

# PANGAIA Carbon Emissions Methodology, Assumptions & Exclusions

This document gives an overview of the methodology that we've used to determine our operational carbon footprint for 2020.

We wholeheartedly acknowledge that we have not captured all of our company's emissions this time around (a few reasons: this is our first attempt at collecting this data, COVID-19 restrictions and changes throughout the year have made determining our impact tricky, and we also switched office location in September), however we are working on expanding the scope of our reporting, as well as improving our data collection methodologies and aligning with best practice over the next year.

This sheet documents our carbon reporting methodology, including the main assumptions that we've had to make when calculating our emissions this year.

This year, we are accounting for a total of 313 tons of greenhouse gas emissions from both our business operations, which we have offset entirely through our partnership with [SeaTrees](#). We currently also plant, protect or restore one tree for every product purchased, and in 2021 we hope to be able to entirely offset our product footprint with verification.

Table 1: Glossary of Key Terms

Glossary of Key Terms	Definition
GHG	Greenhouse gas
GHGE	Greenhouse gas emissions
tCO <sub>2</sub> -eq	Tons of carbon dioxide equivalent. Used to describe various greenhouse gases in a common unit
Emissions Factor	Coefficient which allows conversion of activity data into equivalent greenhouse gas emissions
Scope 1	Direct emissions from owned or controlled sources
Scope 2	Indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed
Scope 3	All other indirect emissions within value chain
LCA	Life cycle assessment. Qualification of environmental impact across a product's entire life cycle
Cradle to Gate	Raw materials (Cradle) to factory gate (Gate)

## Scope & Boundaries for 2020



Table 2: Inclusion in 2020 Emissions Calculations

Scope	Activities Measured
Scope 1	Not Applicable
Scope 2	Electricity (Head Office) Electricity (Remote Working: Laptops and Lighting) Gas (Head Office)
Scope 3	Slack and Emails Website Packages Sent & Received (non-sale) Business Travel (Air, Rail, Car, Bus, and Hotel Stays) Commuting Travel (Bus, Car, Rail, Underground) Downstream Product Transportation from Warehouse to Customer (offset separately through DHL GoGreen)

Our research and development (R&D) and manufacturing facilities are excluded from scope as we're in the process of collecting data. We plan to report on this in 2021.

We accounted for emissions from both our offices and working from home, assuming that our office facilities remained operating throughout the year.

We're in the process of undertaking life cycle assessments of our products, to understand their true impacts. In the meantime, we've used estimations of impact and offset this separately to our operational footprint.

## Emissions Factors

- Electricity: UK [DEFRA](#) 2020 carbon intensity figures.
- Gas (Head Office): [gas provider](#) emissions factor, assuming non-renewable plan.
- Business & Commuter Transportation: UK [DEFRA](#) 2020 carbon intensity figures.
- Business Travel - Hotel Stays: UK [DEFRA](#) 2020 carbon intensity figures.
- Logistics: we use the emissions factor provided by DHL, our logistics partner.
- Packages Sent & Received (non-sale): [Retail Average](#) 3.68kg carbon.
- Emails: email calculator [tool](#).
- Slack (assumed similar to email): [1g CO2 per message](#).
- Website: web calculator [tool](#).

## Data

Data were collected through a variety of sources, including an Employee Carbon Survey (rolled out in September 2020), software analytics and conversations with our operational and logistical partners.

Table 3: Carbon Assessment Data Sources

Category	Data Source
Electricity (Head Office)	Direct meter readings
Electricity (Remote Working: Laptops and Lighting)	Estimation. Methodology <a href="#">here</a> .
Gas (Head Office)	Estimation: <a href="#">medium-size business</a> . Methodology <a href="#">here</a> .
Slack and Emails	Emails: Employee Survey Slack: App analytics
Website	<a href="#">Web Calculator</a>
Packages Sent & Received (non-sale)	Employee Survey
Business Travel (Air, Rail, Car, Bus, and Hotel Stays)	Employee Survey
Commuting Travel (Bus, Car, Rail, Underground)	Employee Survey
Downstream Product Transportation from Warehouse to Customer (offset separately through DHL Go Green)	DHL

Estimates were used for the month of December due to this report being released part-way through this month. For certain categories, November data was not yet available. To estimate for November and December, we worked out the portion of emissions per employee across each impact category measured for the previous month and multiplied this by the total number of employees during the month being calculated.

We moved our Head Office to a larger space in September. We calculated monthly electricity usage for our new office space, based on October's and November's meter readings and extrapolated this back through to January, in the absence of data from our previous location. We also used this data to estimate for December.

Downstream transportation (warehouse to customer) emissions data is provided to us through our logistics provider, DHL. This is based on our actual delivery data and currently captures January 2020 – November 2020 at 4846.24 tCO<sub>2</sub>-eq. We will update this figure at the start of 2021 to reflect the entire 2020 calendar year.

## **Product Life Cycle Assessment**

We've undertaken cradle-to-gate LCAs of our core collections with GreenStory, with the aim to expand this across our collections throughout 2021. The LCA's we have completed account for 66% of our product range so far. We're planning to increase the percentage of our product range covered by LCAs throughout 2021 and will keep you updated as we go.

Boundaries include raw materials production or recycling, ginning, spinning and yarning, dyeing, knitting or weaving, cut and sew, and primary warehouse locations. This assessment doesn't yet capture our natural dyes or waste-conscious production process, and industry standard processes are currently used in replacement. Because of this, it is likely that our actual impact is smaller than our stated impact. We aim to integrate these bespoke processes into our LCA assessments during 2021.

We've published our detailed methodology – check out the PDF link in the Product section of our Climate Action Pillar.