

Application of zero waste index as an alternative performance assessment tool: the context of Adelaide

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Abstract

Adelaide, South Australia is one of the high-consuming cities of the world that has developed and implemented a zero waste strategy to achieve optimum resource recovery from waste. Many similar cities are adopting a zero waste strategy with a 100% rate of diversion of waste from landfill as a key goal. This study argues that achieving a 100% diversion rate will not be adequate and does not reflect the core concept of zero waste philosophy. In a previous study, the zero waste index was presented as an alternative waste management performance assessment tool for zero waste management systems. In this study, waste management performance in Adelaide during the years 2003 to 2010 is analysed using the proposed zero waste index tool and Adelaide's performance in waste management in 2015 and 2020 is predicted. The study indicates that waste composting is increasing significantly in Adelaide and, by the year 2015, the amount of waste composted should be higher than the amount of waste going to landfill. For this reason biological waste treatment infrastructure, particularly in waste composting facilities, should be stimulated in Adelaide. In addition, the study identifies that, despite the zero waste strategy being in place, overall waste management performance in Adelaide may not reach the targeted zero waste goals, particularly in optimum resource recovery from waste. The projected results indicate that by 2020, if similar waste diversion rates continue, Adelaide should have reached a diversion rate of over 82% of municipal solid waste from landfill; and the zero waste index would then be 0.45 (increasing from its current 0.41 (with a 72% diversion rate). The study identified the most important priority areas for future waste management strategies in Adelaide.

Keywords: *Waste Management, Performance Assessment, Zero Waste Strategy, Zero Waste Index*