

# National Waste Reporting 2013

## OVERVIEW – HAZARDOUS WASTE PROFILE 2010–11

**Key fact: At least 6.16 million tonnes of hazardous waste (comprising solid and liquid hazardous wastes) were generated in Australia in 2010–11.**

### What is hazardous waste?

The [Hazardous Waste \(Regulation of Exports and Imports\) Act 1989](#), defines hazardous waste as:

- Waste prescribed by the regulations, where the waste has any of the characteristics mentioned in Annex III to the Basel Convention. These characteristics include:
  - Explosive
  - Flammable Liquids/Solids
  - Poisonous
  - Toxic
  - Ecotoxic
  - Infectious Substances.
- Wastes that belong to any category contained in Annex I to the [Basel Convention](#), unless they do not possess any of the hazardous characteristics contained in Annex III. Wastes in Annex I include:
  - Clinical wastes
  - Waste oils/water, hydrocarbons/water mixtures, emulsions
  - Wastes from the production, formulation and use of resins, latex, plasticizers, glues/adhesives
  - Wastes resulting from surface treatment of metals and plastics
  - Residues arising from industrial waste disposal operations
  - Wastes which contain certain constituents such as: copper, zinc, cadmium, mercury, lead and asbestos.
- Household waste
- Residues arising from the incineration of household waste

### Data Issues

Traditionally, hazardous waste has been viewed separately from the three main waste streams - municipal solid waste (MSW), commercial and industrial (C&I) and construction and demolition (C&D) - notwithstanding that hazardous waste is a component in all three streams. Difficulty in accurately identifying the extent of hazardous waste in Australia has led historically to under-reporting and the Australian Government has undertaken considerable work to improve data reporting to provide a more accurate estimate of hazardous waste generation.

This overview document and the associated fact sheet are based on revised, higher figures for hazardous waste than are reported elsewhere in *National Waste Reporting 2013* documents<sup>1</sup>.

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<sup>1</sup> Issues of potential double counting mean that the higher hazardous waste figures cannot be added to other waste data sets.

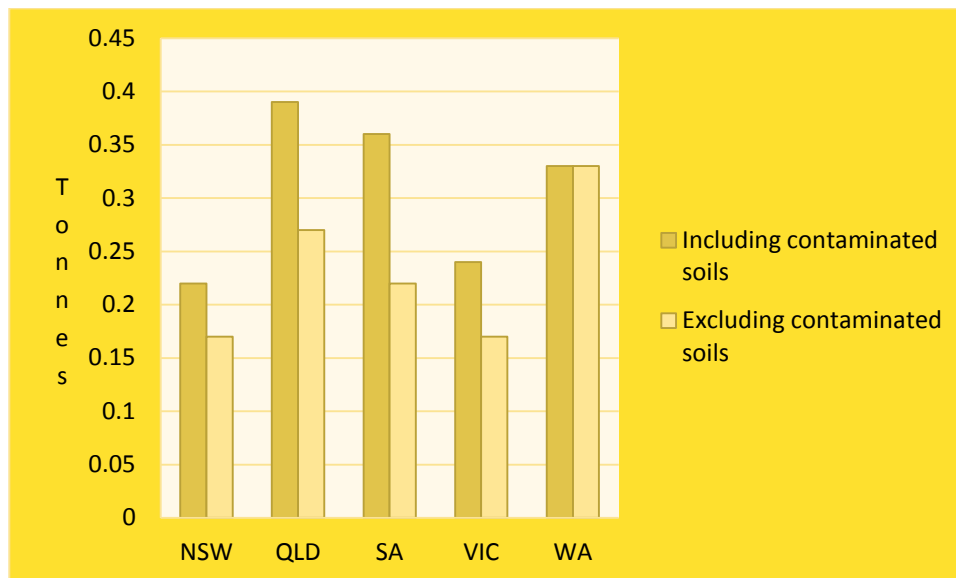
## Per capita hazardous waste generation

