WREC Coalition Greenhouse Gas Emission Info Session: Carbon Accounting

2 October 2025
Global.WREC@wfp.org

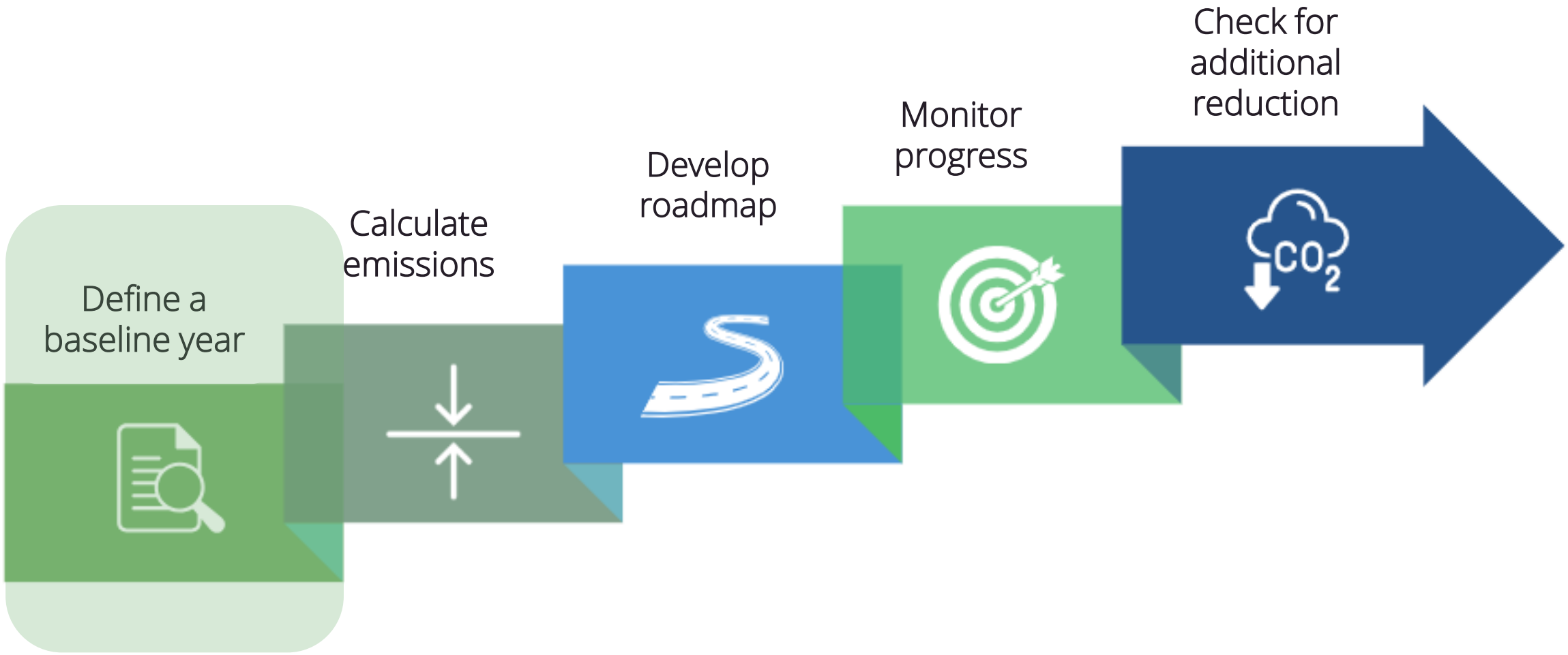
LOGISTICS CLUSTER
DRC DANISH REFUGEE COUNCIL
IFRC
Save the Children
WFP

Agenda

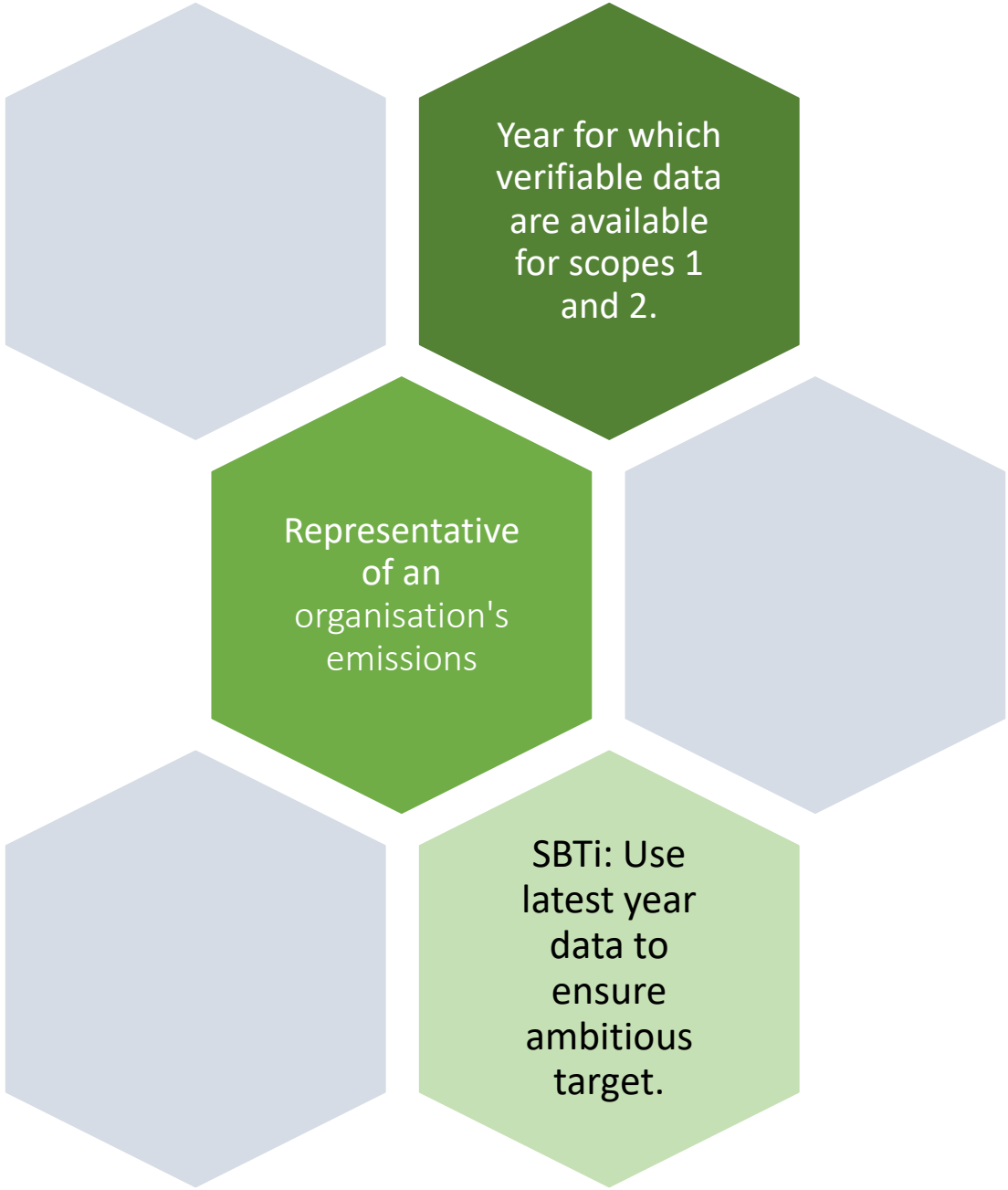
1	**Introduction**	**5 mins**
2	**Carbon accounting basics:** How to get started	**40 mins**
3	**Plan International:** Centralising carbon data collection	**20 mins**
4	**British Red Cross's** carbon footprint	**20 mins**
5	**AOB**	**5 mins**

