

# CARBON FOOTPRINT REPORT 2019



THE CLIMATE ACTION  
ACCELERATOR



ORGANISATION: ALIMA | AUTHOR: JEAN COLRAT | DATE: APRIL 2022



## TABLE OF CONTENTS

Introduction.....	2
GHG assessment methodology .....	3
What is a greenhouse gas balance sheet? .....	3
Methodology for calculating emissions .....	3
Scope of the evaluation .....	4
Organisational scope.....	4
Operational scope .....	4
Temporal scope .....	5
Carbon footprint 2019 .....	6
Global carbon footprint results .....	6
Results by emissions category.....	7
Carbon footprint results by scope .....	8
Results by emission source categories .....	9
Energy.....	9
Travel.....	10
Freight .....	11
Purchases and fixed assets.....	11
Waste .....	12
Uncertainties .....	13
Results by country .....	14
Mapping the organisation's emission flows .....	15
Performance indicators (ratios).....	15
Benchmark .....	16
Recommendations .....	17
Monitoring and continuous improvement of measurement .....	17
Suggestions for improvement .....	17
Annexes.....	19
Annex 1: Description of emission items and data sources.....	19
Annex 2: Description of the main emission factors (EF) used .....	22
Annex 3: ALIMA 2020 carbon footprint assumption .....	24
Annex 4: References.....	24

## Introduction

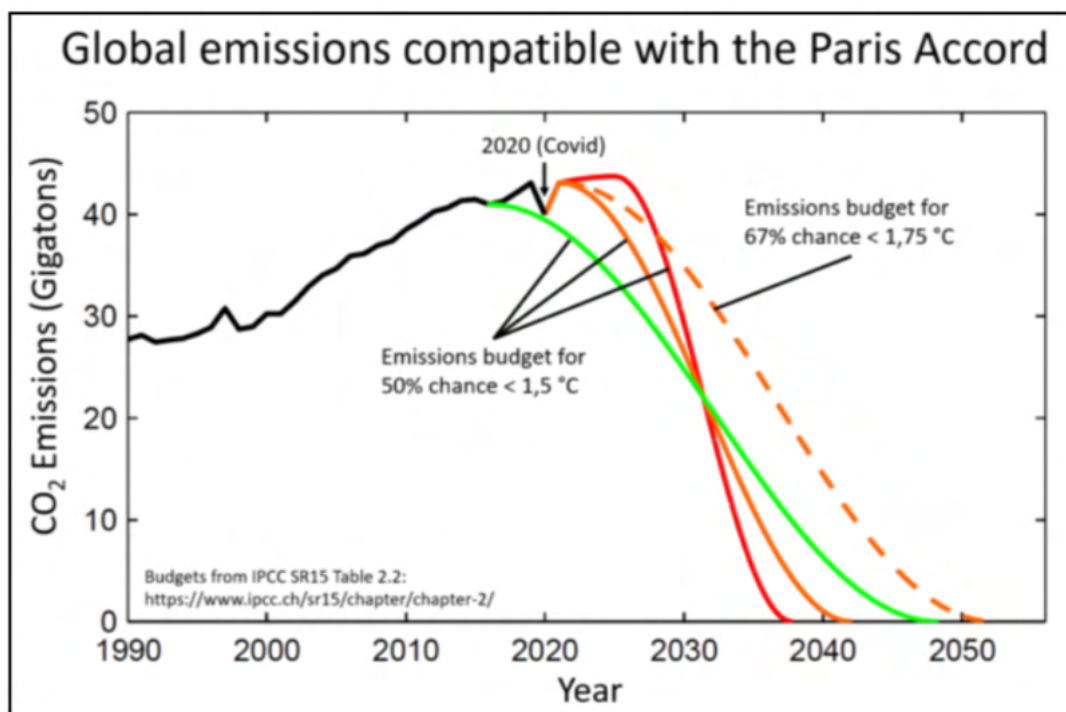
Climate change is one of the greatest challenges facing nations, governments, organisations and citizens in the coming decades. ALIMA has taken stock of the stakes and is committed to taking into account the impacts of its activities on the environment and thus reducing their consequences.

On 17 October 2020, ALIMA's General Assembly amended its Charter, committing the association to minimise its ecological footprint, promote sustainable practices, be accountable for its environmental impact and transparent about the progress made (*ALIMA Position Paper - Sept 2020*).

From the first quarter of 2021, in order to carry out its environmental approach, the Executive Committee has decided to set up a partnership with The Climate Action Accelerator (CAA) to help it implement a system for measuring and monitoring its carbon footprint and to be supported in building a decarbonisation roadmap.

This report is a "snapshot" of ALIMA's greenhouse gas (GHG) emissions that will be used as a reference to identify and measure the organisation's main sources of emissions and that will help define a strategy.

The graph below shows the objectives of the Paris Agreement (COP21) that ALIMA and The Climate Action Accelerator are committed to following (a 50% reduction in emissions by 2030 to achieve carbon neutrality by 2050 in order to limit global warming to below +1.5°C).



## GHG assessment methodology

The methodology chosen for the assessment of the climate impact of ALIMA's activities rigorously respects the international standard on the subject (ISO 14065). The Climate Action Accelerator is very committed to the integrity of this measurement and has set high standards for the reliability and comprehensiveness of this study.

### WHAT IS A GREENHOUSE GAS FOOTPRINT?

The GHG footprint makes it possible to assess the dependency and vulnerability of an organisation with regards to carbon, in order to allow a reflection on its development strategy.

- **Purpose of the carbon footprint**

The main objective of a GHG assessment is to give a global overview of an activity with an indicator that is not economic (CHF or Euros), but climatic (greenhouse gas emissions expressed in tons of CO<sub>2</sub>).

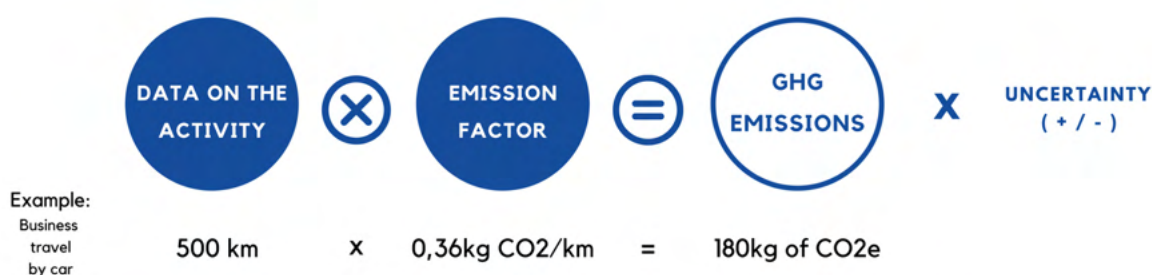
- **Benefits for the organisation**

With the help of a carbon footprint, ALIMA will be able to :

- Structure its environmental policy
- Identify actions to reduce energy costs and overall impact
- Assess its vulnerabilities
- Stand out by example
- Engage with its employees and partners.

### METHODOLOGY FOR CALCULATING EMISSIONS

To calculate ALIMA's GHG emissions, we collected activity data (€, km travelled, litres of fuel consumed, etc.) and multiplied them by an emission factor<sup>1</sup> to calculate their equivalence in terms of CO<sub>2</sub> emissions.



*GHG emissions are always expressed in Kgs or Tonnes of CO2 equivalent (CO2e).*

In order to take into account the quality of the data obtained, a level of uncertainty is incorporated into the estimation of the results. It is usually expressed as a percentage.

<sup>1</sup> Emission factors are developed by measuring the emissions from the life cycle of products or services; that is, the emissions required for their manufacture, use and disposal.



## Scope of the evaluation

Following an exhaustive identification of the sources of emissions from the organisation's sites and competences that enable ALIMA to carry out its social mission, the steering committee validated the perimeters of the initial carbon footprint study.

