NORWEGIAN
REFUGEE COUNCIL

REPORT

2022 | CARBON FOOTPRINT

June 2023

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Sverige

Cover photo: An NRC staff member tests the performance of newly installed solar panels in Syria. © Øystein Os Simonsen/NRC

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1 EXECUTIVE SUMMARY

Welcome to the Norwegian Refugee Council's (NRC) first annual carbon footprint report. The report analyses NRC's carbon footprint during 2022 and compares it to our 2019 baseline.

Tom Peyre-Costa/NRC

Our aims in publishing this report are twofold. Firstly, it is part of our ongoing efforts to be as transparent as possible to our donors, partners and the humanitarian sector as a whole. Secondly, we will use the findings to inform our emission reduction plans. It is a vital step in our journey to minimise our carbon footprint.

The main findings of the report are as follows:

- NRC's overall carbon emissions have increased by 29 per cent since 2019, in line with the growth of the organisation. Emissions per FTE staff member have remained relatively stable, however, showing a small increase of 0.7 per cent.
- Some categories of emissions, such as business travel, have decreased significantly – with flights in particular showing a 17 per cent reduction.
- The biggest contributors to our emissions are construction and procured goods.
- Perhaps most importantly, we now have a robust monitoring system in place that we can use as a basis for future action.

Looking ahead, we plan to focus on two main areas during 2023:

1. We will continue to improve our carbon footprint monitoring, specifically in the areas of purchased energy, cargo transportation, renewable energy generation, and electric and hybrid vehicles.
2. We will reduce our carbon footprint through transitioning to renewable energy sources, improving the efficiency of our fleet, reducing flights, and making our procurement more sustainable.

2 BACKGROUND

NRC is an independent humanitarian organisation helping people forced to flee. We protect displaced people and support them as they build a new future. We specialise in six areas: food security, education, shelter, legal assistance, camp management, and water, sanitation, and hygiene. As an organisation working with the world's most vulnerable people, NRC observes first-hand that those who have contributed least to the climate and environment crisis are hardest affected by the consequences. We recognise our own responsibility to minimise harm to the environment caused by our greenhouse gas emissions and direct impact of our programmes on the local environment.

NRC seeks to incorporate environmental awareness and stewardship into all aspects of our work without changing our mandate or the communities we serve. We will continue to respond to displacement crises, go to hard-to-reach places and prioritise quality in our humanitarian responses.

NRC's 'Greening the Orange'[1] project began in 2020 with the support of the Grieg foundation to shape NRC's strategy and measure a baseline for the organisation's carbon footprint which was completed in 2021 with support from Boston Consulting Group. In 2021 we signed the Climate and Environment Charter for Humanitarian Organisations and has committed to rapidly reducing our carbon footprint. We have set an initial target to reduce our carbon emissions by 20% per FTE[2] staff member from our 2019 baseline by 2030.

In 2022 we launched an ambitious environmental strategy that has two main areas of focus:

1. **Reducing our environmental footprint** by actively working towards reducing our carbon emissions and direct impact of our programmes on the local environment.

2. **Addressing the impact of climate change** on displacement-affected people through environmental analysis, climate change adaptation and mitigation, and collective action.

With support from the Swedish International Development Cooperation Agency (Sida), NRC began the process of annual carbon footprint monitoring in 2022 and implementing environmental footprint reduction through the integration of environmental considerations in policies and practices as well as direct support for clean energy projects.

This report provides a detailed and comprehensive breakdown of NRC's greenhouse gas emissions in 2022. It also provides a comparative analysis of performance in relation to the baseline report completed for the year 2019 which measured our carbon footprint at 114 kilotonnes of CO_2e.[3] Monitoring our carbon footprint will continue on an annual basis with iterative refinements of our data processes. We will focus particular attention on improving data for those sources of emissions identified in our strategy roadmap which we are making initial efforts to reduce: flights, vehicles and energy generation. NRC is also committed to publicly sharing our footprint and promoting transparency between humanitarian agencies. We are working with other organisations to unify our approach to measuring emissions and tackle the challenges of collecting and analysing data from complex humanitarian responses.

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1 Greening the Orange refers to projects focused on reducing the negative environmental consequences of NRC`s activities. "Orange" refers to the colour of NRC's company logo.

2 Full-time equivalent.

3 CO_2 equivalent whichis the standardised unit of measurement for calculating environmental impact of all greenhouse gases.

3 SCOPE OF REPORTING

Information for this report was gathered from 39 Country Offices, 3 Regional Offices, and 6 Representation Offices, including the NRC Head Office and NORCAP. Standardized factors were used for each emission source and are based on publicly available data, notably DEFRA,[4] as well as few other recognised sources. All data collected and analysed and calculation methods within this report follow the World Resources Institute Greenhouse Gas (GHG) Protocol standards. More details on NRC's carbon accounting methodology can be found in Annex A.

The Greenhouse Gas Protocol breaks emissions into different scopes, depending on whether they are direct or indirect emissions. Scope 1 is those carbon emissions produced by NRC and calculated on the use of NRC owned or leased facilities and vehicles. For NRC, scope 2 includes electricity which is indirect, but we have a lot of control over how much we use. Scope 3 indirect emissions are divided into two categories, upstream and downstream emissions. Upstream emissions are calculated on all activities undertaken to produce and deliver goods or services to NRC, such as the transportation of purchased goods from a supplier to an NRC warehouse. Downstream emissions are calculated on all activities undertaken to use or dispose of the goods or financial assistance that we provide, such as the transportation of goods from an NRC warehouse to an NRC distribution site.

