Climate Action Accelerator

ROADMAP FOR HALVING EMISSIONS IN THE HUMANITARIAN SECTOR BY 2030

AN OPERATIONAL PLAYBOOK FOR ORGANISATIONS

JANUARY 2025   VERSION 2.0

ABOUT THE CLIMATE ACTION ACCELERATOR

The Climate Action Accelerator (CAA) is a Geneva-based not-for-profit initiative created in 2020 with the aim of leveraging a critical mass of high human impact organisations in order to scale up climate solutions, contribute to greater resilience, and ultimately limit global warming to well below 2°C, and avoid adverse impact on communities around the world. The overall goal is to help shift the aid, health and higher education sectors towards a radical transformation of their practices, halving greenhouse gas (GHG) emissions by 2030 on a "net zero" trajectory in line with the Paris Agreement, and transitioning to low-carbon, resilient, sustainable models.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

Cover photo credit: ©Seyba Keita/ ALIMA (The Alliance for International Medical Action). Septembre 2022, Dioila (Mali).

ACRONYMS

ACTED	Agency for Technical Cooperation and Development		**kWh**	Kilowatt hours
ALIMA	Alliance for International Medical Action		**kWp**	kilowatt peak
BHA	Bureau for Humanitarian Assistance		**LCA**	Life Cycle Analysis
CCES	Centralised Clean Energy Service		**LED**	Light-emitting diode
CDCS	Crisis Centre of the French Ministry of Europe and Foreign Affairs		**LMICs**	Low- and middle-income countries
CDP	Carbon Disclosure Project		**LNA**	Local and national actors
CF	Carbon Footprint		**MSF**	Médecins Sans Frontières
CO2-eq	Carbon Dioxide Equivalent		**MPTF**	Multi-Partner Trust Fund
CRESH	Climate Resilient and Environmentally Sustainable Health Facilities		**NFI**	Non food items
DG ECHO	Directorate-General for European Civil Protection and Civil Aid Operations		**NGOs**	Non-Governmental actors
DRC	Democratic Republic of the Congo		**NHS**	UK's National Health Service
ERI	Exponential Roadmap Initiative		**NORCAP**	Norwegian capacity to international operations
ESAT	Environment Self-Assessment Tool		**PV**	photovoltaic
ESF	Electriciens Sans Frontières		**RSPO**	Roundtable on Sustainable Palm Oil
EU	European Union		**RUTF**	Ready-to-use therapeutic food
FAO	Food and Agriculture Organization of the United Nations		**SBTi**	Science based Targets initiative
FCDO	Foreign, Commonwealth & Development Office		**SE**	Structural Effects
GFFO	German Federal Foreign Office		**SMEs**	Small and Medium Enterprises
GHG	Greenhouse gas emissions		**tCO2**	tons carbon dioxide
GPA	Global Platform for Action		**TNC**	The Nature Conservancy
HFC	Hydrofluorocarbon		**UN**	United Nations
HGWP	High Global Warming Potential		**UNDP**	United Nations Development Programme
IASC	Inter-Agency Standing Committee		**UNHCR**	United Nations High Commissioner for Refugees
ICRC	International Committee of the Red Cross		**UNICEF**	United Nations Children's Fund
IFRC	International Federation of Red Cross and Red Crescent Societies		**UNITAR**	United Nations Institute for Training and Research
IMF	International Monetary Fund		**USAID**	United States Agency for International Development
INGOs	International NGOs		**VCA**	Vulnerability and Capacity Assessment
IOM	International Organization for Migration		**WFP**	The World Food Programme
IPCC	Inter-governmental Panel on Climate Change		**WHO**	World Health Organization
IT	Information technology		**WMBC**	We Mean Business Coalition
JI	Joint Initiative for Sustainable Humanitarian Assistance Packaging Waste Management		**WREC**	Environmental Sustainability in Humanitarian Logistics project
			WWF	Worldwide Fund for Nature

INTRODUCTION

The climate emergency is one of the greatest challenges of our time and is recognised as an 'existential threat'[1] to human society. More frequent extreme weather events, such as droughts, flooding, tropical storms and heatwaves are causing conflict, displacement, migration, damage to essential infrastructure, disruption to food and water supplies, and public health emergencies.[2]

Humanity is dangerously close to breaching multiple tipping points. But there is still a window of opportunity for action.

Increasingly faced with the unprecedented challenges posed by climate-related disasters, humanitarian organisations have committed to being part of the solution. In the last 4 years, major commitments have been made to improve how the climate and the environment are integrated into humanitarian action; over 450 organisations have already signed the Climate and Environment Charter for Humanitarian Organizations,[3] which is supported by 13 donors. The donor community has also come together under the 'Humanitarian Aid Donors' Declaration on Climate and Environment'.[4] Most recently, the Inter-Agency Standing Committee (IASC) produced a guidance document on 'Environmental Responsibility in Humanitarian Operations',[5] one of the first sector-wide policy frameworks for climate and environmental commitments. These different developments send a strong signal that the humanitarian community has grasped the importance of making climate a priority.

The scientific consensus is clear that only **a drastic reduction in greenhouse gas (GHG) emissions** global temperature +1.5°C, the Paris Agreement emissions by 2030[6] adopt and implement ambitious emissions reduction strategies

But how do we get from where we are now to where we need to be in 2030?

More and more humanitarian organisations are looking to operationalise their commitments and reduce their climate and environmental impact, but the majority of humanitarian actors still report a technical operational gap slowing down their efforts. They are looking for climate solutions and approaches that are relevant to their realities as humanitarians.

Based on its experience working with its partner organisations in the humanitarian sector since 2020, the Climate Action Accelerator has developed a consistent, systematic, quantified, evidenced-based and principled approach to effective emissions reduction.[7] This provides organisations with a compass to help them find ways to operationalise their climate commitments while guiding the sector towards effective emissions reduction, so that can contribute to the Paris Agreement goal of halving GHG emissions by 2030.

This 'Playbook' summarises key steps towards building a roadmap for effective emissions reduction, solutions (actions with an impact on sources of emissions, such as litres of fuel, number of flights, etc.), methodological tips, co-benefit of climate solutions, and the findings from financial impact assessments. It also includes good practices from across the sector and beyond.

Navigating through the practical elements introduced in this Playbook will hopefully also help highlight co-benefits, or **areas where climate action can also contribute to humanitarian goals:**

∴ By reducing their dependency on fossil fuels, organisations **increase their resilience and their ability to adapt** when availability and prices become more volatile. They are able to avoid the negative impact of rising fuel prices on operational budgets.

∴ By integrating environmental sustainability into their programmes, they **improve the quality of the assistance they provide**, without restricting their capacity to act.

This Playbook identifies four pillars, or courses of action, that organisations can follow to develop an effective emissions reduction strategy:

● **PILLAR 1: Adopting a principles-based approach**

● **PILLAR 2: Focusing on top solutions**

● **PILLAR 3: Being a driver of change – transformation levers**

● **PILLAR 4: Assessing the financial impact**

Its content will continue to evolve. This initial version will be augmented as knowledge and experience in effective emissions reduction in the humanitarian sector deepen.

Radical transformation is needed.
This is where to get started.

WHO IS THIS PLAYBOOK FOR?

The devastating consequences of global warming on humanity and the planet are accelerating at an extremely worrying pace, but the Climate Action Accelerator firmly believes that everyone has both the ability to make a difference, and a responsibility to do what they can.

This playbook is primarily aimed at humanitarian organisations, and especially senior management, sustainability managers, and technical experts. It is a simple, practical handbook to help organisations in their initial efforts to halve carbon emissions.

Though local and national actors (LNAs), including **local NGOs,**[8] have a crucial role to play in transforming the humanitarian sector in relation to the climate, content of the Playbook primarily concerns **international NGOs (INGOs)** whose GHG emissions are much higher due to international travel, international freight and large-scale international supply chains.

At the same time, **UN humanitarian agencies and large international organisations** are also strongly encouraged to use the Playbook's approach, principles and priority solutions. It will help them improve emissions reduction efforts for their own operations, and make the transition towards climate- and nature-smart portfolios, thereby contributing to accelerate the transformation of their sub-grantees and partners that they work with. As 50% of international humanitarian funds are consistently channelled through UN agencies, they have an essential role to play in the sector's transformation.

Donors and policymakers will also be able to use the Playbook as a reference to identify the climate solutions they should deploy, fund and support as a priority, and the principles they should adopt to guide effective emissions reduction strategies.

The solutions and approaches in the Playbook were developed collectively by the Climate Action Accelerator and its partner organisations, and have been specifically tailored for humanitarian actors. However, a number of them can be used generically. **Local/host governments and private sector companie**s who work with the humanitarian sector and/or in low- and middle-income countries (LMICs) may find it inspiring.

By openly sharing lessons from pilot projects developed with humanitarian partners, the objective of the Climate Action Accelerator is to amplify change within the humanitarian sector and beyond, initiating a snowball effect into a radical transformation of collective practice.

1.

PILLAR 1:
ADOPTING A PRINCIPLES BASED APPROACH

GUIDING PRINCIPLES FOR EFFECTIVE EMISSIONS REDUCTION

Over the past decade, recognised conceptual frameworks & best practices for climate action have emerged, oriented towards setting science-based targets for emissions reduction, and using recommendations from the Intergovernmental Panel on Climate Change (IPCC) latest report[9] and from the GHG Protocol. Adopting the following set of principles allows humanitarian organisations to be part of the global effort to genuinely address the climate emergency and limit global warming below 2C, as close as possible to 1.5°C above pre-industrial levels.

HARMONISATION LEADING TO EFFECTIVE REDUCTION PLANS

Adopting and implementing a common set of principles allows emissions reduction strategies to be more consistent and effective. It means that organisations can:

- Adopt standardised frameworks for measuring and reducing GHG emissions.
- Align their practices with international standards and best practices (GHG protocol, IPCC, etc.).
- Benefit from the related methodological guidance, adapted to the specific challenges of the sector.
- Assess the volume and nature of GHG emissions, thereby providing solid grounds for emissions reduction plans.
- Improve data quality, and engage in coordinated data collection and monitoring efforts
- Operationalise the Climate and Environment Charter for Humanitarian Organizations (Commitment #2 on impact reduction and #5 on collaboration).

A COMPASS FOR ACCELERATION

Effective emissions reduction requires a multi-pronged approach. Promoting the use of guiding principles will help to spread best practice among humanitarian organisations. This will maximise the volume of emissions avoided and will pave the way for coordinated monitoring and reporting on emissions.

PRINCIPLES

GENERIC TOOLS

CAPACITY BUILDING

QUALITY CONTROL
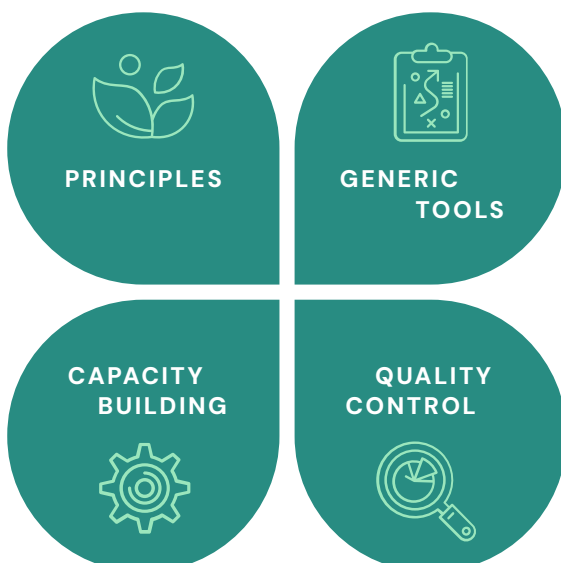
9 GUIDING PRINCIPLES FOR EFFECTIVE EMISSIONS REDUCTION

1. **TAKE RESPONSIBILITY ON WHAT YOU CONTROL AND CAN INFLUENCE**

- **Take immediate leadership and action** wherever it is in the power of humanitarian organisations and donors to do so.
- **Try to influence others** within their networks and suppliers to do the same.

2. **ENGAGE IN RADICAL COLLABORATION WITH OTHERS**

- **Engage in radical collaboration to learn from others** inside and beyond the humanitarian sector, in particular local, national and international actors, but also public institutions and private businesses engaged in a similar effort. This may include technical partnerships to access in-depth knowledge and experience on a given subject; operational partnerships to accelerate the deployment of solutions; or strategic alliances to create communities of action.
- **Remain committed** as highlighted in the Climate and Environment Charter for Humanitarian Organisations,[10] to openly share the knowledge and insights that will contribute to the development of people-centred, climate-resilient and sustainable operations.

3. **REINFORCE OR MAINTAIN SOCIAL GOALS AND HUMANITARIAN PRINCIPLES**

Reducing GHG emissions should not compromise organisations' ability to **deliver people-centred humanitarian assistance** according to their goals and mandate:

- Maintaining their ability to provide timely and principled humanitarian assistance
- Securing the quantity and quality of their programmes
- Confirming their adherence to humanitarian principles, especially the 'Do No Harm' principle.
- Reducing emissions brings co-benefits for more effective humanitarian assistance
- Being aware of overlaps with the global humanitarian agenda (Localization, Grand Bargain, Triple Nexus).

❯ **It's about changing how organisations do things – by operating within planetary boundaries, not what they do.**

4. **SET QUANTIFIED TARGETS AND MILESTONES**

Each organisation should **commit to halving GHG emissions by 2030 on a path to net zero and adopting specific quantified targets for each source of emissions:**

- Calculate and monitor the carbon footprint.
- Define reduction targets in absolute terms.
- Base targets on identified solutions and actions for the main sources of emissions.
- Formulate effective reduction plans.
- Set quantified intermediary milestones on the way to 2030 and beyond.

By adopting quantified, science-based targets and best practice from the private sector, such as the Science Based Targets initiative (SBTi)[11], they will contribute to bringing the humanitarian sector to operate within planetary limits, in line with the goals of the Paris Agreement and the recommendations of the IPCC.[12]

5. **EXERCISE INTEGRITY**

- **Comply with GHG Protocol standards.**
- **Include scopes 1, 2, and 3** in targets for GHG emissions reduction, which notably means that indirect emissions from the supply chain or use of distributed items are included.
- **Take into consideration the full operational perimeter** of their activities, including programmes delegated to or implemented by partners.
- **Do not count carbon credits as part of the primary inventory of emissions, nor use offsetting to support claim to carbon neutrality.** Instead, prioritize emissions reduction initiatives over offsetting. If offsets are being used, use high quality selection criteria and make sure they are appropriately priced.

6. **COMMIT TO TRANSPARENCY**

- **Monitor and report on emissions annually,** including progress made against target – data quality should improve with time and inform more precise mitigation and adaptation actions.
- **Share data publicly,** especially with international and local partners, donors, and local communities.

7. **FAVOR INTEGRATED APPROACHES TO CLIMATE AND ENVIRONMENT**

Taking into account the various planetary boundaries:

- **Promote integrated approaches** that have a positive impact on biodiversity and the local environment, notably air, water and soil quality.
- Ensure that **climate solutions and actions do no harm the environment** or minimise harm to the greatest extent possible.
- Favour solutions that **simultaneously address adaptation, resilience and mitigation challenges** and bear multiple co-benefits for affected populations and organisations.

8. **MAKE THE BEST USE OF RESOURCES, LIMITING CONSUMPTION AS AND WHEN RELEVANT**

Considering the primacy of delivering qualitative, effective humanitarian assistance, but also the extreme tension on sustainable resources, organisations should embrace a mindset of moderation and sufficiency in their organisational model and consumption of goods and services to avoid emissions, where possible, or other negative environmental impacts. In particular, they should:

- **Prioritise the reduction of transport needs,** then shift to alternative transport means
- **Prioritise measures that favour the efficient use of resources,** and avoid waste in order to limit procurement to goods and services to those that are necessary to fulfil the mission, then shift to alternative products & services.
- **Prioritise the reduction of energy consumption,** then shift to renewable energy.

9. **EMBARK YOUR COMMUNITY**

- Demonstrate, and **actively encourage peers, partner organisations and professional networks** to adopt a principles-based approach to reducing their carbon and environmental footprint.
- **Prioritise environmental awareness among staff** – provide them with opportunities to contribute to the cultural shift and foster a culture of learning and adaptation, building expertise, tools and methods collectively.
- Encourage, initiate, join, or contribute to **collective capacity-building efforts** to accelerate knowledge-sharing and achieve economies of scale.

FIVE STEPS FOR DEVELOPING AN EMISSIONS REDUCTION ROADMAP

The following section describes the Climate Action Accelerator's approach to roadmap development. The methodology and steps were initially developed during a pilot project carried out with ALIMA in 2021–2022[13] and referenced in DG ECHO's guidance for operationalising minimal requirements.[14] It was then further expanded based on lessons learned by the Climate Action Accelerator from supporting 18 humanitarian partners to establish roadmaps.

A roadmap is a strategic plan that defines emissions reduction goals and desired outcomes, solutions and actions needed, and ways to make it happen, including from a financial perspective. It is not a declaration of intent or a set of guidelines, but rather a tool for decision-making and action.

It should not be seen as a prediction of the future state of an organisation, but rather as a projection of current trends to allow the most promising actions to be selected. Organisations should regularly review the assumptions used to define the trajectory, and update data input in the model as they become increasingly available. They should continue to monitor that the measures implemented have the desired outcomes.

According to the IPCC, humanity's remaining carbon budget is limited.[15] Only dynamic approaches using data-based trajectories will allow emissions to be effectively reduced, balancing them out with operational growth. A quantified approach to emissions reduction increases the effectiveness and performance of emissions reduction plans.

OUR OVERALL METHODOLOGY*

STEPS IN THE FOOTPRINT ANALYSIS

Resources & Footprint Hypothesis

Scope definition

Data collection and results

STEPS IN THE ROADMAP CONSTRUCTION

1 **STATE OF AFFAIRS**

2 **SOLUTIONS PROPOSALS**

List of solution 1st draft

3 **ASSESSING SOLUTIONS FEASIBILITY AND FIXING TARGETS**

Final list of solution

There are five steps involved in building a roadmap. These can be seen as generic milestones that can be applied to all organisations in the humanitarian sector. Depending on the internal culture and set-up of the organisation, the process may be more or less participatory, but it should always involve all the key stakeholders who will be impacted by and will be drivers of the transformation. The level of detail involved at each step of the process very much depends on resources, the preferred timeline, data availability, and whether or not there has been a previous experience aimed at reducing the organisation's climate and environmental impact.

Regular, public communication about commitments and the progress made on the roadmap is a prerequisite for success.

Trajectory modeling & footprint report

Roadmap KPIs and publication

4

5

TRAJECTORY AND COSTS

Model adjustment and financial estimates

IMPLEMENTATION FRAMEWORK

Monitoring & continuous improvement
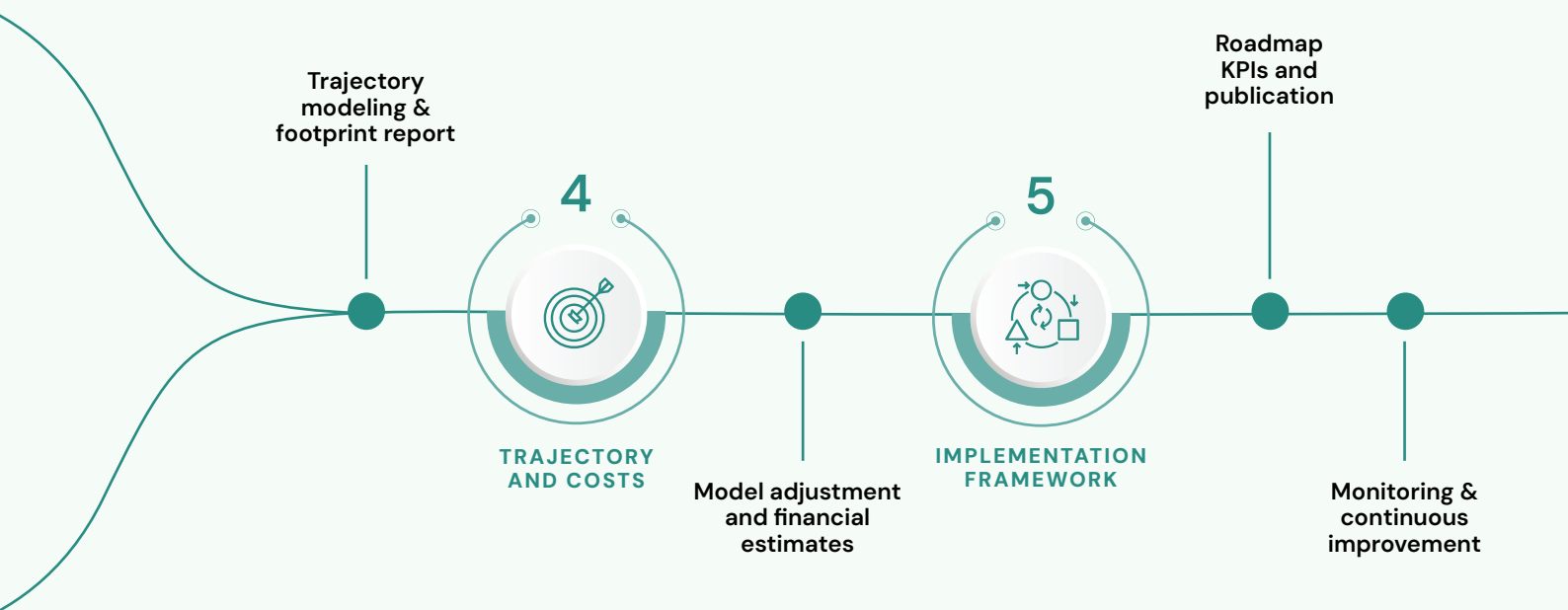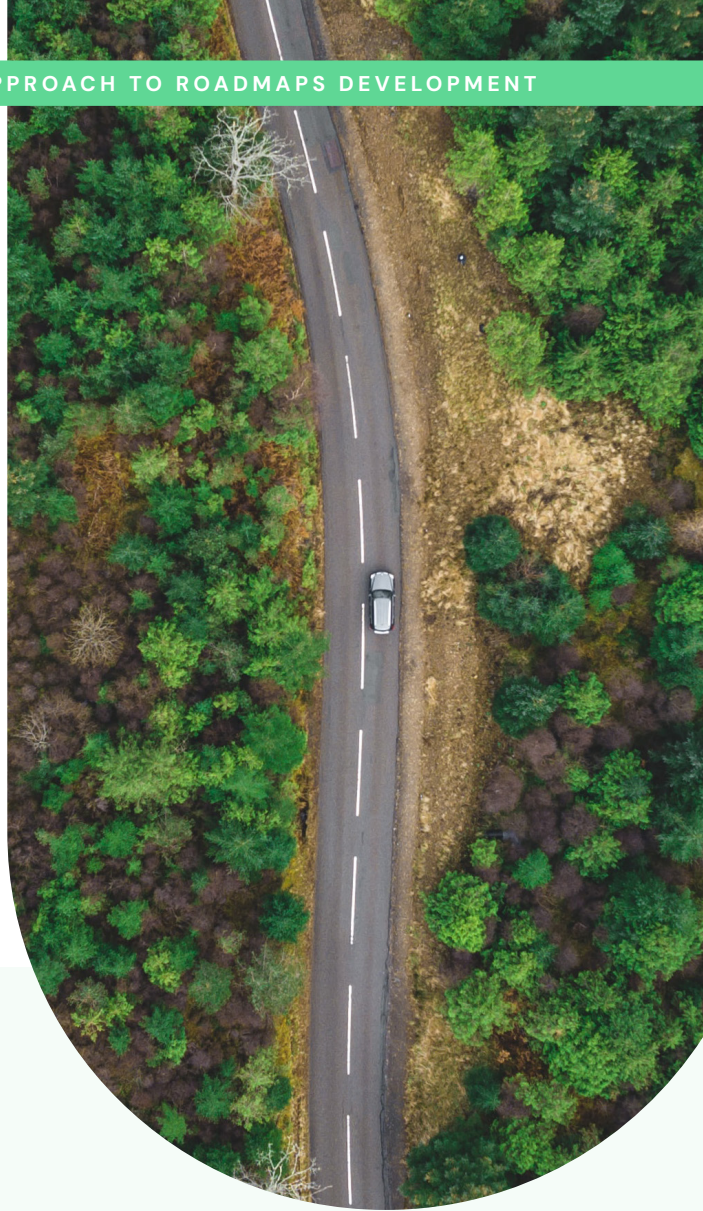
*a 9-12 months process

STEP 0: MEASURING THE ORGANISATION'S CARBON FOOTPRINT

Establishing an organisation's baseline carbon footprint (CF) provides the foundations for a quantified approach to emissions reduction. It allows quantitative targets and a trajectory for halving emissions by 2030 to be defined.