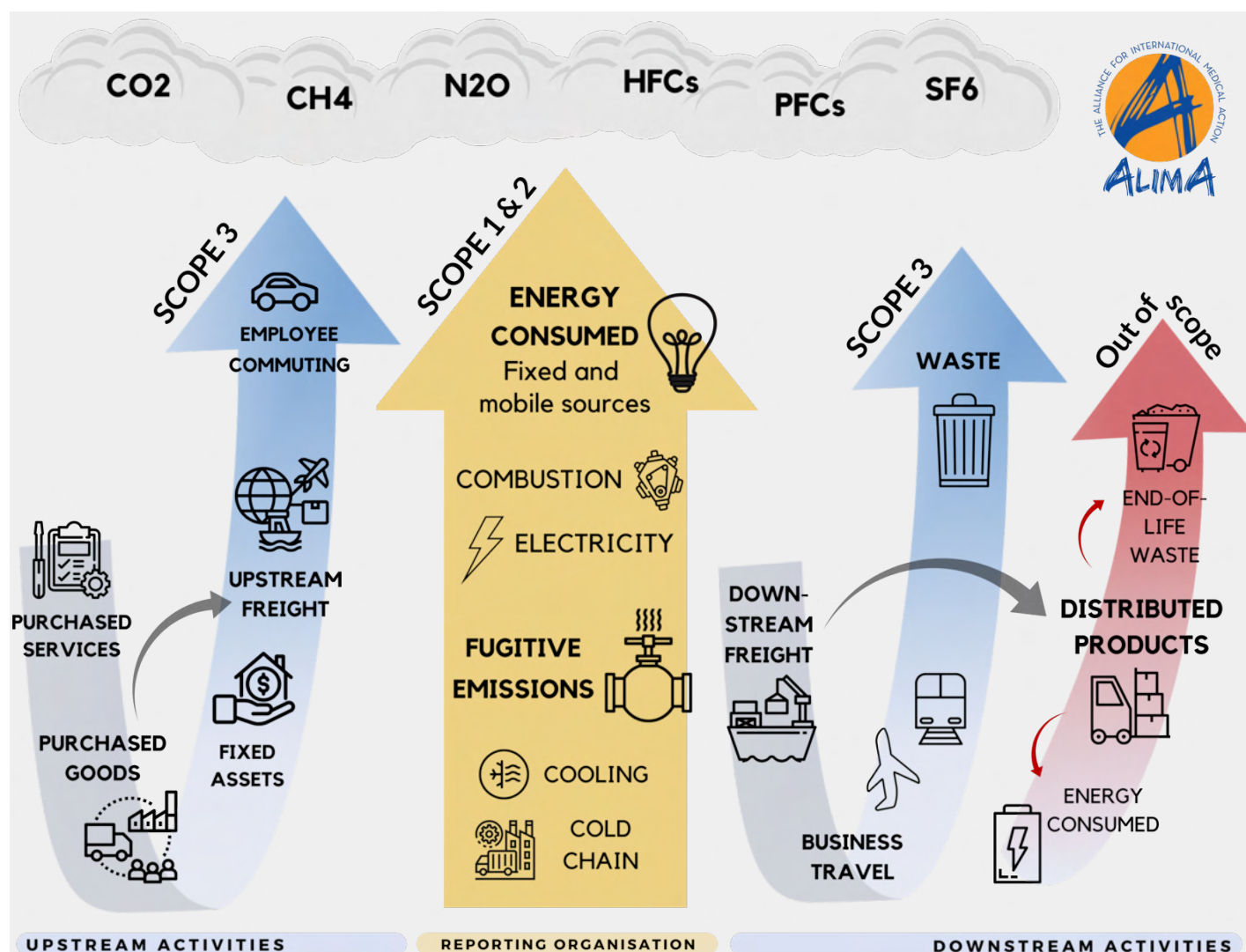
### ORGANISATIONAL SCOPE

This perimeter corresponds to all the organisation's sites and facilities as well as all its missions.

The entities concerned are the following:

<u>2 headquarters</u>	Paris and Dakar
<u>11 countries</u>	Nigeria, Niger, Mali, Mauritania, Chad, Cameroon, Burkina Faso, DRC, Central African Republic, South Sudan, Guinea
<u>Number of employees</u>	1920 people
<u>Budget</u>	€61 million, in 2019

### OPERATIONAL SCOPE



#### ❖ **Selected emission sources**

It was decided that at least all significant sources should be included in the scope of the study. This will enable a thorough investigation of the organisation's emissions.

#### ❖ **Optional emission sources**

Taking into consideration the magnitude of the task and the difficulties inherent in collecting certain data, the steering committee decided that commuting and fugitive emissions from refrigeration systems (air conditioners, refrigerators, etc.) would not be the subject of in-depth research for the initial assessment. These emission sources will, for this initial report, be subject to an estimated evaluation, and in the future will be better collected and calculated, thanks to a continuous improvement approach through periodic repetition of the measurement process (monitoring).

#### ❖ **Excluded emission sources**

Only distributed products are currently classified as "out of scope", as they are currently seldom deployed in ALIMA's activities. Nevertheless, this source of emissions has been identified and may be included in the scope the study in the future.

### **TEMPORAL SCOPE**

As this study is only the initial measurement of ALIMA's GHG emissions, it was essential that the period of activity studied be representative of a normal operational state for the organisation. As such, the steering committee and the CAA took into consideration the health crisis linked to the COVID-19 pandemic which had disrupted the 2020 financial year, and therefore decided that the reference year for this study would be 2019.

However, as the environmental roadmap is based on the year 2020, an extrapolation from the 2019 results will be made (see Annex 3), pending the 2020 measurement. The latter will take into account the growth and effects of the health crisis on the organisation's activities.

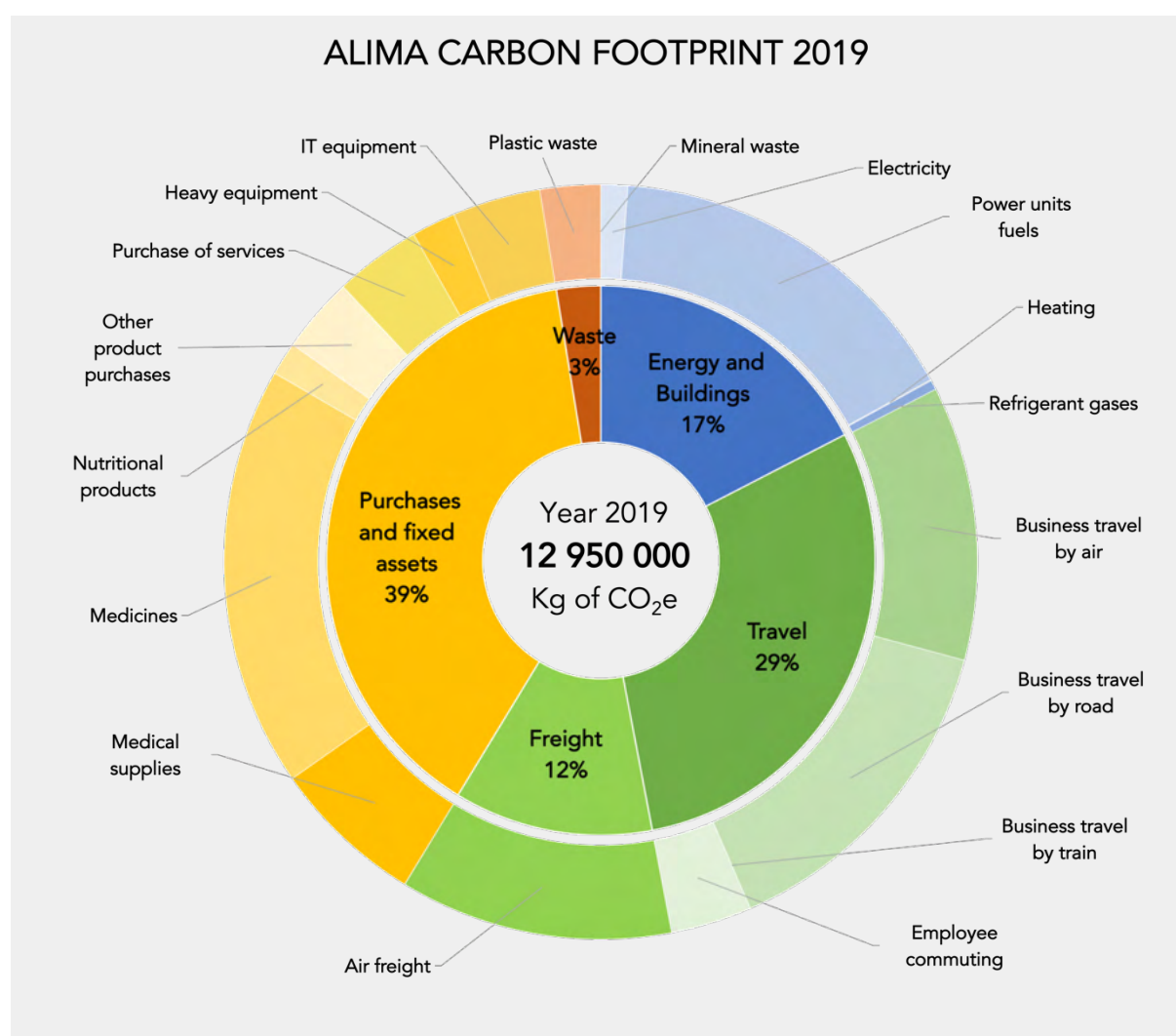
## Carbon footprint 2019

As ALIMA's 2019 carbon footprint is the first measurement carried out, it will act as the main baseline for reference. Consequently, this report does not show any comparisons with previous years.

