paper

part of every day

"There aren't many industries around that
can aspire to becoming genuinely sustainable.
The Pulp and Paper industry, however, is one of them.
At its best, this industry is inherently sustainable."

Jonathan Porritt, at the time, Chairman, UK Sustainable Development Commission

paper
part of every day

A new, comprehensive and easy to read report that proves paper, paper products and print are the sustainable foundation stones of Australia's communications

Published by the Australasian Paper Industry Association (APIA)

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PAPER, PART OF EVERY AUSTRALIAN DAY

Every day, Australians use paper and print to learn, to communicate and to conduct their day to day lives and businesses.

In fact, when you stop and consider, paper is an essential part of our lives. This reality is reflected by the facts about the use of paper and printed material in Australia.

Australians use paper and print in every conceivable way

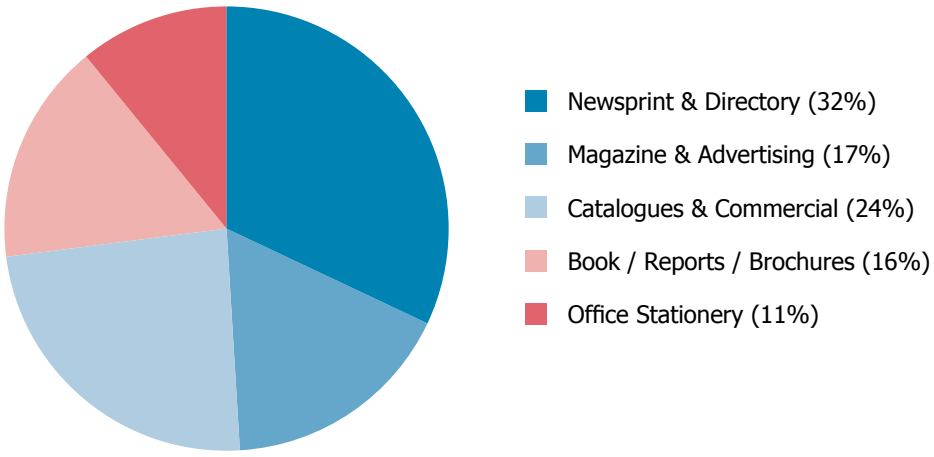
When most people think about paper and print, they think about a newspaper or office stationery or a notepad.

- We buy the newspaper or collect it from our lawn.
- We print a document and photocopy it.
- We take notes in our notepads.
- We write our shopping list on the back of an envelope.

Most of us will be surprised to learn that, in Australia, those activities represent a very small proportion of the paper used in Australia every day. As you can see below, office stationery makes up just 11% of the paper Australians use.

The same information shows us that, of all the paper used in Australia, almost 60% is provided to Australians as pre-printed material for business, advertising and government communications.

What Australia Uses Printing & Communication Papers For: 2009

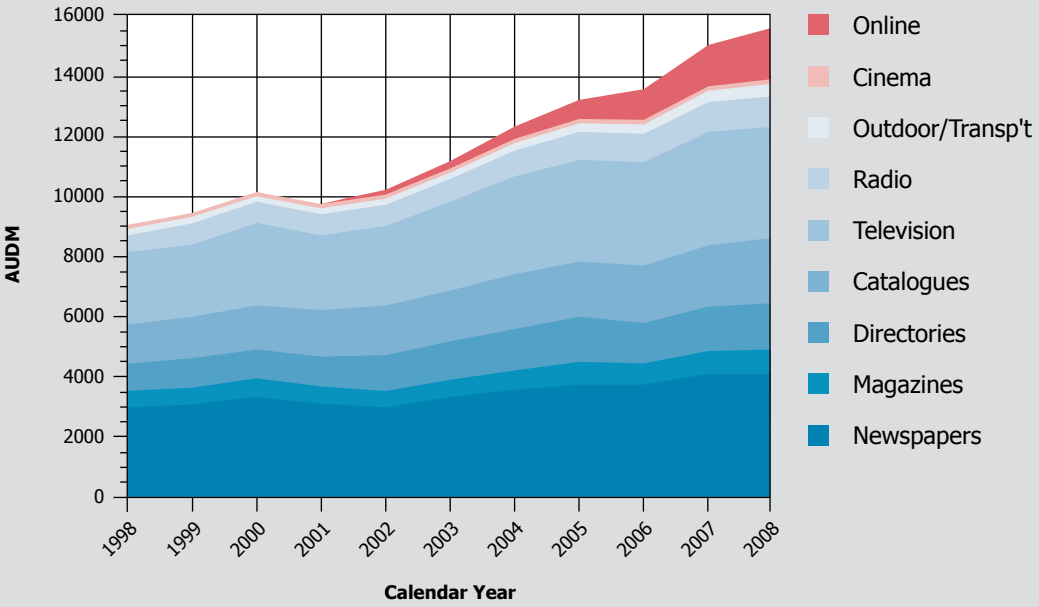


Source: IndustryEdge estimates and research

Case Study - Printed advertising growth ahead of GDP

Since its introduction, the increased use of digital advertising has only marginally slowed the rate of increase of the use of paper and print in Australia. For example, the use of paper and print for advertising grew by 4% to the end of 2008.[i]

Long-term Advertising Expenditure in the Main Media in Australia: 1998 – 2008 (AUDM)



Source: Commercial Economic Advisory Service of Australia, ACA & IndustryEdge estimates

The use of printed advertising is known to be impacted to some extent by economic activity. Commonly, in economic downturns, there is increased investment in cheaper forms of advertising such as catalogues, the use of which is growing at an average annual rate of 5.3%.[ii]

Research shows that the reason paper and print continue to work in advertising is that it can be retained and referred to at a later time. It represents something real and appeals to peoples' senses of already having received something of some value.

