Carbon Footprint Assessment of ZeroMission, 2018/2019

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Introduction

In autumn 2019 ZeroMission conducted an assessment of its carbon footprint for 2018/2019 in accordance with ISO 14064. The purpose is to inspire customers and other companies to be more ambitious, and to live up to the requirements for a carbon neutral organisation according to PAS 2060. In addition to offsetting emissions corresponding to ZeroMission's carbon footprint during 2018/2019, an additional 10% will be offset to make the organization climate positive.

Greenhouse gas emissions are offset in the Drawa Rainforest Carbon Project, located in Fiji. The project is a REDD + project (Reducing Emissions from Deforestation and Forest Degradation) certified by the organization Plan Vivo.

Introductory Information

Individual responsible	Claire Wigg, CEO of ZeroMission AB
Entity making the declaration	ZeroMission AB
Subject of the declaration	ZeroMission AB, which includes all upstream, core, and downstream processes.
Boundaries of the subject	All activities that relates to the core operations are included, with both upstream and downstream emissions in all categories as defined by the ISO 14064-1: 2019.
Description of subject	ZeroMission provides carbon offsetting and environmental consulting services to companies in Sweden.
Rationale for selection of the subject	The scope of the greenhouse gas assessment underlying this commitment is direct and indirect emissions, based on the operational control principle in ISO 14064-1: 2019.
Disclosure of verification	ZeroMission's Carbon Footprint Assessment has not been subject to external verification.
Baseline Period	1 July 2018 – 30 June 2019
Assessment Period	1 July 2018 – 30 June 2019
Standard for assessment of Greenhouse Gas Emissions	ISO 14064 GHG quantification and reporting at the organisational level. GHG Protocol Corporate Accounting and Reporting Standard, Corporate Value Chain (Scope 3) Standard and Scope 2 Guidance.
Confirmation	ZeroMission AB hereby confirms that the ISO 14064 organisational level standard was applied in accordance with its provisions and the principles set out in PAS 2060.
Carbon footprint of ZeroMission	See below p. 14
Signature of senior company representative	See below p. 4

Background and comment from CEO

ZeroMission provides carbon offsetting and carbon accounting services to companies in the Nordics. Calculation and management of clients' GHG inventories is conducted manually or using a third-party software called Our Impacts. The company currently has eight employees and the office is located in central Stockholm.

ZeroMission has analysed its own carbon footprint for 2018-2019 to achieve carbon neutrality in accordance with PAS 2060: 2014. Furthermore, the aim is to become climate positive by offsetting an additional 10% of total emissions.

In the absence of Product Category Rules (PCR) for service companies, we have followed the guidance in ISO 14064:1 2019 and worked with a broad scope, including for instance customers' travel and digital services. By including these activities, we want to raise the level of ambition for service companies taking responsibility for their emissions. We hope this report will be of use to others.

Claire Wigg, CEO ZeroMission

Date: 20-03-02
Place: Stockholm

Purpose

The purpose is for ZeroMission to declare publicly its full carbon footprint and to demonstrate adherence to the requirements for carbon neutral organisations in the specification PAS 2060 for 2018/2019.

An additional 10% of the organisation's total carbon emissions have been offset in order to become climate positive for the period 2018/2019.

Operational Boundaires

- Scope 1
  No relevant emissions category

- Scope 2
- Purchased electricity for the ZeroMission office

- Scope 3
- Water consumption
- Waste
- Construction
- Purchased weekly consumables such as coffee, fruit, milk
- Purchased meals for internal events
- Purchased meals for external events
- Purchased electronic equipment
- Electronic equipment and digital services
- Paper and printed material
- Employee commuting
- Business travel and accommodation
- Guests travelling to and from the office
- Inbound third-party deliveries
- Use of sold digital product (Our Impacts)

The result is a quantitative measure of ZeroMission's total carbon footprint for the year 2018/2019, which will also be communicated externally. The results show which activities give rise to significant emissions and thus gives guidance on where efforts should be made to reduce emissions for the next period.

This report gives an account of the methodology and carbon footprint of ZeroMission.

Participants

From ZeroMission, Ossian Rundquist, Anna Wenell and Filip Dessle have participated in the preparation of the report. Invoices from suppliers have been used in combination with consultations with certain suppliers. Employees have answered surveys about commuting, business travelling and hotel stays.

