

# Researchers find 3 types of food wasters. Which one are you?

October 13 2023, by Trang Nguyen and Patrick O'Connor

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Credit: AI-generated image ([disclaimer](#))

Each year, Australian households discard about [2.5 million metric tons of food](#). Most (73%) of this food waste [ends up in landfill](#).

This is costly and contributes to [escalating greenhouse gas emissions](#), because food waste rotting in landfill produces methane. So reducing

household food waste and diverting it from landfill saves money, improves [food security](#) and benefits the environment.

To address the problem, we need to understand how people generate and dispose of food waste. In [our new study](#), we found households fell into three categories—based on the amount of food wasted, how much of that waste was avoidable and how it was sorted. These insights into consumer behavior point to where the most worthwhile improvements can be made.

## Three types of households

We conducted an [online survey](#) of 939 households in metropolitan Adelaide between April and May 2021.

The sample closely matched the national Australian population in terms of gender, age and income.

We asked about the types of food waste produced, the amount of food waste typically discarded in a week and motivations towards reducing and sorting food waste.

We identified three distinct types of households:

**Warriors** are typically older and highly motivated to reduce and sort food waste. They generate minimal waste (9.6 liters per week), such as bones and vegetable peels, that is mostly unavoidable. This group comprised 39.6% of the sample.

**Strugglers** mainly consist of families with children who produce the largest amount of food waste (33.1 liters per week). They produce the highest proportion of avoidable food waste, such as uneaten fruits and vegetables, bread and cereals. They are moderately motivated to reduce

and sort food waste, but more than half of their food waste still ends up in landfill. This group made up 19.6% of the sample.

**Slackers** are generally younger. They show little concern about reducing or sorting food waste. Slackers produce the smallest amount of food waste overall (9 liters a week), but the proportion of avoidable food waste (such as mixed leftovers) is significantly higher (38.9%) compared to warriors (24.5%). They are more than twice as likely to live in units, with 17.2% doing so, compared to just 7.8% of warriors. This group was 40.8% of the sample.

### **What can households do about their food waste?**

Reducing household food waste involves changing behaviors in both food management ("upstream") and waste management ("downstream").

Upstream measures aim to prevent food waste in the first place. For example, households can avoid buying or cooking too much food. Supporting households to plan and buy just the right amount of food is a great starting point.

Once food waste has been produced, downstream measures come into play. The focus shifts to how we handle and dispose of this waste.

When households engage in food waste recycling they [start thinking more](#) about their behavior including purchasing and cooking.

In Australia, food waste management is mainly the responsibility of local councils.

There are three ways to target household food waste management and drive behavioral change:

- providing kerbside collection of food organics and garden organics, also known as "FOGO"
- changing social norms around food waste
- offering [economic incentives](#) and disincentives.

