UNHCR
The UN Refugee Agency

UNHCR Greenhouse Gas Emissions from value chain activities:

Approach to Scope 3 Emissions Calculations

Introduction

Climate change, especially global warming, is universally acknowledged as a severe threat to all life on earth. It escalates poverty and displacement, exacerbating conflict factors and complicating humanitarian responses. Refugees, internally displaced people and stateless persons are on the frontlines of the climate emergency. Accurate assessment of organizations' carbon emissions is crucial for devising effective reduction strategy, given the pivotal role of greenhouses gases (GHGs) in driving global warming.

According to the GHG Protocol[1], the GHG emissions of an organization are classified into Scope 1, 2, and 3. Scope 1 emissions are defined as emissions generated onsite from the activities an organization owns and/or controls. Scope 2 includes indirect emissions generated from purchased energy. **Scope 3 emissions are all those emissions an organization is responsible for, but which happen outside of its walls and are controlled by other parties.**

The knowledge of all three scopes of emissions provides an understanding of the full value chain emissions impact and offers a tool to strategically reduce the carbon footprint by understanding its origin. However, reporting is mandatory only for Scope 1 and 2, whereas Scope 3 is voluntary and the most challenging to evaluate. At the same time, it is now well-accepted that Scope 1 and Scope 2 do not sufficiently capture an organization's footprint. According to the World Resource Institute (WRI), Scope 3 emissions may account for more than 70 per cent of an organization's total emissions[2, 3].

The overarching account of emissions, which includes Scope 3, is notoriously difficult to assess. Moreover, the GHG Protocol Standards, recognized as standards for emissions accounting, give general recommendations on GHG inventory and accounting primarily for business units. Thus, GHG Protocol Standards recommendations require adaptation to the humanitarian sector context. Therefore, **following the holistic greening approach of UNHCR, it is important to develop a unified approach to capture Scope 3 emissions stemming from UNHCR's activities.**

The main reasons behind developing the Scope 3 inventory of UNHCR are as follows:

- Provide a systematic framework to organize, understand, and report the diversity of activities within UNHCR's value chain.
- Identify and understand risks related to value chain emissions.
- Identify GHG reduction opportunities and reduction targets, and track performance.
- Engage supply chain partners in GHG emissions reduction.

The general approach for Scope 3 emissions calculation implies a review and inventory analysis of all 15 categories of emissions related to the activities by other parties on behalf of UNHCR, the selection of the "hot spot" categories, and further accounting of the related emissions.

This document is in line with the UNHCR Strategic Framework for Climate Action developed to set out the parameters for UNHCR's response to the growing, global climate emergency since it is crucial to identify the sources of carbon emissions to implement measures to reduce emissions and thereby slow climate change.

This document contributes to the Operational Strategy for Climate Resilience and Environmental Sustainability 2022-2025, which sets targets to **reduce greenhouse gas emissions: 20% from the production and delivery of UNHCR Core Relief Items (CRIs)** and other high impact relief items, and **10% from international freight**, to mitigate the impact of climate change on forcibly displaced people and their hosts, enhance resilience and minimize the environmental footprint of humanitarian assistance.

1 https://ghgprotocol.org/
2 https://doi.org/10.1088/1748-9326/aae19a
3 https://www.wri.org/update/trends-show-companies-are-ready-scope-3-reporting-us-climate-disclosure-rule

