

Mindful Fashion New Zealand



CLIMATE ACTION GUIDE

Part 2

Measuring your Emissions

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INTRODUCTION

The Mindful Fashion Climate Action Guide will take you through the process of measuring your organisation's GHG emissions for a specified year, producing a summary of your emissions across each category, and identifying strategies to reduce your emissions.

Using this document

- Black text – for your Information
- Blue Text – instructions for you to follow

Step by step Guide to measuring your GHG emissions (see Appendix)

Step 1. Plan your inventory

1. Set your Organisational Boundary
2. Define your Reporting period (ie, calendar or financial year)
3. Define your Reporting Boundary
4. Screen for categories & scopes

Step 2: Data Collection

5. Collect activity data for each emission category
6. Collate data in the spreadsheet

Step 3: Calculate your emissions

7. Use a tool to calculate your GHG emissions

Step 4: Reduction Strategies (covered in Part 3)

Step 5: Set Targets (covered in Part 3)

Step 6: Show progress (covered in Part 3)

INVENTORY PLANNING

A GHG inventory is the tool to provide your business with a detailed understanding of its GHG impact. The inventory will show you where your emissions are generated, and give you a starting point to develop reduction strategies. Download an Excel copy of the **Data Collection sheet**, rename it for your business and use this to record and gather all your data.

Set your Organisational Boundary

Individual businesses have differing legal and organisational structures and operations. In setting organisational boundaries, a business defines the scope of its GHG accounting and reporting. The Greenhouse Gas Protocol defines two different approaches that can be used to set organisational boundaries.

Equity share approach

Under the equity share approach, a company accounts for GHG emissions from operations according to its share of equity in the operation. Eg. if your company owns 50% of a facility it accounts for 50% of the emissions.

Control approach

Under the control approach, a company accounts for 100 % of the GHG emissions from operations over which it has financial or operational control. It does not account for GHG emissions from operations in which it owns an interest but has no control. This is the most common approach SME businesses use.

If a company owns all its operations the result will be the same regardless of which approach it uses.

- For more information, see GHG Protocol Corporate Standard, p 16 - 23.
- [Complete the 'Company Information' tab, listing all facilities / units within your organisation, their location and number of staff.](#)
- [Decide which Organisational approach best applies to your business.](#)
- [Enter this information on the 'Company Information' tab on the Data Collection Spreadsheet.](#)

1.2 Define your Reporting Period

Your reporting period is generally a 12 month period, often aligned to your organisation's financial year (for ease of reporting). If this is the first year your organisation has produced an inventory, you can use it as a baseline year for measuring the change in emissions over time (as long as the scope and boundaries represent your usual operations).

- Define your Reporting Period on Tab 2 of the Data Collection Spreadsheet.
- Specify whether this is your first (baseline) year of reporting.

1.3 Define your Reporting Boundary

Your reporting boundary defines which emissions categories that your inventory includes. The GHG Protocol requires businesses to account for all Scope 1, 2 and 3 emissions and disclose and justify any exclusions (see below). For the Mindful Fashion Climate Action Programme, at a minimum businesses are required to report on the following categories, or justify their exclusion:

- Scope 1 / Category 1: Fuel consumption;
- Scope 2 / Category 2: Purchased energy;
- Scope 3 / Category 3: Business Travel, Freight, Waste.

It is acknowledged that accounting for all scope 3 emissions may not be feasible or applicable, especially in the first year of calculating. Businesses should report zero emissions or “not applicable” for any categories that are not applicable.

De minimis: For some organisations, certain GHG emissions may contribute such a small portion of the inventory that they make up less than 1 % of the total inventory. These are known as **de minimis** and may be excluded from the total inventory. Using a materiality threshold of 5 %, the total of all emission sources excluded as de minimis must not exceed 5 % of the inventory. Typically, an organisation estimates any emissions considered de minimis using simplified methods to justify the classification. It is important these are transparently documented and justified.