This concept is illustrated below:

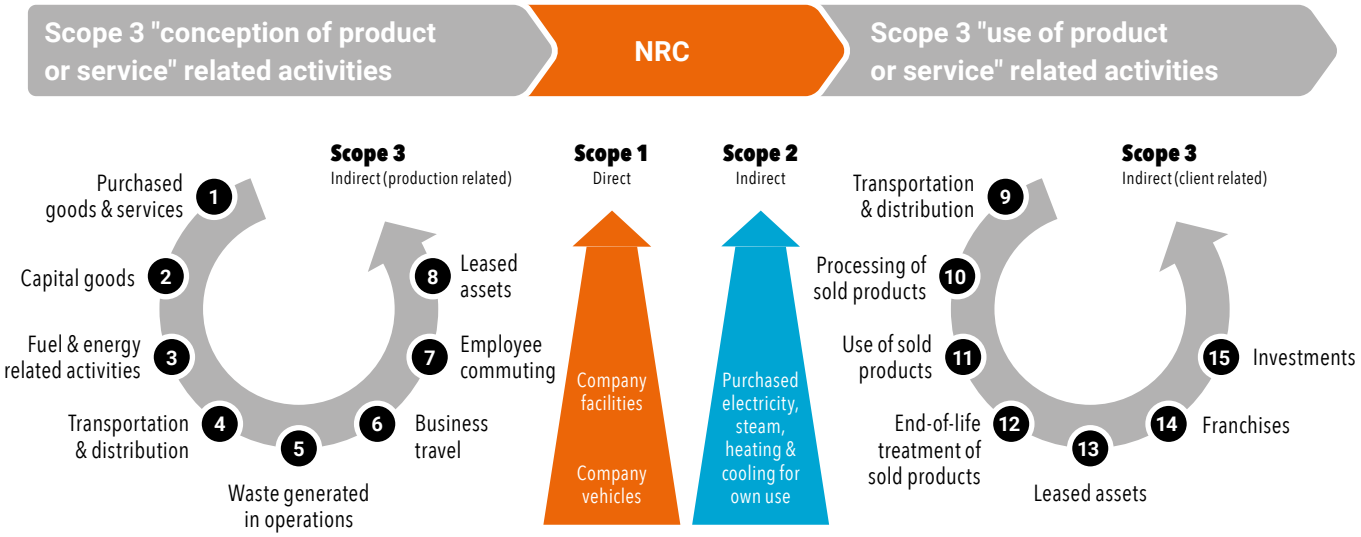
2.1 DATA COLLECTION

Data was collected from the following sources:

- Internal operational and programmatic reporting systems
- Financial system
- Human resources system
- Supplier generated reports and invoices
- Manual collection surveys

Overall, data collection methods have improved since the baseline report was completed. Key areas that have changed from our baseline, such as transportation and distribution, employee commuting, and fuel for owned and leased vehicles are a direct result of having more reliable data because of improved data collection methods.

NRC'S BASELINE COVERS EMISSIONS ACROSS 3 SCOPES IN LINE WITH THE GHG PROTOCOL



[4] UK governmental Department for Environment, Food and Rural Affairs.

Following the GHG Protocol guidance, we calculated NRC's emissions from each of following scopes and categories as they related to our operations.

SCOPE 1

Direct emissions

1.1 **Static combustion:** Fuel used in the operation of generators and office heating

1.2 **Mobile combustion:** Fuel used in the operation of owned and leased vehicles

SCOPE 2

Indirect emissions

2.1 **Purchased electricity:** On-grid electricity purchased for NRC offices and guesthouses

SCOPE 3

Indirect emissions

3.1 **Purchased goods and services:** Upstream emissions of the production of purchased construction materials

3.2 **Capital goods:** Upstream emissions of the production of purchased vehicles and generators

3.3 **Fuel and energy-related activities:** Upstream emissions of the production of fuels and energy purchased by NRC

3.4 **Upstream transportation and distribution:** Emissions generated by air and land freight of purchased products to NRC warehouses

3.6 **Business travel:** Flights, trains, buses, car rentals, taxis, and ferries used in NRC operations

3.7 **Employee commuting**

3.9 **Downstream transportation and distribution:** Emissions generated by air and land freight of purchased products from NRC warehouses to distribution sites

3.11 **Use of distributed products:** Emissions from cooking methods of food distributed

3.12 **End-of-life treatment of distributed products:** Disposal of non-perishable items in NFI Kits.

3.16 **Financial assistance:** Cash or vouchers

NRC is committed to refining and improving the types of data captured and the ways in which data is collected. We are interested in accuracy and accountability for reporting to inform actions to mitigate our impact on the environment. As we improve our data collection, the differences to our baseline and between years will be factored into our review of our set targets in 2025.

