UNOPS

UNOPS 2024 Scope 3 GHG Emissions Report & Inventory Management Plan

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1. Introduction

UNOPS releases this first public, comprehensive Scope 3 GHG report in 2025, following two years of work to conceptualise its approach to Scope 3 accounting, baseline its value chain activities and develop internal calculation methodologies. An intense activity that follows UNOPS ambitious pledge, made during the 2023 UN Climate Change Conference (COP28), to account for its extended value chain emissions and drive meaningful improvements.

The boundary setting and materiality methodology followed in this report are the result of a careful adaptation of the Greenhouse Gas Protocol guidance to the operational constraints of UNOPS activities in the development sector. While a few categories (purchased goods and services, use and end-of-life of sold products) dominate the quantitative materiality of the value chain emissions, the boundary of the disclosed categories is set more broadly, to include categories that meet qualitative materiality criteria that are relevant to UNOPS (see "Scope 3 Materiality Methodology, UNOPS, 2025"). From this angle, stakeholders' validation of the corporate boundary is a necessity for UNOPS, a decentralised organisation with multiple stakeholder groups.

Overall, the results of this inventory show, unsurprisingly for a project-based organisation, that UNOPS' value chain emissions dominate its global footprint. This is a clear reflection of the multitude of suppliers, contractors, implementing partners, freight-forwarders and beneficiaries around the globe. Upon closer examination of the Scope 3 breakdown by category, we observe that UNOPS' supply chain is responsible for roughly ⅖ of its emissions. These emissions are largely related to the supply chain for project needs (corporate procurement emissions don't surpass 1%). The use phase of the products (Category 11) and especially assets delivered by UNOPS is the single largest emission category, a reflection of the high share of infrastructure projects in UNOPS portfolio. Emissions from UNOPS financial investments fall short of the 5% quantitative materiality threshold; however, they are undoubtedly another important category in UNOPS' Scope 3 overview. The remaining emissions are scattered over other categories that are very small from a quantitative perspective, but score high on other materiality considerations.

Together with detailed information about activity data and sources, emission factors utilised, and calculation methods, this report systematically appraises the data quality for each disclosure, within a progressive scale. As expected for an organisation releasing its first report, UNOPS Scope 3 calculations still rely largely on spend-based input data, including for the quantitatively critical disclosures. A process of improvement towards better quality data is already underway, and is particularly visible in corporate-related Scope 3 categories, where the report can build on existing data and data capture systems from the more established Scope 1 and 2 GHG report. In terms of emissions calculations, we make up for the lack of corporate input data for downstream activities by employing a hybrid calculation method based on the life-cycle assessment phases of products and services.

This report not only represents UNOPS' tangible response to its climate pledge; it establishes a solid foundation for the organisation's future Scope 3 work. There is a clear path ahead to improving both the quality of the UNOPS' reported data and its ability to act upon it.

2. Version information

Description	Details
Reporting period	01/01/2024 to 31/12/2024
Reporting platform(s)	www.unops.org
Version number of the IMP	v1.0
Corresponding Inventory Version number	v1
Date of completion of the IMP	23/12/2025

3. Boundary conditions and materiality determination

a. 2024 Scope 3 Materiality process

In 2025, UNOPS conducted a reassessment of its Scope 3 emissions materiality based on 2024 data, with the following findings:

Step 1 - Value chain mapping

- Minor corrections were made to the list of Hosted Entities compared to the previous year. The assessment provided a clearer picture of the Hosted Entities programmatic activities, that can be used for potential reassessments of the quantitative and qualitative materiality of their activities. For 2024, no changes to the value chain mapping were made as a result of this assessment.

Step 2 - Identification of quantitatively material activities

- In some cases, it was noted that methodologies for calculating emissions under certain categories needed updating. For details, refer to the Emissions quantification section.

Step 3 - Identification of material activities by qualitative significance

- The qualitative rating of the identified activities within UNOPS value chain were scored by a team of UNOPS climate experts, utilising the approach and the weighting grid explained in the UNOPS Materiality Methodology.

Step 4 - Validation through consultation with stakeholders

- Two focus groups on Scope 3 materiality have been conducted in 2025, to collect feedback from internal stakeholders on the qualitative materiality of UNOPS emissions, and on the emissions disclosure process.

As a result of the activities listed above, it was concluded that no significant changes in the organisational value chain took place since the 2024 mapping, which would require a reconsideration of the reporting boundary.

b. 2024 Scope 3 boundary

The materiality of UNOPS Scope 3 categories has been confirmed with no deviations from the previous year's assessment; the boundary of UNOPS 2024 Scope 3 report is as follows:

#	Emission Category	Sub-activities	Quantitative significance > 5%	Qualitative significance score	Materiality
1	Purchased Goods & Services	*Building and maintenance services*	yes	91/100	Material
		Fuels and lubricants		39/100	
		Medical equipment and supplies		45/100	
		Pharmaceuticals, contraceptives, vaccines		48/100	
		Other categories of UNOPS procurement		54/100	
		Long-term agreements		70/100	
		UNWebbuy		81/100	
		Procurement for infra - cement, steel, timber and other materials		70/100	
2	Capital Goods		no	86/100	Material
3	Fuel and Energy-Related Activities		no	36/100	Not material
4	Upstream Transportation		no	80/100	Material

	and Distribution				
5	Waste Generated in Operations		no	81/100	Material
6	Business travel		no	88/100	Material
7	Employee Commute		no	63/100	Material
8	Upstream Leased Assets		no	n.a.	Accounted under Scope 1 and 2 as per option provided by the GHGP
9	Downstream Transportation and Distribution		no	29/100	Not material
10	Processing of Sold Products		no	n.a.	Not applicable - UNOPS does not transform intermediary products for sale
11	Use of Sold Products	*Built infrastructure assets*	yes	96/100	Material
		Procured goods		71/100	
12	End-of-life of Sold Products	*Disposal of built infra assets*	yes	62/100	Material
		Disposal of procured goods		64/100	
13	Downstream Leased Assets		no	n.a.	Not applicable - UNOPS does not lease out assets with the exception of limited amounts of office space already accounted for by other Agencies
14	Project delivery and implementation*	*Implementation of grants*	no	64/100	Material
		Implementation of infrastructure projects		88/100	
		Implementation of Mine Action		68/100	
		Implementation by Hosted Entities		66/100	

15	Investments	*Working capital*	no	50/100	Material
		Operational reserves portfolio		50/100	
		ASHI		96/100	
		Internal cash		96/100	
		IBRD - World Bank		73/100	

Table 1 - materiality of Scope 3 categories

Each category is assessed as:

- Material - Indicates that the respective scope 3 category is material to UNOPS and its business according to UNOPS Scope 3 Materiality Methodology.
- Not Material - Indicates that the respective scope 3 category is not material to UNOPS and its business according to UNOPS Scope 3 Materiality Methodology.

While the inclusion or exclusion from the reporting boundary is determined at category level, as instructed in the GHGP, the more complex categories are broken down by subgroups of activities as identified through the value chain mapping, and each group is individually assessed. This analysis is then used to determine the overall category materiality. This granular analysis brings additional benefits: it is useful to inform subsequent steps of emissions management; and its disclosure provides additional insight on how the materiality of the most complex categories has been determined.

