



Material Consumption, Recovery and Waste Issues



Waste is any material that is thrown away, used up or left over during domestic, industrial, commercial and other activities. Most of our solid waste is sent to landfill for disposal – an expensive and traditional approach. Landfill sites are a way of treating the symptoms of waste rather than the problem, which is increasing consumption and increasing waste generation.

We need to avoid generating waste and reduce, reuse and recycle the waste we do create as much as possible.

“ South Australia has a goal of producing no waste. ”

Trends



Material consumption (demonstrated by waste generation per person) **increased** by 4.8% between 2003/04 and 2006/07.



Amount of solid waste sent to landfill is **decreasing**.



Resource recovery is **increasing**.



Liquid waste has **decreased** since 2003.



Household participation in recycling of household waste is up since 2003 with a **20.6% increase** in the period 2004 to 2006.



The amount of litter has **increased** since 2003.



Amount of hazardous waste collected and treated is **up 61%** since 2003.



Beverage container return rates have remained **steady** since 2003.

Material Consumption, Recovery and Waste

What is the Current Waste Situation?



Pressure Indicators

Waste generation per person

We are recycling more per person, but we are also producing more waste. The increase in recycling and the reduction of waste sent to landfill can hide our increased levels of consumption and waste generation. The amount of waste generated per person increased by 179kg/year (8.6%) between 2003/04 and 2005/06, and this highlights our increased consumption of materials. Recycling is a very important part of waste management in South Australia but it is preferable to avoid, reduce and re-use waste.

Solid Waste

The amount of solid waste that we are sending to landfill has decreased over the last five years. In 2005/06, about 1,051,687 tonnes of solid waste was sent to landfill in Adelaide in comparison to 1,161,327 tonnes sent to landfill in 2003/04. This is a drop of 9.4%.

Litter

Cigarette butts make up the largest percentage of litter at 42% since 2003, followed by paper, plastics and plastic snack bags or wraps. Litter is most often found along highways, followed by industrial sites and car parks, retail sites and shopping centres. South Australia's litter monitoring program has been adopted nationally since 2005, so we now have a National Litter Index and can compare litter types and amounts between the states. South Australia was similar to the other states in the amounts of litter recorded, but there were fewer drink containers found in South Australian litter. The deposit system for drink cans and bottles which operates in South Australia has been very successful in reducing drink container litter and over 420 million containers are recovered from landfill every year partly as a result of the deposit scheme.

Liquid waste

Liquid wastes include waste oil, grease, paint sludge and solvents. Liquid wastes are treated in a variety of ways, including filtration and neutralisation. They may be recycled, sent to landfill or incinerated. At the moment there is not much information about the amount of liquid waste re-used.

Hazardous waste

Hazardous wastes are substances that are of risk to our health and the

environment. Special disposal techniques for hazardous waste are needed to make them less dangerous. Hazardous wastes can include inorganic chemicals, paints, resins, inks and dyes, organic solvents, pesticides, asbestos, batteries and clinical and pharmaceutical wastes. Some hazardous wastes such as batteries, chemicals, tablets and motor oil, are still disposed of in household rubbish bins. These wastes can end up in landfill and create significant public and environmental threats.

Zero Waste SA began a chemical collection program to help people dispose of household hazardous waste and farm chemicals properly. Approximately 70% of the waste collected from the public through this program has been recycled or re-used. Permanent storage facilities are needed to manage this waste in South Australia.

Radioactive waste

Radioactive waste is generated from the use of radioactive materials utilised in medical, research, agricultural and industrial processes. This waste is stored in many different areas around South Australia (22 cubic metres at 134 locations). The Environment Protection Authority (EPA) has recommended that all the radioactive material in South Australia be moved to one site in the Olympic Dam region.

“If we do not dispose hazardous wastes properly we can harm the environment.”



Material Consumption, Recovery and Waste



Responding to Material Consumption, Recovery and Waste

Response Indicators

Amount of waste materials recycled

South Australia is the national recycling leader on a per person basis and 69.4% of all South Australia's waste is being recycled.

All metropolitan councils now offer kerbside and green organics recycling compared to only 12 councils in 2003. Kerbside recycling has increased, but significant improvements can still be made in recycling as well as reducing consumption.