### GLOBAL CARBON FOOTPRINT RESULTS

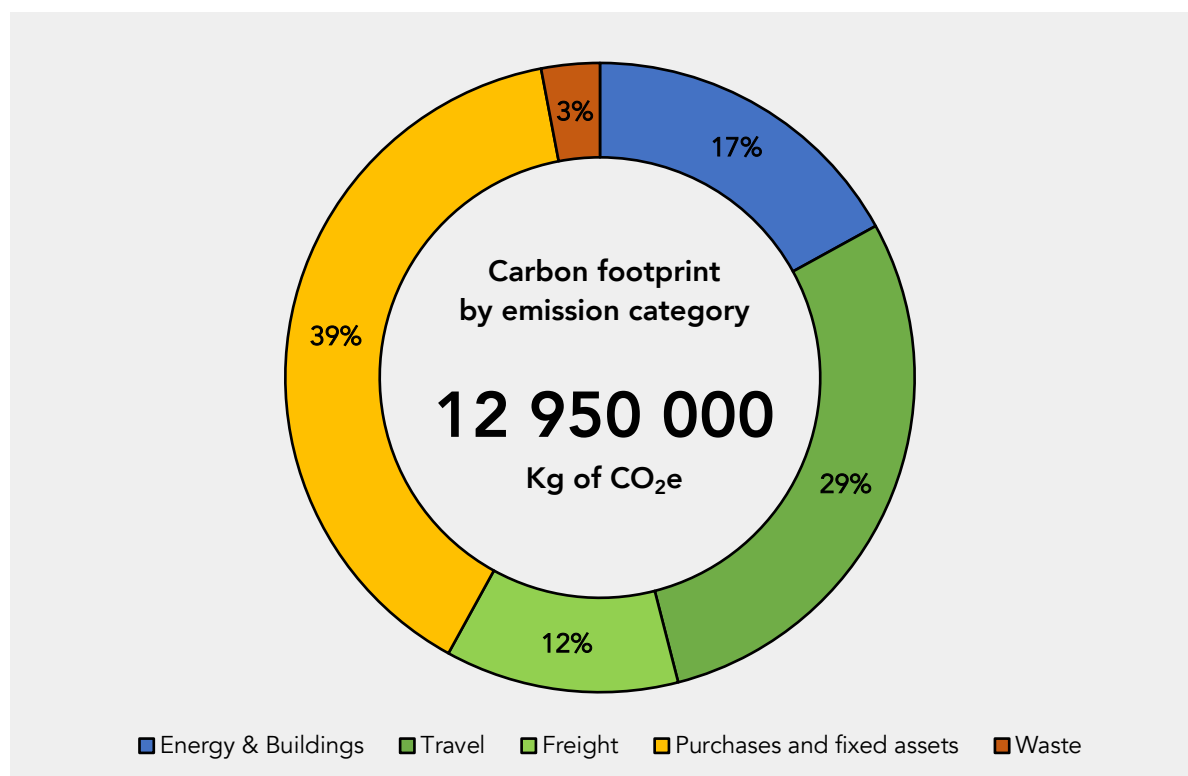
Within the established boundaries of the study's perimeter, the results obtained show that ALIMA's total carbon footprint amounts to 12,950 tonnes of carbon dioxide equivalent<sup>2</sup> (tCO<sub>2</sub>e) per year for the year 2019.

Considering the level of uncertainty in this measurement, which is 37%, ALIMA's carbon footprint is rather situated between a minimum of 8,160 tonnes and a maximum of 17,750 tonnes of CO<sub>2</sub>.



<sup>2</sup> CO<sub>2</sub> equivalent (CO<sub>2</sub>e): reference unit of measurement of the global warming power (GWP) of a gas in CO<sub>2</sub> equivalence even if it is not CO<sub>2</sub>. Example: methane has a GWP 23 times greater than CO<sub>2</sub>, so one molecule of methane is equivalent to 23 molecules of carbon dioxide.

## RESULTS BY EMISSION CATEGORY



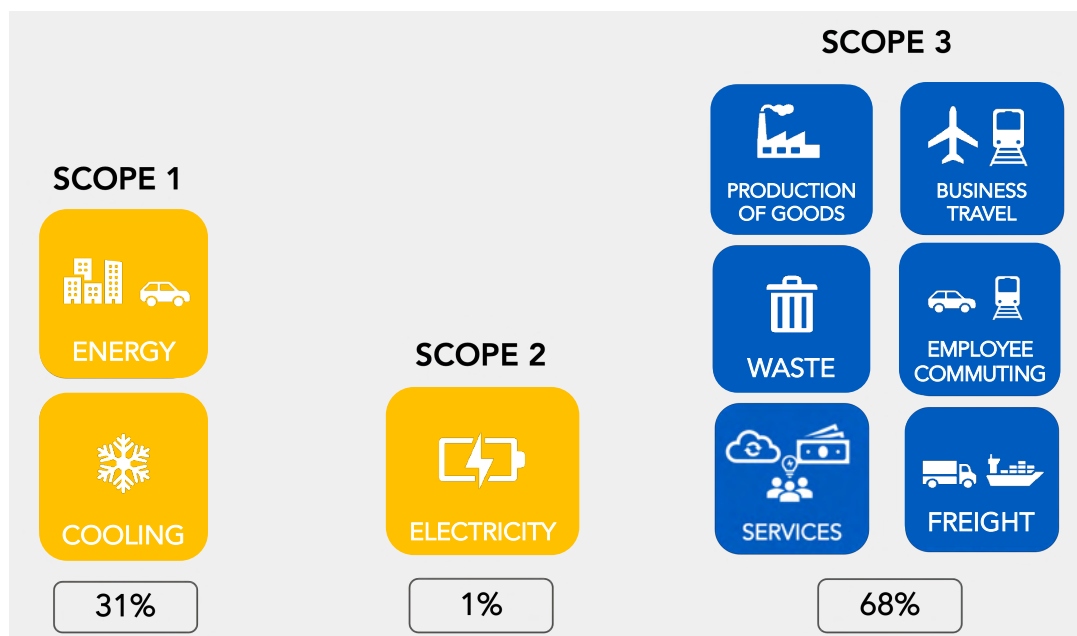
The main categories of CO<sub>2</sub>e emissions are, in ascending order:

- Transport accounts for **41%** of the footprint, or **5,345 t.CO<sub>2</sub>e**.
  - Business travel and commuting account for **29%** of the footprint, or **3,827 t.CO<sub>2</sub>e**.
  - Freight accounts for **12%** of the footprint or **1,518 t.CO<sub>2</sub>e**, as mainly air freight.
- Purchases and fixed assets account for **39%** of the footprint, or **5,010 t.CO<sub>2</sub>e**.
  - Purchases of goods and services and non-depreciated fixed assets.
- Energy represents **17%** of the footprint, or **2,257 t.CO<sub>2</sub>e**.
  - Electricity, fuel purchases for generators and gas consumption in the Paris office.
- Waste represents **3%** of the footprint, or **337 t.CO<sub>2</sub>e**.
  - Incinerated healthcare waste.



## CARBON FOOTPRINT RESULTS BY SCOPE

International standards for carbon accounting classify greenhouse gas emissions into three groups: Scope 1 (direct emissions from the organisation's combustion of fossil fuels), Scope 2 (indirect emissions associated with the consumption of purchased electricity, cooling, and heating) and Scope 3 (all other indirect emissions occurring upstream or downstream).



The categorisation of scope 1, 2 and 3 is an international classification of emission sources. It is a quasi-universal reference<sup>3</sup> that allows a comparative reading of carbon footprints between all types of institutions and organisations (private, public, associations, etc.).

❖ **Scope 1: 31% or 3,961 t.CO<sub>2</sub>e.**

It encompasses the organisation's direct emissions which are generated by the direct combustion of fossil fuels such as fuel oil or gas for heating or fuel for vehicles and generators owned by the organisation. It also includes direct fugitive emissions that come from intentional or unintentional releases; in the case of ALIMA, this mostly consists of refrigerant gases from cooling systems.

❖ **Scope 2: 1% or 148 t. CO<sub>2</sub>e.**

This concerns the indirect emissions related to the consumption of purchased energy, that is, electricity consumption from the grid. This represents only a small portion of the electrical energy consumed, the majority of which comes from generators and is already accounted for in Scope 1.

❖ **Scope 3: 68% or 8,840 t.CO<sub>2</sub>e.**

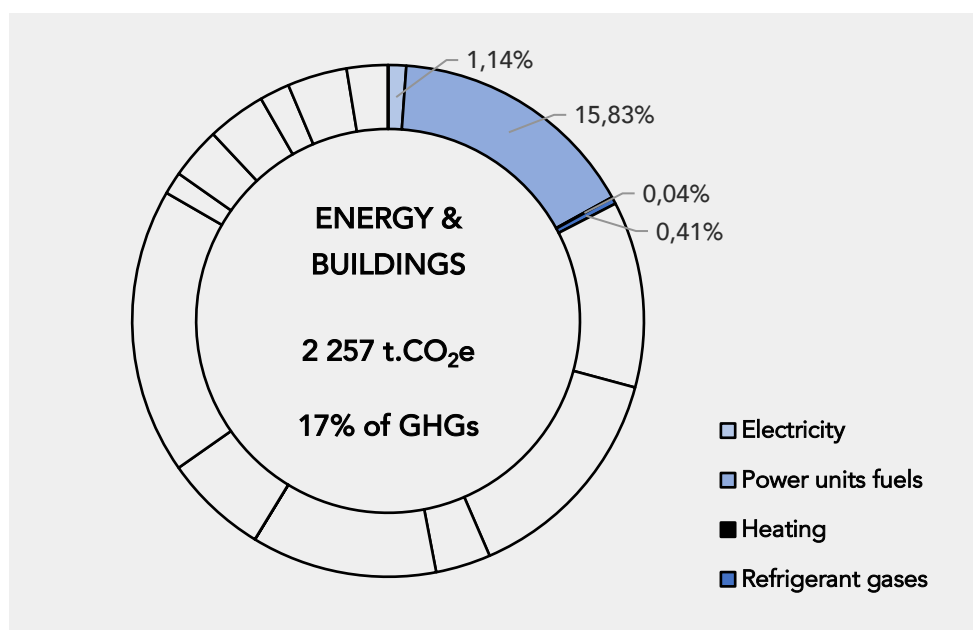
All other indirect emissions: emissions from products, services and goods consumed by integrating their entire life cycle (LC). These are the emissions required for the manufacture, use and disposal of the good or service purchased.

As with all service delivery organisations, it is not uncommon to find that around 70% of the organisation's emissions are indirect or external, and therefore related to scope 3.

<sup>3</sup> ISO 14069 and GHG Protocol in particular.

