



## **ORGANISATION CARBON FOOTPRINTS**

This guide will give you a brief explanation of carbon footprints for organisations, and how they can help you to reduce your climate change impact. It also describes the methodology that Cool World Consulting uses to calculate carbon footprints.

# 1 INTRODUCTION TO ORGANISATION CARBON FOOTPRINTS

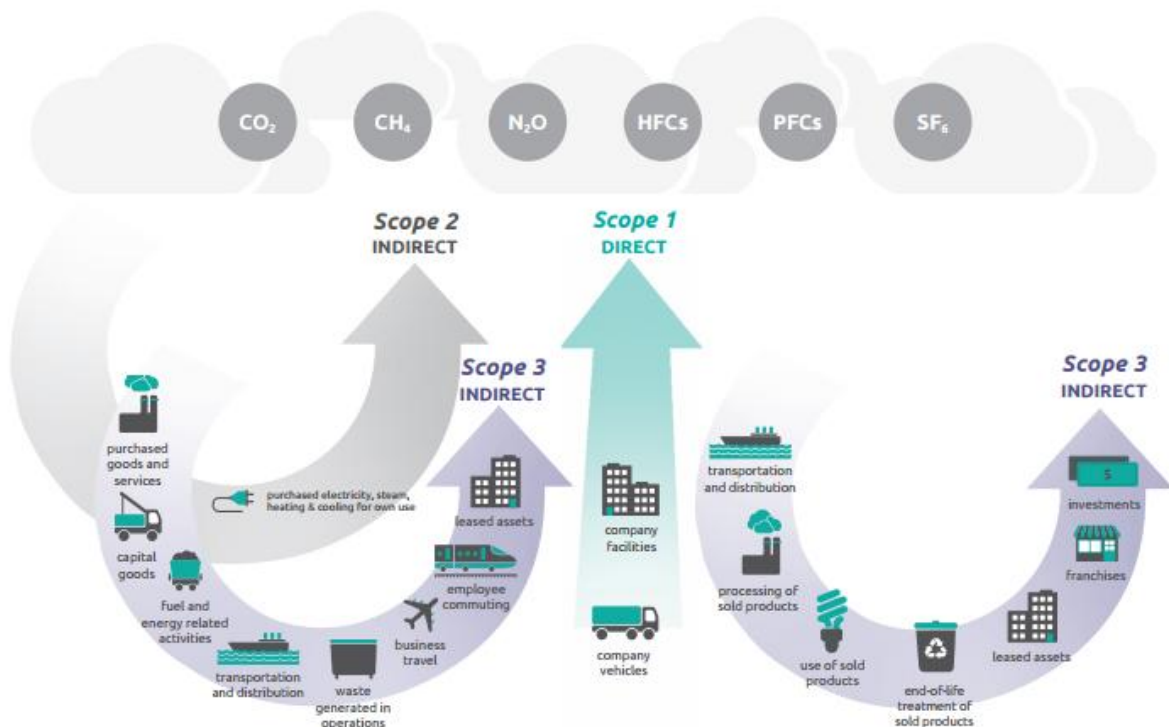
## 1.1 What is a carbon footprint?

An organisation carbon footprint is the calculation of the greenhouse gases that are emitted as a result of an organisation's operations. Some greenhouse gases are more potent than others, so each greenhouse gas has a different weighting, known as global warming potential. The total footprint is measured in terms of the kilos of carbon dioxide equivalent of all the greenhouse gases in a given year.

## 1.2 Organisational boundaries

The diagram below illustrates how organisation emissions are categorised. Scope 1 emissions (the use of energy for buildings and vehicles owned by the company) must be included in the assessment. Scope 2 and 3 emissions should also be included in order to get a full picture of the impact of the organisation's operations, and to help identify where efforts should be concentrated on emission reductions. If greenhouse gas reporting is not mandatory, the organisation can choose which emissions to include in the assessment.

Figure [1.1] Overview of GHG Protocol scopes and emissions across the value chain



### 1.3 Why measure an organisation's carbon footprint?

Carbon footprint assessments have many benefits, and different organisations do them for different reasons. It could help you to understand:

- How your organisation contributes to global emissions;
- Which elements of your organisation are the biggest causes of emissions; and
- Which options are available for reducing emissions.

