The Australian Recycling Sector: Key Findings

Information contained in this fact sheet is derived from *The Australian Recycling Sector* prepared by Net Balance in 2011 for the Department of Sustainability, Environment, Water, Population and Communities. It provides an overview of the key characteristic s of the Australian recycling sector and the environment in which it operates, the social, economic and environmental benefits, and identifies barriers and future opportunities for the recycling sector. More information can be found in the full report available at: www.environment.gov.au/wastepolicy/resources.html.

Introduction

The Australian recycling sector is an important aspect of Australia's economy and society. A strong and sustainable recycling sector is essential for Australia to use resources more efficiently and maximise the full value of materials. The recycling sector is a key element in achieving the objectives of the *National Waste Policy: Less waste, more resources* (National Waste Policy).

Sector overview

The recycling sector is made up of all companies that are involved in the collection, transfer, sorting and processing of materials for use in the place of raw materials in the manufacture of the same or similar non-waste product. Recycling is an activity that is not restricted to "recycling companies". Many companies that are significant contributors to the recycling sector also undertake other activities such as waste management and manufacturing.

Collection, consolidation and transfer of recyclable materials occurs across Australia, however most facilities are concentrated in major cities where the majority of the population and industry are located, particularly along the east coast of Australia. In 2008-09, 26 357 300 tonnes of material was recycled across Australia. This was 44% of all waste generated in Australia.

Processes and markets

Common streams of materials that are recycled include: plastics, metals, glass, paper and cardboard, organics, and masonry materials. The method of collection, type of material, reprocessing requirements and end uses, influence the process for recycling each material.

Economic evaluation

The recycling sector is economically important and unique as it provides resources or inputs to a range of industries without depleting natural resources. This constitutes a significant distinction between recycling and waste management activity, such as landfill disposal. In addition, compared with landfill services, the recycling industry generates more jobs per tonne of waste recycled than per tonne of waste sent to landfill, potentially providing 0.15-0.3% of Australia's jobs.

The economic drivers for recycling are contingent on both material prices and the competitiveness of the cost structure for landfill disposal. The sale of recovered materials is a major component of industry turnover (above 50%) but is highly dependent on volatile commodity markets. The introduction and expected rise of landfill levies is likely to be a significant factor contributing to the economic viability of the recycling sector.

Environmental benefits
Recycling in Australia results in a wide variety of tangible and measurable environmental benefits compared with landfill disposal. These include energy savings, avoidance of greenhouse gas emissions, water savings, avoidance of waste, and significant reductions in natural resource use, eutrophication of waterways and airborne pollutants. The environmental benefits are most apparent in the two significant stages of the waste process which are avoided: extraction of virgin materials and disposal of waste to landfill.

Social assessment
The recycling sector can have both positive and negative social impacts. Positive impacts include; creating employment opportunities; a sense of civic pride and satisfaction felt through participation in recycling; and an improved natural resource base for future generations due to higher recycling uptake. Negative impacts include: noise, air and odour pollution from collection and reprocessing facilities; costs to set up recycling infrastructure and education materials for new areas; and costs associated with innovations and technologies, which are likely to be passed on to end consumers in product prices.

In 2009 over 91% of Australian households utilised municipal kerbside recycling services indicating strong community support for this form of recycling.

Regulatory environment
Waste and recycling policy in Australia is developed and implemented across all levels of government. Recyclers are affected by legislation and policy at the national, state and local government level.

The National Waste Policy sets the direction for all levels of government to work collaboratively on waste management and resource recovery. It is intended to provide a nationally consistent framework for improved resource recovery in Australia. Similarly, the *National Environment Protection Measures* for used packaging and the movement of controlled waste create obligations for recycling sector participants to manage and report on waste and recycling.

The Australian Government is responsible for waste legislation, strategy and policy framework at the national level. The *Product Stewardship Act 2011* was enacted to provide a legislative basis for reducing waste and recovering resources from key products at the end of their useful life.

State and territory governments are responsible for delivering on the jurisdictional elements of the National Waste Policy, as well as waste management and regulation under their specific legislation, policies, plans and programs. At the state and territory level, environmental protection legislation establishes the rules within which the sector must operate. Resource recovery legislation, policies and strategies establish recycling goals and targets and provide direction and support for the achieving these goals.

Local governments typically act across their municipality under the guidance and delegation of the of the state/territory government. They may develop and manage local strategies, regulation and programs including, local policies and service standards for recycling services. Local planning schemes determine where recycling facilities can be established.

Stakeholders identified an aspiration to establish a national system of regulation. National harmonisation would help develop a more effective administrative structure for the recycling and resource recovery industry.

Standards and specifications
Standards and specifications strongly influence the operation of the recycling industry, the form and quality of the products/outputs of the industry and the potential markets for recycled products. There are a wide range principles, specifications, better practice guidelines and standards applicable in Australia that influence the sector as a whole, certain jurisdictions or specific material streams.

There are a number of existing standards in place that would benefit from better promotion. There is a need to build capacity within the recycling sector to apply these standards and build awareness of the standards and specifications. Stakeholders view the process for developing new standards as capital and resource intensive and complex. Engagement and collaboration with industry and across jurisdictions would improve confidence in standards and specifications associated with recycling and resource recovery.

Barriers affecting the sector
There are a number of barriers affecting the recycling sector. Commonly identified barriers include: distance (collection/processing/market), contamination, availability of end markets, government support, labour costs and shortage, competition, lack of investment/infrastructure, behaviours and individual business uptake. More robust evidence is required to quantify the impact of these barriers on the sector and enable the sector to engage with government on issues such as regulatory reform and industry development.

Data collection and reporting
Recycling data is compiled both on a geographic (state/territory) or material type basis (e.g. plastics, organics, etc). It is primarily obtained through licence reporting requirements and annual voluntary surveys through which there is generally a high response rate (80-97%).

There is a lack of nationally consistent waste and resource recovery definitions. Each state/territory has their own definitions enshrined in their respective legislation and policy documents. Interviews with stakeholders revealed there is a strong view that a more sophisticated approach to capturing recycling information at a national level is necessary to improve usefulness of data from landfill and recycling facilities, and to facilitate cooperation and communication between jurisdictions.

Future outlook
The recycling sector is an important element of Australia's future industrial and environmental development. Recycling is viewed as a critical component of our economy's transition towards reducing its reliance on virgin, non-renewable materials.

A comparison of the current level of recycling (44% in 2008-09) and the recycling targets in place across Australia indicates that there is significant capacity for increased recycling in the future. Recycling targets within each of the Australian jurisdictions are one indication of the likely recycling rates in the future.

Discussions with stakeholders indicate that there are opportunities for increased recycling of commercial and industrial materials, organics and products such as appliances.

Waste avoidance, sustainable design and manufacture, and recycling need to be considered holistically, so that Australia can reduce its reliance on non-renewable resources, and sustainably manage those that are consumed. Communication and cooperation across the supply chain, with collaboration between manufacturers and recyclers would help to increase opportunities for beneficial re-use of a range of products, including industrial by-products.