

Ecological or carbon footprint calculators provide a tool to calculate deemed savings based on answers to a set of questions. Theoretically, a footprint calculator can be used to evaluate a participant's footprint before and after an intervention.

The ecological footprint calculator provides an aggregate measure of environmental impact based on a set of limited questions which do not reflect the small step changes most behaviour change interventions target.

The [Victorian Environment Protection Authority Ecological Footprint Calculator](#) is widely used as an awareness raising tool. The questions asked to calculate a personal footprint are outlined below:

- Frequency of eating animal based products
- Consumption of processed foods
- Amount of waste generated
- Number of people living at the home
- Size of home
- Type of home (including whether it has running, or town, water)
- Whether there is electricity to the home, and whether it is from a renewable source
- Use of public transport
- Use of motorbike
- Use of car
- Fuel consumption of car
- Amount of car-pooling (or driving with passengers)
- Hours spent flying in a year

There are a number of constraints that impede the use of this method for most projects or interventions. Firstly, it is important to be aware of what actions an ecological footprint calculator bases its calculations. A calculator will only be of use if the intervention targets the actions or behaviours that are being calculated. For example, the EPA Victorian personal ecological footprint calculator measures a person's footprint from questions such as how much animal product a person consumes, the amount of food that is processed, packaged or imported, the type of housing, and the amount of flights taken annually. Unless an intervention has a focus on changing the behaviours that are measured by the calculator (as opposed to behaviours that are not measured, such as shorter showers, changing lights, draught-stopping), the calculator will not be of use, and if it is used, it may indicate that a person's actions have not led to a lower footprint, which could lead to a person thinking "why bother to change".

For example, all other questions being answered the same; the difference between having coal-powered electricity compared to renewable electricity brings a difference of 0.2 global hectares, or 0.1 of a planet. Yet, if a person were to make such a positive behaviour change, but at the same time record an increase in flying, for example from less than 3 hours per year, to 3-10 hours per year, their footprint would increase by 0.3 global hectares (the calculator however does not consider flight offsets). As such, use of the ecological footprint as an evaluation method may be best used for behaviour change projects that specifically target all, or a significant component, of the variables covered by the eco-footprint calculator.

Alternatively, if you do use the ecological footprint calculator but have a project that covers a range of other behaviours, it is recommended to complement it by other evaluation methods that identify what exact behaviours people have undertaken or changed, such as surveys or stories of change.

The use of the eco-footprint as an awareness raising tool for sustainability has been demonstrated to be of great benefit but its use as a method of evaluating behaviour change is questionable, especially when the focus of behaviour change interventions don't match the questions asked in eco-footprint questionnaires. Using the eco-footprint to evaluate small step changes poses the risk of disillusioning participants into thinking that their behaviour change has had no great outcome. Recognising the limits of the eco-footprint, Vox Bandicoot, as part of their Sustainability Street program, have developed an '[eco-fingerprint](#)' tool to measure the impact of future changes in behaviour.

The [Moreland Energy Foundation](#) has also developed a carbon footprint calculator as part of the [Zero Carbon Moreland](#) project. The project aims to have 20% reduction in participants' carbon footprints. The project guides participants through a number of large actions (solar hot water, solar electricity) as well as smaller actions, which provide a means to obtain the significant reduction in footprint.