TIPS

- No need to wait for the CF to be finalised before starting the roadmap development process. It can be done in parallel.
- Use international standards from GHG Protocol[16], and IPCC recommendations (2023)[17] as a reference.
- Follow emerging best practices and include ALL emissions (including scope 3 emissions from supply chain) into the scope of the CF calculation, but not counting carbon offsetting in the primary inventory of emissions.
- Acknowledge that data collection, availability and quality (especially physical or activity data) will improve over time, and do not let imperfect data stop you.
- Be mindful that quantified approaches carry a certain level of uncertainty, especially in the first years.

STEP 1: PREPARING THE GROUND

1. SECURE THE COMMITMENT OF TOP MANAGEMENT FROM THE OUTSET:

- A clear commitment o adopt a quantified emissions reduction target aligned with the Paris Agreement goals should be made by the organisation's top management. They should make public statements about the adoption of a principles-based approach to effective emissions reduction **(see pillar I, Adopting a principles-based approach)**, reducing the risk of unsubstantiated claims to net zero.
- If top management does not make a commitment early on, there is a risk that the process will be longer and less ambitious.
- Top management should make it clear that the scope of the roadmap includes climate and environment, mitigation and resilience.

2. LAUNCH THE PROJECT INTERNALLY, AND SECURE DEDICATED RESOURCES:

- Set up dedicated project governance, including a steering committee and a project sponsor from the management team.
- Nominate a project manager/team and a data focal point who will be in charge of internal mobilisation, coordinating the roadmap development process and data collection across units.
- Consider internal communication to be of key importance during the definition and implementation of the roadmap.
- Be ready to invest resources and maintain commitment over several years. The roadmap development process can take between 9 and 12 months, but the implementation phase is just as important.
- Plan your financial resources in advance: on average, the climate and environmental roadmap costs 0,1% of the organisation's annual budget over a 7 year period **(see pillar IV, Assessing the financial impact).**[18]

3. STATE OF AFFAIRS

Existing projects and actions should be comprehensively mapped early on so that they can be taken into consideration in the roadmap development process.

STEP 2: IDENTIFYING SOLUTIONS

At this stage, organisations identify **a list of relevant solutions** that will need to be tailored to their specific needs.

TIPS

- **Some organisations may decide to use the Climate Action Accelerator's generic list of solutions as a starting point.**[19]
- **The process of identifying solutions can help to create awareness at the operational and programmatic levels (internal buy-in increase).**

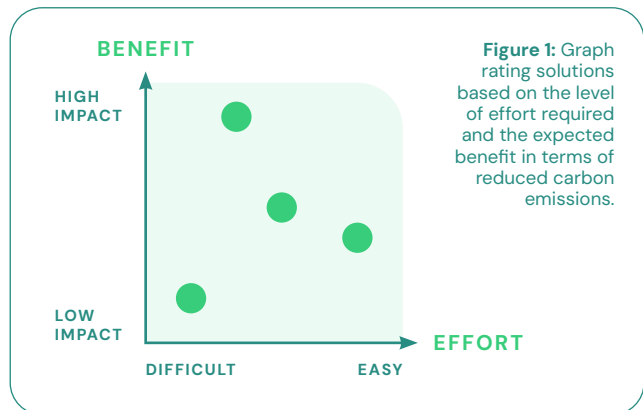# STEP 3: ASSESSING SOLUTIONS FEASIBILITY AND FIXING TARGETS

The solutions that have been identified are grouped by source of emissions or theme (energy, construction, supply, etc.), and then rated according to feasibility criteria. This can take place in dedicated, thematic workshops involving sustainability managers, thematic/technical experts and operational teams as/when needed.

FEASIBILITY CRITERIA FOR RATING SOLUTIONS

- Compatibility with humanitarian missions*
- Carbon reduction impact*
- Conditions for success*
- Human resources required (including skills and positions required)*
- Financial resources required and potential savings generated*
- Environmental footprint reduction impact
- Co-benefits (for the environment, local communities, etc.)

*Key criteria to focus on in the context of a simplified process.

High impact solutions should be prioritised (whether they require significant or limited effort): ➲

Figure 1: Graph rating solutions based on the level of effort required and the expected benefit in terms of reduced carbon emissions.

FIXING OBJECTIVES AND TARGETS

Fixing quantitative targets for each solution that has been identified is a critical step of the roadmap development process.

- Targets should not be considered as performance indicators but rather as practical scenarios for emissions reduction.
- Expressed both in absolute values and in relative terms.

Examples of quantitative targets:

- "Optimise fleet management": Reduce fuel consumption used in land travel by 30%.
- "Fly less and less emissive": Reduce the number of passenger kilometre by 35%
- "Shift from air freight to maritime, road or train": reallocate 25% of air freight to sea freight.

TIPS FOR FIXING TARGETS

- Whenever possible, targets should use physical/activity levers (passenger kilometer, KWh, etc.), rather than financial costs (especially for scope 1, scope 2 and business travel emissions). They should be formulated as simply as possible.
- Use the most up-to-date data for the reference year, avoiding exceptional years (COVID-19, etc...) and use quantitative and physical/activity data.
- Only use process-related targets when quantitative physical or activity data is unavailable.
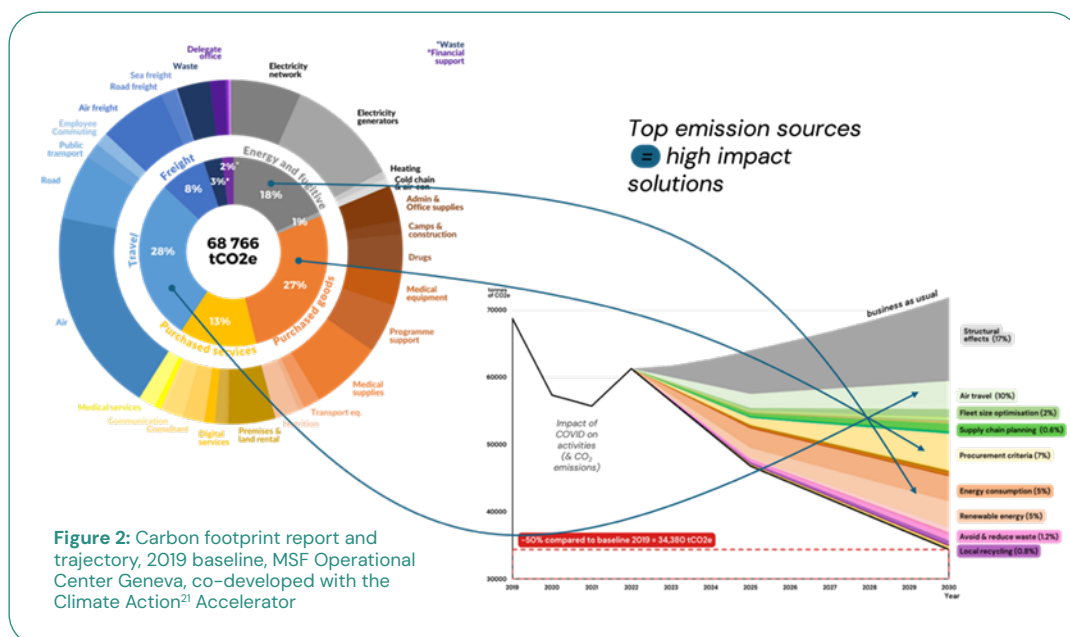
STEP 4: TRAJECTORY AND COSTS

Emissions reduction trajectories predict how the solutions identified, and the corresponding targets will allow emissions to be halved by 2030. **Trajectories typically include:**

- A 'Business as Usual' (BasU) projection: a no-action scenario based on the growth of the organisation, from which inflation has been deducted.
- Structural Effects (SE), e.g. environmental improvements expected to take place because of the underlying decarbonisation of the world market and energy systems.[20]
- Expected impact of solutions on emissions reduction.

Organisations can use dynamic models, that can be adjusted every 3 years. **Key ingredients for establishing trajectories include:**

- Growth forecasts based both on the inflation rate and effective growth (corrected for inflation) to define nominal budgets.
- Fixing a reference year for the emissions baseline, from which emissions should be halved. Most of the Climate Action Accelerator's partners have chosen either 2019 (for those who started their roadmap development process the earliest) or 2022 (for the most recent ones). The reference year should be decided based on the most up-to-date data available.

To complete an emissions reduction trajectory, the financial viability of the roadmap is analysed using simple financial impact models.

Figure 2: Carbon footprint report and trajectory, 2019 baseline, MSF Operational Center Geneva, co-developed with the Climate Action[21] Accelerator

LEADING BY EXAMPLE

- Be fully transparent, publish your climate and environmental roadmap, including targets and monitoring frameworks, and make sure you define an implementation plan right away.
- Bring more organisations on board and acting as champions of change.
- Share your experience with your community and network, to contribute to increase knowledge within the humanitarian sector and beyond.

STEP 5:
IMPLEMENTATION FRAMEWORK

- Define implementation principles **(see pillar III, Being a driver of change)**.
- Identify priority projects.
- Clarify internal roles and responsibilities for roadmap implementation.
- Define the governance set-up for roadmap implementation.
- Establish a timeframe with key implementation milestones.
- Design an appropriate monitoring framework and high-level indicators.

CLIMATE AND ENVIRONMENT ROADMAP

Reducing Médecins Sans Frontières Operational Centre Paris – OCP 's footprint by 2030

28 February 2023 version   **DRAFT NE PAS DIFFUSER**

Climate and Environmental Roadmap

July 2023
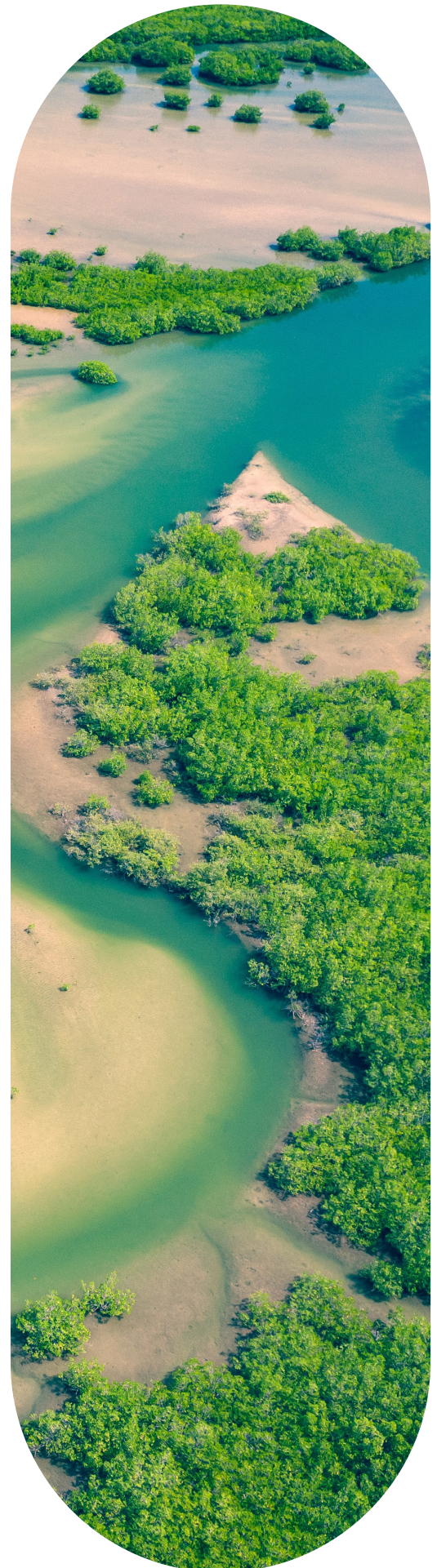
CARBON FOOTPRINT MEASUREMENT

Measuring the carbon footprint of an organisation allows us to quantify GHG emissions while considering possible reduction options. GHG emissions are measured in units of carbon dioxide equivalent (CO2-eq).

5 PRINCIPLES

To ensure that emissions inventory remains faithful, true and fair, in line with the organisation's emissions, the following principles formulated in the GHG Protocol need to be followed[21]:

1. **RELEVANCE**
2. **COMPLETENESS**
3. **COHERENCE**
4. **TRANSPARENCY**
5. **PRECISION**

3 SCOPES OF EMISSIONS

Figure 3: Overview of GHG Protocol scopes and emissions across the value chain[22]
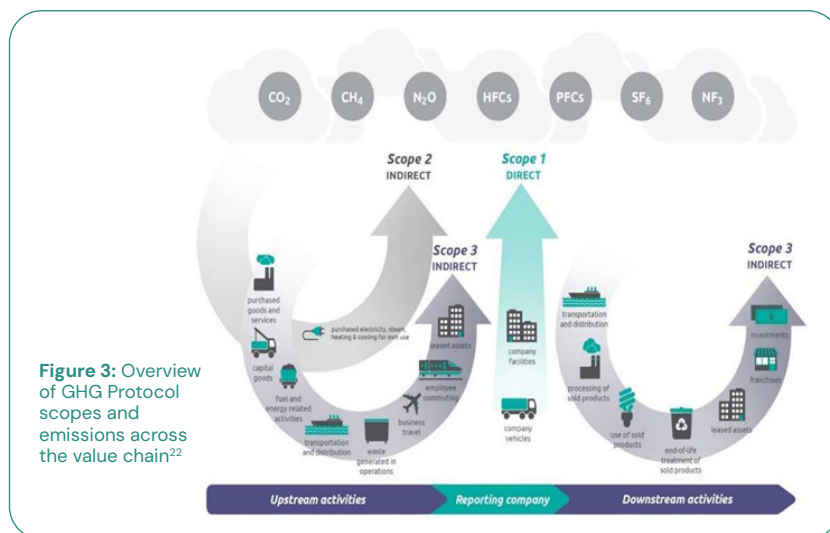

SCOPE 1

DIRECT EMISSIONS

- Fixed or mobile installations located within the organisational perimeter, i.e. emissions from sources owned or controlled by the organisation.
- Examples: gas consumption for heating and steam production, the transportation of materials and products in vehicles owned or controlled by the organisation, and refrigerant loss from refrigeration circuits.

SCOPE 2

INDIRECT EMISSIONS[23]

- Emissions associated with the production of purchased electricity, heat, steam or cooling.
- Examples: electricity. The CO2 equivalent of a kWh of electricity generated by natural resources such as hydroelectric power is negligible compared with a coal-fired plant.

SCOPE 3

INDIRECT EMISSIONS

- All other indirect emissions.
- Examples include trips made by vehicles that do not belong to the organisation, or emissions linked to the purchase of goods and services.

Emissions should be contextualised along the value chain, considering upstream and downstream reporting activities and related emissions.[24,25]

SPECIFIC AREAS OF ATTENTION FOR HUMANITARIAN ORGANISATIONS

1. **Data Collection:** A vast amount of activity data needs to be collected from projects in rapidly changing contexts in different geographical areas.
2. **Engagement:** Mobilising and sensitising large numbers of people to collect data can be a challenge.

To address these challenges effectively, **two key principles should be applied:**

1. **Iterative work:** focus efforts on the most significant emissions categories to maximise impact.
2. **Incremental data quality improvement:** each iteration of the carbon footprint provides deeper insight into emissions sources, thus helping to implement targeted and effective action.

2.

PILLAR 2:
FOCUSING ON TOP SOLUTIONS

Based on its work with its humanitarian partners, Climate Action Accelerator proposes a list of eight solutions to implement in priority for effective emissions reduction.

TOP 8 SOLUTIONS

1. **REDUCE ENERGY CONSUMPTION**

2. **SWITCH TO RENEWABLE ENERGY BY DEFAULT**

3. **FLY LESS AND LESS EMISSIVE**

4. **OPTIMISE FLEET MANAGEMENT AND DRIVE LESS EMISSIVE**

5. **SWITCH TO LOW-CARBON, SUSTAINABLE ALTERNATIVES**

6. **PRIVILEGE LOW-CARBON SUPPLIERS AND HELP SHAPE MARKETS**

7. **BUY ONLY WHAT IS NEEDED**

8. **SHIFT FROM AIR FREIGHT TO SEA, ROAD OR RAIL FREIGHT**

ENERGY AND PREMISES

DEFINITION AND SCOPE

'Energy and Premises' concerns emissions from the energy consumed within premises (offices, healthcare facilities, warehouses, and other buildings), fugitive emissions of gases with high global warming potential from air-conditioning and fridges, and anaesthetic gas. Energy consumption in buildings includes the use of electricity, either via a generator or the power grid, and the use of fossil fuels for heating, cooling and cooking (e.g. coal or fuel oil).

Organisations need to measure the emissions from energy consumed in their project premises, their field offices and their headquarters. For most humanitarian organisations, the largest share of emissions in this category are from fuel generators.

WHY DOES IT MATTER?

Emissions from energy consumption and premises represent 4% of sector-wide emissions according to initial estimates[26] from Climate Action Accelerator. Although percentages may vary between organisations due to the nature of their activities, emissions associated with energy and premises at the level of an organisation can represent a higher proportion, ranging between 12% and 30% according to Climate Action Accelerator's consolidated partners' data (baseline 2019, median 17%).

Meeting the GHG reduction target of –50% by 2030 in the humanitarian sector will require a major push towards renewable energies, with adequate funding to allow actors to switch to renewable energy by default.

WHAT DOES THIS MEAN FOR THE HUMANITARIAN SECTOR?

Due to the nature of their activities, humanitarian organisations tend to deploy in fragile contexts where there may be no access to a power grid, or where access is insufficient or highly reliant on fossil fuels. Generators are often used to ensure the continuity of energy provision. On average, the carbon footprint of one kWh produced via a diesel generator is the same as for 47 kWh from the Swiss electricity grid.[27,28]

		tCO2e	%
ENERGY	Elec. GRID	4589	22.6%
	Elec. Generators	14025	86.9%
	Coal & wood	75	0.4%
	Gas	215	1.1%
	Heating HQ	120	0.6%
HGWP	Aneasthetic gas	173	0.9%
	AC + fridges	1149	5.6%

Figure 4: Key figures energy and fugitive emissions as a share of the total energy related footprint. MSF OCB 2019, courtesy of MSF OCB
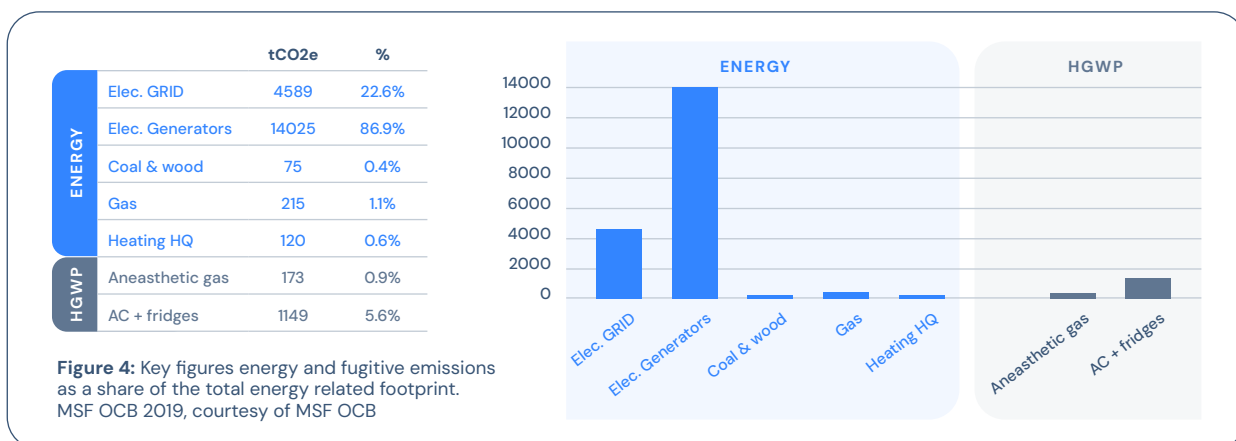
According to a recent study by the Global Platform for Action (GPA),[29] 'Estimating the use of diesel generators in displacement settings', there are 11 365 generators in use in displacement settings around the world. As a result, humanitarian agencies spend 108 million USD on fuel every year, emitting 194 000 tCO2[30], which is equivalent to 70 000 return flights from Geneva to Nairobi.[31]

Against this backdrop, the sector needs to invest in renewable, low carbon sources of energy.[1] When it comes to energy and premises, solutions for reducing carbon emissions have been developed and tested for decades, such as sufficiency measures or solar photovoltaic (PV) power. What the sector urgently needs is to deploy these solutions at scale so that they can significantly contribute to reducing emissions generated by humanitarian actors.[1]

TOP SOLUTIONS FOR REDUCING EMISSIONS FROM ENERGY AND PREMISES

Reducing emissions from energy and premises in the humanitarian sector should follow two simple principles:

1. **Reduce energy consumption:** reduce the number of kWh consumed through energy efficiency gains from behaviour change, appropriate equipment, and alternative construction and renovation measures (insulation and passive design). The greenest and cheapest energy is the one we do not use.

2. **Switch to renewable energy by default:** which means lowering the emissions factor of the energy consumed by transitioning to low-carbon, renewable sources of energy.

CO-BENEFITS

⁝ Solar PV energy supply can be **financially advantageous** in the medium to long term, given the short payback period (5 to 7 years)[32] compared to the relatively long lifespan of the equipment (15 to 25 years), the savings generated, and cost reductions induced, for instance on electricity bills.[33] However, savings depend to a great extent on the local cost of electricity from the grid, the cost of fuel, the cost of solar PV equipment and its installation by companies in the country or the area, and the need for a means of storing the energy.

⁝ **Reducing the organisation's dependency on fossil fuels** increases its resilience and ability to adapt when fossil fuel prices and availability become more volatile, by making energy costs more predictable. It significantly reduces the negative impacts of energy price inflation on operational budgets.

⁝ A solar PV energy supply helps to improve the **operational autonomy** of premises by increasing sustainable access to stable electricity, even in remote areas. As such, it improves access to basic services that **benefit local communities**.

⁝ Favouring alternative and local approaches to construction and renovation tends to **increase acceptance by local actors**, makes local maintenance easier, and contributes to local economic development.

⁝ Energy efficiency measures in **building renovation and construction**, including thermal efficiency and consumption monitoring equipment, help to make financial savings, and make buildings more resilient to extreme weather.

OPPORTUNITIES AND CHALLENGES FOR HUMANITARIAN ACTORS

Opportunities

⁝ It is now relatively easy to self-produce electricity with solar PV equipment. Among renewable energy sources, solar PV systems have the greatest potential to expand energy production and access in a variety of geographical areas, including at the community level.[34,35]

⁝ Solar PV energy is also becoming the cheapest option for new electricity generation in most of the world.[36] Installing and maintaining solar PV systems is relatively cheap, and can generate savings in the medium term, providing that qualified technicians are available for their installation and renewal costs have been taken into account based on their lifespan (especially for batteries). Solar PV module prices have fallen by 80% in the last decade, while installed capacity has grown from 40GW to 600GW in the same period.[37]

⁝ The increased availability of local and international suppliers creates opportunity for deploying renewable energy solutions.