## RESULTS BY EMISSION SOURCE CATEGORIES

### ENERGY



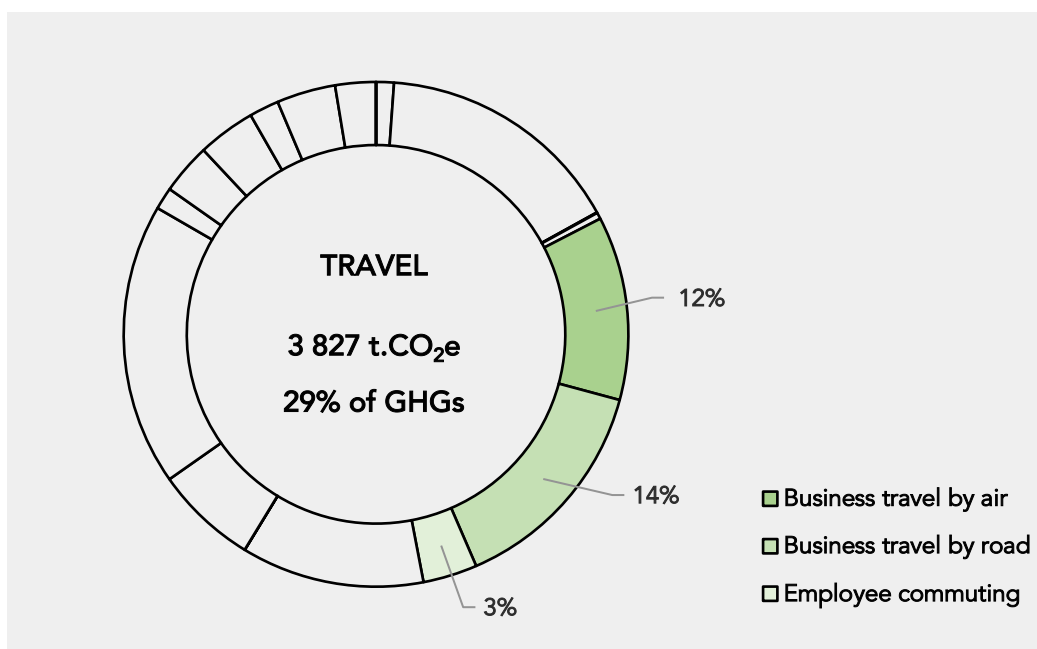
Energy, with **17%** of emissions, or **2,257 tonnes of CO<sub>2</sub>e**, is the organisation's third largest GHG emission source.

This category of emissions includes in particular the energy consumed by the buildings of ALIMA's facilities as well as those of some of its partners (offices, coordination centres, pharmacies, health centres, hospitals, nutritional centres, etc.). The sub-sources of emissions are :

- **Electricity consumption** on the local network (1.14%, 148 t.CO<sub>2</sub>e),
- **Fuel for electricity generation** by generators (16%, 2,050 t.CO<sub>2</sub>e),
- **Natural gas heating** for the Paris office (0.04%, 5.4 t.CO<sub>2</sub>e),
- **Refrigerant gas leaks** from air conditioners managed by ALIMA (0.41%, 53 t.CO<sub>2</sub>e).

As can be surmised above, 98% of the emissions from this category come from the energy needed to produce electricity via generators. This practice has a considerable impact on ALIMA's carbon footprint as, depending on the local energy mix, it is often much less efficient than electricity from the grid.

## TRAVEL

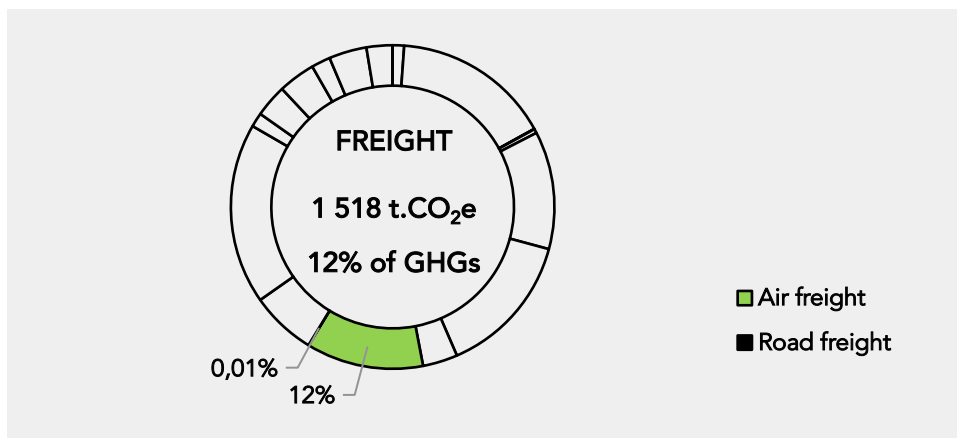


Travel is the second largest source of GHG emissions for the organisation, accounting for **29%** of total emissions with **3,827 t.CO<sub>2</sub>e**.

This category includes the following sub-sources:

- Business travel by air**, representing **12%** of the organisation's GHG emissions (**1,524 t.CO<sub>2</sub>e**). It represents 40% of the emissions from the "travel" category, with a total of 10 million km travelled, i.e. 250 times the circumference of the earth. It is important to point out that this figure seems to fall short of the reality, as it only partially takes into account national flights, which are sometimes difficult to trace.
- Business travel by car**, representing **14%** of the organisation's GHG emissions (**1,852 t.CO<sub>2</sub>e**). It represents the largest emissions source in the "travel" category (50%). A total of 652,000 litres of fuel were consumed.
- Commuting**, representing **3%** of the organisation's GHG emissions (**451 t.CO<sub>2</sub>e**). For this first assessment, we decided to simplify this measure by making an estimate. We have established an average number of km per day per employee, with most of the journeys made by bus.

## FREIGHT

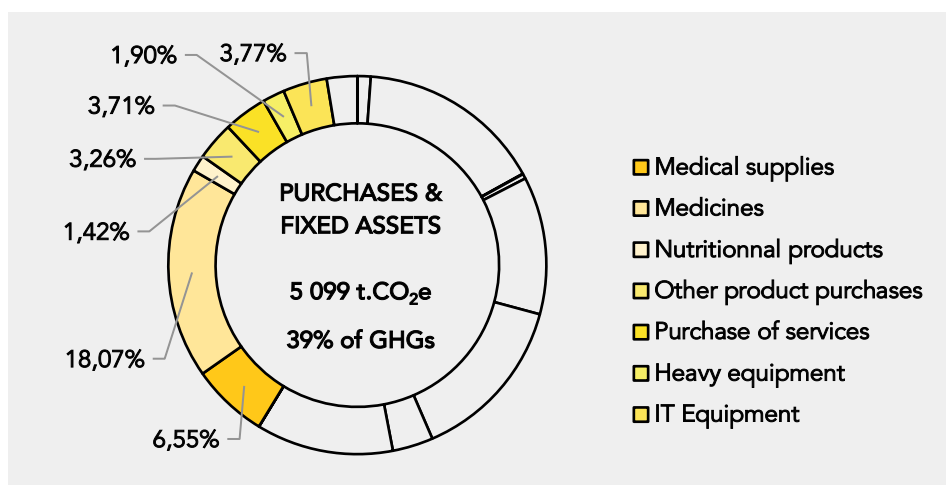


Freight is the fourth most important GHG emission source for the organisation. It accounts for **12%** of total emissions with **1,518 tonnes of CO<sub>2</sub>e**.

This category includes the following sub-sources:

- **Air freight: 12%** of the organisation's GHG emissions (**1,517 t.CO<sub>2</sub>e**). It represents almost 100% of the emissions from freight. In 2019, 296 tonnes were transported over an average of 4000 km. All purchases of medicines and medical supplies were made from MSF Supply and delivered solely by air freight.
- **Road freight: 0.01%** of the organisation's GHG emissions (**1.2 t.CO<sub>2</sub>e**). The road freight calculated only considers the volumes purchased from MSF Supply and transported from a given country's airport to the missions in question. However, this source is very underestimated due to the difficulties related to collecting precise information. Part of the emissions that could be attributed to road freight are nevertheless found in the purchase of services. However, it was not possible to identify them with enough certainty to include them in the freight category.

## PURCHASES AND FIXED ASSETS



Purchases of goods and services and fixed assets account for the largest share of the organisation's emissions, at 39%. Total purchases of goods and services account for 33% of emissions and fixed assets for 6%.

## Details for purchases of goods and services

### MEDICAL ACTIVITIES

The purchase of medical goods represents the core of ALIMA's social mission: it concerns in particular **medical supplies (6.5%)**, **medicines (18%)** and **nutritional products (1.5%)**, i.e. 26% of the organisation's total GHG emissions with 3,373 t. CO<sub>2</sub>e, and 67% of the emissions from the purchases and fixed assets emission source.

### SUPPORT ACTIVITIES

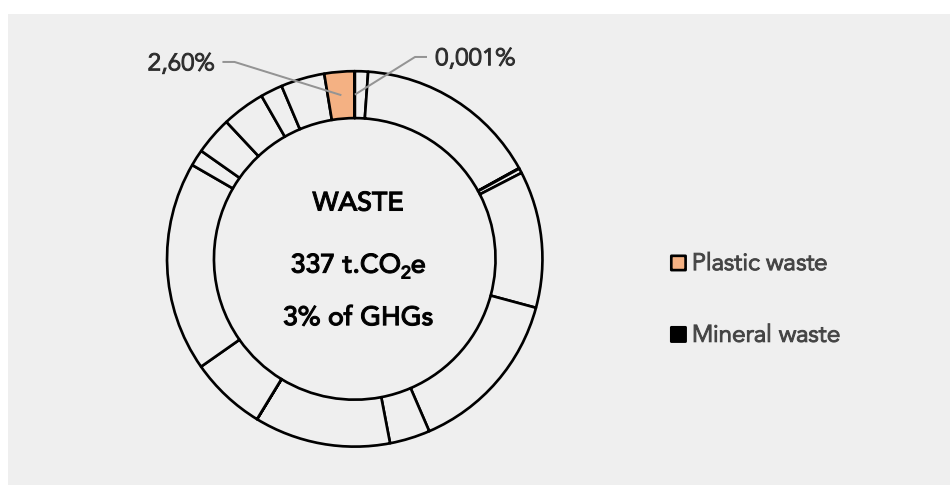
The support activities encompass all other purchases of goods and services necessary for the smooth running of the organisation's activities, i.e. **13%** of the organisation's emissions (1,637 t.CO<sub>2</sub>e).

