MSF OCP 2019 CARBON FOOTPRINT REPORT

MEDECINS SANS FRONTIERES



Climate Action Accelerator

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EXECUTIVE SUMMARY

Médecins Sans Frontières is an international medical and humanitarian non-governmental organisation committed to meeting the medical humanitarian needs of vulnerable and excluded populations in a changing political and aid environment. MSF recognises the medical and humanitarian consequences of climate change and environmental degradation and its contribution towards it.

This report focuses on one of the 6 MSF Operational Centres: the Operational Centre Paris (MSF OCP), that took in 2021 the <u>commitment to reduce its carbon emissions by 50% by 2030 from a 2019</u> <u>baseline</u> (in 2022, the whole MSF Movement took the <u>same commitment</u>). The study, carried out in the framework of a partnership with the Climate Action Accelerator (CAA), quantifies the various sources of greenhouse gas (GHG) emissions for which MSF OCP is accountable. The approach complies with the international standards on the matter (ISO 14064) and follows the GHG Protocol methodology.

The assessment outlines MSF OCP's carbon reduction commitments and explores its different activities to estimate the organisation's CO2 emissions in 2019, aiming to give an overview of its global footprint.

OCP's total greenhouse gas emissions in 2019 amounts to 92 000 tCO2e (tons on carbon dioxide equivalent). When comparing this result with other organisations of the same sector (such as ALIMA, ACTED, or other MSF Operational Centres), there is a significant homogeneity in the distribution of emissions. The carbon footprint is concentrated in three categories of emissions: transport (notably long-distance air travel), energy, and purchases of goods and services.

The level of uncertainty of the assessment is about 71,4%. Hence, the total carbon footprint can be lower or higher: between 26 300 and 157 600 tCO2e. This figure of 71% is high but is currently a typical value in most carbon footprint exercises, considering the novelty of the methodology worldwide.



MSF OCP 2019 carbon footprint by category



The most important emission categories are as follows:

- Purchase of goods: 30 300 tCO2e
- Travel: 20 600 tCO2e. Among which passenger transport by air: 13 700 tCO2e
- Electricity generation and use: 14 700 tCO2e
- Freight (transport of goods): 11 300 tCO2e. Among which air freight: 9 500 tCO2e
- Purchase of services: 11 300 tCO2e

Aircraft used in freight and passenger transport alone accounts for 23 200 tCO2e or 25% of all OCP's emissions. The high proportion of air travel and freight is linked to the nature of the organisation's activities, spanning across the globe and providing medical assistance to people, sometimes in very hard to reach areas.

The report also presents a breakdown by country of intervention. The analysis reveals: i) a direct correlation between expenses and carbon emissions, with a concentration of 50% of the CO2 emitted on 7 missions out of a total of 34; ii) a different distribution of emissions between projects based on the different contexts and operational activities. By putting this data into perspective with the local contexts, new approaches emerge to identify actions to reduce OCP's carbon emissions.

The data collection process is, however, not always systematic. Limitations such as the availability of physical data (kWh, precise kms travelled, number of cars, etc.) and their correlation with accounting data are identified. This study proposes concrete monitoring and reporting recommendations in data collection and analysis to accurately track, improve, and institutionalise the carbon accounting exercise for the following years. Among others, these recommendations include: i) starting collecting information on sources where there are data gaps in the data, notably for waste, local freight and travel; ii) setting up syntax rules in the accounting system to allow the extraction of essential data to be automated to produce future carbon footprints (e.g., water, electricity, gas). These improvements will contribute to reducing the use of financial data in favour of physical data to decrease uncertainty and prevent the impact of inflation on the footprint calculation.

This carbon footprint analysis is intended to help OCP guide its environmental roadmap, working with teams to find solutions to reduce the organisation's footprint. It is the result of numerous exchanges with people working in the field, headquarters and outside the organisation, who should be warmly thanked for their time, patience and efforts. Also, both the methodology used and the structure of this footprint report have been heavily inspired by OCG's and OCB's.



INTRODUCTION

MSF Operational Centre Paris pledged to halve its greenhouse gases emissions by 2030, on a 2019 baseline. This baseline is the focus of the following report. It first presents the methodology used to conduct the GHG assessment and the evaluation's organisational, operational and temporal boundaries. The analysis results are then presented by type of emission (scope), by categories and country of intervention, including a section with key performance indicators and benchmarking to facilitate a better understanding of the analysis outcomes. The study concludes with key monitoring and reporting recommendations to institutionalise the carbon accounting exercise for the following years. In Annexes can be found the detailed figures of the carbon footprint, along with all the emission factors used.

METHODOLOGY

The methodology chosen for this assessment complies with international standards. It is strongly inspired by the pilot Humanitarian Carbon Calculator (HCC) methodology (now fully released, and available <u>here</u>), specifically developed for the humanitarian sector, and based on the <u>GHG (GreenHouse Gas) Protocol</u>, particularly concerning relevance, comprehensiveness, consistency, transparency, accuracy and representation (notably by Scope).

The HCC provides the basis for a humanitarian sector reference framework that allows for more relevant footprint reporting, using common Emission Factors (EF). Those factors are the values that are used to 'translate' an activity data – kms driven, litres of fuel burnt, euro spent – into carbon dioxide (CO2) emissions.

Most EFs in MSF France OCP carbon footprint come from the HCC, that aggregate EFs from various reference databases, first and foremost the Environment and Energy control agency one (<u>Agence de</u> <u>I'Environnement et de la Maîtrise de l'Energie – ADEME</u>) of the French government.

A notable exception are the EFs used to estimate the emissions of the international purchase of goods, that come from a prior work done by the Quantis company in the frame of a project led by an international MSF team called 'Climate smart MSF', that were exclusively selected in the British government's <u>Department for Environment, Food & Rural Affairs (DEFRA) database</u>.

What is a greenhouse gas assessment?

The main objective of a GHG assessment is to give a global overview of an activity with an indicator that is not economic but climatic (greenhouse gas emissions expressed in tonnes of CO2 equivalent). The greenhouse gases and their impacts are defined in the Kyoto Protocol (CO2, CH4, N2O, HFCs, PFCs, SF6). In addition to these gases, a number of so-called "non-Kyoto" gases, including anaesthetics gases (like isoflurane and desflurane) and halocarbons (like hydrofluorocarbons and perfluorocarbons – HFCs and PFCs) that are found in air conditioning and refrigerating systems, are relevant to the current analysis as they are emitted through MSF France OCP's activities.

Methodology for calculating emissions

Activity data is collected (€, kms travelled, litres of fuel consumed, etc.) to calculate MSF France OCP's GHG emissions. Each piece of data is then multiplied by an emission factor to evaluate its equivalence in quantity of GHG emitted. As different gases have different Global Warming Potentials, all emissions are converted into CO2 equivalents (CO2e) to allow for simplified reporting.



It is worth noting that EFs are built by measuring the life-cycle emissions of products or services, i.e., the emissions generated during their production, operation, and disposal.



The current methodologies for estimation CO2 emissions are still nascent, and the data available worldwide still very limited. Hence, the uncertainty surrounding the estimation of any carbon footprint is very high, and the calculation of this uncertainty factor is in itself part of the exercise, so as to illustrate the accuracy of the collected data and the accuracy of the available emission factors. Thanks to this criterion, the margin of the inaccuracy of a carbon footprint can be estimated at the maximum and the minimum, as well as the margin of improvement for the following assessments.

BOUNDARIES OF THE EVALUATION

Determining the boundary of the evaluation is a crucial aspect, both for the methodology and the governance regarding the future decarbonation efforts. It requires to determine:

- The organisational boundary: what are the 'entities' included in the evaluation?
- The operational boundary: what are the 'activities' included?
- The temporal boundary: what is the timespan of the footprint?

Organisational boundary

Quite classically, the organisational perimeter chosen for MSF OCP is based on 'financial control', i.e., everything that appears in the accounts of the association MSF France published in 2019 is considered to be part of the organization's footprint.

Some clarifications:

- Entities included
 - The decentralized headquarters are included:
 - Nairobi, Dakar, Abidjan, Dubai, Tokyo, New York
 - All 34 missions with significant budgets in 2019 are obviously included:
 - Afghanistan, Armenia, Bangladesh, Burkina Faso, Cambodia, Chad, Democratic Republic of Congo, Colombia, France, Georgia, Haiti, Iraq, Iran, Jordan, Kenya, Lebanon, Liberia, Libya, Mali, Malawi, Mozambique, Niger, Nigeria, Papua New Guinea, Philippines, Pakistan, Somaliland, South Sudan, Syria, Uganda, and Yemen
 - Missions with insignificant budgets (mostly exploratory and closing missions) are also included but grouped under 'Miscellaneous Missions'.
- Entities not included
 - The 'Partner Sections' of the OCP Group (MSF Australia, MSF USA an MSF Japan) are not included, as they do not appear in the MSF France accounts



- We are talking here about the accounts of 'MSF France Association' and not about the combined accounts of the 'MSF France Group'; thus, the Foundation, MSF Logistique and SCI (Société Civile Immobilière) MSF are not included in the scope.
- However, as the contributions of the MSF association to these entities, and to other international entities such as the International Office, the Access campaign, etc., appear in the accounts as expenses, they are subject to a carbon valuation, in the same way as any supplier or service provider.
- In the Field accounts, Epicentre appears the same way as any other mission, but this is only because by agreement MSF France 'carries' their expenses. As a result, Epicentre is excluded from the footprint calculation, except for the financial contribution from Headquarters.