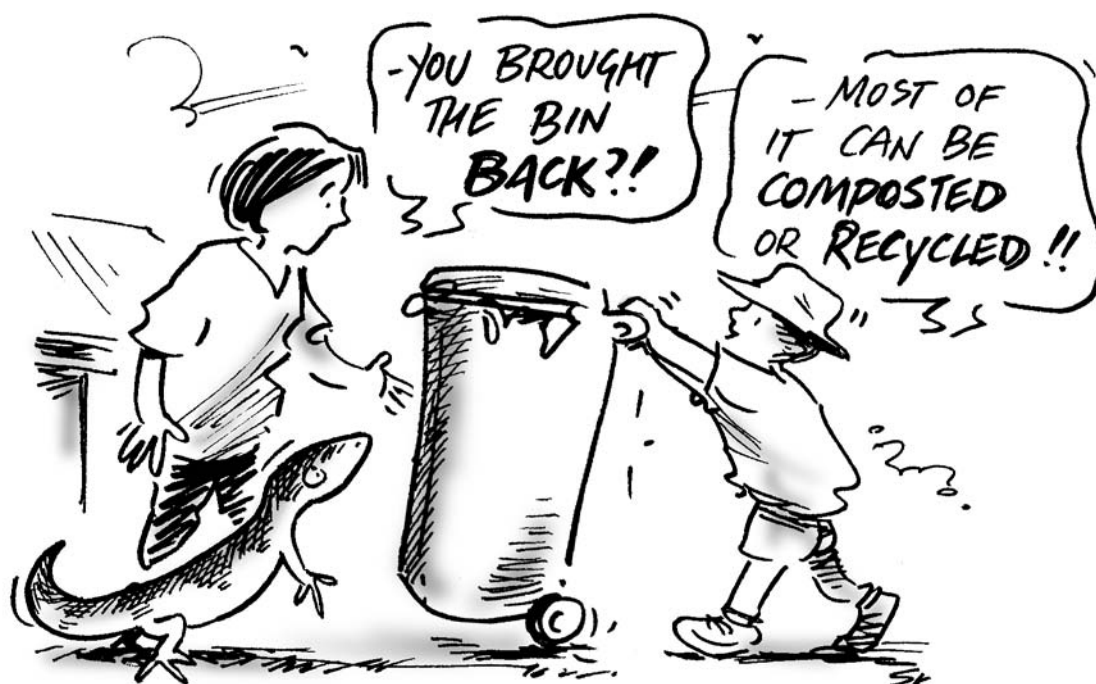
Disposal of waste to landfill

Since 2003 there has been a decrease in the amount of waste going to landfill of almost 9.5% in the metropolitan area and 5.5% in rural areas. A new set of guidelines developed in 2007 – Environmental Management of Landfill Facilities – ensures that landfills are engineered to minimise their potential to harm the environment. It is also more expensive to deposit material into landfill.

Zero Waste SA has been established by the state government to help reform waste management in the state. Zero Waste SA works with the EPA to achieve the zero waste targets for South Australia. Zero Waste SA also offers support and assistance to establish more efficient resource recovery in South Australia.

A **Wipe Out Waste (WOW)** schools program has recently been launched to encourage schools to reduce waste and raise awareness of material consumption, recovery and waste. Approximately 50% of all waste generated by schools can be composted, recycled or re-used.

More South Australian businesses are working towards eco-efficiency, producing goods and services with less energy and fewer raw resources resulting in less waste, pollution and costs.



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Taking Action for Waste

- Work out how much of your household or school rubbish could be composted or recycled.
- Reduce your levels of wasteful consumption.
- Set up a compost bin or worm farm in your house and school. This will reduce the amount of organic or green waste ending up in landfill.
- Start a recycling program at your school.
- Follow the four Rs – refuse, reduce, re-use and recycle!
- Take your own bags to the supermarket.
- Are there any industries near school which produce waste? Invite the company's Occupational Health and Safety Officer to talk to the class about how the waste is treated and what environmental problems it could cause.
- Find out about toxic wastes in your area.

Impacts of Water Consumption in Urban Settlements



Inland Waters

Poor waste management can pollute our water resources.