Method

ISO 14064-1: 2019 was chosen because the standard was updated in 2019 and is suitable for calculating the carbon footprint at the organisational level. At present, there are no sector-specific or product-specific rules (PCR) applicable to service companies that can provide detailed guidance on boundaries and other methodological choices.

According to PAS2060, "the boundaries shall be a true and fair representation of the organization's GHG emissions, i.e. shall include all GHG emissions relating to core operations including subsidiaries owned and operated by the organization."

Furthermore, the results are categorised according to the three Scopes defined in the Greenhouse Gas Protocol Corporate Standard. CO_2, CH_4, and N_2O and other climate-impacting gases are converted to CO_2 equivalents so that a common contribution can be described. Gases such as CO_2, NF_3, SF_6 and other appropriate GHG groups (HFCs, PFCs, etc.) have not been separated from CO_2e for the direct emissions analysis, due to insufficient data. GWP values from the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) over a 100-year period are used for the conversion to CO_2 equivalents (CO_2e).

Emission factors that are up-to-date, relevant to the studied system and that cover entire product lifecycles have been used wherever possible. Sources of emissions factors include national and international institutions, research reports and published articles, as well as international databases for LCA studies. Emission factors are guideline values and should be seen as tools for indicating the climate impact of various activities, and not as exact values, not least because of the time lag between the studies and publication of statistics underlying emission factors. Purchased energy has been calculated according to a market-based approach according to GHG Protocol Scope 2 Guidance (2014). Activity data is based on information from invoices, suppliers, questionnaires and internal statistics.

Key Performance Indicator

The overall result of the carbon footprint assessment is compared to the number of employees, since this will have the most impact on emissions and it also allows for organic growth. The key figure is expressed as tons CO_2e per employee. Tons CO_2e per MSEK revenue is also reported.

Scope of the study

The carbon footprint assessment is at the organisational level, including core processes and relevant upstream and downstream activities. All emissions in this assessment are non-biogenic emissions. Biogenic emissions could arise from purchased products, but this could not be differentiated in this analysis due to lack of data. All relevant greenhouse gases have been included in the assessment.

Data collection and data quality

The primary data sources have been invoices and actual data for the calculations. These include electricity consumption, purchased consumables and the external servers powering Our Impacts, an online software product which ZeroMission provides. Purchase of electronic equipment has been derived from invoices, and deliveries to the premises are based on either individual or aggregated purchases for the year. In the case of self-reported data, clear instructions were given and sent out as a template to all employees for their business travel and commute. All staff has had training and works with sustainability reporting which improves data quality.

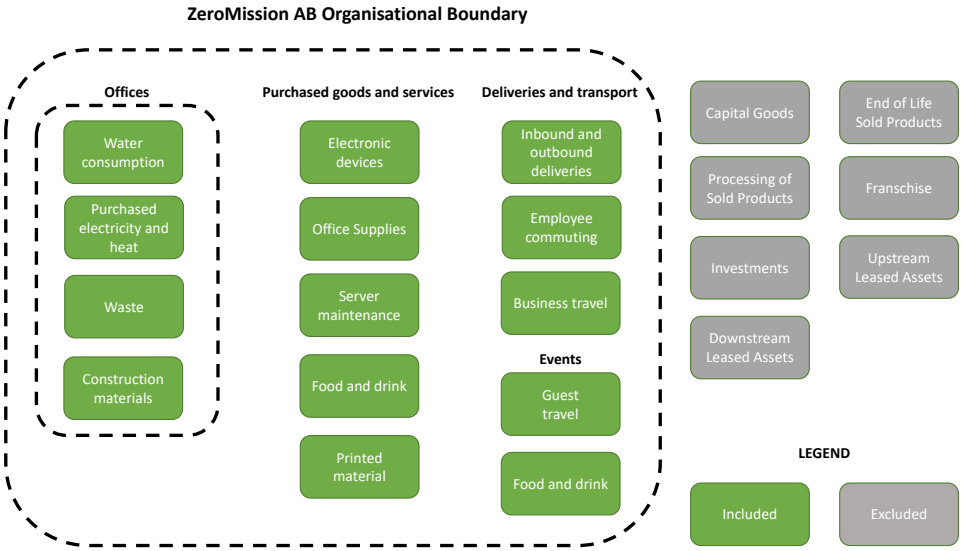
For the quantification of emissions from consumables and purchased products, specific or comparable emissions factors have been applied. The emission factors have been derived from relevant published scientific articles and studies, product-specific environmental declarations (EPDs) and national databases. The limiting factor for the quality of the emission factors is the current state of knowledge.