Carbon accounting basics

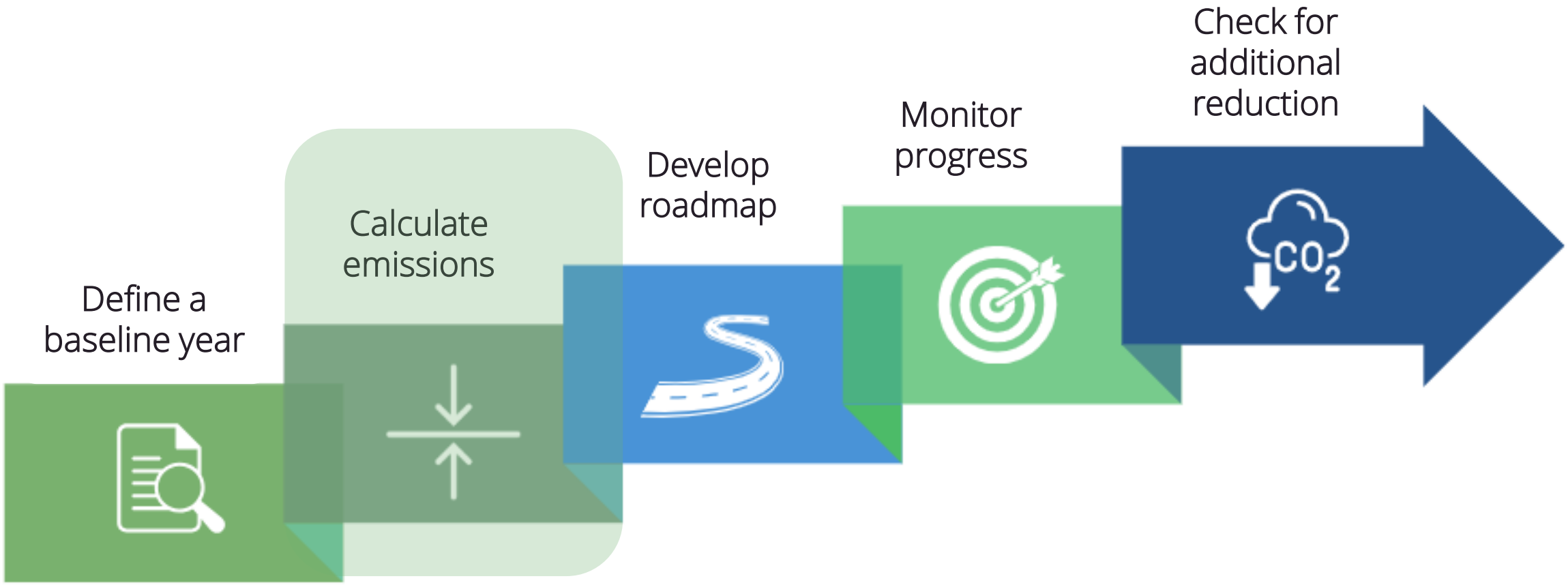
Decarbonisation steps



Choosing a base year



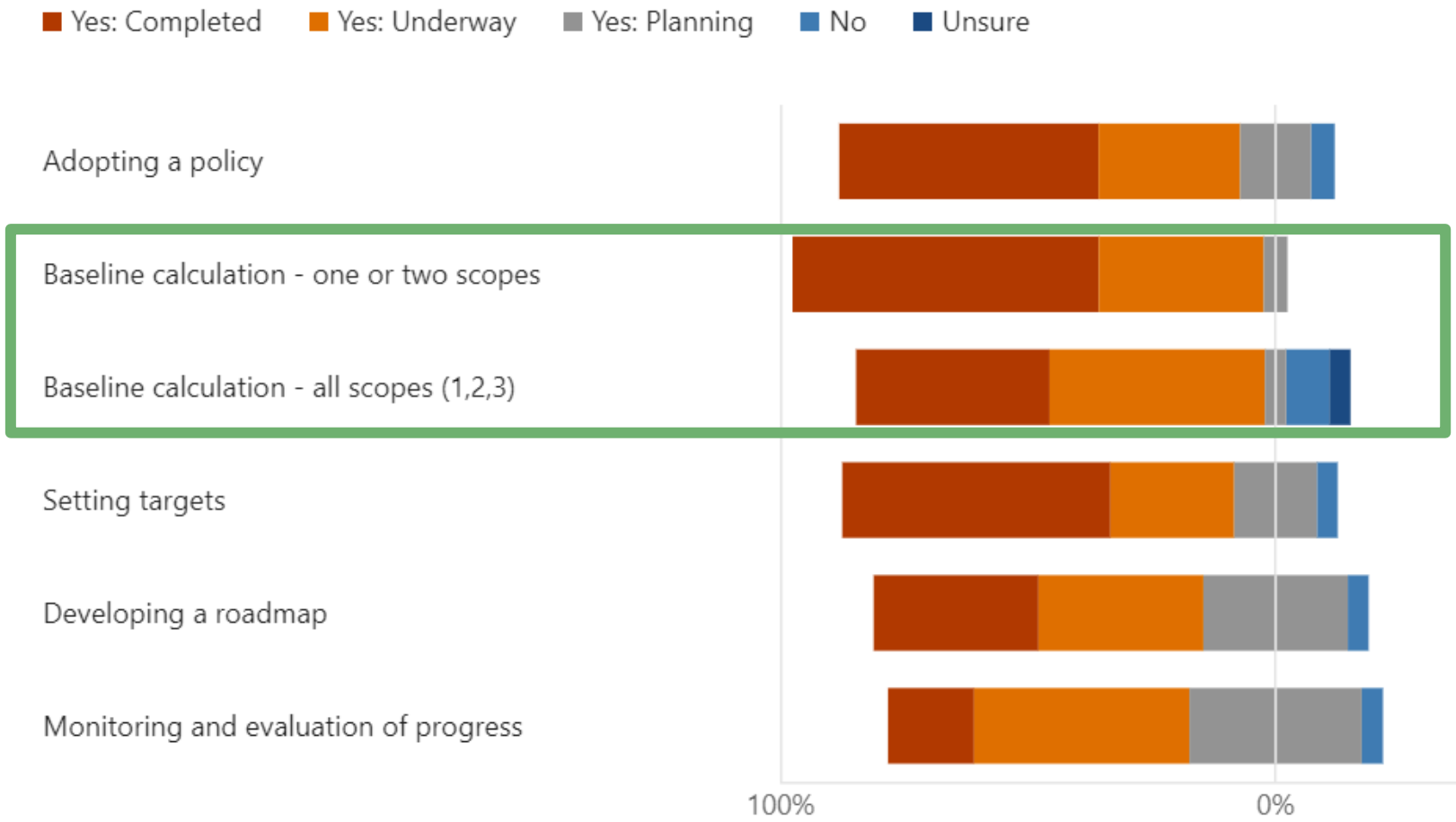
Decarbonisation steps



Calculating emissions

Why?	How?	Example
Demonstrate progress	Start small and work your way up: Process of continuous improvement.	Scope 1 and 2, some of scope 3
Understand hotspots	Start with data you have	What you're spending on fuel.
Engage partners	Look at your key activities & spending	Your organisation focuses on vaccination
Take meaningful action	Use free tools	Humanitarian Carbon Calculator

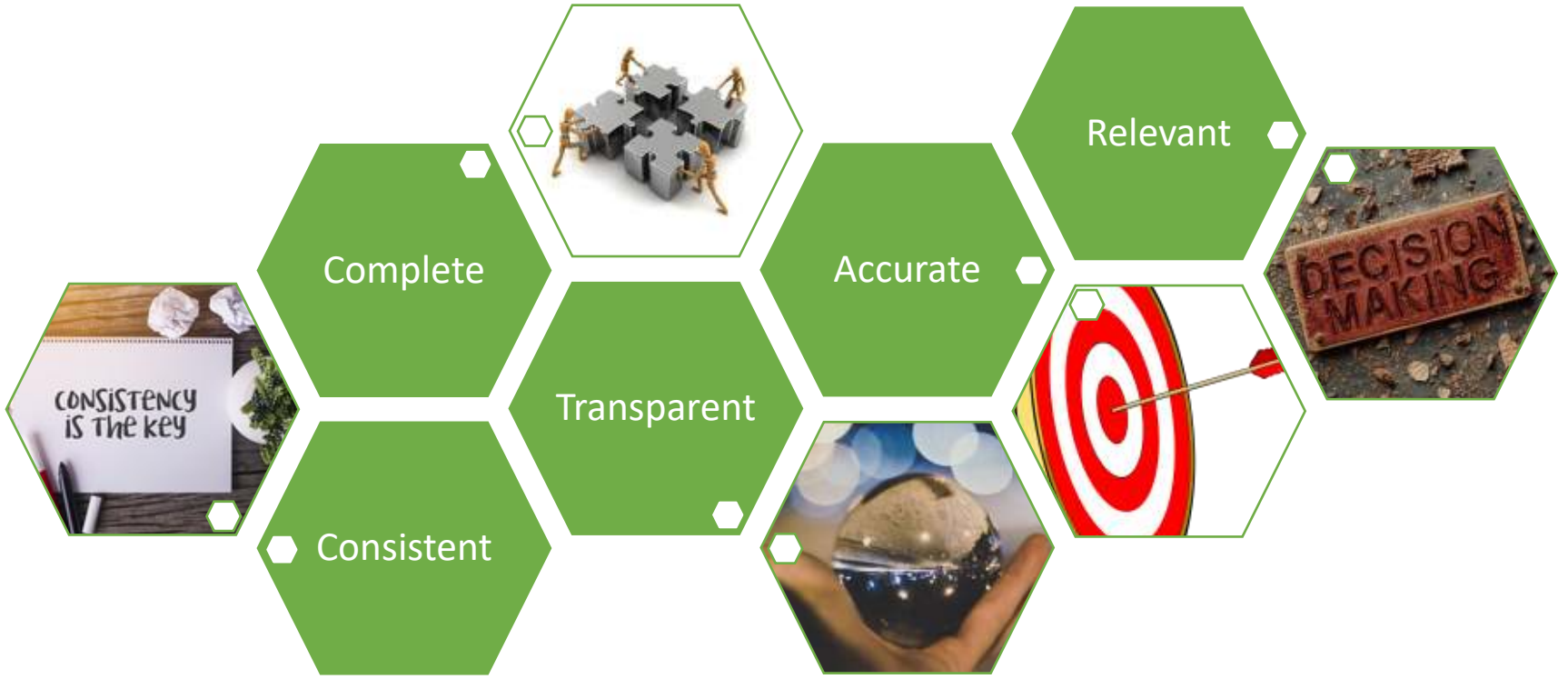
Who is doing it?