Challenges

⁝ Upfront investment may be problematic for organisations with less access to core funding. Greater support from humanitarian donors and increased access to alternative funding streams (including from private investors and blended finance solutions)[38] would help to accelerate the shift to renewable energy.

OVERCOMING BARRIERS TO INVESTMENT:

DECARBONISING HUMANITARIAN ENERGY (DHE) MULTI-PARTNER TRUST FUND (MTPF)

Aimed at supporting the decarbonisation of humanitarian infrastructure, this multi-year fund supports the creation of a Centralised Clean Energy Service (CCES) provided by the Global Platform for Action (GPA) at UNITAR, UNDP and NORCAP. Launched in January 2023 with seed funding received from the GFFO ($22 million), it aims to facilitate sustainable, cost-effective clean energy transitions in humanitarian settings on a large scale by addressing structural constraints (such as grant-based procurement models, early termination clauses, and limited in-house technical capacity). The structural support facilities focus on developing coordinated entry points for the private sector to support third party delivery models by bundling projects, de-risking long-term contracts, and applying innovative finance mechanisms to unlock additional revenue streams. The Fund provides technical support for energy audits, business case developments, and implementing energy efficiency measures to decrease energy consumption. It also supports the development of energy access projects anchored to CCES-funded solar projects.

DOING THE MATH: COST/BENEFIT ANALYSIS OF ENERGY-RELATED SOLUTIONS

The following financial benchmarks are based on consolidated data from financial impact assessments conducted by Climate Action Accelerator with nine of its humanitarian partner organisations and covering a seven year period.

SOLUTION #1

REDUCE ENERGY CONSUMPTION

- This solution costs on average 0.04% of the annual net budget of an organisation over 7 years, with the financial impact varying from average savings of 0.19% to average costs of 0.23%.
- On average, this solution starts generating savings in year 5. By year 7, savings reach 0.10% of the budget, on average.
- The running costs and human resources costs needed to implement this solution are limited.

Main assumptions:

- A reduction in energy consumption averaging 25%, coming from behaviour change, insulation and energy saving equipment.
- The need to combine insulation solutions: "white roofs" (relatively cheap) and proper insulation of buildings (more costly).
- The need to invest in energy monitoring equipment, estimated between 300 USD and 5,000 USD per power source.
- A 'top-up' for the renewal of equipment (air conditioning (AC) units, fridges, etc.), allowing organisations to replace old appliances with energy efficient ones. This budget can vary from 5,000 USD to more than 10,000 USD.

Figure 5: Reduce energy consumption: average yearly evolution of financial impact (as % of yearly budget)

Main differences observed among the Climate Action Accelerator's partner organisations:

- A different average cost per kWh, which is a consequence of both the carbon intensity of the local grid in countries of operations and the proportion of energy coming from generators vs. coming from the grid.
- The proportion of surface area for which insulation is relevant and cost-effective, i.e. mainly offices and medical warehouses with a sufficiently long tenancy.

SOLUTION #2

SWITCH TO RENEWABLE ENERGY

- This solution costs on average 0.13% of the budget over seven years, with the financial impact varying from average savings of 0.05% to average costs of 0.31%.
- The average net financial impact decreases from 0.21% on average in year 1 to 0.10% in year 7, with organisations generating net savings in year 7.
- Average savings grow from 0.05% to 0.23% between year 1 and year 7, while investments average 0.26% of the budget and remain quite stable.
- Running costs are limited, averaging 0.01% of the yearly budget.

Figure 6: Switch to renewable energies: average yearly evolution of financial impact (as % of yearly budget)

Main assumptions:

- A cost of 2,000 USD per kilowatt peak (kWp) of solar panel installed, rising to 3,000 USD when adding batteries.
- A yearly production of 1,510 kWh per kWp installed for the simple models, while some more refined models include a yearly production adapted to the different countries and their potential.
- Training costs of 2,000 USD per country for the maintenance of equipment.

Main differences between organisations:

- Similarly to the 'reduce energy consumption' solution, organisations' energy mix and their geographical footprint have an impact on the ROI of renewable energy investments.
- The presence or absence of batteries in addition to solar panels.
- Faster or slower implementation, which impacts emissions reduction and savings made.
- The level of ambition of the programme, i.e. aiming for a larger proportion of energy to come from renewables.

FOCUSING ON SOLUTIONS & ACTIONS FOR ORGANISATIONS

SOLUTION #1: REDUCE ENERGY CONSUMPTION

FAVOUR SUSTAINABLE CONSTRUCTION OR RENOVATION

Overall, organisations should prefer the renovation of existing buildings and the eco-construction of new buildings, with a low carbon and environmental footprint. Premises should be insulated, preferably from the outside and with low carbon materials, which can represent up to 25% of energy savings.[39] Other technical solutions include using white reflective roof paint, or reflective roof tiles (savings of between 20% and 30%),[40] improving natural ventilation, and solar protection, which all contribute to improving the thermal efficiency of buildings.

REDUCE UNNECESSARY CONSUMPTION IN BUILDINGS

A variety of technical measures are available to reduce the energy consumption of buildings, acting on temperature, space (space planning, office space), and energy equipment. **Key steps to follow include:**

STEP 1

Set-up diagnosis and monitoring systems

Start with an initial diagnosis of energy consumption and the deployment of a monitoring system.

STEP 2

Reduce unnecessary consumption through technical measures

These include rolling out electrical monitoring devices, deploying automated regulation devices and other energy saving appliances (motion sensors, thermostats, automated switch off), or deploying low energy equipment that can consume 50% to 70% less (LED lighting, etc.). Ultimately, organisations may also privilege equipment with an energy efficient label.[41]

STEP 3

Change energy behaviour: 'the human factor'

In addition to awareness-raising activities, organisations may consider proactively promoting best practices, adopting standard policies for energy use, as well as technical training for staff. Ultimately, to make change visible, management should try to make energy savings visible.

IMPLEMENTATION TIPS

:• Resorting to alternative sustainable construction and renovation measures requires a shift in mindset and dedicated expertise (external or in-house).

:• A large deployment of monitoring systems of energy consumption is essential to improve the design of new systems and equipment (such as Air Conditioning (AC) devices).
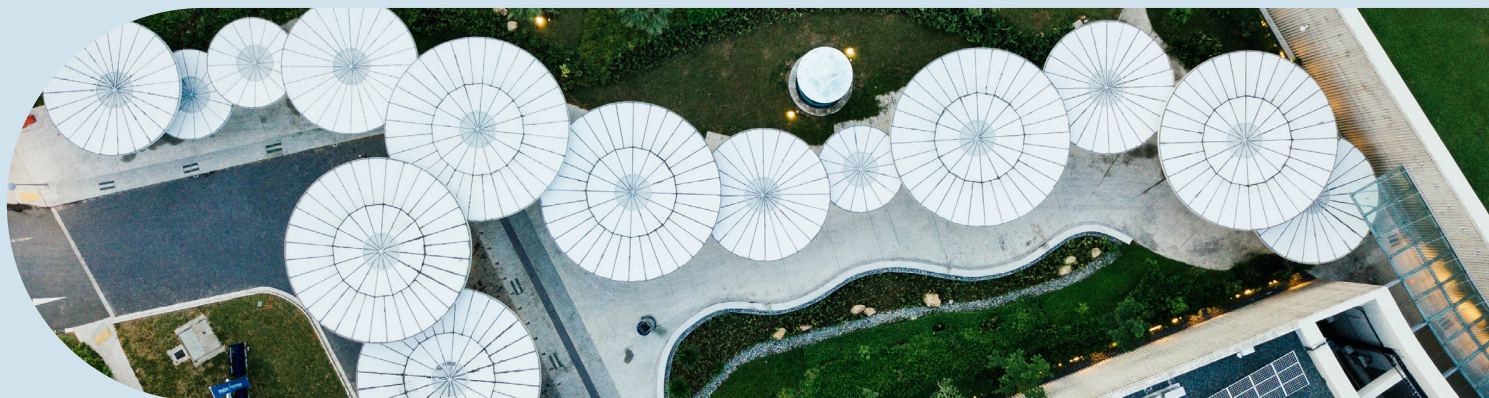
A growing number of humanitarian organisations, UN agencies and INGOs have started to promote the deployment of PV systems across a variety of projects and geographical areas. At this stage, humanitarian actors need to be much more systematic in switching to renewable energy by default (80 to 90%).[42] Electricity from generators or from the local power grid might still be used, but as a back-up or as a last resort.

SPECIFIC ACTIONS

∴ **Subscribe to a low-carbon energy provider** if available for offices and facilities located in countries with a carbon intensive electricity grid.

∴ **Produce or use renewable energy** (photovoltaic, thermal solar, small hydraulic, small wind turbines) thanks to in-house expertise and external partnerships.

∴ **Reduce the use of generators** by reducing energy consumption and making alternatives available; making sure generators are tailored to needs and are not oversized.

∴ Ensure that **energy production equipment is regularly cleaned and maintained**, as dust can reduce their performance. Include maintenance in contracts with service providers from the beginning.

∴ **Include repairs in contracts** with service providers from the beginning. Anticipate costs. Train local staff to maintain equipment.

∴ **Include end-of-life management in contracts** with service providers. Never let e-waste end up in open dumps.

∴ **Find alternatives for heat production** such as solar thermal water heaters, ventilation, or energy production from waste.

∴ **With regards to refrigerant gas**, use cold chain equipment and AC with alternatives to hydrofluorocarbon (HFC) gas (R32, R600), and ensure responsible commissioning, maintenance and decommissioning. Use local, national or regional recycling channels.

PRACTICAL TIPS:

MAINTAINING RENEWABLE ENERGY EQUIPMENT

∴ Properly dimension the system, adjusting production capacity to consumption needs.

∴ Use robust and high-quality equipment – it should be repaired or replaced locally, whenever possible.

∴ Ensure that maintenance and servicing can be carried out easily and safely, resorting to third parties for the design, provision and maintenance of PV energy, depending on skills and services offers available in various markets. Third parties may include Electriciens Sans Frontières (ESF), or private energy providers.

∴ Engage in capacity building activities with local and international staff, improve technical skills and contribute to behaviour change.[43]

∴ Consider waste pollution implications, bearing in mind that lithium batteries require specific recycling solutions.

∴ Initially, prioritise locations with the highest reduction potential. For example, power from the grid in Kenya amounts to 0.2 kg CO_2e/kWh, 0.07 kg CO_2e/kWh in Tajikistan, and 0.8 kg CO_2e/kWh in South Sudan.

GOOD PRACTICES IN MEDICAL FACILITIES

Storage warehouse for medical equipment in the Sahel
A storage warehouse for medical equipment rented by MSF in Niamey needed to be renovated. Polyurethane insulation panels were installed on the interior walls and ceiling at a total cost of $60,000 with a ROI of less than two years. The organisation subsequently deployed these panels in numerous warehouses, reducing the financial cost of cooling and the environmental cost associated with energy consumption.

Health centres in Haiti
An increase in natural disasters in the Island of Dominica led Electriciens Sans Frontières (ESF) to rethink their approach to the island's infrastructure. Autonomous photovoltaic installations are now used to secure the energy needs of six health centres. The 6 solar kits of 2 to 4 kWp represent a reduction of CO_2 emissions of about 300 tonnes. The 44 kWp solar field installed in the Saint-Joseph health centre represents a reduction of 700 tonnes of CO_2 and contributes to the island's energy mix. The operating costs of the health centres have been reduced and the pilot can be replicated on a large scale.

REDUCING GHG EMISSIONS FROM TRAVEL

SCOPE

- International professional travel (by car, plane or train).
- Field transportation (fleet mainly).

WHY DOES IT MATTER?

Travel represents 7% of sector-wide organisations according to initial estimates developed by Climate Action Accelerator. Depending on the operational model of an organisation, this share can be significantly higher: travel represented between 12% and 27% of total emissions of Climate Action Accelerator's humanitarian partners in 2019. Since organisations directly control emissions associated with travel, there is significant potential for reductions to be made.

WHAT DOES THIS MEAN FOR HUMANITARIAN ORGANISATIONS?

Travelling has always been an integral part of humanitarian organisations' way of operating. International aid, *per se*, involves organising emergency assistance and relief activities in distant locations, sending expatriate staff to field projects and using robust cars (such as four-wheel drive vehicles) to reach the most vulnerable populations in remote and unstable areas.

But this model is not set in stone. Given the often large share of travel-related emissions, organisations need to drastically review their travel practices, and notably reduce international flights, in order to achieve ambitious climate targets. As we learned from the COVID-19 pandemic, there are ways to reduce flights, and travel in general, without compromising the ability to deliver assistance. Organisations found ways to keep operations running despite travel restrictions. They increased the use of online platforms and videoconferencing tools for meetings and training courses, and realised that face-to-face interaction was only necessary in specific situations. As travel, and especially air travel, has boomed in recent decades[44], particularly due to low-cost flights, it represents a key lever for emissions reduction and 'sobriety'.

Over the past decade, a growing number of local and national actors (LNAs) have been playing a key role in the delivery of assistance to populations in hard-to reach locations, especially when there are already local capacities in place, such as staff, supply options and technical expertise. Partnerships between international organisations and LNAs have become more frequent and have provided ways for international actors to reconsider the balance between local and international capacities in the implementation of humanitarian projects. Organisations should build on and further develop such partnerships.

In addition, a thorough review of the internal practices and cultures related to professional travel has revealed that there are opportunities for change. What justifies international travel? What is the proportion of travel allocated to internal meetings and training versus travel dedicated to direct humanitarian work? Organisations need to differentiate between what is essential for their programmes and what is linked to their internal policies and practices.

Organisations also need to look at how to change internal culture and habits regarding road transportation. Access, security and logistics constraints mean that electric cars might not be the solution everywhere for humanitarian actors. However, the use of very large numbers of 4WD SUV (e.g. Land cruisers) cars needs to be reconsidered. Where possible, lighter vehicles with alternative forms of motorisation should be introduced. Changes to regulations affecting combustion engine vehicles will have a significant impact on the market in the coming years.

A HUMANITARIAN MEDICAL ORGANISATION REVIEWS ITS TRAVEL PRACTICES

A humanitarian medical organisation, which is a partner of the Climate Action Accelerator, found that 24% of its total emissions were from travel (2019 baseline). The organisation analysed their international travel practices, and despite challenges with data, they found that a non-negligible proportion of trips were for training sessions, pre- and post- mission briefings and debriefings, internal meetings, field visits, R&R, etc.

When they drew up their climate and environmental roadmap, the organisation established quantitative targets to reduce emissions from trips of this kind. They also pooled resources between offices and organisations in the field, and adopted a 'travel less, travel better' policy. Deeper changes require the involvement of programmes and human resource departments, and it is important to remember that operational growth and increasing numbers of expatriate staff in the field mechanically leads to more travel and emissions.

TOP SOLUTIONS FOR REDUCING TRAVEL RELATED EMISSIONS

3. Fly less and less emissive

4. Optimise fleet management

CO-BENEFITS

- Financial savings: flying less and less emissive represents on average 0.4% savings[45] on the overall yearly budget. These savings are obtained with very minimal investments. Optimising fleet management by driving less and less emissive generates net savings that grow from 0.03% on average in year 1 to 0.15% in year 7.
- Opportunities for improved staff learning and development practices.
- Employee well-being increases as a factor of travel reduction.
- Field visits are better planned and optimised if less frequent.
- Online meetings increase inclusion of HQs, coordination teams and field staff as well as staff who are less likely to travel, such as those providing care for children or relatives..
- Implementing eco-driving best practices reduces the risk of accidents (due to reduced speed), in addition to reducing emissions and saving money (reduced fuel consumption).
- The way that organisations are perceived by local communities improves due to lower profile driving.
- Mutualisation of trips or ridesharing may improve collaboration between organisations.

OPPORTUNITIES & CHALLENGES

Modus operandi
- Humanitarian actors tend to still be very centralised organisations (decision-making, quality control, representation) due to the emergency nature of their activities. Adopting travel reduction measures provides them with the opportunity to consider more decentralised organisational models (regional hubs, more autonomy given to country offices, etc.).
- There is a widespread perception that quality and monitoring depend on the number of field visits, which had grown exponentially before COVID-19. Based on lessons from the pandemic, HQ teams could use travel reduction as a way to rethink quality control and monitoring.
- The type of organisational and geographical structure of most organisations, including HQ offices, regional hubs and field offices, impacts the available flight options. It may be easier to find lower emission flights from Europe to Africa, for instance, than it is from Asia or America, or across African countries.

Staffing
- Increasing the proportion of local staff in senior roles can help to reduce the number of trips. The majority of coordination and leadership roles are still filled by international profiles, rather than local or regional staff, although practices have evolved in recent decades in a number of organisations.

Field vehicles
- Based on a thorough analysis of transport needs and the specific context, the smallest, lightest, less powerful vehicles should be chosen (ex: avoid using a heavy duty 4×4 in the city), while meeting field security and operational constraints.
- Non-motorised mobility (public transport, active mobility, etc.) also present an opportunity for reducing emissions from road transport, being mindful that these options may be more or less available depending on field constraints and cultural habits.

DOING THE MATH: COST/BENEFIT ANALYSIS OF TRAVEL–RELATED SOLUTIONS

The following financial benchmarks are based on consolidated data from financial impact assessments conducted by Climate Action Accelerator with nine of its humanitarian partner organisations and covering a seven–year period.

SOLUTION #1

FLY LESS AND LESS EMISSIVE

⁚ This solution costs on average 0.40% of the budget over seven years, with the financial impact varying from average savings of 0.05% to average savings of 1.04%.

⁚ The average net financial impact decreases from net savings of 0.26% on average in year 1 to net savings of 0.49% in year 7.

⁚ The savings represent on average 14% of the plane and travel costs in year 3, growing to 19% of this budget in year 7.

⁚ Running costs are limited, growing from 0.01% to 0.09% of the yearly budget between year 1 and year 7 to cover for greener travel costs.

⁚ There are usually limited human resources costs attached to these solutions, as they mainly require changes to travel policies.

Main assumptions:

⁚ The modelling of the 'fly less' solution assumes a decrease in air travel costs and all related costs (visas, accommodation, taxi).

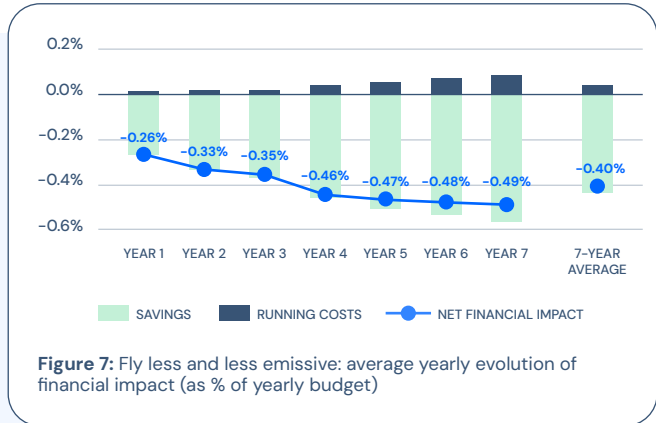⁚ The modelling of the "fly less emissive" solution uses an increased cost of greener travel of 10%.

Figure 7: Fly less and less emissive: average yearly evolution of financial impact (as % of yearly budget)

Main differences among the Climate Action Accelerator's partners:

⁚ The importance of travel in their operations, with the travel budget representing between 0.4% and 6.7% of their yearly budget.

⁚ This means that travel represents different proportions of their GHG footprints in the baseline, and therefore different reduction potential and targets.

SOLUTION #2

OPTIMISE FLEET MANAGEMENT

⁚ This solution costs on average 0.08% of the budget over seven years, with the financial impact varying from savings of 0.20% to average costs of 0.03%.

⁚ The average net savings grow from 0.05% on average in year 1 to 0.19% in year 7.

⁚ Investments are usually offset by savings as fuel–efficient vehicles are often cheaper than existing 4x4.

⁚ Running costs are limited, reaching a maximum of 0.01% of the yearly budget for some organisations.

Main assumptions:

⁚ A 10% decrease of fuel consumption for drivers with eco-driving training.

⁚ A decrease of fuel consumption from 15L per 100km for heavy 4X4 to 11L per 100km for 4X2 or lighter cars.

⁚ The cost of eco-driving training between 100 USD and 250 USD per driver.

⁚ Minor savings on the price of vehicles, which are in general cheaper than heavy 4X4.
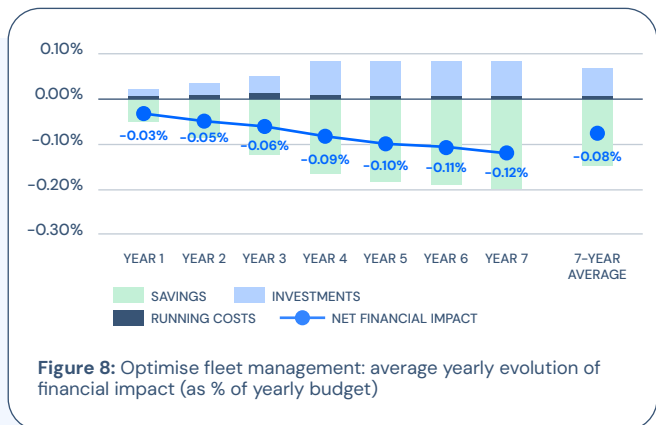
Figure 8: Optimise fleet management: average yearly evolution of financial impact (as % of yearly budget)

Main differences between partners:

⁚ The pace at which vehicles can be renewed.

⁚ The number of vehicles required for their operations also determines the overall impact of this solution when measured as a percentage of the budget.

⁚ The context where they operate also plays a role: for example, it is easier to maximise the benefits of this solution if there is the required infrastructure to charge electric vehicles, or in contexts where heavy high-clearance 4X4 are unnecessary.

FOCUSING ON SOLUTIONS & ACTIONS FOR ORGANISATIONS

SOLUTION #3: FLY LESS AND LESS EMISSIVE

REDUCE PROFESSIONAL TRAVEL, IN PARTICULAR BY AIR ('TRAVEL LESS')

Travelling less, meaning reducing the number of passenger-kilometres consumed by organisations, requires effort on different levels, and requires:

- Leadership support and exemplarity of leadership; as well as guidance on prioritisation of meetings and large organisation-wide events that involve flying in a large share of participants.
- Adjusting organisational models: decentralise entities (multiple headquarters or hubs), play on human resources policies (localisation, regional mobility, etc.) to reduce travels, etc.

SPECIFIC ACTIONS

- Reduce number of trips and number of persons travelling.
- Review the location choices for meetings, training sessions and events in order to reduce the need for travel for a maximum of staff.
- Prefer local recruitment.
- Switch to rail travel instead of air travel, where feasible.
- Adapt HR practices and incentives (e.g. allowing staff to combine holidays with professional travel, do not allow the acquisition of personal loyalty points for professional trips, etc.).

FLY LESS EMISSIVE ('TRAVEL BETTER')

Practically, this means reducing the emission factor of a flight by making climate-friendlier decisions on travel itineraries and companies.[46]

- Allow only economy class, where possible.
- Take direct flights when available.
- Favour fuel-efficient aircraft.
- Favour more efficient airlines.

IMPLEMENTATION TIPS

- Update or elaborate a responsible travel policy.
- Adapt HR policies, as relevant.
- Work with the travel unit/agency to adapt the booking tool and process such as to prioritise less emissive modes of transport, as well as to track mileage and emissions.
- Introduce incentive mechanisms such as carbon budgets per department/unit.
- Flying economy: adjust travel along with the travel booking tools so that flying economy becomes unconditional; flying on premium classes is approved by managers under specific conditions. Disability or accessibility requirements should be recognised and considered as exceptions.
- Staff and leadership awareness: Develop decision-making tools and communicate to help employees make climate-friendly decisions regarding the method of transport, the travel company, and the itinerary.

