

Governing PE Reductions

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- Conclusion

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Environmental Impact

- High Consumption → High Landfill Use
- Non-sustainable Manufacturing
- Kills Wildlife

Biodegradable, Bioerodable, Recycle

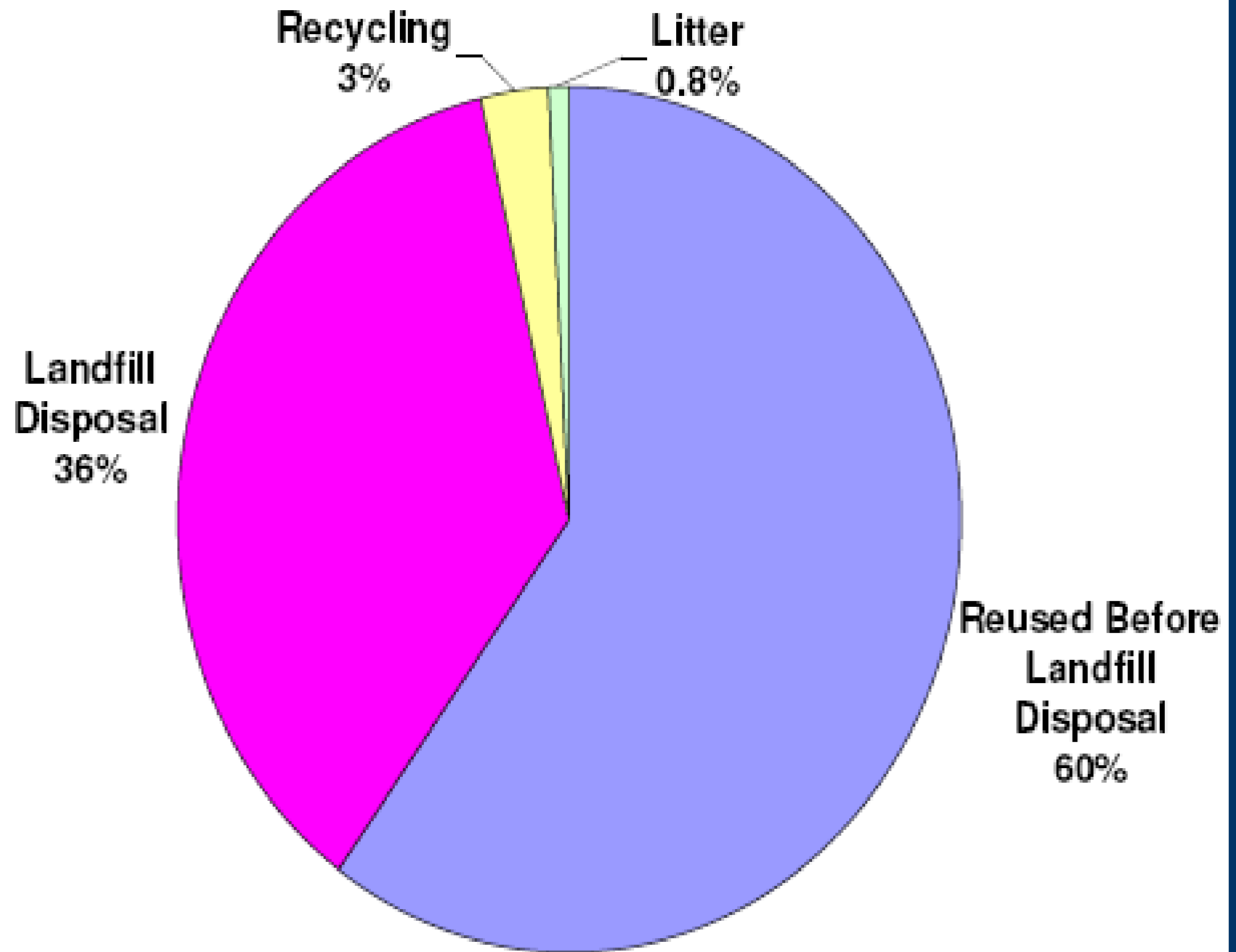
- Biodegradable
 - Breakdown reliant on micro-organisms
 - Bioerodable
 - Breakdown through oxidation and erosion
 - Both emit Greenhouse Gases
 - Both must be seperated from recycling processes
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Bag type	Features	Average cost to the retailer per thousand bags *	Average weight per thousand bags (kg)*	Relative bag storage volume**	Recyclability
Lightweight plastic carrier	Light, strong, durable, effective when wet	£7.47	8.4	1	Yes – but not all stores have facilities
'Bag for life'	Light, strong, durable, effective when wet	£60.88	47.4	4	Yes – system of replacement actively encouraged
Fully degradable plastic bag	Light, strong, durable, effective when wet	£6 to £8	6.5	1	Degradable under the right conditions. Problematic if contaminate conventional plastic recycling.
Paper, without handles §	Convenient	£50	51	8	Yes – kerbside collections available
Paper, with handles §	More appealing to customers e.g. for shoes and clothes	£220	124	10	Yes – kerbside collections available but can be more problematic due to mixed materials
Non-woven polypropylene	Durable, strong, effective when wet	£333.33	138.7	20	Not at present
Woven polypropylene	Durable, strong, effective when wet	£433.33	226	20	Not at present

* Data provided by CBC and Symphony Plastic Technologies plc. Based on average price of an average bag.

**The relative volume of bags (to a conventional lightweight bag) is important for transportation and storage units required compared with plastic carrier bags.

§ The average weight of all paper bags available is 99g (arithmetic mean of 51, 81 and 166g). The values of 51g and 99g are used in the LCA in Section 4 for various analysis sensitivities.



Australian Efforts

- Consumer Awareness
 - Levy-free
 - Virtually No Implementation Required
 - 303 bags per capita → 192 bags par capital
 - Temporary Reductions?
 - Peaked Reductions?
 - Negotiations to phase out Plastic Bags
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Irish PlasTax

- 15 euro-cents (2002) → 22 euro-cents (2007)
 - Biodegradable/Bioerodable taxed like normal bags
 - 328 bags per capita (2002)
 - 31 bags per capita and rising (2006)
 - Relatively simple implementation
 - Temporary Reductions?
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Bangladeshi Plastic Bag Ban

- Prior to ban
 - High Consumption (9 million bags daily)
 - High Litter Rate
 - Result: Catastrophic flood
 - Manufacturing & Usage Ban (2002)
 - Implemented in phases
 - May result in public unrest
 - May pose new problems
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Chinese Free Plastic Bag Ban

- To be implemented on June 1st, 2008
 - Retailers must charge for bags
 - Price must be clearly labeled
 - Plastic Bags not permitted on public transport
 - Ease of Implementation: Unknown
 - Bag Reduction: Unknown
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Conclusion

Inconclusive



Resources

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