



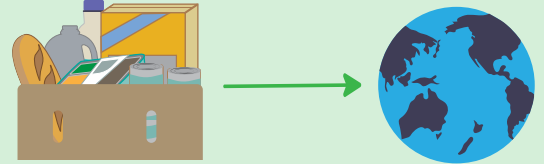
# Food Rescue Calculations

*These calculations have been adopted by the Aotearoa Food Rescue Alliance (AFRA) as best estimates for food rescue use at this point in time. They have come from a variety of sources and have been consulted on with sector experts. As further information is gathered they may change in the future.*

## Climate

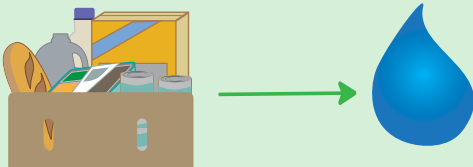
Calculating emissions is complex and product and geographic location specific. There is a range of CO<sub>2</sub> estimates for rescued food from a variety of sources. The most common figure and average in the range is 2.65 kg of carbon avoided from every 1kg of food rescued (less any wastage). In NZ, complete supply chain emissions have only been calculated for certain products but WRAP in the UK has conducted a more in-depth analysis.

For every 1kg of food rescued



**2.65kg of CO<sub>2</sub>e is prevented**

For every 1kg of food rescued



**830 litres of water is saved**

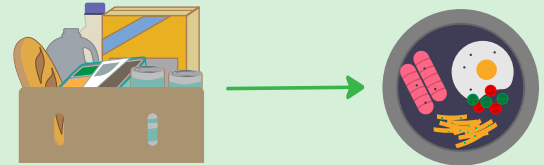
## Water

While there are no statistics for water consumption of food, based on international examples, 830 litres of water saved for every kilogram of food rescued is a conservative calculation. This figure is based on conversations with AFRA ReFed, a US-based non-profit that works to eliminate food waste through evidence-based collaboration. 830 litres of water is the equivalent of 13 showers.

## Meals

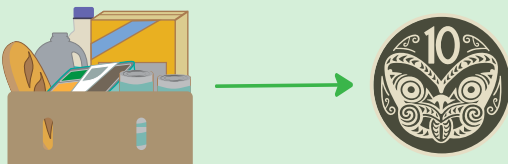
This calculation has become the de facto standard used by many food rescue groups and the Ministry of Social Development. One meal is equivalent to 0.350 grams of packaged or unpackaged food, this means for every 1kg of rescued food, 2.86 meals are created.

For every 1kg of food rescued



**2.86 meals are created**

For every 1kg of food rescued



**\$7.49 retail value of food is saved**

## Retail

This calculation is based on a Ministry for Social Development figure, that a meal costs \$2.57. This is based on a \$216 weekly cost of basic food for a family of four in Auckland in 2019. This works out at \$2.57 per meal. This translates to 1kg of rescued food equals \$7.35. This is similar to WasteMINZ's National Food Waste Audits in 2018.

It is important to note that this is retail value – the actual value of the food may be considered less due to reduced quality. As we do not have a way to calculate that, we are recommending using and noting this as a retail figure.

## But what about the cost of operating a food rescue?

The cost for a food rescue organisation in rescuing and distributing 1kg of food is estimated to be between 0.89c to \$1.86.

This means that food rescue organisations are tackling two major issues (environmental and social) at a considerable value for money.

*The average food rescue cost is \$1.38  
Meaning a net benefit of \$6.11 for  
every kg of food rescued.*