bamboolik

GreenOMeter

BAMBOOLIK

CO2 REPORT 2022

COMPANY FOUNDER MESSAGE

ZUZANA HLOUŠKOVÁ

FOUNDER & CEO

From a Mom's Dream to a Social Enterprise:

Back in 2012, all I had was a vision to create a better world for my children. As a mother, I saw the importance of reducing waste and believed that even something as simple as diapers could make a significant difference. My goal was to inspire other parents to take action and be a catalyst for change. Today, Bamboolik is not only a leading example in waste reduction, but also a social enterprise that has a positive impact on the local community. I am proud of what we have accomplished so far and look forward to tackling the challenges that lie ahead.

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ABOUT THE COMPANY

Bamboolik is a Czech company that produces eco-friendly, sustainable alternatives for disposable products such as baby diapers, sanitary pads, and panty liners. The company's main goal is to create a better future for children and the environment, while keeping production entirely located in the Czech Republic.

Bamboolik production process is sustainable, using recycled cardboard boxes and biodegradable bags made of corn starch.

The company employs mostly people with disabilities and women with disadvantages in the labour market for manufacturing of their products. They use modern fabrics and highly absorbent organic cotton to create comfortable and sustainable products.

Bamboolik has won multiple sustainability awards and helped revive the Czech textile industry by sourcing their materials locally.

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IF WE SHOULD DEFINE BAMBOOLIK IN ONE WORD, IT WOULD BE:

Purpose!

We need to see a **PURPOSE** in everything we do.

We see a purpose in an eco-friendly lifestyle. Not creating tons of useless waste (in disposable diapers or menstrual pads) serves that **PURPOSE**.

We see a **PURPOSE** in sustainable production.

We see a **PURPOSE** in making ur entire business sustainable.

We see a **PURPOSE** in promoting eco-friendly lifestyle, sustainability and responsible entrepreneurship.

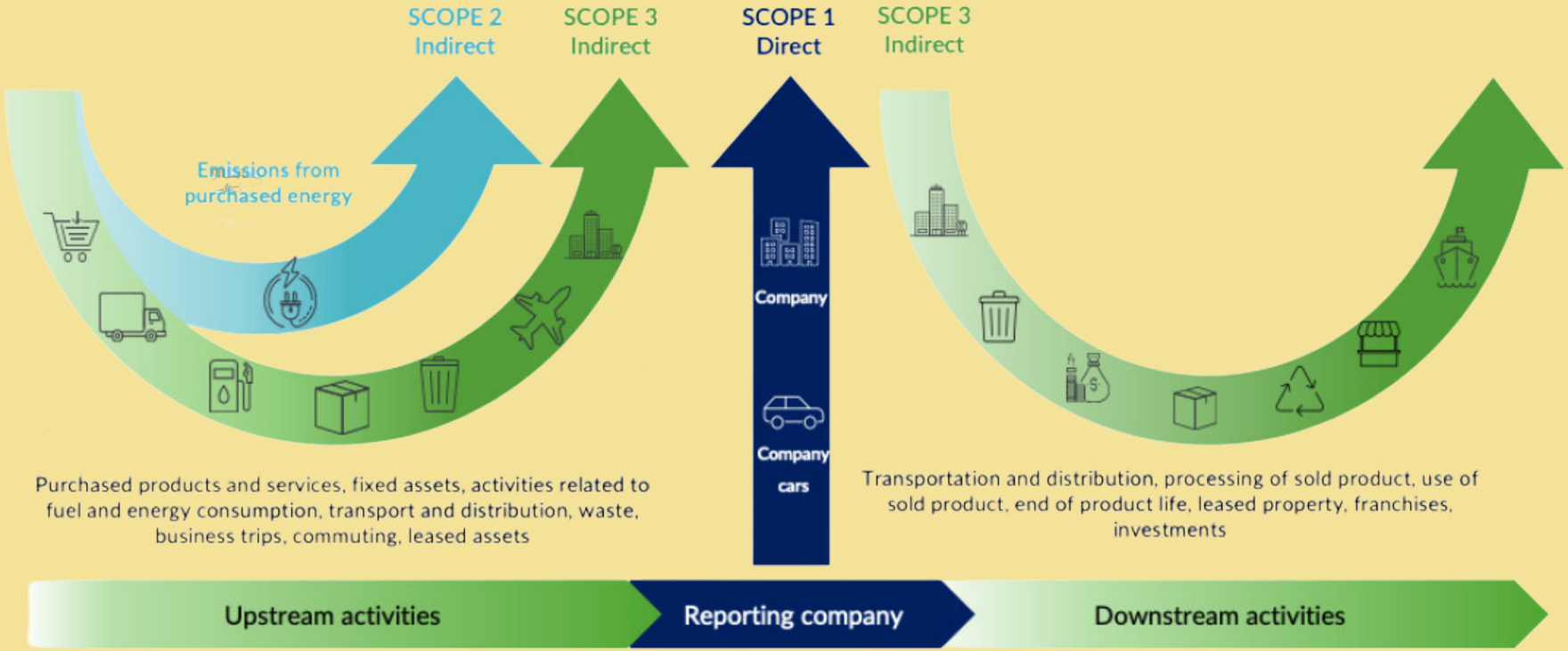
And we a see a **PURPOSE** in growing our business and its reach. Because that is how we all can grow. Together.