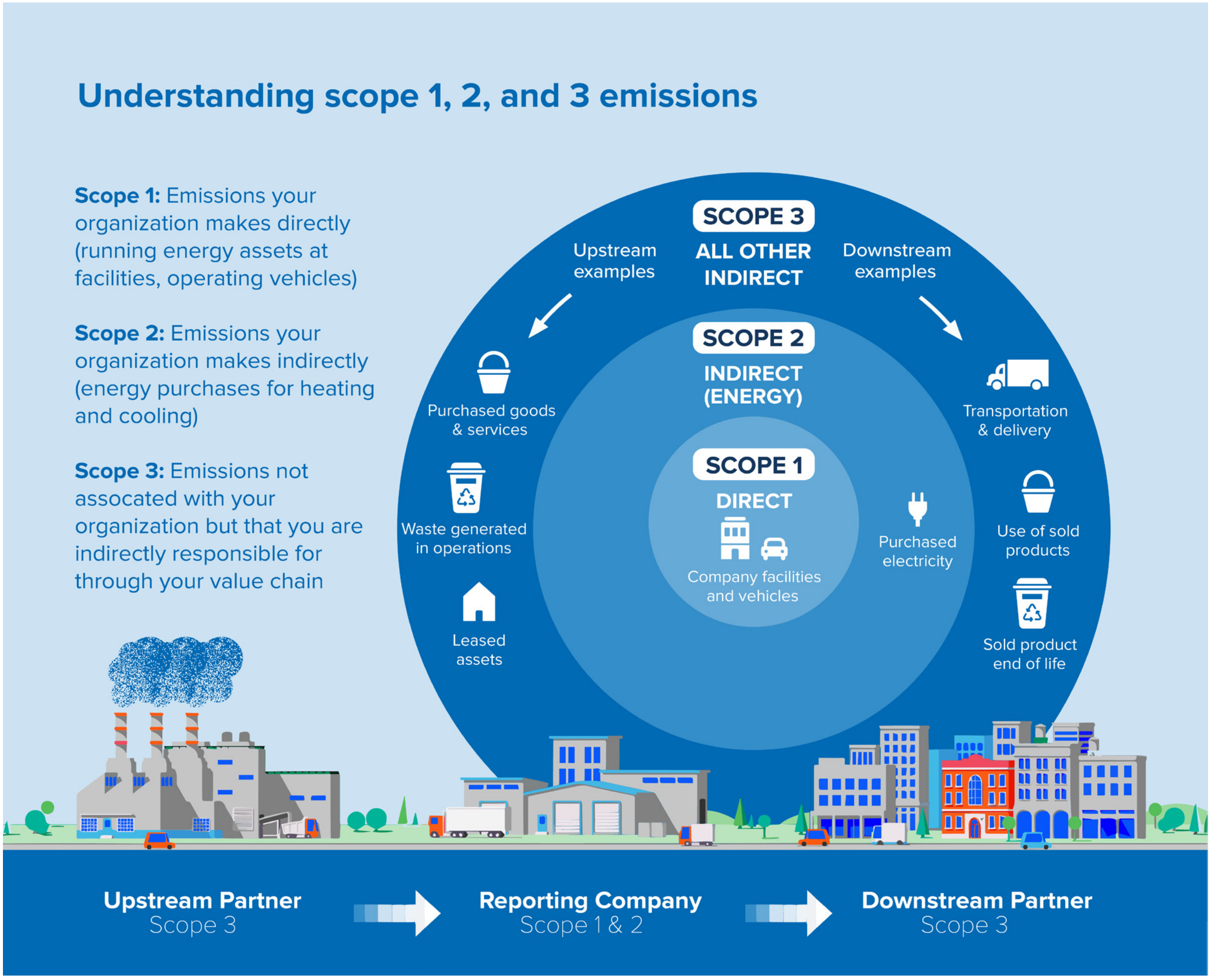
What are Scope 3 emissions?

Scope 3 emissions result from activities involving assets not owned or controlled by the reporting organization but are present in its value chain. These emissions include all sources beyond an organization's Scope 1 and Scope 2 boundaries. According to the GHG Protocol, Scope 3 emissions are split into 15 categories[4], broadly divided into upstream emissions and downstream emissions.

Upstream emissions – are all the emissions that occur during the production of goods and services that the reporting organization purchases or makes use of.

Downstream emissions – are all the emissions that result from the use or disposal of the organization's product or services.

For detailed information on the 15 categories of emissions, please refer to *Corporate Value Chain (Scope 3) Accounting and Reporting Standard.*[5]



In total, there are 15 categories of Scope 3 emissions. 6 categories are highlighted for visualization purposes.

