



GREENHOUSE GAS (GHG)

INVENTORY MANAGEMENT PLAN | 2016

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to the collective input of UNOPS
personnel, especially of local focal
points for GHG reporting

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1 Introduction

Under the United Nations (UN) Climate Neutral commitment, UNOPS is required to complete a Greenhouse Gas (GHG) Inventory and a related Inventory Management Plan (IMP) once a year. The GHG Inventory results and IMP also feed into UNOPS annual Sustainability Report based on the Global Reporting Initiative (GRI) framework. This IMP serves the purpose of enabling UNOPS to better understand and keep track of its emissions, activity data and internal assets. The IMP records the details of each inventory and helps to institutionalize a process for preparing a high-quality inventory. The IMP is filed together with the inventory each year.

Two sets of IMPs, with different levels of detail, are being prepared:

- an Agency-wide IMP developed by UNOPS, which contains information on the agency-specific activity data, sources, policies facilities and equipment; and
- a UN-wide IMP developed by the United Nations Environment Programme/Sustainable UN (SUN), which details the commonly followed principles and data at the UN level. The UN wide IMP will provide part of the information for the agency-wide IMP's. To avoid repetition and enhance clarity, there would be referencing in between these two IMPs.

The UN GHG Inventory follows a common minimum boundary and GHG accounting principles mostly prescribed by the World Resources Institute / World Business Council for Sustainable Development GHG Protocol, but at the same time allows participating UN entities flexibility within these limits.

2 IMP 2016

2.1. Version information

Item	Description	
A	Reporting Period	2016
B	Version Number of IMP	v1 (23/05/2017)
C	Corresponding inventory version number	v1
D	Date IMP Completed	23/05/2017

2.2. Boundary conditions

2.2.1. Organizational boundary

UNOPS applies the principle of operational control to define the boundaries of its inventory. UNOPS adheres to the UN-wide boundary for emission reporting, with the following exception:

- small offices with fewer than 5 personnel¹ are not included in UNOPS reporting boundary.

It is not currently possible to account for offices with <5 personnel using assumptions with high sensitivity, and/or proxies.

2.2.2. List of GHG's being accounted for under the UN GHG Inventory

See UN-wide IMP

2.2.3. List of organization-wide facilities included in this Inventory

¹ For the purpose of this document and of the GHG inventory, all individuals performing continuous work within UNOPS premises are considered personnel.

The list of facilities² falling within the reporting boundary (>5 personnel) has been derived from human resources (HR) records of personnel as of 31st December 2016, excluding personnel whose duty station is defined as “home-based” in their contract.

The list has been further refined with the assistance of regional focal points. Offices open, close and fluctuate frequently, so too does the number of personnel. Regional office focal points have been asked to provide an office occupancy figure that presents the best approximation to reality: Either a yearly average or a snapshot as of 31st December 2016. The figure provided by local focal points is the official total personnel figure appearing in the GHG report.

UNOPS headquarters (HQ)

Name of office	City	Other offices jointly reporting	Remarks
UNOPS headquarters (HQ), Denmark	Copenhagen	Regional offices based in UNOPS HQ in Copenhagen	HQ emission report also contains entitlement travel for the whole organization – not yet possible to disaggregate

Africa Region

Name of office	City	Other offices jointly reporting	Remarks
Regional office, Denmark	Copenhagen		Included in HQ inventory
Burundi	Bujumbura		Flight list included in Kenya report
Central African Republic	Bangui	Bouar	
Democratic Republic of the Congo (DRC)	Kinshasa	Bukavu, Goma, Gemena, Gbadolite	
Ethiopia	Addis Ababa		
Ghana	Accra		
Guinea	Conakry	Nzérékoré	
Kenya	Nairobi		
Liberia	Monrovia		
Mali	Bamako		
Morocco	Rabat		
Senegal	Dakar		
Sierra Leone	Freetown		
Somalia	Mogadishu		Flight list included in Kenya report
South Sudan	Juba	Ajuong Thok, Aweil, Kangi, Kaya, Kuajok	
Sudan	Khartoum		
Tunisia	Tunis		

² For the reason explained below, changes in the number and location of reporting offices occur from year to year.