#### They include:

- **Purchases of non-medical goods (3.26% of GHG):** office supplies, construction and rehabilitation materials, small equipment, etc.
- **Purchases of services (3.71% of GHG):** insurance costs, bank charges, rents, audits and external consultants, telecommunication costs, equipment rentals; maintenance and repair services, hotel, transport, and catering costs, etc.
- **Fixed assets (5.67% of GHG):** these include purchases of heavy equipment (vehicles, generators) and IT equipment (computers, printers, servers, mobile phones, etc.).

---

## WASTE



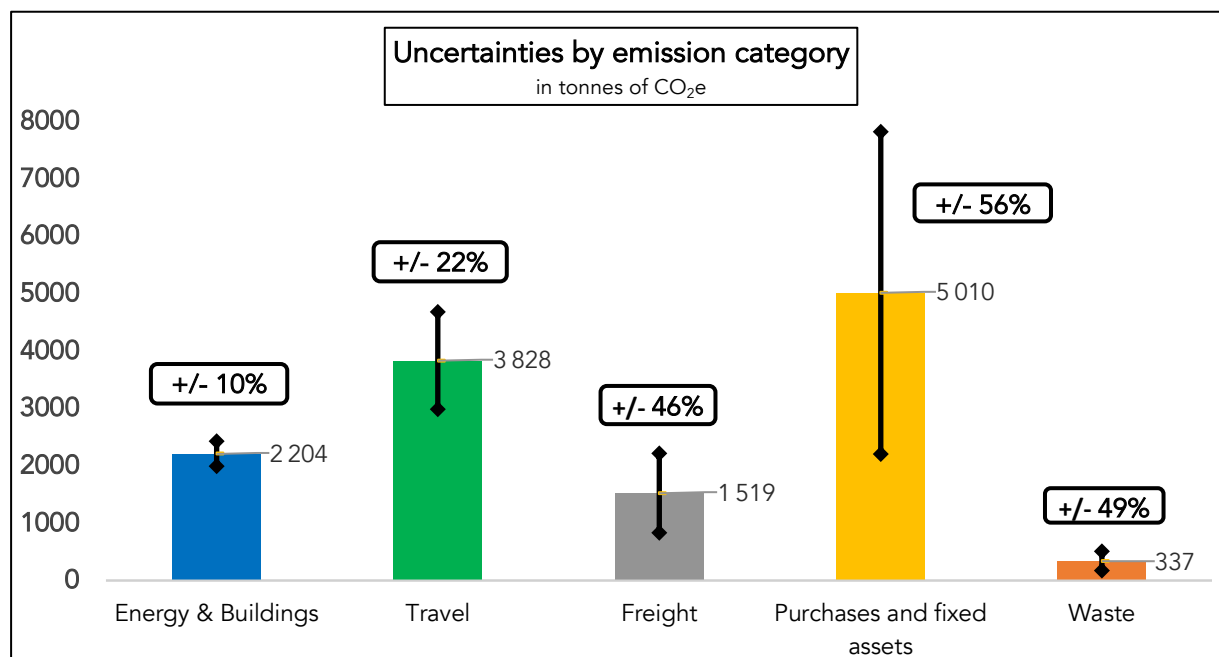
The waste counted in this emission category is only incinerated medical supplies. It accounts for **3%** of the organisation's total GHG emissions, i.e. **337 t.CO<sub>2</sub>e**. The volumes were documented by the main supplier (MSF Supply). There are two main types of waste:

- **Plastic waste:** 2.6% of the organisation's GHG emissions.
- **Mineral waste** (metal and glass): 0.001% of the organisation's GHG emissions.

Other waste such as packaging and office supplies could not be estimated due to lack of data.



## UNCERTAINTIES



The level of uncertainty depends on two criteria: the quality and exhaustivity of the activity data collected and the applicability of the emission factor.

The highest level of uncertainty (56%) is found in particular in the **purchases of goods and services** as the data is largely derived from financial rather than physical data and includes a wide range of elements. This lack of precision results in the use of more general emission factors which indeed incorporate a high level of uncertainty, of 50% on average. For example, no distinction is made between different suppliers of the same product.

For **energy**, the level of uncertainty is low (10%) and for **travel**, it is medium (20%). The reliability level for the latter was reduced due to certain inconsistencies between the volumes of fuel consumed and the sums spent and the use of an estimative method to evaluate employee commuting.

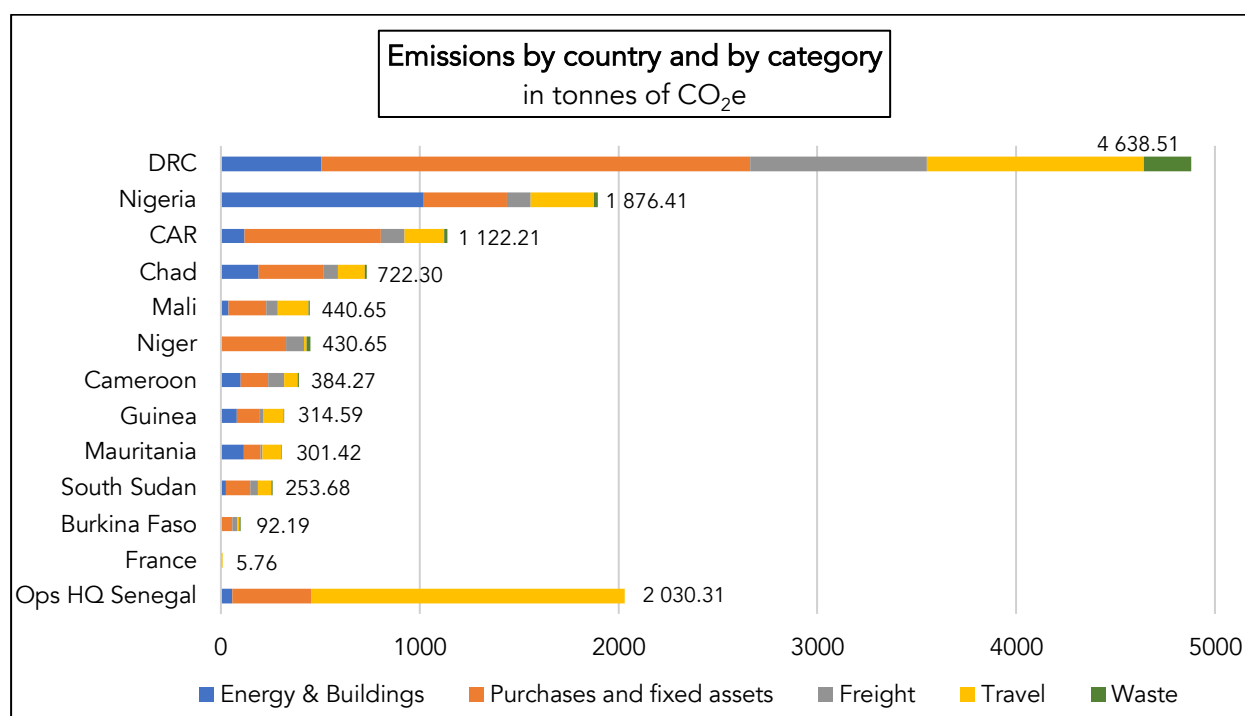
The high level of uncertainty for **freight** (46%) is mainly due to the uncertainty of the air transport emission factor from international databases (with 44% uncertainty). The data collected in Tonnes/Km from MSF Supply is on the contrary very reliable (uncertainty of 2%).

As ALIMA's 2019 carbon footprint is a first measurement, the level of uncertainty is considered medium (37%)<sup>4</sup>. This means that the estimated footprint of 12,950 tonnes of CO<sub>2</sub>e could in fact be found within a range of 8,158.5 and 17,741.5 tonnes of CO<sub>2</sub>e. One reason for this level of uncertainty is the inherent difficulties of a first data collection exercise. Repeating this measurement in subsequent years to monitor the organisation's GHG emissions will allow for a continuous and progressive improvement in the reliability of results.

<sup>4</sup> The breakdown of this 37% level of uncertainty is 17% for the emission factors and 20% for the data. However, this subdivision must be put into perspective as:

- The quality and completeness of the data determines the emission factor
- This is an overall result that erases the level of uncertainty per item.

## Results by country



The diagram above shows total GHG emissions by country, subdivided by emission category.

The values (horizontal) are in tonnes of CO<sub>2</sub>e.

Emissions from the headquarters in Senegal are presented separately from the other mission countries. One of the main reasons for this, apart from the fact that the Senegal headquarters does not have the same activities as the missions, is that it accounts for all of the organisation's business travel by air. Emissions from the headquarters itself, without mission-related business travel, would probably be closer to 700 tonnes of CO<sub>2</sub>e rather than 2,000 tonnes.