Exclusions: Businesses may have scope 3 activities, but be unable to estimate emissions due to a lack of data, or difficulty gathering data and limited ability to influence reductions, such as offshore manufacturing or offshore textile production. In such cases, businesses may exclude these activities provided reasoning is justified and disclosed.

Scope 3 Value Chain: This Guide does not include Scope 3 emissions from upstream supply chain production due to the difficulty in obtaining accurate data to quantify or measure the large range of scenarios, and the limited ability that many SMEs have in influencing reductions in these areas. Mindful Fashion is investigating how best to reduce impact in these areas, and/or include these categories in future stages.

- For more information about Scope 3, see GHG Protocol Corporate Value Chain Scope 3 Standard, p 61
- Specify which categories you are measuring by marking Y / N / NA in the column on the ‘Reporting Boundary’ of the Data Collection Spreadsheet.
- For any categories you are excluding, briefly justify your reasoning alongside the category.

DATA COLLECTION & MANAGEMENT

Primary data is data which is sourced directly from company or supplier records. In general, primary data is the preferred data source for key activities. For areas where your company aims to set reduction targets, track performance over time or engage suppliers, you should strive to collect primary data.

Secondary data is data that is not from specific activities within a company's value chain. It can be collected for non-priority areas, activities for which no primary data is available, or where the quality of secondary data is assessed to be higher than primary data.

According to the GHG Protocol: "In the initial years of Scope 3 data collection, companies may need to use data of relatively low quality due to limited data availability. Over time, companies should seek to improve the data quality of the inventory by replacing lower quality data with higher quality data as it becomes available".

Primary data can generally be gathered for most of the categories the Mindful Fashion Guide covers. In some instances, for example rental car, freight and waste, data may need to be estimated if primary data has not been captured. For any categories that are estimated, it is advised to establish systems that allow for primary data to be gathered in subsequent reporting periods.

Activity data sources and calculation methods

Activity data must be gathered for each category you are going to measure. The following table shows common sources of activity data for each category.

- This information can also be found on the 'Data Required' Tab on the Data Collection spreadsheet.

Table 1: Data Sources

Activity	Source	Unit	Data Required for the period	Data Source
Stationary fuel consumption	Diesel consumption	Litres	Amount/volume of fuel used in facilities/operations, by appliance/facility/country.	Invoices from suppliers Company Records
	LPG consumption	Litres		
	Natural Gas consumption	kWh		
Transport fuel consumption (company owned/leased)	Regular Petrol consumption	Litres	Volume fuel consumed (preferable) OR Distance travelled, vehicle type and year.	Fuelcard reports for individual vehicles Receipts
	Diesel consumption	Litres		
Purchased electricity, heat or steam	Electricity consumption; imported heat or steam consumption	kWh	Electricity Kwh for all company owned or controlled facilities.	Supplier invoices / reports