Asia Region

Name of office	City	Other offices jointly reporting	Remarks
Regional Office, Thailand	Bangkok		
Afghanistan	Kabul	Herat, Mazar-I-Sharif	
Bangladesh	Dhaka		
Cambodia	Phnom Penh		
China	Beijing		
Indonesia	Jakarta		
Maldives	Malé		
Myanmar	Yangon	Nay Pyi Taw	
Nepal	Kathmandu		
Pakistan	Islamabad		
Sri Lanka	Colombo	Batticaloa, Mannar, Vavuniya	

Europe and Central Asia Region

Name of office	City	Other offices jointly reporting	Remarks
Regional Office, Switzerland	Geneva	WSSCC, STOPTB	
Belgium	Brussels		
Kosovo ³	Pristina		
Serbia	Belgrade	Nis	

Jerusalem office

Name of office	City	Other offices jointly reporting	Remarks
State of Palestine	Jerusalem	Gaza, Ramallah	

Latin America and the Caribbean Region

Name of office	City	Other offices jointly reporting	Remarks
Regional Office, Panama	Panama City		
Argentina	Buenos Aires		
Brazil	Brasília		
Colombia	Bogotá		
Costa Rica	San José		
El Salvador	San Salvador		

³ United Nations Security Council Resolution 1244/99.

Guatemala	Guatemala City		
Haiti	Port-au-Prince	Jeremie, Les Cayes, Miragoane, Port Salut	
Honduras	Tegucigalpa		
Mexico	Mexico City		
Paraguay	Asunción		
Peru	Lima		
Saint Lucia	Castries		

Middle East Region

Name of office	City	Other offices jointly reporting	Remarks
Regional Office, Jordan	Amman		
Djibouti	Djibouti City		Flight list included in Jordan report
Iraq	Baghdad		Flight list included in Jordan report
Syria	Damascus		Flight list included in Jordan report

Peace and Security Cluster

Name of office	City	Other offices jointly reporting	Remarks
Afghanistan	Kabul		
Algeria	Tindouf		
Central African Republic	Bangui		
Colombia	Bogota		
Côte d'Ivoire	Abidjan		
Democratic Republic of Congo	Goma		
Iraq	Baghdad	Erbil	
Lebanon	Naqoura		
Libya	Tripoli		
Mali	Bamako	Gao, Tombouctou	
State of Palestine	Gaza		
Somalia	Mogadishu		
South Sudan	Juba		
Sudan	El Fasher	Abyei, Kadugli, Khartoum	
Turkey	Gaziantep		
Uganda	Entebbe		

New York office

Name of office	City	Other offices jointly reporting	Remarks
New York	New York City		

2.2.4. Emission source categories (direct, indirect and optional sources of GHG emissions)

See UN-wide IMP

2.2.5. UNOPS boundary condition assumptions

The inventory data collection methodology is, to the extent possible, the same throughout all offices.

Our boundary conditions and assumptions are outlined below:

Buildings

- Where UNOPS shares office facilities without a separate meter, emissions are apportioned by percentage of total square meters.
- All offices are required to report on electricity, refrigerants, steam, and generator fuel consumption (when applicable).
- Where reliable electricity figures are missing, one of the following methods is used, in order of preference: 1) the electricity consumption per m² available from a nearby building is applied; or 2) a proxy is calculated using the SUN-recommended methodology, based on the size of an office in m² and Energy Efficiency Index (EEI) per climatic zones.
- Where refrigerants figures are missing, those are estimated by the Sustainable UN's Flat File calculator.
- Where steam figures are missing, one of the following methods is used, in order of preference: 1) the steam consumption per m² available from a nearby building is applied; or 2) a data gap is marked.
- If generator fuel figures are missing, a data gap is marked.