Countries included in the scope of OCP 2019 footprint

Operational boundary

International carbon accounting classifies greenhouse gas emissions into three groups:

- Scope 1: direct emissions from the combustion of fossil fuels and fugitive gas emissions
- Scope 2: indirect emissions associated with the consumption of purchased electricity, cooling and heating
- Scope 3: all other indirect emissions.

The operational scope defines which organisational processes are included in the measurement. It consists of all activities for which the organisation is considered responsible. In the case of MSF France OCP's carbon footprint, the operational scope can be visualised as follows:







Included emission sources

All significant emissions sources are included in the scope of this study:

Scope 1 and 2 in full:

- Scope 1
 - Fuels for stationary and mobile use (vehicles and generators)
 - Direct emissions from medical activities (gas for medical use)
 - Fugitive emissions from air conditioning units.
- Scope 2
 - Electricity purchased.

Scope 3 almost in full:

- Purchased goods and services.
- Transportation and distribution (freight).
- Business travel.
- Employee commuting.
- Fuel- and energy-related activities not included in Scope 1 or Scope 2
 - Mostly the upstream extraction and distribution of the fuel itself
- Waste disposal
- Capital goods acquired in 2019.
 - NB: MSF Field accounting treating all equipment purchase as a simple cash expense with no amortization, and capital expenditure in HQ being very small, for the sake or readability, all this category is included in the 'Purchased goods' one.



Excluded emission sources

A few Scope 3 emission sources are excluded emission due to their non-applicability to MSF France OCP's activities or to their a priori insignificance.

- Processing of distributed products
- Use of distributed products
- End-of-life treatment of distributed products
- Downstream and upstream leased assets
- Franchises
- Investment.

Main limitations in the assessment of certain emission categories

Among the categories of emissions included in Scope 3, some are subject to the following limitations:

- Fugitive emissions: as it was not possible to account for the appliances (air conditioning and cold chain) and the refrigerant gases contained in the equipment, fugitive emissions are estimated using a hypothesis linked to the missions' budgets, hypothesis based on a sample far too small to be considered representative
- Waste: not all different types of waste were considered. Only medical waste is included in the analysis. The medical waste volumes were estimated using a hypothesis linked to the missions' number of employees (Full Time Equivalents – FTEs), hypothesis also based on a sample way too small to be considered representative. This evaluation does not include the treatment of water consumed, the equipment's end of life, etc.
- Employee commuting: emissions from field staff travel are based on a working assumption, derived from an estimation of another organisation, which was itself poorly supported.

Temporal boundary

The carbon footprint measurement usually encompasses a full year. The year 2019 was chosen to be the baseline measurement, as it is not affected by the considerable disruptions related to the CoVid-19 pandemic. Indeed, activities during the years 2020 and 2021 were strongly impacted, drastically reducing air travel, among other things.

The emissions retained are therefore those induced by the expenditures made in 2019. Thus, products purchased at the end of 2019 and received in 2020 are accounted for in 2019. Similarly, products received in 2019 but purchased in 2018 are not taken into account in this analysis.

However, an adjustment has been made for the Paris headquarters, for which 2021 has been chosen rather than 2019, to benefit from the following advantages:

- The move to the new Parisian headquarters in Jaurès (19th arrondissement), bringing together in one place the employees who until now were spread over 7 different locations, took place at the end of 2019: retrieving the data for these 7 former buildings and compiling them would have proved to be very complex and would have been incomplete. The choice was therefore made to take 2021 to simplify this work.
- The new building is also much more energy efficient, so it sets a lower baseline, inviting us to make greater efforts to reduce them further.
- Finally, the purchase of the building and the ensuing works, part of which still took place in 2019, would also have artificially 'inflated' the baseline footprint: starting from 2021 allows us to start from a cleaner base and prevents any 'clever accounting' accusation.



MSF FRANCE OCP'S 2019 CARBON FOOTPRINT

The results of the MSF France OCP carbon footprint are presented in two forms:

- An analysis by Category of emissions and Sub-categories related to the organization's activities.
- An analysis by Scope 1, 2 and 3 according to the GHG Protocol.

All following figures are taken from the version 1.4.0 of the footprint.

Global carbon footprint by emission category

The overview of the global footprint by category of emissions, proposed in particular by the Humanitarian Carbon Calculator, gives a more operational view of the composition of the carbon footprint of MSF France OCP.

The level of uncertainty of the assessment amounts to 71,4%. Hence, the total carbon footprint can be lower or higher, between 26 300 and 157 600 tonnes of CO2e.



MSF OCP 2019 carbon footprint by category

Except for two categories whose share are very small (Waste and Fugitives), a first glimpse shows that the orders of magnitude or the remaining categories are quite similar. It means that decarbonization efforts will necessarily have to weigh on all categories with a comparable intensity.

The following section provides a more detailed analysis of each category.



Emission sources by category and sub-category

A more detailed look into each category is presented in the following figure, with the subcategories within each category, which also correspond to the sources of emissions and data points collected.



MSF OCP 2019 carbon footprint per category and sub-category

This graphical representation aims to present a synthetic view of the organisation's emissions:

- The middle circle represents the 7 emission categories.
- The outer circle represents the main sub-categories of emissions that make up the categories.

High level description:

- All purchases represent 45% of the total footprint, i.e., 41 600 tCO2e.
 - Purchases of goods represents 33% of the footprint or 30 300 tCO2e. This is mainly composed of medical supplies (drugs, nutrition, equipment, consumable), office supplies, transport equipment, construction material, and programme support items (generators, cold chain, etc.).
 - Reminder: the few capital goods, or more specifically, purchases triggering an amortization, have been integrated in this category.
 - Purchases of services represents 12% of the footprint, i.e., 11 300 tCO2e. This covers the emissions coming from services performed by external providers, ranging from offices and houses rent to digital services.



- All transport represents 35% of the footprint, i.e., 32 000 tCO2e.
 - **Travel** accounts for 22% of the footprint, i.e., 20 600 tCO2e. It is mainly business travel, the biggest share being international air travel, as well as road travel and public transport for a minor share.
 - **Freight** transport represents 12% or 11 300 tCO2e of the footprint, for the most part due to the share of Air transportation.
- **Energy** emissions represent 16% of the footprint, i.e., 14 700 tCO2e. About two third come from the emissions produced using electricity generators, a third from the local energy providers and the rest from heating.
- Waste treatment represents 2,5%; i.e., 2 300 tCO2e, most of it coming from medical waste incineration on the field.
- **Fugitive** emissions amount to 1,6%, i.e. 1 400 tCO2e, most of it being due to HFC and PFC gases from fridges and air conditioning system, the rest coming from the use of anaesthetics gases (isoflurane and desflurane)

This distribution of emissions is very similar to other MSF Operational Centers, like Geneva (<u>OCG</u>) and Brussels (OCB), and to other Non–Governmental Organisations (NGO) such as <u>Acted</u> or the Alliance for International Medical Action (<u>ALIMA</u>):

- The purchase of goods and services typically represent 40% to 50% of the footprint because those organisations do not manufacture anything as their core mission is to provide medical goods and services around the globe.
- Transport accounts for around 30% of emissions because of the need to send both human and material resources to all corners of the world and of significant logistical and access constraints to the places where they deploy their operations.



Details of emission sources by category

The categories are each described in detail in the following section. They are listed in the order they appear in the footprint diagram presented above (clockwise).



Energy emissions

Energy-related emissions account for 16% of the total footprint, with 14 700 tons of CO2e.

MSF OCP 2019 energy carbon footprint per subcategory

It is the organisation's third largest GHG emission source. This category of emissions represents the electricity consumed by the organisation's headquarters and field offices. Most of the CO2 emissions in this category stem from the field (more than 99%).

94% (= 13 800 tCO2e) of energy emissions are related to the use of electricity, either via generator or the city power grid and 6% (950 tCO2e) for heat production and cooking (gas, steam, etc.).

Electricity: Local network and Generators

The generators are used to ensure continuity of service when the local electricity grid is non-existent or non-reliable. They represent 8 700 tCO2e of GHG emissions (9,4% of total emissions).

The use of electricity on the local grid accounts for 5 100 tCO2e (5,6% of total). These emissions are directly linked to the energy mix (proportion of coal, gas, nuclear, hydroelectric in the electricity production) of the countries where OCP operates, hence the Emission factor vary widely from one country to the next; in OCP case, it ranges from 0,069 kgCO2e/kWh for France to 1,61 kgCO2e/kWh for Iraq, so more than 20 times higher!

Heating and cooking

Heating and cooking represent 950 tCO2e. This is 1,0% of total emissions.

400 tCO2e come from the gas purchased in missions, for cooking purposes, and the rest comes from heating, for the biggest part in missions (83%).



Fugitive emissions



Fugitive emissions account for 1,6% of the total footprint, with 1 400 tons of CO2e.

MSF OCP 2019 fugitive carbon footprint per subcategory

They come from 2 main subcategories: refrigerant gas leaks and anaesthetic gas uses.