BAMBOOLIK.
FOR PEOPLE WHO CARE.

CO2 METHODOLOGY

For this analysis, we included in the calculation all sources of direct emissions and indirect emissions from purchased energy. We follow the GHG Protocol - a standard for calculating carbon footprints that not only allows emissions to be measured, but also helps the company plan and manage their gradual reduction. The standard is in accordance with ISO 14064.

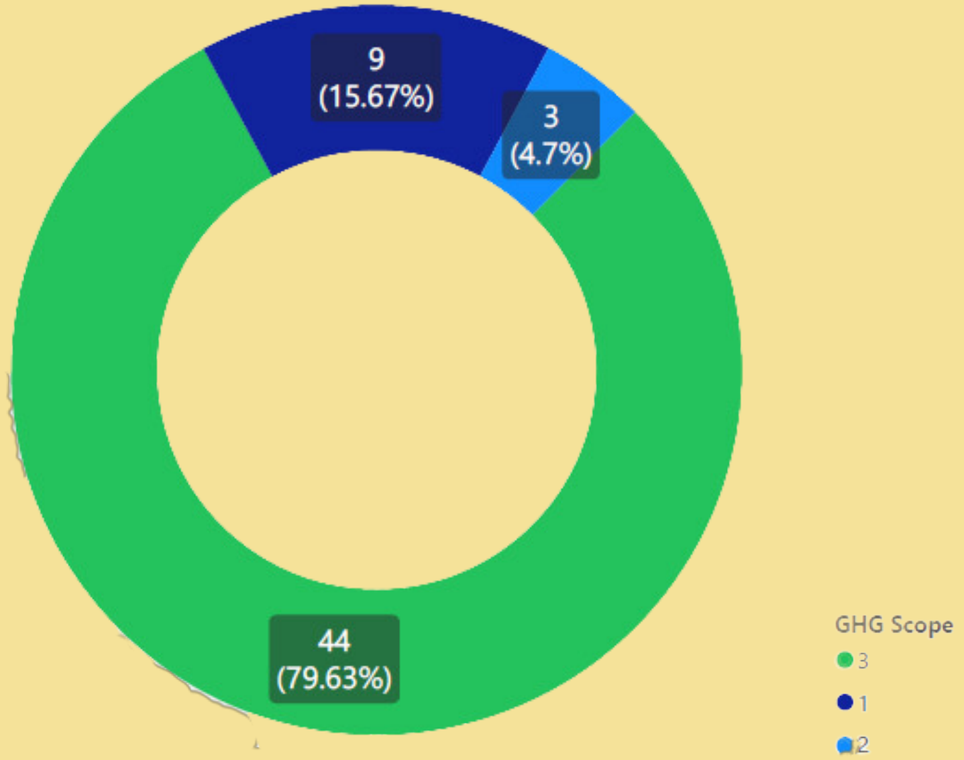
In accordance with GHC Protocol, we divided the amount of greenhouse gases produced by Bamboolik's direct and indirect activities into three areas (ranges):



BAMBOOLIK'S CARBON FOOTPRINT IN THE YEAR 2022

CO2 METHODOLOGY

Bamboolik's direct emissions in the year 2022 amounted to 8,63 tCO2e (15,67%). Indirect emissions from purchased energy accounted for 2,59 tCO2e (4,7%) and other indirect emissions generated in company's value chain were 43,89 tCO2e (79,63%).