The new normal

- NRC (NRC)
- ICRC
- UNICEF
- ACF
- MSF Paris
- MSF Geneva
- Mercy Corps
- Oxfam
- ALIMA
- TDH Suisse
- Groupe URD
- UN Greening the Blue

Carbon accounting principles



Source: GHG protocol

The organisation 'Dedicated Humanitarians' only has two cars. They decide to omit these emissions from their carbon calculations since the contribution is so small.

Which principle did they violate?

You can get 1 point for this question.

Setting organizational boundaries

*Boundaries **determine the operations owned or controlled** by the organisation. This depends on the consolidation approach taken.*

Consolidation approach		Definition	GHG accounting
Equity		Percent ownership	% owned
Control	Financial control	Ability to direct financial policies with a view to gaining economic benefits	If yes: 100%. If no: 0%. If shared: % owned.
	Operational control	Authority to introduce and implement operating policies.	If yes: 100%. If no: 0%

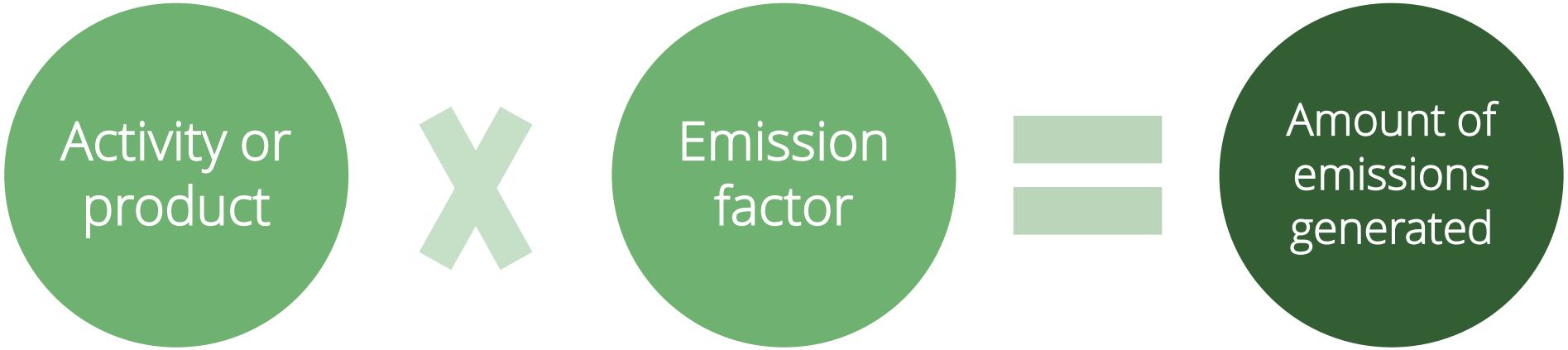
Source: GHG protocol

The organisation 'Dedicated Humanitarians' have chosen the 'operational control' approach. They use a facility paid for by a donor and apply their own policies.

Do they need to account for emissions from the facility? Why or why not?

You can get 2 points for this question.

What is the basic emissions calculation formula?



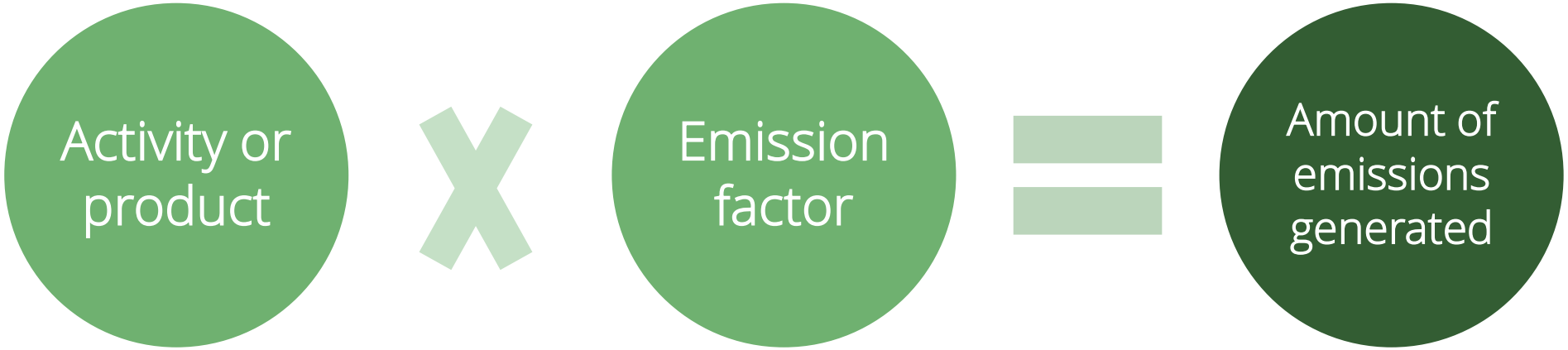
Emission factors: GHG emitted per unit of activity

Example:
100 litres of gas

Example:
2.78 kgCO2e/liters of gas

Example:
100*2.78=278 kgCO2e

What is the basic emissions calculation formula?



Example:
100 litres of gas

Example:
2.78 kgCO2e/liters of gas

Example:
100*2.78=278 kgCO2e

Organisational challenge: Where to find data? What unit is data in?

Sectoral challenge: Where to obtain information?

- **Humanitarian Carbon Calculator**
- **IPCC Global Emission Factors**
- **ADEME**
- **GHG protocol**
- **Ecoinvent**
- **Climatiq (some free some paid)**
- **IEA (partially paid)**

Emission calculators

Humanitarian-specific calculators

Humanitarian Carbon Calculator

Spanish Red Cross Carbon Footprint Calculator

UNHCR GHG Emissions Calculator

Standard calculators

GHG protocol calculation tools

Calculators for SMEs

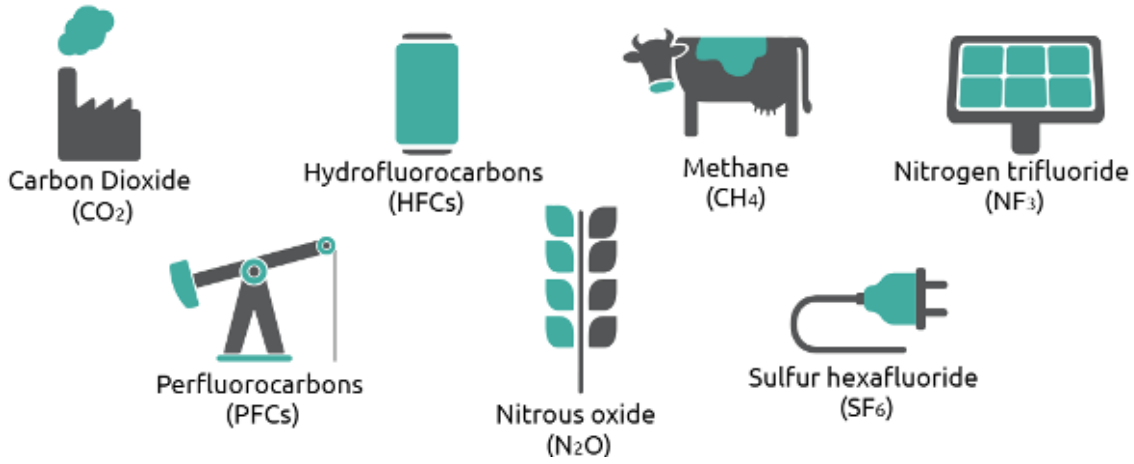
Small Business Carbon Calculator

Advanced Business Carbon Calculator

Why CO2e? The Global Warming Potential (GWP)

CO2 equivalent (CO2e): Universal unit of measurement indicating the GWP of each GHG, expressed in one unit of carbon dioxide.