4 https://ghgprotocol.org/sites/default/files/standards/Scope3_Calculation_Guidance_0.pdf
5 https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf

Steps to calculate emissions

A general framework for Scope 3 emissions calculations includes six consecutive phases.

1. Create a value chain map
2. Identify relevant Scope 3 activities
3. Collect data
4. Choose the calculation method for each category & calculate GHG emissions
5. Interpret results, make decisions
6. Report

Phase 1: Create a value chain map

The first recommended step to take inventory of Scope 3 in an organization is to map its value chain, which includes purchased and distributed goods and services, along with relevant partners such as suppliers and service providers. This process offers valuable insights for inventory management, aids in identifying inapplicable Scope 3 categories to the organization's operations and helps pinpoint limitations and data gaps for further emissions calculations. The value chain map also provides a valid explanation for excluding certain categories from the report.

Mapping UNHCR's value chain may require a more in-depth analysis to have a full understanding of all activities related to the organization. The inventory list of the goods and services that UNHCR purchases to deliver humanitarian assistance can give insights into the complexity of UNHCR's value chain and the difficulties of this exercise.

Phase 2: Identify relevant Scope 3 activities

Analyzing all 15 categories of Scope 3 and determining their relevance to UNHCR's context is a critical step in the GHG inventory (Annex I). The relevance of each category depends on several factors[6], including:

- Contextualization for UNHCR, i.e. identification of applicability of a particular category to the UNHCR activity.
- The importance of each category for the key stakeholders.
- Potential emissions reduction that could be undertaken or influenced by the company.
- The estimated size of the Scope 3 category. This factor serves to identify the most emissions-intensive categories and prioritize data collection accordingly.

Some Scope 3 categories may be accounted for in Scope 1 and Scope 2 inventories. For example, category 6 of Scope 3 "Business travels" is included in Scope 2 inventory of UNHCR. In addition, if reasonably and transparently explained, some of the categories can be excluded from the Scope 3 inventory.

Each Scope 3 category has minimum required boundaries which the organization must adhere to, as defined in Chapter Five of the *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*. This exercise helps define the main activities to be included in the scope 3 inventory which can be found in Annex I. An example of an analysis of Scope 3 categories and its contextualization for UNHCR is presented in Annex I.

6 Full list of criteria for identifying relevant Scope 3 activities are presented in Table 6.1 of the Corporate Value Chain (Scope 3) Accounting and Reporting Standard

Phase 3: Collect data

Collecting data for the Scope 3 inventory can be challenging due to the large number of internal and third-party engagements. Within the reporting organization, several internal departments, such as procurement, logistics, programme, finance, operations, and others, are likely to be involved in the data collection process. Therefore, it is recommended to develop a data management plan to document the Scope 3 inventory process.

The data collection phase includes four stages: prioritizing data collection, selecting data, collecting data, and improving data quality over time. Below, only two stages are disclosed. For detailed information, please refer to the complete version of the document.

3.1 Prioritizing data collection

It is recommended to prioritize the collection of data that is likely to contribute most significantly to the emissions in Scope 3 of the reporting organization.

The initial screening of UNHCR activities and related GHG emissions revealed that:

1. Four categories, namely Category 9 "*Downstream transport and distribution*", Category 10 "*Processing of sold products*", Category 14 "*Franchises",* and Category 15 "*Investment*", do not apply to UNHCR activities.

2. The two most significant polluting categories for UNHCR are:

    - *Category 1 "Purchased goods and services":* One of UNHCR's core activities is providing livelihood assistance, including Core Relief Items (tents, blankets, sleeping mats, etc.), Non-Standardized Items (clothing, bedding, etc.), and others. The initial analysis of the carbon footprint of UNHCR procurement identified a list of ten Core Relief Items responsible for over 250 ktCO_2 per year, representing more than 60 per cent of the organization's total GHG emissions.