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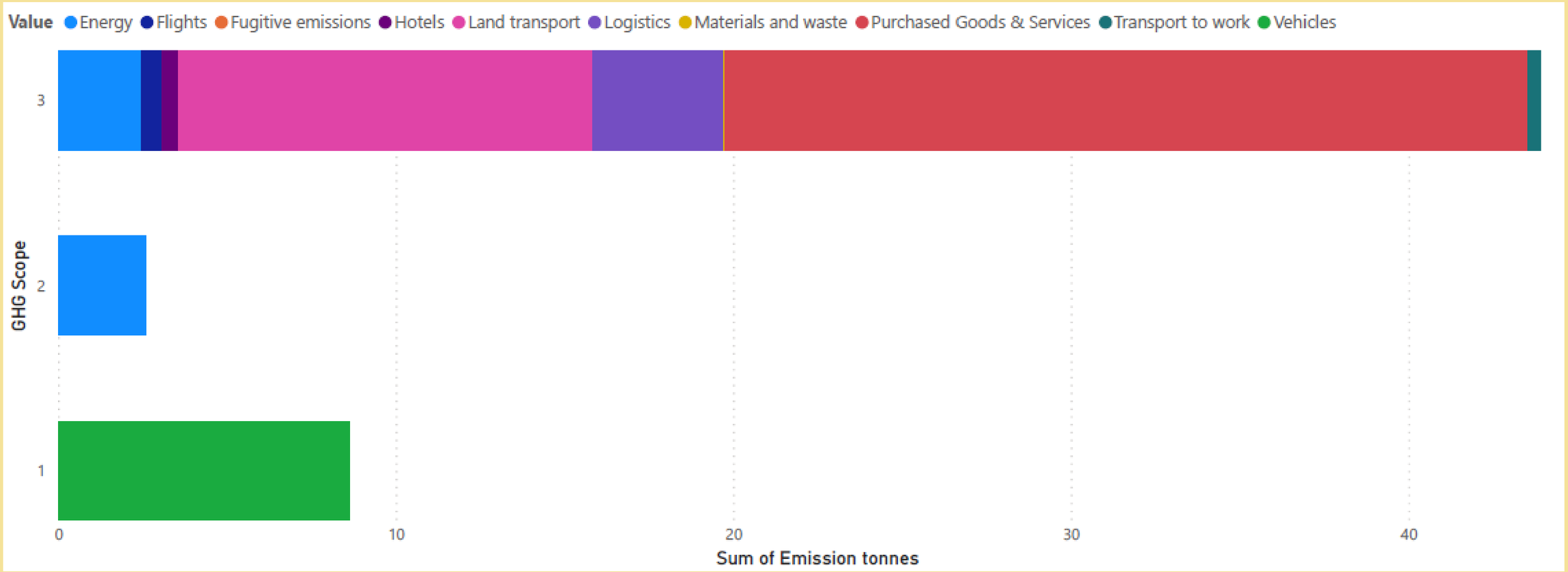


DIRECT EMISSIONS (SCOPE 1)

Bamboolik's primary sources of direct emissions were the combustion of natural gas and fuels, which together formed 8,63 tCO2e.
Of this, the combustion of natural gas was responsible for 8,63 tCO2e and the combustion of fuels in the company's vehicles accounted for 0,00 tCO2e.

Value	Tonnes CO2e
Vehicles	8.63
Energy	0.00
Fugitive emissions	0.00
Total	**8.63**

PURCHASED ENERGY EMISSIONS (SCOPE 2)

The main source of Bamboolik's indirect emissions was the consumption of purchased electricity. Indirect emissions from purchased energy totalled 2,59 tCO2e.

Value	Tonnes CO2e
Energy	2.59
Total	**2.59**

OTHER INDIRECT EMISSIONS (SCOPE 3)

The other indirect emissions of Bamboolik together formed 43,89 tCO2e.
Of this, emissions created in the company's upstream chain made up 2,66%; emissions created in the company's downstream chain contributed 76,98% tCO2e to the total indirect emissions.