- Refrigerant gas leaking from air conditioners and fridges represents 1 200 tCO2e, i.e. 83% of this
 category. It was not possible to obtain precise values for all projects. This calculation requires a
 lot of information such as the power of the appliances, their quantity, their gas capacity, and the
 type of gas used. Thus, we used MSF OCG hypothesis, itself based on an extrapolation from a
 very small dataset
- Anaesthetic gases usage amount to 240 tCO2e, 17% of this category. Even if the used volume is low (560 kg), these gases are GHGs with a much higher impact on the climate than CO2. Indeed, 1 kg of sevoflurane is equivalent to 130 kg of CO2e, and 1 kg of isoflurane as much as 510 kg of CO2e!

Purchase of services



Purchased services account for 12% of the total footprint, with 11 300 tons of CO2.

MSF OCP 2019 Services carbon footprint per subcategory





MSF OCP 2019 Services carbon footprint per subcategory - HQ/Field Split

Purchase of services is the organisation's fifth largest GHG emissions source. Emissions from purchased services are divided between the headquarters (27% of this category) and the Missions (73%). Premises and land rental and medical services are the two largest sources of emissions in this category.

Main emission items for purchase of services in order of importance:

- Premises and land rental represent 32% of the service purchase category. It represents a total of 3 700 tCO2e i.e., approximately 4,0% of MSF France OCP total emissions. This includes offices and guesthouses mostly. Worth noting that this sub-category of emissions is overestimated because part of these emissions are hotel nights that could not be isolated from other expenses, although hotel rooms should be included in the "Hotels & restaurants" subcategory in the Travel section.
- **Medical services** account for 21% of this category with 2 400 tCO2e, representing 2,6% of the total footprint. Subcontracted medical activities include in particular contributions to Ministry of Health salaries as well as subcontracted medical studies.
- External consultants account for 13% of this category with 1 500 tCO2e, and 1,6% of the total. This subcategory covers the fees associated with consultants (trainings, legal and fiscal support, security services, etc.) or external project managers (street fundraisers, IT project managers, studies, translation). Most of this category is due to HQ (86%).
- **Communication** represents 13% of this category with 1 400 tCO2e (1,5% of the total). It encompasses all communication activities: content creation, printing, sending (physically or electronically), events, etc. The biggest part is directly due to the Fund-raising activities (74%): mailing and e-mailing campaigns to reach new and existing donors.
- Construction and rehabilitation amount to 8% of this category with 900 tCO2e (1,0% of the total). This includes construction and rehabilitation services, including water and sanitation subcontracted works.
- **Digital services** account for 7% of this category and are responsible for 770 tCO2e (0,8% of the total). This includes mainly the software licenses charged at HQ but benefitting all missions. It also includes website hosting fees and donors' database management.



- **Maintenance**-related activities amount to 2,2% of the Services category with 250 tCO2e. It includes maintenance of premises, equipment, and vehicles, mostly on the Field (80%).
- **Insurances and banks** represent 1,4% of this category with 160 tCO2e. It stands for vehicles and buildings insurance, as well as bank fees.
- **Taxes** account for 0,7% of this category, with 80 tCO2e. It mainly includes a few local taxes. Worth noting that in most countries, MSF OCP has very little or no tax to pay.
- **Rental services** amount to 0,8% of this category with 90 tCO2e. This includes the rental of medical, logistic and energy equipment as well as tools rental (photocopier, generator, surgical bed, forklift, furniture, etc.). Car and truck rental are included in the Travel category.

Purchase of goods

Purchased goods account for 33% of the total footprint with 30 300 tons of CO2e.

NB: it has been chosen to integrate the very small share of Capital goods within the Purchase of goods category for the reason that Field accounting has currently no amortization process, hence any equipment purchase is just a cash expense, like any other good purchase. The few remaining HQ capital goods acquisition were considered small enough to be treated as simple purchase of goods too, considering the gain in readability.

In the following pie chart and bar chart, unlike the other categories, we choose to firstly regroup by Medical and Non-medical items, and then only to apply the descending order per subcategory.



MSF OCP 2019 Goods carbon footprint per subcategory

This is the largest category of emissions for MSF OCP, and it is almost entirely attributed to Field activities (97,2%). The following split in subcategories follows MSF standard nomenclature for the most part.





MSF OCP 2019 Goods carbon footprint per subcategory - HQ/Field Split

Medical goods and equipment account for 46% of CO2 emissions in the purchased goods category with 13 800 tCO2e (15,0% of the total MSF France OCP footprint). It is decomposed in:

- Renewable medical supplies: 16% of the category with 4 900 tCO2e (5,4% of the total). It includes all medical items used to carry out medical procedures, such as syringes, catheters, gloves, and dressings.
- Drugs: 12,6% of the category with 3 800 tCO2e (4,1% of the total). This obviously includes all the medicines that are used to provide medical assistance: pills, vaccines, serums, etc.
- Nutrition: 12,4% of the category with 3 750 tCO2e (4,1% of the total). This is almost exclusively the
 products used to treat malnourished children, namely Ready-to-Use Therapeutic Food (RUTF).
 Worth noting that these types of products being food-based, their emission factors are high
 compared to other medical items.
- Medical equipment: 4,3% of this category with 1 300 tCO2e (1,4% of the total). It includes laboratory equipment, hospital furniture, diagnostic imaging equipment, laboratory equipment, etc.

Non-medical goods:

- Administration and office supplies amount to 18,2% of the Purchase of goods category with 5 500 tCO2e (6,0% of the total). It includes a wide variety of items necessary to run normal office tasks and to take care of both office and housing facilities: stationery, furniture, small appliances, personal hygiene, laundry and cleaning products, printer toners, staff personal equipment, water consumption).
- Programme support represents 17,6% of this category with 5 300 tCO2e (i.e., 5,8% of the total footprint). This category includes mainly logistical items (for electricity, water, sanitation, security, identification) which support medical activities.
- Camp and construction products account for 9,8% of this category with 3 000 tCO2e (3,2% of the total). It includes plastic sheeting and raw materials used for the construction and maintenance of permanent, semi-permanent and temporary structures.
- Transport equipment represent 5,9% of this category with 1800 tCO2e (2,0% of the total). It includes the purchase of vehicles (cars mostly) and of spare parts such as oil filters, brake fluid, etc.



- IT equipment represent 2,1% of this category with 600 tCO2e (0,7% of the total). It includes the purchase of computers, printers, routers, etc. HQ represent 44% of the emissions in this analysis, however it is probably overestimated as numerous IT purchase from HQ are benefitting to all Missions.
- Paper for Fundraising amounts to 0,8% of this category with 250 tCO2e (0,3% of the total): this is all the paper that has been used to print and send documents and mailings to all donors.

Freight

Freight accounts for 12% of the total footprint with 11 300 tons of CO2e



MSF OCP 2019 Freight carbon footprint per subcategory

It is the fourth most significant source of GHG emissions. The freight accounted for in this analysis is entirely attributed to the missions. Two sources of data were used to estimate freight: shipments made by ESCs (European Supply Centers, that includes the Dubaï platform) and freight organised directly by the missions (including a share of the Flight Cell emissions attributed to freight). Freight emissions are slightly underestimated as it is not always possible to isolate the emissions related to freight. Part of the freight emissions are sometimes included under other categories (purchased transport services, fuel combustion of MSF vehicles, etc.).

Comparisons between emissions and volumes transported per km:



MSF OCP 2019 freight ton.kms split per mode of transport

MEDECINS SANS FRONTIERES



Although maritime transport is the main mean of freight, air freight is by far the most important source of emissions, representing 84% of emissions in this category but only 31% of the t.kms. It emitted 9 500 tCO2e, so is responsible for 10,4% of OCP's total CO2 emissions.

Maritime transport represents 50% of the weight transported per km (expressed in tons.kilometers or t.kms) but accounts for 1,2% of the emissions in this category, and less that 0,2% of the total OCP footprint.

Road accounts for 13% of the emissions in this category, 19% of the t.kms. Transport of goods by truck is responsible for 1 400 tCO2e, i.e., 1,5% of the total OCP footprint.

Customs are activities associated to transportation (custom clearance basically) and has been included in this category for the sake of consistency. It represents 1,9% of the emissions of the category with 220 tCO2e.

The analysis can also be done according to several types of freight:

Upstream freight:

- From International suppliers to ESCs (European Supply Centers). These emissions are associated with products that are not yet purchased by the operational sections but stored in the ESCs warehouses. They are therefore distributed among the sections that buy from the ESCs according to the volume of purchases made in 2019. Thus, OCP is assigned for 2 700 tCO2eq (2,9% of the total footprint).
 - NB: the emissions linked to the transport from Suppliers to the Casier Départ (OCP's internal small-scale Supply Center), as well as the upstream emissions from local supply suppliers, have not been estimated in this footprint, for lack of data.
- From ESCs (+ Casier Départ) to the missions: when the goods are ordered by the projects, the transport between the central purchasing office and the field, mainly by air and sea, over long distances. These emissions are directly linked to OCP's activities and therefore represent 8 100 tCO2e, about 8,8% of OCP's footprint.
 - NB: the 'Direct deliveries' from international suppliers directly to the missions is aggregated in this category due to reporting shortcomings.

