Senate Environment, Communications and the Arts Committee

Inquiry into the management of Australia's waste streams

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Please note that these comments reflect a regional perspective rather than a metropolitan one

A/ Trends in Waste Production

Residential / Commercial will continue to increase until EPR (Extended Producer Responsibility) is introduced especially for the higher 'contaminant' products such as electronic wastes, tyres. Covenants are not effective as there is no penalty per se.

Construction & Demolition will vary depending on the economic climate of the day and any legislative requirements currently in play. There will always be wastage. However, the opportunity for recycling depends on the ability to segregate on-site, but in particular on end-markets. This is compounded by the fact that some State and many Local Government's do not willingly accept recycled products for use, nominally for economic and quality reasons (yet are accepted elsewhere). Note that all wastage is recyclable / reusable.

Industrial Wastes will continue to decrease or conversely provide the product for some other product generation, especially from larger companies, but increasingly from the larger SME's. this will continue as knowledge and business opportunities increase.

B/ Effectiveness of Existing Strategies

Existing strategies are variably effective depending to a large extent on:

- the manner in which they are implement; and
- where they are implemented.

In addition, it is often expected that if it works in one area then it will work across the state or nation. A good example of this is kerbside recycling. In metropolitan areas this works well and is potentially economically viable. However, in most rural areas the cost (not to mention the greenhouse gas (GHG) emissions) to provide such a service far outweighs the return. Albeit, meeting community expectations. Overall effectiveness is very much related to socio-economic factors rather than environmental benefits.

Further, many existing recycling strategies are aimed at either those groups who will "always oblige" or "are never interested". In the latter case the only effective strategy is by creating an economic impact to that individual or company rather than it being "shared out" amongst the community or industry.

Overall I believe that many of the strategies, initially, were applicable and accepted by both the community and industry. However, instead of the strategies being followed through over time, they have languished or not been pushed into those parts of our community and business that they really needed to be applied to. Examples being tyres, organic waste (compost), packaging and containers.

There is also the problem that many strategies are 'independent' or state based rather than being nationally integrated. Nor are many nationally consistent. Further, most are very "metro-centric" in their effective application.

C/ Potential New Strategies

There are four that I believe would enhance additional re-use and conformity across Australia. I have explored one other as the others are self-explanatory:

1. Nationally accepted standards and uses for recycled C&D products – crushed bricks, concrete, glass, etc – via Australian Standards and a requirement for construction (including local Government) to use recycled products unless these products are not available within, say, 100 km of where the construction is taking place.
2. EPR for tyres, whitegoods and electronic equipment.
3. Nationally consistent definitions for waste types, recycling, re-use.
4. Accepting that solid, liquid and biosolids are all waste streams that can and should be used where possible together to enhance the opportunity for "recycling".

The main new strategy I believe that would have the greatest effect on reducing waste to landfill, maximising generation of renewable energy, addressing agricultural salinity and acidity problems and minimising our GHG emissions relates to and Organic Waste Strategy. This would relate to all liquid and solid organic wastes (including putrescible domestic waste). While the anaerobic digestion technology for heterogeneous wastes still needs more research, improved landfill standards and operations can achieve a similar result, utilising KISS (keep it simple, stupid) principles. Homogenous organic wastes would continue to be composted or anaerobically digested.

The main intent of the strategy would be to:

1. create the market for organic waste products (and not separate them into compost and biosolids); and
2. create the framework ensure that all waste going to landfill are biologically broken down to remove all organic matter by the establishment of regional waste precincts.

Intention 1 would look at both reclamation opportunities on degraded lands and requiring minimum soil organic carbon levels in agricultural lands. This would have the result in the need for organic carbon from compost to be applied rather than increased use of inorganic fertilisers that do not assist soil structure, create environmental impacts from leaching and causing soil acidification issues. The likely outcome is that the fertiliser industry would then look at incorporating 'compost' with its fertilisers thereby minimising possible cost imposts on agriculture while improving the farm environment over the longer term.

With respect to land degradation large scale trials using composts on salt and acid effected agricultural land has the opportunity to improve productivity, reclaim land for future productive uses, improve drought resistance, minimise ongoing land degradation and act as carbon sinks.

Intention 2 is a more pragmatic approach to existing waste management. It also permits landfills to be considered to be a penultimate disposal option. However, to maximise its effectiveness it requires a framework whereby regional wastes are taken to a regional waste precinct for source segregation (if this is viable before landfill), landfill to utilise the organic waste component for renewable energy then segregation of the remnant inorganic waste for recycling. This strategy has the OHS benefit of having the waste 'pasteurised' before workers segregate the inorganic component and allows for greater use of technology (screening, magnets, etc) to further reduce OHS risk. Other benefits relate to regional socio-economic benefits to the local community, including retention of workforce and local businesses to support such operations.

The strategy would include the requirements for such precincts and operations, especially establishment and monitoring requirements. Ideally they would be Public-Private partnerships.

D/ Cost-Benefit of Strategy

Benefits			
Economic	**Social**	**Environmental**	**Governance**
▪ Increased regional business opportunities. ▪ Additional sources or income. ▪ Renewable energy and Carbon offset opportunities. ▪ Improved land productivity. ▪ National and international carbon trading opportunities.	▪ Regional jobs. ▪ Educational opportunities (Schools, TAFE). ▪ Maintenance and prosperity of regional communities. ▪ Decreased societal impact on environment. ▪ Reduced illegal dumping of rubbish. ▪ Greater opportunities for disposal of organic wastes.	▪ Minimises ultimate waste to landfill. ▪ Reduces need for additional future landfills (existing landfill acts as a treatment rather than storage facility). ▪ Decreases GHG emissions (renewable energy generation). ▪ Decreases Inorganic fertiliser use and need for herbicides and pesticides. ▪ Increases waste diversion options.	▪ Framework that clearly defines requirements. ▪ Legislation defines boundaries and imposes penalties for non-compliance. ▪ Allows for free-market involvement in establishment and operation. ▪ Ensures transparency.
Costs			
▪ Increased Establishment costs likely (to achieve best practise at outset). ▪ (possible) increased transport costs in some areas – cost sharing options should be available. ▪ Increased compliance costs (as sites more advanced than existing). ▪ (possible) Increased cost to farmers to achieve soil organic carbon levels.	▪ Pollution issues (odour, noise, amenity) from poor planning.	▪ Environmental contamination / impact if site not managed correctly.	▪ Establishment of legislative framework. ▪ Need to work with States and Local Government.

E/ Policy Priorities

The principle policy priority should relate to the establishment of regional waste precincts and the establishment of organic carbon (compost) markets. This will:

- maximise the amount of renewable energy from landfill / compost gas capture;
- require coordination for the collection and location of waste precincts;
- maximise recycling opportunities;
- minimise final waste to landfill;
- minimise OHS worker issues associated with recycling / segregation;
- address land degradation issues;
- improve regional economies directly and via carbon trading opportunities; and
- assist in reducing our GHG footprint.