4. Emissions quantification and methodology

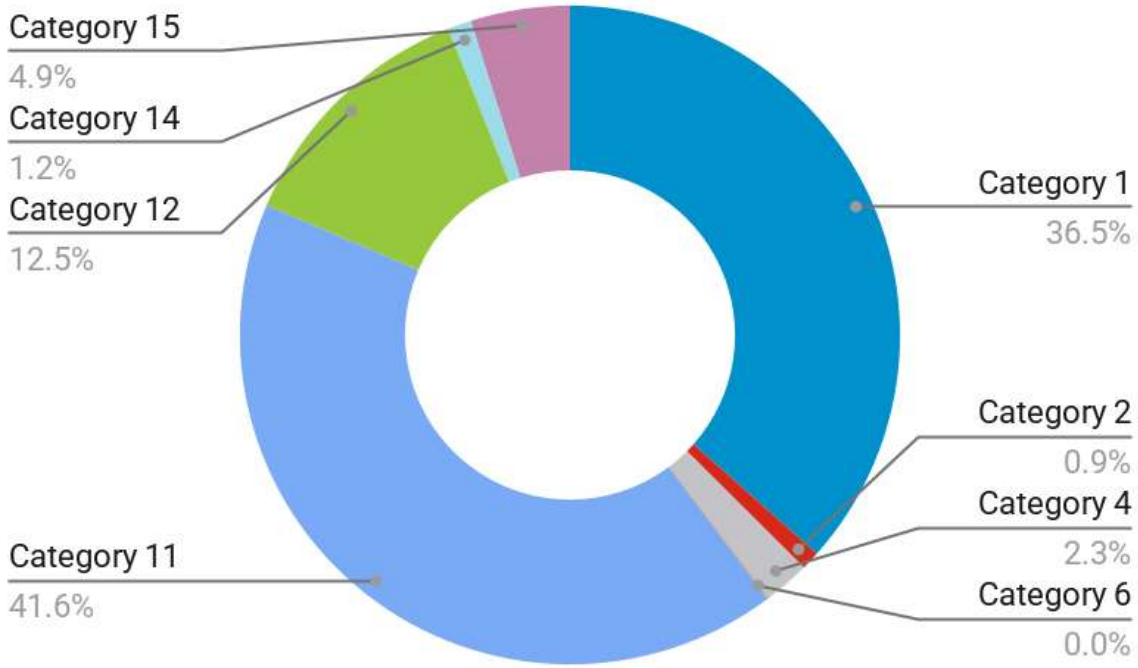
The table below provides a high-level summary of the 2024 value chain emissions profile by category, and an overview of the emission factor databases used.

CATEGORY #	EMISSIONS t/CO2e	% of scope 1+2+3 emissions	QUANTIFICATION METHODOLOGY
1 - PURCHASED GOODS AND SERVICES	**4,749,850**	**36.53%**	**Total emissions = ∑ [Expenditure {USD} · Emission Factor {kgCO2e / USD}]**
2 -- CAPITAL GOODS	**119,604**	**0.92%**	**Total emissions = ∑ [Expenditure {USD} · Emission Factor {kgCO2e / USD}]**

4 - UPSTREAM TRANSPORTATION & DISTRIBUTION	**294,738**	**2.27%**	**Total emissions = ∑ [Expenditure {USD} · Emission Factor {kgCO2e / USD}]**
5 - WASTE IN OPERATIONS	**217**	**0.00%**	**Total emissions = ∑ (waste produced (tonnes or m3) × waste type and waste treatment specific emission factor (kg CO2 e/tonne or m3))**
6 - BUSINESS TRAVEL	**5,737**	**0.04%**	**Air travel:** **Total emissions = ∑ (distance travelled per route (passenger-km) × route specific emission factor (kg CO2 e/passenger-km))** **Ground travel:** **Total emissions = ∑ [distance travelled by passengers {passenger-km} x vehicle-specific emission factor {kgCO2e/passenger-km}]**
7 - EMPLOYEE COMMUTE	**1,469**	**0.01%**	**Total emissions = ∑ [distance travelled by vehicle type {passenger-km} · vehicle-specific emission factor {kgCO2e/passenger-km}]**
11 - USE OF SOLD PRODUCTS	**5,412,448**	**41.63%**	**Procurement of Goods:** **Total emissions = ∑ [Expenditure {USD} · (use phase) Emission Factor {kgCO2e / USD}]** **Infrastructure physical asset(s):** **Total emissions = ∑ [Output {unit} · (use phase) Emission Factor {kgCO2e / unit}]**
12 - END OF LIFE OF SOLD PRODUCTS	**1,629,890**	**12.54%**	**Procurement of Goods:** **Total emissions = ∑ [Expenditure {USD} · (EoL phase) Emission Factor {kgCO2e / USD}]** **Infrastructure physical asset(s):** **Total emissions = ∑ [Output {unit} · (EoL phase) Emission Factor {kgCO2e / unit}]**
14 - FRANCHISES	**149,523**	**1.15%**	**Total emissions = ∑ [Expenditure {USD} · Emission Factor {kgCO2e / USD}]**
15 - INVESTMENTS	**632,571**	**4.87%**	**Total emissions {kgCO2e} = ∑ [Investee emissions {kgCO2e} × Attribution factor]**
TOTAL	**12,996,046**	**99.96%**	

Table 2 - GHG emissions by Scope 3 category

Scope 3 emissions breakdown



Category 1: Purchased Goods and Services

In accordance with the GHG Protocol, Category 1 includes the upstream emissions associated with the production of goods and services procured by an organisation. Given the unique nature of UNOPS' operations, the 'Purchased Goods and Services' category encompasses the upstream GHG emissions embedded within goods and services acquired by UNOPS for its projects[1]. This category accounts for emissions generated throughout the upstream lifecycle of purchased items, from raw material extraction to the factory gate.

The following approach has been undertaken to estimate the emission for Category 1: Purchased Goods and Services.

Input data: The input data comes from UNOPS Purchase Order (PO) Details Reports and covers the spend data for all products (goods and services) procured in 2024 for projects. More specifically, the following data has been extracted and used for the calculation:

[1] Includes UNOPS procurement for Hosted Entities and Mine Action.

- Purchased product categories: a comprehensive data set was utilised, consisting of detailed UNSPSC product descriptions[2];
- Amount spent on purchased goods, by product category[3] (e.g. US dollars);
- Location of Tier 1 suppliers and UNOPS project countries.

The project regions and service lines provided in the data for the procured products have been mapped to a standard set of regions to ensure uniformity in the calculations across Scope 3 categories. Regionalisation of emissions factors for procured goods was based on the supplier country, whereas emissions factors for procured services were based on the country of implementation[4].

Emissions Factors Used: A customised approach has been employed to develop regionally specific spend-based emission factors. Emission factors from USEEIO served as the foundation, adjusted for inflation to reflect current economic conditions. Regionalisation is achieved by incorporating normalisation factors derived from EXIOBASE, resulting in a database that better represents regional emission factors for products. The emission factors, derived from the customised dataset combining USEEIO and EXIOBASE, represent the average emission factors per unit of currency spent on a specific product or service category.

Calculation method: The average spend-based method[5] was applied, which involves estimating emissions for goods by collecting data on the economic value of goods purchased and multiplying by relevant industry average emission factors (e.g., average emissions per monetary value of goods).

$$\textit{Total emissions} = \sum [\textit{Expenditure \{USD\}} \cdot \textit{Emission Factor \{kgCO2e / USD\}}]$$

Where:

- Expenditure = Expenditure for the procured good or service
- Emission factor = Regional emission factor for the procured good or service

Purchased goods and services

[2] UNSPSC (United Nations Standard Product and Services Code) - the UN standard product and service code taxonomy for e-commerce products and services.
[3] Excluding 'Travel' category, as it is accounted for under the 'Business travel' category.
[4] Note: a change in country classification has been implemented since last year: Middle East classified as Middle East, and Central Asia classified as Asia.
[5] The GHG Protocol Technical Guidance identifies different methods that can be used for calculating Scope 3 emissions, i.e. supplier-specific, hybrid, average-data, and spend-based methods.

Activities	Emissions (tCO2e)	% of total
Equipment and materials	3,070,031.9	64.63%
Operations and administration	583,998.1	12.30%
Other goods and services	374,710.5	7.89%
Health	347,903.4	7.32%
Infrastructure	243,565.0	5.13%
ICT	69,322.0	1.46%
Vehicles	60,318.8	1.27%
Total	**4,749,849.8**	**-**

Table 3 - Break-down of GHG emissions by activities within category 1

Limitations and opportunities for improvement:

- The spend-based methodology has been adopted for estimating emissions within this category due to data availability constraints. However, it is acknowledged that this approach does not provide the most accurate representation of emissions due to inherent limitations in granularity, as spend-based data don't allow for accounting for different levels of embodied carbon. The quantities of procured goods (units) can be used to further improve the accuracy of the emission estimates.
- To optimise data utility and maintain consistency, product categories defined at Level 2 of the product category description have been employed for emissions estimation. This level of granularity balances the need for detailed categorisation with the practical considerations of data variability associated with more granular Level 3 classifications.
- For goods, emissions were regionalised based on the country where the supplier is registered (supplier country basis), rather than the country where the product was manufactured (manufacture country basis). This is an imperfect proxy for production emissions.
- For goods, given that the PO expenditure encompasses the entire product, including transportation and distribution, it is assumed that 15% of the total spend represents the costs associated with transportation and distribution activities (and subtracted from Category 1). The 15% allocation is based on secondary research[6]. This allocated amount is then used to estimate transportation emissions reported under Category 4. Further methodological detail is provided in Category 4.