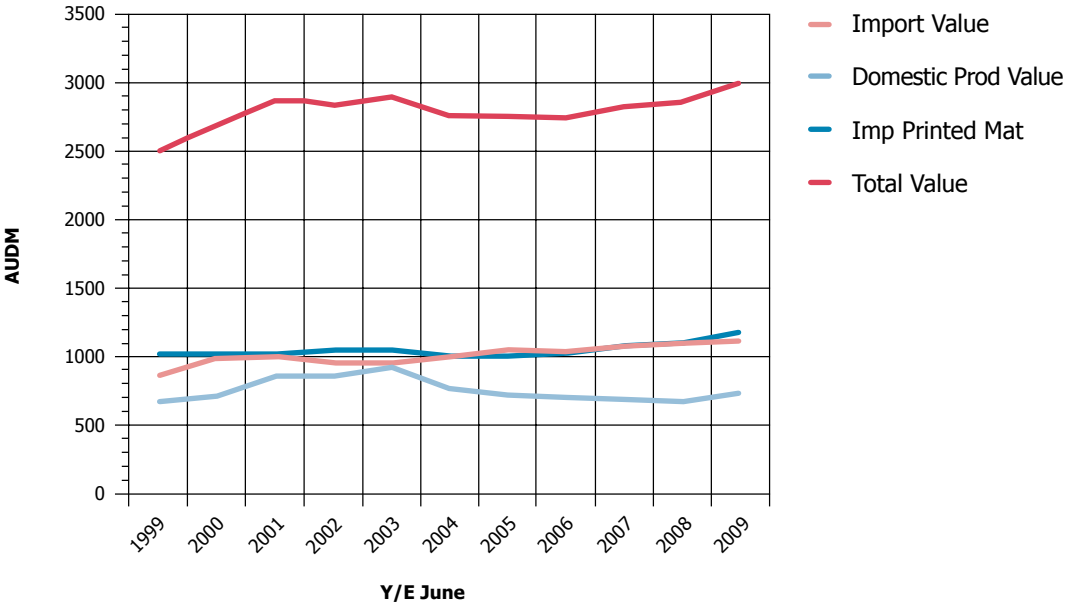
Paper – Part of every advertising campaign

Every day, Australians use paper and print

As a developed country with high literacy levels, Australia has always used relatively large amounts of printing and communication paper and printed material. In fact, paper and print consumption is a leading indicator of high levels of literacy.

The data demonstrates that Australians continue to use large and increasing quantities of paper and printed material. For example, book sales are increasing in Australia, ahead of our relatively stable population growth[iii] and Australians per capita read more magazines than anyone else on the planet.[iv]

Australian Consumption of Writing and Communication Papers and Printed Material (AUDM)



Source: ABS & IndustryEdge estimates and research

Over the past decade, from its very high base, Australian demand for printing and communication paper has increased at an average of 2.3% per annum.[v] Demonstrating that Australia is a mature market, this demand growth rate is broadly consistent with long term population growth of 2.1% per annum.[vi] Across the same time period, average gross domestic product was 3.1% per annum.[vii]

PAPER AND PRINT ARE IMPORTANT TO AUSTRALIA

The paper and print industries are highly integrated, not only with one another, but right across the Australian economy.

With fibre resources for making pulp to manufacture into paper coming from regional Australia, major volumes of product crossing Australia's ports, giant warehousing facilities that are fed by truck and by train and systematic distribution direct to printers and the businesses that transform large volumes of paper into everyday products, there is paper moving around the Australian economy every hour of every day.

Once paper is printed, folded, packaged and labeled, it is consigned for distribution to retail outlets like newsagents, direct distribution firms such as Australia Post and catalogue walkers, bookshops, stationery stores, government departments and corporations.

Even after printing and communication papers arrive at their ultimate destination, whether that is an office, a home letter box or a school, it continues to move through the Australian economy. A large proportion of communications papers are archived and stored. Many documents are passed from one person to another.

Over 47% of this form of paper is recycled through specific recycling collections for re-processing in Australian and international paper manufacturing facilities.[viii]

Because of the integration of the Australian paper and print industry and the operational efficiencies that drive paper recovery and recycling, Australia's paper recycling rates compare very favorably with global averages.[ix]

There are opportunities to increase these comparatively high recovery and recycling rates, largely through improved support from major corporations and governments. Australian domestic consumers are well practised and excellent recyclers of paper products.