    - *Category 4 "Upstream transport and distribution":* UNHCR's global operations involve delivering livelihood goods to more than 130 countries. The transport and distribution of goods, a significant contributor to the overall UNHCR emissions, is estimated to be over 200 ktCO_2/year. Two Scope 3 emissions categories pertain to transportation and distribution: Category 9 "*Downstream transportation and distribution*", and Category 4 "*Upstream transportation and distribution*". As outlined by the *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*, Category 4 is specifically defined as "emissions from the transportation and distribution of products (excluding fuel and energy products) purchased or acquired by the reporting company in vehicles and facilities not owned or operated by the reporting company". Therefore, all the transportation of goods in the interest of UNHCR which utilizes vehicles owned by a third-party company and paid by UNHCR, falls into Category 4.

3.2 Collecting relevant data

All data needed for Scope 3 calculations can be divided into three categories: primary, secondary, and proxy data. UNHCR should, whenever possible, collect primary data derived from specific activities within its value chain. Supply chain service providers often lack quality primary data, or systems that help them calculate and share data effectively and accurately.

When not feasible, it is recommended to use secondary data from scientific literature, publicly available databases, industry association reports, etc. Secondary data may be less specific but provide an industry average estimate of GHG emissions from specific activities. If neither primary nor secondary data is available, proxy data from value chain partners can be used for identical or comparable products.

UNHCR currently employs various digital tools for operational and financial data management. It is advisable to integrate essential data requirements into existing UNHCR tools. This ensures that information is readily available in digital format, making it more accessible and beneficial for the organization.

The source of data should be clearly and transparently reported alongside the calculation of emissions. It is also strongly recommended to use the factors consistently, i.e. from the same source for all categories (where possible) and on a yearly basis.

Phase 4: Select the calculation method and calculate GHG emissions

The choice of calculation method for each relevant Scope 3 category should be based on the following criteria:

- Relative size of emissions from Scope 3 activities
- Data availability
- The quality of the data
- The cost and effort required to apply each method

All selected calculation methods for each category should be clearly and transparently described in the report. Detailed guidelines for calculation methods for each Scope 3 category are developed by the GHG protocol and available online.[7]

Phase 5: Interpret results, make decisions

The GHG impact of any activity can be succinctly expressed as the product of two key factors: the activity level (i.e. kilometres driven) and the GHG intensity of that activity (i.e. CO_2 emitted per kilometre). These factors, simultaneously serving as mechanisms or interventions, offer avenues for companies to address and reduce their GHG impact. Any measure taken to address one or both factors is termed a reduction lever.

In short, reduction levers can encompass projects, programmes, business decisions or other actions that either diminish the level of activity or enhance GHG intensity, ultimately resulting in emissions reduction.

Phase 6: Report

The reporting requirements for Scope 3 emissions can be found in Chapter 11 of the *Corporate Value Chain (Scope 3) Accounting and Reporting Standard.*

7 https://ghgprotocol.org/scope-3-calculation-guidance-2

Conclusion

The accountability for GHG emissions, both direct and indirect contributors to climate change, is paramount in mitigating the environmental impact of organizations like UNHCR. This assessment identified three distinct sources of GHG emissions: Scope 1 emissions, generated on-site from organizational activities; Scope 2 emissions, originating from purchased electricity; and Scope 3 emissions, resulting from activities involving assets not owned or controlled by the reporting organization, yet present in its value chain and accounting for over 50 per cent of total emissions. The measurement of Scope 3 emissions poses significant challenges, underscoring the necessity for a unified methodology, as presented in this document, to accurately identify areas for emissions reduction. Therefore, it is important to have resources (expertise and tools) to actively identify and monitor the CO_2 accounting process, coordinate efforts with other humanitarian organizations, and stay abreast of evolving accounting and reporting requirements to ensure knowledge is updated within UNHCR.

