

Carbon Footprint Background

Carbon Footprinting is the estimate of the amount of emissions of Greenhouse Gases (GHG) that is directly and indirectly caused by an activity or accumulated over the life stages of a product expressed as carbon dioxide equivalent (CO₂ e).

Greenhouse Gases are atmospheric gases that contributes to the greenhouse effect. There are six primary categories of greenhouse gases: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and sulphur hexafluoride (SF₆). When emitted in large quantities, they contribute to climate change.

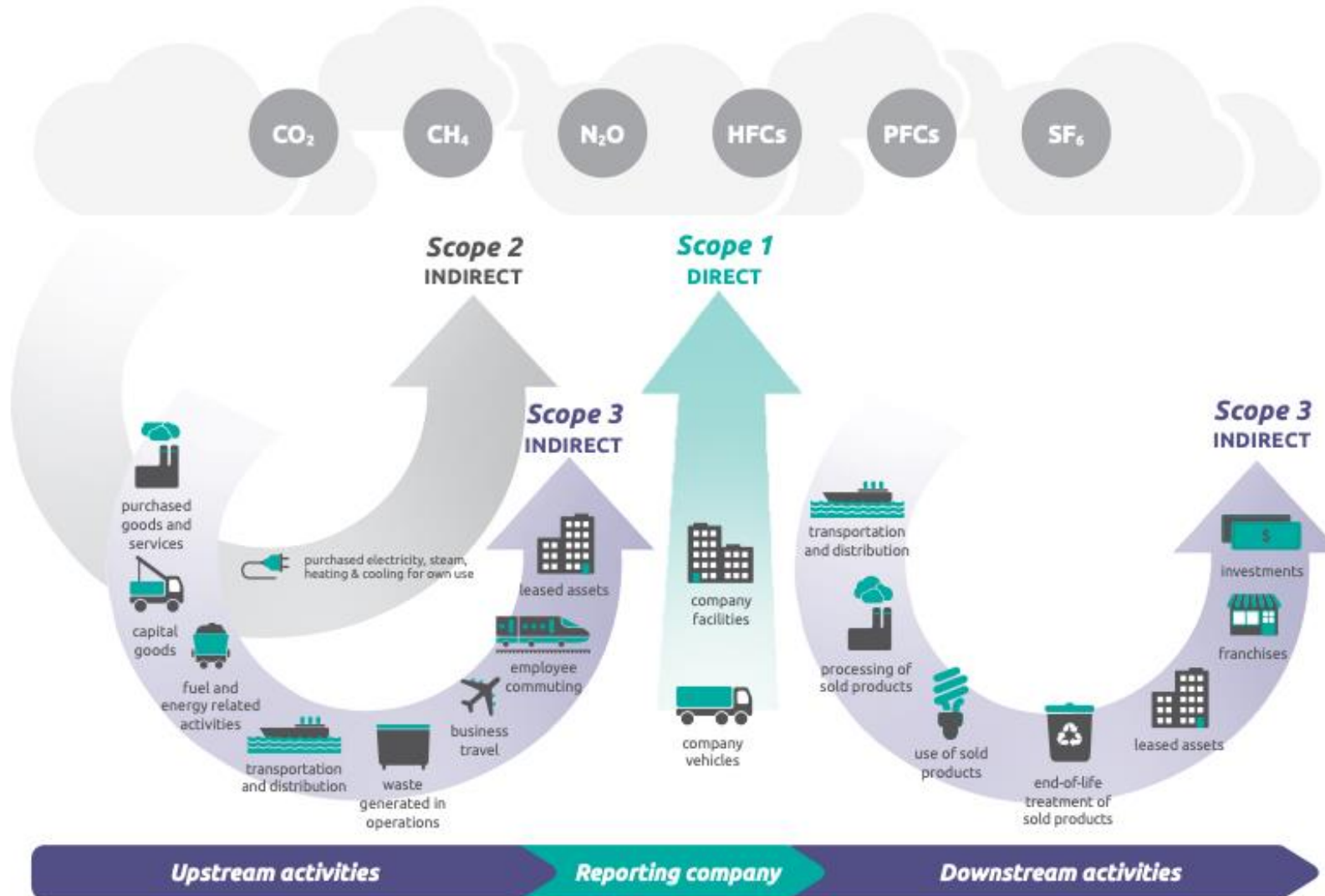
It is important that the whole chain is included in any footprint which captures the company use of fossil fuels, but also the other emissions are not carried out at the company e.g., production of fertilisers or pesticides. The components of the footprint are made up of 3 scopes.

Scope 1 emissions— This one covers the Greenhouse Gas (GHG) emissions that a company makes directly — for example while running its boilers and vehicles.

Scope 2 emissions — These are the emissions it makes indirectly – like when the electricity or energy it buys for heating and cooling buildings, is being produced on its behalf.

Scope 3 emissions — In this category go all the emissions associated, not with the company itself, but that the organisation is indirectly responsible for, up and down its value chain. For example, from buying products from its suppliers, and from its products when customers use them. Emissions-wise, Scope 3 is nearly always the big one.

The diagram on the next page shows this in more detail.



More detail on carbon footprinting can be found in the GHG-Protocol Standard - The Product Life Cycle Accounting and Reporting Standard <https://ghgprotocol.org/product-standard>.

Industry-wide methodologies should be followed. An example of this is the FloriPEF-CR.

For producers and traders supplying into Europe and GB the FloriPEF-CR standard provides clear guidelines for an environmental footprinting in floriculture. This covers other topics than carbon footprinting like water and biodiversity, but the carbon aspect can be calculated alone. Companies like MPS, PRé Sustainability and Blonk have been involved in the steering group. Any company used to assist in the calculation should be able to confirm their compliance to FloriPEF-CR where possible. For more details on FloriPEF-CR see <https://www.wur.nl/en/project/developing-product-environmental-footprint-category-rules-for-floriculture.htm>

Producers supplying other markets should identify if there are any industry-wide standards which are applicable for flowers.

To calculate the carbon footprint per stem/ finished plant/ plant (e.g., cutting) simply divide the company footprint by the number of stems produced. At the simplest level only one number is required per company, although it is possible to calculate at a more detailed footprint for different product types if you wish to.