2.2 SOURCES OF EMISSIONS NOT INCLUDED

The calculated carbon footprint is as complete as possible but as not all data is available, priority has been given to the most significant sources of emission across NRC. We continue to improve our data collection for carbon footprint monitoring and some of these may be possible to measure in future years. These are notable sources of emissions defined in the GHG protocol but not included in NRC's calculation:

- Purchased goods and services includes only the highest emitting goods which is construction materials as assessed for the 2019 baseline with the support of Boston Consulting Group. The capture of complete data for other purchased goods and services is not currently possible from NRC systems.
- Production of capital goods has been limited to vehicles and generators as these are the largest and most common assets purchased.
- Hotel accommodation has not been included as NRC does not have a centralised booking system at present.
- Waste and fugitive emissions from refrigerants are not included in this report as we currently do not have data in these areas.

4 CARBON FOOTPRINT

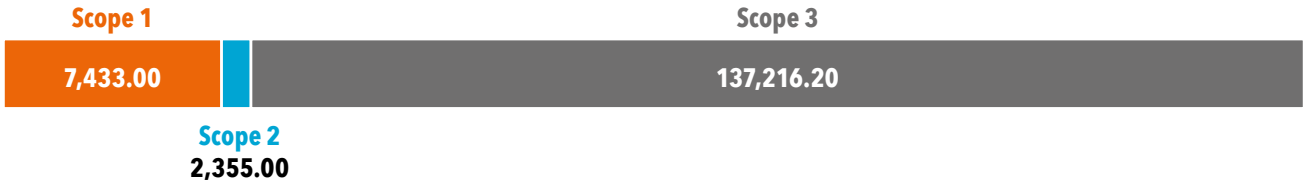
4.1 OVERVIEW

147,004 Tonnes of CO_2e in 2022 = **17,123** Flights around the Earth = **Anguilla** Island emissions

NRC'S EMISSIONS BY CATEGORY

Scope	Category name	Emissions (tCO_2e) 2022
1.1	Static combustion	3,507
1.2	Mobile combustion	3,926
2	Purchased electricity	2,355
3.1	Purchased goods and services	50,480
3.2	Capital goods	262
3.3	Fuel and energy-related activities	2,328
3.4	Upstream transportation & distribution	3,251
3.6	Business Travel - Total	13,437
3.7	Employee commuting	5,083
3.9	Downstream transportation & distribution	1,325
3.11	Use of distributed products	24,870
3.12	End-of-life treatment of distributed products	311
3.16	Financial assistance	35,877

NRC'S EMISSIONS BY SCOPE (tCO_2e)