[6] Ratio of transportation costs to the total costs and sales, Fatih Mutlu

- Additional free-text information from the purchase orders can be used to refine the data and extract more detailed product descriptions for improved accuracy of the emission estimation.
- The USEEIO emission factors for services are supply chain emission factors, designed to capture the full cradle-to-shelf environmental impact associated with the production and delivery of the service. This includes:
    - ***Direct cradle-to-gate emissions:*** generated directly by the industry sector responsible for producing the primary good or service.
    - ***Indirect supply-chain emissions:*** the emissions embedded in all the goods and services purchased by the primary producing industry, across the entire domestic and often international supply chain.
    - ***Transport and trade:*** These margins specifically account for the emissions associated with bringing the product from the "factory gate" to the "shelf" (the final consumer or purchaser).
- For infrastructure services, a spend-based emission factor (USEEIO) has been applied. The USEEIO emission factor covers cradle-to-gate emissions, including emissions from the production and acquisition of goods, machinery, and other inputs used in infrastructure projects; the procurement of supporting services (e.g. professional, scientific, and technical services); utilities (electricity and water); transportation and distribution; and energy use (such as fuel for equipment and purchased electricity) across the supply chain. However, this emission factor also includes emissions associated with implementation or construction activities, which fall under Category 14. To avoid double-counting, emissions related to implementation—assumed to represent 10% of total infrastructure service emissions—have been excluded from Category 1 and reallocated to Category 14. Further methodological detail is provided in Category 14.

Scope 3 data quality scale - Purchased goods and services					
SPEND-BASED DATA	AVERAGE DATA	SUPPLIER-SPECIFIC DATA	GENERIC EMISSION FACTORS	COUNTRY/SECTOR-SPECIFIC EMISSION FACTORS	SUPPLIER-SPECIFIC EMISSION FACTORS
X				X	

Category 2: Capital Goods

In accordance with the GHG Protocol, Category 2 includes the upstream emissions associated with the production of capital goods procured by an organisation. Given the unique nature of UNOPS' operations, the 'Capital Goods' category encompasses the upstream GHG emissions embedded

within goods and services acquired by UNOPS for its internal operations. This category accounts for emissions generated throughout the production lifecycle of purchased items, from raw material extraction to the factory gate.

The following approach has been undertaken to estimate the emission for Category 2: Capital Goods.

Input data: The input data comes from UNOPS Purchase Order (PO) Details Reports and covers the spend data for all products (goods and services) procured in 2024 under Admin projects. More specifically, the following data has been extracted and used for the calculation:

- Purchased product categories: a comprehensive data set was utilised, consisting of detailed UNSPSC product descriptions[7];
- Amount spent on purchased goods, by product category[8] (e.g. US dollars);
- Location of Tier 1 suppliers and UNOPS premises (project countries).

The project regions and service lines provided in the data for the procured products have been mapped to a standard set of regions to ensure uniformity in the calculations across Scope 3 categories. Regionalisation of emissions factors for procured goods was based on the supplier country, whereas emissions factors for procured services were based on the country of implementation[9].

Emissions Factors Used: A customised approach has been employed to develop regionally specific spend-based emission factors. Emission factors from USEEIO served as the foundation, adjusted for inflation to reflect current economic conditions. Regionalisation is achieved by incorporating normalisation factors derived from EXIOBASE, resulting in a database that better represents regional emission factors for products. The emission factors, derived from the customised dataset combining USEEIO and EXIOBASE, represent the average emission factors per unit of currency spent on a specific product or service category.

Calculation method: The average spend-based method[10] was applied, which involves estimating emissions for goods by collecting data on the economic value of goods purchased and multiplying

[7] UNSPSC (United Nations Standard Product and Services Code) - the UN standard product and service code taxonomy for e-commerce products and services.
[8] Excluding 'Travel' and 'Fuel' categories, as they are accounted for under 'Business travel', and 'Fuel and Energy-Related Activities' categories, respectively.
[9] Note: a change in country classification has been implemented since last year: Middle East classified as Middle East, and Central Asia classified as Asia.
[10] The GHG Protocol Technical Guidance identifies different methods that can be used for calculating Scope 3 emissions, i.e. supplier-specific, hybrid, average-data, and spend-based methods.

by relevant industry average emission factors (e.g., average emissions per monetary value of goods).

$$\text{Total emissions} = \sum [\text{Expenditure \{USD\}} \cdot \text{Emission Factor \{kgCO}_2\text{e / USD\}}]$$

Where:

- Expenditure = Expenditure for the procured good or service
- Emission factor = Regional emission factor for the procured good or service

Capital goods		
Activities	**Emissions (tCO2e)**	**% of total**
Operations and administration	85,121.8	71.17%
Other goods and services	14,175.3	11.85%
Equipment and materials	12,788.0	10.69%
ICT	4,785.0	4.00%
Infrastructure	1,926.8	1.61%
Health	700.7	0.59%
Vehicles	106.6	0.09%
Total	**119,604.1**	**-**

Table 4 - Break-down of GHG emissions by activities within category 2

Limitations and opportunities for improvement:

The key considerations and limitations of this category are the same as of Category 1: Purchased Goods and Services as the same approach and methodology have been used for this category. The only point of difference is that "implementation" under infrastructure services has not been deducted.

Scope 3 data quality scale - Capital goods					
SPEND-BASED DATA	AVERAGE DATA	SUPPLIER-SPECIFIC DATA	GENERIC EMISSION FACTORS	COUNTRY/SECTOR-SPECIFIC EMISSION FACTORS	SUPPLIER-SPECIFIC EMISSION FACTORS
X				X	

Category 3: Fuel and Energy-related Activities

Category 3 is not considered material for UNOPS, and the related GHG emissions are not included in this report.

Category 4: Upstream Transportation & Distribution

In accordance with the GHG Protocol, Category 4 encompasses the indirect greenhouse gas (GHG) emissions generated during the transportation and distribution of purchased goods from suppliers to the organisation's facilities.

The following approach has been undertaken to estimate the emissions for Category 4: Upstream Transportation & Distribution.

Input data: The input data comes from UNOPS Purchase Order (PO) Details Reports and covers the spend data for transportation and distribution for all the products procured in 2024 for the projects as well as internal operations. The data has been classified in separate groups depending on the sub-category:

- **Group A -** Transportation and distribution of products purchased in the reporting year, between a company's tier 1 suppliers and its own operations in vehicles not owned or operated by the reporting company for projects. To calculate emissions for this group, 15% of the total cost of purchased goods has been assumed as transportation cost[11].
- **Group B -** Third-party transportation and distribution services purchased by the reporting company in the reporting year, including inbound logistics, outbound logistics (e.g., of sold products), and third-party transportation and distribution between a company's own facilities. This group is represented by purchase orders under the services category 'Freight Handling and Forwarding'.

Emissions Factors Used: A customised approach has been employed to develop regionally specific spend-based emission factors. Emission factors from USEEIO served as the foundation, adjusted for inflation to reflect current economic conditions. Regionalisation is achieved by incorporating normalisation factors derived from EXIOBASE, resulting in a database that better represents regional emission factors for products. The emission factors, derived from the customised dataset combining USEEIO and EXIOBASE, represent the average emission factors per unit of currency for various modes of transportation. Regionalization of the emissions factors for both Group A and B was based one the country of implementation.

[11] Ratio of Transportation Costs to Total Costs and Total Sales | Download Table (researchgate.net)

Calculation method: The average spend-based method was applied, which involves multiplying the total expenditure on transportation by the corresponding emission factors.

$$Total\ emissions = \sum [Expenditure\ \{USD\} \cdot Emission\ Factor\ \{kgCO_2e / USD\}]$$

Upstream transportation and distribution - Group A		
Activities	**Emissions (tCO2e)**	**% of total**
Health	99,710.7	37.88%
Equipment and materials	69,689.2	26.47%
Vehicles	48,863.6	18.56%
ICT	24,855.8	9.44%
Other goods and services	12,134.9	4.61%
Operations and administration	7,995.2	3.04%
Infrastructure	0.9	0.00%
Total	**263,250.3**	**-**

Table 5 - Break-down of GHG emissions by activities within category 4, group A

Upstream transportation and distribution - Group B		
Activities	**Emissions (tCO2e)**	**% of total**
Operations and administration: Logistics services	31,488.1	100%
Total	**31,488.1**	**-**

Table 6 - Break-down of GHG emissions by activities within category 4, group B

Limitations and opportunities for improvement:

- The accuracy of the analysis is influenced by data limitations, such as missing transportation mode information for a portion of the dataset. To address these gaps, proxy transportation modes have been assigned based on established criteria, where to map missing delivery method, the historical data on the most often used delivery method between two countries

was prioritized, and if not available, ROAD transportation was assumed for the local delivery, AIR transportation for international delivery.