Air travel

The UNOPS corporate travel agency provides a list of air travel itineraries and class of travel for all UNOPS missions booked through their system during the reporting year. All offices that do not use the corporate travel agency are required to upload all missions undertaken throughout the calendar year onto the UNOPS intranet's official duty travel page. A comprehensive list, region by region and office by office, can be triggered, for review.

If focal points have not uploaded missions, offices have been requested to maintain a list of official duty travel expressed in International Air Transport Association (IATA) codes and class of travel in their internal records.

- Where IATA codes are faulty and/or incomplete, they are corrected by HQ Sustainability Team on the base of likelihood/approximations.
- Where it is impossible to determine the flight itinerary, a proxy based on office average value is applied.
- Large (> 10%) reporting gaps are marked.
- Entitlement travel (ET) for international personnel is calculated as follows:

- Flight itineraries are generated as follows: the closest large commercial airport to the indicated duty station and place of recruitment cities (as relevant) was selected for generating itineraries.
- Where this information is not available, the average carbon footprint (CO₂ in kilograms) and trip distance (in kilometres) of available ET were therefore used as proxies for this group. The class of travel applied to the trips was economy class.
- Where no reasonable information of the type of travel, number of travelers and likely itinerary were available, a data gap was marked.
- ET was also calculated for interns for 2016.

Public transportation

- Official duty travel using other means of transportation than air is irregularly recorded.
- Where local focal points provide this information, it is included in the inventory.
- It is impossible to quantify the size of the data gap for official duty travel by train, car and boat.
- To account for transportation to/from airports, the GHG Helpdesk recommends applying a proxy of 25 kilometres per terminal recorded under “taxi” (also in those locations where taxi services are not used, or where local practices are unknown).

This emission category will be targeted for data quality improvement.

Mobile sources

- When fuel consumption or mileage for mobile sources is not available, a proxy value for fuel consumption based on average fuel price from invoices is used (when the information is available).
- It is impossible to quantify the size of the data gap for mobile sources.

Water consumption

As part of the UN's broader sustainability reporting requirements, providing annual water consumption data is also mandatory. Water consumption data is collected following the GRI Standard on Water (303-1). The data is relatively accessible through water bills and/or meters. Where UNOPS shares office facilities without a separate meter, water consumption is apportioned by percentage of personnel.

Waste management

As part of the UN's broader sustainability reporting requirements, providing annual waste management data is also mandatory. Waste management data is collected following the GRI Standard on Effluents and Waste (306-2). The data is accessible to some extent through waste contractor bills, however, less frequently than water data. However, compared to previous years, the data turnover for waste management significantly improved in the 2016 GHG inventory, but full coverage was still not obtained due to the voluntary nature of the reporting in the past. Where UNOPS shares office facilities without separate bills, waste generation is apportioned by percentage of personnel.

General remarks

It has been observed that data quality tends to improve in offices after the first year of participation in the inventory (especially if the local focal point is confirmed). With these considerations in mind, the HQ Sustainability Team offers WebEx training every year to support the completion of the GHG inventory.

2.3. Emissions quantification

2.3.1. Quantification method

See UN-wide IMP

Note on quantification of Scope 3 emissions - duty travel emissions (air travel):
Business air travel is a significant component of UNOPS emission profile. In the UN GHG inventory, emissions from air travel are calculated using the ICAO air travel calculator (v 5.0) released in July 2016 and replacing the previous version (v 4.0) used for the 2015 inventory.