Internal freight:

 When goods transit internally, between different sites of the organisation (all movements of goods between OCP sites), mainly by road but also by air via the Flight Cell. These emissions are estimated at 460 tCO2e or 0,5% of OCP's total emissions. Internal freight, however, is also underestimated as the transport of goods with MSF vehicles is not included. It is not yet possible to distinguish between vehicles used for passenger and freight transport movements. These emissions have therefore been accounted for in the fuel combustion of MSF vehicles.



Travel





MSF OCP 2019 travel carbon footprint per subcategory



MSF OCP 2019 travel carbon footprint per subcategory – split HQ/Field

Travel is the second largest source of the organisation's GHG emissions. Overall, 88% of the travel can be attributed to Missions, and 12% to HQ. Air travel and vehicle fuel consumption alone account for more than a fifth of the organisation's total emissions.



The main travel-related emissions are:

- Air travel: represents 66% of this category with 13 700 tCO2e (15% of total footprint). This is the largest individual source of emissions in OCP. In total, this represents more than 62 million kms travelled (to which should be added the kms of local flights in the mission, like UNHAS (United Nations Humanitarian Air Service) or the Flight Cell, for which a total distance estimation could not be made. The motive behind each flight is not directly available and is to be inferred from the routing and/or the accounting code. Hence it can be reasonably guessed that most of the long-distance flights (> 3 500 kms) paid directly by missions can be attributed to internationally mobile staff ('expats'), going to/from the field from/to their home countries, their holidays, and their trainings. The MIOs (Mobile Implementation Officers) also fall in this category. Flights over 1 OOO kms and under 3 500 kms are responsible for 15% of air travel emissions, and short travels (less than 1 000 kms) for 9%. HQ is responsible of 14,9% of the air travel emissions.
- Road + Rental services + Taxi: represents 30% of travel with 6 300 tCO2e (6,7% of total footprint). These emission items concern almost exclusively the field (98,6%) and consists of the fuel consumption of OCP's vehicles (4 360 tCO2e), 730 of which are due to employee commuting using thermal non-MSF vehicle to go to work, both in HQ and on the Field, as well as the transport of people by non-MSF owned vehicles (like taxis, or rented cars), with 120 tCO2e. For field OCP's vehicles, diesel vehicles are responsible for 3 900 tCO2e and petrol vehicles emitted 480 tCO2e. These emissions have a certain margin of error to be considered, as emissions from vehicle rentals, which can also be considered as a service, are included in transport. It is also not possible to differentiate between long-term rentals and one-off rentals. Nor is it possible to differentiate between vehicles dedicated to transporting persons and those dedicated to transporting goods. Also, the field commuting emissions are based on very speculative hypothesis.
- Other business travel: less than 0,1% of this category with 15 tCO2e. That includes mostly train travel and public transportation. This value is extremely low mostly due to the very low emissions factor for train travel, especially in France (0,00236 kgCO2e/passenger.km for high-speed train) whose electricity grid is heavily relying on nuclear power, hence low carbon.
- **Travel services** represent 0,1% of this category with 130 tCO2e. It mainly stands for visa fees and parking or toll expenses.
- Hotels & restaurants stand for 0,5% of this category with 500 tCO2e. The carbon emissions linked to hotels and restaurants are split almost 50/50 between HQ and Field. However, they are quite underestimated for the Field because, as previously mentioned, it is not possible to differentiate the hotel field expenses related to long stays (premises and land rental) from short stays (that should be accounted under this category).



Waste

Waste is estimated at 2 300 tCO2e, 2,5% of the total footprint.

The waste estimation only considers the climatic impact of waste and not the environmental impact (soil pollution, fine particles, etc.), which is not included in the scope of a carbon study.



MSF OCP 2019 waste carbon footprint per mission

There is currently no monitoring tool for the waste generated and its treatment. It is not possible today to have a precise idea of the composition of this waste (medical, plastic, recyclable, etc.). The estimates made are thus based on the scarce information currently available, mostly a small-scale internal study carried out by another operational centre, whose results have been extrapolated based on the number of full-time equivalents.

Also, it does not consider the projects' operational specificities (vaccination, nutrition, forced migration, etc.) or context (region, available infrastructures, etc.).

Lastly, the emission factor used is one implying waste incineration, assuming that this mode of treatment is the most widespread across the organisation.

Emissions by mission

It is possible to analyse the carbon footprint through another lens: by country of intervention. The aim is to visualise better the concentration of projects and their links with the interventions and situation contexts. It is worth noting that this profile can vary greatly depending on events (humanitarian emergencies) from one year to the next.

The following two graphs present:

Emissions by mission: breakdown of emissions by country

Emissions per country and category: percentage distribution of emissions by category (without considering the volume of operations).





MSF OCP 2019 carbon footprint per mission

50% of the emissions are due to 7 missions (out of a total of 34): D.R. Congo, Yemen, Central African Republic, Nigeria, South Sudan, Jordan and Mali.

The HQ emissions represent 7,1% of the total.



Emissions per country and category

MSF OCP 2019 carbon footprint per mission per category

The above graph shows the distribution of the emissions per category per mission. The categories are presented in different colours per each bar (the same colour scheme used for the global footprint). The analysis reveals that:



- Energy represents between 5 and 50% of most missions' footprint. This proportion varies greatly depending on the context. Nigeria, for example, is the mission consuming the biggest amount of fuel to run its generators, and Jordan has the highest local network electricity consumption, on top of its heating equipment: so almost half of the emissions of these missions come from energy. Different climatic conditions will also affect energy consumption (e. g. different cooling and heating needs).
- The purchase of **goods and services** is responsible for 25–65% of the emissions of most missions. This varies strongly with the activities that are carried out in the different missions and their contexts (strong construction component, supply needs and restrictions, etc.). HQ services are the most significant, mainly because an important part of the services purchased at HQ benefit all the projects, such as software licenses, cloud hosting, or fundraising.
- **Travel**-related emissions represent between 5–35% of emissions across most missions. This is also strongly linked to the situation in each country. For instance, the high share for Papua New Guinea, the Philippines and Cambodia may be linked to the remoteness of these countries compared to the 'gravity centre' of the expatriates' countries of origin, that is lying somewhere around the Mediterranean Sea. The very high proportion for Colombia is most probably due to its closure in 2019. Worth noting that the HQ share is, unsurprisingly, higher than the missions' average, due to the field visits and the international meetings and events.

It is essential to keep in mind that the more we go into detail on the reading of the footprint, the greater the margin of error. Indeed, many expenses and, therefore impacts, are shared between several missions. If a staff member based in Paris visits a project in Iraq, then South Sudan and finally returns to Paris, the plane tickets are not split exactly across the different missions.

The results of this graph give essential information on the trends in the distribution of emissions per missions. This information is key to better targeting the potential actions to be implemented in the environmental roadmap. It can also be used to direct more in-depth research into the operational practices that are responsible for the differences across missions.

Global carbon footprint by scopes

MSF France OCP's greenhouse gas emissions in 2019 accounted for a total of 92 000 tCO2e. As presented in below figure, direct emissions from Scope 1 represent 14% of the total footprint. Scope 2 emissions account for 5%, and finally, Scope 3 emissions account for 81%.







The above results are typical for a tertiary organisation such as MSF France OCP, providing mostly services. Primary and secondary sector organisations will be more likely to have more significant Scope 1 and 2 emissions as their core activities require transforming energy into goods (mine extraction, farming, product transformation).

Analysis of Scope 1, 2 and 3

This analysis helps identify the activities that are most significant in terms of carbon emissions sources.

Scope 1: 15% or 13 400 tCO2e

This scope accounts for the organisation's direct emissions generated by the combustion of fossil fuels, such as oil or gas for heating or fuel for the vehicles owned by the organisation. MSF OCP's scope 1 is mainly composed of the electricity production by generators (diesel combustion) with 7 000 tCO2e, representing 50% of scope 1 emissions. Emissions from fuel combustion in vehicles represent 34% with 4 700 tCO2e; fugitive emissions (refrigerant gas leaks in refrigerators and air conditioners and use of medical gases) account for 10% (i.e., 1 400 tCO2e), and emissions resulting from the heating of premises (via gas or coal) represents 5% with 730 tCO2e.

Scope 2: 4,8% or 4 400 tCO2e

Scope 2 includes indirect emissions related to the consumption of purchased energy; in this case, the consumption of electricity from the grid (4 300 tCO2e / 98,5% of Scope 2) and of the steam from Paris city network (66 tCO2e / 1,5% of Scope 2).

Electricity · Local network 25% Energy -Generators 39% Scopes 1+2 18 000 Fugitives 8% tCO₂e Freight - Flight Cell 0% Travel - Flight Cell Energy · 4% Heating Travel - MSF Cars 4% 20%

For the sake of readability, we merge Scope 1 and Scope 2 in the graphic presentation below.