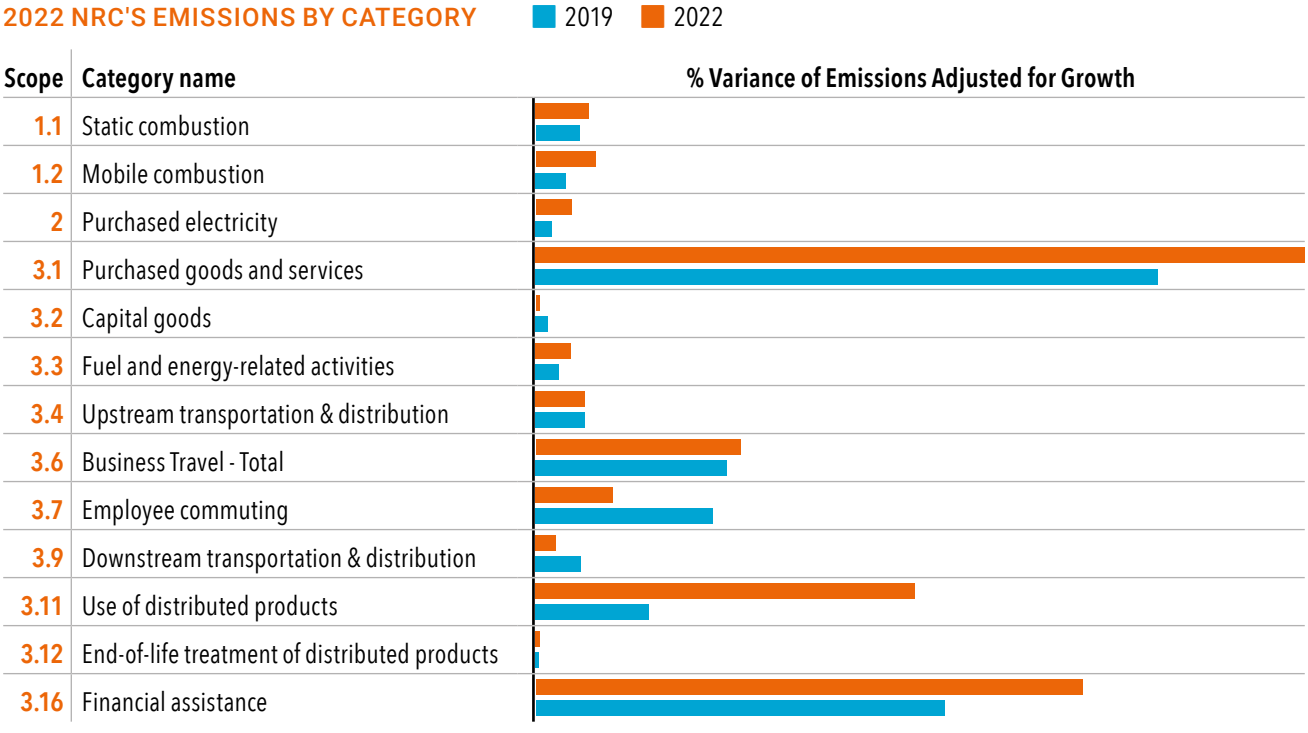
4.2 COMPARISON TO BASELINE

An important analysis of our carbon footprint is to measure our progress by comparison to our 2019 baseline. A basic year over year analysis shows that overall, NRC carbon emissions have increased 28.9% from our 2019 baseline report. This is not surprising as the organisation has grown substantially in that period and opened operations in new countries. To measure our progress in reducing emissions, we must factor in the growth of the organization. Therefore, our reduction goals and year over year analysis focus on the change in carbon emissions intensity. This measurement quantifies total carbon emissions, in kilograms of carbon dioxide equivalent (CO_2e), per FTE staff member.

When adjusted for organizational growth, NRC's carbon intensity has increased by 0.7% since 2019.

Scope	Category name	Emissions (tCO_2e)		% Variance of Emissions		
		2022	2019	Actual	Adjusted for Growth	Total Emissions
1.1	Static combustion	3,507	2,882	22%	-5%	2.4%
1.2	Mobile combustion	3,926	1,976	99%	55%	2.7%
2	Purchased electricity	2,355	1,068	121%	72%	1.6%
3.1	Purchased goods and services	50,480	40,843	24%	-3%	34.3%
3.2	Capital goods	262	819	-68%	-75%	0.2%
3.3	Fuel and energy-related activities	2,328	1,555	50%	17%	1.6%
3.4	Upstream transportation & distribution	3,241	3,257.4	-1%	-22%	2.2%
3.6	Business Travel - Total	13,437	12,539	7%	-16%	9.1%
3.7	Employee commuting	5,085	11,654	-56%	-66%	3.5%
3.9	Downstream transportation & distribution	1,325	2,990	-56%	-65%	0.9%
3.11	Use of distributed products	24,870	7,413	235%	162%	16.9%
3.12	End-of-life treatment of distributed products	311	209	49%	16%	0.2%
3.16	Financial assistance	35,877	26,823	34%	4%	24.4%
	Grand Total	**147,004**	**114,028**	**29%**	**0.7%**	

2022 NRC'S EMISSIONS BY CATEGORY



5 EMISSIONS BREAKDOWN

The breakdown sections below show comparisons between 2019 and 2022 for each category of emissions by staff head count (FTE).

1.1

Static Combustion

This category is calculated on diesel fuel used to power generators and other purchased fuels for office heating. NRC's total emissions for this category is 3,507 tCO_2e compared to 2,882 tCO_2e in 2019. In 2022 this category only totalled 2.4% of NRC's total carbon emissions.

% variance by FTE

2,882
Emissions tCO_2e in 2019

-5 %

3,507
Emissions tCO_2e in 2022

1.2

Mobile Combustion

This category is calculated on diesel or petrol used for owned and leased vehicles. NRC's total emissions for this category is 3,926 tCO_2e compared to 1,976 tCO_2e in 2019. In 2022 this category only totalled 2.7% of NRC's total carbon emissions.

% variance by FTE

1,976
Emissions tCO_2e in 2019

55 %

3,926
Emissions tCO_2e in 2022

Note: When doing the analysis compared to the baseline, we discovered that some countries fleets were not included in the baseline report since the internal fleet reporting system was not fully rolled out to all NRC offices in 2019. We estimate the actual year over year variance is 46% and the variance by FTE to have increased by 14%.

CASE STUDY:

BURKINA FASO'S SOLARISATION PROJECTS

In Dori, NRC was running an emergency response programme to support displaced people in northern Burkina Faso, but the team needed a reliable supply of electricity in their field office. It was difficult to source diesel for generators and the team looked to more environmentally friendly solutions. A NORCAP energy adviser conducted an assessment and with support from the German Federal Foreign Office (GFFO) a solar power system was implemented. Solar panels were installed on the roof of the office and additional solar panels created a shelter used for parking. The team now has reliable electricity to power their office and support their programmes. Solar power provides a dependable source of clean energy particularly benefitting our work in hard-to-reach contexts where electricity and fuel supplies may be unreliable.

CASE STUDY:

JORDAN'S ELECTRIC VEHICLE

In late 2021, the NRC Middle East Regional Office (MERO) in Jordan decided to purchase NRC's first electric vehicle to help reduce their carbon footprint. Despite the initial concerns about the cost of purchasing the vehicle, the perceived risks of a new technology, and potential maintenance challenges, the MERO team recognised the importance of embracing green technology and decided to move ahead . The electric vehicle has now been in service for 16 months and been driven over 10,000 kilometres and the team considers it both an environmental and financial success. Compared to their other vehicles, the team has so far saved 1,750 USD in fuel costs and more than 500 USD in maintenance costs. Amin Samara, NRC MERO's logistics technical assistant, who has experience driving both fuel-powered and electric vehicles, said that he feels safer in the electric vehicle (EV), as it is reliable and equipped with cutting-edge safety systems.

2.