- Given that the provided spend for goods encompasses the entire product, including transportation and distribution, it is assumed that 15% of the total spend represents the costs associated with T&D activities. Emissions are currently being calculated based on the transportation and distribution component of the expenditure. Further analysis of INCOTERMS can be used to improve the accuracy of emissions estimation in future reports.
- The spend-based methodology is adopted for estimating emissions within this category due to data availability constraints. However, it is acknowledged that this approach does not provide the most accurate representation of emissions due to inherent limitations in granularity.

Scope 3 data quality scale - Upstream transportation and distribution					
SPEND-BASED DATA	AVERAGE DATA	SUPPLIER-SPECIFIC DATA	GENERIC EMISSION FACTORS	COUNTRY/SECTOR-SPECIFIC EMISSION FACTORS	SUPPLIER-SPECIFIC EMISSION FACTORS
X				X	

Category 5: Waste Generated in Operations

In accordance with the GHG Protocol, Category 5 encompasses the indirect greenhouse gas (GHG) emissions associated with the treatment and disposal of waste generated by an organisation's operations. The following approach has been undertaken to estimate the emission for Category 5: Waste Generated in Operations.

There is no activity data available from the waste hauliers and recycling facilities specific to their Scope 1 and 2 emissions. However, UNOPS collects primary data on the volumes and types of waste generated in its offices and operations, as well as the disposal methods. The data is reported on a yearly basis through the IMPACTI Carbon online platform. Following the guidance of the GHGP, a waste-type-specific calculation method is selected for the calculations:

$$\textit{Total emissions} = \sum [\text{waste produced } \{\text{tonnes or } m^3\} \cdot \text{waste type and waste treatment specific emission factor } \{\text{kg } CO_2 \text{ e} \cdot \text{tonne or } m^3\}]$$

In the absence of country-specific emission factors, the Defra 2024 waste disposal conversion factors are applied.

Waste from operations - emissions by disposal method				
Disposal method	**Electronic Waste (tCO2)**	**Non-hazardous (general/sorted) (tCO2)**	**Other hazardous waste (t CO2)**	**Grand Total (tCO2)**
Closed incineration		0.2175	0.0003	**0.2178**
Composting		0.0283		**0.0283**
Controlled disposal	0.0009	0.2657	0.0023	**0.2689**
Donated	0.0000			**0.0000**
Incineration with energy recovery		0.0840	0.0001	**0.0842**
Landfill	0.0000	87.3946	0.0003	**87.3949**
Landfill with energy recovery		0.4408		**0.4408**
On-site storage	0.0000	0.0000		**0.0000**
Open incineration		0.0279		**0.0279**
Other/Unknown	0.0083	121.5972	0.0000	**121.6055**
Recycling	0.0602	0.4138	0.0041	**0.4781**
Sold	0.0000			**0.0000**
Supplier take-back scheme	0.0000		0.0000	**0.0000**
Uncontrolled disposal	0.0000	6.1996		**6.1996**
Grand Total (tCO2)	**0.0695**	**216.6694**	**0.0071**	**216.7460**

Table 7 - Break-down of GHG emissions by activities within category 5

Limitations and opportunities for improvement:

The above emissions calculations have the following considerations and limitations:

- The calculations rely heavily on the quality of the waste data reported by UNOPS offices. As the quality of waste data is considered average, that reflects on the quality of the emission figures under category 5. There is an opportunity to improve emissions data under this category by improving the quality of the waste generation reports.
- It is a reasonable assumption that the Defra emission factors for waste are ill-suited to represent real emissions outside the UK. There is an opportunity to improve emissions data under this category by collecting supplier-specific emission information, where locally available, or by using national/regional emission factors.

Scope 3 data quality scale - Waste from operations					
SPEND-BASED DATA	AVERAGE DATA	WASTE TYPE-SPECIFIC DATA	SUPPLIER-SPECIFIC DATA	GENERIC EMISSION FACTORS	COUNTRY/SECTOR-SPECIFIC EMISSION FACTORS
		X		X	

Category 6: Business travel

In accordance with the GHG Protocol, Scope 3 Category 7 encompasses the indirect greenhouse gas (GHG) emissions generated by employee transportation for business-related activities in vehicles owned or operated by third parties, such as aircraft, trains, buses, and passenger cars.

Input data

Air travel

To calculate air travel emissions, UNOPS relies on TADA air travel reports (UNOPS digital travel authorisation too, which is mandatory for use). Input data includes all UNOPS travel paid for and managed by the organisation in its inventory, based on travel itineraries (IATA codes) and travel class information recorded in TADA.

UNOPS is able to quantify emissions for all its business travel, except for entitlement travel of International Contract Holders' dependents and Rest and Recuperation (R&R) travel for staff members - both of which are currently marked as data gaps.[12] Travel that is booked by UNOPS on behalf of UNOPS partners, which is outside of UNOPS financial and administrative control, is not included in this report. Types of air travel included in the inventory:

- All air travel carried out through commercial passenger airlines
- Air travel carried out through WFP's UN Humanitarian Air Services (UNHAS). Humanitarian air travel carried out using the UN Peacekeeping Missions' airlines is fully accounted for in the UN DPO's GHG report; and therefore, it is excluded from the UNOPS report.
- Entitlement travel paid for by UNOPS through a lump sum but purchased independently by personnel.

Entitlement Travel for international personnel is estimated on the basis of a commercial air travel quotation and paid as a lump sum to the beneficiary personnel member. The following ET modalities

[12] R&R travel, although subsidized by UNOPS, is calculated and disbursed at the local level, making it currently impossible to account for.

are included: travel to join, travel to separate, reassignment to a new duty station, and home leave. This includes the eligible dependents.

Ground Travel

For ground travel, UNOPS calculates emissions using a distance-based approach, drawing on TADA reports. The inventory provides data on official ground travel by public transport, rented vehicles, and taxis.

Emissions Factors Used:

For air travel emission calculations, UNOPS utilises the latest available version of the UN interface to the ICAO Carbon Emissions Calculator for the respective reporting year. This tool, officially designated for calculating air travel emissions within the UN GHG Inventory, enables emission estimates based on a database of fuel logs, load ratios, aircraft emission information, etc.

Individual country-specific emission values for UNOPS' UNHAS flights are provided by the WFP UNHAS team, based on their records of fuel consumption and passenger log for the reporting year.

CO_2e emissions from ground travel are calculated by multiplying the total distance travelled by all passengers over the year by an emission factor specific to each mode of transport, as provided by the Defra 2024 ground travel conversion factors. Since the calculation is performed on a per-passenger basis, distances travelled by individual passengers are aggregated to determine total emissions. For taxi trips to and from airports, which are not captured in TADA and are reimbursed as a lump sum to travellers, a default proxy of 25 km per trip is applied, in line with UNEP recommendations.