Value	Tonnes CO2e
Energy	2.47
Flights	0.62
Hotels	0.50
Land transport	12.24
Logistics	3.90
Materials and waste	0.01
Purchased Goods & Services	23.80
Transport to work	0.35
Total	**43.89**

EMISSIONS PER PRODUCT LINE

In this study, the portfolio was segregated into three distinct product categories: cloth diapers, reusable menstrual hygiene, and accessories. Using this categorization, we calculated the average product's CO2e share and converted it into an estimate of the number of products manufactured in 2022.

Diapers Product Carbon Footprint

516.78
gCO2e

Menstrual Hygiene Product Carbon Footprint

276.50
gCO2e

Accesoooories Product Carbon Footprint

148.59
gCO2e

EMISSIONS PER PRODUCT LINE PER SINGLE USE

Bamboolik products are not intended for disposal but can be utilized multiple times throughout their life cycle. The following table illustrates the average number of times each product can be utilized before replacement.

	% of company CO2 emissions	CO2 emissions per average product	Average number of usage during lifecycle of product	Emissions per product per single use
Diapers	71%	516,78 gCO2	230	2,25 gCO2
Menstrual hygiene products	13%	276,50 gCO2	100	2,76 gCO2
Accessories	16%	148,59 gCO2	50	2,97 gCO2

In the case of diapers, a child is expected to require 5475 diaper changes (2.5 years * 365 days * 6 diapers). If a full cloth diaper stash is at 24 pieces , each diaper would be used roughly 230 times for the first child alone.

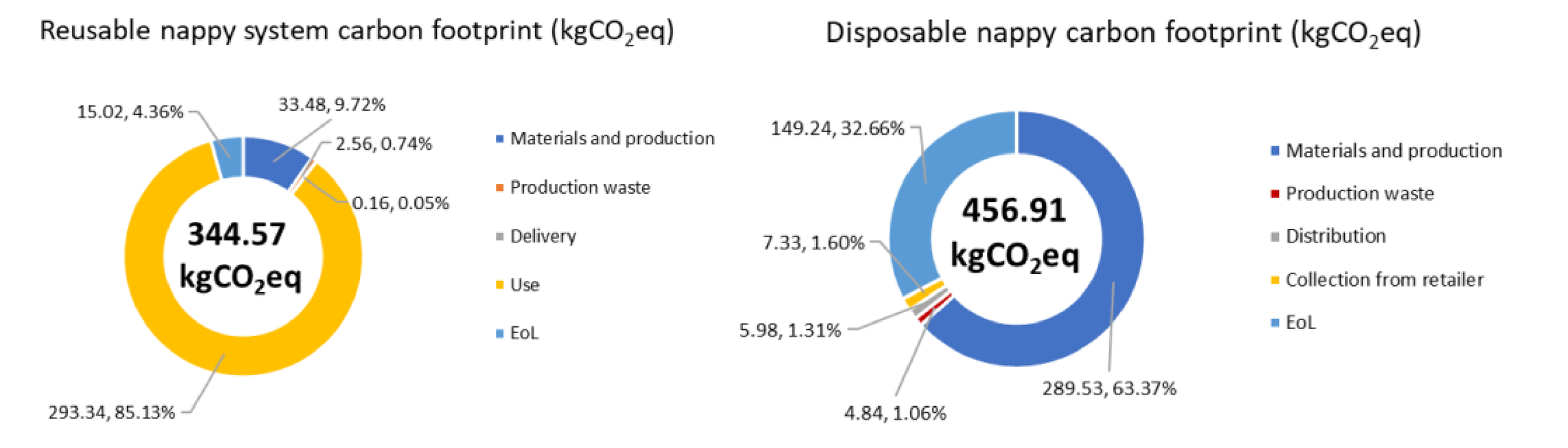
COMPARISON WITH DISPOSABLE PRODUCTS PRODUCTION - BAMBOOLIK

In the European Union, each conventional disposable diaper is estimated to release 89 gCO2 from the production of raw materials. Significant emissions are also associated with the disposal of diapers after use (1). When compared to disposable diapers, CO2 emissions generated by producing Bamboolik cloth diapers are approximately **40 times lower.**

(1) Mendoza, J.M.F., F. D'Aponte, D. Gualtieri and A. Azapagic. 2019. Disposable baby diapers: life cycle costs, eco-efficiency and circular economy. Journal of Cleaner Production 211: 455-467.