2.3.2. Emission factors and other constants that are different than the UN-wide factors used

Name of office	City	Country	Emission factor	Source
HQ office	Copenhagen	Denmark	Emission factor for purchased steam: 95 grams (g) of CO ₂ equivalent (CO ₂ e) per (l) kilowatt hour (kWh)	The emission factor is provided by the local energy supplier in their official environmental declaration on district heating for 2016.
			Emission factor for electricity: 468g CO ₂ e / kWh	The emission factor is provided by the local energy supplier in their official environmental declaration on electricity generation for 2016.
Regional Office, Switzerland	Geneva	Switzerland	Emission factor for purchased steam: 240g CO ₂ e / kWh	The emission factor is provided by the local energy supplier.
			Emission factor for electricity: 12g CO ₂ e / kWh	The emission factor is provided by the local energy supplier.

2.3.3. Proxies used for each emission source category including all assumptions made, possible resulting errors/shortcomings and ways we plan to improve these in the future

Emission source	Options #	Proxy	Possible errors	Plan to improve data
Electricity consumption	1	Use m ² EEI of near building	Energy intensity of similar offices in same area is assumed to be similar. The proxy doesn't allow capturing energy efficiency improvements.	Working with country offices to obtain electricity consumption data from host governments; agencies managing common premises; energy providers; etc.
	2	Use SUN proxy	Proxy adapted to	It will continue to be

			climate zones; considered reliable. The proxy doesn't allow capturing energy efficiency improvements.	used when other options are inapplicable
Steam consumption		Use m ² steam consumption of near building	Steam consumption of similar offices in the same area is assumed to be similar. The proxy doesn't allow capturing efficiency improvements.	Working with country offices to obtain steam consumption data from host governments, agencies managing common premises, steam providers, etc.
Air travel		Apply office average to missing itineraries	Emissions from flights with missing itineraries might diverge from office average.	Improve air travel reporting system through centralized online tool (implemented).
Air travel		Entitlement Travel proxy when travel departure and destination are not available	Average carbon footprint and trip distance of available Entitlement Travel trips used as proxies for missing trips; large margin of error.	Liaise with new Global Shared Service Centre to obtain actual itineraries of Entitlement Travel in future inventories
Public transport		Travel to/from airport	Inaccurate measure. It is paid as a lump sum, hence we cannot know the actual transport modality. The proxy also does not capture efficiency improvements (e.g. travelling by public service).	This emission source represents a minimal share of UNOPS footprint; and the burden for more accurate reporting is disproportionately large. Hence, this proxy will continue to be used.
Mobile sources		Fuel consumption	Estimates based on average fuel cost should be quite reliable even if not 100% accurate.	Plan to require all drivers to log and report fuel consumption for their vehicles annually.

2.4. Data management

2.4.1. Sources of activity data

A web-based or an ERP-based system to collect building activity data does not exist but is currently under development. Data collection is performed through the circulation of the Flat File to local focal points, who fill it in with support from building administrators, logistics officers and office managers. In addition, local focal points forward the summary list of official duty travel (see below) based on a review from the office travel focal point and/or administrative assistant.

Scope 1:

- Fuel for stationary combustion: The source of activity data is typically invoices reporting quantities of purchased fuel, estimates based on average fuel cost, or consumption profiles recorded by building administrators.
- Fuel consumption/mileage for office car: Activity data typically comes from fuel purchase receipts and/or log book records. Alternatively, vehicle log books are used to obtain mileage data.

- Refrigerants consumption: The source of activity data is typically limited to the refrigerant type, verified through physical inspection of the equipment. Occasionally, activity data on yearly refrigerants purchase based on invoices is available.

Scope 2:

- Electricity consumption: The source of activity data is typically bills from electricity providers, or consumption profiles provided by building administrators.
- Steam consumption: The source of activity data is typically invoices with quantities of purchased steam, or consumption profiles provided by building administrators.

Scope 3:

- Air travel data: air travel activity is monitored through UNOPS corporate travel agency's travel booking records; reporting on the UNOPS intranet Official Duty Travel page; or the creation of a summary list of travel authorizations in every office. Processing of travel itineraries is centralized to avoid duplications and inconsistencies.
- Public transport data: public transport activity is monitored through the same travel authorization list used for air travel, even though reporting on travel modalities other than air is much less accurate.