MSF OCP 2019 Scope 1&2 carbon footprint per category



Scope 3: 81% or 74 000 tCO2e

Scope 3 includes all other indirect emissions induced by the organisation's activity, such as emissions from purchased goods and services, business travel and employee commuting. The proportion of Scope 3 emissions are distributed as follows:

- Purchase of goods: 41 % of Scope 3
- Travel: 22% of Scope 3
- Purchase of services: 15% of Scope 3
- Freight: 15% of Scope 3
- Indirect emission related to energy: 3,5% of Scope 3
- Waste: 3,1% of Scope 3



MSF OCP 2019 Scope 3 carbon footprint per category

Emissions from MSF France OCP activities are heavily reliant on Scope 3. We can observe that Goods, Travel and Services alone represent 78% of Scope 3 emissions. A more detailed description for each category of emissions is provided in the section 'Details of emission sources by category'.

Consumption of goods and services are the basic ingredients needed by MSF to provide medical care, considering all supplies needed for medical activities, and also for all the support activities around the provision of medical care in humanitarian settings. In addition, the proportion of freight and travel is related to the international dimension of MSF OCP, which has operations all over the world and therefore needs to transport goods and people to carry them out.





MEASUREMENT UNCERTAINTIES

General

The analysis presented in this report has a global uncertainty of 71,4%:

- 37% for Energy
- 81% for Fugitives
- 81% for Other purchased goods
- 80% for Other purchased services
- 72% for Travel
- 76% for Freight
- 87% for Waste.

This uncertainty level seems extremely high, but is currently a typical value for organisations like OCP whose footprint shows a significant share of indirect emissions (Scope 3), and those emissions estimations are primarily derived from financial data, which means that their Emission factors uncertainties are mostly around 80%.



MSF OCP 2019 Scope 3 carbon footprint per category

This measure is, for several reasons, far from absolute. There are many uncertainties at various levels. Some of these uncertainties can be reduced by OCP improving the quality of its data, but others are inherent to the process of measuring carbon emissions.

This invites to take a step back from the above-mentioned figures. While one can analyse and breakdown the exact tCO2e of each activity, is also important to reflect on these figures in terms of the orders of magnitude and proportions they indicate rather than their absolute value of carbon emissions.

Nevertheless, if an uncertainty exists on the value, it does not question the impact associated with each emission category. For instance: using 50% less electricity will emit 50% less greenhouse gases. The uncertainty is on the representation of this impact in our emissions' reports.

The process used to calculate the footprint in the following years will evolve according to the data availability, to the scientific research on emission factors, and to the increasing obligation for suppliers to provide carbon data in their products' technical descriptions. Consequently, the uncertainty will decrease, but this will be a slow process.



Emission factors

The level of uncertainty directly due to emission factors is 59,5%:

- 10% for Energy
- 30% for Fugitives
- 80% for Other purchased goods
- 80% for 'Other purchased services
- 55% for Travel
- 70% for Freight
- 20% for Waste

These uncertainties can be improved by using emission factors with more precise units. For example, if the number of computer monitors purchased is used rather than the volume of expenditure on monitors, the uncertainty of the emissions factor will decrease.

While well-documented and relatively reliable, emissions factors have some level of uncertainty. For example, certain activities, such as the CO2 emitted when burning a litre of petrol can be measured very accurately, allowing the emission factor to have an uncertainty of about 5%.

In contrast, activities that depend on many factors generate more uncertainty. For example, the transport of a ton of goods by air over a given distance depends on the occupancy rate of the aircraft, the weather conditions (temperature, pressure), the type of engine of the aircraft and many other factors. The uncertainty here can easily reach 50%.

In addition, for specific sectors, it is also difficult to obtain reliable values. For example, there is currently no emission factor to estimate the emissions of medicines based on physical data such as weight and volume. Countless drugs exist with different active ingredients, producers, production processes and more. Today it is only possible to measure the carbon footprint of medicines based on their price by applying an emission factor to an average, leading to an uncertainty of up to 80%.







Activity data

The level of uncertainty tied to activity data collected is estimated at 23,5%:

- 36% for Energy
- 74% for Fugitives
- 8% for Other purchased goods
- 3% for Other purchased services
- 38% for Travel
- 22% for Freight
- 85% for Waste

These uncertainties can be improved by implementing a more reliable and comprehensive data collection process.

Activity data is the information available in OCP on the content of its activities. This data is multiplied by the emissions factors to obtain the carbon footprint estimation.

As mentioned earlier, this data is often imperfect for carbon accounting purposes. The number of tonnes shipped from OCP's main supply centre (MSF Logistique) to the field is well documented: it is possible, with some effort, to isolate the route of each order, almost to the nearest km. Conversely, for waste, there is currently little idea of the volume produced in each location, so the estimates are very uncertain. Similarly, it is impossible to have the electrical readings of all MSF infrastructures worldwide today, nor the precise routings of all plane travels. These data points require significant effort to collect in the field and are not relevant, as of today, for operational purposes.



MSF OCP 2019 activity data uncertainty per category (tCO2e)



MAPPING EMISSION FLOWS

A flow map gives a different view of the organisation's carbon footprint. It is no longer a representation essentially by emissions categories but a representation of the value chain of the emissions imported (upstream activities), internal (organisation reporting) and produced (downstream activities).

The flow map below shows the movements and proportions of GHG volumes required for OCP's operations. Most emissions are imported (55%) and come mainly from the purchase of goods and services. The internal emissions, over which the organisation has the highest control, represent 16% and are energy-related. The exported emissions are 26%, of which 22% are due to travel.



OCP's carbon emissions flow



This assessment of MSF OCP's footprint allows for the production of certain indicators that will enable future assessments to monitor the organisation's carbon intensity.

Key performance indicators	Value	Unit
Per employee		
Total GHG emissions	9,84	tCO₂e/FTE
Total Scope 1 & 2	1,90	tCO₂e/FTE
Total Scope 3	7,93	tCO₂e/FTE
Per€ spent		-
Total GHG emissions	0,318	kgCO₂e/€
Total Scope 1 & 2	0,062	kgCO₂e/€
Total Scope 3	0,257	kgCO₂e/€

OCP's carbon intensity per Scope

Benchmark

For reflection purposes, this section presents some emissions indicators from other humanitarian medical organisations. However, it is important to be critical as not all organisations have assessed exactly the same scope of activities, some emission factors may differ, and the activities in question are not necessarily the same.

The most relevant comparisons are between MSF OCP, OCB and OCG, on the one hand, because of the high operational similarity; on the other hand, because of the methodological similarity used to carry out these two evaluations (same approach and emission factors mostly identical).

Benchmarking indicators Per employee (FTE)	MSF OCP	MSF OCB	MSF OCG	AUMA	ACTED	Unit
Total GHG emissions	9,84	12,77	10,20	6,74	10,36	tCO2e/FTE
Total Scope 1 & 2	1,90	1,98	2,34	2,14	1,85	tCO2e/FTE
Total Scope 3	7,93	10,79	7,85	4,60	8,51	tCO2e/FTE
Per Euro spent						
Total GHG emissions	0,32	0,32	0,29	0,21	0,23	kgCO2e/€
Total Scope 1 & 2	0,06	0,05	0,07	0,07	0,04	kgCO2e/€
Total Scope 3	0,26	0,27	0,22	0,14	0,19	kgCO2e/€

Carbon intensity benchmark between OCP, OCB, OCG, Alima and Acted

Ratio tCO2e per FTE: the distribution of emissions per FTE is relatively homogeneous between OCP, OCB, OCG and ACTED; only ALIMA presents a much lower intensity per employee (-40%). The difference in the operational model may partly explain such a difference. ALIMA is an organisation with its headquarters in Africa and works with fewer financial resources. Its staff travels less and most of its activities are carried out with the staff of its local partners. As a result, it is not advisable to read this ratio too literally, as it depends heavily on the operational choices made by the organisation.



Ratio tCO2e per €: the emissions linked to the amount of money spent are similarly distributed between all the organisations. Scopes 1 and 2, the energy-related part of emissions, represent about 20% of the footprint while the remaining 80% comes from purchases of goods and services, including transport. This is an inherent feature of all service activities and is even more pronounced for medical activities within the humanitarian field, requiring more equipment and transport than other activities. As a result, the share of Scope 3 for MSF OCP represents 80% of the emissions. The proportions are broadly similar in The Shift Project's November 2021 French health sector study and the 2020 English National Health Service study, both of which have a Scope 3 of 85%.

Comparing the carbon intensity per euro spent (kgCO2e/ \in) between organisations requires more perspective. For instance, the difference between MSF OCP (0.32 kgCO2e/ \in) and ALIMA (0.21 kgCO2e/ \in) is 50%. Such a difference is justified by operational differences (Alima works in existing local infrastructures) and a difference in the diversity of missions. On the other hand, the difference between MSF OCP, MSF OCB and MSF OCG are rather small, although they feature difference in their type of operations, and more specifically of the type of products bought to run those.¬¬

In general, as of today, there is a lack of comparative studies that allow determining more precise sectoral values. The standardisation of practices and emission factors and the democratisation of footprints by the sector players will in time allow for more in-depth analyses.

It is sometimes difficult to grasp the GHG emissions indicators in tonnes or kilograms of CO2e. To further illustrate the volumes obtained in OCP's carbon footprint (92 000 tonnes of CO2e), below are presented some useful comparisons.



OCP emissions per employee 9,8 tCO2e/FTE France emissions per inhabitant 9,0 tCO2e/inhab. (2019)



92 000 tCO2e is equivalent to emissions from 208 000 barrels of oil



92 000 tCO2e is equivalent to emissions when driving 380 million kms (9 500 trips around the globe)





Monitoring and continuous improvement of measurement

The carbon footprint analysis must be repeated every year or every 2 years to ensure continuing improvement and an accurate read of reductions towards the commitment of reducing OCP's carbon emissions by 50% by 2030.