Calculation methods:

Emissions from air travel (kg CO_2e) are calculated as:

Total emissions = ∑ (distance travelled per route (passenger-km) × route specific emission factor (kg CO2 e/passenger-km))

Emissions from ground travel (kg CO_2e) are calculated as:

Total emissions = ∑ [distance travelled by passengers {passenger-km} x vehicle-specific emission factor {kgCO2e - passenger - km}]

Air Travel			
Travel Class	**Commercial (t CO2e)**	**Humanitarian (t CO2e)**	**Entitlement (t CO2e)**
ECONOMY	3225.70		
BUSINESS	900.35		
N/A*		577.61	694.93
Grand Total	**5,398.60**		

Table 8 - Break-down of GHG emissions by activities within category 6, Air travel

*N/A no travel class available or not consequently assigned

Ground Travel		
Mode of transport	**Distance (km/kWh)**	**t CO2e**
Bus	184,339.9 km	19.99
Car	1,103,746.3 km	164.03
Electric car	8 kWh	0.00
Taxi	890,936.2 km	132.40
Ferry	42,665.8 km	4.81
Train	489,992.5 km	17.38
Grand Total		**338.61**

Table 9 - Break-down of GHG emissions by activities within category 6, Ground travel

Limitations and opportunities for improvement:

These considerations and limitations apply to the staff travel category:

- The TADA centralised database ensures high reliability of the activity data. However, it should be noted that where IATA codes of the reported itineraries are faulty and/or incomplete, they are corrected by the HQ climate team on the basis of likelihood/approximations.
- Two sub-categories of entitlement travel - entitlement travel of International Contract Holders" dependents and Rest and Recuperation (R&R) travel for staff members - are not trackable and remain as data gaps.
- For ground travel, a potential limitation in the use of the Defra emission factors is that the passenger CO_2e/km in the United Kingdom may deviate, also significantly, from the average energy efficiency of transport fleets in other countries where UNOPS operate.
- The disclosure under this category can achieve further comprehensiveness by including emissions from hotel stays - currently not available.

	Scope 3 data quality scale - Business travel				
	SPEND-BASED DATA	DISTANCE-BASED DATA	FUEL-BASED DATA	NORMALISED EMISSION FACTORS	ROUTE/FUEL-SPECIFIC EMISSION FACTORS
Air travel		X			X
Ground travel		X			X

Category 7: Employee commute

In accordance with the GHG Protocol, Scope 3 Category 7 encompasses the indirect greenhouse gas (GHG) emissions generated by employee transportation between their homes and workplaces.

Input data

To calculate emissions from employee commuting, UNOPS used data collected through an organisation-wide survey conducted in 2024. The results were extrapolated from the number of respondents to represent the total number of personnel. This approach enabled the estimation of regional average commuting distances per person across different modes of transport.

Emissions Factors Used:

2024 DEFRA emission factors were then applied to calculate the associated greenhouse gas emissions per mode of transport. Energy consumption related to home-based work was not included in the 2024 assessment.

Calculation methods:

Employee commute emissions were calculated as:

$$\text{Total emissions} = \sum [\text{distance travelled by vehicle type } \{\text{passenger-km}\} \cdot \text{vehicle-specific emission factor } \{\text{kgCO2e/passenger-km}\}]$$

Employee commute		
Mode of transport	**Distance km/kWh**	**t CO2e**
Car	7,224,687.5 km	1,307.41
Bicycles	524,473.0 km	-
Electric vehicles	800 kWh	0.39
Walking	180,254.2 km	-
Train	2799.0 km	0.08
Bus	881,741.2 km	95.63
Subway	2,339,972.5 km	65.05
Grand Total		**1468.57**

Table 10 - Break-down of GHG emissions by activities within category 7

Limitations and opportunities for improvement:

- A variable percentage of UNOPS personnel regularly work remotely from their home. Emissions from home-based work are currently not captured in the Scope 3 report, and should be considered for inclusion in the future.
- Employee commute emissions are calculated based on a survey of commuting habits conducted in the fall of 2024. The survey should be repeated to capture more recent data, and ideally complemented by office-level reports to reach a higher degree of granularity in considering the significant variation in commuting habits among duty stations.
- The emission factors used in this category should be aligned with other comparable categories. Currently, DEFRA EFs are used for commuting in all locations, as opposed to Category 6 ground travel emissions, which receive a 15% multiplier under the UNEP IMP.

Scope 3 data quality scale - Employee commute

AVERAGE DATA	DISTANCE-BASED DATA	FUEL-BASED DATA	GENERIC EMISSION FACTORS	COUNTRY/TRANSPORT-SPECIFIC EMISSION FACTORS
	X		X	

Category 8: Upstream Leased Assets

Category 8 is not considered applicable for UNOPS Scope 3 reporting, as the upstream leased assets emissions are already included in its Scope 1 and 2 report, an option provided in the GHGP; the related GHG emissions are not included in this report.

Category 9: Downstream Transportation and Distribution

Category 9 is not considered material for UNOPS, and the related GHG emissions are not included in this report.

Category 10: Processing of Sold Products

Category 10 is not considered applicable for UNOPS as UNOPS does not transform intermediary products for sale; and the related GHG emissions are not included in this report.

Category 11: Use of Sold Products

In accordance with the GHG Protocol, Scope 3 Category 11 encompasses the direct and indirect greenhouse gas (GHG) emissions associated with the end-use of products sold by an organisation. These emissions occur when customers or other end-users utilise products, leading to emissions from various activities such as product combustion or energy consumption. In the case of UNOPS, this category covers use-phase emissions of the products and infrastructure delivered to the beneficiaries.

The following approach was undertaken to estimate the emission for Category 11: Use of Sold Products.

Input data: The input data for Scope 3 Category 11 was sourced from two primary repositories.

- For **infrastructure physical assets,** estimation of the use-phase emissions was based on the annual quantities of reported outputs from the Output Report. Manual adjustments to the output data have been made based on the estimated level of UNOPS intervention, that affects the final emission factor (e.g. for major works, 20% of use phase emissions have been considered; for major works 80%; refurbishment 50%; new building 100%, etc.).

- For **goods**, estimation of the use-phase emissions was based on the purchase order data and procurement amount associated with the purchase of goods from Category 1.

Emission Factors Used: The emission factors were determined through secondary research and the application of proxy products. These factors provide a representative estimate of the emissions associated with the use of specific product categories and infrastructure types. An overview of the proxy products and emission factors can be found here.

Calculation method: For procured goods, the procurement spend for each category of good was multiplied by the corresponding emission factor representing the use stage of the product:

$$\text{Total emissions} = \sum [\text{Expenditure \{USD\}} \cdot \text{(use phase) Emission Factor \{kgCO2e / USD\}}]$$

For infrastructure assets, the approach involves multiplying the number of units of infrastructure outputs completed in the reported year by corresponding emission factors representing the use stage:

$$\text{Total emissions} = \sum [\text{Output \{unit\}} \cdot \text{(use phase) Emission Factor \{kgCO2e / unit\}}]$$

Use of sold products		
Activity	**Emissions (tCO2e)**	**% of total**
Infrastructure	4,736,012.7	87.50%
Equipment and Materials	395,538.4	7.31%
Vehicles	206,926.8	3.82%
Health	37,399.3	0.69%
Other Goods and Services	28,395.2	0.52%
Operations and Administration	4,728.9	0.09%
ICT	3,446.7	0.06%
Total	**5,412,448.1**	**-**

Table 11 - Break-down of GHG emissions by activities within category 11

Limitations and opportunities for improvement:

- Goods procured under Category 2: Capital Goods have been excluded from this category because they are assumed to be covered under Scope 1 and Scope 2 emissions in the annual environmental inventory.
- The accuracy of the emissions estimates for Scope 3 Category 11 depends on the appropriateness of the proxy products, infrastructure size and types used for categorisation. Proxy products have been created based on regional standards and a sample of UNOPS project deliverables. The use of these proxies may not capture the specific nuances of individual product types within a category or across regions, potentially leading to variations between estimated and actual emissions.
- Additionally, the lack of established datasets for use-phase emission factors for specific product types necessitates reliance on secondary research and proxy-based estimates. This approach may introduce uncertainties into the emissions calculations.
- The use phase emissions have been reduced by fixed percentages depending on the type of intervention, with minor works and refurbishments being attributed a reduced share of the life cycle emissions. These generic estimates may deviate from actuals; for future reports, UNOPS might explore creating a more granular proxy, for example by linking the useful life emissions of assets to the m^2 affected by the UNOPS works.
- Indirect use-phase emissions from goods and infrastructure assets (e.g. for roads, emissions generated by vehicles using them; for food, emissions generated to cook it) - an optional disclosure under the GHGP - have not been included in the calculations.

	Scope 3 data quality scale - Use of sold products					
	SPEND-BASED DATA	PROXY DATA	AVERAGE DATA	QUANTITIES/ENERGY USE DATA	LCA-BASED EMISSION FACTORS	FUEL-SPECIFIC EMISSION FACTORS
Goods	X				X	
Infrastructure assets		X			X	

Category 12: End-of-Life Treatment of Sold Products

In accordance with the GHG Protocol, Scope 3 Category 12 encompasses the indirect greenhouse gas (GHG) emissions associated with the disposal and recycling of products sold by an organisation. These emissions occur after a product reaches the end of its useful life and are often related to activities such as waste processing, landfill operations, incineration, and recycling. In the case of UNOPS, this category covers end-of-life emissions of the products and infrastructure delivered to the beneficiaries.