COMPARISON WITH DISPOSABLE PRODUCTS LIFE CYCLE - GENERAL STUDY

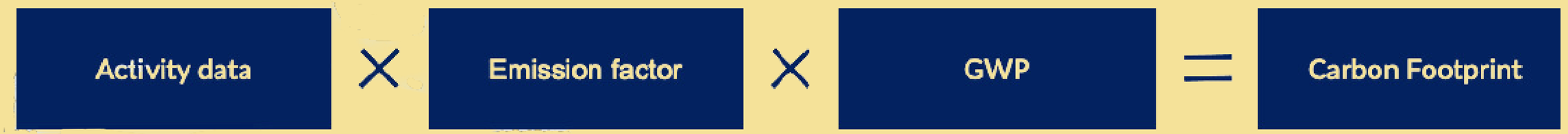
In March 2023, the Department for Environment, Food & Rural Affairs (Defra) in the UK published a new and updated Life Cycle Analysis (LCA) for single-use and reusable diapers (2).
The key findings from the report confirm that reusable diapers are the best for the environment, as across their lifecycle, reusable diapers have a **25% lower carbon footprint** than single-use diapers.



(2) https://randd.defra.gov.uk/ProjectDetails?ProjectId=20622

METHODOLOGY

We calculated our greenhouse gas emissions in accordance with the international standard GHC Protocol (GHGP) and the technical standard ČSN EN ISO 14064-1.



Activity data is a quantitative measure of the level of activity (eg liters of fuel used, kilometers driven, etc.) that results in greenhouse gas emissions.

A factor that converts activity data into greenhouse gas emissions data (e.g. kg CO_2 emitted per liter of fuel consumed, kg CH_4 emitted per kilometer driven, etc.

A factor describing the radiative effect (degree of damage to the atmosphere) of one unit of a given greenhouse gas in relation to one unit of CO_2 over a time horizon of 100 years. By multiplying the emissions of a given greenhouse gas by its GWP, we obtain the equivalent CO_2 emissions.

It determines the amount of greenhouse gases that correspond to the production activity of the enterprise and is expressed in CO_2 equivalents (CO_2e).

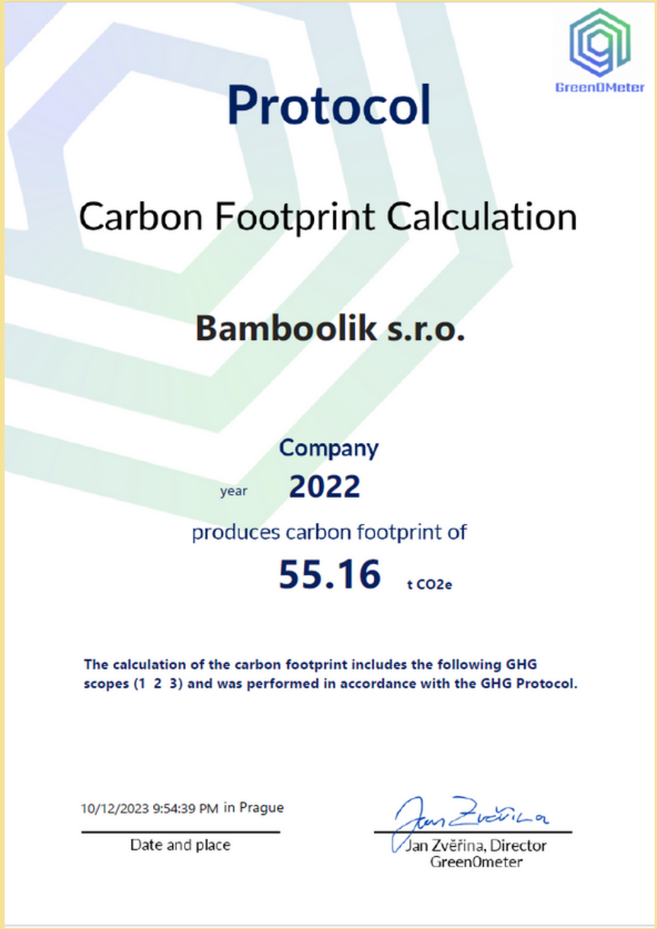
WHICH GREENHOUSE GASES DID WE CALCULATE WITH?