Allocation

Allocation has been done at two stages. First, between all the companies sharing the office. This allocation has been done by dividing emissions from collective activities by floor area. Secondly, the shared emissions from ZeroMission and its sister company U&We have then been allocated between these two companies based on number of employees. The reason for the second allocation is that U&We and ZeroMission work in an open office environment, and share many collective activities such as conference trips, monthly meetings etc.

Allocation has also been made to calculate the emissions from server use from Our Impacts, a software ZeroMission provides to its customers. The allocation is based on ZeroMission's share of Ecomaetrica's total clients using Our Impacts.

Boundary



Organisational Boundary for calculations of ZeroMission's carbon footprint.

The system boundaries used for the analysis are presented in the figure above. Below we show how the emissions are categorized according to the Greenhouse Gas Protocol.

Boundaries and emissions assessment 2018/2019

Scope	Definition	Included emissions activities
Scope 1 - Direct Emissions	Direct emissions from vehicles / facilities owned or controlled by the organization	No relevant emission activities
Scope 2 - Indirect Emissions	Indirect emissions from purchased energy from facilities owned or controlled by the organization	Generation of purchased electricity to the organization's office.
Scope 3 - upstream	1. Purchased goods and services	Purchased consumables, food, paper and IT-equipment.
	3. Fuel- and energy-related activities	Upstream emissions from generation and distribution of electricity.
	4. Upstream transportation and distribution	Transportation of purchased goods to the office.
	5. Waste	Collection and treatment of waste from the office.
	6. Business travel	Company travel by air, land and sea, including accommodation.
	7. Employee commuting	Employee commuting for work by car, rail, bus, ferry and bicycle.

Scope	Definition	Included emissions activities
Scope 3 - downstream	9. Downstream transportation and distribution	Guests travelling to and from the office.
	11. Use of sold products	Our Impacts, sustainability reporting software

Excluded Scope 3 Emissions Categories	Motivation
2. Capital Goods	Emissions are included in Category 1 Purchased Good and Services
8. Upstream leased assets	No upstream leased assets.
10. Processing of sold products	Sold product is not processed and does not result in emissions.
12. End-of-life treatment of sold products	Sold product does not produce waste.
13. Downstream leased assets	Emissions have been allocated to other entities in shared office.
14. Franchises	ZeroMission does not have franchises.
15. Investments	ZeroMission does not provide financial services.

Important processes

Based on the calculated carbon footprint, the following processes contribute most to the total footprint, with the proportion of the total carbon footprint shown in brackets.

- Use of sold digital product (82%)
- Electronic devices and digital services (7%)
- Business travel and accommodation (6%)

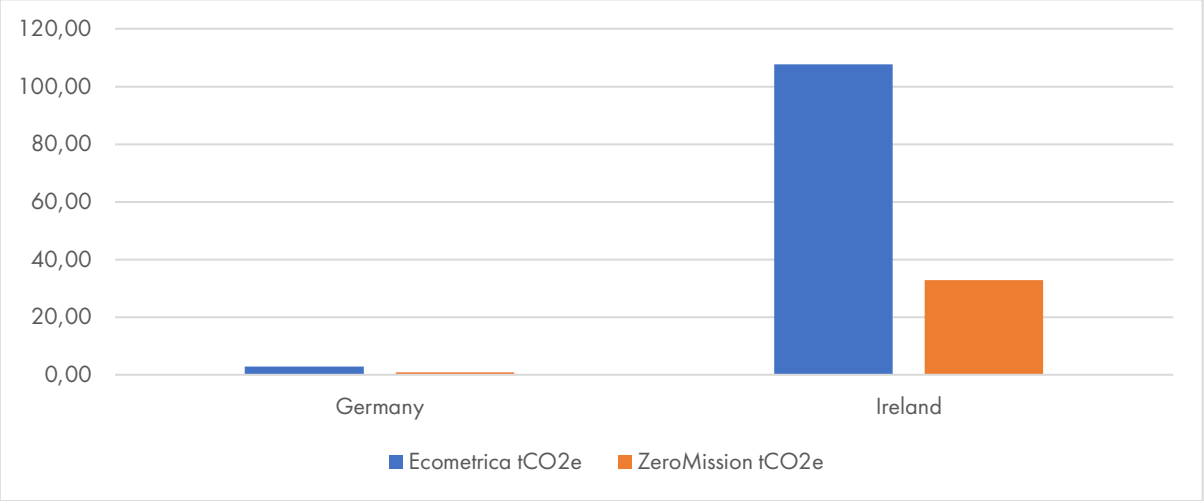
In total, the above activities correspond to 95% of ZeroMission's carbon footprint.