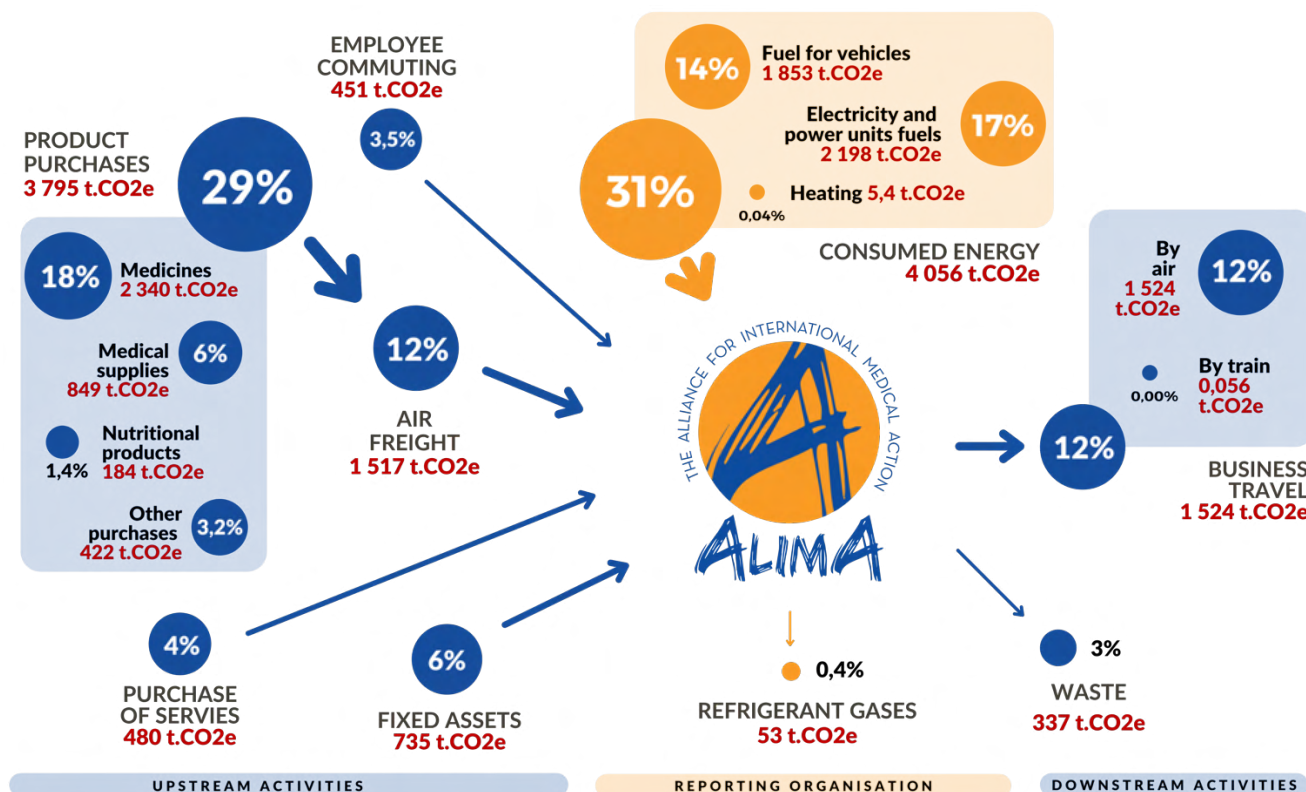
Compared to the other countries of intervention, the Democratic Republic of Congo is where ALIMA emits the most GHGs (4,638 t.CO<sub>2</sub>e), i.e. **35% of ALIMA's total emissions** for 41% of the budget for missions. These emissions are mainly due to the medical supplies purchased and the ensuing freight. Travel represents 23% of the country's GHGs. However, this does not include business travel, which is accounted for at the headquarters level as explained above. This makes it possible to estimate a very strong correlation between budget allocation and the distribution of GHG emissions within the organisation.

Nigeria is the second most carbon-intensive area of ALIMA's work.

The distribution of emission categories across the different countries is relatively homogeneous, except for energy. This disparity calls into question the reliability of the physical and financial data collected, as the greater or lesser use of electricity from generators cannot fully explain it.

## Mapping the organisation's emission flows

The flow map below shows the movements and proportions of GHG volumes required for the organisation's operations. It can be seen that three items (purchases of products from MSF Supply, energy, and business travel) alone account for 72% of the organisation's total emissions.



## Performance indicators (ratios)

The assessment of ALIMA's GHG footprint allows for the production of a certain number of indicators that will subsequently allow to compare and monitor the organisation's carbon intensity.

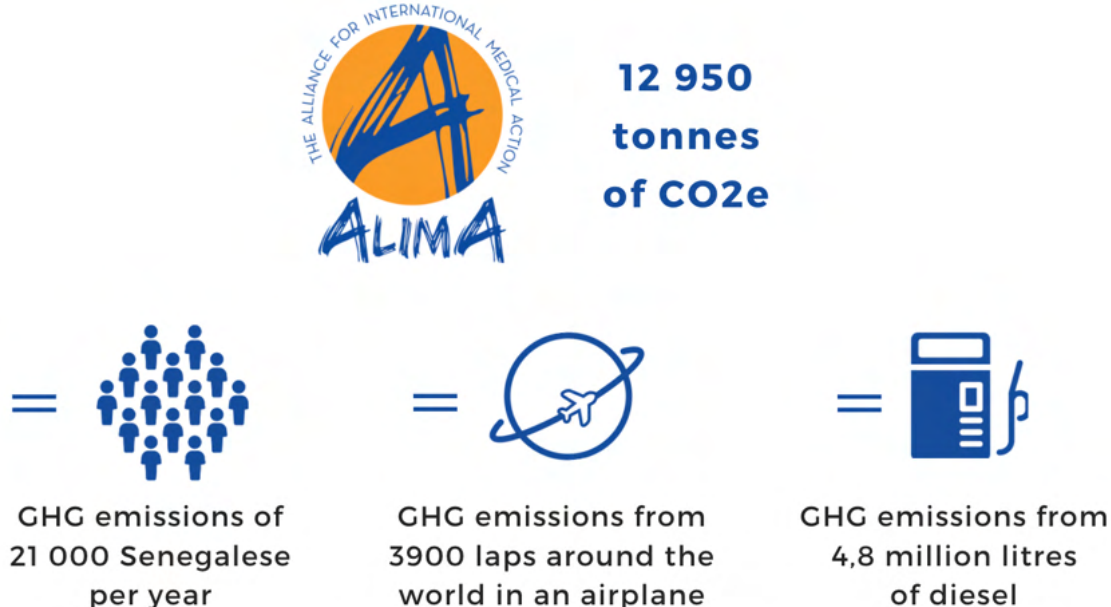
Key Performance Indicators	Value	Unit
<b>Per employee*</b>		
Total GHG emissions	6,74	t CO <sub>2</sub> e / FTE
Total Scope 1 & 2	2,14	t CO <sub>2</sub> e / FTE
Total Scope 3	4,60	t CO <sub>2</sub> e / FTE
<b>Per Euro spent**</b>		
Total GHG emissions	0,21	kg CO <sub>2</sub> e / Euro
Total Scope 1 & 2	0,07	kg CO <sub>2</sub> e / Euro
Total Scope 3	0,14	kg CO <sub>2</sub> e / Euro

\* Based on 1920 employees

\*\* Based on €61m

## Benchmark

It is sometimes difficult to grasp the GHG emissions indicators in tonnes or kilograms of CO<sub>2</sub>e. To further illustrate the volumes obtained in ALIMA's carbon footprint, which are 12,950 tonnes of CO<sub>2</sub>e, here are some useful comparisons:



For comparison purposes, here are some indicators of emissions from organisations in the aid sector. However, it is important to read these maintaining a critical eye as not all organisations have assessed exactly the same scope of activities and some emission factors may differ.

Benchmarking indicators	ALIMA	ACTED	ICRC	
<b>Per employee</b>		<b>Value</b>		<b>Unit</b>
Total GHG emissions	<b>6.74</b>	10.36	58.54	t CO <sub>2</sub> e / FTE
Total Scope 1 & 2	<b>2.14</b>	1.85	3.98	t CO <sub>2</sub> e / FTE
Total Scope 3	<b>4.60</b>	8.51	54.55	t CO <sub>2</sub> e / FTE
<b>Per Euro spent</b>				
Total GHG emissions	<b>0.21</b>	0.23	0.60	kg CO <sub>2</sub> e / Euro
Total Scope 1 & 2	<b>0.07</b>	0.04	0.04	kg CO <sub>2</sub> e / Euro
Total Scope 3	<b>0.14</b>	0.19	0.56	kg CO <sub>2</sub> e / Euro

There is a relative similarity between ACTED and ALIMA, especially concerning the carbon intensity per Euro spent. However, emissions per employee are 40% higher at ACTED. A comparison with the ICRC seems more complicated due to the difference in activities. Only the emissions per Euro spent on Scopes 1 and 2, which correspond to energy consumption, are very similar between the three organisations (~0.05 kg CO<sub>2</sub>/€).

## Recommendations

### MONITORING AND CONTINUOUS IMPROVEMENT OF MEASUREMENT

The process of measuring ALIMA's GHG emissions is a long-term exercise. The study of the evolution of the organisation's emissions should be repeated every year. It will complement the accounting information to help determine the organisation's decisions and strategy in a coherent manner, but also to monitor the impact of the actions implemented as part of the environmental roadmap.

Monitoring lends to a continuous improvement process. The latter has the following essential functions:

- To enable the organisation to gradually improve the quality and comprehensiveness of the data collected,
- To facilitate, or even automate, the collection process,
- To evaluate the successes and shortcomings of the emissions assessment process but also of the decarbonisation actions implemented.

Moreover, such a process will enable ALIMA to develop a "climate culture" within the organisation, which will encourage the implementation of mitigation actions.