Rental car, Uber & taxi travel	Rental car & taxi/uber fuel consumption or distance travelled	Litres; or, Kilometres travelled	Fuel consumed in rental cars OR Distance (kms) travelled OR \$ spent	Invoices / Hire agreements
Domestic Air travel	Passenger air travel	Pkm (passenger kms)	Data on domestic air travel, including departure and destination and # of passengers per trip.	Flight records: invoices / tickets / travel agent report
International Air travel	Passenger air travel	Pkm (passenger kms)	Data on international air travel, including departure and destination (short haul or long haul), # of passengers, and class of travel.	Flight records: invoices / tickets / travel agent report
Accommodation	Accommodation Nights	# Rooms; location	Data on location country, number of rooms and number of nights.	Invoices/bills from hotel or travel agent.
Waste	Waste sent to landfill	Kilograms or litres	Volume of Waste to landfill by facility Landfill destination Broad waste composition if known (office, general, textile, etc)	Report from waste supplier OR Estimation of average data from facilities
Upstream transport and distribution	Freight paid for by the organisation	Tkm Distance x Weight By mode	Mode of transport (truck, van, ship, plane) Weight of shipment Distance travelled by mode (kms)	Report from Freight supplier OR Company records
Downstream transport and distribution	Freight to customers (where not paid for by the organisation nor in vehicles owned by the organisation)	Tkm Distance x Weight By mode	Mode of transport (truck, van, ship, plane) Weight of shipment Distance travelled by mode (kms)	Report from Freight supplier OR Company records
Rental car, Uber & taxi travel	Rental car & taxi/uber fuel consumption or distance travelled	Litres; or, Kilometres travelled	Fuel consumed in rental cars OR Distance (kms) travelled OR \$ spent	Invoices / Hire agreements
Domestic Air travel	Passenger air travel	Pkm (passenger kms)	Data on domestic air travel, including departure and destination and # of passengers per trip.	Flight records: invoices / tickets / travel agent report
International Air travel	Passenger air travel	Pkm (passenger kms)	Data on international air travel, including departure and destination (short haul or long haul), # of passengers, and class of travel.	Flight records: invoices / tickets / travel agent report
Accommodation	Accommodation Nights	# Rooms; location	Data on location country, number of rooms and number of nights.	Invoices/bills from hotel or travel agent.
Waste	Waste sent to landfill	Kilograms or litres	Volume of Waste to landfill by facility Landfill destination Broad waste composition if known (office, general, textile, etc)	Report from waste supplier OR Estimation of average data from facilities

Gathering and Recording Data

Begin by gathering data for the more straightforward categories, such as electricity and fuel, then proceed through each category methodically. Some categories will be easier than others. Much of the data will be sourced through supplier reports or company invoices therefore access to the relevant (eg. finance) people within your organisation will be necessary.

You must record the data source and keep records of activity data. However it is not necessary to record granular data on the spreadsheet, all that's required is the total for the reporting period. We recommend recording data by calendar month - both to give your organisation the ability to monitor changes over reporting periods, and because it makes checking for accuracy more straightforward.

- Use the 'Data Sources' tab to record the source of your data source for each category.
- On the Data Collection Spreadsheet, use each category tab to collate your information.

Notes on data collection

1. Stationary Fuel Consumption

- LPG, Diesel, Natural Gas
 - Identify if/where the gas is used within the organisation, record appliance type or ICP, & location.
 - Calculate volume of gas used for the period using supplier reports / financial records.

2. Transport Fuel Consumption

- Record a list of company owned/leased vehicles and corresponding fuel type.
- Gather records on volume of fuel consumption using fuelcard reports, invoices or receipts. Calculate total fuel consumption for each fuel type for the period.
 - If volume of fuel use is unavailable, distance travelled or \$ spent can be used.

3. Purchased Electricity

- Identify sites where electricity is used. Record location, ICP & supplier.
- Calculate electricity consumption in kWh for the period using reports from suppliers/invoices.
 - If you only occupy part of a space, include % of the facility you use.
 - Can be itemised by facility so that comparisons can be made by Country/Region.

4. Rental Car travel

- Calculate Rental Car fuel consumption by fuel type* OR
- If consumption is not available, distance (kms) travelled can be used.

- Source data from supplier invoices, travel agent reports or mileage records. Alternatively, calculate distance using a mapping tool.

5. Domestic Air Travel

- Gather information on Domestic air travel trips taken by staff from travel agent reports, tickets or airline records.
- Record Origin, Destination, and # of passengers.
- Using the 'Air Travel Calculator' tab, calculate total passenger kilometres (pkm) travelled.

6. International Air Travel

- Gather information on International air travel trips taken by staff from travel agent reports, ticket or airline records.
- Record Origin, Destination, # of passengers and class of travel.
- Using the 'Air Travel Calculator' tab, calculate total passenger kilometres (pkm) travelled by class of travel.