The GHC Protocol registers a total of seven anthropogenic greenhouse gases that are relevant in terms of Bamboolik's carbon footprint. The table shows the main sources of the gases, their names, sources and global warming coeficient.

Greenhouse Gas	Chemical abbreviation	Sources	GWP
Carbon dioxide	CO_2	Combustion of fossil fuels and biomass (80%); deforestation; aerobic decomposition of organic matter; erosion.	1
Nitrous oxied	N_2O	Agricultural activity, production of nitric and adipic acid, combustion processes, rocket and aviation technology.	265
Methane	CH_4	Anaerobic decomposition of organic matter, biomass burning and landfill (5%); natural gas and oil processing, coal resources, gas leaks, cattle breeding, rice cultivation (25%).	28
Fluorinated hydrocarbons	HFC	Industrial processes, replacement of freons in refrigeration and air conditioning equipment, propellant gases - fire extinguishers, cleaning agents, foaming agents.	100 – 14 800
Perfluorocarbons	PFC	Refrigeration equipment, industrial processes, aluminum and semiconductor production, pharmaceuticals, cosmetics.	6 000–17 200
Sulfur fluoride	SF_6	Electrotechnical industry, magnesium and aluminum smelting.	23 500
Nitrous fluoride	NF_3	Production of plasma screens, solar panels and liquid crystal displays, selective agent.	16 100

PROTOCOL

Carbon footprint and protocol have been calculated and issued by Green0Meter.com



Protocol

Carbon Footprint Calculation

Bamboolik s.r.o.

Company

year **2022**

produces carbon footprint of

55.16 t CO2e

The calculation of the carbon footprint includes the following GHG scopes (1 2 3) and was performed in accordance with the GHG Protocol.

10/12/2023 9:54:39 PM in Prague

Date and place

Jan Zvěřina, Director
Green0meter

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CURRENT MEASURES TO REDUCE THE CARBON FOOTPRINT

Our company endorses remote work and does not mandate that employees who do not need to commute come into the office every day. Currently, only workshop and dispatching staff commute to the office daily.

Our fleet mainly consists of alternatively powered cars, with only one diesel car currently in use. We have made a conscious effort to incorporate electric and hybrid cars into our fleet.

Our sewing workshops are conveniently located near our headquarters, thus reducing emissions associated with transport from the workshops to dispatching.

We have devised alternative measures to maintain comfortable temperatures in our workshops without the use of air-conditioning.

To minimize air travel, we have opted for train or bus transportation to reach our B2B clients.

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CURRENT MEASURES TO REDUCE THE CARBON FOOTPRINT

We do not use plastic packaging when shipping our goods, only compostable starch packaging. Additionally, we've implemented a policy of using once-used paper boxes when shipping orders, rather than purchasing new cardboard boxes. In fact, over 80% of our orders are shipped in pre-used boxes.

To reduce our carbon footprint, we avoid using air or sea transportation to move materials to our workshops. Instead, we rely solely on train or freight transport. Additionally, we source our materials primarily from the EU, with over 95% coming from the Czech Republic or neighbouring countries.

We encourage our employees to use alternative modes of transportation when commuting to work. Presently, only 30% of our staff drive to the office, while the majority opt for the train, tram or bus.

Our offices and workshops have a waste separation policy in place. Additionally, we make an effort to send any unused textile materials to creative workshops where they can be repurposed.

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FUTURE STEPS TO BE TAKEN

Energy Efficiency and Sustainability are Key
Our company is currently seeking new premises for our headquarters. Our primary focus is finding a space that has superior insulation and sustainable energy sources.

Establishing a Partnership with an Environmentally Friendly Goods Carrier
Collaborating with a goods carrier that uses carbon-neutral transportation to deliver our products to customers

Smart lighting systems
Our company will install lighting solution that will include LED lights and an intelligent system that automatically adjusts based on external conditions.

Biodegradable waste
In addition to our standard waste sorting services, we are delighted to provide the opportunity for bio-waste sorting at our company location.

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CONTACT US

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THERE IS NO PLANET B