Identifying emissions within the Scope 3 category and creating an inventory serves to pinpoint and understand risks associated with value chain emissions. It also aids in identifying GHG reduction opportunities and targets, tracking performance, and engaging supply chain partners in emissions reduction. The elucidation of emission scopes, the established methodology, and the example calculations in this report aim to provide a comprehensive understanding of the environmental impact originating from the organization's activities. Moving forward, UNHCR's holistic approach to enhancing the sustainability of its supply chain will play a pivotal role in mitigating adverse environmental effects associated with humanitarian assistance.

Annex 1: Corporate Value Chain (Scope 3) Accounting and Reporting Standard

	From the Corporate Value Chain (Scope 3) Accounting and Reporting Standard			Contextualization for UNHCR
	Name of the Category	Category Description	Minimum Boundaries	
UPSTREAM	**Category 1:** **Purchased goods and services**	Includes the emissions associated with producing goods and services the reporting company purchases. Only emissions up to the point the product leaves the tier 1 supplier's gate, are included.	The minimum boundary for this category is all upstream (Cradle-to-Gate*) emissions of purchased goods and services. ***Cradle-to-gate** emissions include all emissions that occur in the lifecycle of purchased products (or services) up to the factory gate of the Tier 1 supplier.	**CRI** (Core Relief Items) **NSI** (Non-standardized items) **CBI** (Cash-based interventions) In-kind donation Acquired services non-CBI More to be identified
UPSTREAM	**Category 2:** **Capital goods**	Emissions from the production of capital goods (cradle-to-gate) purchased or acquired by the reporting organization.	The minimum boundary for this category is all upstream emissions of purchased capital goods (cradle-to-gate). Combustion emissions from the use of capital goods by the reporting company are not accounted for in Scope 3.	Capital assets in different country offices.
UPSTREAM	**Category 3:** **Fuel and energy-related activities**	Emissions of the extraction, production, and transportation of fuels and energy purchased by the reporting organization in the reporting year, are not included in Scope 1 and Scope 2. This category includes emissions from four distinct activities:	Minimum boundaries for each activity are listed below:	
UPSTREAM		1. Upstream emissions from purchased fuels	Upstream emissions of purchased fuels: All upstream (cradle-to-gate) emissions of purchased fuels (from raw material extraction up to the point of, but excluding combustion).	Inventory of different kinds of fuel purchased by the organization.

UPSTREAM	**Category 3:** **Fuel and energy-related activities**	**2. Upstream emissions of purchased electricity**	Upstream emissions of purchased electricity: All upstream (cradle-to-gate) emissions of purchased fuels (from raw material extraction up to the point of, but excluding, combustion by a power generator).	Inventory of energy purchased by the organization. *NB: Might be included in Scope 2.*
		3. Transmission and distribution (T&D) losses	T&D losses: All upstream (cradle-to-gate) emissions of energy consumed in a T&D system, including emissions from combustion.	Inventory of T&D losses
		4. Generation of purchased electricity that is sold to end users	Generation of purchased electricity that is sold to end users: Emissions from the generation of purchased energy.	Not applicable
	Category 4: **Upstream transport and distribution**	Emissions from the transportation and distribution of products purchased by the organization in vehicles/ facilities not owned or operated by the reporting organization and **paid for by the reporting company**.	The minimum boundary for this category is the Scope 1 and Scope 2 emissions of transportation and distribution providers.	Transportation of the products procured by UNHCR, done by the third-party company, but **paid by UNHCR:** **1. Air transports** **2. Rail transports** **3. Road transport** **4. Marine transport** Storage of purchased production warehouses, and distribution centers.
	Category 5: **Waste generated in operations**	Emissions from third-party disposal and treatment of waste that is generated in the organization's owned or controlled operations.	The minimum boundaries for this category are future Scope 1 and Scope 2 emissions of waste management suppliers that occur during disposal or treatment.	Inventory of waste management activities in operations. Inventory of waste management activities in UNHCR offices.
	Category 6: **Business travel**	Emissions from the transportation of employees for business-related activities in vehicles owned or operated by third parties, such as aircraft, trains, buses, and passenger cars.	The minimum boundaries for this category are the Scope 1 and Scope 2 emissions of transportation and distribution providers. These emissions occur during the use of vehicles and facilities, i.e. from the energy use. Leased cars used in business travel must be excluded from this category.	Business travel of UNHCR staff members and affiliate workforce. *NB: Might be included in Scope 2.*