Use of sold digital product

Emissions from use of sold digital product originate from Our Impacts (OI), which is a tool for carbon accounting and sustainability reporting. ZeroMission delivers this as a service, enabling customers to document and analyse their own emissions. It is therefore included in Category 11: Use of Sold Products. Data was collected from Ecometrica, the supplier of Our Impacts.

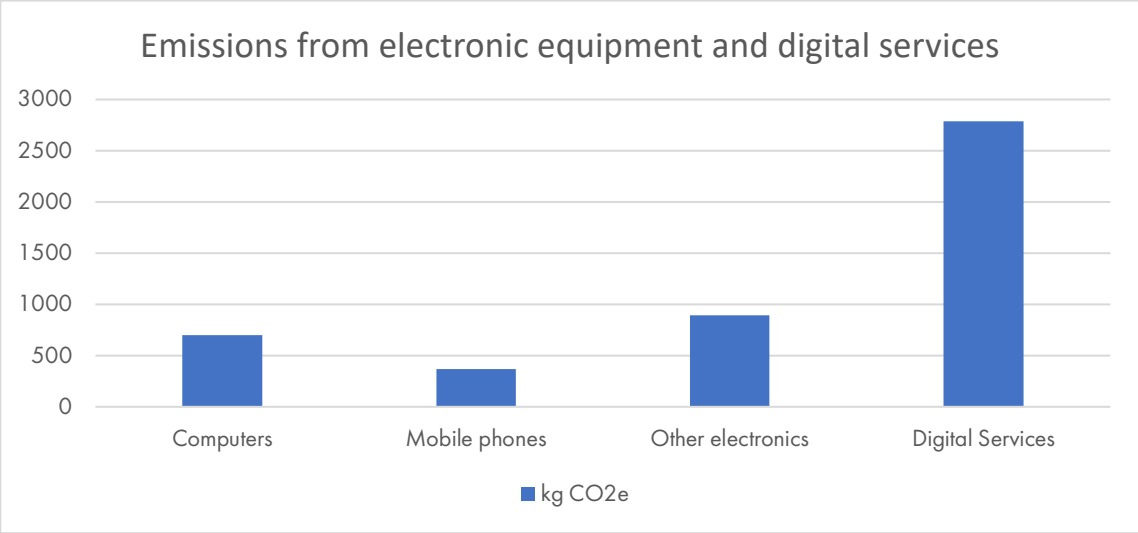
The significant volume of the emissions arises because of the energy mix in the countries where the servers are located, which are Germany and Ireland. Today, there is no clear guidance from the Greenhouse Gas Protocol for calculating emissions based on server use. ZeroMission has used economic allocation to determine its' share of emissions from Ecometrica's servers. This means reporting 30.5% of the emissions from Ecometrica's servers, which corresponds to ZeroMission's share of clients in Our Impacts. Our Impacts is responsible for 33,7 tCO_2e, or 0,45 tCO_2e per OI client.

The table below shows emissions from Our Impacts, divided by server providers in Germany and Ireland. This has been based on local energy mix data. IEA (2018). Statistics. http://www.iea.org/stats/index.asp.