Global Warming Potential (GWP): The degree of harm to the atmosphere of one unit of a given greenhouse gas relative to one unit of CO2 .

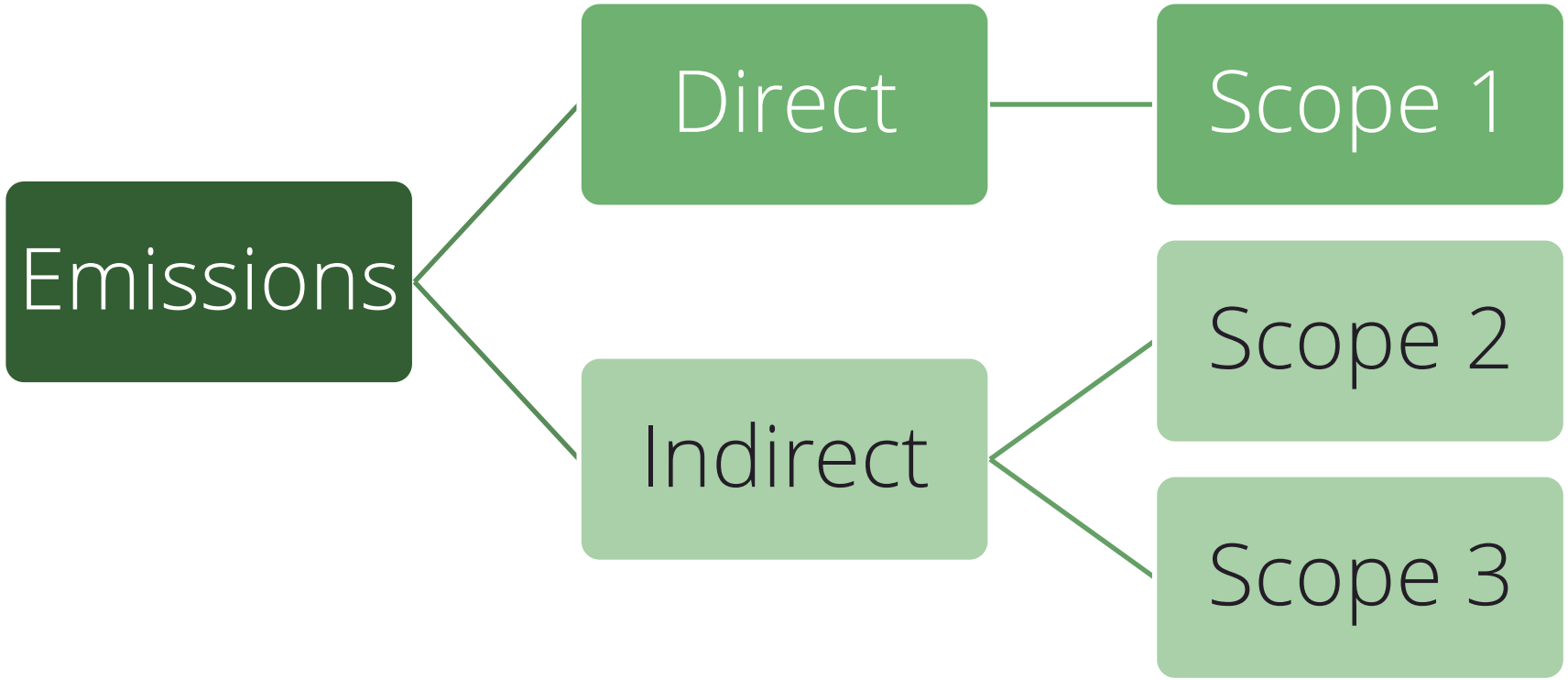


Source: GHG protocol

GHG	GWP
CO2	1
CH4	21
N2O	310
HFCs	140-11,700
PFCs	6,500-9,200
SF6	23,900

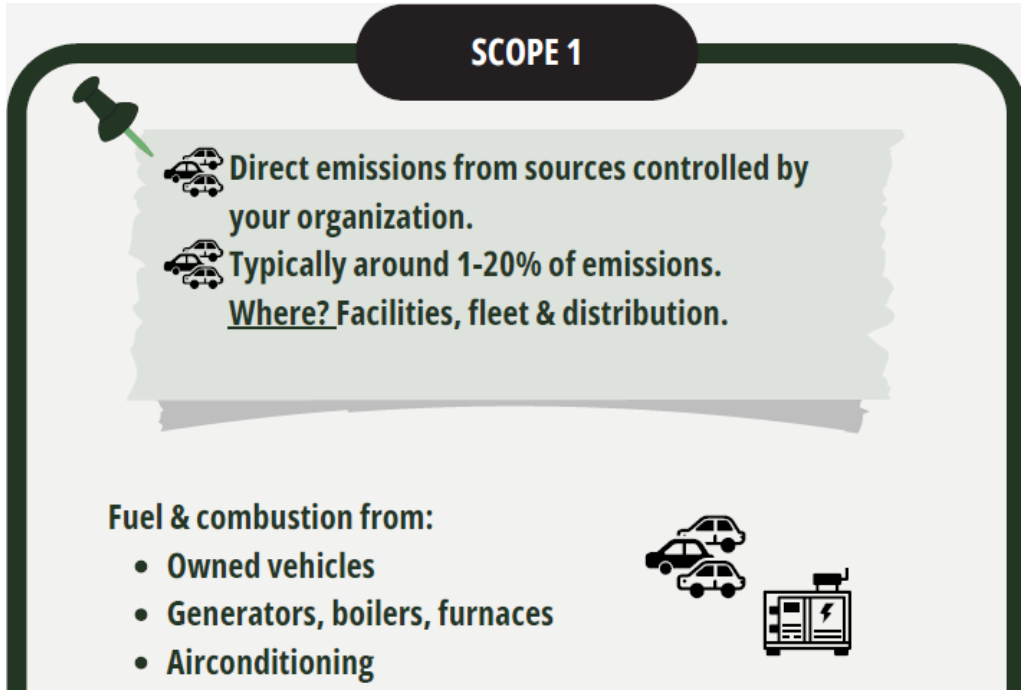
Source: IPCC Assessment reports, and/or 5th assessment report values

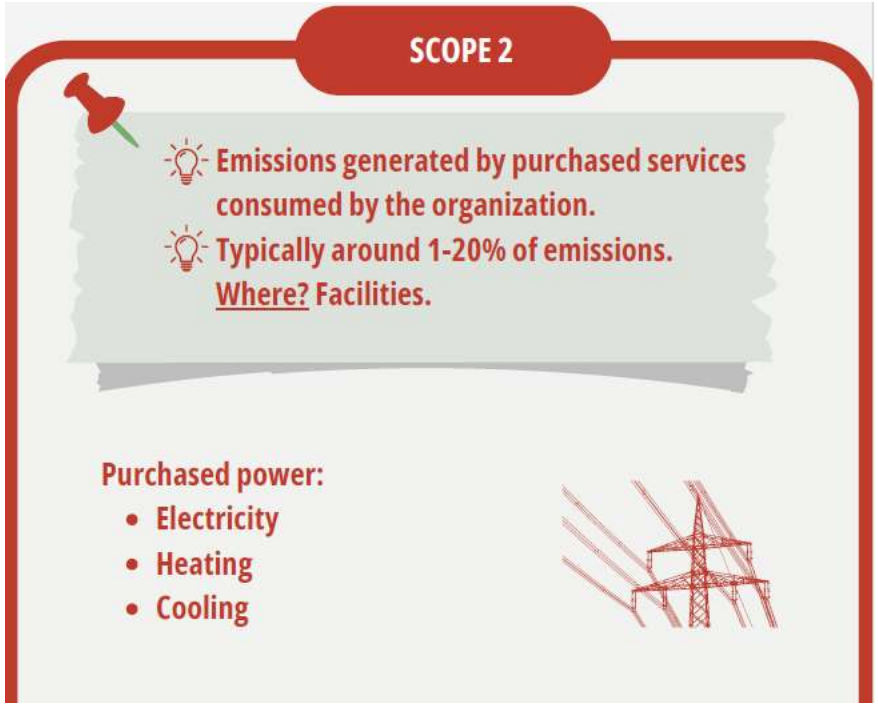
The scopes



Source: GHG protocol

The scopes





Source: WREC Coalition

The organisation 'Dedicated Humanitarians' replaces their on-site generator with off-grid solar panels.