The following approach was undertaken to estimate the emission for Category 12: End-of-life of Sold Products.

Input data: The input data for Scope 3 Category 12 was sourced from two primary repositories.

- For **infrastructure physical assets,** estimation of the use phase emissions was based on the annual quantities of reported outputs from the Output Report. Manual adjustments to the output data have been made based on the estimated level of UNOPS intervention, that affects the final emission factor (e.g. major works, improvements/rehabilitation, light repairs, etc.).
- For **goods**, estimation of the use phase emissions was based on the purchase order data and procurement amount associated with the purchase of goods from Category 1.

Emission Factors Used: The emission factors were determined through secondary research and the application of proxy products. These factors provide a representative estimate of the emissions associated with the disposal of specific product categories and infrastructure types. An overview of the proxy products and emission factors can be found here.

Calculation method: For procured goods, the procurement spend for each category of good was multiplied by the corresponding emission factor representing the disposal stage of the product:

$$\text{Total emissions} = \sum [\text{Expenditure \{USD\}} \cdot \text{(EoL phase) Emission Factor \{kgCO2e / USD\}}]$$

For infrastructure assets, the approach involves multiplying the number of units of infrastructure outputs by corresponding emission factors representing the disposal stage:

$$\text{Total emissions} = \sum [\text{Output \{unit\}} \cdot \text{(EoL phase) Emission Factor \{kgCO2e / unit\}}]$$

End-of-life of sold products		
Industry	**Emissions (tCO2e)**	**% of total**
Infrastructure	1,615,849.0	99.14%
Equipment and Materials	8,183.0	0.50%
Vehicles	2,178.4	0.13%
Health	1,396.9	0.09%
Other Goods and Services	1,164.7	0.07%
Operations and	1,118.1	0.07%

Administration		
ICT	0	0
Total	**1,629,890.1**	**-**

Table 12 - Break-down of GHG emissions by activities within category 12

Limitations and opportunities for improvement:

- Goods procured under Category 2: Capital Goods have been excluded from this category because they are assumed to be covered under Scope 3 Category 5: Waste from operations. At this stage, EoL-phase emissions for all Category 2 goods have been excluded.
- The accuracy of the emissions estimates for Scope 3 Category 12 depends on the appropriateness of the proxy products, infrastructure size and types used for categorisation. The use of proxies may not capture the specific nuances of individual product types within a category or across regions, potentially leading to variations between estimated and actual emissions.
- Additionally, the lack of established datasets for use-phase emission factors for specific product types necessitates reliance on secondary research and proxy-based estimates. This approach may introduce uncertainties into the emissions calculations.

	Scope 3 data quality scale - End of life of sold products						
	SPEND-BASED DATA	**AVERAGE DATA**	**PROXY DATA**	**MASS OF SOLD PRODUCTS-BASED DATA**	**LCA-BASED EMISSION FACTORS**	**WASTE TREATMENT-GENERIC EMISSION FACTOR**	**WASTE TREATMENT-SPECIFIC EMISSION FACTOR**
Goods	X				X		
Infrastructure assets			X		X		

Category 13: Downstream Leased Assets

Category 13 is not considered applicable for UNOPS as UNOPS does not lease out assets with the exception of limited amounts of office space already accounted for by other Agencies, and the related GHG emissions are not included in this report.

Category 14: Franchises

Reporting under Category 14 diverges most significantly from the GHGP, in accordance with the UN Scope 3 Advisory Group preliminary guidance on reporting emissions from implementation of development activities; and according to UNOPS Scope 3 Materiality Methodology. According to this guidance, category 14, which is not applicable in a UN context, is repurposed to include emissions from the operation of contractors and other implementing partners that implement projects on behalf of UNOPS, in alignment with its development mandate and under a legal/contractual relationship. Under this category, UNOPS reports the emissions that occur during the projects' implementation (i.e. the scope 1 and 2 emissions of the implementing partners during the project execution period, and their procurement when material).

Input data:

- **Mine action services / Peacekeeping services:** The input data comes from UNOPS Purchase Order (PO) Details Reports and covers the spend data for all services under categories "Demining and Explosive Detection Services" and "Peace Keeping" procured for the projects as well as internal operations. More specifically, the following data has been extracted and used for the calculation: purchased categories based on UNSPSC product descriptions; amount spent on purchased services (e.g. US dollars); location of Tier 1 suppliers (project countries). All input data for these activities have been removed from category 1 and reported under category 14.
- **Hosted entities implementation:** No data available.
- **Infrastructure implementation:** The input data comes from UNOPS Purchase Order (PO) Details Reports and covers the spend data for all services under categories "Engineering Works" procured for the projects. To calculate emissions for this category, 10% of the total cost of purchased services has been assumed as implementation cost, removed from category 1 and disclosed under category 14.
- **Grants:** The input data comes from UNOPS Purchase Order (PO) Details Reports and covers the spend data under product code OPS00001 (Grants), and procurement of products under contracts established via non-procurement processes, e.g. 'Grant Support', 'Transfer of funds to National Governments' or 'Transfer of funds to UN System organizations'; amount spent on purchased services (e.g. US dollars); location of Tier 1 suppliers (project countries). All input data for these activities have been removed from category 1 and reported under category 14.

Emission factors used: A customised approach has been employed to develop regionally specific spend-based emission factors. Emission factors from USEEIO served as the foundation, adjusted for inflation to reflect current economic conditions. Regionalisation is achieved by incorporating normalisation factors derived from EXIOBASE, resulting in a database that better represents regional emission factors for products. The emission factors, derived from the customised dataset combining USEEIO and EXIOBASE, represent the average emission factors per unit of currency spent on a specific product or service category.

Calculation method: The average spend-based method[13] was applied, which involves estimating emissions for goods by collecting data on the economic value of goods purchased and multiplying by relevant industry average emission factors (e.g., average emissions per monetary value of goods).

- **Mine action services / Peacekeeping services:** spend-based emission factors from USEEOI for "mining services" and "relief services" have been applied.

$$\text{Total emissions} = \sum [\text{Expenditure \{USD\}} \cdot \text{Emission Factor \{kgCO2e / USD\}}]$$

- **Infrastructure implementation:** To isolate emissions associated with direct implementation and construction activities—including on-site operations, equipment fuel use, and purchased electricity (equivalent to Scope 1 and Scope 2 emissions of the construction sector)—a standard industry-based proxy of 10% of the total USEEIO Supply Chain Emission Factor (SEF) for infrastructure services was applied. These emissions were deducted from Category 1 to avoid double-counting.
    - The USEEIO SEF for infrastructure services is a cradle-to-shelf (Scope 1, 2, and 3) factor that captures the substantial embodied emissions from upstream material production (e.g. steel, cement, asphalt). Evidence from multiple Life Cycle Assessment (LCA) studies of the heavy construction sector consistently shows that direct on-site construction emissions represent a relatively small share of total upstream impacts, typically 5–15%, with the remaining 85–95% attributable to upstream supply chain emissions (Scope 3). Applying a conservative 10% proxy, therefore, allows for a more accurate separation of direct implementation impacts from upstream material production within the emissions inventory.

$$\text{Total emissions} = \sum [\text{Expenditure \{USD\}} \cdot \text{Emission Factor \{kgCO2e / USD\}}]$$

- **Grants:** a spend-based emission factor from USEEOI for "grantmaking, giving, and social advocacy organisations" has been applied.

$$\text{Total emissions} = \sum [\text{Expenditure \{USD\}} \cdot \text{Emission Factor \{kgCO2e / USD\}}]$$

Implementation		
Activities	**Emissions (tCO2e)**	**% of total**
Mine action and peacekeeping		

[13] The GHG Protocol Technical Guidance identifies different methods that can be used for calculating Scope 3 emissions, i.e. supplier-specific, hybrid, average-data, and spend-based methods.