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

- To enable the gradual improvement of the quality and comprehensiveness of the data collected
- To ease the data collection process
- To evaluate the successes and shortcomings of the emissions assessment process and the decarbonisation actions implemented
- Reduce the use of financial data in favour of physical data to decrease uncertainty and prevent the impact of inflation on the footprint.

Measuring and monitoring the carbon footprint is essential to follow up and improve the impact of the actions implemented as part of the environmental roadmap to reduce the organisation's footprint.

Suggestions for improvements

Data collection improvement

- It is essential to work on obtaining **physical data** as much as possible to replace financial information. This necessity becomes all the more critical as OCP works with many currencies in an inflationary context which can distort the results of future carbon footprints.
- Scope 1 and 2: there is room for improvement on data for Scope 1 and 2 emissions for which OCP is directly responsible. It is, therefore, essential to be able to measure them accurately. Thus, reporting the electricity consumption in kWh for each mission and gaining better visibility on the gas consumption are important actions to put in place. Also, splitting the accounting line 'Water, Electricity and Gas' in 3 separate lines would come in handy.
- **Scope 3:** it is necessary to start collecting information on sources where there are data gaps, notably for:
 - **Purchased services:** identifying hotel expenses within the "premises and land rental" category to enable their extraction.
 - **Purchased goods:** by ensuring the reliability of other supply and financial tools monitoring the goods purchased locally (e.g.: Unifield, MSF's Field ERP system).
 - **Purchased goods and services:** assign an emission factor per couple 'product/supplier' rather than at the product family / accounting code level. This would represent a significant work.
 - **Capital assets** (currently included in Purchased goods): with a precise record of the quantities and specifics of the equipment purchased: vehicles, generators, pumps, IT, etc.
 - Fugitive gas: with a better estimate of the number of air conditioners and appliances in facilities, first and foremost pharmacies for the cold chain.
 - Waste: by setting up a reporting system to estimate the volume of waste and its treatment.
 - **Freight:** local transport services are mostly tracked financially. It would be essential to have a better estimate of the volumes and kilometres travelled. The actual Air freight routing would also help being more precise.
 - **Travel:** by better collecting data on the travels that are not organised by the OCP's main 2 travel partners Wagram and Air France.



Improvement of the quality of the analysis

- Carry out a footprint by type of activity (surgery, vaccination, nutrition, etc.). To do this, it is necessary to identify and qualify the sources of emissions early on and integrate them into other existing monitoring systems.
- Carry out a more detailed footprint analysis by 'business' area (Supply, Admin, Medical, Log, Fund raising) to enable a more transversal reading.
- Develop tools that allow direct emissions to be categorised according to how they are used across the different facilities. For example, fuel use (ambulance, 4x4, goods transport, generators, etc.) in health-care facilities, guest houses, offices, etc.
- To set up syntax rules in the accounting system that would allow the extraction of certain key data to be automated to produce future carbon footprints. (e.g.: utilities code water, electricity, gas).

Finally, as other MSF entities worldwide embark on climate initiatives, a common approach to calculating greenhouse gas emissions and common indicators should be defined between operational centres and partner sections, ideally through the intersectional program called Climate smart.



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Useful acronyms

ALIMA	Alliance for International Medical Action
CAA	Climate Action Accelerator
CH4	Methane
CO2e	Carbon dioxide equivalent
EF	Emission Factor
ESC	European Supply Center
FTE	Full Time Equivalent
GHG	Green House Gases
HFC	Hydrofluorocarbons
HQ	Headquarter
ICRC	International Committee of the Red Cross
MSF	Médecins Sans Frontières
N2O	Nitrous Oxide
NGO	Non-Governmental Organization
OCB	Operational Centre Brussels
OCG	Operational Centre Geneva
OCP	Operational Centre Paris
PFC	Perfluorinated compound
SF6	Sulfur hexafluoride.



Details and description of emissions categories

SCOPE	EMISSION CATEGORY	EMISSION SUB-CATEGORY	DESCRIPTION (emissions related to)
1	Fugitive	Fugitive emissions	Refrigeration, air conditioning systems, and anaesthesic gases usage.
1	Energy	Generators	Fossil fuel combustion for generators
1	Energy	Combustion	Fossil fuel combustion for heating and cooking
1	Travel	Mobile combustion	Fuel combustion in mobile sources
2	Energy	Electricity	Indirect GHG emissions from electricity purchases
3	Travel	Travel	Passenger transportation and accommodation
3	Freight	Freight	Transportation of goods
3	Capital goods	Capital goods	Manufacture of purchased assets
3	Purchase of goods	Purchase of goods	Manufacture of purchased supplies
3	Purchase of services	Purchase of services	Provision of consumed services
3	Energy	Energy scope 3	Indirect emissions due to the production and the transport of energy
3	Waste	Waste	Disposal of waste in facilities



Emissions reporting by Scope (ISO 14064 & GHG Protocol)

SCOPES	CATEGORY	tCO ₂ e	%
	Generators	7 017	39,4%
Scope 1	MSF vehicles	4 233	23,8%
	Fugitive	1 435	8,1%
	Combustion	732	4,1%
Scope 2	_ocal electricity 4 374		24,6%
[Scope 1 & 2]	Total	17 790	100,0%
	Purchased goods	30 320	41%
	Travel	16 429	22%
	Purchased services	11 284	15%
Scope 3	Freight	11 272	15%
	Capital Goods	-	0%
	Energy Scope 3	2 593	3%
	Waste	2 290	3%
[Scope 3]	Total	74 188	100%
[All Scopes]	TOTAL	91 979	100%



Category	Sub-category	HQ	Field	Total	%
	Heating and cooking	89	858	948	1%
Energy	Electricity network	42	5 072	5 114	6%
	Electricity generators	_	8 654	8 654	9%
	Anesthetic gas	-	237	237	0%
Fugitive	Cold chain & air conditioner	70	1 128	1 198	1%
	IT equipment	280	345	624	1%
	Medical equipment	-	1 293	1 293	1%
	Program support	-	5 343	5 343	6%
	Transport equipment	-	1 799	1799	2%
Other purchased	Administration & office supplies	323	5 203	5 526	6%
goods	Camps & Construction	-	2 982	2 982	3%
	Drugs	-	3 806	3 806	4%
	Nutrition	-	3 765	3 765	4%
	Renewable medical supplies	-	4 938	4 938	5%
	Paper	244	-	244	0%
	Construction & rehabilitation	-	928	928	1%
	External consultant	1 284	213	1 4 97	2%
	Insurance & bank	47	114	161	0%
	Digital services	366	407	773	1%
Other purchased services	Maintenance	50	198	248	0%
	Medical services	-	2 426	2 426	3%
	Taxes	23	54	76	0%
	Premises and land rental	47	3 617	3 664	4%
	Rental services	17	75	92	0%
	Communication	1 229	189	1 418	2%
	Air	2 039	11647	13 685	15%
	Road	59	5 035	5 094	6%
	Тахі	16	87	103	0%
Turnela	Train	6	2	8	0%
Travels	Hotels & restaurants	244	258	502	1%
	Travel services	23	109	132	0%
	Rental services	14	1 076	1090	1%
	Other	7	-	7	0%
	Air	-	9 538	9 538	10%
E	Road	-	1 421	1 421	2%
Freight	Sea	_	134	134	0%
	Customs	-	219	219	0%
Waste	Waste	17	2 273	2 290	2%
TOTAL		6 536	85 442	91 979	100%

Emissions reporting by category



Emissions by country (including budget and FTE distribution)

Country	Budget	FTE	Emission (tCO2e)	% of total footprint
Headquarters	56 400 000 €	403	6536	7,1%
Dem. Rep. Congo	23 972 874 €	566	11 666	12,7%
Yemen	22 722 936 €	738	8 132	8,8%
Central African Rep.	17 311 336 €	1 024	7 191	7,8%
Nigeria	12 742 540 €	690	5 922	6,4%
South Sudan	16 891 873 €	816	5 792	6,3%
Jordan	13 528 184 €	237	3 746	4,1%
Mali	8 320 352 €	517	3 658	4,0%
Haiti	4 922 113 €	341	3 439	3,7%
Iraq	10 067 263 €	373	3 104	3,4%
Chad	7 206 352 €	219	2 930	3,2%
Liberia	6 067 770 €	334	2 615	2,8%
Niger	6 147 325 €	351	2 512	2,7%
Field - other	6 514 089 €	5	2 424	2,6%
Palestine	10 702 205 €	266	2 418	2,6%
Afghanistan	6 138 871 €	418	2 339	2,5%
Malawi	6 129 010 €	230	2 142	2,3%
Kenya	7 492 608 €	224	1882	2,0%
Uganda	4 357 550 €	241	1 468	1,6%
Papoua NG	4 486 178 €	175	1 387	1,5%
Bangaldesh	3 403 249 €	227	1 308	1,4%
Pakistan	3 531 887 €	257	1 202	1,3%
Lebanon	4 446 144 €	78	1064	1,2%
Ivory Coast	3 625 329 €	158	1 038	1,1%
Iran	3 904 692 €	86	915	1,0%
Libya	3 964 078 €	59	879	1,0%
Mozambique	1 083 377 €	3	760	0,8%
Philippines	2 150 971 €	57	647	0,7%
Syria	2 554 861€	123	639	0,7%
France	2 245 523 €	19	560	0,6%
Burkina Faso	663 276 €	1	542	0,6%
Somaliland	1 186 712 €	33	486	O,5%
Cambodia	2 462 190 €	62	469	0,5%
Georgia	658 044 €	14	87	O,1%
ML Armenia	713 245 €	9	66	O,1%
Colombia	133 972 €	1	13	0,0%



