



Did you know?

- Every tonne of paper recycled saves 2.5 barrels of oil, 4,100 kWh of electricity, 4 cubic metres of landfill and 31,780 litres of water.¹
- Every year around 3.5 million tonnes of paper and cardboard is used in Australia, enough to fill 160,000 large semi trailers.¹
- Almost 90% of waste paper recycled in Australia is used to make packaging and industrial paper.¹
- Recycling 1 tonne of paper and cardboard saves 13 trees.¹
- It takes 2.5 tonnes of radiata pine to make one tonne of newsprint.²
- 17 trees can absorb the carbon dioxide emitted from your car each year, trapping the carbon in the wood and releasing the oxygen back into our atmosphere.¹
- All newspaper manufactured in Australia have a recycled content of up to 40%.²
- The inky residue extracted from printed-paper in the recycling process is mixed with waste wood fibres and used as a soil conditioner.

Paper & Cardboard

Natural resources will not last forever. In Australia there are 20 billion fewer trees than when Europeans first settled here in 1788. They have been felled to provide timber and to make way for development. But trees are vital. They help regulate the temperature, and keep our air clean. That's one great reason to recycle.¹

The problem

The basic paper making process has not changed for 2000 years. Fibres are still soaked in water, drained on a fine wire screen and then dried under pressure and heat.³ Paper is one of the most important and widely used consumer materials with approximately 7,000 different types, each with a different use³. In the year 2002 - 2003 Australians consumed 4,011,000 tonnes of paper.⁴

Impact of paper waste on the environment

Production

Modern paper production involves both mechanical and chemical pulping to convert raw materials into various paper products. Both processes consume large amounts of energy and use valuable natural resources, including trees and water. Certain processing techniques such as bleaching are also known to be environmentally harmful.³

Energy

It takes 13.5Gj of energy to make one tonne of paper⁴. This is the equivalent of using 552 litres of heavy crude oil.

Trees

3,456,000 tonnes of wood was used in Australian papermaking in 2001 - 2002⁴. Of this wood, 22% came from native forests.⁴

Water

It is reported that making paper from virgin pulp can use up to 300 cubic metres of water for every tonne of paper produced.³

In 2001 - 2002, Australian paper manufacturers used one litre of water for every 7 sheets of A4 paper produced.

Greenhouse gases

When paper goes to landfill it produces dangerous greenhouse gases during decomposition. In 2001 - 2002, 1.51 tonnes of greenhouse gases were emitted per tonne of paper produced. This is the same amount of greenhouse gas that would be produced if 5 million cars drove from Sydney to Perth. The production of 26 sheets of paper produces the same amount of greenhouse gas as driving your car 1 km.

Landfill space

Through the paper production process in 2002-03 approximately 290,000 tonnes of paper was disposed of to landfill.⁴ That's 112kg of paper disposed of per tonne of paper produced.⁴ At home, paper makes up about 25% of the waste stream, and most of it can be recycled³. Newspaper is the most abundant paper waste, followed by cardboard and magazine/advertising material.

Rubbish

In 2005, paper and cardboard items accounted for 15% of the total rubbish collected on Clean Up Australia Day. Many people assume that because paper is biodegradable, it is OK to dump it in the natural environment. However, paper rubbish is not only unsightly it can also harm animals and marine life.

Clean up - inspiring and working with all Australians to clean up, fix up and conserve our environment.

Reduce, Reuse & Recycle

Protect our environment by reducing, reusing and recycling paper and cardboard.

Reduce

- Send e-mail instead of distributing printed documents.
- Read the newspaper online.
- Avoid paper plates and cups.
- Avoid buying goods which use excessive packaging.
- Put a 'No Junk Mail' sign on your letterbox.
- Minimise printing and use double sided copying where possible.
- Proofread documents on the screen before printing out.

Reuse

- Use both sides and as much of each sheet as possible.
- Reuse gift-wrapping paper, paper bags, envelopes, paper boxes, files, posters etc.
- Use unwanted printouts as notepaper for phone messages and notes or for printing draft copies.
- Use shredded paper as packaging instead of purchasing other forms of packing material.
- Sell old books and magazines to second hand dealers, or donate them to libraries, hospitals or charities.
- Cardboard boxes are expensive to purchase but can be re-used with no reprocessing expenses, either by the original supplier or for general storage and transport.
- At work, contact your suppliers to arrange a return scheme for clean packing boxes and other materials.

Recycle

- Recycling extends landfill life and reduces pressure on native forests.
- Support recycling programs by buying recycled paper and cardboard products.
- Get organised: set up a container for paper recycling at home, the office or at school, especially next to photocopiers, printers and fax machines.
- Contact your local council for information on your local paper-recycling scheme.

Try to **minimise contamination** as it may result in the paper being unusable and ending up in landfill anyway. Remove all staples, string, paper clips, metal foil, plastic material, sticky tape, latex, food remnants, grit and dirt from paper before recycling it.

Where does recovered waste paper end up?

It is estimated that 1.56 million tonnes of paper were recovered in Australia in 2001 - 2002. Of this approximately⁴:

- 87% was used to manufacture packaging grades - much of the packaging on supermarket shelves is made from recycled paper.
- 10% was used to manufacture newsprint.
- 2% was used to manufacture printing and writing papers, such as stationery and photocopy paper.
- 1% was used to manufacture tissues.



References

¹ **VISY Recycling**
www.visyrecycling.com.au

² **Publishers National Environment Bureau**
www.pneb.com.au/recycling1.html

³ **Zero Waste, SA**
www.zerowaste.sa.gov.au/pdf/factsheets/card.pdf

⁴ **Australian Paper Industry Council**
www.apic.asn.au

For more information on:

Pulp and Paper
www.pc.gov.au/ic/inquiry/01pulp/finalreport/

Making your own paper
www.pneb.com.au/kids/paper.html

Products that *can* be recycled

Cardboard boxes
Newspapers, magazines and brochures
Photocopy paper and wrappers
Bond Stock (letterheads / forms)
Computer printouts
Envelopes (even those with windows)
Manila folders
Phone books
Coloured paper

Products that *can not* be recycled

Carbon and self carbonised paper
Food scraps / wrappers
Sticky tape and adhesive labels
Facial tissues and paper towels
Wax or plastic coated boxes or paper
Tissue paper
Thermal fax paper
Staples, paper clips, spiral bindings or other fastenings



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