What happens to their scope 1 emissions?

What about their scope 2 emissions?

You can get 2 points for this question.

The scopes

SCOPE 3

Other emissions from assets not owned by the organisation but essential for your operations, including those related to its supply chain, services, and logistics.

Typically around 60-98% of emissions.

Where? Planning & preparedness, procurement, freight, end-of-life, business travel, commuting.

- Purchased products and services.
- Business travel and commuting.
- Freight and leased vehicles.
- Waste related.

Groupe URD reduces its environmental footprint

Suggestions

- Implement circular economy practices.
- Reduce air travel and incentivize public transport.
- Minimise air freight.
- Choose local suppliers, where possible.
- Choose suppliers with decarbonisation goals.

Source: WREC Coalition

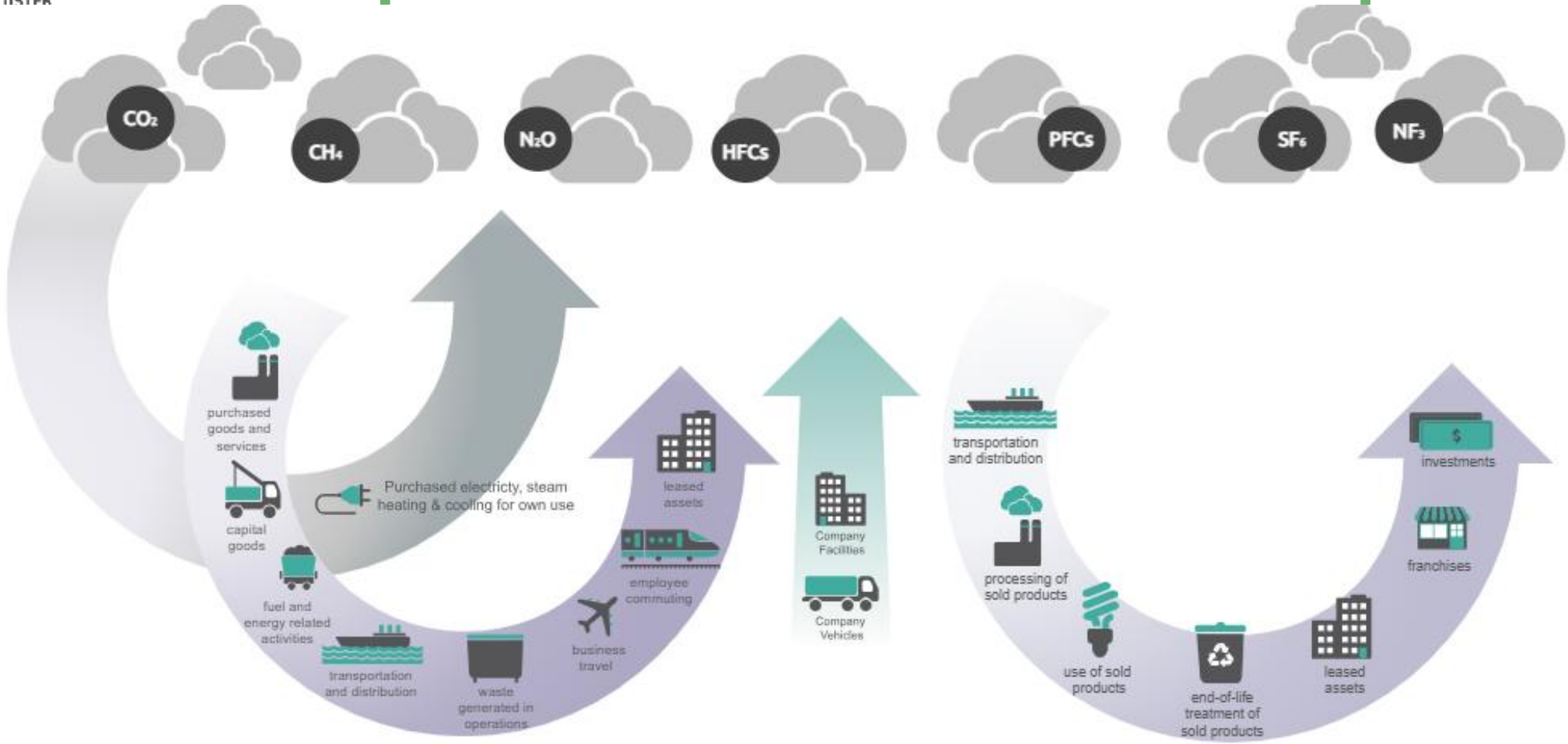
The organisation 'Dedicated Humanitarians' switches to purchasing less carbon intensive sorghum instead of rice. Quantities stay the same.

What happens to their scope 1 and 2 emissions?

What about their scope 3 emissions?

You can get 2 points for this question.

Upstream and downstream scope 3



UPSTREAM emissions
Indirect GHG emissions related to PURCHASED/ACQUIRED goods & services

DOWNSTREAM emissions
Indirect GHG emissions related to SOLD goods & services

Setting the scope 3 boudnary

GHG category	Source of emission	Priority level
3-1	**Purchased Goods and Services**	**1**
	In-kind donations	2/3
	Cash assistance	1/2
	Financial Support (upstream emissions)	1/2
3-2	**Capital Goods**	**1**
3-3	**Fuel & Energy related to activities not included in scope 1 & 2**	**1**
3-4	**Upstream transportation and distribution**	**1**
3-5	Waste generated in operations	3
3-6	**Business travel**	**1**
3-7	**Employee commuting**	**1**
3-8	Upstream leased assets	Not relevant
3-9	**Downstream transportation and distribution**	**1**
3-10	**Processing of distributed products**	**1**
3-11	**Use of distributed products**	**1**
3-12	**End-of-life treatment of distributed products**	**1**
3-13	Downstream leased assets	Not relevant
3-14	Franchises	Not relevant
3-15	Investments	Not relevant
3.1 bis	In-kind donations	2/3
	Cash transfer	1/2
	Financial Support (downstream emissions)	1/2

Setting the scope 3 boundary:

Map your supply chain during a typical time frame

Get a rough estimate of all activities before you exclude any

1. Create a list of activities
2. List purchased goods & services
3. List & rank suppliers

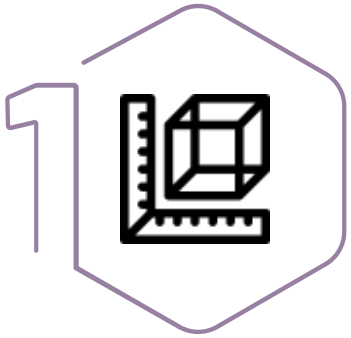
Priority criteria

Criteria	Description
Size	Significant contribution to organisation's scope 3 emissions
Influence	Strong influence over emission reduction
Risk	Contribution to organizational risk exposure (e.g., regulatory, reputational risk)
Stakeholders	Deemed critical by key stakeholders

Source: GHG protocol scope 3 standard.