Biodiversity

The more waste material we throw away, the more we need to use new resources that we take from the environment. If we do not dispose of our hazardous wastes properly, we can harm the environment, impacting on all the species that depend on that habitat for survival.



Atmosphere

Poor waste management can lead to air pollution, generate greenhouse gases (from landfill sites) and develop odours.



Health

If we do not manage our waste properly, we will affect the health of our community.



Economic

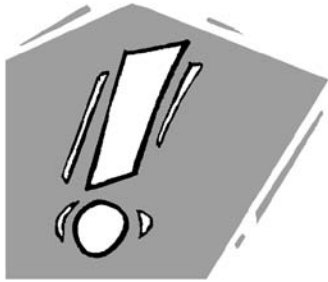
Most people think that landfill is a cheap waste option but when we factor in the costs to the environment, it becomes clear that avoidance, re-use and recycling are much cheaper options.



Land Resources

Poor waste management options can lead to the contamination of land.

Material Consumption, Recovery and Waste



Attention!!

What is wasteful consumption?

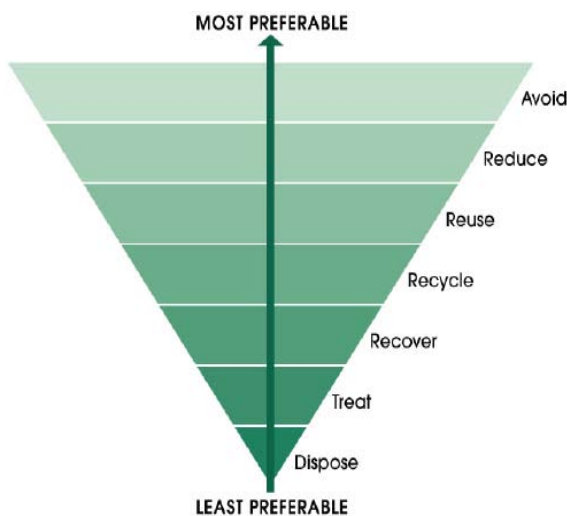
Wasteful consumption is classified as the purchase of goods or services that are not used at all, or are not used to their full potential. Across Australia, food is the most common instance of wasteful consumption, though other wasted items include clothes, shoes, gym memberships, books, CDs and electricity. More and more Australians are also shopping (consuming) as a form of mood enhancement – for the thrill of the purchase. Shopping for instant fun rather than for the pleasure of owning and using something over time is most likely to result in increased waste.

As consumers we need to be aware of the impact of our purchases on waste production, though interest in whole-of-life product management is growing in Australia. This is called Extended Producer Responsibility (EPR) or product stewardship and this approach seeks to designate responsibility for the impacts of products throughout their whole lifecycle.

When a product is made, the consequences of its use and disposal must be considered. Adopting this approach across a number of industries would help to minimise problem waste, reduce toxicity and improve the efficiency of the resources used. Waste items that will benefit from EPR programs include 'e-waste' such as televisions and computers.

In 2008, the Environment Protection and Heritage Council released a package outlining a whole-of-life management approach to tyres. This approach could drive innovations, decrease environmental impacts and build end of life management costs into product prices.

The Waste Hierarchy



Material Consumption, Recovery and Waste

References

Hamilton, Denniss & Baker (2005). *Wasteful Consumption in Australia*. The Australia Institute, Canberra.

Resources

For more detailed information on the issue and actions you can take see the *State of the Environment report for South Australia 2008*.

This is available at:
www.epa.sa.gov.au/soe



Research Ideas about Waste

- 1 What is 'waste'?

- 2 What are the main sources of waste in South Australia?

- 3 How does waste impact on the environment in your community, South Australia, Australia and globally?

- 4 What influences the amount and type of waste we produce?

- 5 What is the waste hierarchy and how can your activities reach the top?

- 6 What are government, business and industry doing to address waste management issues?

- 7 What can we do individually, or in communities, to reduce the impact of waste in South Australia?

This fact sheet is part of a set of 20 fact sheets about the key environmental issues identified in the State of the Environment report 2008, produced for the Environment Reporting Education Resource. You can access the fact sheets and learn more about taking action for the environment at the Education Resource website:
www.epa.sa.gov.au/soe.
For more information call the Environmental Education Unit of the Department for Environment and Heritage (08) 8463 3911.



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