Main emissions factors used

Category	Source	Emission Factor	Unit	Scope 1	Scope 2	Scope 3
Energy	Base Carbone - ADEME	Butane – kg	kgCO2e/kg	3,016	0,000	0,505
Energy	Base Carbone - ADEME	Diesel	kgCO2e/litre	2,687	0,000	0,626
Energy	Base Carbone - ADEME	Natural gas - PCI	kgCO2e/kWh PCI	0,187	0,000	0,040
Energy	Conversion factors 2019, BEIS	Petrol	kgCO2e/litre	2,315	0,000	0,598
Energy	CPCU	Paris urban heat - CPCU	kgCO2e/kWh	0,000	0,161	0,000
Energy	IEA 2018 + DEFRA 2019	Electricity - Armenia	kgCO2e/kWh	0,000	0,191	0,015
Energy	IEA 2018 + DEFRA 2019	Electricity - Bangladesh	kgCO2e/kWh	0,000	0,494	0,053
Energy	IEA 2018 + DEFRA 2019	Electricity - Cambodia	kgCO2e/kWh	0,000	0,406	0,047
Energy	IEA 2018 + DEFRA 2019	Electricity - Cote d'Ivoire	kgCO2e/kWh	0,000	0,327	0,061
Energy	IEA 2018 + DEFRA 2019	Electricity - Democratic Republic of the Congo	kgCO2e/kWh	0,000	0,001	0,000
Energy	IEA 2018 + DEFRA 2019	Electricity - France	kgCO2e/kWh	0,000	0,055	0,014
Energy	IEA 2018 + DEFRA 2019	Electricity - Georgia	kgCO2e/kWh	0,000	0,083	0,006
Energy	IEA 2018 + DEFRA 2019	Electricity - Haiti	kgCO2e/kWh	0,000	0,820	0,504
Energy	IEA 2018 + DEFRA 2019	Electricity - Indonesia	kgCO2e/kWh	0,000	0,766	0,173
Energy	IEA 2018 + DEFRA 2019	Electricity - Iraq	kgCO2e/kWh	0,000	1,044	0,565
Energy	IEA 2018 + DEFRA 2019	Electricity - Islamic Republic of Iran	kgCO2e/kWh	0,000	0,525	0,057
Energy	IEA 2018 + DEFRA 2019	Electricity - Israel	kgCO2e/kWh	0,000	0,495	0,125
Energy	IEA 2018 + DEFRA 2019	Electricity - Jordan	kgCO2e/kWh	0,000	0,441	0,046
Energy	IEA 2018 + DEFRA 2019	Electricity - Kenya	kgCO2e/kWh	0,000	0,163	0,035
Energy	IEA 2018 + DEFRA 2019	Electricity - Lebanon	kgCO2e/kWh	0,000	0,725	0,078
Energy	IEA 2018 + DEFRA 2019	Electricity - Libya	kgCO2e/kWh	0,000	0,644	O,131
Energy	IEA 2018 + DEFRA 2019	Electricity - Mozambique	kgCO2e/kWh	0,000	0,070	0,007
Energy	IEA 2018 + DEFRA 2019	Electricity - Niger	kgCO2e/kWh	0,000	0,950	0,133



Category	Source	Emission Factor	Unit	Scope 1	Scope 2	Scope 3
Energy	IEA 2018 + DEFRA 2019	Electricity - Nigeria	kgCO2e/kWh	0,000	0,415	0,064
Energy	IEA 2018 + DEFRA 2019	Electricity - Pakistan	kgCO2e/kWh	0,000	0,393	O,119
Energy	IEA 2018 + DEFRA 2019	Electricity - Philippines	kgCO2e/kWh	0,000	0,703	0,143
Energy	IEA 2018 + DEFRA 2019	Electricity - South Sudan	kgCO2e/kWh	0,000	0,776	0,026
Energy	IEA 2018 + DEFRA 2019	Electricity - Sudan	kgCO2e/kWh	0,000	0,320	0,089
Energy	IEA 2018 + DEFRA 2019	Electricity - Syrian Arab Republic	kgCO2e/kWh	0,000	0,659	0,097
Energy	IEA 2018 + DEFRA 2019	Electricity - Yemen	kgCO2e/kWh	0,000	0,691	O,168
Freight	Base Carbone - ADEME	Jet Fuel	kgCO2e/litre	2,795	0,000	0,532
Freight	Base Carbone - ADEME	Middle haul - 1000 to 3500 km	kgCO2e/ton.km	0,000	0,000	1,868
Freight	Base Carbone - ADEME	Public administration and defence, compulsory social security	kgCO2e/€	0,000	0,000	0,160
Freight	Base Carbone - ADEME	Truck >3,5t-7,5t< diesel	kgCO2e/ton.km	0,000	0,000	0,378
Freight	Base Carbone - ADEME	Warehousing and services incidental to transportation	kgCO2e/€	0,000	0,000	0,170
Freight	Quantis database	Sea transport	kgCO2e/€	0,000	0,000	0,016
Fugitives	Base Carbone - ADEME	Refrigerants - R134a	kgCO2e/kg	1300,0	0,000	0,000
Fugitives	Base Carbone - ADEME	Refrigerants - R22	kgCO2e/kg	1760,0	0,000	0,000
Fugitives	Base Carbone - ADEME	Refrigerants - R32	kgCO2e/kg	677,0	0,000	0,000
Fugitives	Base Carbone - ADEME	Refrigerants - R410a	kgCO2e/kg	1920,0	0,000	0,000
Fugitives	Sulbaek Andersen, M. P. (2012)	Isoflurane	kgCO2e/kg	510,0	0,000	0,000
Fugitives	Sulbaek Andersen, M. P. (2012)	Sevoflurane	kgCO2e/kg	130,0	0,000	0,000
Oth. purch. Goods	Base Carbone - ADEME	Agricultural and sea products	kgCO2e/€	0,000	0,000	2,300
Oth. purch. Goods	Base Carbone - ADEME	Computer, electronic and optical products	kgCO2e/€	0,000	0,000	0,400
Oth. purch. Goods	Base Carbone - ADEME	Construction	kgCO2e/€	0,000	0,000	0,360



Category	Source	Emission Factor	Unit	Scope 1	Scope 2	Scope 3
Oth. purch. Goods	Base Carbone - ADEME	Furniture and other manufactured goods	kgCO2e/€	0,000	0,000	0,600
Oth. purch. Goods	Base Carbone - ADEME	Paper – average	kgCO2e/tons	0,000	0,000	919,0
Oth. purch. Goods	Base Carbone - ADEME	Pharmaceutical products	kgCO2e/€	0,000	0,000	0,500
Oth. purch. Goods	Base Carbone - ADEME	Processed food products	kgCO2e/€	0,000	0,000	1,000
Oth. purch. Goods	Base Carbone - ADEME	Purchase of IT and telecom equipment	kgCO2e/€	0,000	0,000	0,917
Oth. purch. Goods	CICR – 2020 footprint	Water - Armenia	kgCO2e/€	0,000	0,000	2,657
Oth. purch. Goods	CICR – 2020 footprint	Water - Bangladesh	kgCO2e/€	0,000	0,000	4,808
Oth. purch. Goods	CICR – 2020 footprint	Water - Cambodia	kgCO2e/€	0,000	0,000	5,939
Oth. purch. Goods	CICR – 2020 footprint	Water - Central African Republic (the)	kgCO2e/€	0,000	0,000	2,148
Oth. purch. Goods	CICR – 2020 footprint	Water - Chad	kgCO2e/€	0,000	0,000	5,609
Oth. purch. Goods	CICR – 2020 footprint	Water - Côte d'Ivoire	kgCO2e/€	0,000	0,000	2,060
Oth. purch. Goods	CICR - 2020 footprint	Water - Democratic Republic of the Congo	kgCO2e/€	0,000	0,000	2,039
Oth. purch. Goods	CICR - 2020 footprint	Water - Georgia	kgCO2e/€	0,000	0,000	8,413
Oth. purch. Goods	CICR - 2020 footprint	Water - Iran (Islamic Republic of)	kgCO2e/€	0,000	0,000	7,212
Oth. purch. Goods	CICR - 2020 footprint	Water – Iraq	kgCO2e/€	0,000	0,000	2,729
Oth. purch. Goods	CICR - 2020 footprint	Water - Jordan	kgCO2e/€	0,000	0,000	1,683
Oth. purch. Goods	CICR - 2020 footprint	Water – Kenya	kgCO2e/€	0,000	0,000	0,901
Oth. purch. Goods	CICR - 2020 footprint	Water - Lebanon	kgCO2e/€	0,000	0,000	4,808
Oth. purch. Goods	CICR - 2020 footprint	Water - Liberia	kgCO2e/€	0,000	0,000	O,711
Oth. purch. Goods	CICR - 2020 footprint	Water - Libya	kgCO2e/€	0,000	0,000	5,385
Oth. purch. Goods	CICR - 2020 footprint	Water - Mali	kgCO2e/€	0,000	0,000	2,462
Oth. purch. Goods	CICR - 2020 footprint	Water - Mozambique	kgCO2e/€	0,000	0,000	1,905
Oth. purch. Goods	CICR – 2020 footprint	Water – Niger	kgCO2e/€	0,000	0,000	2,657
Oth. purch. Goods	CICR – 2020 footprint	Water – Nigeria	kgCO2e/€	0,000	0,000	1,553
Oth. purch. Goods	CICR – 2020 footprint	Water - No Country (FD)	kgCO2e/€	0,000	0,000	1,043