2.4.2. Data management

The data collection process is decentralized. HQ Sustainability Team provides global coordination and project management.

The data collection process is based on a network of focal points designated in every office hosting five or more personnel. Once focal points are confirmed in collaboration with HR and regional headquarters, the Flat File and instructions on how to provide an official duty travel report are sent to local focal points. In January 2017, WebEx training sessions were offered to focal points who wished to receive direct guidance on how to complete the Flat File and improve the quality of their reports.

During the reporting period, assistance to local focal points was provided upon request through email, phone and Skype.

All Flat Files were quality checked and processed by the HQ Sustainability Team, then uploaded on the GHG File Cabinet. A copy of each report is saved for internal records and verification purposes. A log file for the inventory is created, with emission reports split up by country locations.

2.4.3. Normalization factors

See UN-wide IMP

2.4.4. Data collection process for normalization factors

Two normalization factors are used: "m²" and "number of personnel". Data on both normalization factors is collected through the Flat File.

2.4.5. Quality assurance

Quality assurance on data provided by local focal points is performed by the HQ Sustainability Team.

Uncertainty is widespread in all data sources, as office reports are not accompanied by any supporting evidence but rely fully on the accuracy of reporting personnel.

To detect obvious errors, year on year comparison of the reported emission levels is performed. This type of quality check is possible for offices that are at least in their second year of reporting. At present, further quality assurance checks are under consideration.

2.4.6. Integrated tools

A new integrated tool was implemented in 2011 to simplify the reporting exercise on air travel. An intranet-housed duty travel reporting system based on the inputs required by the ICAO calculator has been developed, and it has been made mandatory to report on air travel in the prescribed format with the aim of calculating related GHG emissions.

2.4.7. Frequency

Annual activity data for the GHG inventory for the previous calendar year are collected by local focal points and submitted to the HQ Sustainability Team annually.

2.5. Base year

2.5.1. Base year

UNOPS performed its first GHG inventory on 2008 emissions from its HQ. This was considered a learning exercise and the experience was used the following year in the roll-out to field locations. Therefore, emissions data for 2009 represents the first attempt to map UNOPS global GHG emissions.

However, 2009 data is not verifiable, no IMP has been produced for that inventory and especially air travel figures (representing 36% of total emissions) are unreliable. Choosing 2008 or 2009 as base year would provide a distorted perception of UNOPS GHG emission performance over time. The 2010 inventory had better coverage and higher quality data, however, it still did not provide a complete picture of corporate emissions.

In comparison, the 2011 inventory had significantly improved coverage and data quality. It should thus be expected that this inventory serves as the base year inventory.

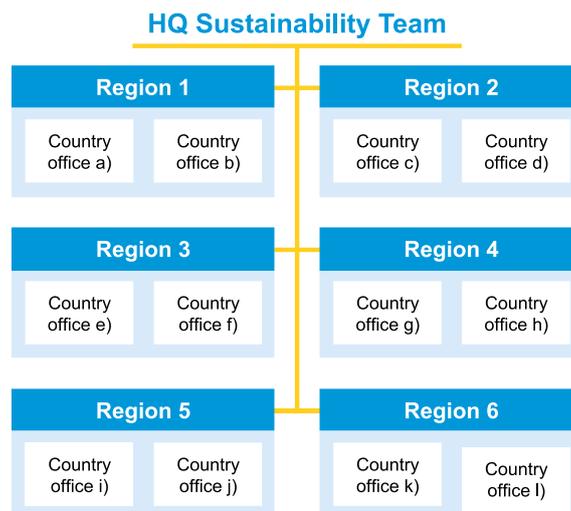
2.5.2. Base year recalculation policy

At present, a Base Year Recalculation Policy specific to UNOPS doesn't exist. UNOPS will follow the UN-wide recalculation policy when this is made available, and until its internal recalculation policy is developed.

2.6. Management tools

2.6.1. Roles and responsibilities

The reporting structure chart for the global inventory 2016 is provided below.