Real-life example: Freight transport of relief items

Steps for using the Humanitarian Carbon Calculator (HCC)



Look for the unit used in the HCC

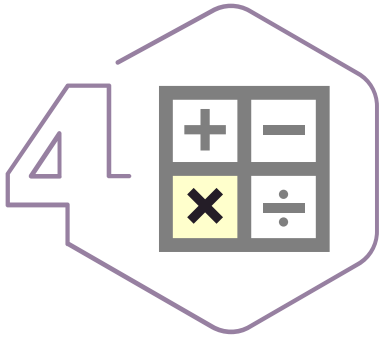
ton.kms

Search for relevant columns in data sheet

weight + distance

Undertaked any needed conversions

Kgs >> Ton



Multiply with correct emisión factor

Enter data into HCC

Your turn: Calculate freight emissions

1 **In the "Licence plate" tab, look for the truck with plate VZI-375. What data do you need to calculate your associated GHG emissions?**

2 points

Your turn: Calculate freight emissions

DATA	LICENCE PLATE	VEHICLE TYPE	DISTANCE IN KM	TOTAL KGS	NAME OF PROJECT
1/14/2025	VCC-493	DOUBLE-DECKER TRUCK 15-20 TONS	135	10,862.5	2. APOYO A VICTIMAS DE LA
1/14/2025	WRD-390	TURBO	30	3,041.5	2. APOYO A VICTIMAS DE LA
1/19/2025	ZDA-402	SINGLE CARGO TRUCK 8-10 TONS	384	8,924.5	2. APOYO A VICTIMAS DE LA
1/19/2025	VZI-375	DOUBLE-DECKER TRUCK 15-20 TONS	428	17,279.1	2. APOYO A VICTIMAS DE LA

2 **Do you need to do anything with the data before you can use it to calculate emissions? If so, what? How do you find this out?**

3 points

Your turn: Calculate freight emissions

DATA	LICENCE PLATE	VEHICLE TYPE	DISTANCE IN KM	TOTAL KGS	NAME OF PROJECT
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kgCO2e/ton.km
kgCO2e/ton.km

1. Convert kilograms to tons: 17,279.1 kilograms = 19.05 tons
2. Multiply the distance by the weight: 428 * 19.05 = 8,153.4 tons.kilometers

3 **In the HCC, which tab do you need to use to calculate emissions?**

1 point

Your turn: Calculate freight emissions

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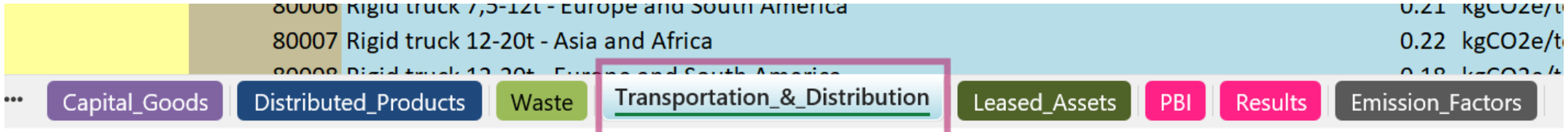

4 **What emission factor do you need to calculate emissions?**

1 point

Your turn: Calculate freight emissions

DATA	LICENCE PLATE	VEHICLE TYPE	DISTANCE IN KM	TOTAL KGS	NAME OF PROJECT
1/14/2025	VCC-493	DOUBLE-DECKER TRUCK 15-20 TONS	135	10,862.5	2. APOYO A VICTIMAS DE LA
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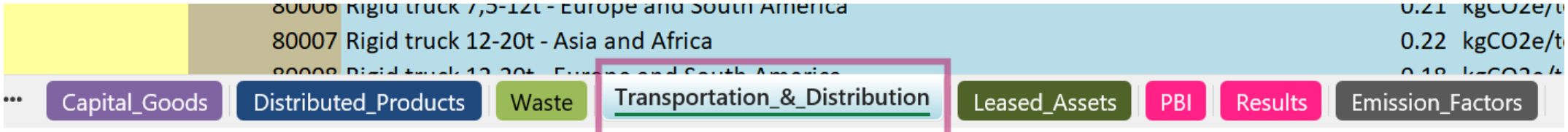

80006	Rigid truck 7,5-12t - Europe and South America	0.21	kgCO2e/ton.km
80007	Rigid truck 12-20t - Asia and Africa	0.22	kgCO2e/ton.km
80008	Rigid truck 12-20t - Europe and South America	0.18	kgCO2e/ton.km
80009	Rigid truck 20-26t - Asia and Africa	0.16	kgCO2e/ton.km

5 **What are the GHG emissions for this trip?**

2 points

Your turn: Calculate freight emissions

DATA	LICENCE PLATE	VEHICLE TYPE	DISTANCE IN KM	TOTAL KGS	NAME OF PROJECT
1/14/2025	VCC-493	DOUBLE-DECKER TRUCK 15-20 TONS	135	10,862.5	2. APOYO A VICTIMAS DE LA
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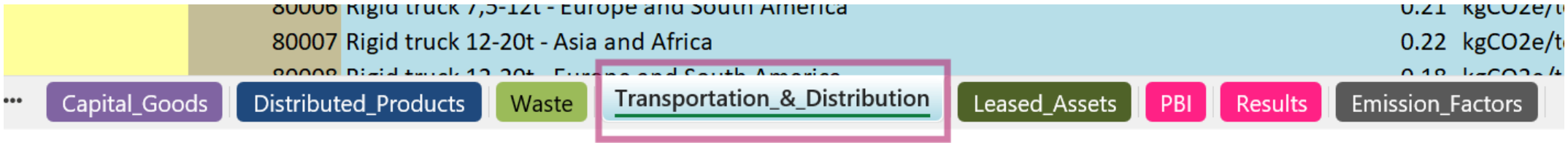

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80009	Rigid truck 20-26t - Asia and Africa	0.16	kgCO2e/ton.km

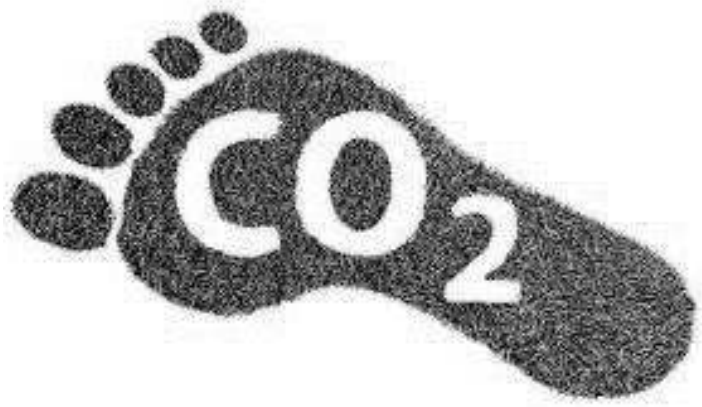
Multiply tons.kilometers by emission factor:
8153.40*0.18=1459.46 kilograms CO2e

Plan international: Centralizing collecting carbon data

Dare Ologe
Global Environmental Specialist
Plan International

Centralising Carbon Data Collection

GHG Accounting at Plan International



Background

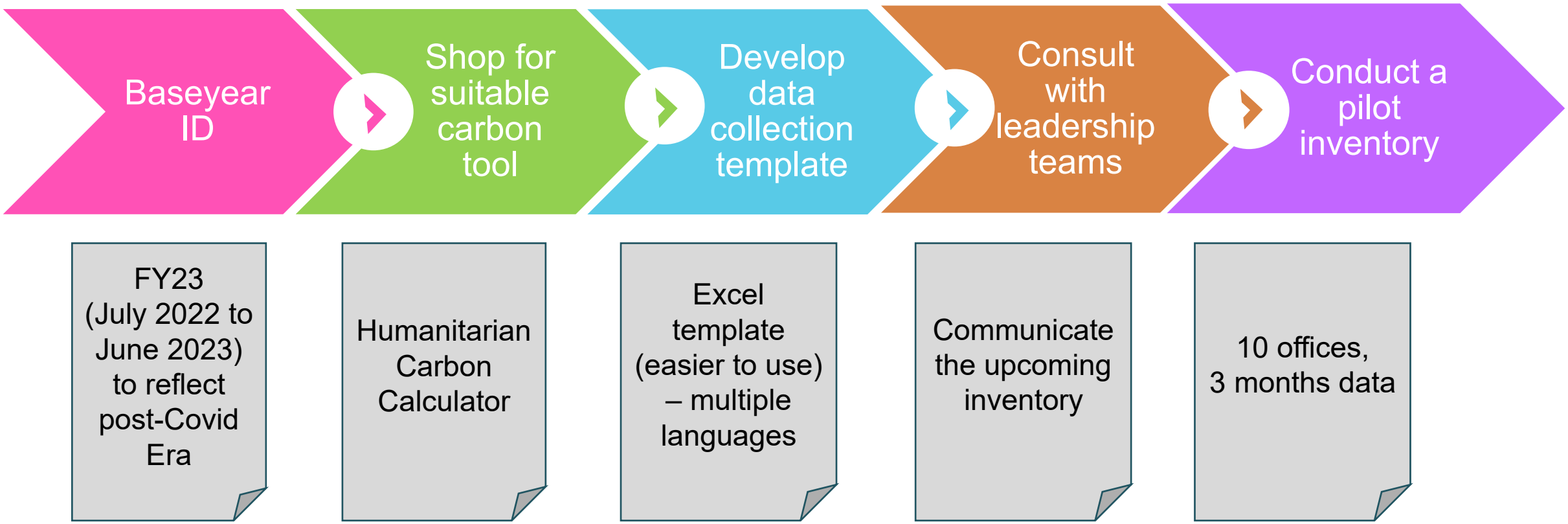
Plan International – The organisation

- Offices scattered across about 80 countries around the globe
  - Country Offices
  - National Organisations
  - Global Hub