Demining and Disarmament	6781.4	4.54%
Humanitarian	1474.4	0.99%
Infrastructure implementation		
Buildings	17547.6	11.74%
Roads and Transportation	4202.0	2.81%
Water and Sanitation	1768.0	1.18%
Energy	630.6	0.42%
General	380.1	0.25%
Solid Waste	16.5	0.01%
Grants		
Non procurement	58076.7	38.84%
Operations and Administration	45097.4	30.16%
Other Goods and Services	7104.4	4.75%
Health	2705.9	1.81%
Equipment and Materials	1848.8	1.24%
Infrastructure	1458.9	0.98%
ICT	426.1	0.28%
Vehicles	3.9	0.00%
Total	**149,522.7**	**-**

Table 13 - Break-down of GHG emissions by activities within category 14

Limitations and opportunities for improvement:

Disclosure of emissions under Category 14 presents several limitations due to the fact that our IT systems do not capture most of the activity data required to calculate emissions. Another challenge is that UNOPS implements a wide range of project activities, which have been clustered in five main groupings for ease of analysis. This grouping in itself might present an excessive simplification. The main limitations, across activities, are presented below.

- Currently, UNOPS is unable to report or quantify emissions from cash transfer (i.e. direct financial assistance transferred to beneficiaries, typically through financial intermediaries, to meet their essential needs). This is a data gap in the report.

- As far as the activities of UNOPS implementing partners (also referred to as grantees), the calculation is generic and not representative of the grantees' actual activities.
- It is assumed that for some implementation activities (e.g. infrastructure), significant procurement is conducted by the contractors/implementing partners as an input to these activities. The UN Scope 3 Advisory Group preliminary guidance recommends that such procurement is reported under category 14, if material. This is aligned with the GHGP recommendation for category 14. To maintain consistency in the use of emission factors and relative calculations, the same set of emission factors should be used for procurement emission calculations under categories 1, 2 and 14. This poses a particular challenge as the procurement of the implementing partners is not captured in UNOPS financial records. At this stage, UNOPS is not able to represent that in a consistent manner
- For mine action services (which mainly involve demining activities, as well as other specialised services, such as peacekeeping services), a spend-based factor for "mining services", "relief services" under procurement has been applied. The mining services emission factor is likely to be inadequate for capturing the actual emissions from these activities and should be replaced when more accurate activity data and emission factors become available.
- The calculation approach for infrastructure implementation, i.e. the construction of infrastructure assets delivered by UNOPS, differs from that used for Categories 11 and 12 in order to ensure consistency with activities and emissions occurring in the reporting year. For Categories 11 and 12, output data are based on completed infrastructure assets, meaning that the associated construction activities—and their emissions—typically occurred in prior years and are therefore captured through historical procurement data for infrastructure services.
    - An alternative approach would be to estimate construction-related emissions on a per-asset basis, consistent with the methodology applied for Categories 11 and 12, while still deducting the 10% implementation share from Category 1 to avoid double-counting. This would enable a more asset-specific calculation; however, emissions would be reported in the year of asset completion rather than during the construction phase. Under either approach, some degree of misalignment across Scope 3 categories remains unavoidable.
    - Improving this category is identified as a priority area for future refinement, with the aim of achieving greater methodological alignment for infrastructure activities across Scope 3 categories in subsequent reporting years.

	Scope 3 data quality scale - Downstream implementation activities					
	SPEND-BASED DATA	AVERAGED DATA	IMPLEMENTER-SPECIFIC DATA	GENERIC EMISSION	SECTORAL EMISSION	IMPLEMENTER-SPECIFIC

				FACTORS	FACTOR	EMISSION FACTOR
Mine action / Peacekeeping services	X			X		
Grants	X			X		
Cash transfers	*data gap*					
Infrastructure implementation	X			X		

Category 15: Investments

In accordance with the GHG Protocol, Scope 3 Category 15 encompasses emissions associated with financial investments made by UNOPS. These include a variety of asset classes such as equities, fixed income, real estate, and sovereign debt.

The following approach has been undertaken to estimate the emission for Category 15: Investments.

Input data:

- **Portfolio data:** Investment exposures by asset class, collected from UNOPS Treasury as of 31 December 2024 as investments in the year can vary over time. This approach is in line with the GHG Protocol.
- **Emissions data:** Reported Scope 1 and 2 emissions from investees collected from Bloomberg, and public data on country emissions[14].
- **Denominators:** Enterprise value Including Cash (EVIC[15]) and adjusted Gross Domestic Product per capita (GDP_PPP)[16].

Emissions Factors Used: Emission factors for Scope 1 and Scope 2 emissions associated with our investments were sourced from Bloomberg. An exception applies to investments in sovereign debt, where we use the country's production-based (territorial) emissions as the emission factor. This approach aligns with the guidance provided by the Partnership for Carbon Accounting Financials (PCAF).

[14] https://edgar.jrc.ec.europa.eu/report_2025#emissions_table

[15] A company's EVIC (Enterprise Value Including Cash) is its total value, calculated by adding its market capitalization, preferred shares, total debt, and non-controlling interests.

[16] PPP-adjusted GDP per capita measures a country's economic output per person after adjusting for differences in the cost of living between countries.

Calculation method: The Partnership for Carbon Accounting Financials (PCAF) Global GHG Accounting and Reporting Standard[17] has been applied as the methodological baseline, providing detailed, asset-class–specific formulas for attribution. Financed emissions are calculated by multiplying the investee's emissions by UNOPS's ownership or financing share, defined through PCAF's attribution factor for each asset class. The general formula is:

$$\text{Total financed emissions (FE)} = \sum [\text{Investee emissions (E) \{tCO2e\}} \cdot \text{Attribution factor (AF)}]$$

Where:

- E = investee/company/national emissions (Scope 1 and 2, unless otherwise stated),
- AF = ratio of UNOPS exposure to an appropriate denominator (enterprise value, GDP).

Non-eligible assets: In line with PCAF, the following asset classes have been excluded from the calculation: bank deposits, cash and cash equivalents (cash futures, commercial paper, fixed income futures, forward FX contracts, money market funds, pending trade purchases, pending trade sales, recoverable taxes, treasury bills, variation margin account). These non-eligible assets make up 18.80% of total investments.

Asset Class–Specific Methodologies

The following section describes the asset-class-specific methodologies. The following notation is used in the subsequent chapters:

- **FE** = Financed Emissions (tCO_2e) attributed to the UNOPS exposure for the reporting year.
- **E** = Investee/country total emissions (tCO_2e) for the corresponding reporting year.
- **Exposure** = the value of the UNOPS holding/exposure (USD).
- **Denominator** = the PCAF denominator appropriate to the asset class (e.g., enterprise value, GDP_PPP).

Table 14 gives an overview of the asset classes in scope and the applied methodology.

Asset class in scope	Investments - asset class methodology and portfolio composition			
	% of portfolio	PCAF asset class	FE formula	Remarks
Sovereign debt	73.27	Sovereign debt	Exposure × (National Emissions ÷ GDP_PPP)	N.A.

[17] carbonaccountingfinancials.com

Corporate debt	4.95	Listed equity and corporate bonds	Exposure × (Issuer Emissions ÷ EVIC)	N.A.
Government sponsored agency	12.01	Sovereign debt / corporate bonds	Exposure × (Issuer Emissions ÷ EVIC)	Sub-sovereign and municipal bonds issued by a city or regional authority are treated as corporate bonds. Bonds issued directly by a national treasury or ministry of finance are considered sovereign debt.
Municipal / provincial bonds	6.60	Listed equity and corporate bonds	Exposure × (Issuer Emissions ÷ EVIC)	
Multi-national agencies	1.93	Listed equity and corporate bonds	Exposure × (Issuer Emissions ÷ EVIC)	Treated as corporate if EVIC is available.
Developed market equities	0.55	Listed equity and corporate bonds	Market Value Holding × (Issuer Emissions ÷ EVIC)	N.A.
Emerging market equities	0.38	Listed equity and corporate bonds	Market Value Holding × (Issuer Emissions ÷ EVIC)	N.A.
Real estate investment trusts (REITs)	0.30	Listed equity and corporate bonds	Market Value Holding × (Issuer Emissions ÷ EVIC)	Although REITs invest in real estate *economically*, the holdings are publicly traded REITs — which are *equities*, not physical property loans or project finance.