2.6.2. Training

During the first UNOPS global GHG inventory, the need for further guidance and training was highlighted by several local focal points. It should be noted that the large majority of local focal points perform different professional functions than environmental sustainability.

To respond to the training requests, WebEx sessions were offered to local focal points in January 2017.

2.7. Auditing and verification

2.7.1. Internal auditing

At present, no internal audit is performed on the inventory.

2.7.2. External validation and/or verification

At present, there are no external procedures in place or in programme for external validation of the GHG inventory.

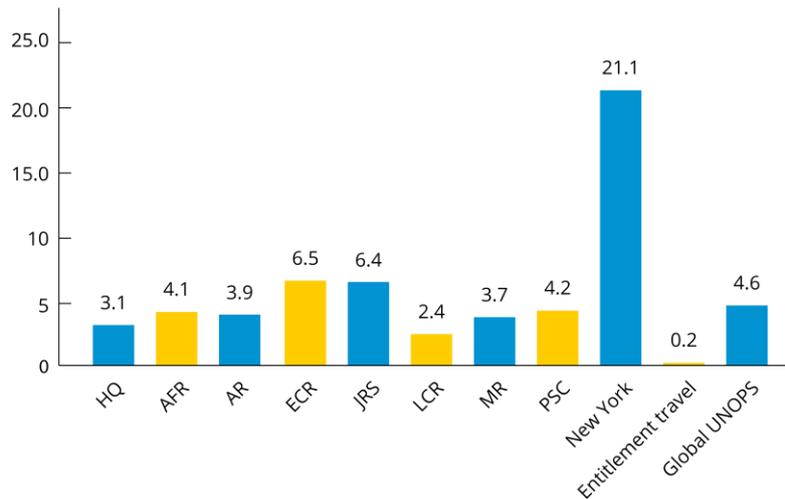
2.7.3. Management review

At present, there is no management review process for the GHG inventory.

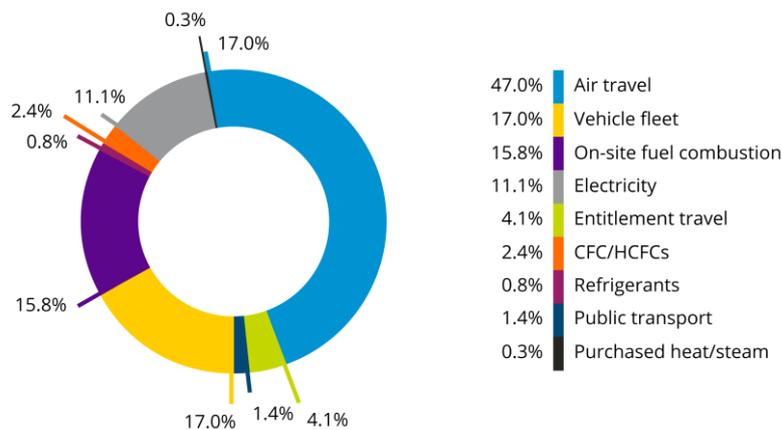
Appendix: Overview of UNOPS 2016 GHG Inventory

Summary	
Reporting period	1 January 2016 - 31 December 2016
Number of inventories completed ⁴	67
Number of staff included in assessment	3,234
% of staff covered in assessment	89%
Total GHG emissions [tonnes CO ₂ e] with optional emissions	14,968.9
Total office space [m ²]	64,669
Global average emissions per staff [tonnes CO ₂ e]	4.6

