

Recycled paper can be used in some grades more than others. For example, newsprint and some types of packaging are often made with 100% recycled fibre. High grade graphic papers, however, have a lower utilisation rate, around 13%, but when recycled, inject the cycle with virgin fibres.

A fibre can be recycled several times, yet not indefinitely, depending on the paper grade. Therefore, there is a continuous need to feed the inflow of recovered fibre with paper products made of virgin pulp. Paper recycling needs to continuously incorporate a certain amount of fresh fibres for three main reasons: strength, quality and availability.

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European Paper Recycling Council, 2017.

72% of Australia's native forest area is comprised of areas that are completely bounded by forest

A total of 68% of Australia's native forest is in patches of over 100,000 hectares.

A total stock of 21,949 Mt C (million tonnes of carbon) was stored in Australia's forests at the end of June 2016. Of this forest carbon store:

- 85% was stored in non-production native forests, 14% in production native forests and 1.2% in plantations*
- 36% was in above-ground biomass and 64% was in below ground*

Australia's State of the Forests Report, 2018

THE MYTH

Electronic communication is more environmentally friendly than paper-based communication.



THE FACT

Electronic communication also has environmental impacts.

“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?

These sorts of messages give the impression that electronic communication is more environmentally friendly than traditional, paper-based communication. But it is very difficult to make such statements without considering the full lifetime of those different mediums.

The Australian pulp and paper sector is committed to environmental sustainability initiatives. Over the past three years the industry has been focused on reducing its impact with direct greenhouse gas emissions being reduced to the energy equivalent of removing 29,192 cars off the road and energy intensity fell to be equal to the energy required to power 122,252 houses. 100% of all Australian pulp manufactured is independently certified and about 70% of all paper is recycled – this is leading global best practice.

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National Pulp & Paper Sustainability, 2018

The environmental impacts of our ever-increasing digital world cannot be ignored. The ICT industry accounts for around 2.5-3% of global greenhouse 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.

When it comes to communication, whether it’s electronic or traditional mediums, consumers must be informed about the environmental impacts of those activities. Two Sides advises businesses to be transparent about the carbon footprint of all their services.

Tackling Greenwash

To date, over 500 of the world’s largest organisations have been found to be using greenwash statements in their communications. Of those, around 70% have removed their misleading statements as a direct result of being challenged by Two Sides. It is important to mention that not all greenwashing is due to purposely misleading

customers. Often it is down to genuine and common misconceptions about paper and print. Two Sides is committed to educating consumers and businesses in this regard.

By 2040, the ICT carbon footprint could account for as much as 14% of the total worldwide footprint at the 2016 level, and hence exceed the current relative footprint of the Agriculture sector (9%), and almost half of the current total footprint of the industrial sector (29%) in the United States.

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 435,000 tonnes were mobile phones, representing more than the mass of the Empire State Building.

THE MYTH

Digital is always the preferred means of communication.



THE FACT

Many consumers value paper-based communication.

Many organisations, banks, utilities, telecom and governments are now increasingly going online or making charges if their customers wish to receive paper-based communication.

But switching to digital is not always welcome.

Two Sides understand the value and convenience of the digital revolution but believe that citizens must continue to have a right to receive paper-based communications, particularly bills and statements, without penalties, supplementary charges or difficulty.

Often it is the most vulnerable members of society that depend on traditional postal transactional mail. The move to an online-only society risks leaving older people, the disabled, rural dwellers and those on low incomes disconnected.

It is important for policy makers to acknowledge that information on paper is preferred by many consumers and often receives more attention. Consumers wish to retain the flexibility of postal and electronic communications.

In reality we live in an increasingly digital world where electronic and paper-based communications coexist and are often complementary. Communication strategies must not only be cost effective but also recognise citizen choice. 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 of any digital planning.