Electronic devices and cloud storage

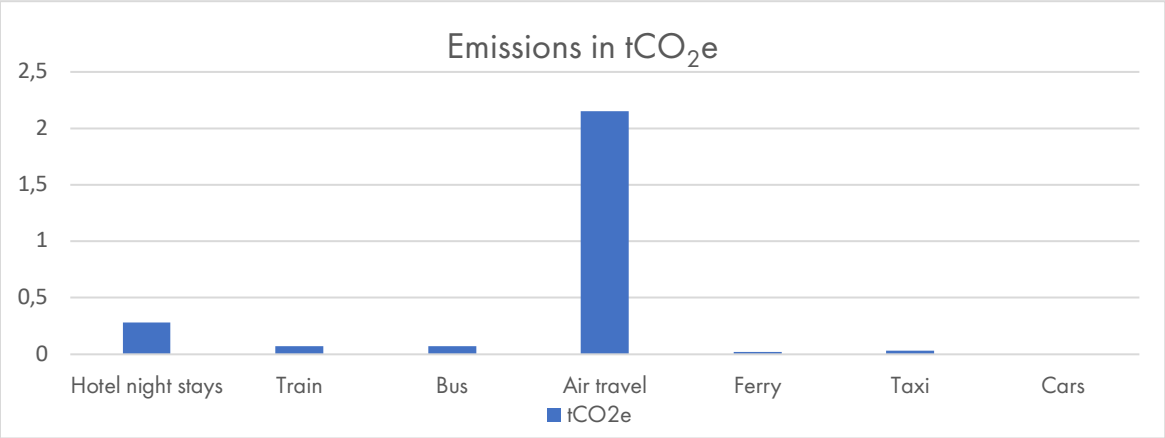
Data on purchases of computers, mobile phones and other electronic equipment has been collected through invoices. Specific emissions factors have been used where available, otherwise conservative estimates have been used based on similar products. For digital services, a intensity measure was calculated from sources where data was available. The intensity measure was then used to calculate the rest of the digital services where data was not available. Difficulties of collecting data on digital services can be attributed to a knowledge gap between suppliers and buying customers.



Business travel and accommodation

The data on business travel and accommodation has been collected by self-reporting from employees of ZeroMission. All of ZeroMission's employees are well-versed in carbon

accounting, and the quality of the self-reporting has also been assessed. The possibles modes of transportation include from air-, land- and sea-based travel. Most travel has been made with bus or train, as company policy requires a good justification for air-travel. Despite keeping flying to a minimum level, the high emissions associated with this type of travel mean that this category of emission represent the biggest share of emissions from business travel.



LUC

LUC (Land Use Change) has not been included in the analysis due to insufficient data. ZeroMission likely have an indirect impact on land-use from purchased products (excluding carbon offsets) but this has not been analysed in this assessment.

Uncertainty of the results

The uncertainty of the results arises from the quality of data collected, assumptions, estimates and applied emission factors. The results have been critically examined with regard to these uncertainty factors in order to reach an aggregate value of the uncertainty of the result. In the uncertainty analysis, the criteria below have been applied to quantify uncertainty in input and uncertainty in applied emission factors. The model used is derived from Greenhouse Gas Protocol Quantitative uncertainty guidance from 2019.

Uncertainty in activity data - For specific data from invoices and suppliers, the uncertainty is +/- 5%. For the largest emissions category, from Ecometrica's servers, there is an uncertainty because of the allocation made of +/- 35%. Self-reporting of business travel and commuting had on average an uncertainty of +/-42%, due to inputs being from several different sources. Digital services have the largest uncertainty, +/-90%. This is due to the difficulty of acquiring specific data for locations and measurements.

Uncertainty in emissions factors – For emissions factors, food represented a high uncertainty, +/- 70%, because of the general nature of the emissions factors used. High uncertainties also exist for the paper, +/- 55%. because of the age of the emissions factor. For business travel and commuting there was a varying degree of certainty, 30-32%. This can be attributed to the unspecific geography and age of the emissions factor used for each transportation. For accommodation uncertainty stands at +/- 42%. This is also due to the uncertainty of geography.

The highest uncertainty was servers and digital services with +/-100%. This is due to the difficulty in determining where server space is located and the emissions of digital services.

The combined uncertainty was calculated by weighing the uncertainty of each category against their share of total emissions. The combined margin of error has been determined to be +/- 36,9%.

Interpretation of result and boundaries

Digital services account for an unexpectedly large proportion of ZeroMission's carbon footprint. Since it is challenging to include externally located servers in GHG Inventories on a company level, ZeroMission's inclusion of these emissions is ambitious but we believe it should be common practice for carbon accounting of organisations. By acquiring Guarantees of Origin, by Ecometrica moving their servers or simply as a result of technological progress, there is great potential for reducing these emissions in the future. Therefore, it is important not to forget other sources of emissions such as business travel, purchased goods and deliveries. These categories represent core activities for ZeroMission, and are significantly harder to reduce. Business travel and electronic equipment continue to represent a significant part of the carbon footprint and are therefore key areas for ZeroMission to consider in its carbon management plan.