ENVIRONMENT SELF-ASSESSMENT TOOL (ESAT)[47] BY FLEET FORUM IN PARTNERSHIP WITH HULO

Reducing emissions from Fleet and Transport Management means changing the approach to mobility, transport and fleet management. The Fleet Forum, in partnership with HULO and with the support of the CDCS and the European Commission have developed an Environment Self-Assessment Tool (ESAT). This tool allows organisations to assess their approach to transport and fleet management from an environmental sustainability perspective against recognised standards and requirements. It is based on a three-tiered approach: **Avoid** (do not go on trips or field visits, where possible), **Shift** (from plane to train, from car to public transport, walking, cycling, car sharing), **Improve** (fly less emissive, use cleaner and smaller vehicles).

SOLUTION #4: FLEET OPTIMISATION

KEY LEVERS INCLUDE REDUCING MILEAGE AND FUEL CONSUMPTION, AND EXTENDING THE LIFESPAN OF VEHICLES:

Reduce Mileage and fuel consumption:
- Limit and optimise vehicle usage.
- Pool vehicle use with partners to optimise fleets.
- Train drivers in eco-driving.
- Maintain vehicles to increase their lifespan.
- Run regular rightsizing/right profiling exercises.
- Set ambitious speed limits and restrict car speeds.
- Forbid use of 4WD vehicles within urban contexts and on tarmac roads.
- Pool transport demand (internally/between agencies).
- Increase lifespan: review/adapt current replacement policies in light of environmental factors.
- Improve your fleet-related waste management.

Purchasing of vehicles:
- Adapt the mix of vehicles that make up the fleet to various usages and contexts, based on a thorough analysis of transport needs. This also includes an evaluation of how public transport and soft mobility can fulfil transport needs.
- Purchase vehicles that are the most fuel-efficient (the lighter the better), have the lowest emissions (no diesel, electric in relevant cities) and meet your needs (no SUVs in cities).
- Favour fuel-efficient and repairable vehicles that are locally or regionally produced, if available.
- Consider procuring second-hand vehicles for some specific transport needs.

REDUCING EMISSIONS FROM THE SUPPLY CHAIN

SCOPE

Supply chain emissions come from both upstream and downstream activities, such as raw material extraction, manufacturing, packaging and transportation (freight). They are the main component of Scope 3 emissions according to the GHG Protocol.[48] In the humanitarian sector, these essentially come from the procurement of goods & services for the organisation itself, and the distribution of food, non-food or medical items to beneficiaries.

WHY DOES IT MATTER?

According to data consolidated by Climate Action Accelerator working with its humanitarian partners,[49] procurement represents **between 40% and 60% of GHG emissions produced by individual humanitarian organisations**, reaching up to 75% in some instances. At the sector level, Climate Action Accelerator's initial assessment shows that the purchase of goods and services represents **74% of sector-wide emissions**, the majority of these coming from food supplies, non-food items (NFIs), and medical and nutritional products.

The supply chain is undoubtedly the most complex and challenging area in terms of footprint reduction, but it is also where the potential for emissions reduction is the most significant.

WHAT DOES THIS MEAN FOR THE HUMANITARIAN SECTOR?

At its core, humanitarian procurement means:

'buying and delivering requested supplies and services at the places and times they are needed, while ensuring best value for money, in the immediate aftermath of any emergency and reconstruction situation, including items that are vital for survival, such as food, water, or shelter.'[50]

It is therefore a strategic, technical and logistical question that is deeply connected to the capacity of individual organisations, and the humanitarian system as a whole, to fulfil their social mission.

Reducing emissions from procurement is cross-cutting by nature. It implies major changes in the way the sector operates. The involvement of programme teams and management is therefore of paramount importance to make these transformation efforts successful.

At the sector level, increased coordination between the main humanitarian buyers, and collective initiatives on key items will be needed to further influence suppliers to propose climate-smart, low carbon alternatives. Due to their weight within the sector and their capacity to influence suppliers, large operational UN agencies should be at the forefront of supplier engagement and the transformation of humanitarian supply chains.

TOP SOLUTIONS FOR REDUCING PROCUREMENT-RELATED EMISSIONS

Tackling these challenges one after the other provides the humanitarian sector with a powerful set of opportunities for reducing emissions from procurement.

Key solutions identified by the Climate Action Accelerator to reduce emissions from supply chain are:

5. **Switch to low-carbon, sustainable alternatives.**

6. **Privilege low-carbon suppliers and contribute to shaping markets.**

7. **Buy only what is needed.**

8. **Shift from air freight to sea, road or rail freight.**

According to Climate Action Accelerator's initial sectoral estimates, solutions addressing emissions associated with procurement can contribute to 23% of total emissions reduction efforts.

CO-BENEFITS

- Savings generated by the limitation of purchases through efficiency gains can be reinjected into procuring products with a lower carbon and environmental footprint or into programmes.
- Providing quality assistance through long-lasting products at the community level reduces costs in the long-run and improves how humanitarian organisations are perceived.
- Reducing single-use plastics avoids large volumes of waste and reduces local degradation of the environment.
- Working more with local suppliers that provide quality products and work on reducing their environmental footprint helps to build local capacity and creates employment opportunities, thereby contributing to the humanitarian-development nexus.
- Using low-carbon sustainable options helps to increase community resilience. For example, they can allow local populations to have access to longer lasting NFIs or shelter materials, support improving local agricultural practices or provide clean energy cooking solutions that also reduce air pollution.
- Procuring more sustainable products strengthens employee morale and motivation both locally and globally.

SPECIFIC OPPORTUNITIES AND CHALLENGES FOR HUMANITARIAN ACTORS

Rapidly evolving markets, positive experiences from the private sector, and increased availability of alternatives create opportunities for humanitarian organisations to succeed in reducing emissions from their supply chains:

Opportunities

- **The private sector is making progress towards targets** in Europe, the US, China and India. According to the Science Based Targets Initiative (SBTi),[51] which develops standards, tools and guidance for companies, the number of private companies adopting science-based targets is continuing to grow. Over 5000 companies had adopted them as of April 2024,[52] and the number of SMEs adopting science-based targets grew by 58% in 2022.[53]

- **The maturity of suppliers on environmental and climate issues is growing fast.** It is estimated that 28% of suppliers already have a low-carbon transition plan.[54]

- As humanitarian supply chains tend to be highly concentrated, in many cases **targeting a limited number of items (10 to 20) is enough to achieve a very significant impact**. For instance, food makes up 24%[55] of ICRC's total carbon footprint, and 38% of the footprint related to purchased goods and materials (excluding services). The top 10 food items purchased account for 74% of this, with the vast majority coming from rice. Given this level of concentration, organisations may want to focus their efforts on a set of top items.

- Humanitarian organisations have only just begun to transform their procurement practices. Hence, there is **significant potential to improve**. Best practices include identifying the key impact areas of top items, identifying quick-win actions, mapping and evaluating suppliers, developing a sustainable procurement policy and integrating this into procurement processes, engaging with existing and new suppliers to identify alternatives.

Challenges

- While **the buying power of individual organisations** might be limited, a few large organisations such as UNICEF, WFP, UNHCR, ICRC, IFRC, etc. have sufficient individual and/or collective weight to influence suppliers. Moreover, the humanitarian sector's moral/ethical leadership is attractive to the private sector and thus gives it leverage.

- The humanitarian sector frequently works with **local small and medium enterprises (SMEs)** who tend to have more limited technical and investment capacities. This requires deeper engagement to establish long-term relationships and reconcile environmental considerations with the specificities of local distribution and production systems.

- Both **internal supply policies, and donor expectations** continue to be primarily based on price, quality and lead time, as opposed to other climate and environmental criteria. A shift away from this approach is needed, based on the understanding that the best value for money includes positive environmental and climate outcomes.

- **The availability of goods and services** at a given time and in a given place is of paramount importance for humanitarian organisations who respond to sudden-onset disasters and other emergencies. Alternative solutions and processes need to account for a certain lack of predictability.

- In areas of intervention, the **end-of-life management of packaging and distributed items** can be challenging due to limited local recycling systems.

DOING THE MATH : COST/BENEFIT ANALYSIS OF SUPPLY CHAIN-RELATED SOLUTIONS[56]

ADDRESSING EMISSIONS ASSOCIATED WITH THE PROCUREMENT OF GOODS AND SERVICES

- This solution costs on average 0.67% of the budget over seven years, with the financial impact varying from net savings of 0.30% to net costs of 1.52%.
- The average net financial impact increases from 0.04% on average in year 1 to 1.73% in year 7.
- There are no investments related to this solution.

Figure 9: Procurement: average yearly evolution of financial impact (as % of yearly budget)
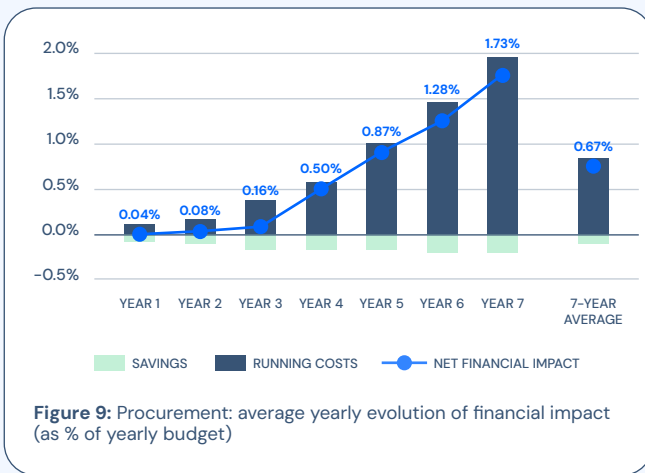
Main assumptions:

- The increased cost of greener procurement is usually estimated at 10% of goods and services. This is an average as greener goods and services can be cheaper or more expensive, or can cost the same price.
- A Pareto approach to estimating goods and services allows us to focus on the most emissive purchases.

Main differences between Climate Action Accelerator's partners:

- Estimated over-consumption is the key driver for organisations generating savings from this solution. This mainly applies to medical organisations who have identified significant potential for reducing medical purchases.
- The pace at which organisations decide to increase their purchases also have a significant impact on the net cost of this group of solutions.
- Human resource costs are more significant for organisations with a global footprint and a wide range of purchases (typically involved in food and non-food item distributions), as they will have to source greener products from multiple suppliers in multiple regions.

SHIFT FROM AIR FREIGHT TO SEA FREIGHT, ROAD OR TRAIN

- Freight solutions generate on average net savings of 0.14% of the budget over seven years, with the financial impact varying from average savings of 0.85% to average costs of 0.07%.
- The average net financial impact increases from savings of 0.04% on average in year 1 to 0.19% in year 7.
- Average savings grow from 0.06% to 0.27% between year 1 and year 7.
- Running costs are limited, growing on average from 0.02% to 0.09% of the yearly budget over the roadmap duration.

Main assumptions:

- A ratio is used to calculate the number of tkm of sea freight and road freight required to replace 1 tkm of air freight: 1.64 for sea freight and 0.10 for road freight.
- The increased cost of greener transporters is estimated to be between 10% and 20%.

Figure 10: Freight: average yearly evolution of financial impact (as % of yearly budget)
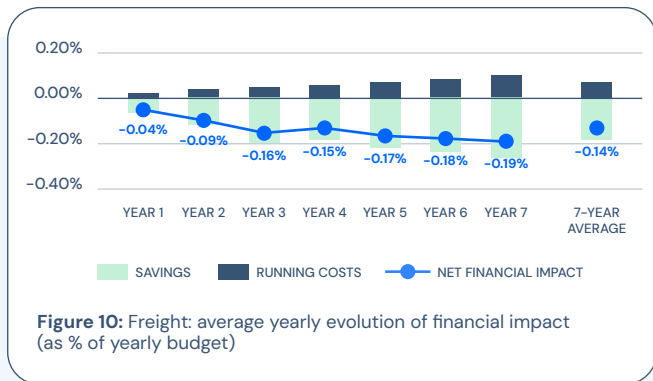
Main differences between Climate Action Accelerator's partners:

- Savings depend very much on the organisation's activities and the yearly cost of freight, which can represent between 0% and 0.18% of their yearly budget.
- An important factor is also the current mix of air freight and sea freight: the outlier has almost 100% air freight at the beginning of the roadmap, while some others are already very large users of sea freight. The ability to generate savings by transferring from air freight to sea freight therefore varies a great deal.
- The overall impact of freight solutions varies depending on the scale of use of greener freight providers, as these more expensive providers can offset some of the savings.

SOLUTION #5: SWITCH TO LOW-CARBON ALTERNATIVES

Organisations can identify viable low-carbon alternatives to current purchases, with a focus on key items responsible for a significant proportion of their carbon footprint, and they can integrate environmental and climate criteria into their procurement policies.

PRIORITY ITEMS

- Start by taking action on items responsible for a large portion of emissions or items with a very high emission factor.
- Items with the highest carbon and environmental impact need to be identified, using emissions data or, if this is not available, expenditure data. Taking action on these items should be a priority. The cumulated emissions linked to selected top items should ideally represent 70% to 80% of procurement emissions.
- Start taking action on 'quick-win' items, e.g. items for which solutions are readily available. For example, buy food that does not contain palm oil, or that contains palm oil certified by RSPO; diversify rice sourcing and replace rice with cereals with a lower carbon impact; or switch to ICRC's eco-designed tarpaulin (with a 20% lower carbon footprint).[57,58,59]

PRODUCT ALTERNATIVES

- **Use low-carbon or low-waste alternatives** for key items based on their full lifecycle analysis. For example, substitute high-emitting food items such as meat and rice, with alternatives with a lower carbon footprint.
- **Choose products from low-carbon production methods** or regenerative agriculture. For example, items produced with renewable energy or from regenerative agricultural production methods have shown a GHG reduction potential of between 6% and 48%, depending on the item.[60]
- **Factor in environmental risks in product composition.** Avoid ingredients with high risks of being responsible for deforestation. Source certified ingredients (e.g. palm oil and sugar), or avoid high-risk ingredients (e.g. beef, soy).
- **Incorporate recycled or low-carbon materials** into relief items (e.g. ensure that tarpaulins are made of at least 15% recycled polyethylene).
- Reduce unnecessary packaging, **switch to reusable packaging and use alternative packaging materials** (e.g. recycled, plastic free) for most important items. Use alternatives to single-use plastic items[61] (e.g. 5 out of 11 items procured by Palladium on behalf of FCDO are now received without primary and secondary plastic packaging. These items include dignity kits, solar lamps, and kitchen sets).[62]
- **Use certification and labels** where applicable (e.g. RSPO for palm oil, Bonsucro[63] for sugar, etc.), keeping in mind that not all certifications already integrate climate criteria.

1 032 847 tCO$_2$-eq.
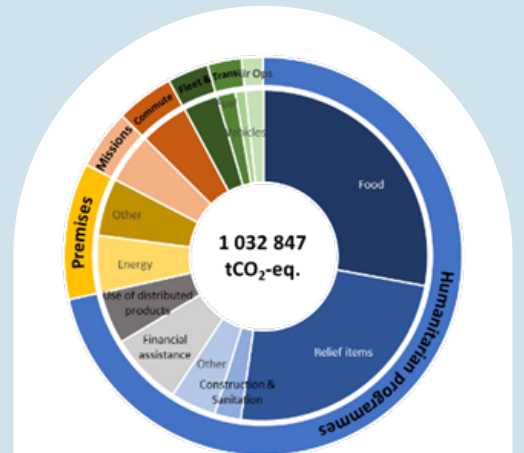
GOOD PRACTICE: FOCUSING EFFORTS ON KEY ITEMS, THE ICRC EXPERIENCE

ICRC estimated that, in 2018, rice was responsible for more than 50% of its emissions from food items, which were themselves responsible for 34% of the organisation's total carbon footprint and 56% of its emissions from purchased goods and materials (excluding services). Its top 10 food items (rice, beans, canned meat, lentils, sugar, oil, etc.) represented 71% of the carbon footprint from food items in 2018. As part of the work carried by the Climate Action Accelerator, an in-depth analysis was conducted showing a potential for reduction of 40% for rice's footprint that could represent up to 5% of ICRC's footprint by 2030.

ENABLING PROCESSES

✥ In order to implement the above-mentioned actions, organisation need to adapt their ways of working. They may for instance define who needs to be involved internally in integrating climate and environmental considerations. When possible, they may also include environmental considerations in annual objectives and performance reviews and update job descriptions to include the environmental and carbon dimension.

IMPLEMENTATION TIPS

✥ It is easier to work on non-manufactured items or single raw material products first rather than on sophisticated, transformed items.

✥ Start implementing changes for a few well-selected pilot items. Integrate the lessons learned and move on to further items. An incremental process like this will help to achieve early successes and keep staff motivated.

Humanitarian organisations can influence their supply chains individually and collectively by sending 'advanced market signals towards increasing their demand in less emissive products, with a focus on "hot spots" or top suppliers.

STEP 1: RAISE EXPECTATIONS TOWARDS SUPPLIERS

- **Request transparency and public reporting** on GHG emissions and progress made towards reduction targets. Request information about the carbon footprint of products in order to make informed choices.
- **Make it mandatory for suppliers to put in place a reduction strategy aligned with science.** Use external mechanisms for verification (e.g. SBTI). New requirements can be implemented gradually up until a defined deadline, as was done by the NHS in their supplier engagement strategy.[64]
- **Define environmental criteria for selecting suppliers** (publication of their carbon footprint report, use of decarbonised and/or renewable energy, decarbonisation plan), giving priority to those that are already actively working on reducing their climate impacts.
- **Monitor compliance;** set a timeline and actions for non-compliant suppliers; define a clear process for tracking climate progress of top suppliers annually.
- **Participate in collective efforts,** for instance, by sharing supplier assessment data among humanitarian agencies in order to rapidly increase the amount of data available.

GOOD PRACTICE: THE NHS' NET ZERO SUPPLIER ROADMAP

The UK's National Health Service (NHS) has been at the forefront of climate action in the health sector for over a decade. The NHS has committed to reaching net zero by 2040 for the emissions they control directly (e.g. scopes 1 and 2), and, by 2045 for the emissions they influence (e.g. scope 3).

In September 2021, the NHS England Board approved a roadmap[65] in order to ensure their suppliers are actively taking steps to reducing their climate impact and are on a pathway towards net zero.. The roadmap includes measures such as requiring carbon reduction plans from suppliers as from April 2023 for each new contract for goods and services and/or works anticipated to be above GBP 5 million per year. From April 2024, the NHS will progressively extend the carbon reduction plan (CRP)[66] requirement to cover all new procurements, and from April 2027, all suppliers will be required to publicly report targets, emissions, and reduction plans.

From 2030, suppliers will only be able to qualify for NHS contracts if they can demonstrate their progress through published progress reports and continued carbon emissions reporting.

STEP 2: ACTIVELY ENGAGE WITH SUPPLIERS

An open dialogue with suppliers on climate can help buyers understand better where suppliers currently stand on climate action, build trust and identify needs and opportunities for collaboration.[67]

- **Inform suppliers** about the organisation's carbon strategy and invite them to work on the decarbonisation of their operations. Set clear targets for senior management and procurement for all suppliers to halve carbon emissions by 2030.[68] Engage in regular dialogue with suppliers to monitor climate performance and progress.
- **Provide incentives** for suppliers to measure their emissions and put concrete emissions reduction plans in place. For example, offer longer-term contracts, better payment terms and prices for climate & environmental actions.
- Consider **joint improvement projects** together with key suppliers and for key items. For instance, organisations involved in food security and agriculture activities could design projects that foster collaboration between local farmers and local suppliers.
- Engage with suppliers to identify low-carbon, **sustainable and innovative solutions** and use outcome-based specifications. Focus on the desired outcomes of the procured item or service instead of defining the exact specifications of the solution in advance.[69]
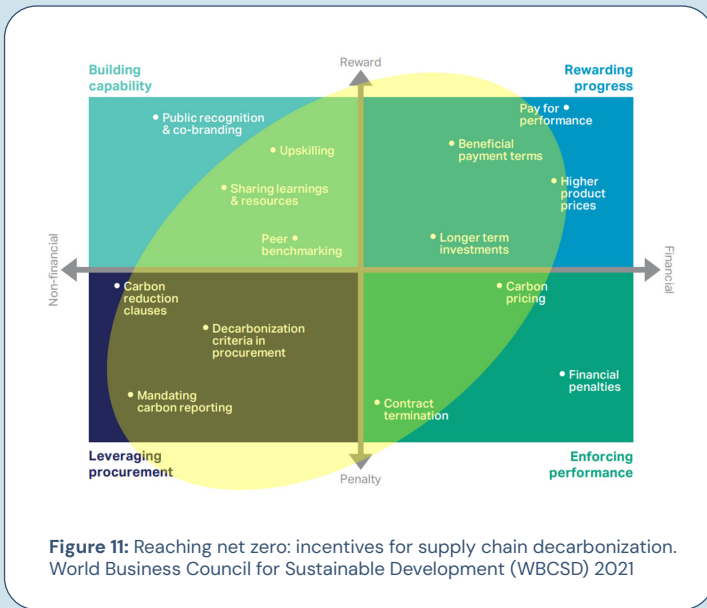
Figure 11: Reaching net zero: incentives for supply chain decarbonization. World Business Council for Sustainable Development (WBCSD) 2021

There are various kinds of incentives to encourage suppliers to reduce their emissions, including capacity building, leveraging procurement, enforcing performance and rewarding progress. Humanitarian organisations can establish their own unique combination of actions, based on the profile of their supply chain, while monitoring rapidly changing market patterns.

GOOD PRACTICES FOR SUPPLIER ENGAGEMENT

UNILEVER letter to 300 suppliers[70,71]
UNILEVER has published a letter sent to 300 suppliers outlining their Climate Programme and climate action goals, sending a clear message about what they expect from their business partners. They have also invited some of their partners to take part in a pilot programme that aims to make their supply chain more resilient. In 2024, Unilever announced more ambitious goals for reducing scope 3 emissions for 2030, ranging from 30% to 42%, depending on the items.

WWF questionnaire for suppliers[72]
As part of a global effort to upgrade their procurement policy, WWF has produced a helpful questionnaire for clients to assess suppliers' climate policies and practices. The objective is to increase suppliers' transparency about their GHG footprint reduction measures, approach and methodology.

GOOD PRACTICE: PRIVATE SECTOR INITIATIVES TO ENCOURAGE SUPPLIERS IN EMISSIONS REDUCTION

Target setting and validation: Over the past 20 years, several groundbreaking initiatives have been created aimed at buyers and suppliers from a variety of sectors. One of the most emblematic is the Science Based Targets Initiative (SBTi).[73] Science-based targets provide companies with a clearly defined path to reduce emissions in line with the Paris Agreement goals. Companies can become members of SBTi, thereby committing themselves to adopting science-based targets, and going through STBi's target validation process. A dedicated SME target setting option is available within SBTi.

Transparency: The Carbon Disclosure Project (CDP)[74] is a not-for profit charity that runs a global disclosure system for investors, companies, cities, states and regions to manage their environmental impact. With the aim of promoting transparency regarding the environmental and climate impact of organisations and businesses, CDP gathers data on environmental risks, target setting, etc. and scores them based on Climate, Forest, and Water Security criteria. CDP has become a global standard providing crucial information for clients' decision-making.

Influence: We Mean Business Coalition (WMBC)[75] is a global non-profit coalition working with private business to take action on climate change. WMBC works with a variety of sectors, including finance, energy, transport and industry, to support their efforts to halve GHG emissions by 2030. WMBC also houses the SME Climate Hub and other initiatives.

CDP, SBTi and WMBC create a unique ecosystem and reinforce each other. Businesses who sign the SBTi commitment letter are immediately recognised as "Committed" on the SBTi website, as well as the CDP, and WMBC websites.

SME Climate Hub: one-stop-shop for Small and Medium-sized Entreprises (SMEs) to commit to globally recognised science-based targets, access free tools to measure emissions, take climate action and report on progress. Initiative created by WMBC, Exponential Roadmap Initiative (ERI), and the Race to Zero Campaign.