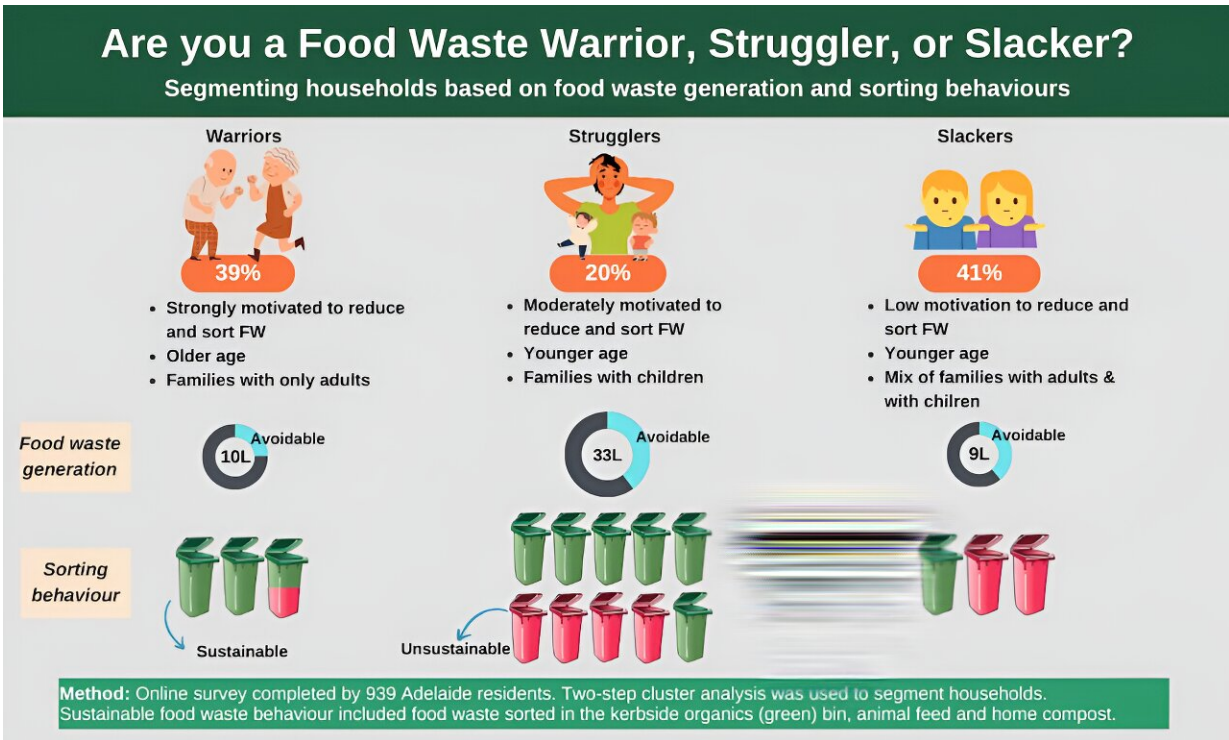
## 1. Providing a FOGO system

Councils should provide this option at a minimum. This ensures sufficient infrastructure is available to support motivated households to sort food waste.

Unfortunately [fewer than half of Australian councils](#) provide a garden organics system and only a quarter of councils provide a FOGO system.

You can explore [the FOGO interactive map](#) to see how your area stacks up.

[Most councils in metropolitan Adelaide](#) provide access to food waste recycling through the FOGO bin. But [our research](#) indicates more than half of household food waste still ends up in landfill. So we need additional programs to promote more sustainable behaviors.



The three types of households with their typical characteristics and food waste behaviours. Credit: [Trang Nguyen using Canva.com](#), [CC BY-NC-ND](#)

## 2. Changing social norms

Social norms, the unspoken rules about what behaviors are deemed appropriate, can drive behavioral change.

Examples of promoting [social norms](#) around food waste reduction include a [nationwide consumer campaign](#) on stopping food waste and the [kitchen caddy](#) for benches to increase convenience for collecting food waste.

But our research suggests some groups, like slackers, remain unmotivated without additional incentives. Economic incentives might

motivate this group to engage in more sustainable behaviors.

### 3. Economic incentives

Currently, Australians pay for waste management through their council rates. This is a "pay-as-you-own" system.

The cost is determined by the property's value, regardless of the amount of waste generated. Renters indirectly contribute to this cost by paying rent.

Neither owner-occupiers nor renters have any incentive to reduce waste generation when the cost is levied on property value rather than the amount of waste.

An alternative approach gaining momentum in other parts of the world is the "pay-as-you-throw" approach, such as [Stockholm](#) and [Taipei](#). This system charges households based on the weight of their waste, usually the general waste that needs to be discarded in landfill, while the collection of food waste and other recyclables remains free to encourage waste sorting.

Recent [research](#) in Italy shows pay-as-you-throw schemes result in significant reductions in both the quantity of waste and costs associated with waste disposal in many Italian municipalities.

The reduced costs flow on to savings for councils that could potentially reduce [waste management](#) fees passed on to homeowners and renters through council rates. Giving households incentives to reduce waste and find alternatives to disposal encourages residents to place a higher value on food that may otherwise be sent to landfill.

## Reducing food waste is a win-win

Tackling food [waste](#) is a win-win for people and the planet. It's worth using various approaches to encourage people to change their behavior.

Our findings can help inform the design of interventions aimed at reducing and sorting [food waste](#) in specific segments of the Australian population.

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