Results

Description of results and tables*

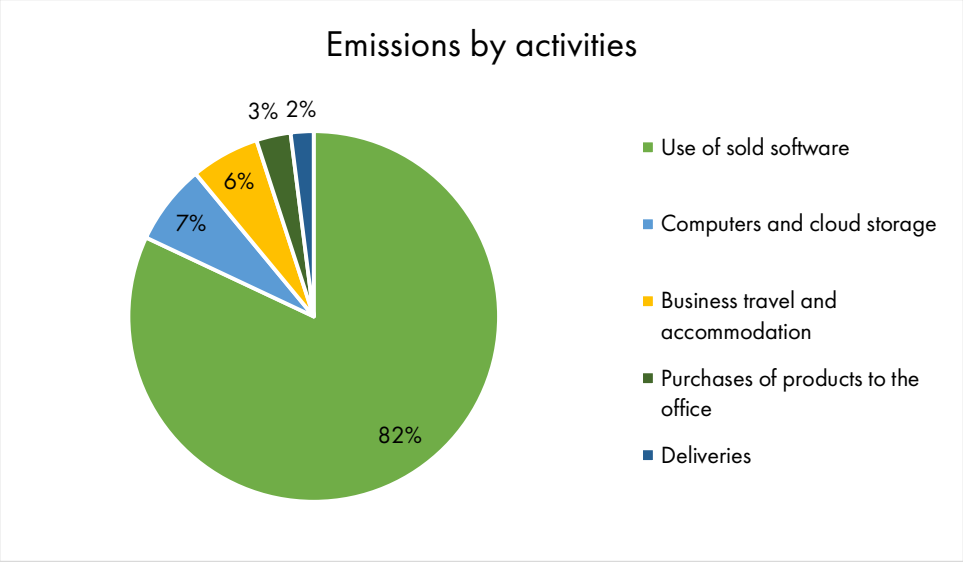
Distribution by category

Scope	Category	(tCO_2e)
1	a) 1- Direct GHG emissions and removals	0
2	b) Indirect GHG emissions from imported energy	0,12
3	c) Indirect GHG emissions from transportation	3,03
3	d) Indirect GHG emissions from products used by organisation	4,13
3	e) Indirect GHG emissions associated with the use of products from the organisation	33,7
3	f) Other indirect GHG emissions	0,28
	Total emissions	41,27
	GHG-emissions [tons] per employee	6,35

*For the full GHG Inventory see Annex A

Distribution by processes

Processes	tCO_2e
Upstream activities	7,45
Core processes	0,12
Downstream activities	33,70



NOTE: Only activities with emissions greater than 1% of the total carbon footprint are shown in the figure.

Scope	Category	Activity	tCO_2e	Uncertainty (+/-)
Scope 2	Purchased electricity	Electricity consumption from the office	0,0072	5%
Scope 3 - Upstream	1. Purchased goods and services	Purchases of products to the office	1,43	76%
Scope 3 - Upstream	1. Purchased goods and services	Purchase of construction material	0,04	57%
Scope 3 - Upstream	1. Purchased goods and services	Electronic devices and cloud storage	2,7	102%
Scope 3 – Upstream	1. Purchased goods and services	Water consumption	0,003	115%
Scope 3 - Upstream	3. Fuel and energy related activities	Electricity consumption, distribution	0,1152	5%
Scope 3 - Upstream	4. Upstream transportation and distribution	Transportation of goods	0,68	44%
Scope 3 - Upstream	5. Waste	Waste from offices	0	60%
Scope 3 - Upstream	6. Business travel	Business travel and accommodation	2,62	70%
Scope 3 - Upstream	7. Employee commuting	Commuting	0,01	89%
Scope 3 - Downstream	9. Downstream transportation and distribution	Guests travelling to and from the office.	0,06	142%
Scope 3 - Downstream	11. Use of Sold Product	Used server space of sold product	33,7	82%
Total			**41,27**	**+/- 36,9%**

Base year

An average of the intensity measure for the reporting period of 2017/2018 and 2018/2019 was selected as a base year, in accordance with ISO 14064-1:2019. This was due to the fact that 2018/2019 was not a representative year, as no visits were made to carbon offsetting projects. The methodology for 2018/2019 was the same as for the previous year, with the exception of the emissions from use of sold products. This required a recalculation for the emissions from Our Impacts, the sustainability software that ZeroMission provides to its customers. The results of this recalculation can be seen in Annex B. Due to the high quality of data provided by the provider of this service, Ecometrica, their emissions from the previous year were directly added to the assessment of the previous year, to give directly comparable results.