Category	Source	Emission Factor	Unit	Scope 1	Scope 2	Scope 3
Oth. purch. Goods	CICR - 2020 footprint	Water - Pakistan	kgCO2e/€	0,000	0,000	14,423
Oth. purch. Goods	CICR - 2020 footprint	Water - Palestine	kgCO2e/€	0,000	0,000	0,502
Oth. purch. Goods	CICR – 2020 footprint	Water - Papua New Guinea	kgCO2e/€	0,000	0,000	1,530
Oth. purch. Goods	CICR - 2020 footprint	Water - Philippines (the)	kgCO2e/€	0,000	0,000	3,365
Oth. purch. Goods	CICR – 2020 footprint	Water - Somalia	kgCO2e/€	0,000	0,000	7,766
Oth. purch. Goods	CICR - 2020 footprint	Water - South Sudan	kgCO2e/€	0,000	0,000	1,726
Oth. purch. Goods	CICR – 2020 footprint	Water - Syrian Arab Republic (the)	kgCO2e/€	0,000	0,000	1,030
Oth. purch. Goods	CICR – 2020 footprint	Water - Uganda	kgCO2e/€	0,000	0,000	0,612
Oth. purch. Goods	CICR – 2020 footprint	Water – Yemen	kgCO2e/€	0,000	0,000	0,534
Oth. purch. Goods	Quantis database	Air conditioning, refrigeration, and warm air heating equipment manufacturing	kgCO2e/€	0,000	0,000	O,589
Oth. purch. Goods	Quantis database	Automobile manufacturing	kgCO2e/€	0,000	0,000	0,526
Oth. purch. Goods	Quantis database	Community food, housing, and other relief services, including rehabilitation services	kgCO2e/€	0,000	0,000	0,251
Oth. purch. Goods	Quantis database	Concrete pipe, brick, and block manufacturing	kgCO2e/€	0,000	0,000	1,555
Oth. purch. Goods	Quantis database	Laboratory apparatus and furniture manufacturing	kgCO2e/€	0,000	0,000	0,350
Oth. purch. Goods	Quantis database	Motor vehicle parts manufacturing	kgCO2e/€	0,000	0,000	0,711
Oth. purch. Goods	Quantis database	Small electrical appliance manufacturing	kgCO2e/€	0,000	0,000	0,510
Oth. purch. Goods	Quantis database	Surgical and medical instrument manufacturing	kgCO2e/€	0,000	0,000	0,298
Oth. purch. Goods	Quantis database	Surgical appliance and supplies manufacturing	kgCO2e/€	0,000	0,000	0,361
Oth. purch. Goods	Quantis database	Water, sewage and other systems	kgCO2e/€	0,000	0,000	1,112
Oth. purch. Services	Base Carbone - ADEME	Accommodation and catering	kgCO2e/€	0,000	0,000	0,320



Category	Source	Emission Factor	Unit	Scope 1	Scope 2	Scope 3
Oth. purch. Services	Base Carbone - ADEME	Activities for human health	kgCO2e/€	0,000	0,000	0,120
Oth. purch. Services	Base Carbone - ADEME	Activities of voluntary organisations	kgCO2e/€	0,000	0,000	0,220
Oth. purch. Services	Base Carbone - ADEME	Construction	kgCO2e/€	0,000	0,000	0,360
Oth. purch. Services	Base Carbone - ADEME	Film, sound recording, television and radio	kgCO2e/€	0,000	0,000	0,310
Oth. purch. Services	Base Carbone - ADEME	Insurance, banking, consulting and fees	kgCO2e/€	0,000	0,000	O,11O
Oth. purch. Services	Base Carbone - ADEME	Machinery and equipment	kgCO2e/€	0,000	0,000	0,700
Oth. purch. Services	Base Carbone - ADEME	Maintenance	kgCO2e/€	0,000	0,000	0,215
Oth. purch. Services	Base Carbone - ADEME	Postal mail	kgCO2e/€	0,000	0,000	0,130
Oth. purch. Services	Base Carbone - ADEME	Public administration and defence, compulsory social security	kgCO2e/€	0,000	0,000	0,160
Oth. purch. Services	Base Carbone - ADEME	Repair and installation of machinery and equipment	kgCO2e/€	0,000	0,000	0,390
Oth. purch. Services	Base Carbone - ADEME	Services (printing, advertising, architecture and engineering, multi- technical building maintenance, security, cleaning, security, travel agency, other business services)	kgCO2e/€	0,000	0,000	0,170
Oth. purch. Services	Base Carbone - ADEME	Teaching	kgCO2e/€	0,000	0,000	0,120
Oth. purch. Services	Base Carbone - ADEME	Telecommunications	kgCO2e/€	0,000	0,000	0,170
Travel	Base Carbone - ADEME	Accommodation and catering	kgCO2e/€	0,000	0,000	0,320
Travel	Base Carbone - ADEME	Car - average horsepower, diesel	kgCO2e/km	0,000	0,000	0,251
Travel	Base Carbone - ADEME	Diesel	kgCO2e/litre	2,687	0,000	0,626
Travel	Base Carbone - ADEME	Diesel - Commuting	kgCO2e/litre	0,000	0,000	3,313
Travel	Base Carbone - ADEME	High speed train - France	kgCO2e/passenger.km	0,000	0,000	0,002
Travel	Base Carbone - ADEME	Jet Fuel	kgCO2e/litre	2,795	0,000	0,532
Travel	Base Carbone - ADEME	Land transport	kgCO2e/€	0,000	0,000	0,560



Category	Source	Emission Factor	Unit	Scope 1	Scope 2	Scope 3
Travel	Base Carbone - ADEME	Land transport	kgCO2e/€	0,000	0,000	0,560
Travel	Base Carbone - ADEME	Plane (passengers) - long haul >3500km, with trails	kgCO2e/passenger.km	0,000	0,000	0,152
Travel	Base Carbone - ADEME	Plane (passengers) - middle haul 1000-3500 km, with trails	kgCO2e/passenger.km	0,000	0,000	0,187
Travel	Base Carbone - ADEME	Plane (passengers) - short haul <1000km, with trails	kgCO2e/passenger.km	0,000	0,000	0,259
Travel	Base Carbone - ADEME	Services (printing, advertising, architecture and engineering, multi- technical building maintenance, security, cleaning, security, travel agency, other business services)	kgCO2e/€	0,000	0,000	0,170
Travel	Base Carbone - ADEME	Subway, tramway, trolleybus	kgCO2e/passenger.km	0,000	0,000	0,005
Travel	Base Carbone - ADEME	Walking, biking, work from home	kgCO2e/passenger.km	0,000	0,000	0,000
Travel	Conversion factors 2019, BEIS	Petrol	kgCO2e/litre	2,315	0,000	O,598
Waste	Base Carbone - ADEME	Glass and other non combustibles materials -landfill	kgCO2e/tons	0,000	0,000	33,000
Waste	Base Carbone - ADEME	Household waste – Incineration	kgCO2e/tons	0,000	0,000	374,000
Waste	Base Carbone - ADEME	Paper and cardboard - Storage	kgCO2e/tons	0,000	0,000	950,000
Waste	Base Carbone - ADEME	Plastic - storage	kgCO2e/tons	0,000	0,000	41,000



ABOUT THIS REPORT

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About Médecins Sans Frontières OCP – Operational Centre Paris

MSF is an independent, international humanitarian medical organisation that provides medical assistance to people whose lives or health are in danger, in France or elsewhere, mainly from armed conflict, but also epidemics, pandemics, natural disasters, or exclusion from healthcare. OCP is one of 6 Operational Centres that deploy interventions under the MSF banner. MSF has grown considerably since its creation by a group of volunteers in 1971; it now employs more than 60,000 people each year in 70 countries. The organisation's autonomy and independence is ensured by its funding, which comes from the generosity of private donors. In France, in 2021, 98.6% of MSF resources came from private sources.

About Climate Action Accelerator

The Climate Action Accelerator, a not-for-profit initiative, aims to mobilise a critical mass of community organisations in order to scale up climate solutions, contain global warming below 2°C and avoid the risk of dangerous runaway climate change. The aim is to help shift the aid, health and higher education sectors towards a radical transformation of their practices, pursuing emissions reduction targets (-50% by 2030) and a 'net zero' trajectory, in line with the Paris Agreement.