7. Accommodation

- Gather information on the number of nights per person in each country location using travel agent reports, invoices or company financial records.

8. Waste to landfill

- Record waste bins at each site/location, their capacity, how frequently they are collected, who the supplier is.
- Calculate data* on volume of waste sent to landfill (litres or kgs) either;
 - Report/records from your waste supplier, or
 - Estimate average volume/weight for each bin, multiply by number of collections.
- *Specific data is not available for many organisations, so estimates can be used.
- Provide any available data on construction materials and demolition waste incurred during the year.

9. Freight*

- Using your accounting records identify your freight suppliers and rank by order of \$ spent. Determine what freight each supplier is responsible for. To visualise easily you could map freight movements, by drawing a transport map of all your sites and all freight flows.
- Information is required for all freight the organisation pays for. Eg. Inbound freight, outbound freight, and freight between an organisation's facilities (in non-company vehicles).
- You need to calculate all freight that travels around New Zealand. You also need to measure all freight that arrives in New Zealand, making the calculation from its departure point if possible.
- Request reports from all freight suppliers. Some may provide pre-calculated emissions, others might only have distance and mode.
- For each freight movement, the information needed is either:

- Pre-calculated emissions for all freight by that supplier or;
- Mode/Distance/Weight to calculate TKM (tonnes per kilometre travelled)
 - Mode of travel - air, sea, truck
 - Distance travelled by each mode (kms)
 - Weight of shipment (tonnes)
- For some freight, an average figure may need to be used eg. NZ Post/Courier Post can be estimated using average emissions multiplied by total number of shipments sent around NZ.
- Use the spreadsheet to record freight by mode of transport.
- The calculation is:
 - Distance (kms) x weight (tonnes), by mode.
 - Eg. Truck travel: (100kms x 0.5tonnes) = 50 tkm truck travel.
- *Freight is often the most complicated step in the GHG inventory. The best approach is to start with identifying freight suppliers and a transport map, and methodically approach each supplier/freight movement to collect data.

Once you have entered complete data sets for the reporting period into each tab, this stage is complete.

CALCULATION

Once you have final totals for each of the emissions categories you are ready to enter your data into a calculator. There are a number of free-to-use calculators. Two we have trialled are the [Ekos Business Lite Calculator](#) and the [Climate Action Toolbox calculator](#).

Using the Ekos Business Lite Calculator

The [Ekos Business Lite Calculator](#) is straightforward to use. It requires you to enter your total annual figures for each category that you have collected data for into the online calculator. It generates an online summary and an email summary showing your emissions for each category. Details on how to use the tool are below.

Using the Climate Action Toolbox

The [Climate Action Toolbox calculator](#) is straightforward to use. It requires you to enter your total annual figures for each category that you have collected data for. It then presents you with an online table showing a breakdown of your emissions for each category.

There is a limitation with both tools where you do not automatically see a breakdown of emissions within each category eg. air freight vs sea freight. We recommend you record this manually from the online calculator as you go, which is time consuming but the simplest way we have found to get an accurate breakdown using these free tools. You can use the table on the last tab of the Data spreadsheet to record emissions for each category and mode.

Once you have entered your data into a tool, you have completed your GHG Inventory, congratulations! You're now ready to analyse your inventory and develop reduction strategies.