Purchased electricity

This category is calculated on the amount of on-grid electricity purchased by NRC offices, guesthouses and other facilities. This category falls under GHG Scope 2 and the emissions calculated are for the production of the electricity generated. NRC's total emissions for this category is 2,355 tCO_2e, or 1.6% of the organization's carbon footprint in 2022. This is compared to 1,068 tCO_2e in 2019.

% variance by FTE

1,068
Emissions tCO_2e in 2019

72 %

2,355
Emissions tCO_2e in 2022

Note: The large variance in this section is due to a more accurate calculation method for emissions. When adjusting 2019 emissions with these calculation methods we estimate the actual year over year variance is 21% and the variance by FTE to have decreased by 6%. You can read more about this and a description of our calculation methods in Annex A.

3.1

Purchased goods and services

This category is calculated on the total purchased construction materials and construction contractor services in 2022. This category falls under GHG Scope 3 and the emissions calculated are for the production of goods purchased by the organization. Construction materials are widely used in humanitarian responses to displacement including building or rehabilitating homes, schools, water and sanitation infrastructure and community spaces. The most significant material for carbon emissions is concrete followed by metals and other construction materials. The high carbon emissions are due to the process of producing these materials.

NRC's total emissions for this category is 50,480 tCO_2e, or 34.3% or the organization's total carbon footprint in 2022. This makes it the largest contributing factor of the organization's carbon emissions. In 2019 our emissions in this category were 40,843 tCO_2e and accounted for 36% of NRC's overall carbon footprint.

% variance by FTE

40,843
Emissions tCO_2e in 2019

-3 %

50,480
Emissions tCO_2e in 2022

CASE STUDY:

SUDAN USING LOW IMPACT SHELTERS

In Um Rakuba camp, eastern Sudan, NRC built hand-in-hand with the refugee community 1,000 semi-permanent “tukuls” for Ethiopian refugees who fled raging violence in Tigray in 2020. The round homes are typical for local culture in the region and replaced refugees’ tarpaulin tents which used to be swept away overnight during the strong storms of the rainy season. These more resilient low carbon structures are made of locally sourced bricks and hay. They offer more dignified homes, adapted to the harsh weather of the region.

3.2

Capital goods

This category is calculated on the total purchased generators and vehicles in 2022. This category falls under GHG Scope 3 and the emissions calculated are for the production of capital goods purchased by the organization and applied in the year of purchase.

NRC’s total emissions for this category is 262 tCO_2e, or 0.2% or the organization’s total carbon footprint in 2022. This makes it the lowest contributing area of the organization’s carbon emissions. The decrease in this area is due to fewer generators and vehicles purchased in 2022 than in 2019.

% variance by FTE

819
Emissions tCO_2e in 2019

-75 %

262
Emissions tCO_2e in 2022

3.3

Fuel and energy-related activities

This category falls under GHG Scope 3 and calculates the upstream emissions of the production of fuels and electricity purchased by NRC. This includes activities related to fuel extraction, production, and transportation and assumed transmission and distribution losses for electricity.

NRC’s total emissions for this category is 2,328 tCO_2e, or 1.6% or the organization’s total carbon footprint in 2022. This is compared to 1,555 tCO_2e in our baseline report.

% variance by FTE

1,555
Emissions tCO_2e in 2019

17 %

2,328
Emissions tCO_2e in 2022

A woman cooks a meal for her family using firewood at a refugee camp in Yemen, © Mahmoud Al-Filastini/NRC.

3.4

Upstream transportation and distribution

This category falls under GHG Scope 3 and calculates emissions related to land, air and sea transportation and distribution of purchased products to NRC warehouses.

NRC's total emissions for this category is 3,241 tCO_2e, or 2.2% of the organization's total carbon footprint in 2022. This is compared to 3,257 tCO_2e in our baseline report.

% variance by FTE

3,257
Emissions tCO_2e in 2019

-22 %

3,241
Emissions tCO_2e in 2022

3.6

Business travel

This category falls under GHG Scope 3 and calculates emissions related to flights and land travel (which includes buses, trains, rented vehicles, and taxis).

NRC's total emissions for this category is 13,437 tCO_2e, or 9.1% of the organization's total carbon footprint in 2022. This is compared to 12,539 tCO_2e in 2019. The majority of our business travel emissions come from flights; however, a small portion comes from land travel.

% variance by FTE

12,539
Emissions tCO_2e in 2019
Flights: 12,189
Land travel: 350

-16 %

13,437
Emissions tCO_2e in 2022
Flights: 12,961
Land travel: 476

3.7

Employee commuting

This category falls under GHG Scope 3 and calculates emissions related to how employees get to and from the office. This does not include employees who use an NRC vehicle to get to work, as those emissions are captured under section 1.2 Mobile Combustion: Fuels for Owned & Leased Vehicles.

NRC's total emissions for this category is 5,085 tCO_2e, or 3.5% of the organization's total carbon footprint in 2022. This is compared to 11,654 tCO_2e in 2019.

% variance by FTE

11,654 Emissions tCO_2e in 2019 | **-66 %** | **5,085** Emissions tCO_2e in 2022

Note: The large variance in this section is due to better data collection and a more accurate calculation method for emissions. When adjusting 2019 emissions with these calculation methods we estimate the actual year over year variance is -36% and the variance by FTE to have decreased by 50%. You can read more about this and a description of our calculation methods in Annex A.

