LODHA & CO

THE CARBON FOOTPRINTING: A CONCEPTUAL FRAMEWORK 2022

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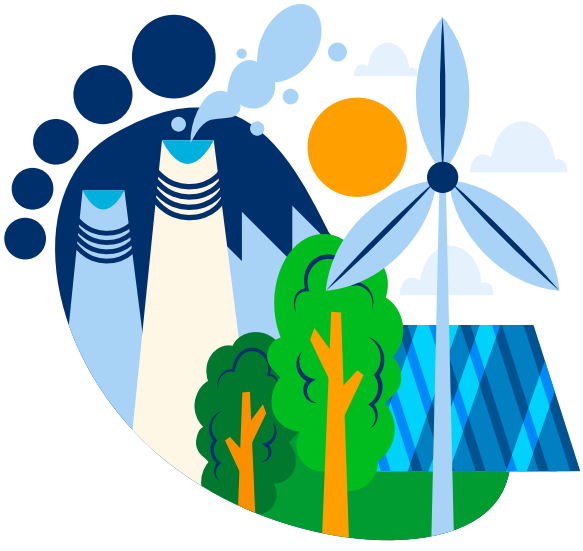
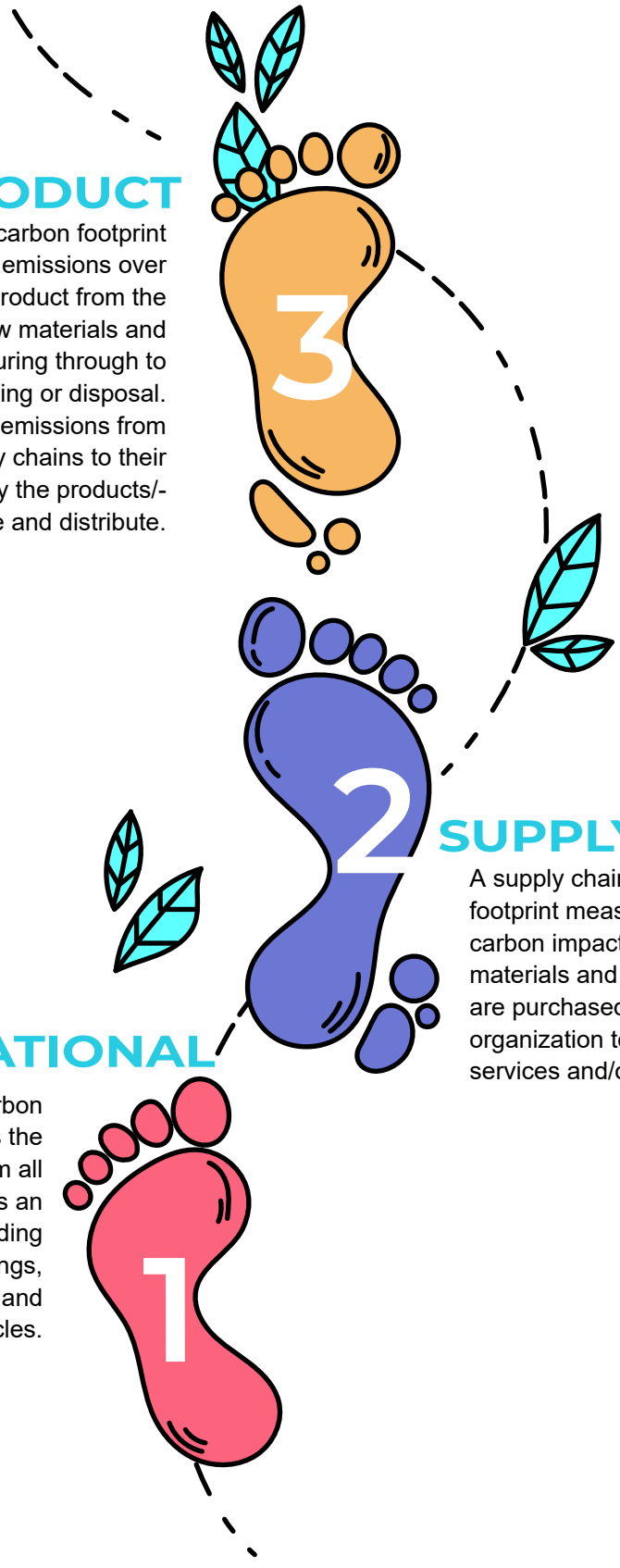
WHAT IS CARBON FOOTPRINT?

The term Carbon footprint is used to denote the full extent of direct or indirect carbon emissions which is released into the environment by anthropogenic activities. The Carbon Footprint (CF) is a method used to quantify the amount of greenhouse gas emissions associated with Company (Corporate Carbon Footprint, CCF) or with the lifecycle of an activity or a product/service (Product Carbon Footprint, PCF) in order to determine its contribution to climate change. A carbon footprint of the individual, an organization or even an entire nation can be estimated. The climate change impact resulting from each activity is estimated by calculating the carbon footprint, which includes not just carbon dioxide but also methane and nitrous oxide. The GHG Protocol Corporate Accounting and Reporting Standard, which has been the first standard for estimating carbon footprint at organizational scale, helps organizations to identify, calculate, and report GHG emissions, providing specific guidelines for performing a GHG emission inventory at organizational scale. (Fullnana et al.,).

Companies need to quantify carbon emissions across their value chains including business operations, supply chains, product use and disposal. Financial institutions need to quantify carbon emissions linked to their capital allocation; it could be across companies in equity and debt portfolios or bank loan books, or investments in other asset classes such as infrastructure and real estate. (Portal, n.d.)