### SUGGESTIONS FOR IMPROVEMENT

The initial measure that is the subject of this report has allowed us to carry out a first exercise. It provides us with valuable feedback that the organisation should use to improve and facilitate the implementation of the next measure.

First key improvements to consider:

- **Appointment of a project officer to coordinate the monitoring of the carbon footprint.** The organisation should take ownership of the measurement process in order to standardise and institutionalise data collection. In particular, the person in charge should develop, with the support of the CAA, a common methodology for reporting information from the field.
- **Define and coordinate with management the collection of information that is necessary and useful for all.** Much of this information is needed both for steering the organisation and for assessing and monitoring GHG emissions.

In particular, it will be necessary to:

- **Record the exact fuel consumption** on missions with the breakdown between travel and energy production.
- **Record the nature and volumes of local freight** in tonnes/kilometres transported, especially if a policy of developing local purchases is developed.
- **Record the distances travelled and the mode of transport used** for local business travel (by country).
- **Allocate international business travel by country** to avoid counting it only at the headquarters level.
- **Identify the number and nature of cooling systems** in pharmacies.



- **Identify the volumes of the main medical supplies** and classify them into broad categories.
  - **Accurately account for and record purchases of equipment** that can be considered as fixed assets. In particular: vehicles, generators, medical equipment, IT equipment, air-conditioning, household appliances as well as the main improvements made (e.g. PV installation, renovation, etc.).
  - **Assess the volumes of other waste and learn of available disposal methods or channels.**
- **Anticipate the data to be collected.** Some important procurement data is held or can be easily provided by suppliers. It will be necessary to establish the requirements in advance and to set up the tools and processes for collecting the information with the suppliers.
  - **Plan for continuous improvement in measurement.** ALIMA should focus the annual collection of activity data on the most important sources. Planning for improvement efforts on the quality and exhaustivity of measurement should be the subject of a dedicated roadmap.
  - **Raise awareness among all the organisation's stakeholders (internal and external).** The improvement and automation of the carbon measurement is highly dependent on the contribution of all the actors involved in the smooth running of the organisation. It is imperative that they understand and appropriate their role and contribution in relation to ALIMA's commitments on the climate and its potential effects on them as well.

## Annexes

### ANNEX 1: DESCRIPTION OF EMISSION CATEGORIES AND DATA SOURCES.

#### ENERGY & BUILDINGS

Descriptions of the emission sources concerned	<ul style="list-style-type: none"> <li>• Electricity purchased from the local grid at headquarters and missions.</li> <li>• Purchased fuels (petrol and diesel) for the use of generators.</li> <li>• Refrigerant gas: Leakage and destruction of air conditioning units.</li> </ul>
Exclusions	<ul style="list-style-type: none"> <li>– Electricity consumption in expatriate accommodation. These are included in purchases.</li> <li>– Fuel purchased for vehicles that are counted as travel.</li> <li>– Cold chain equipment in pharmacies.</li> </ul>
Calculation methods	<p><b>Electricity:</b> consumption in kWh from electricity suppliers multiplied by the emission factors of the electricity production of the country concerned. In the absence of a country-specific EF, an average value was used.</p> <p><b>Fuel:</b> Fuel consumption is provided in litres and by country. Where data was missing, financial amounts were used and converted to litres based on the average cost of fuel for the country concerned.</p> <p><b>Refrigerant gas:</b> Estimate the number of units per employee (1 air conditioner for 10 people) plus the disposal of 10% of the fleet per year. Use of a reference device from the Dakar headquarters to determine the type of gas and the cooling capacity. Leakage is calculated using the Clim_froid Bilan Carbone® utility. Leaks are estimated in Kg of gas.</p>
Data sources	<p><b>Electricity and fuel:</b> Consumption indexes collected from the coordinations in each country plus accounting information from headquarters.</p> <p><b>Refrigerant:</b> Reference air conditioner in Dakar headquarters.</p>

#### FREIGHT

Description of the emission sources concerned	<ul style="list-style-type: none"> <li>• Air freight: all goods not purchased locally and chartered by air.</li> <li>• Road freight: all goods chartered by air and transported from the airport to the missions.</li> </ul>
Exclusions	<ul style="list-style-type: none"> <li>– No sea freight carried by the organisation in 2019.</li> <li>– For air freight, the following are not estimated: Distances between the suppliers and the airport of embarkation; Potential direct deliveries from manufacturers; Potential stopovers of the flights involved.</li> </ul>

	<ul style="list-style-type: none"> <li>Local road freight excluding international purchases. The latter is accounted for in the form of services in the purchases unless the fuel is purchased by the organisation.</li> </ul>
Calculation method	<p>The calculation of emissions is based on tonnes per km transported (t/km). Details of the volumes transported are provided by the service provider in tonnes per country of destination and then multiplied by the distances travelled by the goods according to the mode of transport.</p> <p><b>For air freight:</b> the distances travelled by the goods between the departure and arrival airports are determined via an online application.</p> <p><b>For road freight:</b> distances between the airport and the missions were provided by the country coordinations.</p> <p>The resulting t/km are multiplied by an emission factor specific to each transport mode.</p>
Data sources	<p>Volumes transported by country of destination: MSF Supply database.</p> <p>Distances between airports Departure/Arrival : calculator <a href="http://www.fr.distance.to">www.fr.distance.to</a></p> <p>Distances to airport of arrival and mission: Country coordination.</p>

## PURCHASES & FIXED ASSETS

Emission sources concerned	<ul style="list-style-type: none"> <li><b>Purchases:</b> This category covers all emissions associated with the purchase of goods and services.</li> <li><b>Fixed assets:</b> All of the organisation's fixed/capital assets. We have added the purchase of certain equipment for missions that are not usually included in the organisation's fixed assets: <u>purchase of vehicles, purchase of computer equipment and purchase of generators.</u></li> </ul>
Exclusions	None.
Calculation method	<p><b>Emissions from purchases of goods and services</b> are calculated mainly on the basis of monetary ratios. Beforehand, a classification by emission category is carried out (<u>e.g. office supplies, medical supplies, insurance premiums, etc.</u>). The most representative EFs are applied to the financial values to convert them into quantities of CO<sub>2</sub>e. An uncertainty coefficient is systematically assigned to each category of data and EF.</p> <p><b>Emissions from fixed assets</b> are determined, as much as possible, from physical data. It is important to note that <u>amortised</u> items from the historical fleet re not included in the GHG balance for the year under review. Only acquisitions and amortisation for the year under review are taken into account.</p> <ul style="list-style-type: none"> <li><u>The fixed assets table</u> provides details of the equipment acquired and the amount of fixtures and fittings to which we have been able to attach specific emission factors. Only the amortised values of the reference year are taken into account. <i>For example, for a computer</i></li> </ul>

	<p><i>purchased in 2018 and amortised over 3 years, only 1/3 of the emissions will be accounted for in 2019.</i></p> <ul style="list-style-type: none"> <li>For equipment acquired for missions that is not included in <u>amortisation</u>, we extracted data from the accounting ledger. This method does not allow us to obtain a perfect physical accounting and some details on the characteristics of the products are missing, which explains the average level of uncertainty in the values obtained. Nevertheless, we were able to determine representative volumes for computer equipment, mobile phones, cars, motorbikes, and generators. As these products are accounted for as purchases, we have assumed that they are amortised during the year.</li> </ul>
Data sources	<ul style="list-style-type: none"> <li>MSF Supply file, which details the quantities, weights and destinations of products.</li> <li>The accounting General Ledger</li> <li>Accounting amortisation (Pluriel Consultants).</li> </ul>

## TRAVEL

Emission sources concerned	<p>Two categories of travel are considered:</p> <ul style="list-style-type: none"> <li><b>Business travel:</b> by air, car and train. It is important to note that patient transport in mission vehicles is included in road travel, as a distinction by type of road travel is not feasible.</li> <li><b>Commuting</b> to and from work for ALIMA staff.</li> </ul>
Exclusions	<p>Subcontracted road transport services (taxi, ambulance, etc.), but excluding fuel if the latter is provided by ALIMA. These services are recorded in the purchases of services.</p>
Calculation method	<p>The values taken into account for the assessment of GHG emissions from travel are physical values. They are of different natures depending on the data sources:</p> <p><b>For plane and train tickets:</b> distances travelled are in <u>Km/passenger</u>. This information is readily available for international flights where tickets were purchased from the same tour operator. This was not the case for domestic flights purchased directly by the missions, for which it was not possible to retrieve the information. Separate emission factors were applied according to the distances travelled, the type of aircraft used and the GHG emissions involved.</p> <p><b>For road travel:</b> emissions are estimated from the quantities of fuel consumed <u>in litres</u>. For the majority of missions, these volumes were provided by the coordinations. For missing data, the volumes were estimated using financial data divided by the price of fuel per litre in the countries concerned.</p> <p><b>For commuting to work:</b> this emission source was assessed on an estimated basis. First, we estimated the dominant mode of transport used by ALIMA staff: <u>the bus</u>. This allowed us to use the emission factor for this mode of transport as a basis for calculation. Secondly, we</p>

	estimated the distances travelled in <u>km/employee</u> based on the assumption that the average distance was 10km round trip over 220 days worked per year per FTE.
<b>Data sources</b>	<p>Surveys of coordinations for fuel consumption.</p> <p>Information on air and rail tickets provided by the tour operator.</p> <p>HR data on ALIMA staff.</p>