3.9

Downstream transportation and distribution

This category falls under GHG Scope 3 and calculates emissions related to land and air transportation NRC warehouses to distribution sites.

NRC's total emissions for this category is 1,325 tCO_2e, or 0.9% of the organization's total carbon footprint in 2022. This is compared to 2,990 tCO_2e in our baseline report.

% variance by FTE

2,990 Emissions tCO_2e in 2019 | **-65 %** | **1,325** Emissions tCO_2e in 2022

Note: The large reduction in this area is due to an improvement in our data collection, which you can read more about in Annex A.

A woman affected by Cyclone Sitrang heads home with an NFI kit, © Ayesha/ NRC.

3.11

Use of distributed products

This category falls under GHG Scope 3 and calculates emissions related to home cooking of food distributed to participants.

NRC's total emissions for this category is 24,870 tCO_2e, or 16.9% or the organization's total carbon footprint in 2022, making it the third largest contributing area of the organization's carbon emissions. This is compared to 7,413 tCO_2e in 2019, when it was only 6.5% of our carbon emissions and the fifth largest contributing factor.

% variance by FTE

7,423 Emissions tCO_2e in 2019 | **162 %** | **24,870** Emissions tCO_2e in 2022

The difference in our carbon emissions in this category relates to the increase in the amount of food distributed through humanitarian programmes. In 2022 the amount of food NRC distributed, in kilograms, nearly tripled from that which was distributed in 2019. This growth is due to severe food insecurity caused by increased conflict and environmental disasters in areas where we work. We anticipate that our calculated carbon emissions in this area will continue to be variable year over year, depending on the needs of our target communities.

Distribution of emergency supplies following tribal violence in West Darfur, Sudan, © Nicolai Madsen/ NRC.

3.12

End-of-life treatment of distributed products

This category falls under GHG Scope 3 and calculates emissions related to the disposal of items in NFI kits distributed to participants.

NRC's total emissions for this category is 311 tCO_2e, or 0.2% of the organization's total carbon footprint in 2022. This is compared to 209 tCO_2e in 2019.

% variance by FTE

209
Emissions tCO_2e in 2019

16 %

311
Emissions tCO_2e in 2022

Note: In comparison to the 2019 baseline, one additional category of NFI kit was included in the 2022 data.

3.16

Financial assistance

This category falls under GHG Scope 3 and calculates the estimated emissions associated with the spending of cash and vouchers distributed to participants. Financial assistance is used to purchase goods and services by the participants, so NRC includes the estimated emissions of those in our footprint.

NRC's total emissions for this category is 35,877 tCO_2e, or 24.4% of the organization's total carbon footprint in 2022, making it the second largest contributing factor. In 2019 our emissions in this category were 26,823 tCO_2e and accounted for 23.5% of NRC's overall carbon footprint.

% variance by FTE

26,823
Emissions tCO_2e in 2019

4 %

35,877
Emissions tCO_2e in 2022

The use of cash assistance has increased in NRC in 2022 particularly in response to the Ukraine crisis. The calculated emissions are based on the assumed average consumption which the cash or vouchers are used for. It is assumed that this source of emissions will vary annually according to the needs we are responding to.

6 NEXT STEPS

Looking forward to 2023, we have identified priority areas that we can improve our carbon footprint monitoring and ways that we can take immediate action to reduce our carbon emissions.

An aerial view of NRC's emergency drought water distribution site in Baidoa, Somalia, © Abdulkadir Mohamed/NRC.

6.1 IMPROVING OUR CARBON FOOTPRINT MONITORING

NRC will continue to develop and improve our carbon footprint monitoring in 2023. Our first priorities are:

- Improving data collection of purchased energy to allow for a more complete dataset and less manual monitoring
- Improving data collection for cargo transportation
- Introducing new monitoring for renewable energy generation
- Introducing new monitoring for electric and hybrid vehicles

6.2 REDUCING OUR CARBON FOOTPRINT

NRC's roadmap for reducing our carbon footprint prioritises transitioning from diesel generators to renewable energy sources, improving the efficiency of our fleet, reducing flights and sustainable procurement.

With support from Sida, we are working to raise awareness and build capacity at an organizational level. Teams throughout the organisation are implementing NRC's new environmental minimum standards and new environmental considerations included in the NRC Logistics Handbook. Learnings from pilot projects to implement solar energy systems are being used to develop a framework approach and handbook to equip teams across the organisation to transition to renewable energy.

There are initiatives taking place across NRC at all levels demonstrating the dedication and creativity that our staff are bringing to tackle our environmental footprint.

A ANNEX

This annex outlines NRC's carbon calculations methodology for each of the categories contained in this report. Carbon emissions are not measured directly but instead calculated from proxy indicators. For each source of emissions, we measure a relevant quantity and then multiply it by a carbon emissions factor to calculate the CO2e of emissions. For example, instead of measuring the emissions from the exhaust of a vehicle, we measure the quantity of fuel used and then multiply that by a carbon emissions factor which is chosen according to the size and type of vehicle.