We believe that it is every consumer's right to choose, without disadvantage, how they are contacted by banks and other financial service companies, utility companies, media companies and other service providers. Increasingly businesses are restricting access to paper bills and statements and denying their customers an informed choice

Keep Me Posted, 2018

Print and Paper in A Digital World

An international survey of over 10,700 consumers was commissioned by Two Sides and carried out by independent research company Toluna in June 2017. Some of the key findings were:

- Consumers worldwide 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 the story when read from print media (65%) over online news sources (49%). In addition, consumers also trust the stories read in printed newspapers (51%) more than stories found on social media (24%).
- Many consumers do not pay attention (68%) to online advertisements and 57% do their best to avoid them. 46% would be more likely to take an action after seeing an advertisement in a printed newspaper or magazine than they would if they saw the same ad online.
- 89% of consumers believe that they should have the right to choose how they receive communications (printed or electronically), at no extra charge, from financial organisations and service providers.

GLOSSARY

Afforestation: establishment of forest plantations on land that, until then, was not classified as forest. Implies a transformation from non-forest to forest.

Biodiversity: the variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.

Bioenergy: renewable energy made from biofuels derived from organic matter or other biological sources.

Biomass: as a renewable energy source, refers to living and recently dead biological material that can be used as fuel or for industrial production.

Chain of Custody (CoC): a wood flow accounting system applied by an enterprise to trace the flow of wood from certified forests or non-certified forests to the end product.

Climate change: long-term significant change in the expected patterns of average weather of a specific region over an appropriately significant period of time.

Collection (of paper and board): separate collection of paper and paper products from industrial and commercial outlets, from households and offices for recycling. (Collection

includes transport to the sorting/processing or recycling plant/paper mill).

Consumer: industrial, commercial or private end-user.

Deforestation: the conversion of forest to another land use or the long-term reduction of the tree canopy cover below the minimum 10 percent definition for forests.

Eco-label: a labelling system that verifies that consumer products are made in a way that environmental aspects are considered and negative effects are minimized.

Forest Area: area with a 10% minimum crown cover. The definition includes both natural forests and forest plantations. It excludes stands of trees established primarily for agricultural production.

Forest certification: a system for verifying that a forest is being managed according to the requirements of a forest management standard.

Forest management: a range of human interventions that affect forest ecosystems.

Forest restoration: renewing a degraded, damaged, or destroyed forest ecosystem through active human intervention.

Paper for recycling: used paper and board separately collected and in general pre-processed according to the European Standard List of

Recovered Paper and Board Grades (EN 643).

Paper: term used to cover all grades of paper and board.

Primary forest: naturally regenerated forest of native species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.

Production forest: forest area designated primarily for production of wood, fibre, bio-energy and/or nonwood forest products.

Recovered paper: outdated term used for paper for recycling.

Recyclability: design, manufacturing and converting of paper-based products in such a way as to enable a high quality recycling of fibres and other materials in a manufacturing process in compliance – where appropriate – with current standards in the community: as a minimum, recyclability requires that sufficient information is exchanged for appropriate risk management and safe re-use of fibres.

Recycling rate: the ratio between recycling of used paper, including net trade of paper for recycling, and paper and board consumption.

Recycling: reprocessing of used paper in a production process into new paper and board.

Reforestation: establishment of forest plantations on temporarily unstocked lands that are considered as forest.

Sustainable forest management: the stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfil, now and in the future, relevant ecological, economic and social functions, at local, national, and global levels, and that does not cause damage to other ecosystems.

Utilisation rate: percentage of paper for recycling utilisation compared to the total paper and board production.

Glossary sources:

Confederation of European Paper Industries

Food and Agriculture Organization of The United Nations

From newspapers to magazines, from photocopies to leaflets, we believe paper and print cannot be beaten for attractiveness, impact and sustainability.

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

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

www.twosides.org.au

www.twosides.co.nz

“Forestry, paper and packaging are among the most sustainable industries in existence.”

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CEO Perspectives, PricewaterhouseCoopers



NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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