SOLUTION #7: BUY ONLY WHAT IS NEEDED

Buying less, reducing overconsumption, and increasing the efficiency of supply chain processes, is often referred to as 'sufficiency'. It boils down to exploring a few simple questions: can we buy more efficiently, and therefore less, while securing the interests of affected populations? Can waste be avoided? Can we change our way of working to reduce the need for purchases? Can planning and logistics be improved to order only the quantities needed and reduce waste?

Going through these questions systematically will help organisations to reduce unnecessary quantities being bought.

Using a sufficiency lens, organisations should:

- **Rethink the organisational set-up**, ways of working, programme design and standard operating procedures to reduce the need for certain services or items. For example, energy consumption can be reduced through insulation measures or by using LED lighting.

- **Promote sufficiency practices in operational policies, and technical protocols.** For example, medical organisations who are partners of Climate Action Accelerator are tackling the issue of over-use of examination gloves in medical facilities.

- **Improve demand planning, stock management and forecasting.** This is essential to avoid potential surplus items and waste. Some progress has been made, but there is still room for improvement in terms of anticipating programme needs, stock keeping, planning processes, limiting overstock situations leading to losses (expired products) or sleeping stocks. Review kit composition regularly and limit their use to appropriate situations.

- **Increase the lifespan of equipment:** items such as computers and medical equipment need to be maintained and repaired more. Equipment needs to be repairable, spare parts need to be available and repair capabilities need to be available on the ground (either through a service provider or in-house). For instance, United Nations High Commissioner for Refugees (UNHCR) has set a target of 50% of solar lanterns repaired or recycled in 12 operations by 2025.[76]

SOLUTION #8: SHIFT FROM AIR FREIGHT TO SEA, ROAD AND RAIL FREIGHT

Emissions associated with freight represent 12% of sector-wide emissions according to Climate Action Accelerator initial estimate. Amongst the Accelerator's partner, freight can range between 4% and 11% of organisations' GHG emissions, and up to 30% (2019 baseline). It therefore represents an interesting lever for emissions reduction.

Viewed from a carbon footprint reduction perspective, air freight should be strictly limited to sudden-onset emergencies, security requirements, and specific, validated items. Better procurement planning and networks will allow organisations to substantially reduce air freight and switch to sea, road and rail freight. Longer funding contracts would allow organisations to incentivise greener suppliers by offering longer contracts.

LEVER 1: REDUCE THE PROPORTION OF AIR FREIGHT RATIO AND INCREASE THE PROPORTION OF SEA, ROAD AND TRAIN FREIGHT THROUGH IMPROVED SUPPLY CHAIN NETWORK AND PLANNING

Reduce freight and mileage
- Limit air freight to mandatory products (cold chain, narcotics, products with a short shelf-life), specific contexts and sudden-onset emergencies (excluding emergencies from poor forecasting).
- Increase direct deliveries from suppliers to hubs/missions.
- When relevant, share shipments and containers going to the same destination with partners. Different approaches are being tested, from sending more regular containers (even if they are not full) to avoid shortages and urgent backorders all the way to optimising shipments and containers (cf. ECHO logistics, HULO[77]).

Switch to sea, road, and rail freight
- Consider and improve the entire supply lead time to favour sea freight in planning and delivering orders.
- Consider organising regular container shipments by sea (even if not full) in order to prevent last minute air shipments.
- Improve order tracking and communication of supply lead times.
- Reduce stockouts leading to urgent air shipments through better forecasting, demand, supply and transport planning, inventory management, and product segmentation.
- Review back orders from field offices for confirmation or cancellation.
- Develop logistics platforms and warehouses as close as possible to operating sites, and optimise the entire supply chain.

LEVER 2: CHOOSE GREENER TRANSPORT SERVICE PROVIDERS

- Include environmental criteria in the selection process for transport service providers, authorise price increases based on greener options.
- Prioritise direct flights without transiting.
- Give preference to fuel-efficient aircraft.
- Give preference to more efficient airlines.

IMPLEMENTATION TIPS

- The choice of air freight should be an exception (sudden-onset crises, special items and security reasons).
- Planes are faster BUT customs procedures take an extremely long time. Sea transportation takes longer, but when customs procedures are carried out on departure, they are usually much quicker than if they are done in the country of destination.
- Processing and validation timelines for orders have lengthened in the humanitarian sector (up to 6 to 9 months). Optimising and shortening the lead time for orders will help to compensate for the longer transportation times of sea freight.

FOSTERING COLLABORATION FOR TO REDUCE SUPPLY CHAIN EMISSIONS

A few projects and initiatives have emerged in which humanitarian actors work together to reduce their supply chain emissions:

- **Climate Action Accelerator's community of procurement:** CAA brings together its partners' procurement practitioners to share guidance and examples of good practice and to provide a platform for discussion and learning.

- **WREC project:** created in 2021, the Waste Management Measuring, Reverse Logistics, Environmentally Sustainable Procurement and Transport, and Circular Economy (WREC) project aims to reduce the adverse environmental consequences of humanitarian logistics through awareness, practical guidance, and real-time environmental expertise. In December 2023 they issued a call to action: 'A supply chain framework for the future: reducing the carbon footprint of humanitarian aid'.[78]

- **Joint Initiative for Sustainable Humanitarian Assistance Packaging Waste Management** (or simply the 'Joint Initiative'): Whilst the JI has discontinued its focus on packaging waste, the resources developed remain available on their website.[79]

- **Sustainable Supply Chain Alliance (SSCA)** is a project led by the International Committee of the Red Cross (ICRC). It aims to embed the three pillars of sustainability (environmental, social and economic) in the supply chain activities of the International Red Cross and Red Crescent Movement.[80]

OTHER SOLUTIONS

REDUCING EMISSIONS FROM WASTE

Waste generation is increasing globally and is expected to reach 3.4 billion tons per year by 2050.[81,82] In addition to causing soil, air and water pollution, waste also produces 3% of total global GHG emissions and 20% of global methane emissions,[83] mainly because of landfilling.

By delivering aid, humanitarian organisations produce waste of various kinds, such as packaging, e-waste, garage waste and medical waste. Among Climate Action Accelerator's partners, waste represents up to 3.5% of GHG emissions.[84] Though this is a relatively small percentage compared to the emissions from the production process itself captured in the "procurement" category, it nevertheless is an area where there is potential to reduce emissions.

Waste management systems are often disrupted and/or inefficient in the low- and middle-income countries (LMICs) where humanitarians often operate. As a result, most of the waste is dumped[85] or burnt. The waste produced in delivering humanitarian assistance needs to be handled in an appropriate manner to avoid creating health and environmental hazards for communities: it is indeed as much an accountability issue as a climate and environment issue.

PRIORITY ACTIONS FOR ORGANISATIONS:

1. **Avoiding and reducing** the waste generated by programmes, offices and warehouses as well as during events/training sessions. These actions should be embedded in waste reduction policies which can help support organisations' efforts to plan for and to monitor the impact of waste reduction strategies.[86]
   - Refuse unnecessary items (e.g. donations).
   - Avoid items with a close expiry date.
   - Purchase high-quality and more durable items with a longer lifespan.
   - Ensure that items can be repaired locally.
   - Eliminate unnecessary packaging.
   - Refuse goods with single-use packaging[87] when it does not affect the quality of the item delivered, opting for reusable items etc.

2. **Ensuring proper waste collection:** even though part of the waste is no longer accessible to organisations after items have been distributed, organisations should at least ensure that the waste generated is properly collected, so that it can be responsibly managed (e.g. the collection of humanitarian assistance packaging waste at distribution sites).

3. **Sorting and recycling:** each type of waste needs to be managed in a specific way and sorting ensures that each type is treated in the most appropriate way.[88] It may be possible, for instance, to compost organic waste or to reuse[89]/repurpose[90] or recycle waste locally.[91] As such, identifying treatment/recycling opportunities per waste stream is an essential step.[92] Particular care should be taken with hazardous waste (e.g. used oil and batteries from vehicles, or medical waste) and electronic waste (e.g. phones and computers). This should be collected, labelled, and stored in appropriate containers separately from all other waste to limit contamination. While options for these waste streams are limited, opportunities for recycling or co-processing[93] should be explored.[94]

4. **Managing end-of-life waste in humanitarian settings** can be particularly challenging given the absence of sanitary landfills or environmentally sustainable incinerators in most contexts.
   - Organisations should ensure that local waste collection companies dispose of the waste in appropriate facilities called "sanitary landfills" (e.g. ones that are inspected, in a fenced-off location) in according with local legislation.
   - A clause can be added to contracts with waste collection companies, asking to provide certification wherever possible as well as to carry out visits of the disposal site.

Reducing humanitarian organisations' environmental and climate footprint related to waste is a cross-cutting responsibility and requires procurement, administrative and programme functions to work together.[95,96]

The humanitarian community (organisations and donors) should take responsibility for the waste and local pollution generated by humanitarian action. They should increase their support for waste treatment, recycle locally, and collaborate with governments and communities whenever possible.

BIODIVERSITY

Climate change and biodiversity are interlinked: the effects of climate change exacerbate risks to natural ecosystems, whilst loss of biodiversity and the destruction of natural habitats have negative effects on nature's ability to adapt to the effects of climate change. Degraded eco-systems increase people's exposure and vulnerability to hazards, have a negative impact on livelihoods, and increase threats to human health. The humanitarian sector has acknowledged the importance of biodiversity protection and has made a commitment to reduce its impact on it in both the Humanitarian Aid Donors' Declaration[97] and the Climate Charter.[98]

Humanitarian organisations have a role to play in protecting, conserving and restoring ecosystems, thereby creating significant co-benefits for staff and beneficiaries, both at headquarters and field levels.

ORGANISATIONS CAN:

∴ **Conserve and restore biodiversity on their premises** by creating refuge areas, feeding and breeding grounds and ensuring that there are areas that can be occupied by local flora and fauna.

∴ **Assess and reduce procurement practices that negatively affect biodiversity.**
   • Food production, forestry, mining and energy production can contribute to changes in land and sea use and the overexploitation of natural resources, and they can involve harmful production and waste management practices.[99]

∴ **Reduce the risk of biodiversity loss at field level.**
   • The activities of humanitarian organisations, especially in areas with limited waste and wastewater infrastructure can have a negative impact on biodiversity.

∴ **Enhance biodiversity and increase climate resilience at field level.**
   • Humanitarian organisations can go a step further and create positive biodiversity outcomes, with co-benefits for climate resilience and human well-being.

∴ **Raise awareness among staff and beneficiaries.**
   • Raising awareness about the benefits of protecting biodiversity will help to implement measures and make them more sustainable.
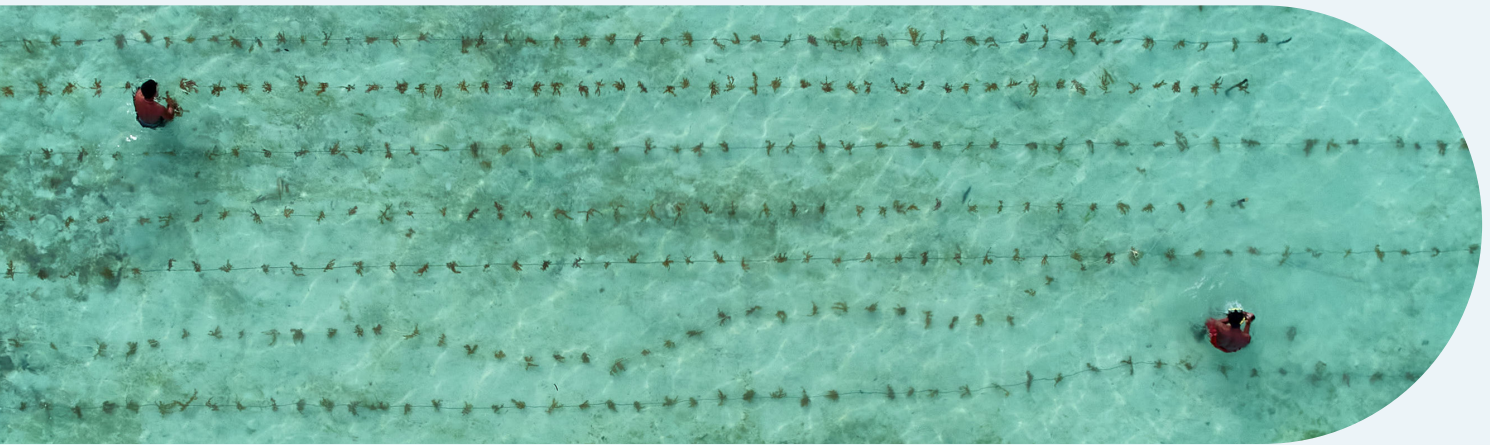
GOOD PRACTICE EXAMPLE: PARTNERSHIP BETWEEN IFRC AND THE NATURE CONSERVANCY HELPS TO EQUIP CARIBBEAN COMMUNITIES TO COMBAT THE CLIMATE CRISIS

IFRC and The Nature Conservancy (TNC) have prepared over 3,000 people in the Dominican Republic, Grenada, and Jamaica to adapt to the climate crisis through the Resilient Islands Project. The project uses nature-based solutions to enhance community resilience, such as designing a climate-smart fisher facility in Grenada and enhancing Jamaica's national vulnerability ranking index with ecosystem indicators. The project emphasizes the importance of local engagement and collaboration between organisations with complementary capabilities.[100]

REDUCING EMISSIONS FROM DIGITAL TECHNOLOGY

While digital technologies have also become a critical tool for reducing emissions within organisations to countervail the environmental impact from travel, the growing impact of digitalisation and related data use is often underestimated and represents a risk if not properly considered in climate roadmaps. It is therefore important for organisations to rationalise digital practices and the amount of digital equipment in use to limit their climate impact within organisations, especially as digital energy consumption is growing at a rate of 9% annually.[101]

ORGANISATIONS SHOULD:

⠿ **Devices: Make digital equipment and services more sustainable.**
- Reduce the number of IT devices and extend their lifespan.
- Reduce the impact of IT equipment.
- Properly dispose of IT devices.

⠿ **Data: Limit the growth of data and energy consumption.**
- Limit data growth and reduce energy consumption.

⠿ **Servers: Reduce the impact of servers.**
- Localise data storage in countries with low carbon electricity.
- Use greener data centres with appropriate certifications/ratings/labels[102] and greener cloud service providers.
- Prefer the storage of non-essential documents on local devices and use disconnected data storage for backups.

PROGRAMMATIC HIGHLIGHTS

While halving emissions by 2030 requires a systematic work on the main domains of emissions (energy, travel, freight, supply, etc.), it also calls for rethinking the way humanitarian operations are being done, and exploring how to shape the humanitarian operations of the future.

TOWARDS CLIMATE- AND NATURE-SMART HEALTH ACTIVITIES

Low- and middle-income countries (LMICs) are being severely impacted by climate change. As a result, they are faced with an increasing number of acute events with either direct health consequences (such as outbreaks of disease) or indirect health consequences (such as natural disasters and migration). The health cluster is the second most emissive, representing 18% of the sector's total baseline emissions for 2022 according to Climate Action Accelerator's initial estimate. It represents therefore a significant potential for emissions reduction while better responding to growing health needs of the most vulnerable populations.

1. INTERVENTION #1: STRENGTHENING RESILIENCE AT THE LEVEL OF HEALTH SERVICE DELIVERY

Considering growing health needs, increased climate impacts and higher energy prices, reducing the carbon footprint of health assistance is an opportunity to make it more fit for purpose by increasing access to quality care for populations and improving their resilience to shocks.

Some operational approaches allow to maximise benefits while limiting trade-offs. This is the case of Climate Resilient and Environmentally Sustainable Health Facilities (CRESH).[103] These are designed to address the changing needs caused by current and anticipated climate change impacts, and to make optimal use of 'climate smart' and low carbon technologies and approaches. Applying a CRESH approach at primary and secondary care levels allows the transition towards environmentally sustainable health to be made in a realistic timeframe.

A first step towards adopting a CRESH approach is identifying a Climate Vulnerability and Capacity Assessment (VCA) methodology that is adapted to the level of health facilities, and includes both infrastructure and service delivery. Climate Action Accelerator has developed a comprehensive, field-tested Climate VCA methodology adapted to health facilities in low- and middle-income countries. It includes five stages: 1) a desk review of regional climate hazards and vulnerabilities; 2) a quantitative audit of health facility vulnerabilities and capacities; 3) qualitative (scenario-based) data collection from health workers and the local population to identify climate risks and potential solutions; 4) data analysis and solution generation; and 5) prioritization of solutions and the development of a facility adaptation plan.[104]

In partnership with ALIMA, Alerte Santé and the Chadian Ministry of Health, Climate Action Accelerator is supporting the Ngouri Hospital (Chad) for the transition of its malnutrition and paediatrics services into CRESH services. This will be one of the first documented CRESH transition projects in a low-income setting with high climate risk.

2. INTERVENTION #2: THEMATIC APPROACHES

Other interventions to improve the way climate and environmental strategies are integrated into health programme design are currently being explored. A number of diseases can be aggravated by climate change thereby creating a significant additional burden on already fragile health care systems. Adopting climate smart approaches therefore allows for significant health co-benefits in addition to emissions reduction. As such, investing in cross-cutting and disease-specific approaches, and exploring climate smart approaches in immunization, surgery, and nutrition should be considered a priority.

OPPORTUNITIES FOR EMISSIONS REDUCTION IN NUTRITIONAL AND VACCINATION ACTIVITIES

While malnutrition inpatient treatment should follow the CRESH approach, outpatient treatment (ambulatory activities), which is received by 80% of malnourished children, should be a priority for emissions reduction. 'Win–win' approaches need to be further explored to meet the growing nutritional needs of children in LMICs, as food and environmental safety deteriorate. **Possible measures include:**

- **Transport:** Malnutrition detection sessions and distributions of Ready-to-Use Therapeutic Food (RUTF) require significant transportation to reach rural areas. It may be possible to collaborate with other outreach activities, such as advanced vaccination programmes, to limit travel.

- **Programming:** Empowering caregivers can reduce the number of follow-up visits, travelling to and from health centre only when required, and using the 'Family MUAC' programme to reduce travel needs.[105,106]

- **Nutritional treatment:** RUTF used to treat acute malnourished children is packaged in metallic laminated sachets. These sachets give the product a shelf life of 2 years, but they are a source of pollution for the local environment. They should be systematically collected and stored to limit pollution while options for identifying less polluting alternatives and recycling options are being explored. Milk proteins are one of the main ingredients of RUTF. Despite the excellent results, particularly in terms of weight gain, the origin of the proteins needs to be reconsidered (animal versus vegetal and local versus international or regional).

The climate and environmental impact of **immunisation programmes** could potentially be reduced in the short term thanks to a number of practical solutions covering the following areas:
- the fleet (eco-friendly vehicles);
- sourcing, procurement and shipment of supplies (eco-friendly packaging, single-use equipment);
- use of climate-friendly refrigerants instead of hydrofluorocarbons;
- renewable sources of energy;
- waste management (reuse, recycling, no incineration).

3. INTERVENTION #3: REDUCING CONSUMPTION BY REVISING MEDICAL PRACTICES AND PROTOCOLS

Humanitarian medical organisations are often looking for ways to achieve a 'virtuous' circle, e.g. being more climate and nature smart, reducing quantities, and adapting technical protocols and guidelines. The question of reducing the number of products used for medical activities (and the related risk of pollution) needs to be weighed up along with the ability to maintain the quality of care.

Reduce the overconsumption or unjustified use of consumables:
- Ensure the selection, ordering, and dispensing of drugs, the use of consumables, the use of medical devices, are in line with medical protocols and with what is necessary from a medical perspective. Train staff on reducing overprescriptions.
- Optimise the ordering, use and maintenance of medical equipment.

Switch to medical protocols with less environmental impact:
- Switch to longer-lasting medical equipment and alternative medical products, like recycled plastic items or anaesthetic gases and inhalers with lower 'global warming potential'.
- Train and support medical practitioners on updated protocols and their environmental impact.

Increase the percentage of sea and road freight through better planning of medical orders:
- Only use air freight in situations and contexts where it is absolutely unavoidable.
- Reduce field stock-outs that need to be urgently re-supplied.

CASE STUDY: GLOVES REDUCTION

Gloves are one of the most common single-use plastic items in health care. Between 25 February 2020 and 24 February 2021, 5.5 billion gloves were used in the NHS and social care in England alone. By reducing unnecessary glove use, health care can become more sustainable.

Staff at Great Ormond Street Hospital reduced the use of plastic gloves, and in doing so saved 21 tonnes of plastic and £90,000. The team used internal communications channels to raise awareness and developed a training package to reach all their nursing staff and healthcare assistants. The project changed behaviour and helped deliver health benefits for staff as well as the environment.[107]

Gloves reduction is also an important topic for humanitarian organisations. Médecins Sans Frontières recently did a study showing that margins for gloves reduction in the medical humanitarian practice were quite significant.[108]

4. INTERVENTION #4: SWITCH TO ALTERNATIVE, LOW CARBON, SUSTAINABLE MEDICAL PRODUCTS

Purchases of medical and paramedical goods and equipment represent one of the most important sources of emissions for medical humanitarian organisations.[109] Suppliers can make a meaningful contribution to emissions reduction by reducing the lifecycle footprints of their products, developing innovative programming and increasing the availability of more medical products with reduced climate and environmental impact.

In health programmes, buyer-specific and supplier-specific challenges are particularly delicate, due to the global regulatory environment, national legislative frameworks, and the overall complexity of drug production processes (small molecule and biologic drugs). While a significant proportion of pharmaceutical companies, notably some well-known brands, have already committed to emissions reduction targets, their results have yet to be substantiated.[110]

Key levers for organisations:

∴ Engaging with existing and potential suppliers to explore the availability of alternative, low-carbon, sustainable products and/or packaging options.

∴ Requesting that suppliers have robust decarbonisation plans in place, which, ideally, are independently verified.

∴ Mapping WHO qualified regional or local production and distribution sources, especially for heavy items, in order to reduce emissions from freight (e.g. anaesthetic gas, inhalers, etc.).

SUSTAINABLE MARKETS INITIATIVE'S HEALTH SYSTEMS TASK FORCE[111]

Seven of the world's largest pharmaceutical companies have partnered with the World Health Organization (WHO) to introduce a new set of requirements for suppliers to abide by. This initiative will help these organisations, and, in turn, healthcare organisations, to reduce their scope 3 emissions. Private sector members of the Sustainable Markets Initiative Health Systems Task Force have signed an open letter calling on suppliers to commit to joint, minimum climate and sustainability targets to play their part in decarbonising the healthcare value chain.

REDUCING EMISSIONS FROM FOOD AID ACTIVITIES

Food security and agriculture are the largest source of emissions produced by the international humanitarian sector: according to an initial estimate developed by Climate Action Accelerator, the Food Security and Agriculture Cluster would represent 50% of total sector-wide GHG emissions, 2022 baseline.

By nature, food aid is a cornerstone of the work of humanitarian organisations, providing live-saving assistance to those in need. Given the scale of the malnutrition and hunger crisis, with more than 333 million people facing acute levels of food insecurity in 2023[112], the quantity and quality of food assistance delivered to the most vulnerable populations across the world should by no means be hampered, but rather maintained or reinforced by emissions reduction strategies. This section therefore explores ways to decrease the GHG intensity of food assistance (e.g. emissions per unit, USD, beneficiary, etc.) while respecting the nutritional needs of the people and looking for alternative options which are culturally acceptable in countries and regions where aid is delivered.

To reduce the carbon impact of food, several lines of effort can be considered:

- Intervention #1: Prioritising low carbon, sustainable procurement options
- Intervention #2: Changing the composition of food rations
- Intervention #3: Encouraging local sourcing through aid organisations' own food security programmes

1. **INTERVENTION #1: PRIORITISING LOW CARBON, SUSTAINABLE PROCUREMENT OPTIONS**

As with any sustainable procurement approach (see section above), organisations that are working on reducing the emissions of food assistance, should work on improving forecasting, planning and reducing waste (e.g. food waste in warehouses). The organisation's approach to procurement needs to integrate climate and environmental considerations at every step of the procurement process. The right balance needs to be found between traditional procurement criteria prioritising the lowest bid and the objective of reducing the climate and environmental impact.