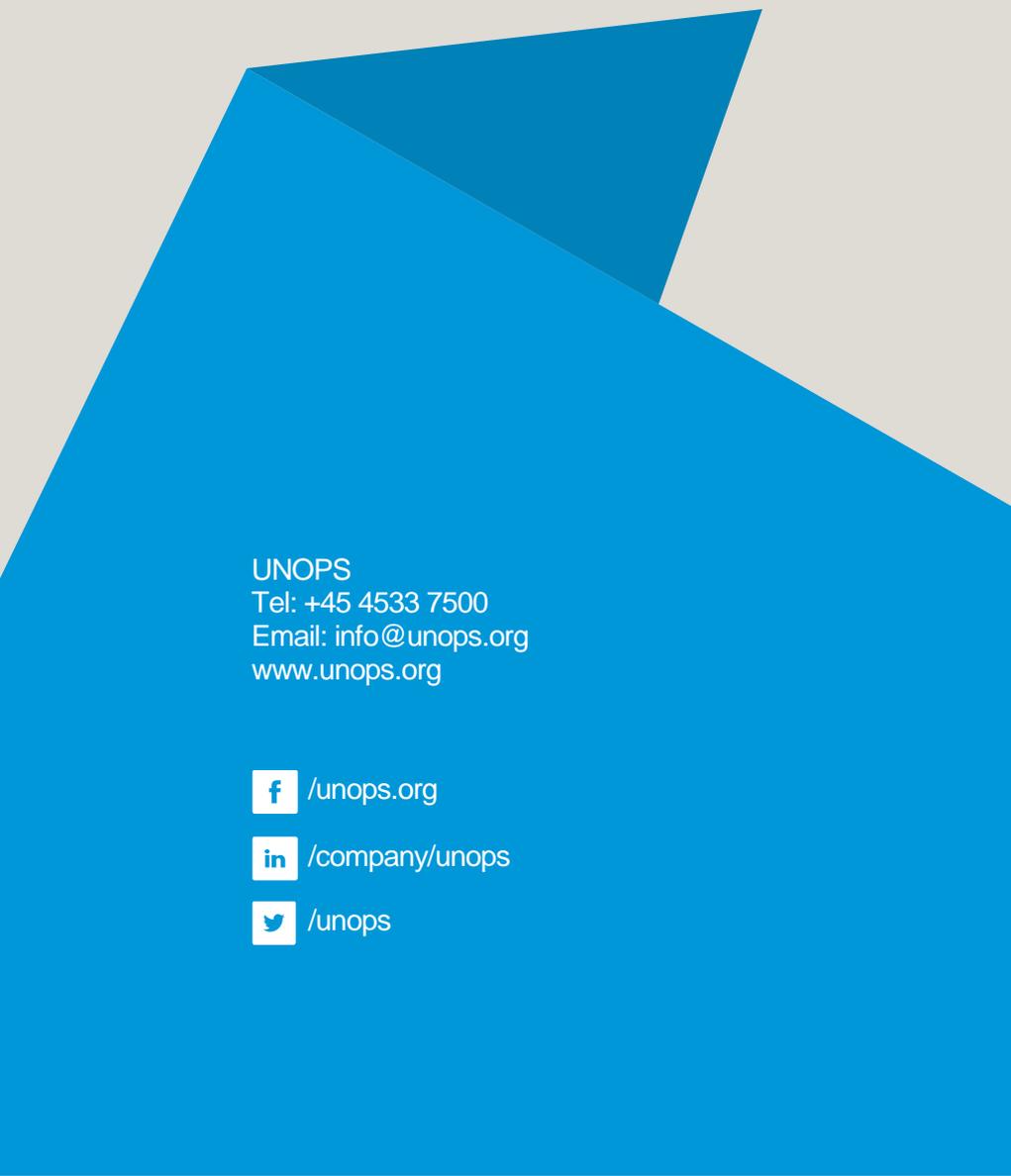
Emissions per staff (in tonnes CO₂e), 2016



UNOPS emissions by source, 2016



⁴ The number reflects "number of offices that reported emissions" - even if in some countries there may be several inventories (e.g. large offices or offices from different regions), while in other countries inventories might be bundled together in one (in particular in the case of different projects under the same office).

A large blue geometric graphic consisting of several overlapping triangles and polygons, located in the bottom-left corner of the page.

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