Extending the Waste Input Output Model to behavioural change: the case of municipal food waste in South Australia

Topic: IO and MFA
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Australian households are throwing out more than $5 billion worth of food each year, with over 40% of household food wasted. The creation, transport and disposal of this non consumed food constitutes a needless waste of resources and energy. Public education campaigns are run by government agencies in an attempt to reduce this wastage. These campaigns often lack the formal quantitative verification required to provide economic and environmental impact.

This paper explores the extent to which the Waste Input-Output model (WI/O) can be extended to provide the solution to this lack of quantification. Enabling an economic and environmental assessment of the effectiveness of waste education to take place. These modifications primarily include adapting the waste allocation matrix to include influences from psychological behavioural change models to gauge the reallocation of waste due to household behaviour change.

Informing the creation of this behavioural change based extension of the WI/O model is the case study of a 2010 South Australian local council program to provide a new food waste education and collection trial to further enhance municipal food waste collection.

Keywords: Municipal food waste, consumer behaviour change, Waste Input Output