- Global Policy on the Environment release in 2022
  - Annual tracking of GHG emissions
  - 55% reduction target by FY31
  - Screen projects for impacts

- Decentralised procurement
  - Goods & service procurement at country level
  - SAP ERP
  - Tracpoint

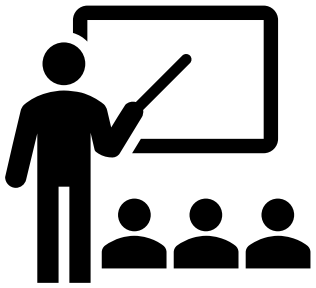
Preparatory steps



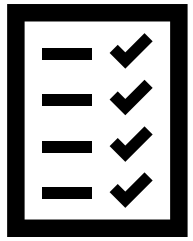
Baseline Inventory Process

Establishing Green Teams per location

Training of the teams in batches



Data collection exercise



Carbon Tool Calculations/Analysis

Challenges and walk-around

- Competing tasks
- Restructuring across the organisation
- Data outside of the ERP system
- Data in the unsuitable formats
- Internal resistance to change

Don’t let “perfect” be the enemy of good

dare.ologe@plan-international.org

British Red Cross' Carbon Footprint

Adele Perkins
Senior Project Manager
British Red Cross

Reduce our carbon footprint to net zero

BRC Green Response Programme

BRC Data Approach – high level

Discovery - scope 1 and 2 data (identify the areas we have control over)

- **Gather source data** using the relevant utility bills, expenses information or additional data collection protocols for baseline year (2019) and nearest full reporting year (2023 or 2024).

Research and Calculate

- Do some **research** – learn the lingo (Science Based Targets Initiative, Climate Charter , & Greenhouse Gas Protocol)
- Save or **organise your data** into a central location, input your data into a spreadsheet(s).
- **Start calculating**. The UK Government has a handy greenhouse gas conversion factors document you can use, plus we also used the humanitarian carbon calculator.

The equation you want to end up with is:

- Total **energy consumption** (fuel, electricity, miles travelled etc.) **x emission factors** (fuel, electricity, travel mode etc.) = carbon dioxide equivalent (CO2e)
- Develop processes for the ongoing calculation and presentation of scope 1 & 2 data (report against strategy goals quarterly)

Stretch into **scope 3** emissions specific to your organisation

- Gather source data : business transport/travel, waste, cloud storage and purchase goods and services. Choose what is relevant to your organisation.
- Carbon accounting calculates an organisation's greenhouse gas (GHG) emissions using two methodologies: spend-based and activity-based. Recommendation to use a hybrid approach combining spend-based and activity-based methods.

BRC GHG Emissions data approach

Upstream activities

Scope 3 (Indirect)

- Purchased Goods & Services
- Purchased Capital Goods
- Fuel & Energy (NOT included in scope 1 & 2)
- Transportation & Distribution
- Upstream leased assets
- Waste generated
- Business Travel
- Employee commuting

Scope 2 (Indirect)

- Purchased energy (electricity & gas)
- Purchased steam, heat and cooling

Downstream activities

Scope 1 (Direct)

- Direct emissions from facilities
- Direct emissions from vehicles
- Refrigerant gases (AC)

Scope 3 (Indirect)

- Funds transferred to National Societies
- Use of sold products
- Leased assets
- Investments
- Transportation and distribution
- Franchises
- End of life treatment

- Data available and collated
- Data available - to be reviewed Q4 2025
- Research required, potential to use spend based methodology

Sharing our results - Annual Trustees Report 2024

In 2025 the BRC published a specific page on carbon in our 2024 Annual Trustees Report.

This publicly shows our commitment and progress to the Net Zero goals that we've set and shares information on the projects and changes we're implementing to help us cut carbon.

Our organisation

Reducing our carbon footprint

As a humanitarian organisation, it is vital that we mitigate our impact on the planet. We are committed to reducing our carbon footprint. We are focusing on the areas where we have the most control, allowing us to optimise our operations and enhance our efficiency.

Focusing our efforts

In 2024, we introduced processes and systems that will enable us to confidently measure our progress in reducing our carbon footprint. We have focused our efforts on 'scope one' and 'scope two' emissions, where we have direct control. We have now established a complete data set of our scope one and two emissions to enable us to measure them accurately and report on our findings transparently. We will expand reporting of 'scope three' emissions beyond business travel in the next two years.

- **Scope one** emissions are those we generate directly by, for instance, running our vehicles.
- **Scope two** emissions are those caused by the energy produced on our behalf, eg electricity.
- **Scope three** emissions are all indirect emissions that occur from activities such as employees' commuting, waste disposal, and the production of purchased goods and services.

Our progress last year

We continued to reduce our energy consumption (gas and electricity in our properties, and fuel for our fleet) by 15%. Additionally, by switching to a green energy tariff for electricity, we achieved a 37% reduction in our carbon emissions across scopes one and two, and a 60% reduction compared to our 2019 baseline.

We are committed to embedding environmental sustainability into the way we work. This involves integrating sustainable practices across all our operations to ensure we minimise our environmental impact.

Key initiatives last year include:

Reviewing our use of our properties

We reviewed our property portfolio to ensure efficient use of space. Since 2019, our property footprint has reduced by approximately 25% as we continue with hybrid working and the utilisation of digital technology. Analysing the carbon footprint of each property will help us make informed decisions regarding property decarbonisation in 2025 and beyond.

Reducing our electricity usage

We installed energy-efficient lighting in all our shops, resulting in a 6% reduction in electricity usage. Additionally, we have transitioned to using 100% renewable electricity.

Essential travel

We observed a slight increase in our business travel (air and rail) compared to 2023. However, this remains significantly lower (46%) than pre-pandemic levels (2,470 tCO_2e in 2019 and 1,327 tCO_2e in 2024). We will continue to remind staff to ensure that all travel must be for essential purposes.

Reducing textile waste

Our shops played a crucial role in reducing textile waste across the UK last year. We are committed to using resources more efficiently by prioritising the reuse, repair and repurposing of our new and donated goods. By selling and reusing second-hand clothes, and recycling unsold stock through third parties, we helped reduce landfill waste. These third parties work in line with our goals and values to keep as few materials as possible from ending up in landfill. Additionally, we continue to use FSC-certified paper bags in our shops.

IT

We improved our processes for repurposing and recycling IT equipment and mobile phones. Last year, the energy saved from this work was equivalent to the annual energy supplied to 115 homes.

Achieving ISO 20121 Event Sustainability Certification

The Red Cross Training's ongoing sustainability commitments range from due diligence assessments on all suppliers to waste recycling options provided at internal training venues.