The paper and print industry employs more than 76,000 everyday Australians

At the end of 2007, Australia's paper and printed products industries together employed over 76,000 people.[x]

The wages and salaries paid to employees in the industry are estimated to be almost $3.8 billion.[xi]

Pulp & Paper Manufacturing and Converting

Employment 23,800
Wages $1,470 million

Paper Merchants *(est.)*

Employment 2,100
Wages $108 million

Printing

Employment 50,300
Wages $2,325 million

While the paper manufacturing industry has a small number of large facilities, paper wholesalers, distributors and printers appear in every city, town and community.

Nearly every activity involving paper and print involves people. This is one of the reasons the significant national income from the paper industry is distributed widely and deeply throughout communities.

Almost $21 billion of national income is created by the Australian paper and print industry every year

From all of its activities combined, paper and print creates almost $21 billion of income every year.[xii]

With a population of around 21 million, that means every year, the average Australian consumes $980 of paper and printed material.

Pulp & Paper Manufacturing and Converting

National Income
$9,605 million

Paper Merchants *(est.)*

National Income
$1,620 million

Printing

National Income
$9,371 million

Renewable and sustainable fibre resources – the proper beginning of every piece of paper

All paper is made from renewable, grown fibres which are generally made from timber or some other forms of vegetable matter. Recycled paper is part of that fibre mix.

Australia's paper and printing industries are committed to the sustainable sourcing of the fibre required to make paper.

Through the Australian Forestry Standard, most Australian manufactured printing and communication papers are certified by the global Program for Endorsement of Forest Certification (PEFC) and some by the Forest Stewardship Council (FSC). These certifications provide a level of assurance about the source of the fibre in paper, helping to guarantee that it comes from sustainable sources.

While all forest harvesting in Australia is conducted sustainably, almost all of the original fibre for printing and communication paper is sourced from softwood plantations and regrowth forests.

Internationally, the sourcing of fibre, especially from developing countries, remains an issue. Certification schemes only provide limited information about the real sustainability of the forestry activities that provide the fibre for the manufacture of paper.

Issues like conversion of native forests to plantations and balanced and fair land use decision making are more complex issues. Certification schemes are not generally capable of assisting with these issues, which requires detailed scrutiny and attention by manufacturers, wholesalers, printers and customers.

Every day, Australians lead the way in recycling and recovering paper

Australia is well advanced in its paper collection and recycling levels. Collection occurs from businesses, governments and households at a level and proportion that is embarrassing for almost every other product in Australia.

Plastics, glass, aluminium, computers, monitors, components and parts are all recycled at much lower levels than paper products. In fact, huge quantities of them are going into landfills, and being made in ways and containing products that make them incapable of breaking down naturally. Recently, the Council of Australian Government announced better coordination and data collection of recyclable materials, which over time may see other resources being recycled at the level of paper products.

In total, over 2.5 million tonnes of paper and paperboard are recovered and recycled in Australia every year.[xiii]

Almost 66% of some grades of paper, for example, newspaper, are recovered and recycled.[xiv] This is a very high figure when we consider that, for some other grades, such as office papers, a large proportion is retained in files and archives (just look around your office), in magazines and books and even the children's drawings we stick on the fridge.

An important fact to consider is that the economics of the paper and printing industry rely on recycling because recycled paper is often cheaper than original fibre.

A small portion of paper and printed material is destroyed for security reasons because what is printed on office papers, such as financial statements and medical records, is in many cases more valuable than the paper itself.