Using the 2011 Census national population total of 21 507 717 people, and a reported hazardous waste generation figure of 6 161 906 tonnes, we can say that:

- Australia generated 287 kilograms of hazardous waste per person in 2010-11
- this is an increase of 234 kilograms on the 53 kilograms of hazardous waste generation per person for the 2007 calendar year <sup>2</sup>. It should be noted that this is largely due to improvements in reporting and data accessibility for hazardous waste.
- Australia's 2010–11 per capita hazardous waste generation is 53 per cent greater than the 188 kg per person average of the European Union for 2010.<sup>3</sup>

Per capita waste generation across Australia differs between jurisdictions as shown in Figure 1. The *Hazardous Waste Data Summary* report found that WA was the jurisdiction generating the most hazardous wastes per capita when contaminated soils were excluded. Including contaminated soils made Queensland the highest generator per capita, followed by South Australia and then WA. It should be noted that asbestos data is not available from WA so this waste has not been included in these totals.

Figure 1 Per capita hazardous waste generation 2010–11, with and without contaminated soils



Notes: Data from the Australia Capital Territory, Northern Territory, and Tasmania is not included. Contaminated soils are under reported in WA (KMH).

## Hazardous waste generation by jurisdiction

The *Hazardous Waste Data Summary* provides the following breakdown by jurisdiction of hazardous wastes moved within and between states and territories (see Table 1).

<sup>2</sup> Based on the December 2007 ABS population estimate of 21 181 000 people and a hazardous waste generation figure for 2007 calendar year (*National Waste Report 2010* p175).

<sup>3</sup> EU numbers for EU-27 countries only. Source: Eurostat

[http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Waste\\_statistics#Hazardous\\_waste\\_generation](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Waste_statistics#Hazardous_waste_generation) with specific data available from the waste statistics tables and figures excel file available for download from [http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Waste\\_statistics#Further\\_Eurostat\\_information](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Waste_statistics#Further_Eurostat_information)

Table 1: Revised (Normalised) National 2010–11 Hazardous Waste Data by Jurisdiction

Jurisdiction	Hazardous waste generated (tonnes)		
	Intrastate	Sent interstate	Total from waste movements
Australian Capital Territory	6345	7325	13 670
New South Wales	1 641 853	0*	1 641 853
Northern Territory	35 300	5994	41 294
Queensland	1 759 040	6505	1 765 545
South Australia	596 015	5201	601 216
Tasmania	35 820	16 029	51 849
Victoria	1 330 445	43 725	1 374 170
Western Australia	664 168	8142	672 309
<b>Total</b>	<b>6 068 986</b>	<b>92 921</b>	<b>6 161 907</b>

\* Data not provided

### Recovery and recycling of hazardous wastes

Recovery and recycling rates for hazardous wastes are significantly less than for non-hazardous wastes, with estimates that only four per cent of hazardous waste was recovered in Australia for 2010–11<sup>4</sup>.

Although it is harder and more expensive to achieve recovery outcomes than for non-hazardous wastes, safe, environmentally sound and efficient recovery, recycling and reuse opportunities do exist for many hazardous wastes. For example, three-quarters of the batteries (such as are used in all vehicles) consumed in Australia are collected and reprocessed domestically as displayed below in Table 2.

Table 2: Recovery and other outcomes for used batteries arisings<sup>5</sup>

Fate of used batteries arisings	Australia (2010)	
	Tonnage	Per cent
Reprocessed in Australia	100 750	75
Legal export	300	..
Landfill	11 374	8
Stockpiled formal	6500	5
Stockpiled informal	5820	4
Rebirth	2055	2
Illegal export	8150	6
<b>TOTAL</b>	<b>134 949</b>	<b>100</b>

<sup>4</sup> Waste Generation and Resource Recovery in Australia (2013)

<sup>5</sup> GHD 2013, *Cost-benefit analysis of possible changes to export provisions favouring domestic hazardous waste treatment*, unpublished; Warnken Industrial and Social Ecology Pty Ltd (Warnken ISE) 2010, *Analysis of Battery Consumption, Recycling and Disposal in Australia*, for Australian Battery Recycling Initiative (ABRI), November.