PRODUCT

A product's carbon footprint measures the GHG emissions over the whole life of a product from the extraction of raw materials and manufacturing through to its use, recycling or disposal. Compnies generate emissions from their supply chains to their operations and finally the products/-services they produce and distribute.

SUPPLY CHAIN

A supply chain carbon footprint measures the carbon impacts of the raw materials and services that are purchased by an organization to deliver its services and/or products.

ORGANIZATIONAL

An organizational carbon footprint measures the GHG emissions from all the activities across an organization, including energy used in buildings, industrial processes and company vehicles.

KEY STEPS IN CALCULATING AN ORGANIZATIONAL CARBON FOOTPRINT

01 Defining organizational boundaries:	The definition of the organizational boundaries depends on the characteristics of the organization and several aspects should be considered such as the organizational structure, geographic location and purpose of information
02 Defining operational boundaries:	The choice of the operational boundaries is also relevant because it determines which emission sources will be quantified such as Scope 1 and 2 (it should be included) and Scope 3 (not always included)
03 Estimating carbon footprint:	The carbon footprint is generally estimated by multiplying activity data by standard emissions factors. In some cases organizations may need to track emissions over time in order to identify their temporal advancements and a specific base year is selected.
04 Reporting the final achievement:	Finally, organizations develop reports to inform internal and external partners thus promoting actions addressed to mitigate GHG emissions at the organizational level

MORE THAN JUST CARBON FOOTPRINTING

Getting ahead of climate risk requires a detailed understanding of your carbon footprint and underlying sources of carbon emissions as well as forward looking metrics on your exposure to physical and transition climate risks.

When the idea of sustainable investing was born in the 1960s, it was a vehicle for supporting companies engaged in environmental and social good at a cost to their bottom line. Today, sustainability is measured in terms of environmental, social, and governance (ESG) issues, essentially a company's green footprint. Sustainable investing is now a major driver of capital and corporate priorities. In fact, many companies now consider ESG a key component of their brand protecting the planet, drawing investors, engaging employees, and engendering customer loyalty.

MORE THAN JUST CARBON FOOTPRINTING

ESG paves a path forward with vision and values. Announcing that your company will be carbonneutral by a certain date may sound good, but it's a massive undertaking that involves many moving parts and requires enormous investment. By taking ESG goals and translating them into actionable plans across the company, you can make continual progress that is assessable and attainable. Whether it's measuring carbon emissions, sourcing ethically produced materials, or managing the water usage in a manufacturing process, data on a broad range of metrics is captured, aggregated, and considered in ESG reporting. With the right platform and planning, businesses can shape the response to the climate crisis and build both experience with, and reputation for, good stewardship.

Climate and Net-Zero solutions help investors make their portfolios more resilient to the transition to a net-zero economy and overall effects of global warming.

Climate data and financial modeling capabilities across multiple asset classes helps investors in the following:

01 **Analytical tools for constructing, benchmarking and managing climate-aligned portfolios, setting net-zero targets and assessing impacts on valuations**

02 **Portfolio- and enterprise-level monitoring, management and reporting of carbon emissions and climate-related financial risks.**

Carbon metrics can be used alongside portfolio footprinting to provide investors with a more holistic understanding of their exposure to climate risks and opportunities. This is particularly useful for institutional investors, who have hundreds or thousands of holdings across portfolios, with different benchmarks, geographic exposure and investment styles, often run by different asset managers. (Climate and Net-Zero Solutions, n.d.)

PORTFOLIO CARBON FOOTPRINT

Portfolio carbon footprinting captures an investor's exposure to carbon emissions by quantifying the GHG emissions associated with a portfolio's underlying holdings and allows investors to quickly appraise large numbers of holdings for carbon emission 'hot spots' regardless of asset class, size, geography or portfolio style. As a result, it is often the first step investors take when beginning to address climate risk.
Initiatives such as the Montreal Pledge and advisory groups such as the High-Level Commission on Carbon Pricing, the High-Level Expert Group on Sustainable Finance and the Financial Sustainability Board's Task Force on Climate Related Financial Disclosures (TCFD) are all pushing for greater transparency and strongly support carbon footprinting.

The increased demand for portfolio carbon footprinting and the lack of clear established standards have led to the emergence of several methodologies, sometimes with the same name but using different methodologies.

The four metrics highlighted below are the most widely adopted and well-defined by the TCFD:

1.	**Weighted Average Carbon Intensity**
2.	**Total Carbon Emissions**
3.	**Carbon Emissions to Value Invested**
4.	**Carbon Emissions to Revenue Intensity**

The most appropriate methodology to calculate a portfolio's carbon footprint depends on the particular question an investor wants to answer. The following descriptions can help investors discern the specific intent of each carbon footprinting approach. ("Carbon Footprinting: An Investor Toolkit," n.d.)

CONCLUSION

By calculating a portfolio's carbon footprint, you can assess it against international standards, pinpoint the best places to focus your efforts on cutting emissions, and monitor your progress. There are disclaimers that alternative estimating approaches exist and that carbon footprinting is not yet accessible for unlisted assets or for scope 3 emissions. However, investors who have already assessed the carbon footprint of their holdings claim that doing so helps them better understand the risks and opportunities that climate change poses to their portfolios, enablesthem to respond to stakeholder inquiries about the issue, and enables them to publicly show their commitment to combating it.

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