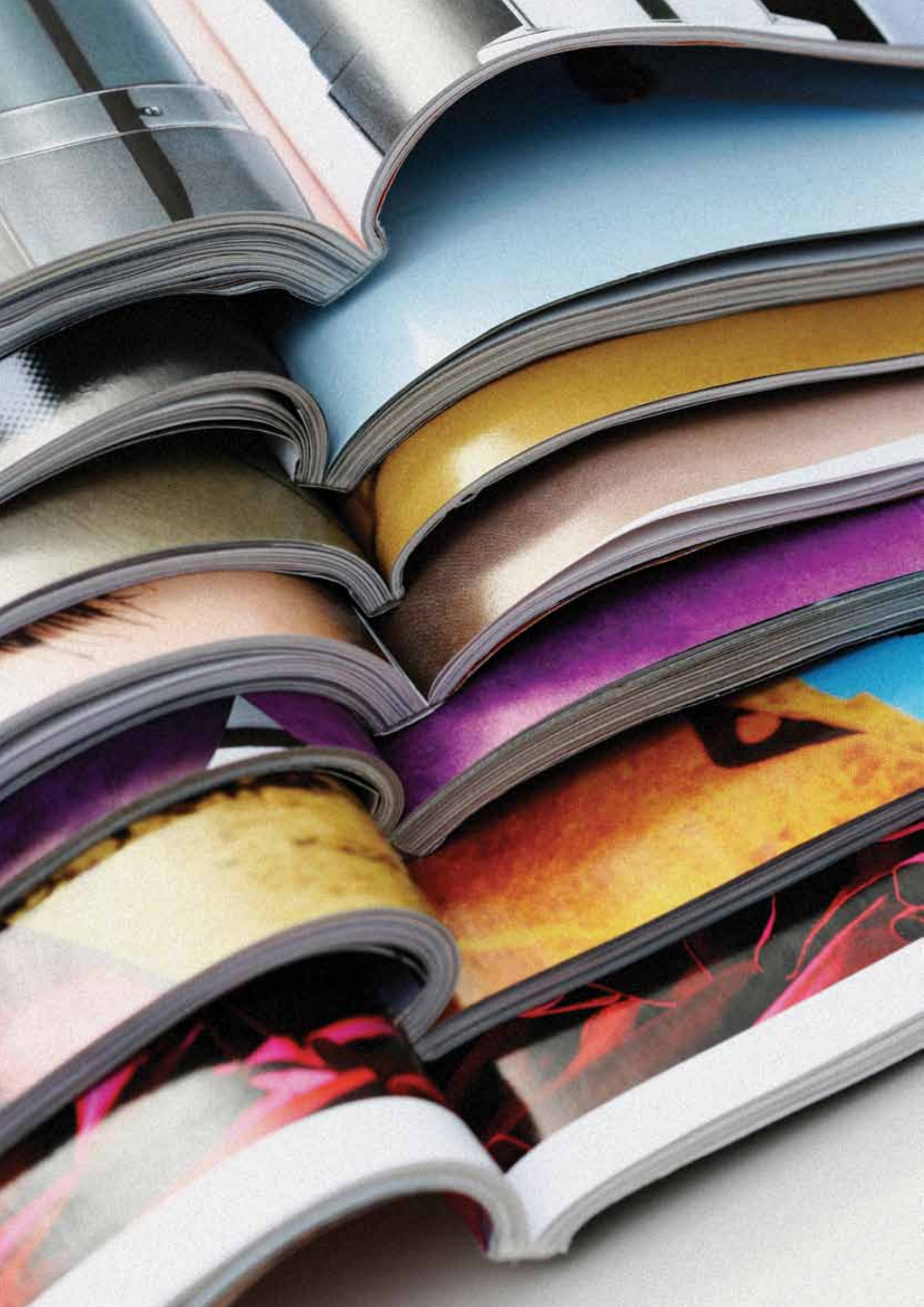
Only a very small amount of paper and printed material ends up in landfill, but even if it does, recent research demonstrates even this paper continues to store carbon long into the future.[xv]

In large part, Australia's record on recovery and recycling of paper has come about because of voluntary steps taken by industry through PaperRound. PaperRound is an industry organization committed to maximising paper recovery rates.

Check out the industry's efforts at www.paperround.com.au.

This high level of recycling led by the paper and print industries occurs despite some serious constraints, including:

- The large distances between the major urban areas add significant costs.
- Poor office building design in Australia, with no facilities in building basements to securely store large quantities of recovered office papers, or to place them efficiently in large collection trucks. The accepted practice is to collect the office waste paper in small bins, which are then lined up in great numbers outside office blocks for inefficient and expensive collection.
- Non-mandatory 'destruction through recycling' regimes for all personal information held by health and financial institutions.
- Security destruction being allowed by incineration, instead of mandated to occur by recycling.



WHERE AUSTRALIA GETS ITS PAPER AND PRINTED MATERIAL

Like most manufactured goods, Australia has a mix of domestic manufacturing and importation of paper and printed material. The value of imports far outweighs the value of the Australian manufactured goods, meaning Australia has a large and growing trade deficit in printing and communication papers and printed material.

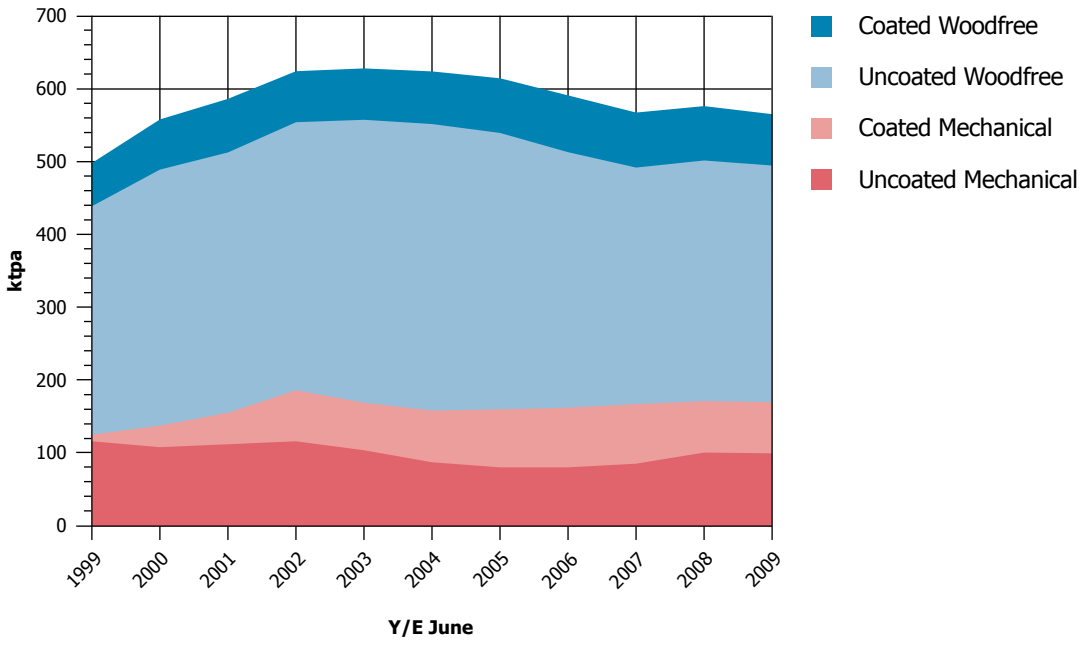
Every day, Australia manufactures thousands of tonnes of printing and communication paper

Australia manufactures a range of paper products, from the heaviest forms of cardboard, through to the finest of tissue papers.