## WASTE

<b>Emission sources concerned</b>	The organisation's most significant emissions arise from healthcare waste. Most of this waste is incinerated.
<b>Exclusions</b>	<ul style="list-style-type: none"> <li>– Ordinary waste (paper, packaging, etc.),</li> <li>– Sewage.</li> </ul> <p><i>Note: Other purchases (excluding the MSF Supply list) and fixed assets include the emissions related to their destruction in their EF.</i></p>
<b>Calculation method</b>	<p>As it is not possible to estimate the volume of waste incinerated by hospitals and health centres in the countries where the organisation operates, we proceeded on the assumption that all incinerable medical supplies (plastic) purchased by the organisation were included in its GHG emissions.</p> <p>Based on the volumes and categorisation of medical supplies, we sorted them by material: plastic, metal and glass. The volumes thus obtained allowed us to estimate the emissions due to their incineration via corresponding emission factors.</p>
<b>Data sources</b>	<ul style="list-style-type: none"> <li>– MSF Supply file which details the quantities, weights and destinations of the products.</li> </ul>

## ANNEX 2: DESCRIPTION OF THE MAIN EMISSION FACTORS (EF) USED

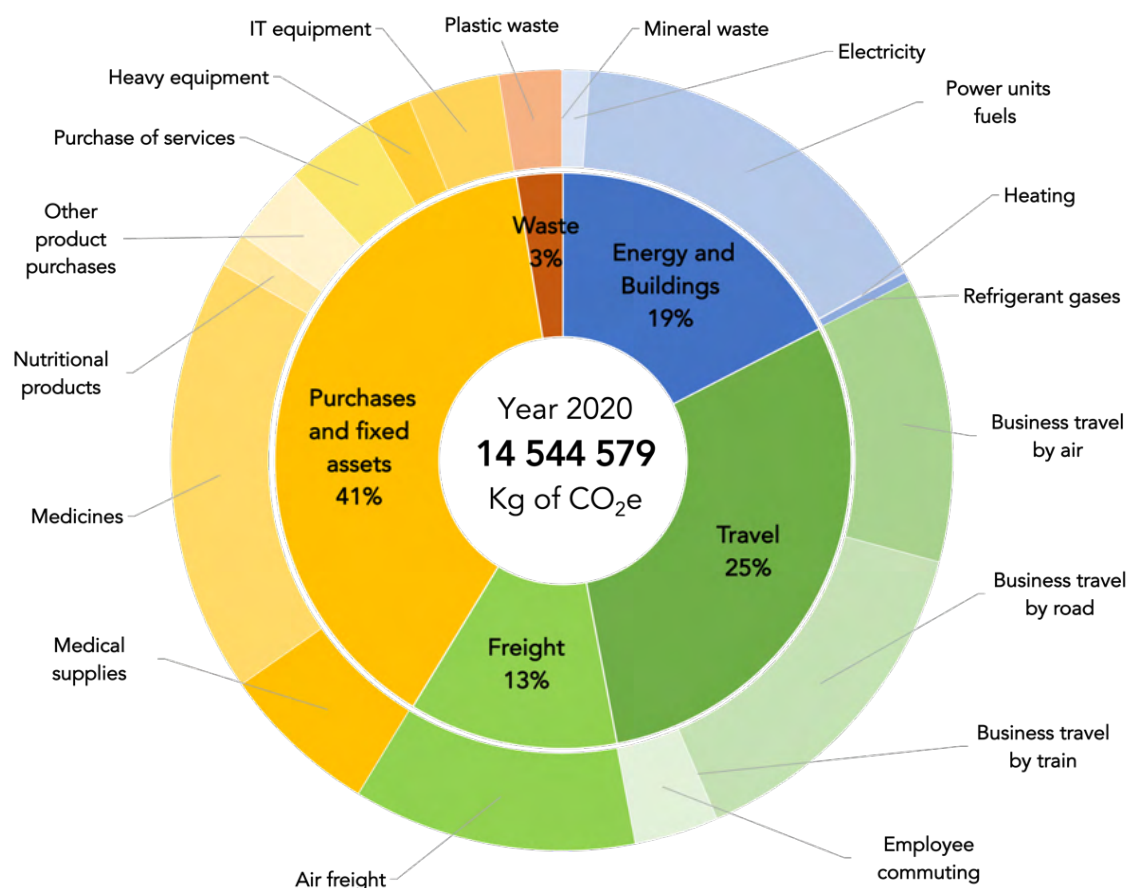
Element	Emission factor	Unit	Source
Natural gas	0,227	KgCO <sub>2</sub> e/kWh PCI	Carbon base - ADEME
Road diesel	3,158	KgCO <sub>2</sub> e/Litre	Carbon base - ADEME
Petrol (E85)	1,681	KgCO <sub>2</sub> e/Litre	Carbon base - ADEME
Electricity (Africa average)	0,456	KgCO <sub>2</sub> e/kWh	Carbon base - ADEME
Refrigerant gas R408a	3260	KgCO <sub>2</sub> e/Kg	Carbon base - ADEME
Medicines	54,03	KgCO <sub>2</sub> e/k€	Journal of cleaner product 214 (2019)
Plumpynut	1,53	KgCO <sub>2</sub> e/Kg	Ecoinvent 3



Concentrated milk	3,28	KgCO <sub>2</sub> e/Kg	Carbon base - ADEME
Office supplies	0,367	KgCO <sub>2</sub> e/€	Carbon base - ADEME
Office stationery	0,917	KgCO <sub>2</sub> e/€	Carbon base - ADEME
Furniture and other manufactured goods	0,600	KgCO <sub>2</sub> e/€	Carbon base - ADEME
Medical supplies	0,350	KgCO <sub>2</sub> e/€	NHS England Carbon Emissions
Insurance	110	KgCO <sub>2</sub> e/k€	Carbon base - ADEME
Banking services	110	KgCO <sub>2</sub> e/k€	Carbon base - ADEME
Fees	110	KgCO <sub>2</sub> e/k€	Carbon base - ADEME
Car maintenance	495	KgCO <sub>2</sub> e/k€	Ecoinvent 3
Telecommunications	170	KgCO <sub>2</sub> e/k€	Carbon base - ADEME
Mail	130	KgCO <sub>2</sub> e/k€	Carbon base - ADEME
Accommodation	91	KgCO <sub>2</sub> e/k€	Ecoinvent 3
Multi-technical maintenance	215	KgCO <sub>2</sub> e/k€	Carbon base - ADEME
Land transport	560	KgCO <sub>2</sub> e/k€	Carbon base - ADEME
Plastic waste - Incineration	2680	KgCO <sub>2</sub> e/Tonne	Carbon base - ADEME
Mineral waste - Incineration	36	KgCO <sub>2</sub> e/Tonne	Carbon base - ADEME
Cargo plane 100T >3500 km	1,079	KgCO <sub>2</sub> e/TonneKm	Carbon base - ADEME
Rigid truck 12-20T	0,152	KgCO <sub>2</sub> e/TonneKm	Carbon base - ADEME
Mainline train	0,0053	KgCO <sub>2</sub> e/PassengerKm	Carbon base - ADEME
TGV	0,0017	KgCO <sub>2</sub> e/PassengerKm	Carbon base - ADEME
Short-haul aircraft	0,258	KgCO <sub>2</sub> e/PassengerKm	Carbon base - ADEME
Medium-haul aircraft	0,1871	KgCO <sub>2</sub> e/PassengerKm	Carbon base - ADEME
Long-haul aircraft	0,1517	KgCO <sub>2</sub> e/PassengerKm	Carbon base - ADEME
Laser printer	197	KgCO <sub>2</sub> e/Unit	Carbon base - ADEME
Laptop	156	KgCO <sub>2</sub> e/Unit	Carbon base - ADEME
Desktop	169	KgCO <sub>2</sub> e/Unit	Carbon base - ADEME
Computer server	600	KgCO <sub>2</sub> e/Unit	Carbon base - ADEME
Miscellaneous IT	917	KgCO <sub>2</sub> e/k€	Carbon base - ADEME
Vehicle	5500	KgCO <sub>2</sub> e/Tonne	Carbon base - ADEME
Machines	5500	KgCO <sub>2</sub> e/Tonne	Carbon base - ADEME
Transport equipment	700	KgCO <sub>2</sub> e/k€	Carbon base - ADEME
Machine equipment	700	KgCO <sub>2</sub> e/k€	Carbon base - ADEME

### ANNEX 3: ALIMA 2020 CARBON FOOTPRINT ASSUMPTION

#### ALIMA CARBON FOOTPRINT 2020



### ANNEX 4: REFERENCES

ADEME, Centre de ressources sur les bilans de gaz à effet de serre, *Base Carbone*, <https://www.bilans-ges.ademe.fr/fr/accueil/contenu/index/page/principes/siGras/0>

BEIS 2019, *Conversion Factors*, <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2019>

Ecoinvent 3, *Database*

Flysjö, A., 2012, *Greenhouse gas emissions in milk and dairy product chains - Improving the carbon footprint of dairy products*.

WRI, *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard*, <https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf>

WRI, *GHG Protocol Technical Guidance for Calculating Scope 3 Emissions*,  
[https://ghgprotocol.org/sites/default/files/standards/Scope3\\_Calculation\\_Guidance\\_0.pdf](https://ghgprotocol.org/sites/default/files/standards/Scope3_Calculation_Guidance_0.pdf)

Carbon base - ADEME

Health and medical social establishments sector guide 2020 - ADEME

Norm ISO 14064-2 : 2019

IPCC Fifth Assessment Report: Climate Change - IPCC

EFDB, IPCC carbon base, <http://www.ipcc-nggip.iges.or.jp/EFDB/main.php>

World Bank Open Data, <https://donnees.banquemondiale.org/>

Association Bilan Carbone, <https://www.associationbilancarbonate.fr/le-changement-climatique/>