UPSTREAM	**Category 7:** **Employee commuting**	Emissions from the transportation of employees between their homes and their worksites.	The minimum boundaries for this category are the Scope 1 and Scope 2 emissions of employees and transportation providers that occur during the use of vehicles (from energy use and fuel use).	Emissions that occur due to the transportation of UNHCR's employees from their homes to the worksite.
UPSTREAM	**Category 8:** **Upstream leased assets**	Emissions from the operation of assets that are leased by the organization from a third-party company and not already included in the organization's Scope 1 or Scope 2 inventories.	The minimum boundaries for this category are the Scope 1 and Scope 2 emissions of lessors that can occur during the reporting company's operation of leased assets (for example from energy used).	ICT equipment Vehicles (TBD) Generators/energy (TBD)
DOWNSTREAM	**Category 9:** **Downstream transport and distribution**	Emissions from transportation and distribution of products sold by the reporting organization between the organization's operation and the end consumer, **if not paid for by the reporting organization**, in vehicles and facilities not owned or controlled by the reporting organization.	The minimum boundaries for this category are the Scope 1 and Scope 2 emissions of transportation providers, distributors, and retailers that occur during the use of vehicles and facilities.	Not applicable As UNHCR pays for all the transportation and distribution of the procured items, there are no downstream emissions to report.
DOWNSTREAM	**Category 10:** **Processing of sold products**	Emissions from the processing of intermediate products sold in the reporting year, by downstream third-party companies, after the reporting company sold the product to them. **Intermediate products** – are inputs to the production of other goods and services. They require further processing, transformation, or inclusion in another product, before use by the end consumer.	The minimum boundaries for this category are Scope 1 and Scope 2 emissions of downstream companies that occur during the processing (from energy use for example).	Not applicable
DOWNSTREAM	**Category 11:** **Use of sold products**	Emissions from the use of goods and services sold by the reporting organization in the reporting year. The Scope 3 emissions from the use of sold products include at least the Scope 1 and Scope 2 emissions of end users.	The minimum boundary for this category is the direct use-phase emissions of sold products over their expected lifetime. The minimum boundaries for this category include Scope 1 and Scope 2 emissions of end users of the product sold.	Selling of cars and assets (TBD)

DOWNSTREAM	**Category 12:** **End-of-life treatment of sold products**	Emissions from the waste disposal and the treatment of all products sold by the reporting organization at the end of their life, during the reporting year.	The minimum boundaries for this category are Scope 1 and Scope 2 emissions of waste management companies that occur during the disposal or treatment of sold products.	Not applicable As UNHCR auctions most of its vehicles, responsibility for emissions from the operation or disposal of those vehicles lies with the purchaser of the vehicle.
	Category 13: **Downstream leased assets**	Includes the emissions from the operation of assets that are owned by the reporting organization (acting as a lessor) and leased to other entities in the reporting year.	The minimum boundaries for this category include Scope 1 and Scope 2 emissions of lessees that occur during operations of leased assets.	Not applicable UNHCR gives cars for lease. However, emissions arising from the use of those vehicles by those parties are not allocated to UNHCR; they are to be allocated to the organization that used the vehicle.
	Category 14: **Franchises**	Emissions from the operation of franchises (by franchisees) not included in Scope 1 or Scope 2.	The minimum boundaries for this category include Scope 1 and Scope 2 emissions of franchisees that occur during the operation of franchises.	Not applicable
	Category 15: **Investments**	Emissions associated with the reporting organization's investments in the reporting year, not already included in Scope 1 or Scope 2.	The minimum boundaries for this category include Scope 1 and Scope 2 emissions of investees that occur during the operation of investment.	Not applicable Category 15 is designed primarily for private financial institutions like commercial banks. This category is also relevant to public financial institutions, and other entities with investments.

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