In the midst of this is Australia's manufacture of printing and communication papers. This is the paper that printers use so that we get information, newsletters, advertising and government communications. It is also the copy and printer paper that we use in offices, at home, at school and at university, from the plainest white sheet of paper to the coloured paper children bring home from kindergarten.

With well known, high quality brands, demand for Australian manufactured products remains relatively high, despite the pressures created by cheap imported product.

Local Production of Printing & Communication Papers by Grade: 1999 – 2009 (ktpa)



Source: ABS & IndustryEdge estimates and research – for a description of each of the types of paper and their general uses, see the endnotes[xvi]

The paper mills making these grades of paper are located in New South Wales and Victoria.

Case Study - Shoalhaven makes paper others can only dream about

At the Shoalhaven Paper Mill on the New South Wales south coast, they make a range of printing and communication papers that are envied the world over.

With machinery from a previous age and skills passed down through generations, paper makers go about making the finest white papers for that perfect business letter, paper of the brightest colours to light up the day of a child at play and unique security papers that help make Australia's passports among the most secure in the world.

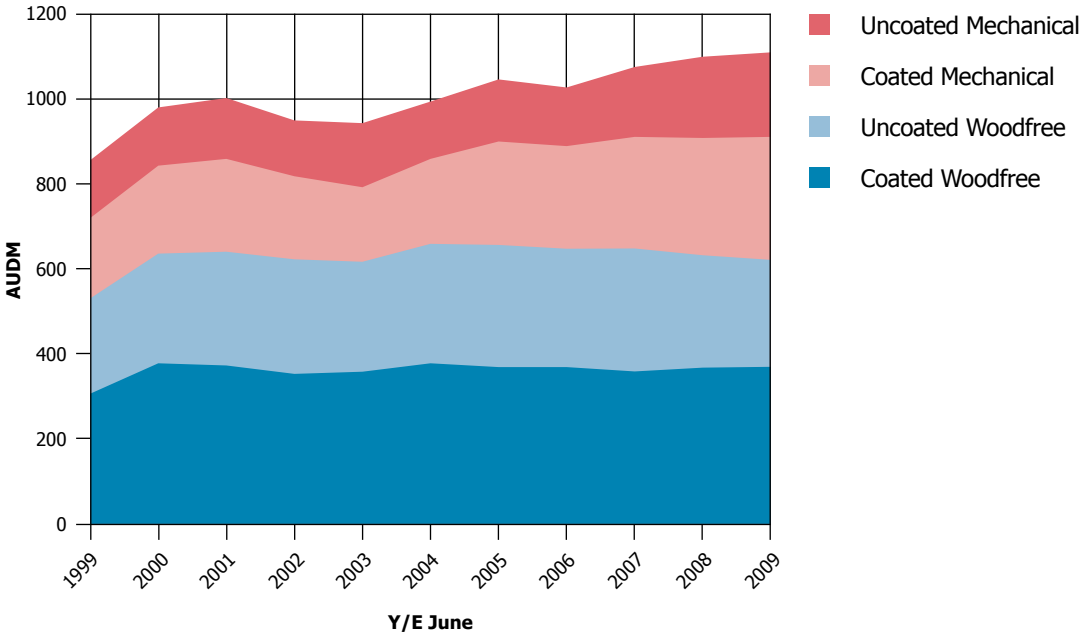
Shoalhaven is one of the few paper mills left on the planet that can put watermarks into paper.

They also make the blackest paper known to humanity. The sort of paper that when you look into it, all you can see is deep space or a perfectly still pond at night. That is no mean feat because the hardest coloured paper to make is black. Artists love it.

Australia imports large quantities of printing and communication papers

Australian consumption of printing and communication paper far outstrips domestic production. This results in an annual balance of trade deficit that at the end of 2008-9 was approaching $1 billion. Over the last decade, on average, this deficit has grown by 4.8% per annum.[xvii]

Imports of Selected Printing & Communication Grades: 1999 – 2009 (AUDM Fob)



Source: ABS & IndustryEdge estimates

Over recent years, imports have increased to around $1.1 billion per annum. In contrast exports have been falling away and are currently at around $125 million.[xviii]