This annex includes details of:

- Sources of internal data and limitations of that data
- Assumptions made where data was unavailable or incomplete
- Source of carbon emissions factor used
- Calculation method used

1.1 Static combustion

Data for generators was collected from NRC's internal logistics KPI reporting system regarding the amount of fuel in litres purchased per location. Data for purchased fuels used for office or guesthouse heating was collected from manual country surveys regarding the amount and fuel type purchased for a three-month period. Surveys were filled out based on invoices, bills, or meter readings. These were then used to extrapolate how much of these heating fuels were purchased for the entire year. This section was calculated using DEFRA 2021 conversion factors.

1.2 Mobile combustion

Data was collected from our internal logistics KPI reporting system regarding the number of owned and leased vehicles per office and the total amount of fuel received in litres. We calculated this section using DEFRA 2021 conversion factors.

2. Purchased electricity

Data was collected from manual country surveys regarding the amount of electricity in kilowatts purchased and consumed per month for a three-month period. The response rate to this survey was 65%. Surveys were filled out based on invoices, bills, or meter readings. We then extrapolated how much electricity was purchased for the entire year. In instances where data was not available, we extrapolated how much energy was purchased based on the amount of electricity purchased in 2019 and increased this amount in relation to office or staff growth in 2022. We calculated our carbon emissions for this category using the GHG Protocol Location-Based Method and used the corresponding DEFRA 2019 conversion factors for purchased electricity by region.

3.1 Purchased goods and services:

Procurement data is limited as no standard item categories or quantities are captured in NRC systems in a form which can be extracted across the organisation. For this reason, measurement of purchased goods and services is limited to construction materials which was deemed to be the most significant contributor to NRC's carbon footprint in an assessment by Boston Consulting Group in 2021. Data was collected from NRC's financial system as to the total amount in U.S. Dollars spent on construction materials and contractor services. Limitations of this data is that generally the specific type or weight of construction material being used is not captured. Therefore, we extrapolated the type and weight of materials used based on the materials lists of typical NRC construction projects and commodity

prices in key countries. Using the extrapolated materials and weight purchased we calculated our carbon emissions for this category using the GHG Protocol Spend-Based Method and DEFRA 2021 conversion factors.

3.2

Capital goods

Data was collected from NRC's financial system as to the total amount in U.S. Dollars spent on generators and vehicles. We used the GHG Protocol Average Spend-Based Method and calculated our carbon emissions for this category using DEFRA 2014 conversion factors (Table 13 – Indirect emissions from the supply chain), which is the most recent version available.

3.3

Fuel and energy-related activities

This section calculates the upstream emissions of the production of fuels and electricity purchased by NRC. This includes activities related to fuel extraction, production, and transportation and assumed transmission and distribution losses for electricity. Therefore, the data for this section matches all the data from categories 1.1 Static Combustion, 1.2 Mobile Combustion, and 2. Purchased Electricity. Calculations for this section were done using the GHG Protocol Average-Data method and DEFRA 2019 conversion factors.

3.4

Upstream transportation & distribution

LAND AND SEA TRANSPORTATION

Data was collected from manual surveys filled out by NRC warehouse staff regarding the type of delivery vehicles used, average number of deliveries per month, and distances travelled in relation to deliveries between suppliers and NRC warehouses. The response rate to this survey was 36%, which was a 21% increase in survey responses from our 2019 baseline. During both years emissions were extrapolated for warehouses where data was not available by applying the average carbon emissions per warehouse to all warehouses with missing data. The increase in response rate from the 2022 survey gave us more accurate data for this data extrapolation. All calculations assumed that delivery vehicles were making roundtrips. Calculations for this section were done using the GHG Protocol Distance-Based Method and DEFRA 2021 conversion factors.

AIR FREIGHT

For our 2019 baseline report we used a manual country survey to collect data on international air freight and extrapolated those figures to each country that had at least one NRC warehouse. In 2022 we released a similar manual country survey; however, responses revealed the only items received by international air freight were centrally purchased electronic equipment. Therefore, in 2022 we used supplier reports containing the weight of equipment shipped to each NRC location. We decided against extrapolating emissions to every country as we were working with more complete data and not all countries receive air freight. Calculations for this section were done using the GHG Protocol Distance-Based Method and DEFRA 2021 conversion factors.

3.6

Business travel

FLIGHTS

Flight data was collected from our travel agency, which included kilometres travelled and cabin type. For flights booked outside of the travel agency, data was collected from our financial system which categorizes flights as either international or domestic. Where origin and destination locations were available, kilometres travelled were calculated. Where either origin or destination locations were not available, we extrapolated the distance by calculating the average of kilometres travelled for either domestic or international flights for that country and applied it. Using this data, we calculated emissions using DEFRA 2021 conversion factors using the GHG Protocol Distance-Based Method.

LAND TRAVEL

Data for taxis, buses, trains and rented vehicles was collected from our financial system. As this data did not capture origin or destination cities, we were not able to calculate kilometres travelled. Therefore, we used ADEME Base Carbon conversion factors to calculate emissions using the GHG Protocol Spend-Based Method.

3.7 Employee commuting

For Employee Commuting data was collected from a manual survey in which 21% of employees responded, which was a 6% increase in survey responses from our baseline. The survey allowed respondents to choose up to two types of transportation, enter the average distance travelled, number of days a week taken, and if choosing a vehicle, the number of people that they carshared with. The question about carsharing was not included in the 2019 employee commuting survey and we estimate contributed to a 20% drop in emissions in this section. 43% of respondents that commuted by vehicle reported carsharing with at least one other person. Additionally, NRC has implemented more flexible working options since 2019 and in this year's survey respondents were allowed to select if they worked from home; 18.4% of respondents reported working from home at least one day a week.