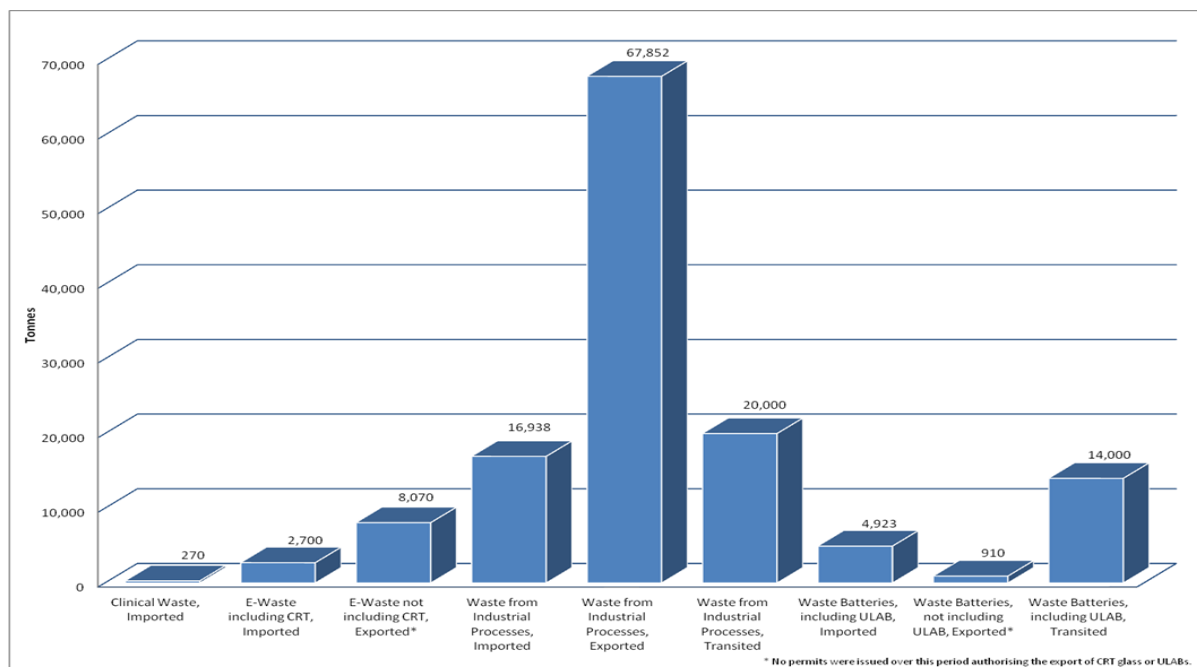
## Hazardous waste exports and imports

Australia has obligations, including those under the Basel Convention, to ensure international movements of hazardous wastes are minimised and those that do occur do so safely, and in environmentally sound fashion.

These obligations are implemented under the *Hazardous Waste (Regulation of Exports and Imports) Act 1989* and associated regulations.

Only small amounts of Australian hazardous wastes move across international borders. In 2007, exports and imports together made up 2.7 per cent of Australian hazardous waste generation. In 2011, up to 40 310 tonnes of hazardous waste was permitted for export and up to 4 615 tonnes was permitted for import. This is an increase of 11 070 tonnes exported and 3722 tonnes imported on the 2007 data reported in the *National Waste Report 2010*. The export of waste from industrial processes made up the bulk of authorised movements of hazardous waste from 2009 to 2012 (see Figure 2).

Figure 2 Authorised movements of hazardous waste, 2009–10 to 2011–12.



Source: Department of the Environment

For more information on hazardous waste see:

- Hazardous waste factsheet
- [Hazardous waste data assessment](#)
- [Review of Australia's international waste-related reporting obligations](#)
- <http://www.environment.gov.au/topics/environment-protection/hazardous-waste>.