Table 14 - Overview of applied methodology per asset class

Sovereign Debt

- **Method:** The sovereign debt methodology attributes a share of national emissions to holdings of government bonds, using an exposure-to-GDP denominator in line with PCAF guidance. In this inventory, national production-based emissions are applied, with GDP measured on a purchasing power parity (PPP) basis, consistent with PCAF's recommended approach.
    - This attribution method is methodologically sensitive, as results can vary significantly depending on key assumptions, including the choice of denominator (nominal GDP vs. PPP-adjusted GDP), the emissions metric (production-based vs. consumption-based), and currency treatment. PCAF has acknowledged this sensitivity in its updated sovereign guidance and encourages institutions to explicitly disclose the methodological choices applied, which is done here.
- **Formula:** PCAF shared-ownership approach:

$$FE = E_{country} \times \frac{Exposure\ [USD]}{Country\ GDP\ (PPP)\ [USD]}$$

- **Data inputs:** Country total emissions (national inventory), investor exposure to sovereign debt (market value of holdings), and country GDP (PPP-adjusted).

Listed Equity and Corporate Bonds:

- **Asset classes:** Developed and emerging markets equities (listed equity), fixed income / investment grade credits (debt), corporate debt, government sponsored agency, municipal/provincial bonds, multi-national agencies, REITs.
- **Method:** Attribution based on enterprise value to calculate the share of the company's emissions (PCAF Part A / Global Standard) i.e. the outstanding exposure/principal relative to the company enterprise value. This treats debt exposure pro rata to the company's overall financing.
- **Formula:** Financed emissions are the share of the investee's emissions by the outstanding amount of the loan/bond, based on enterprise value:

$$FE = E \times \frac{Exposure\ /\ outstanding\ principal\ [USD]}{Enterprise\ value\ (EVIC)\ [USD]}$$

- **Assumptions:** Scope 1 and 2 emissions used; Scope 3 excluded. EVIC[18] is used consistently across all equity exposures.
- **Data inputs:** Market value of holdings (portfolio), outstanding principal, company total emissions (reported or modelled), enterprise value, data year.

Asset class in scope	Working capital (AGI) (tCO2)	PEB (BNP) (tCO2)	Operational reserves (DWS) (tCO2)	Working capital (UNOPS) (tCO2)	Working capital (IBRD) (tCO2)	Grand Total (tCO2)
Sovereign debt	314,116	2,293	40,959	0	11,983	**369,351**
Corporate debt	101,195	0*	0	4,325	41,492	**101,195**
Government sponsored agency	88,449*	0	0	0	11,653*	**100,102**
Municipal / provincial bonds	12,187*	0	0	3,918	0*	**16,105**
Multi-national	0*	0	0	0	0*	**0**

[18] A company's EVIC (Enterprise Value Including Cash) is its total value, calculated by adding its market capitalization, preferred shares, total debt, and non-controlling interests.

agencies						
Developed market equities	0	0*	0	0	0	**0**
Emerging market equities	0	0*	0	0	0	**0**
Real estate investment trusts	0	0*	0	0	0	**0**
Grand Total (tCO2)	**515,947**	**2,293**	**40,959**	**8,243**	**65,128**	**632,571**

Table 15 - Break-down of GHG emissions by asset classes within category 15

***** *indication of missing/incomplete data*

Limitations and opportunities for improvement:

- **Data sources:** All asset managers utilised different methodologies for emissions calculations and as such, none of the emission data shared by asset managers was used.
- **Listed equity and corporate bonds:** Where company-reported emissions were missing, the investment was not included in the inventory. This makes up approximately 13% of the eligible investments/assets, resulting in under-reporting of emissions for this category. The asset classes and portfolios with missing data are indicated with an asterisk (*) in Table 15.
- **Money market instruments:** This asset class was included last year, but has been excluded this year in line with the PCAF guidance. PCAF and GHG Protocol treat money market instruments (cash, cash-equivalents) as typically out of scope or reported optionally, because they are not directly financing long-lived real-economy investments. If included, one should be explicit about the rationale and method (common approaches: exclude; pro-rata allocation across portfolio; treat as sovereign exposure if short-term sovereign bills).

	Scope 3 data quality scale - Investments					
	SECTOR AVERAGE DATA	COUNTRY/COMPANY SPECIFIC DATA	FINANCED ACTIVITY SPECIFIC DATA	GENERIC EMISSION FACTORS FOR ...	COUNTRY/SECTOR LEVEL EMISSION FACTORS	COMPANY-SPECIFIC EMISSION FACTOR
Sovereign debt		X			X	
Corporate debt and listed equities		X				X

5. Data management

a. Sources of activity data

The 2024 Scope 3 emission calculations were performed centrally, mostly using data obtained from UNOPS ICT tools and systems. The main IT sources of activity data were:

- UNOPS Travel Authorisation and DSA Automation (TADA) tool for Category 6
- oUP Purchase Order Report for Category 1, 2, 4, 11, 12, 14
- oUP Projects Output Based Report for Category 11,12
- Corporate Financial Statements Report for Category 15

Manual data collection took place:

- for cat. 5, Waste from operations, activity data on waste generation was reported by focal points in each UNOPS office with >5 personnel, as part of the yearly GHG inventory process.
- for cat. 7, Employee commute, through the use of an online survey that was distributed to all personnel in the fall 2024. The survey yielded statistically significant results in all UNOPS Regions, which were used to approximate the activity data for the missing personnel members.
- For category 11 and category 12 infrastructure outputs, a manual data collection was performed at the level of data quality checks conducted by IPMG for the annual reporting of UNOPS outputs.

b. Data collection process

Data collection in UNOPS corporate tools is systematic for mandatory processes, such as travel registration in TADA, or integrated in platforms where the processes take place, like in the E-sourcing. The use of these tools is mandated by corporate policies. The data reliability for the information captured in these tools is therefore estimated to be medium to high.

Employee commute

To collect data for the “employee commute” category, an organisation-wide online survey was conducted to gather information on personnel commuting habits. The data was collected through a standardised Google Form distributed to all personnel. Respondents provided details on their modes of transport, commuting distance and frequency, and the number of days worked in the office or remotely. In total, 745 employees participated in the survey, representing 14.7% of UNOPS personnel in 2024. Based on these responses, regional proxies were developed to estimate commuting patterns for all offices. The aggregated data were then centrally uploaded into the Impacti Carbon platform as part of the annual Environmental Inventory.

Waste

Waste data is collected within UNOPS' annual Environmental Inventory through the online platform IMPACTI Carbon, where office focal points provide information on the waste generated in their offices. Data is reported using the waste categories defined in the UN-wide IMP and includes details on disposal or end-use methods listed there. Waste data is typically obtained from invoices provided by waste hauliers. In some cases, building management maintains a tracking system, and some offices conduct waste audits to estimate their waste generation. For offices where waste data was not available, a waste proxy based on 2023 data was applied[19].

c. Quality assurance

The 2024 Scope 3 report is the first systematic value chain emissions analysis conducted internally by UNOPS. As such, organisational efforts were prioritised to produce a value chain emissions report of the highest possible quality.

UNOPS will consider adding quality assurance checks for its future reports.

6. Base year

UNOPS established 2016 as its baseline year for its scope 1 and scope 2 emissions. This report represents the first attempt to quantify and disclose UNOPS Scope 3 emissions.

Therefore, 2024 can be used as base year with a caveat, namely that the high level of uncertainty in both the activity data and emission factors will inevitably require a reconsideration of this choice in a few years, when the quality of the Scope 3 data increases.

The only exception to this approach is category 3.6 Business travel, where the 2016 baseline year applies for benchmarking and emission reduction purposes.

7. Management tools

a. Roles and responsibilities

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UNOPS waste proxy is based on average waste of non-hazardous waste production in all UNOPS offices with high to medium data quality; High level of inaccuracy, hazardous waste is not captured.

The 2024 Scope 3 report was developed by the Climate Action Programme team, with input from field office personnel and key HQ functions that are the custodians of corporate data.

The Climate Action Programme team is also responsible for communicating and disseminating the results of the Scope 3 assessment, and for transparently reporting progress. UNOPS Climate Programme Board, senior management and other key stakeholders are responsible for integrating the results of the report into business decisions and driving sustainability improvements.

b. Training and capacity building

c. Files maintenance

UNOPS Scope 3 report is completely relying on digital tools for data collection and calculations.

8. Auditing and verification

The 2024 Scope 3 report is the first systematic value chain emissions analysis conducted internally by UNOPS. As such, organisational efforts were prioritised to produce a value chain emissions report of the highest possible quality.

UNOPS will consider auditing and verification of the results for its future reports.