And it's good for business. It could help you to:

- Identify cost saving opportunities;
- Understand and manage greenhouse gas risks associated with your business;
- Create market differentiation and enhance your brand;
- Meet consumer demand - committing to emissions reduction can help attract new business and improve customer satisfaction; and
- Achieve compliance with environmental legislation.

### 1.4 Other environmental impacts

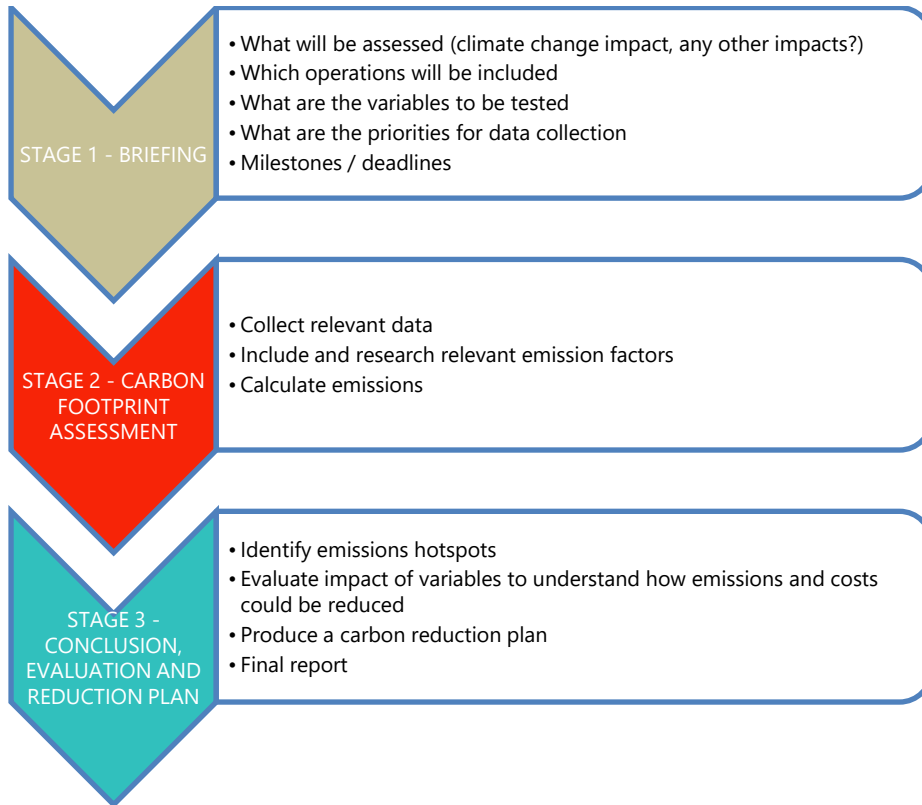
**Air pollution** is a major environmental risk to health. The average reduction in life expectancy of UK residents as a result of long-term exposure to air pollutants is now six months. Worldwide it was estimated to have caused 3.7million premature deaths in 2012.

Around 70% of the key pollutants come from transport. It is therefore advisable for organisations to also assess their impact on air quality (and human health), as well as climate change impact – especially for those organisations whose operations involve transporting goods.

As has been proven in recent research, attempts made to lower carbon emissions (such as by promoting the use of diesel vehicles instead of petrol) can sometimes have adverse impacts on human health (diesel has a worse impact on human health than petrol). It is important therefore to take air quality into consideration when putting together a carbon reduction plan.

## 2 METHODOLOGY

We propose that projects are broken down into three stages.



### 2.1 What information will I need to supply?

You will need to:

1. Decide what you want to measure (just brewery emissions, the whole life of bottled beer).
2. Provide quantities of inputs (e.g. malt, hops, electricity for brewing) and outputs (e.g. spent grain, beer). Also provide either fuel use data or average distance travelled for distribution.
3. Provide other information, such as where the inputs are sourced from, and how they are transported to your brewery.

## 2.2 What will CWC do?

CWC will then calculate the inputs and outputs per hectolitre of beer, and input this data into the carbon calculator. The calculator multiplies the inputs, outputs and travel data by specific emission factors, to give a total carbon footprint per product. CWC will then analyse the findings.

CWC will assess what impact potential changes to processes and materials could have on the carbon footprint. Based on the findings, CWC will work with the client to develop a carbon management plan / sustainability strategy.