Streamlined Energy and Carbon Report 2024

Measure	Detail	Unit	2019 (baseline)	2023	2024	2024 vs (baseline)	2024 vs 2023
Energy consumption	used to calculate emissions below	kWh	15,284,687	10,424,298	8,837,078	42%	15.2%
Total number of employees	used to normalise data	FTE	3,354	3,548	3,286	2%	7.4%
Natural gas		kWh	6,186,009	4,260,557	3,048,673	51%	28%
Petrol		L	29,360	85,045	85,226	-190%	-0.2%
Diesel		L	848,119	525,330	416,015	51%	21%
Electricity		kWh	9,017,837	6,111,507	5,737,230	36%	6%
Scope 1	Gas	tCO_2e	1,137	778	558	51%	28%
Scope 1	Transport/fleet	tCO_2e	2,188	1,498	1,223	44%	18%
Scope 2	Electricity*	tCO_2e	2,305	1,266	445	81%	65%
Scope 3	Transmission and distribution of all Scope 1 & 2	tCO_2e	1,462	1,027	774	47%	25%
Scope 3	Grey fleet	tCO_2e	1,761	970	949	46%	3%
Scope 3	Air travel	tCO_2e	2,108	1,234	1,241	41%	-1%
Scope 3	Rail travel	tCO_2e	362	82	86	76%	-5%
Total carbon emissions	Scope 1 & Scope 2	tCO_2e	5,628	3,541	2,226	60%	37%
Total gross carbon emissions per FTE	Scope 1 & 2 per full-time employee	tCO_2e/FTE	1.68	1.00	0.68	60%	32.1%
Total gross carbon emissions	Scope 1, 2 and subset of Scope 3	tCO_2e	11,321	6,859	5,275	53%	23%
Total gross carbon emissions per FTE	Scope 1, 2 and subset Scope 3 per full-time employee	tCO_2e/FTE	3.38	1.93	1.62	52%	17%

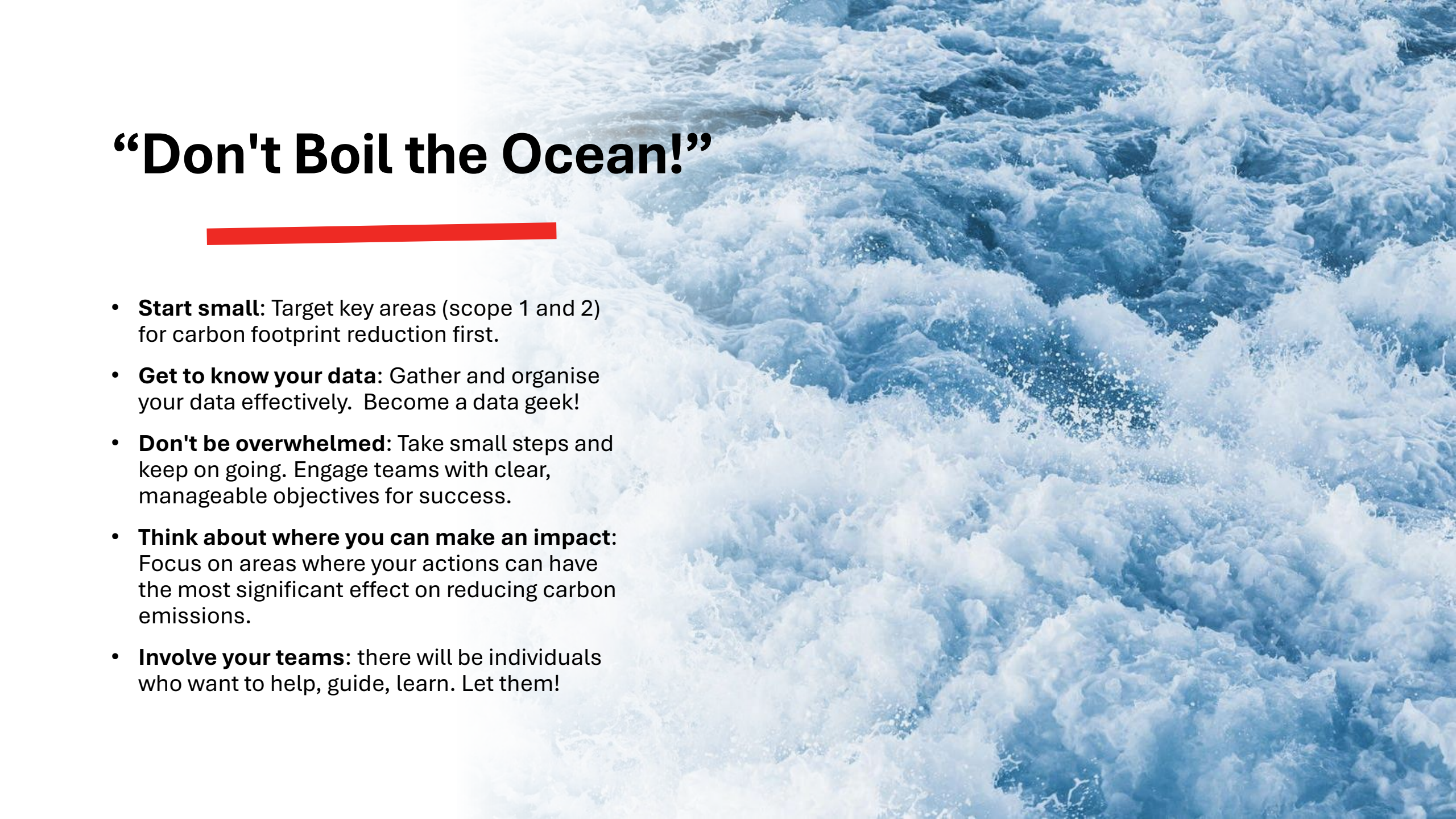
Notes and assumptions

FTE refers to "total average number of full-time equivalent (FTE) staff.
The actual number of staff (headcount) as at 31 December 2024 was 3,753.
tCO_2e refers to "tonnes of carbon dioxide equivalent.
An "operational control" approach has been used to define the Greenhouse Gas emissions boundary and does not reflect the

method used for 2024 Q2 to Q4 only (to reflect the specific electricity purchased, rather than the local grid's average intensity, and demonstrate our commitment to green energy choices of a renewable energy contract).
Where there was missing raw original data in the re-calculation of the baseline year (2019), previously reported figures were used.
All emissions factors are taken from Green House Gas Conversion Factors for Company Reporting.

“Don't Boil the Ocean!”

- **Start small**: Target key areas (scope 1 and 2) for carbon footprint reduction first.
- **Get to know your data**: Gather and organise your data effectively. Become a data geek!
- **Don't be overwhelmed**: Take small steps and keep on going. Engage teams with clear, manageable objectives for success.
- **Think about where you can make an impact**: Focus on areas where your actions can have the most significant effect on reducing carbon emissions.
- **Involve your teams**: there will be individuals who want to help, guide, learn. Let them!



The journey to Net Zero... (2025 onwards)

Reduce consumption

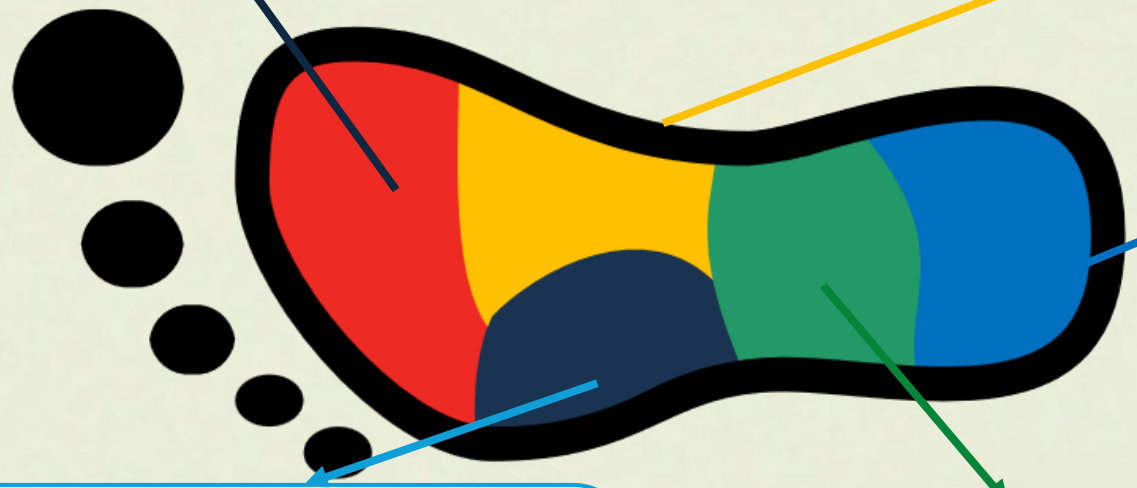
We need to keep reducing our energy use where possible and develop a roadmap to reduce waste to landfill.

Get more data

Expland carbon reporting to build our scope 3 carbon data to inform key operational decision making.

Green Responders

Launch of the new Green Responders Network – encourage staff and volunteers to get involved!



Optimise procurement, property & fleet

Develop a roadmap to decarbonise our fleet AND continue to decarbonise our properties alongside setting targets for sustainable procurement.

Policy and Plan

Embed Environmental Sustainability policy and review and build on the Carbon Reduction plan.

LOGISTICS CLUSTER

WREC
Environmental Sustainability in Humanitarian Supply Chain

THANK YOU!

Global.WREC@wfp.org

LOGISTICS CLUSTER · DRC DANISH REFUGEE COUNCIL · IFRC · Save the Children · WFP