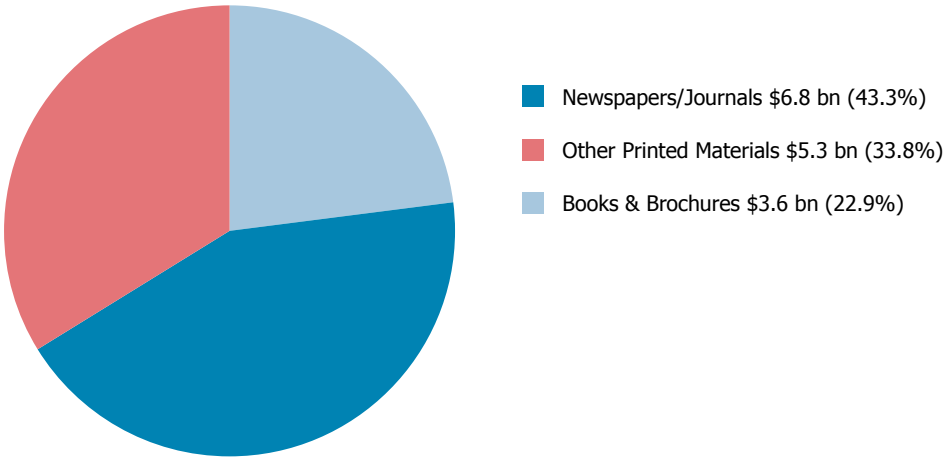
Australia has a large and robust printing industry

Australia has a large and robust printing industry which provides an amazing array of products, from labels, stamps and stickers through catalogues, brochures and leaflets to newspapers, magazines and books.

Australia has a wide range of printing operations:

- National operations with multimillion dollar, world's best practice printing presses
- Small to medium size printers servicing local customers in almost every postcode
- In-house printing operations of large corporations and governments
- Home computer and small office printers and copiers.

Australian Domestic Printing Industry: 2005 (AUD)



Source: ABS & IndustryEdge estimates

Domestic printing is currently estimated to be valued at $15.7 billion per annum.

Australia imports very large quantities of printed material

With high levels of literacy and relatively high average incomes, it is no surprise that Australians are big readers. As a result, in Australia most paper ends up being printed.

Australians are such big readers that the nation imports nearly $1,200 million of printed material per year. With negligible exports, Australia has a significant balance of trade deficit in printed material.

Imports of printed material: 1999 - 2009 (AUDM Fob)

Source: ABS & IndustryEdge estimates

Almost $630 million of books and brochures are imported into Australia every year, with about $300 million of imported magazines and newspapers and another $230 million of other printed matter.[xix]

Despite the imports, Australia's printing industry is robust and mature, requiring and making constant and ongoing investment in new technology to improve efficiencies and reduce environmental footprints, which are all necessary for printers to remain competitive.

Anti-competitive dumping of paper and printed material into Australia is an issue

Despite Australia's convoluted and complex provisions for demonstrating that printing and communication papers and printed material are being dumped into Australia, there have still been several proven cases of dumping in the last decade and a reasonably high number of formal investigations undertaken.

Evidence and industry anecdotes suggest that rather than being systematic, the dumping activities are opportunistic and often conducted by single business units, not entire business entities.

Nonetheless, for printing and communication papers in particular, dumping can artificially lower the price for large volumes of product with an immediate negative effect on domestic manufacturing volumes and the creation of unsustainable pricing models built on the expectation of continued lower prices.

When the dumping ends and the lower prices are no longer available, the entire industry has been damaged by end-users perceiving price rises as unnecessary and unreasonable. Dumping damages the entire value chain of the industry.

REDUCING PAPER AND PRINT'S ENVIRONMENTAL FOOTPRINT

Energy efficiency and greenhouse gas emissions have always been important to the paper and print industries. More efficient processes and reduced energy use are cheaper and improve profitability. This is good news for the environment and good news for the reduction of greenhouse gas emissions.

Making pulp and paper is an energy intensive process, meaning that the industry's efforts in energy efficiency and emissions reduction are particularly important. However, because they are largely located in regional Australia, most pulp and paper mills, and some large printers, also act as an 'anchor on demand' for electricity. This is important because it provides a stable and sufficient base for private and public investment in electricity transmission and distribution assets from which entire communities can benefit.

Most pulp mills are also renewable energy facilities, using wood waste that is continually re-grown to manufacture their own electricity. In some cases this energy goes back to the grid and earns Renewable Energy Certificates for manufacturers.

Australia's paper manufacturers, merchants, wholesalers and printers are moving to lower emissions vehicle fleets as part of their commitment to reduce their environmental footprints - in particular, through water and energy efficiency. For instance, at one printing company, carbon dioxide emissions have been reduced by close to 35% in the last five years, while production increased by around 10%.[xx]

Paper stores carbon long into the future

Paper is made from wood fibre which is built from carbon molecules, therefore every piece of paper is a tiny store of carbon. Because new paper requires new wood fibre to be grown, paper is a renewable product.

But, importantly, recent scientific work undertaken in Australia and internationally demonstrates that paper stores carbon long into the future.

Research undertaken over the last few years in New South Wales proves that this is even the case when paper is stored in landfills which are notorious for their long term emissions as organic matter breaks down and rots.[xxi]

Paper manufacturing and printing in Australia is energy efficient

Several of Australia's domestic paper manufacturers generate a large part of their own power, from renewable energy sources.

In fact, the Australian pulp and paper manufacturing industry's largest facility is also one of the Australia's largest producers of renewable energy, making more than 200,000 megawatt hours of renewable electricity every year.[xxii]

Going organic – vegetable based printing and organic chemicals

In recent years, Australia's printers have moved increasingly to the use of vegetable based inks and dies that can break down naturally and aid the paper recycling process.