Since most emissions come from on-farm activities, the main hurdles are making supply chains transparent and influencing upstream suppliers. With many actors involved, tracking the activities of the hundreds of thousands of farmers in the supply chains is a complex endeavour. Organisations should adopt structural approaches, working on the whole supply chain. They should collaborate with suppliers capable of verifying where products come from and they should source produce from farms or cooperatives who adhere to agricultural practices with a lower carbon and environmental impact, such as regenerative agriculture. Suppliers can either be selected from the current supplier base, if they are already involved in this kind of transformation, or new sourcing options can be identified via certifications, green initiatives, and programmes. Dedicated resources are therefore needed to work closely with suppliers.

The fact that only a few actors actually buy and distribute food, directly or via partners, makes reducing emissions from food procurement somewhat easier. These actors include the World Food Programme (WFP) and the ICRC, as well as USAID, which plays a predominant role. By working together with key food suppliers, distributors, and wholesalers, they could, for example, explore and adopt sustainable rice sourcing options in Asia and in the US. As such, they could achieve a significant reduction in GHG emissions. They are further encouraged to align their procurement criteria, assess synergies, and explore the potential for joint procurement.

Priority actions include:

- **Develop individual or collective engagement with wholesalers and distributors,** being clear on climate and environmental expectations. Identify suppliers who can provide less emissive alternatives and/or who have a credible decarbonisation plan in place.

- **Engage with suppliers** to better understand if and how they are working to reduce emissions and whether they are able to measure reductions.

- **Leverage existing platforms or initiatives** focused on greener and more resilient sourcing to explore new options, such as the Sustainable Rice Landscapes Initiative (SRLI). Some of these platforms have established climate-smart agricultural programmes based on regenerative agriculture and are mature enough to offer sourcing options that prioritise sustainable agricultural practices.

- **Explore existing certification and verification mechanisms** and improve the understanding of what elements they cover, if the standard is credible and if and how carbon reductions are included in the standard. It is important to note that labels and verification schemes exist for some items (e.g. sugar[113], palm oil and rice), but do not yet exist for others. Certification and verification schemes provide a useful avenue to explore, though their actual impact on carbon reduction is difficult to measure, but not all of them have already systematically integrated a dedicated climate perspective into their requirements.

- **Take into consideration the difficulties** that buyers in humanitarian organisations face in tracing the production and value chains of food items. Due to the globalisation of supply chains and the numerous intermediaries involved, transparency within the food commodity market is relatively limited. Procurement teams/projects therefore need to be resourced accordingly.

- **When working with suppliers, including local ones, prioritise long-term relationships.** Investment, time, and commitment from both parties are necessary to promote sustainable agriculture. Suppliers need assurance that their efforts to implement regenerative practices will be supported and rewarded by their buyers over the long term.

- **Consider more responsible sourcing options without compromising supply security.** This becomes even more challenging when organisations are responding to life-saving food aid emergencies. Food procurement strategies therefore need to integrate climate and environmental criteria while also considering flexibility and resilience, especially as more and more frequent fluctuations in the quantity and quality of crops will directly affect food availability and pricing. This also underlines the need for supporting the transformation to more climate resilient and regenerative agricultural practices in the first place.

REDUCING EMISSIONS FROM RICE

A fifth of the world's population depends on rice cultivation for their livelihood. In food assistance programmes, rice is also one of the top items distributed to vulnerable populations. However, rice cultivation contributes significantly to climate change, producing about the same amount of GHG emissions as Germany,[114] primarily from rice straw rot in paddy fields releasing methane. Though there are many factors involved, studies and pilots show that emission reductions of 40%–60% per kg of rice are possible.[115]

For humanitarian organisations, rice is one source of emissions where there is potential to make significant reductions. For example, when Climate Action Accelerator helped the ICRC to establish their trajectory for halving emissions by 2030, we showed that reducing rice's footprint by 40% by 2030 would reduce ICRC's total footprint by 5%.

LOCAL AND REGIONAL SOURCING

Globally, more than 70% of the carbon footprint of food production comes from the production stage.[116] Reducing emissions from food items yields interesting co-benefits. For example, it contributes to providing livelihoods to communities and increasing local food production. In general, locally produced items are also well adapted to the cultural habits of the local population. Locally 'sourced' does not necessarily mean 'locally produced'. Organisations that are looking to increase the sourcing of locally produced food should accompany farmers in the transition to better agricultural practices by, for example, establishing long-term agreements that involve a commitment from producers to move towards less impactful practices. This could also include a partnership with a third party to provide necessary technical support. Humanitarian organisations could help local farmers to implement better agricultural practices through their programmes.

2. **INTERVENTION #2: CHANGING THE COMPOSITION OF FOOD RATIONS**[117]

Emissions from food items can be significantly reduced by switching from high-emitting food items to low-carbon options. This should be done in the respect of cultural habits and under the technical guidance of nutritionists. Decarbonisation measures should not lead to a decrease in quality, quantity and timeliness of life-saving assistance.

5 Steps:
1. Identify food items with the largest impact on the carbon footprint.
2. Identify potential low-carbon, sustainable alternatives.
3. Diversify rice sourcing, and include less carbon-intensive alternatives, such as pulses, maize and wheat, ideally from regional and local sources.
4. Increase sourcing of plant-based options, reducing animal-based products when possible (especially beef, lamb and goat).
5. Streamline the procurement process, integrating greenhouse gas emissions data into the food procurement decision-making process.

- In theory, switching to low(er)-carbon food options is easy. However, the cultural and traditional aspects of nutrition for people in need are priority considerations that need to be taken into account.

- Reducing the carbon impact of food aid requires the involvement of different departments and specialists, such as nutritionists and local experts. While the norm for food ration composition[118] allows a variety of food items to be included, a potential change in food items should be reviewed by nutritionists and experts to ensure there is no negative impact on nutritional values.

3. ### INTERVENTION #3: ENCOURAGING LOCAL SOURCING THROUGH AID ORGANISATIONS' OWN FOOD SECURITY PROGRAMMES

Some humanitarian organisations implement food security and livelihoods activities, either in post-crisis situations, or as a way to reduce the vulnerability of local populations to potential crises. These activities include farming and agricultural programmes to support local production.[119] Programmes of this kind should have a climate and environmental component. Improving agricultural practices by, for example, increasing soil health and reducing the use of pesticides not only contributes to the local availability of low-carbon, sustainable food items, but also supports long-term food security and farmers' resilience.

A few humanitarian organisations, such as CARE[120] and Action Contre la Faim,[121] already promote agroecology in their programmes as a way to help communities combat both food insecurity and climate change.

IMPROVING AGRICULTURAL PRACTICES

The FAO estimates that 1/3 of soils globally are degraded,[122] and that, instead of absorbing carbon, they emit carbon into the atmosphere. Buyers of food items can contribute to the transformation of agricultural systems so that soils go from being a source of GHG emissions back to functioning as a carbon sink. Whilst different concepts with slightly different focus areas exist (e.g. regenerative agriculture, climate-smart agriculture or agroecology), it is important to keep the outcome in mind: regenerating soil health, increasing biodiversity, reducing pollution, improving water quality and increasing carbon storage in the soil. A one-size fits all approach will not work due to the complexity of ecosystems and local circumstances: it is key to adapt practices to the local environment at farm level and work in collaboration with suppliers and producers to improve practices.

The Swiss-based NGO, Earthworm Foundation, has been working for 25 years with businesses, farmers, civil society and other actors on solutions to produce food and other commodities while restoring ecosystems. They are currently working with partners to improve soil health and scale-up regenerative agriculture in France, the USA and India.[123] The NGO recently partnered with Vivescia, a cooperative farming and food processing group, to develop a tailored programme to scale-up regenerative practices with 1,000 farmers by 2026.[124] This programme aims at reducing GHG emissions by 20% by 2030[125].

3.

PILLAR 3:
BEING A DRIVER OF CHANGE – TRANSFORMATION LEVERS

ENABLING TRANSFORMATION

A number of transformation levers will help to put the roadmap in place and ensure that its implementation is a success. Most are classic change management procedures, but they require strong institutional alignment and continuity of purpose to ensure that the desired outcomes are achieved.

STEWARDSHIP

Organisations need to commit to being a part of the solution to the climate and environmental crises. The roadmap therefore should be aligned with earlier institutional engagements. The role of the leadership both top management and at the field office level, is critical in order to make climate and environment work a priority, regularly report on progress, and mobilize resources for change.

Management needs to be committed to achieving the roadmap's objectives and needs to recognise and support staff engaged in its implementation. Inclusive roadmap governance should be established, ensuring that all key stakeholders are represented, and responsibility lines represented are delineated.

INVESTING IN PEOPLE, AND CLARIFYING ROLES AND RESPONSIBILITIES

Environmental responsibility is a way of bringing people together around shared values. Raising awareness on institutional commitments throughout the organisation, clarifying the distribution of roles and responsibilities, upgrading competences where needed with complementary skills, tools, and external partnerships will therefore be key for roadmap implementation. Once they have the appropriate skills and knowledge, it is expected that each staff member will be able to contribute to the individual and organisational behaviour changes needed to meet the objectives of the roadmap.

ADOPTING KEY PRINCIPLES

In order to increase efficiency and cost effectiveness while engaging in the required change in culture, it is recommended that organisations integrate climate and environmental considerations into their operational cycle and key activities, rather than addressing them as a separate issue. They should adopt and implement the key principles of roadmap implementation **(see above section on "Guiding Principles")**.

GETTING YOUR COMMUNITY ON BOARD

Addressing the climate and environmental crises requires substantial collaboration to learn from others inside and beyond the aid sector, in particular between local, national and international actors. Organisations should demonstrate their commitment to engagement their partners, peers and broader networks, encouraging them to adopt an ambitious climate and environmental agenda. They should also encourage them to play a leading role in active coalitions, such as technical partnerships to access in-depth knowledge and experience on a given subject, corporate partnerships to accelerate the deployment of solutions or strategic alliances to create communities of action.

IMPLEMENTATION PRINCIPLES

Organisations should define a set of implementation principles to provide a framework for the shift towards more sustainable practices. Given the fast-paced nature of their activities, humanitarian organisations typically renew their project portfolios every 4 to 7 years, offering a valuable opportunity for swift transformation.

1. PRINCIPLE #1: STRENGTHEN EXISTING EFFORTS

In order to optimise their impact and achieve results in the short term, organisations should strengthen their efforts in areas where they have already begun to take action and should prioritise key projects. Acting on 'low-hanging fruits' will help to build momentum, while acting on projects that generate savings will provide resources to support the overall roadmap implementation.

Examples of projects to be considered from the start of the implementation phase:

- **Design and implement a responsible travelling policy,** including criteria for essential travel, differentiated targets per reason for travel and travel validation procedures, to maintain the volume of travel at around 2023 levels.

- Systematically **purchase lighter, lower-emission, adapted vehicles** for all planned replacements and new procurements to reduce the volume of fuel purchased and the cost of procurement.

- **Reduce electricity consumption** through "no regret adaptations" to improve efficiency (all new premises should be considered as well as long-term carbon-intensive energy-consuming sites) and adopt waste management plans.

- **Expand renewable energy programmes,** complete ongoing solarisation initiatives and design subsequent solarisation phases.

- **Make changes to the supply chain.** Conduct market analysis to identify alternative items and sources, define general and specific procurement criteria and encourage suppliers to change their practices.

2. **PRINCIPLE #2: OPTIMISE OPPORTUNITIES LINKED TO INVESTMENTS, NEW PROJECTS AND CONTRACTS**

New infrastructure or planned renovations

Use every opportunity to integrate standard sustainability practices and requirements in every new infrastructure investment, lease or building contract, whether for a new location or for planned renovations. Focus on:

- Sustainable energy production (equipping new/renovated infrastructure and facilities with photovoltaic systems upfront; when back-up generators are installed, make sure they are properly sized based on consumption needs (not too big).
- Low consumption electrical appliances.
- Thermal efficiency of buildings (cool roofs, insulation, etc.).

New projects

Instead of engaging in a massive transformation plan affecting all existing country offices and programmes, use new project locations to implement the climate and environmental strategies laid out in the roadmap. For example, in an organisation with a project duration of approximately 7 years, this would mean that the vast majority of programmes would benefit from solutions by 2030.

Contract renewal

Identify opportunities for new goods and services contracts and tenders, at HQ and field levels, and integrate environmental and climate criteria into decision trees. A good opportunity to do this is when a supplier contract is coming to an end, and both parties are looking to renew it. Focus on the following areas:

- Capital goods (vehicles and IT).
- Transport services (transporters and travel agencies).
- General services (finance and administration, pension funds, building leases and IT services).
- Procurement contracts (food, emergency relief items and agricultural products).

3. **PRINCIPLE #3: IDENTIFY AND PRIORITISE 'HOTSPOTS'**

'Hotspots' can be defined as countries/projects where GHG emissions are the highest, and where the organisation's presence is due to continue beyond 3 to 5 years. Energy, fleet, procurement, and freight have a significant impact on the carbon footprint in these hotspots.

In addition to new or planned investments, gradually upgrade a list of long-term hotspots with particularly poor climate and environmental records. Each organisation will identify priority domains of intervention, based on their specific emissions profiles.

For example, a Climate Action Accelerator partner organisation has decided to focus on 15 country programmes, out of a total of around 100, as these account for 80% of the total footprint attributable to energy.

4. **PRINCIPLE #4: INCREASE BUY-IN FROM CORE PROGRAMME TEAMS**

Ultimately, implementing climate and environmental strategies is about the way programmes are being designed and implemented. The success of a roadmap implementation plan is therefore closely connected to the ability of programme teams to integrate these dimensions into the project design and annual budgets.

- Identify and highlight **operational co-benefits** in the communication strategy.
- Put **climate issues on the agenda** of programme team meetings (such as the annual country directors' meeting).
- **Create success stories with 'early adopter' country offices:** encourage cultural change by identifying supportive 'early adopter' country directors who are convinced of the need to adapt the organisation and are willing to take a leadership role in implementing climate and environmental strategies.
- During a second phase, **bring all country programmes on board to implement the roadmap**, distributing clear responsibilities and accountability lines. This implies developing workplans at the country level. Appropriate data collection and reporting should be developed early on (year 1 of roadmap implementation).

ROADMAP MONITORING FRAMEWORK

■ WHY MONITOR PROGRESS?

Monitoring frameworks are designed to answer the question: 'Are we on track?' with regard to roadmap implementation and meeting our quantitative targets.

TWO MAIN GOALS:

EXTERNAL ACCOUNTABILITY

∴ **Accountable to public & board:** showing progress on public key commitments taken in the roadmap. Demonstrating that the organisation is taking concrete actions (as opposed to green washing).

∴ **Anticipate on increased compliance expectations:** ensure compatibility with recognised international standards, and emerging best practices (such as for instance those promoted by the Science Based Target initiative SBTi).

INTERNAL ACCOUNTABILITY

∴ **Manage implementation:** assess progress, arbitrate priorities, manage resources, mitigate blockages, involve staff and motivate with success stories.

TIPS

∴ Adopt a dedicated monitoring framework as soon as the first year of implementation of the climate roadmap, while acknowledging that data availability and quality may be a challenge, and that impact reduction may not be immediately visible (progress usually shows after 2 to 3 years).

∴ In the early years, while monitoring data are still limited, use success stories and case studies, which, when disseminated, help maintain momentum.

■ TAILOR–MADE MONITORING FRAMEWORK

The list of solutions and actions, and corresponding quantified reduction targets identified in the roadmap serve as a backbone for defining monitoring indicators.

This list may be used as a starting point to define corresponding indicators, then assess data feasibility, and design the data collection process. The organisation will be able decide what is feasible today, and what is desirable/how to improve the monitoring framework in the future.

TYPOLOGY OF INDICATORS

Monitoring frameworks include high level indicators, which offer a "cockpit" for monitoring the overall progress of roadmap implementation, and a set of more detailed indicators.

HIGH LEVEL INDICATORS (THE "COCKPIT")

What: critical data for decision-making and showing overall progress on roadmap commitments. If these indicators are not met, it means that the implementation of the organisation's roadmap is going off track.

Target audience: senior leadership, sustainability managers.

High Level Indicators are mandatory metrics to measure progress against the overall climate roadmap commitment, that is halving GHG emissions by 2030 (measuring emissions avoided).

The main high-level indicator consists in measuring emissions reduction in absolute terms. This can be complemented by emissions per dollar spent (intensity).

PROGRESS INDICATORS

For each category of solution (procurement, air freight, business travel, etc.), **a set of input, activity, output, outcomes and impact indicators needs to be defined.**

- Use a mix of qualitative and quantitative indicators.
- Focus on priority projects to be initiated on the first couple of years of the roadmap implementation.
- Combine the measurement of progress on key action/activities planned, with process, policies, and data availability/generation tracking tools.

Data collection, availability and quality are key for the capacity of an organisation to develop its climate roadmap and for the monitoring framework. However, organisations are often faced with **initial challenges which will be addressed over time:**

- Improve the physical data collection process, starting with an initial mapping of available data.
- Contribute to develop emissions factors for key items used by humanitarian organisations, for instance identifying proxies and/or investing into research projects to estimate life cycle analysis (LCAs).
- Be very picky in the number and complexity of additional indicators requested, using existing data in priority; make sure field is not overburden with data collection.

TOP INDICATORS

CAPTURE THE OVERALL PROGRESS IN THE SOURCES OF EMISSIONS OF ORGANISATIONS

Direct emissions (Energy & Transport)

1. **Travel**: Number of km per passenger by air
2. **Fuel**: Number of liters of fuel used (for cars & generators)
3. **Energy**: Number of kWh consumed
4. **Energy mix**: Percentage of kWh from low-carbon energy
5. **Freight**: Number of t.km transported by air

Indirect emissions (Procurement)

1. **Purchasing emissions**: Emissions from Purchased Goods and Services
2. **Purchasing intensity**: Emissions per $ spent
3. **Procure greener***: Percentage of spend meeting environmental specifications
4. **Pool of items***: Evolution of emission factors for a selected set of items
5. **Transparency***: Number of purchased goods with Carbon Footprint Data
6. **Suppliers energy mix***: % of Suppliers Using Low-carbon energy **
7. **Suppliers commitment***: % of Suppliers Committed to Paris-Aligned Emissions Reductions**

Environment

1. **Waste**: Kg of waste
2. **Plastic**: Proportion of facilities banning single-use plastic

* Implementation from the start isn't required (depends on size and maturity level)
** Only for suppliers - producers of goods with significant spend.

OTHER MONITORING TOOLS

Monitoring can go beyond tracking indicators and collecting data. Organisations can also assess how well they integrate environmental requirements into their practices. This can be achieved using a maturity model, which breaks environmental integration into measurable stages for different solution categories (such as travel, freight, procurement, etc.). The model consists of five stages, each stage representing a level of progress in adopting environmental strategies. Using this approach, organisations can identify their current stage for each category and determine the steps needed to advance to the next level. A financial module can be added, to follow-up on investments, costs and savings.

ALIMA'S ENVIRONMENTAL ACTION: ACHIEVEMENTS, LESSONS AND OUTLOOK, FEBRUARY 2024[126]

In December 2021, ALIMA adopted an ambitious climate and environmental roadmap[127], aiming to reduce its GHG by 50% by 2030 and outlining specific actions such as transitioning from air to sea freight, prioritising renewable energy and improving waste management across all its operations. In February 2024, ALIMA's progress report marked two years of steps forward and lessons learned. With regards to renewable energy for example, healthcare facilities supported by ALIMA have increasingly invested in solar power, and thanks to the recruitment of an energy and buildings coordinator and a partnership with Electricians Sans Frontières, the organisation launched its energy management policy in 2024, allowing for better assessment and larger deployment. Among the key lessons learned, ALIMA cites; annual action plans at country levels to empower field teams to define priorities and integrate needs into project cycles, proactive partnership identification to address on-site expertise gaps and an internalised environment team at the intersection of operations and support services to avoid environmental actions becoming isolated initiatives.

ACCOUNTABILITY & REPORTING

A transparent and accountable approach will empower every employee and donor to assess the progress made in implementing the roadmap and the steadfastness of commitment. To that aim, organisations should:

- Ensure and improve adequate and quality data collection.
- Monitor the roadmap implementation.
- Ensure progress measurement and accountability.
- Regularly and publicly report on progress.

4.

PILLAR 4:
ASSESSING THE FINANCIAL IMPACT

KEY MILESTONES FOR ASSESSING THE FINANCIAL IMPACT OF CLIMATE STRATEGIES

Climate Action Accelerator has developed a methodology to estimate the financial impact of the climate and environmental roadmaps developed with its partner organisations, to allow them to assemble to means to succeed.

This method provides a high-level estimate of the costs of climate and environmental measures listed in roadmaps, and their implementation of the 7 years over which these roadmaps run. It should not be considered as a budget, even though it can be used for costs monitoring during the roadmap implementation. It is rather a financial viability estimate, designed to inform the decision of executives and boards committing their organisation to ambitious emissions reduction plans.

The estimation of the financial impact of an organisation's roadmap has three key dimensions: a macro-level analysis of the growth, a solution-by-solution review of the savings, running costs and investments[128], and an estimate of human resources requirements.

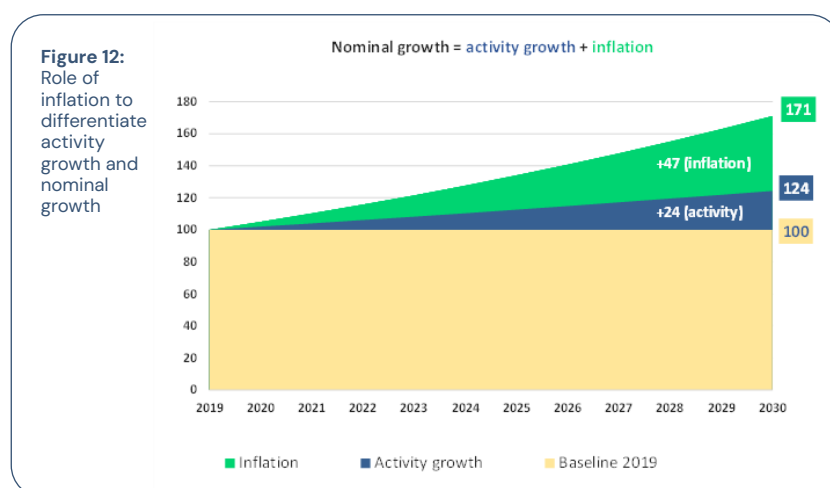## STEP 1: ESTABLISH THE NOMINAL AND ACTIVITY GROWTH OF THE ORGANISATION

Establishing the nominal[129] and activity growth of an organisation until 2030 requires a two-step approach. Organisations must first understand how activity growth and inflation drive the nominal (or financial) growth of their organisation. They must then validate realistic activity growth projections and adapted inflation assumptions.

OPERATE A DISTINCTION BETWEEN ACTIVITY GROWTH AND NOMINAL GROWTH

The modelling of costs, savings and investments requires a split of the nominal (or "financial") growth into:

: **budget growth resulting from activity growth:** by what percentage will activity indicators[130] such as number of plane tickets or litres of diesel, grow until 2030.
: **budget growth coming from inflation:** what is the expected yearly inflation until 2030.

Figure 1 shows the difference between nominal and activity growth on a hypothetical budget of 100 in 2019, applying a 5% yearly nominal growth made of 3% of yearly inflation and 2% of activity growth.

Figure 12: Role of inflation to differentiate activity growth and nominal growth

Nominal growth = activity growth + inflation

171
+47 (inflation)
124
+24 (activity)
100

■ Inflation ■ Activity growth ■ Baseline 2019

In the recent context of increased inflation, this approach is essential to identify the weight of activity indicators, in driving both the carbon trajectory and the financial modelling. Inflation is still used to calculate the yearly evolution of prices (see below).

