LINDT & SPRÜNGLI

Lindt & Sprüngli Corporate Carbon Footprint 2020: Methodology

Kilchberg, 2022
Valid for: Lindt & Sprüngli Group | Contact: media@lindt.com

To better understand our climate impact, we partnered with third-party experts and employees across functions and subsidiaries to develop our first complete carbon footprint in line with the GHG Protocol corporate standard. This carbon footprint covers our Scopes 1, 2, and 3 emissions for the year 2020 and was externally assured by an independent assurance practitioner.

Methodology

- The Lindt & Sprüngli Corporate Carbon Footprint 2020 is aligned with the **GHG Protocol** standard to account for corporate GHG emissions.

- **Organizational structure and boundaries:** The operational control approach is used to set the organizational boundaries for the Lindt & Sprüngli corporate footprint. Lindt & Sprüngli produces quality chocolates at its 12 factories in Europe and the USA. Its products are sold by 28 subsidiaries and regional offices, in around 500 of its own shops, as well as via a network of more than 100 independent distributors around the globe.

- **Coverage of Scopes 1, 2, and 3:** Full coverage of greenhouse gas (GHG) emissions in Scopes 1 and 2 (market-based) and Scope 3 (categories 3.1-3.12). The GHG emissions related to the energy consumption of Upstream leased assets (3.8), such as Lindt & Sprüngli stores, are included in Scopes 1 and 2. Downstream leased assets (3.13), Franchises (3.14), and Investments (3.15) are excluded from the Scope 3 assessment, as they are either covered in Scopes 1 and 2, not applicable for Lindt & Sprüngli Group or not required by the GHG Protocol corporate standard.

- **Global Warming Potential (GWP):** All 7 GHGs defined by the Kyoto Protocol are included in this calculation, among others. We applied the most widely used impact method from the Intergovernmental Panel on Climate Change (IPCC, 2013), as suggested by the EU PEF initiative.

- **Continuous improvement of data quality**: GHG quantification is subject to uncertainty as the activity data is partially based on estimates and GHG emission factors are mainly derived from secondary sources. We strive to improve the methodology and availability of primary data over time and will incorporate changes as needed.

Scope 1+2

- This category includes direct GHG emissions from stationary combustion emissions, mobile combustion emissions, and fugitive emissions (Scope 1) and GHG emissions related to the generation of acquired and consumed electricity, steam, heat, or cooling (Scope 2).

- We use primary data on fuel, electricity, heat, and, if available, refrigerant use at our manufacturing sites. For Lindt & Sprüngli stores, certain warehouses, and the operation of leased vehicles, energy consumption is estimated due to a lack of primary data available for 2020.

Chocoladefabriken Lindt & Sprüngli AG | Seestrasse 204 | CH-8802 Kilchberg
T +41 44 716 22 33 | www.lindt-spruengli.com | media@lindt.com

- More than 95% of our Scope 1 and 2 emissions are covered. Scope 1 and 2 emissions for manufacturing sites are fully covered, while the Scope 1 emissions (heating) of some warehouses and stores are currently excluded due to lack of primary data.

- A market-based accounting approach is used as per the GHG Protocol Scope 2 Guidance to calculate the GHG emissions related to electricity use.

- Default CO_2 emissions factors for fuels are taken from DEFRA and country-specific sources for the residual electricity mixes.

Scope 3

- **Cocoa and non-cocoa ingredients:** GHG emissions related to purchasing cocoa and non-cocoa ingredients (category 3.1) are modeled based on the average-data method according to the GHG Protocol. The activity data considers the type and volume of a raw material purchased, along with information about the sourcing country. The emission factors are derived from secondary process databases such as ecoinvent v3.7 and WFLDB, as supplier-specific emission factors are currently not available. The carbon footprint of agricultural crops and commodities can vary significantly depending on farming practices, deforestation patterns, transport, and processing, among other parameters, and consequently the use of average data instead of supplier-specific data might significantly underestimate or overestimate the actual carbon footprint.

- **Land use change accounting:** Given the prevalence of deforestation in cocoa origin countries and cocoa's significance to our business, we have conducted a detailed assessment of land-use change (LUC) emissions for cocoa. For several years, we have been mapping cocoa farms in our supply chain to improve traceability and support our biodiversity and no-deforestation actions. With expert support, we analyzed satellite imagery of those cocoa bean farm locations from the last 20 years to evaluate the scale of tree cover loss and more accurately calculate land-use change emissions in our supply chain. We have used well recognized and publicly available tree cover loss data from Global Forest Watch (GFW). The carbon contained in the aboveground biomass (AGB), belowground biomass (BGB), and dead organic matter (DOM) of forests and cocoa plantations was considered. Linear discounting (as referenced in the GHG Protocol draft guidance for "Carbon Removal and Land Use") is used to distribute the impacts over time. Average yield figures for each cocoa sourcing region were used to calculate the LUC emissions per kg of cocoa bean sourced. The yield figures were based on supplier-specific information when available, otherwise generic values were used from the Food and Agriculture Organization Corporate Statistical Database (FAOSTAT). Statistical land-use change (sLUC) values were used for conventional cocoa butter and mass as well as for non-cocoa ingredients, given the limited traceability.

- **Manufacturing:** Scope 3 GHG emissions related to manufacturing include the production of fuels and energy (3.3) and Waste generated in operations (3.5), both calculated based on the average-data method. Emissions from waste from non-manufacturing (e.g. stores) are marginal and were excluded due to lack of data. Indirect procurement (3.1), Capital goods (3.2), and Business travel (3.6) are

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considered using the spend-based method, where annual expenditures are multiplied by carbon intensity factors from environmentally-extended input-output (EEIO) data (US EEIO 2002). Employee commuting (3.7) is estimated based on number of employees (FTE) and average national data on commuting patterns. For this purpose the Quantis Commuting Model was applied.

- **Packaging:** The carbon footprint of producing packaging materials (3.1) is calculated considering the type, volume and share of recycled content of packaging sourced, and multiplied by the corresponding carbon intensity factor from ecoinvent v3.7.

- **Transport and Distribution:** This category includes the transport of purchased goods, intercompany transport (3.4) and the downstream transport all the way to the end consumer (3.9). The transport related emissions are based on the distance-based method, which involves determining the mass, distance, and mode of each shipment, then applying the appropriate mass-distance emission factor for the vehicle used.

- **Use:** The GHG emissions from using Lindt & Sprüngli products (3.11) are limited, as it is assumed that consumers typically store chocolate products at ambient temperature, and no mixing with other ingredients is required. Only a minor volume of final products, namely chocolate chips, which are typically melted by the consumer before use, show some indirect GHG emissions related to chocolate melting.

- **End-of-Life:** The GHG emissions from waste disposal and end-of-life treatment of products sold by Lindt & Sprüngli (3.12) include food waste and packaging. The amount of food waste is estimated based on total sales volumes, applying default loss rates for confectionery products at the retail and consumer stage taken from the European Union's Organisation Environmental Footprint Sector Rules (OEFSR) for Retail. The amount of packaging waste disposed of is assumed to be equal to the purchased packaging. It is geographically distributed over Lindt & Sprüngli's three main markets, namely Europe, North America, and the rest of the world, using shares of sales volumes per region. The treatment methods per material type are determined using waste statistics for the three regions.

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