At the same time, many expensive and damaging chemicals have been entirely removed from the paper and print industries and others have been significantly reduced.

Wherever possible, the environmental impact of paper and print is being reduced, with benefit to the environment and to the sustainability of the industry.

When it comes to environmental footprint comparisons – nothing beats paper and print

We know that comparisons are odious. But for the paper and print industries, it is important to get the facts out, because when it comes to communications, nothing beats paper and print.

Because paper and print are renewable and recyclable, they have an immediate advantage over electronic communications that use new and additional energy every time they are opened or read from a computer screen.

Case Study – Stern Review proves paper and print are better

The Stern Review on the Economics of Climate Change is a report released on 30th October 2006. Written by Sir Nicholas Stern, Head of the Government Economic Service for the British Government, it is one of the most important social works of our time, discussing the effect of climate change and global warming on the world economy.

As a 700 page document, the Stern Review provides a powerful example of how paper and print have a better environmental footprint than electronic communications:

Printing the Stern Review uses 85 grams of CO2 **maximum***	Reading the Stern Review on computer for **one hour** uses 226 grams of CO2 **every time#**	Burning the Stern Review to CD is estimated to use 300 grams of CO2 for every copy	Burning the Stern Review to DVD is estimated to use 350 grams of CO2 for every copy

** that's the maximum because once its printed, its printed and can be read and used over and over again without new CO2 emissions.*[xxiii]
 # that's without accounting for any emissions associated with creating the computer file or emailing it.[xxiv]

As these figures demonstrate, even without taking into account the paper and print industry's focus on recycling, electronic communications just can't compete when it comes to carbon footprints.

AUSTRALIA'S PAPER AND PRINTING INDUSTRIES – INVESTING IN AUSTRALIA'S FUTURE

Every year, Australia's printing and communications paper manufacturers, the distribution networks and the nation's printers spend an estimated $340 million in ongoing upgrades and maintenance[xxv]. Because of the wide geographic spread of sectors of the industry, this expenditure occurs across the country.

With greater concentration around specific locations, especially in regional Australia, building new pulp and paper mills in Australia is very expensive business, normally requiring investments upwards of $400 million and as much as $2.5 billion.[xxvi]

Despite the investment challenges, two new pulp mills are proposed for Australia, with both intending to use 100% plantation timber either immediately or within a few years. One of these is the proposed Gunns Bell Bay Pulp Mill in Northern Tasmania. The other is proposed for Penola in south east South Australia. The total potential investment in these two pulp mills alone is $3.7 billion.[xxvi]

In their own right, each of these investments will secure very significant additional and ongoing investments in plantation establishment and management, providing major, ongoing and sustainable income and employment for regional Australia.

While no new printing and communication paper making investments are currently proposed, secure new supplies of domestic pulp are expected to lead to major new investments and reinvestments in Australian paper making, to supply the relatively small domestic market.

HOW YOU CAN SUPPORT THE AUSTRALIAN PAPER AND PRINT INDUSTRY

As the Australian paper and print industries go about providing the nation's communications and writing papers, there are things every person can do to help.

1. Recycle paper and printed material and assist the industry to encourage increasing rates of paper recovery and recycling
2. Continue to read books, magazines and to use paper to communicate at home, school and work
3. Print long documents and read them on paper – avoid reading too much material on screen – it just uses too much energy
4. Support the expansion of Australia's native forests and plantations. By doing that, you help expand Australia's only carbon sequestering industry – sustainable forestry and industries that use its fibre, like the paper and printing industries
5. Support Australian printers - and help support thousands of Australian jobs right across the country
6. Support improved anti-dumping and border protection methods that ensure trade is free of unfair and inappropriate advantages for our nation's competitors
7. Support the generation of renewable energy from biomass, including the waste fibre from forestry and paper manufacturing processes

REFERENCES

[i] Commercial Economic Advisory Service of Australia, Australian Catalogue Association & IndustryEdge estimates

[ii] Australian Catalogue Association

[iii] ABS 1363.0 2003-2004

[iv] Nick Chan, Chief Executive of the Seven Network-owned Pacific

[v] Pulp & Paper Strategic Review 2009, IndustryEdge

[vi] ABS 3101.0 March 2009

[vii] ABS 5206.0 September 2009

[viii] ABS and Pulp & Paper Strategic Review 2009, IndustryEdge

[xi] Publishers National Environment Bureau, PaperRound, NPCC, IndustryEdge

[x] **MANUFACTURING INDUSTRY DATA FOR PULP AND PAPER INDUSTRIES: 2006-07**

Sector	Employment June '07	Wages and Salaries	Sales and Service Income	Industry Value Added	Sales & Service Income per FTE	Industry Value Added per FTE
Units	No.	AUDM	AUDM	AUDM	AUD'000	AUD'000
Pulp, Paper & Paperboard Mfg	5 963	342	2 400	603	403	101
Corrugated paperboard & paperboard container mfg	6 370	474	3 008	878	472	138
Paper bag mfg	1 734	93	521	144	300	83
Paper stationery mfg	4 966	222	1 136	317	22	64
Sanitary paper product mfg	3 449	279	2 205	624	639	181
Other converted paper product mfg	1 319	61	335	92	254	70
Total pulp, paper and converted paper product mfg	23 801	1 470	9 605	2 657	404	112
+/- % pa Change between 2004-05 and 2006-07	-1.1	1.4	0.3	-6.4		