Using the responses from the survey, we calculated the total number of kilometres travelled using each transportation type for working weeks in the year, dividing total kilometres travelled by the number of people in the carshare where applicable. We also calculated number of hours spent working from home where respondents did not travel into the office daily. Using staff counts per country and the number of respondents per country, we then extrapolated kilometres travelled by transportation type and hours spent working from home to the remaining staff where data was not available. Emissions were then calculated using the GHG Protocol Distance-Based Method using DEFRA 2021 conversion factors for transportation and DEFRA 2021 conversion factors for Homeworking.

3.9 Downstream transportation & distribution

LAND TRANSPORTATION

Data was collected from manual surveys filled out by NRC warehouse staff regarding the type of delivery vehicles used, average number of deliveries per month, and distances travelled in relation to deliveries between NRC warehouses and distribution sites. The response rate to this survey was 36%, which was a 21% increase in survey responses from our 2019 baseline. During both years emissions were extrapolated for warehouses where data was not available by applying the average carbon emissions per warehouse to all warehouses with missing data. The increase in response rate from the 2022 survey gave us more accurate data for this data extrapolation. All calculations assumed that delivery vehicles were making roundtrips. Calculations for this section were done using the GHG Protocol Distance-Based Method and DEFRA 2021 conversion factors.

AIR FREIGHT

For our 2019 baseline report we used a manual country survey to collect data on domestic air freight and extrapolated those figures to each country that had at least one NRC warehouse. In 2022 we released a similar manual country survey; however, responses revealed that domestic air freight was rarely used. Therefore, we used data from our financial system containing information on items shipped and the to/from shipping locations; where data was not available on weight of items, we extrapolated this data based on dollars spent. We also decided against extrapolating emissions to every country as we were working with better data and not all countries use air freight. Calculations for this section were done using the GHG Protocol Distance-Based Method and DEFRA 2021 conversion factors.

3.11

Use of distributed products

Data was collected from our internal programmes KPI system as to the kilograms of food distributed and the count of individuals that received food items by country. In a few cases, data was only available for the total number of participants that received food and not for total kilograms of food distributed. In these instances, we extrapolated the amount of food distributed by averaging the total amount of food distributed to individuals in countries where both sets of data were available and applied the average to the total amount of individuals that received food in countries where the data was not available. The extrapolated kilograms of food distributed makes up less than 8% of the total.

For the 2019 baseline report, the Boston Consulting Group created an emissions calculator to measure the carbon footprint of cooking food using information published in the study "Impacts of home cooking methods and appliances on the GHG emissions of food" and datasets collected and published by the Food and Agriculture Organization of the United Nations (UN FAO). The information used in the calculator are as follows:

- kg CO_2e emitted by home cooking methods per kilogram of different foods as published in the study, which are then grouped into four main categories: carbohydrates, fruits and vegetables, vegetarian proteins, and meat/fish
- calories contained per kilogram of different foods, which are then grouped into the four food categories listed above
- average calories consumed by populations of each country and ratio of caloric consumption by the four food categories, per UN FAO datasets

Using the above data, the calculator quantifies the kg CO_2e emitted by home cooking methods per kilogram of food category by country. We then apply these emissions factors to the kilograms of food distributed by country to get the total emissions in this category.

Note: Under the GHG Protocol this category is titled Use of Sold Products, which we have changed here to match our operations.

3.12

End-of-life treatment of distributed products

Data for this section was collected from our internal programmes KPI system as to the type of kit and quantity distributed. We also made assumptions around weight of packaging of food distributed (see 3.11 Use of distributed products). Using item lists from select countries, we calculated the weight of non-perishable items, such as various plastics, metals, paper, clothing, and small electronic items contained in the kits. We assumed all items were disposed of in a landfill, except for paper which we assumed was assumed to be combusted. Emissions in this area were calculated on all products distributed in 2022, regardless of which year they are actually disposed. Emissions were then calculated using the relevant DEFRA 2021 conversion factors under Waste Disposal using the GHG Protocol Waste-Type-Specific Method.

Note: Under the GHG Protocol this category is titled End-of-life treatment of sold products, which we have changed here to match our operations.

3.16

Financial assistance

Data for this section was collected from our financial system in U.S. Dollars. To calculate carbon emission conversion factors, we used datasets for all countries for GDP Per Capita and Consumption of CO2 Per Capita. Both datasets are collected and made publicly available by the World Bank. Some countries, especially those that face extreme political or economic instability, may not have updated data in these datasets. If updated data was not available for a country in the GDP Per Capita file, we used the data for the year that it was most recently available. If a country did not have data in the Consumption of CO2 Per Capita file, we used the data provided for the category of Low-Income Countries. By dividing Consumption of CO2 Per Capita by GDP Per Capita data we get a conversion factor of CO2 emitted by person per U.S. Dollar spent. We then multiplied the amount of financial assistance distributed by country by this calculated CO2 conversion factor to get the total carbon emissions in this section.

Note: Financial assistance is not an area of emissions calculations that the GHG Protocol covers but is a standard humanitarian category.

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