

Reducing Polyethylene Usage

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Polyethylene is a thermoplastic with various applications such as bags, film, plastic wrap and more [1]. Plastic materials such as plastic bags were found in the guts of 177 marine species [2]. A leatherback turtle was found dead with 57kg of plastic bags in its innards (1998) and a Minke whale was similarly found dead with 800kg of plastic bags (2002) [2].

The Australian Government is taking action of the plastic bag problem through consumer awareness, and various levy-free initiatives [3]. In 2002, it was found that 6.9 billion plastic bags are consumed annually in Australia [4]. 96% of such bags ended up in landfills, 3% were recycled, 0.8% littered [4]. In 2002, HDPE bag usage per capita was 303 bags for a total of 5.95 billion bags [5]. By 2005, the per capita usage of HDPE bags decreased to 192 bags for a total 3.92 billion bags [5].

In Ireland, a plastic bag levy of 15 cents per bag was passed in December 2001 [6] and introduced in March 2002 [7] to address a litter problem where plastic bags accounted for 5% of litter [7]. Overnight, estimated plastic bag usage dropped from 328 bags per capita to 21 bags [7]. However, in 2006 the per capita usage rose to 31 [7]. In an attempt to curb plastic bag usage, the levy was increased to 22 cents effective July 2007 [7].

Various governments recognize the plastic bag issue. In 2002, South Africa was looking to a levy similar to Ireland's; Denmark and Italy have a tax absorbed into consumer products; while, Bangladesh and Taiwan introduced bans on the manufacturing and distribution of plastic bags [4].

References

[1] Microsoft® Encarta® Online Encyclopedia (2007) **Major Plastic Materials**

[Online] Accessed 18 Nov 2007. Available:

http://encarta.msn.com/media_461541376/Major_Plastic_Materials.html

This is a table of properties and common uses of various polymers. The table clearly illustrates that polyethylene (PE) is used to make plastic bags.

[2] WWF-UK (2005) **Marine Groups support plastic bag levy to protect Sea Life**

[Online] Accessed 18 Nov 2007 Available:

http://www.wwf.org.uk/news/scotland/n_0000001646.asp

This article outlines the threat of plastic bags to the environment through several marine examples, such as the leatherback turtle and minke whale. The article concludes stating that it is due to the mobility of plastic bags that causes littered bags to move from the location in which it was littered and into the habitats of wildlife.

[3] Department of the Environment and Water Resources, Australian Government (2007)

Action being taken on plastic bag problem [Online] Accessed 18 Nov 2007 Available:

<http://www.environment.gov.au/settlements/waste/plastic-bags/action.html>

This article outlines how the Department of the Environment and Water Resources in Australia plans to tackle the plastic bag problem. Such measures include the setting of goals, various standards, and a Code of Practice for Retailers. In addition, the department supports Clean Up Australia in undertaking the public awareness campaign, Bag Yourself a Better Environment.

[4] Nolan-ITU Pty Ltd (Dec 2002) **Plastic Shopping Bags – Analysis of Levies and Environmental Impacts** [Online] pp. I. Accessed 18 Nov 2007 Available: <http://www.environment.gov.au/settlements/publications/waste/plastic-bags/pubs/analysis.pdf>

This is the executive summary of a plastic shopping bags analysis. It outlines Australia-specific statistics on the use of plastic shopping bags. In addition, it provides some information on what actions other countries have taken to address the plastic bag issue.

[5] Peter Allan, Hyder Consulting Pty Ltd (2005) **Plastic Retail Carry Bag Use 2002 – 2005 Consumption** [Online] pp. 1. Accessed 18 Nov 2007 Available: <http://www.environment.gov.au/settlements/publications/waste/plastic-bags/pubs/report-2005.pdf>

This is the executive summary of a plastic bag usage report. It outlines Australia's yearly progress since 2002 on the plastic bag issue through statistics presented in the form of tables. Between 2002 and 2005, Australia's plastic bag usage decreased.

[6] Irish Statute Book, Office of the Attorney General (2001) **Waste Management (Environmental Levy) (Plastic Bag) Regulations, 2001** [Online] Accessed 18 Nov 2007 Available: <http://www.irishstatutebook.ie/2001/en/si/0605.html>

This is the legislation on the Plastic Bag Levy in Ireland. This document outlines the amount of the levy, exceptions, the collection method, and more. The levy is 15 euro cents per plastic bag.

[7] Department of the Environment, Heritage & Local Government, Ireland (2007)

Plastic Bags [Online] Accessed 18 Nov 2007 Available:

<http://www.environ.ie/en/Environment/Waste/PlasticBags/>

This article announces an increase on the Irish Plastic Bag Levy. In addition, it provides background information regarding the levy as well as statistics. These statistics show that the levy was initially successful on reducing litter and usage; however in 2006, plastic bag usage was on the rise once more.