Source: ABS Catalogue 8221.0 2006-07

MANUFACTURING INDUSTRY DATA FOR PRINTING INDUSTRIES: 2006-07

Sector	Employment June '07	Wages and Salaries	Sales and Service Income	Industry Value Added	Sales & Service Income per FTE	Industry Value Added per FTE
Units	No.	AUDM	AUDM	AUDM	AUD'000	AUD'000
Printing	45 281	2 102	8 557	3 482	189	77
Printing support services	2 786	110	338	185	121	67
Reproduction of recoded media	2 249	113	476	213	212	95
Total printing (inc. reproduction of recorded media)	50 315	2 325	9 371	3 881	186	77
+/- % pa Change between 2004-05 and 2006-07	-2.8	1.3	1.3	2.4		

Source: ABS Catalogue 8221.0 2006-07

[xi] ibid

[xii] ibid

[xiii] IndustryEdge

[xiv] Publishers National Environment Bureau

[xv] 2008: Ximenes, F.A., Gardner, W.D and Cowie, A. "The decomposition of wood products in landfills in Sydney, Australia". Waste Management (in print).

[xvi] CWF is coated wood free paper used for high quality books, quality glossy magazines, annual reports and quality brochures and posters.

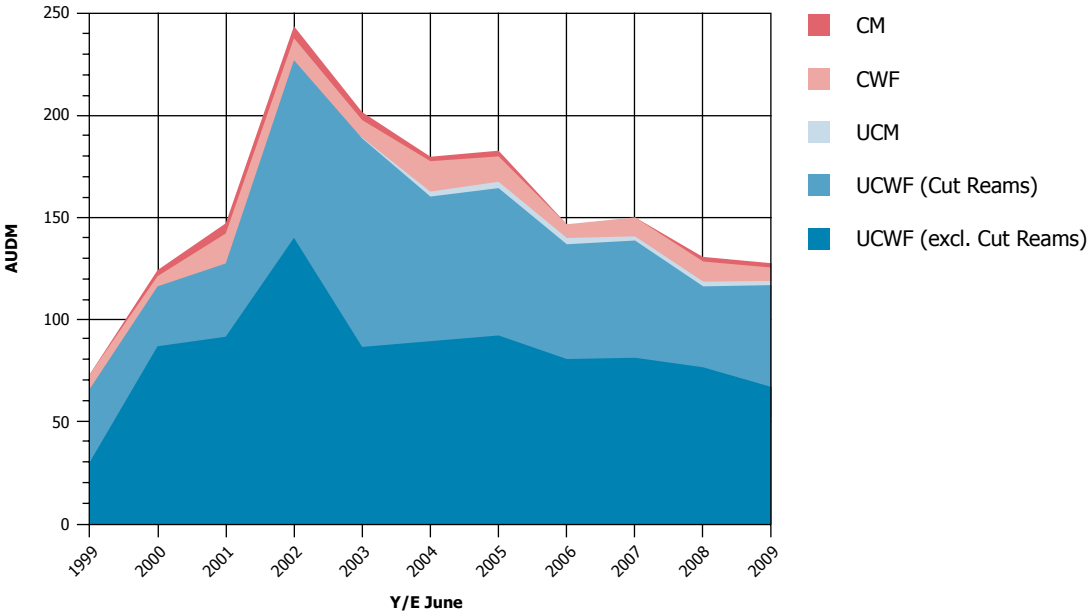
UCWF is uncoated wood free paper used for office papers, most forms of stationery, forms, books, reports and letterheads

CM is coated mechanical paper used for glossy magazines and better quality brochures and advertising material

UCM is uncoated mechanical paper used for newsprint, directories and some cheaper catalogues and brochures

[xvii] Pulp & Paper Strategic Review 2009, IndustryEdge

[xviii] **EXPORTS OF PRINTING & COMMUNICATION GRADES: 1999 – 2009 (AUDM FOB)**



Source: ABS & IndustryEdge estimates

[xix] ABS Catalogue 5368.0 and IndustryEdge estimates

[xx] Sustainability Report 2008-2009, Heidelberger Druckmaschinen

[xxi] ibid

[xxii] Australian Paper's Maryvale Mill in Victoria's LaTrobe Valley generates a significant portion of its own electricity needs and 100% of its steam needs from the wood waste and residues from its pulp manufacturing process. At the same time, it uses some of that power to recover and reuse the chemicals used to make pulp and paper.

[xxiii] Pulp and paper manufacturing and printing industry estimates and accounting

[xxiv] Computer energy costs from Choice Australia, May 2008 and conversion coefficients from the Australian Greenhouse Office Factors and Methods Workbook, December 2007

[xxv] IndustryEdge analysis of company balance sheets and profit and loss statements, information supplied by APIA members and other associations

[xxvi] Pulp & Paper Edge, IndustryEdge

FURTHER INFORMATION

The Australasian Paper Industry Association invites you to contact APIA for further and more detailed information.

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