DEFINE THE NOMINAL GROWTH RATE AND PREFERRED INFLATION ASSUMPTIONS BETWEEN PRESENT YEAR AND 2030

First, organisations need to establish a high-level but realistic estimate of their nominal yearly growth rate until 2030. This timeframe exceeds the common financial planning timeframe of organisations. It therefore usually requires a discussion at senior leadership level, covering the following dimensions:

- What is a realistic growth rate for the organisation, based on:
  - the understanding of the drivers of past growth
  - the assessment of the trends in our current and future environment
  - historic data (10 years usually, statistical approach)

- To what indicator should this growth rate be applied, as it best represents the organisation's business model? For most organisations, expenses are a better indicator than revenues. Not only are they linked to the carbon footprint, but they also eliminate potential fluctuations in revenues and related deficits or surpluses.

- Are there highly impactful changes in the organisation's business model which suggest that GHG emissions[131] will not grow linearly compared to footprint baseline? Examples used for some organisations include: the development of a new operational activity of significant size, or the regionalisation of the operating model.

Secondly, the most suited inflation assumptions need to be identified, based on the geographical footprint of the organisation. The model uses the International Monetary Fund (IMF) inflation projections by country, by region or global, or a mix of these projections. For large organisations with a global operational footprint, global projections offer a realistic estimate. For organisations with large headquarters expenses in Europe for example, a weighted mix of Europe and global inflation can be relevant.

Finally, it is important to document the assumptions used to define the growth: this will allow organisations to better understand differences between predicted growth and actual growth, and improve the future modelling.

STEP 2: UNDERTAKE A SOLUTION-BY-SOLUTION FINANCIAL ESTIMATE OF INVESTMENTS, RUNNING COSTS, AND SAVINGS

The following section describes Climate Action Accelerator's solution-based approach to financial impact assessment. We use here for the purpose of the demonstration an hypothetical example of energy consumption and emission reduction targets for 2026 and 2030.

GATHER INFORMATION NEEDED FOR FINANCIAL MODELLING

- Collect existing activity and financial information. For example, for energy solutions: yearly consumption from the grid and from generators in kWh, yearly costs of energy from the grid and from generators in currency (EUR for example).
- Identify proxies when activity data is not available, using Climate Action Accelerator's expertise and benchmarks. For example, there is rarely an accurate measure of energy production from generators. Using an estimation of the number of kWh produced by litre of diesel purchased provides an estimation of the energy consumption from generators.
- Establish essential baseline costing indicators from the baseline data. Examples include the cost of energy from the grid and generators, expressed in EUR/kWh.

CALCULATE YEARLY COSTS PROJECTIONS, REGARDLESS OF THE IMPLEMENTATION OF CLIMATE SOLUTIONS

- **Apply activity** (excluding inflation) **growth** to baseline activity indicators such as energy consumption in kWh.
- **Estimate yearly cost for activity indicators** by adding yearly inflation, using specific assumptions when required (using the World Bank projections for energy costs for example).
- **Calculate the projected yearly costs** by multiplying activity indicators and cost indicators.

	2024	2025	2026	2027	2028	2029	2030
Yearly consumption in kWh	100	102	105	102	108	110	112
Price per kWh in EUR	0.5	0.51	0.52	0.53	0.54	0.55	0.56
Yearly costs in EUR	50.0	52.0	54.6	54.1	58.3	60.5	62.7

ESTIMATE SAVINGS GENERATED BY THE IMPLEMENTATION OF CLIMATE SOLUTIONS, IF ANY

- **Calculate the yearly impact of climate solutions** identified in the roadmap on activity indicators, using reduction assumptions from the trajectory.
  For instance, if considering a decrease in energy consumption by 10% by 2026 (phase 1), and 20% by 2030 (phase 2), the model uses "implementation rates[132]" for both phases as summarised below to get the yearly decrease:

	2024	2025	2026	2027	2028	2029	2030
Phase	Phase 1: 10% by 2026			Phase 2: 20% by 2030			
Implementation rate	50%	75%	100%	25%	50%	75%	100%
Reduction target	5%	7.5%	10%	12.5%	15%	17.5%	20%

- **These targets determine the yearly decrease of key activity indicators,** such as kWh consumed for examples. This decrease is translated into savings, using the estimated cost per kWh including inflation. The table below shows an example of yearly decrease in kWh for a flat consumption over the seven years of the roadmap.

	2024	2025	2026	2027	2028	2029	2030
Phase	Phase 1: 10% by 2026			Phase 2: 20% by 2030			
Yearly consumption before solution, in kWh	100	102	105	102	108	110	112
Reduction target	5.0%	7.5%	10.0%	12.5%	15.0%	17.5%	20.0%
Yearly decrease in kWh	5.0	7.7	10.5	12.8	16.2	19.3	22.4
Price per kWh in EUR	0.50	0.51	0.52	0.53	0.54	0.55	0.56
Yearly savings in EUR	2.5	3.9	5.5	6.8	8.7	10.6	12.5

ESTIMATE THE RUNNING COSTS AND INVESTMENTS LINKED TO THE IMPLEMENTATION OF CLIMATE SOLUTIONS

- Similarly to savings, running costs and investments require a combination of activity indicators, unit costs including inflation, and impact of solutions to determine their financial impact. Examples of unit costs include: the cost of a solar equipment maintenance training, or the cost of minor waste management equipment.

- **The table below summarises the hypothetical running costs** associated with the installation of solar panels for an organisation requiring the training of 25 new employees every year; this takes into account the pace of implementation of solar energy and a turnover rate of employees.

	2024	2025	2026	2027	2028	2029	2030
Number of employees trained yearly	25	25	25	25	25	25	25
Individual cost in EUR	2,000	2,060	2,122	2,185	2,251	2,319	2,388
Yearly cost	50,000	51,500	53,045	54,636	56,275	57,964	59,703

- **The table below summarises the investments** associated with the installation of solar panels and batteries, as part of the renewable energy solution.

	2024	2025	2026	2027	2028	2029	2030
Nb of kW installed	45	47	49	51	53	0	0
Average cost of 1 kW including battery	3,000	3,090	3,183	3,278	3,377	3,478	3,582
Yearly cost	135,000	145,230	155,952	167,187	178,956	0	0

ADDITIONAL ELEMENTS OF THE MODEL

- **Uncertainty:** depending on the accuracy of data sources, an uncertainty factor of 5% to 20% is applied to each solution. Savings are diminished by this uncertainty factor, while running costs and investments are increased. This approach provides a level of conservatism in the model.

- **Savings** they are used to support the roadmap, which means they are:
  - kept within the organisation rather than kept by the donors. This means that reduced costs for travel will not result in lower funding levels or funders taking back these operational savings.
  - re-allocated to climate and environmental solutions of the roadmaps. This means these savings are assumed to be reallocated internally to support investments and increased costs inherent to the roadmap, even if supported by a different internal cost centre.

CONSIDERATIONS FOR SUCCESSFUL IMPLEMENTATION

- The financial model is underpinned by multiple operational assumptions, linked to the overall GHG reduction objectives: energy consumption, air travel, fleet consumption, etc. Organisations must ensure they have the right data collection systems in place to track the progress of their roadmap.

- Financial assumptions underpinning the model (cost of kWh, savings from reduced travel) are also essential as they underpin the financial viability of the model. These assumptions must be checked, any variation understood, and the model must be updated as the implementation progresses and provides more accurate information.

STEP 3: ESTIMATE HUMAN RESOURCES (HR) REQUIREMENTS NEEDED FOR THE IMPLEMENTATION OF CLIMATE SOLUTIONS

This section details the methodology applied to estimate the financial impact of the roadmap implementation in terms of human resources, considering elements such as the type of skills required, for how long they are needed, their location or the level of experience.

⁚ **Produce an estimate of HR needs,** solution by solution, as well as cross-cutting HR needs supporting the implementation of the roadmap, such as for instance, a position of "Programme Manager, environment and sustainability".

 This includes going through different questions:
- Is this resource needed one-off (to create new policies or make technical assessments for instance) or recurring (e.g. for maintenance of solar panels)?
- Is this resource located in headquarters, in regional hubs or on the field?
- Is this a junior or senior position?

⁚ **Perform an analysis of the best way to staff the identified needs:**
- **"Build":** the additional workload linked to climate solutions implementation can be managed within the current staffing structure. There are no new recruitments, but there may be a need for some training (and costs associated).
- **"Bridge":** this additional workload cannot be managed within the current staffing structure, but it is possible to redeploy existing employees towards new tasks and responsibilities. Similarly, there are no new recruitments. There is most likely a need for training (and associated costs).
- **"Borrow":** there is a short-term need which cannot be filled within the existing staffing structure, either due to workload or absence of specific skills. Organisations can recruit consultants or short-term contracts for instance.
- **"Buy":** the new tasks and responsibilities are long-term or ongoing and cannot be filled by existing employees. There is a need to invest into new positions.

STEP 4: BRING ALL FINANCIAL INFORMATION TOGETHER TO ESTABLISH THE FINANCIAL IMPACT OF THE ROADMAP

Combining these different elements allows the organisation to calculate a yearly and total financial impact of roadmap implementation. The visual below shows an example of a graph summarising this financial impact.

This high-level information allows decision-making bodies in organisations to assess its financial viability of the roadmap.
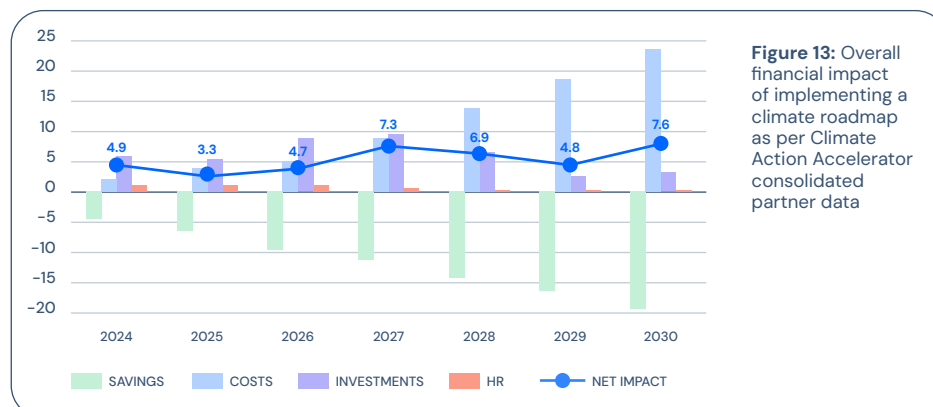

Figure 13: Overall financial impact of implementing a climate roadmap as per Climate Action Accelerator consolidated partner data

FINANCIAL IMPACT ASSESSMENT: TRENDS

Using consolidated data from its humanitarian partners,[133] Climate Action Accelerator provides here an estimate of the savings, running costs and investments required to implement climate roadmaps.

METHODOLOGICAL APPROACH

In the absence of sufficient activity data at the sector level to carry out a financial impact assessment, consolidated data from Climate Action Accelerator's humanitarian partners has been used to provide a picture of the financial impact of implementing climate solutions for humanitarian organisations in general. For the purpose of this analysis, financial data from nine of the Climate Action Accelerator's partners was used. These organisations, which vary in size and are involved in different activities, represented approximately 9% of the international humanitarian assistance budget (in terms of financial expenditure) in 2022.

Although not fully representative of the sector, this sample size is still relevant enough to establish trends and benchmarks. The analysis developed below shares lessons from organisations who have used similar, comparable, and systematic approaches to set quantitative targets and estimate related costs, savings and investments. To the best of our knowledge, this is the only available sample in the humanitarian sector today.

Even though they were originally established over different periods of time, the roadmaps were all extrapolated over a seven-year period to improve comparability. Three different extrapolation methods were used to model missing data from year 4 to 7 and improve the comparability of results. All three approaches calculate average savings, running costs and investments as a percentage of the organisations' yearly budget.

No extrapolation was undertaken for the impact of environmental solutions and the human resources costs, the respective available averages of 0.16% and 0.20% were therefore used for all three methods. The data used in the following analysis is the average of the three methods, as detailed in the below table.

The full methodology and sample are detailed in **Appendix 5**.

	Savings	Running costs	Investments	Net impact before HR	HR	Net impact incl. HR
Method 1	−1.27%	0.73%	0.68%	**0.14%**	0.20%	**0.34%**
Method 2	−1.64%	1.36%	0.64%	**0.36%**	0.20%	**0.56%**
Method 3	−1.64%	1.14%	0.74%	**0.24%**	0.20%	**0.44%**
Average	−1.52%	1.08%	0.69%	**0.25%**	0.20%	**0.45%**

Table 2: Average savings, running costs, investments and net costs, Climate Action Accelerator's consolidated partner data

CONSOLIDATED RESULTS

All data presented below detail the estimates costs of climate roadmaps, i.e. exclusive of environmental solutions and staff costs.

∷ **The average net financial impact** of implementing a climate roadmap represents 0.09% of organisations' yearly budget, reaching up to 1% for the most expensive roadmap. Total running costs and investments average 1.6% of the budget, while savings average 1.5%.

∷ **Running costs** represent 1.02% on average, varying from 0.25% to 2.1%. They are mainly driven by the greener purchasing solutions (transport, general purchases).

∷ **Investments** represent on an average 0.58% (ranging from 0% to 1.1%). Energy saving measures, solar energy and environmental solutions represent most of the investments.

∷ **Total savings** average 1.52% of the yearly budget, varying from −0.3% to −2.5%. They mainly come from transport solutions (plane travel and freight), as well as energy solutions.

ABATEMENT CURVE

The abatement curve captures the GHG impact of the main decarbonation levers, as well as the cumulated financial impact implementing them.
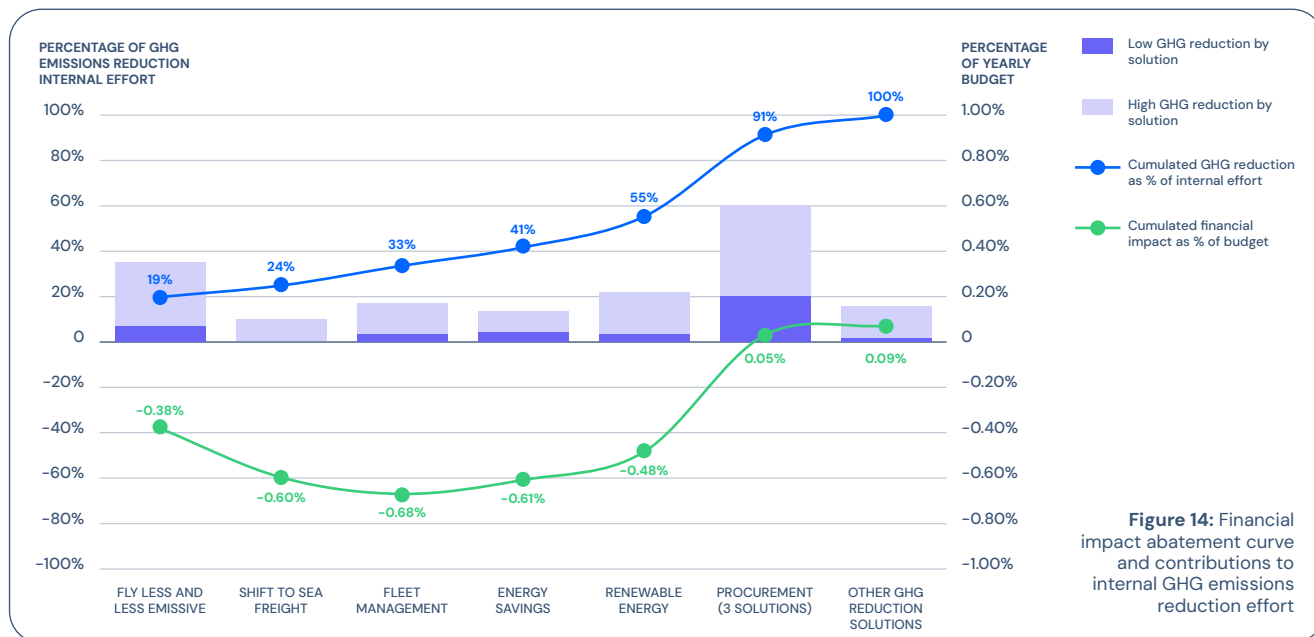

Figure 14: Financial impact abatement curve and contributions to internal GHG emissions reduction effort

A list of "Top 8 solutions" identified by Climate Action Accelerator and representing over 91% of the total reduction effort was used as reference for this consolidated analysis.

∴ **Financial impact:** the abatement curve captures the average financial impact of each solution, as well as the cumulated financial impact of the solutions in the "Top 8".

- Solutions are ranked according to their average financial impact. The solution generating the most savings (fly less) is on the far left, and the costliest (procurement) is on the right. They end with the "other solutions", i.e. solutions outside of the Top 8.
- The green curve shows the cumulated financial impact, with green dots showing for each solution the average impact for the top three and bottom three organisations, defined as the three with the highest savings or lowest costs (top 3) and the three with lowest savings or highest costs (bottom 3).

∴ **GHG emissions:** for each solution the graph shows the percentage of the total internal efforts to achieve a 50% reduction of GHG by 2030.

- The blue curve shows the average cumulated GHG reduction for each solution.
- Blue columns show the low and high averages of GHG reduction by solution. The high represents the average GHG reduction of each solution for the three organisations most impacted by this solution. The low average represents the average of the three smallest GHG reduction, as a percentage of the internal effort.
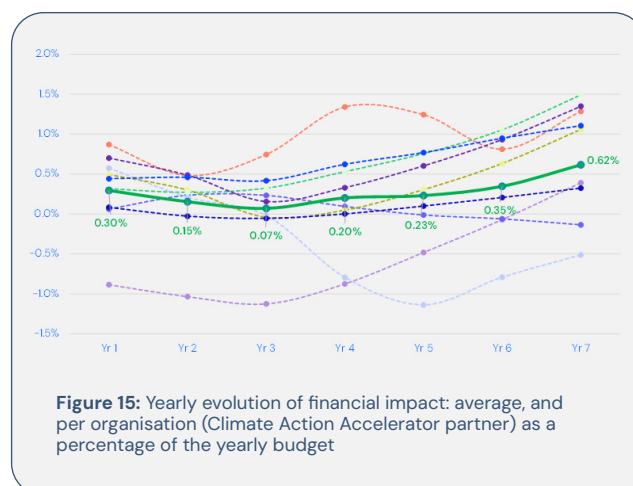
KEY LESSONS FROM THE ABATEMENT CURVE

∴ **The first three solutions,** e.g. on travel, freight and fleet respectively generate on average 0.38%, 0.22% and 0.07% of savings, or cumulated savings of 0.68% of our sample's yearly budget. They represent on average 33% of the organisations' reduction effort.

∴ **The next two solutions,** e.g. energy solutions, present an average net cost of 0.06% (energy savings) and 0.13% (renewable energy) over 7 years. These solutions ultimately generate savings, sometimes as early as in year 5. Early investments will provide early savings and increased GHG emissions reduction. These combined solutions represent on average 22% of the internal GHG reduction effort.

∴ **The last three solutions,** combined under "procurement of goods", are the costliest at 0.53% of the yearly budget, but also have the largest GHG reduction impact, averaging 36% of the internal effort.

∴ **The remaining solutions** cost on average 0.04%, represent 9% of the internal reduction effort.

YEARLY EVOLUTION OF THE FINANCIAL IMPACT

The average yearly financial impact of the climate roadmaps is estimated at 0.09% of the yearly budget, excluding human resources costs. It averages –0.05% during the first 5 years, before increasing to 0.31% and 0.58% in years 6 and 7 (all excluding human resources). This is mainly driven by the procurement solutions[134].

: **Average savings** grow from 0.69% to 2.19% between year 1 and year 7, as key energy savings and travel solutions deliver their full benefits.

: **Investments** decrease from 0.61% in year 1 to 0.52% in year 7. As the energy savings equipment and renewable energies are installed, the need to invest decreases. Organisations with the financial resources and implementation capabilities can invest more earlier, unlocking GHG reduction and savings earlier in the roadmap.

: Finally, **running costs** grow from 0.26% to 2.25%, offsetting part of the savings.

Figure 15: Yearly evolution of financial impact: average, and per organisation (Climate Action Accelerator partner) as a percentage of the yearly budget

SPREAD OF THE FINANCIAL IMPACT BY ORGANISATION

Each organisation has a different business model, different financial resources, emissions profiles, but also capacity to invest and priorities.

The graph below summarises the 7-year savings, running costs, investments and net financial impact of the roadmap for the nine organisations of the sample.

: **Savings** represent on average 1.5% over 7 years, ranging from 0.3% to 2.5%. The organisation with the highest savings is also the organisation with the lowest financial impact (–0.85%).

: **Running costs** represent on average 1% over 7 years, ranging from 0.3% to 2.1%. The organisation with the highest running costs has the costliest climate roadmap (0.82% of its budget) despite having the third largest savings (–2.4%).

: **Investments** represent on average 0.6% over 7 years, ranging from 0% to 1.1%. There is a strong correlation between investments and savings, as most investments are energy related and generate savings, and even net savings before year 7 for some organisations.

: **The overall net financial impact** ranges from –0.85% to 0.82% (excluding human resources costs and environmental solutions costs), with four organisations having a climate roadmap generating net savings before human resources costs. The five remaining organisations have an average net financial impact of 0.48% before HR costs.

Figure 16: Repartition of financial impact over 7 years as a percentage of budget
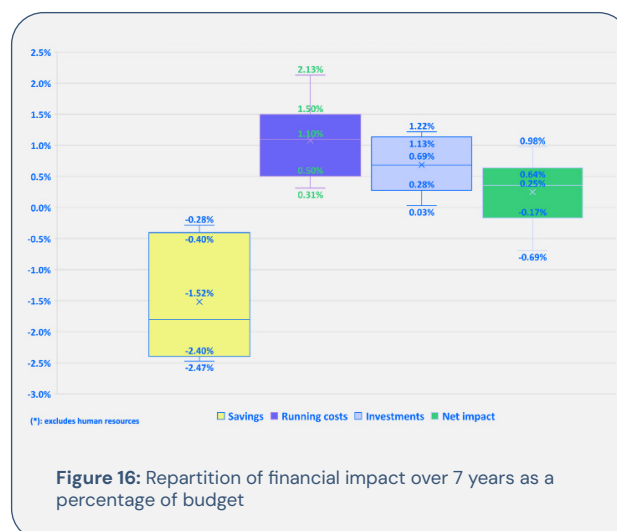
USEFUL REFERENCES

ENERGY AND PREMISES

Climate Action Accelerator's solutions resources:

"Factsheet: Heating and air conditioning", https://climateactionaccelerator.org/solutions/heating_and_air_conditioning/, (Accessed 23 May 2024).

"Factsheet: White roofs", https://climateactionaccelerator.org/solutions/white_roofs/, (Accessed 23 May 2024).

"Factsheet:EarthTubes",https://climateactionaccelerator.org/solutions/earth-tubes/, (Accessed 23 May 2024).

"Factsheet: Green Building", https://climateactionaccelerator.org/solutions/green-building/, (Accessed 23 May 2024).

"Factsheet: Solar Thermal energy", https://climateactionaccelerator.org/solutions/solar-thermal-energy/, (Accessed 23 May 2024).

Other useful resources:

H. Al-Kaddo and S. Rosenberg-Jansen, *State of the Humanitarian Energy Sector: Challenges, Progress and Issues in 2022*, UNITAR GPA, 2022, https://www.humanitarianenergy.org/thematic-working-areas/state-of-the-humanitarian-energy-sector/, (Accessed 23 May 2024).

Electriciens Sans Frontières, *Solar Streetlights Practical Guidebook, Institut National de L'Energie Solaire,* 2019, https://electriciens-sans-frontieres.org/app/uploads/2021/02/guideisa_streetlights-feb2019-web.pdf, (Accessed 23 May 2024).