APPENDIX 1

Instructions for using Ekos Business Lite Calculator

1. Go to <https://ekos.co.nz/businesslitecalculator>
2. Enter your Company information as per the prompts on the page.
3. Select the country of your headquarters/main operation – assume NZ (the New Zealand electricity factor will be applied to your power use.)
4. Enter the measurement period as per your Data collection sheet and click 'Next'.
5. Enter your Stationary Fuels consumption as per your data collection sheet.*
6. Enter your Company vehicles data.* Fuel data is preferable. If you don't have fuel data, you can enter km travelled as an alternative. You can select up to 3 different vehicle types within the Business Lite calculator.
7. Enter your Electricity data.*
 - a. Please note that if you use Ecotricity, you can select "Carbon neutral electricity provider". If you use Meridian Energy, it doesn't mean your electricity is automatically 'carbon neutral'. You will need to have purchased their Renewable Energy Certificate (REC), and be able to supply that to us as evidence, before we're able to recognise this as carbon neutral energy.
8. Freight - select "Accurate measurement". Then tick Inward/Outward freight as most appropriate for you.
9. For either International freight (left hand side) or Domestic freight (right hand side), select the transport mode using the drop down arrow, then enter the total TKM for that mode as per your data collection sheet. Repeat if you have more than 1 transport mode. Repeat again if you have selected both Inward/Outward freight.*
10. Flights - select "Accurate measurement" and enter your flight data as per your data collection sheet. Remember the flights need to be split by Domestic, International short haul and International long haul.*
11. Enter your Accommodation data. Select the country where you have stayed in hotels. You can enter data for up to 3 different countries. (If you have more than 3, please choose your top 3.)
12. Enter your Non-Company vehicles data as per your data collection sheet.*
13. Enter your Waste data as per your data collection sheet. (The calculator assumes all waste goes to a landfill facility that does NOT have landfill gas recovery.)

14. If you have any emissions sources where the calculator does not have a calculation field, and/or you had to undertake manual calculation using a spreadsheet, enter it in “Other Additional Emissions Sources” by choosing which emissions scopes it belongs to (i.e. Scope 3), typing in the emissions source name (i.e. staff commute), and the calculated tCO₂e total. Otherwise, please select “I don't have any sources to add”.
15. Once you have completed your data entry, you may choose to SAVE or SUBMIT.
16. Choose “SAVE” to get a resume link to come back to your entry at a later time. You may want to choose this option if you are considering going through the verification and certification process.
17. Choose "SUBMIT" to finalise your entry. You will no longer be able to come back to your entry or make any updates/changes.

^ **Australian sites** - If you have Australian sites follow this process in the Ekos Calculator Tool:

- Set up NZ as the primary office location in the calculator (i.e. select NZ in first page) and enter the NZ electricity usage in the electricity page.
- Save this and create a second entry in the online calculator with Australia as the location. In this entry only enter the Australian electricity, go through to the end and complete the calculation to work out what the total emissions are for Australian Electricity.
- Add this total in "Additional sources" section in the online calculator, under scope 2.

* Any T&D losses and WTT emissions from these categories will be automatically calculated and added to your emissions total.

Please note: At any point you can save your entry by clicking “SAVE”. You will get a resume link to return to your entry at a later time.

Once submitted you will receive a summary of your emissions. Your emissions total will be summarised in Scope 1, 2 & 3. (Within the Business Lite calculator, all categories 3-6 emissions are aggregated and reported as a scope 3 total, hence why we recommend recording as you enter them).

Verifying with Ekos

Footprints over 50 tonnes

If your total Footprint is **greater than 50 tCO₂e**, you are not eligible for standard Business Lite verification or certification. You can offset your ‘estimated emissions’ by purchasing carbon credits, or complete a quality review and/or certification by contacting Ekos.

Footprints under 50 tonnes

If your Footprint is **less than 50 tCO₂**, you are eligible for Ekos Business Lite verification and certification directly through the online calculator;

- If you do not wish to complete verification or certification, select “I just want a summary”.

- If you want to proceed with verification and certification, please select “check qualification”. Please tick all that applies.
- If you meet all the requirements for Business Lite certification, and you’ve completed your data collection sheet, please select “I’m ready for the verification process”.
- Click on the link shown on your screen to go to the verification submission page.
- Upload your data collection sheet as per prompts on the page and you can submit your data for an Ekos Business Lite verification review.

APPENDIX 3

Tools

- [Mindful Fashion Data Collection spreadsheet \(link in Toolkit\)](#)
- Mindful Fashion Freight Calculation spreadsheet - available on request