Future declarations of carbon neutrality will be compared to this average base year. The base year will be reviewed each year to ensure representativeness.

Years	GHG-emissions [tons] per employee
2017/2018 (Previous year) *	8,96
2018/2019 (Current year)	6,35
Base year (Average of current and previous year)	7,66

* Standard for assessment of Greenhouse Gas Emission reductions was GHG Protocol Corporate Standard and GHG Protocol Corporate Value Chain (Scope 3) Standard.

Carbon Offsetting

Background

In order to become climate positive, the carbon footprint plus an additional 10% (4,13 tons CO_2e) has been offset. In total this is 46 tCO_2e. Carbon offsetting is done through the purchase of ex-post credits in the Plan Vivo certified project The Drawa Rainforest Carbon Project, located in Fiji. The project is a REDD+ project where rainforest is preserved. The project involves local communities and is coordinated on site by the organization Live & Learn Fiji.

The Plan Vivo Standard, under which the project is validated, requires that the carbon offsets are real and additional. The validation also ensures that the project meets criteria of permanence, leakage and double counting. The project generates emission reductions that occur geographically far from the ZeroMission's operations and are outside the system boundaries for this assessment.

Actors and concepts

Key players in the carbon offsetting process and important concepts are described below.

ZeroMission: Swedish reseller for carbon offsetting.

Plan Vivo Standard: A standard for carbon offsetting focusing on poverty reduction and payments for ecosystem services. The standard works exclusively with Land-Use and Forestry projects, such as agroforestry, sustainable land management and forest conservation.

Plan Vivo Foundation: A registered, non-profit foundation in Edinburgh, which reviews, approves and monitors carbon offsetting projects. Plan Vivo also issues certificates for verified emissions reductions. They specialize in projects where the participants are individual smallholder farmers and communities.

The Nakau Programme: A rainforest conservation financing programme supplying carbon offsets and Habitat Hectare units to buyers seeking carbon certification.

Ex Post: A term for carbon offsetting credits that are issued after the carbon benefit has taken place.

Markit: An international register where Plan Vivo certificates sold are issued, transferred and retired.

Proof of carbon offsetting

Project	Standard	Nr. tCO_2e	Vintage	Date of retirement by ZeroMission
The Drawa Rainforest Carbon Project	Plan Vivo	46	2013–2014	December 2019
Plan Vivo certificate serial number				
PV-PVC-FJ-104000000014148-06092013-06092014-4887117-4887162-MER-0-P				

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ANNEX A: Breakdown of Carbon Footprint

GHG Inventory	ZeroMission AB 2018-19
Offices (ZeroMission's share)	**Emissions [tCO_2e]**
Electricity consumption (market-based)	0,12
Third-party deliveries	0,57
Printed material	0,01
Copying paper	0,01
Food	0,44
Water consumption	0,00
Company	
Incoming third-party deliveries	0,06
Food	0,51
Printed material	0
Electronic devices and digital services	2,70
Construction materials	0,04
Use of sold software (Our Impacts)	33,70
Food from events	0,41
Travelling to events	0,004
Business travel external, clients travel to office	0,058
Business travel and commuting	
Employee-owned cars	0
Accommodation	0,28
Bus	0,07
Car	0
Taxi	0,03
Ferry	0,02
Flights	2,15
Train	0,07
Bus (commute)	0,00
Train (commute)	0,01
Total	41,27
Total per employee (6,5)	6,35

ISO 14064-1: 2019 Categories	
Direct GHG Emissions	0
Indirect GHG Emissions imported energy	0,12
Indirect GHG Emissions transportation	3,033
Indirect GHG Emissions products used by organisation	4,1
Indirect GHG Emissions use of products from the organisation	33,70
Other Indirect GHG Emissions	0,28
Total Direct and Indirect GHG Emissions	41,27

Annex B: Greenhouse gas emissions 2017/2018

Distribution by category

Scope	Category	tCO_2e
1	g) Direct GHG emissions and removals	0
2*	h) Indirect GHG emissions from imported energy	0,13
3	i) Indirect GHG emissions from transportation	18,85
3	j) Indirect GHG emissions from products used by organisation	4,28
3	k) Indirect GHG emissions associated with the use of products from the organisation	21,54
3	l) Other indirect GHG emissions	0
	**Total emissions 2017–2018	44,8
	GHG-emissions [tons] per employee 2018 - 2019	8,96

*Using market-based methodology for scope 2 emissions.