Alliance for Rural Electrification, https://www.ruralelec.org/ (Accessed 23 May 2024).

Global Off-Grid Lighting Association, "Accelerating access to renewable energy", https://www.gogla.org/ (Accessed 23 May 2024).

Programme for Energy Efficiency in Building, https://www.peeb.build/about-peeb, (Accessed 23 May 2024).

Programme for Energy Efficiency in Building, "Tunisia Green Hospitals", https://www.peeb.build/news-events/hospitals-in-tunisia, (Accessed 23 May 2024).

ICRC Webinar Series, *"Sustainable Energy in Humanitarian Settings"*, Energypedia, 2023, https://energypedia.info/wiki/Webinar_Series:_Sustainable_Energy_in_Humanitarian_Settings, (Accessed 23 May 2024).

AFD, *Health and Energy Efficiency: Towards Greener Hospitals*, 2019, https://www.afd.fr/en/actualites/health-and-energy-efficiency-towards-greener-hospitals, (Accessed 23 May 2024).

IRENA, *The Renewable Energy Transition in Africa, Powering Access, Resilience and Prosperity*, 2020, https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2021/March/Renewable_Energy_Transition_Africa_2021.pdf, (Accessed 23 May 2024).

Electriciens Sans Frontières "Guide de bonnes pratiques", https://electriciens-sans-frontieres.org/app/uploads/2016/09/Guide-de-bonnes-pratiques.pdf, (Accessed 23 May 2024).

Groupe URD and Electriciens Sans Frontières "Les Enjeux Énergétiques En Ukraine Face À L'hiver 2023-2024", 2023, https://electriciens-sans-frontieres.org/app/uploads/2023/11/EvalUkraine_GroupeURD_ESF_Novembre-2023.pdf, (Acessed 23 May 2024).

Institut de La Francophone pour le Développement Durable, "Démarche Bas Carbone Du Secteur De L'Aide", 2023, https://formation.ifdd.francophonie.org/self-demarche-bas-carbone-du-secteur-de-laide-retours-dexperience-et-role-de-la-solarisation/, (Accessed 23 May 2024).

Electriciens Sans Frontières, "Project Close-Up: Cox's Bazar, Bangladesh", 2024, https://electriciens-sans-frontieres.org/en/news/coxzbazar-bangladesh/, (Accessed 23 May 2024).

TRAVEL

Climate Action Accelerator resources:

"Toolkit: Business travel", https://climateactionaccelerator.org/solution-areas/transport/business_travel/, (Accessed 23 May 2024).

"Factsheet: Economy Class Tickets", https://climateactionaccelerator.org/solutions/economy_class_tickets_only/, (Accessed 23 May 2024).

"Factsheet: Public Transport", https://climateactionaccelerator.org/solutions/public_transport/, (Accessed 23 May 2024).

"Travel toolkit", Climate Action Accelerator, October 2024, https://climateactionaccelerator.org/wp-content/uploads/2024/11/Toolkit-Travel.pdf

"Fleet toolkit", Climate Action Accelerator and Fleet Forum, October 2024 https://climateactionaccelerator.org/wp-content/uploads/2024/10/Toolkit-Fleet.pdf

Other useful resources:

Fleet Forum "Environment Self-Assessment Tool", 2023, https://www.fleetforum.org/esat, (Accessed 23 May 2024).

Fleet Forum, "GreenMe", 2023, https://www.fleetforum.org/green-me, (Accessed 23 May 2024).

Fleet Forum, "Managing the environmental impact of your fleet," https://knowledge.fleetforum.org/knowledge-base/article/managing-environmental-impact-of-your-fleet (Accessed 23 May 2024).

Fleet Forum "The Environmental Performance of EVs vs. ICEVs", https://knowledge.fleetforum.org/knowledge-base/article/the-environmental-performance-of-evs-vs-icevs, (Accessed 23 May 2024).

CFAO Group, https://www.cfaogroup.com/fr/accueil/, (Accessed 23 May 2024).

SUPPLY

Climate Action Accelerator resources:

"Procurement toolkit", Climate Action Accelerator, October 2024, https://climateactionaccelerator.org/wp-content/uploads/2024/11/Toolkit-Procurement.pdf

"Factsheet: Procurement", https://climateactionaccelerator.org/solution-areas/procurement/, (Accessed 23 May 2024).

"Factsheet: Freight", https://climateactionaccelerator.org/solution-areas/freight/, (Accessed 23 May 2024).

"Factsheet: Rice", https://climateactionaccelerator.org/solutions/rice/, (Accessed 23 May 2024).

"Factsheet: Eco-design Tarpaulin", https://climateactionaccelerator.org/solutions/eco-design-tarpaulin/, (Accessed 23 May 2024).

Other useful resources:

Climate Action Accelerator, *How MSF France reduced its carbon footprint by switching to sea freight*, https://climateactionaccelerator.org/successful-experiences/how_msf_france_reduced_its_carbon_footprint_by_switching_to_sea_freight/, (Accessed 23 May 2024).

Exponential Roadmap Initiative, *Supplier Action Guide*, https://exponentialroadmap.org/supplier-action-guide/, (Accessed 23 May 2024).

Exponential Roadmap Initiative, *"The 1.5°C Suppliers Engagement Guide"*, https://exponentialroadmap.org/supplier-engagement-guide/ (Accessed 23 May 2024).

SBTI, *Unlocking the Power of Supply Chains for Decarbonization*, 2023, https://sciencebasedtargets.org/blog/new-supplier-engagement-guidance-unlocking-the-power-of-supply-chains-for-decarbonization, (Accessed 23 May 2024).

WREC, *Waste Management and Reverse Logistics in the Humanitarian Context*, Logistics Cluster, 2022, https://logcluster.org/document/wrec-research-waste-management-and-reverse-logistics-humanitarian-context-september-2022, (Accessed 23 May 2024).

Joint Initiative for Sustainable Humanitarian Packaging Waste, *Outcome document of Webinar Episode 6: Sustainability in Supply Chains: Bringing Suppliers on Board*, 2024, https://eecentre.org/wp-content/uploads/2019/07/Outcome-document-_Supplier-Sustainability_Episode-6.docx.pdf, (Accessed 23 May 2024).

Joint Initiative for Sustainable Humanitarian Packaging Waste, *Compendium of best practices - Managing Packaging Waste Responsibly- Lessons from humanitarian organisations*, 2024, https://eecentre.org/wp-content/uploads/2019/07/1.-JI-Humanitarian-Case-Studies_Compendium_March-2024_ENG.pdf, (Accessed 23 May 2024).

We Mean Business Coalition resources, "About", https://www.wemeanbusinesscoalition.org/about/ (Accessed 23 May 2024).

The Chancellery Lane Project "Examples of standard clauses" https://chancerylaneproject.org/climate-clauses/, (Accessed 23 May 2024).

WASTE

Climate Action Accelerator's solutions resources:

"Factsheet: Waste Management", https://climateactionaccelerator.org/solution-areas/waste_management_principles_life_cycle/, (Accessed 23 May 2024).

"Factsheet: Recycling", https://climateactionaccelerator.org/solutions/recycle-waste-developing-countries/, (Accessed 23 May 2024).

"Solution area: Hazardous waste", https://climateactionaccelerator.org/solution-areas/waste/hazardous-waste/, (Accessed 15 December 2024)

"Solution area: Non-hazardous waste", https://climateactionaccelerator.org/solution-areas/waste/non-hazardous-waste/, (Accessed 15 December 2024)

Other resources:

Environmental Emergencies Centre: "Disaster Waste Management: Best Practices and Tools", https://eecentre.org/training/, (Accessed 23 May 2024).

Global Alliance for Incinerator Alternative (GAIA): "Zero waste to zero emissions: how reducing waste is a climate gamechanger", 2022, https://www.no-burn.org/zerowaste-zero-emissions/, (Accessed 23 May 2024).

ICRC & Fleet Forum, "Guidance on management of garage and fleet waste", https://knowledge.fleetforum.org/knowledge-base/article/icrc-shares-garage-waste-management-research, (Accessed 23 May 2024).

IFRC, "Green Logistics Guide", The European Union, 2023, https://www.ifrc.org/document/green-logistics-guide, (Accessed 23 May 2024).

IFRC, "Managing Solid Waste: Sector Specific Guidelines for the Red Cross Red Crescent", OCHA, 2022, https://reliefweb.int/report/world/managing-solid-waste-sector-specific-guidelines-red-cross-red-crescent, (Accessed 23 May 2024).

Joint Initiative for Sustainable Humanitarian Assistance Packaging Waste Management, "Managing Packaging Waste Sustainably: Palladium's experience", 2023, https://eecentre.org/wp-content/uploads/2019/07/Palladium-Case-Study-Managing-Packaging-Waste-Sustainably.pdf, (Accessed 23 May 2024).

Joint Initiative for Sustainable Humanitarian Assistance Packaging Waste Management, "Managing Packaging Waste Sustainably: Shelter Box's experience in removing single use plastics from distributions", 2022, https://resources.eecentre.org/wp-content/uploads/sites/6/2022/10/Compendium-of-Best-Practice-ShelterBox-Case-Study_ENG_508.pdf?_gl=1*9hoqp5*_ga*MTM0NTU4ODE3Ny4xNzA5MTE5MDEy*_ga_E6OZNX2F68*MTcwOTExOTAxMi4xLjEuMTcwOTExOTA0NS4yNy4wLjA., (Accessed 23 May 2024).

Joint Initiative for Sustainable Humanitarian Assistance Packaging Waste Management, "Managing Packaging Waste Sustainably: Replacing plastics with cardboard in Afghanistan, ICRC", 2022, https://eecentre.org/wp-content/uploads/2022/11/ICRC-Afghanistan-Case-Study_ENG_508.pdf, (Accessed 23 May 2024).

WREC, "Measuring the Greenhouse Gas Emissions and Waste from Humanitarian Supply Chains", Kuhne Logistics University and Center for Humanitarian Logistics and Regional Development, 2024, https://s3.eu-west-1.amazonaws.com/logcluster-production-files/public/2024-02/V03_WREC_Final%20report_14.02.24.pdf, (Accessed 23 May 2024).

World Bank, "What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050", Urban Development Series, 2018, https://www.worldbank.org/en/news/press-release/2018/09/20/global-waste-to-grow-by-70-percent-by-2050-unless-urgent-action-is-taken-world-bank-report, (Accessed 23 May 2024).

WREC, "Advice On Minimising Waste in The Event Of An Acute Emergency", Réseau Environnement Humanitaire, 2023, https://www.environnementhumanitaire.org/en/ressource/wrec-poster-advice-on-minimising-waste-in-the-event-of-an-acute-emergency-november-2023/, (Accessed 23 May 2024).

WREC, "Quick Guide to Solid Waste Management", Réseau Environnement Humanitaire, 2023, https://www.environnementhumanitaire.org/en/ressource/wrec-quick-guide-on-waste-management-august-2023/, (Accessed 23 May 2024).

WREC, "Environmental Sustainability in Humanitarian Supply Chains - Training Landscape Mapping", Logistics Cluster, 2024, https://logcluster.org/en/document/wrec-environmental-sustainability-humanitarian-supply-chains-training-landscape-mapping, (Accessed 23 May 2024).

WREC, "Waste Management Facilities Mapping", https://logie.logcluster.org/?op=wrec, (Accessed 23 May 2024).

United Nations Office for the Coordination of Humanitarian Affairs Emergency Preparedness Section, 'Disaster Waste Management Guidelines, UNEP/OCHA Environment Unit, 2013, https://eecentre.org/wp-content/uploads/2019/05/Disaster-Waste-Management-Guidelines-6.pdf, (Accessed 23 May 2024).

BIODIVERSITY

Climate Action Accelerator's solutions resources:

"Factsheet: Renaturing Urban Premises", https://climateactionaccelerator.org/solutions/renaturing-urban-premises/, (Accessed 23 May 2024).

Other resources:

WWF, *Living Planet Report*, 2022, https://www.wwf.org.uk/our-reports/living-planet-report-2022, (Accessed 23 May 2024).

SPHERE, FEBA, IUCN, PEDRR, EHAN, IFRC, "Nature-based Solutions for Climate Resilience in Humanitarian Action", 2023, https://spherestandards.org/resources/nbs-guide/, (Accessed 23 May 2024).

ACTED, "THRIVE : Rééquilibrer les relations entre les agriculteurs et leurs terres est essentiel pour améliorer la résilience des communautés agro-pastorales" https://www.acted.org/fr/thrive-reequilibrer-les-relations-entre-les-agriculteurs-et-leurs-terres-est-essentiel-pour-ameliorer-la-resilience-des-communautes-aux-chocs-naturels/, (Accessed 23 May 2024).

DIGITAL

Climate Action Accelerator's solutions resources:

"Factsheet: Sustainable Digital Devices", https://climateactionaccelerator.org/solutions/sustainable-digital-devices/, (Accessed 23 May 2024).

"Factsheet: Sustainable Digital Uses", https://climateactionaccelerator.org/solution-areas/digital_uses/, (Accessed 23 May 2024).

Other resources:

ITU, *Circular and sustainable public procurement – ICT equipment guide*, https://www.itu.int/hub/publication/d-hdb-guidelines-04-2023/, (Accessed 23 May 2024).

CFIT, "Checklist for circular and fair ICT procurement", https://circularandfairictpact.com/news/cfit-framework-document/, (Accessed 23 May 2024).

The Shift Project, *Lean ICT Towards Digital Sobriety*, 2019, https://theshiftproject.org/wp-content/uploads/2019/03/Lean-ICT-Report_The-Shift-Project_2019.pdf, (Accessed 23 May 2024).

HEALTH

Climate Action Accelerator's solutions resources:

MSF OCG, *Climate and Environmental Roadmap - Towards a transformational reduction of MSF OCG's footprint by 2030*, 2022, https://climateactionaccelerator.org/wp-content/uploads/2022/06/MSF-OCG-Climate-Environmental-Roadmap_31102022.pdf, (Accessed 23 May 2024).

MSF and CAA, *Climate and Environment Roadmap - Reducing Médecins Sans Frontières Operational Centre Paris OCP's footprint by 2030*, 2023, https://climateactionaccelerator.org/wp-content/uploads/2023/06/OCP-Roadmap-V-ENGLISH.pdf, (Accessed 23 May 2024).

The Alliance for International Medical Action (ALIMA), *Climate and Environmental Roadmap*, 2022, https://climateactionaccelerator.org/wp-content/uploads/2022/09/ALIMA_Roadmap_avril2022-1.pdf, (Accessed 23 May 2024).

Other resources:

WHO, *WHO Guidance for Climate Resilient and Environmentally Sustainable Health Care Facilities*, 2020, https://www.who.int/publications/i/item/climate-resilient-and-environmentally-sustainable-health-care-facilities, (Accessed 23 May 2024).

Sustainable Markets Initiative (SMI), "Health Systems Taskforce", https://www.sustainable-markets.org/taskforces/health-systems-taskforce/, (Accessed 23 May 2024).

WHO, Alliance for Transformative Action on Climate and Health (ATACH), https://www.who.int/initiatives/alliance-for-transformative-action-on-climate-and-health/working-groups, (Accessed 23 May 2024).

FOOD AID

Climate Action Accelerator's solutions resources:

"Factsheet: Food items ", https://climateactionaccelerator.org/solution-areas/food_items/, (Accessed 23 May 2024).

"Factsheet: Shift to low-carbon food options", https://climateactionaccelerator.org/solutions/shift_to_low_carbon_food_option/, (Accessed 23 May 2024).

"Factsheet: Rice", https://climateactionaccelerator.org/solutions/rice/, (Accessed 23 May 2024).

Other useful resources:

H. Ritchie, P. Rosado, and M. Roser, "Environmental impacts of Food Production", Our World in Data, 2018, https://ourworldindata.org/environmental-impacts-of-food, (Accessed 23 May 2024).

Sustainable Rice Platform, "Sustainable Rice Platform", https://sustainablerice.org/, (Accessed 23 May 2024).

World Business Council for Sustainable Development, "The Sustainable Rice Landscapes Initiative (SRLI)", https://www.wbcsd.org/Programs/Food-and-Nature/Food-Land-Use/Scaling-Positive-Agriculture/Sustainable-Rice-Landscapes, (Accessed 23 May 2024).

World Resources Institute, "Creating a Sustainable Food Future", 2019, https://research.wri.org/wrr-food, (Accessed 23 May 2024).

Global Network of Lighthouse Farms, "Global Network of Lighthouse Farms", 2020, https://www.lighthousefarmnetwork.com/, (Accessed 23 May 2024).

Action Contre la Faim, "Agro-écologie et changement climatique", 2018, https://www.actioncontrelafaim.org/publication/agroecologie-changement-climatique/, (Accessed 23 May 2024).

Fleet Forum, "Fleet Forum Website", https://www.fleetforum.org/, (Accessed 23 May 2024).

Fleet Forum, "GreenMe", 2023, https://www.fleetforum.org/green-me, (Accessed 23 May 2024).

Fleet Forum, "ESAT", https://www.fleetforum.org/esat, (Accessed 23 May 2024).

Fleet Forum, "Managing the environmental impact of your fleet", https://knowledge.fleetforum.org/knowledge-base/article/managing-environmental-impact-of-your-fleet, (Accessed 23 May 2024).

Fleet Forum, "Start Guide for NGOS", https://knowledge.fleetforum.org/knowledge-base/article/start-guide-for-ngos, (Accessed 23 May 2024).

Fleet Forum, "The Environmental Performance of EVs vs. ICEVs", https://knowledge.fleetforum.org/knowledge-base/article/the-environmental-performance-of-evs-vs-icevs, (Accessed 23 May 2024).

END NOTES

1. In recent years, both climate scientists and leading figures, such as the UN Secretary General and the US Secretary of Defence, have described climate change as 'an existential threat to humanity'.

2. IPCC, *Climate Change 2022: Impacts, Adaptation, and Vulnerability* Working Group II contribution to the IPCC's Sixth Assessment Report, 2022, p. 9. https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_FullReport.pdf., (Accessed 23 May 2024).

3. *The Climate and Environment Charter for Humanitarian Organizations*, signatories as of December 2024. https://www.climate-charter.org/, (Accessed 20 December 2024).

4. *Humanitarian Aid Donors' Declaration on Climate and Environment*, signed in March 2022. https://civil-protection-humanitarian-aid.ec.europa.eu/what/humanitarian-aid/climate-change-and-environment/humanitarian-aid-donors-declaration-climate-and-environment_en, (Accessed 23 May 2024).

5. IASC, *Environmental Responsibility in Humanitarian Operations*, Endorsed by IASC OPAG, 2023, https://www.icvanetwork.org/uploads/2023/11/IASC-Guidance-Environmental-Responsibility-in-Humanitarian-Operations-20231005.pdf, (Accessed 23 May 2024).

6. Johan Rockström et al., "Safe and just Earth system boundaries", *Nature*, 2023, https://www.nature.com/articles/s41586-023-06083-8, (Accessed 23 May 2024).

7. 'Effective emissions reduction' refers to targeted approaches that aim to minimise the GHG emissions produced by an organisation or a sector with a view to reaching the Paris Agreement goal of halving GHG emissions by 2030. A 'quantified approach' uses quantitative targets, implementation plans, and monitoring and reporting frameworks. It ensures that all emissions - whether direct or indirect - are accounted for and does not include offsetting in carbon accounting.

8. In 2023 and 2024, Climate Action Accelerator launched a pilot project with Sahelian NGOs exploring ways to develop more resilient, low-carbon and sustainable operational procedures. Lessons from this initial pilot will be available in an upcoming playbook for local organisations, to be released in early 2025.

9. IPCC, "Assessment Report AR6", Intergovernmental Panel on Climate Change, https://www.ipcc.ch/assessment-report/ar6/, (Accessed 23 May 2024).

10. Climate Charter, "Climate and Environment Charter for Humanitarian Organisations", https://www.climate-charter.org/, (Accessed 23 May 2024).

11. Please refer to the Science Based Targets initiative (SBTi), " About Us", https://sciencebasedtargets.org/about-us, (Accessed 23 May 2024).

12. IPCC, "AR6 Synthesis Report: Climate Change 2023", 2023, https://www.ipcc.ch/report/sixth-assessment-report-cycle/, (Accessed 23 May 2024).

13. European Union, *Guidance on the Operationalisation of the Minimal Environmental Requirements and Recommendations for EU-funded Humanitarian Aid Operations*, 2022, https://op.europa.eu/en/publication-detail/-/publication/f6d2240b-2d94-11ed-975d-01aa75ed71a1/language-en, (Accessed 23 May 2024).

14. IPCC, "AR6 Synthesis Report: Climate Change 2023", 2023, https://www.ipcc.ch/report/sixth-assessment-report-cycle/, (Accessed 23 May 2024).

15. Greenhouse Gas Protocol establishes comprehensive global standardised frameworks to measure and manage GHG emissions from private and public sector operations, value chains and mitigation action. Green Gas protocol, "About Us", https://ghgprotocol.org/about-us, (Accessed 23 May 2024).

16. IPCC, "AR6 Synthesis Report: Climate Change 2023", 2023, https://www.ipcc.ch/report/sixth-assessment-report-cycle/, (Accessed 23 May 2024).

17. As per Climate Action Accelerator consolidated partners data, 2019 baseline.

18. Climate Action Accelerator's list of generic solutions: https://climateactionaccelerator.org/solutions_overview/

19. Carbon footprint reduction pathways incorporate structural effects to account for the overall decarbonisation efforts of society, beyond the choices made by any single organisation. Various factors, such as technological progress, infrastructure improvements, and legislative changes can encourage countries to adopt a less carbon-intensive energy mix. Progress in energy efficiency will have a positive impact on emissions from trucks, boats, and planes. Consumer preferences, volatile energy prices and stricter environmental legislation push industries to transition to lower emission production processes.

20. Climate and Environmental Roadmap," towards a transformational reduction of MSF OCG's footprint by 2030", Médecins Sans Frontières, Operational Center Geneva, 2022, https://climateactionaccelerator.org/wp-content/uploads/2022/06/MSF-OCG-Climate-Environmental-Roadmap_31102022.pdf, (Accessed 23 May 2024).

21. As per The GHG Protocol, "A corporate accounting and reporting standard, revised version", WBSCD and WRI, 2004, https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf, (Accessed 23 May 23, 2024).

22. GHG Protocol, "*Technical Guidance for Calculating Scope 3 Emissions*", https://ghgprotocol.org/sites/default/files/standards/Scope3_Calculation_Guidance_0.pdf, (Accessed 23 May 2024).

23. M. Sotos, "GHG Protocol Scope 2 Guidance", Green House Gas Protocol and World Resources Institute, https://ghgprotocol.org/sites/default/files/2023-03/Scope%202%20Guidance.pdf, (Accessed 23 May 2024).

24. Greenhouse Gas Protocol, "Scope 3 Calculation Guidance", https://ghgprotocol.org/scope-3-calculation-guidance-2 ,(Accessed 23 May 23, 2024).

25. Greenhouse Gas Protocol, "Corporate value Chain Scope 3) Standard", https://ghgprotocol.org/corporate-value-chain-scope-3-standard, (Accessed 23 May 2024).

26. As per Climate Action Accelerator's sectoral analysis in "Roadmap towards halving GHG emissions in the humanitarian sector by 2030", June 2024, https://climateactionaccelerator.org/humanitarian-decarbonisation-roadmap

27. Médecins Sans Frontières Operational Center Geneva (MSF OCG), "*MSF OCG Carbon Footprint Report 2019*", 2022, p. 17, https://www.msf.ch/en/media/4712, (Accessed 23 May 2024).

28. When electricity from the grid is available, emissions are directly linked to the energy mix in the country of intervention, which is often more dependent on fossil fuel than developed countries. For instance, 1 kWh in Iraq has the same carbon footprint as 5 kWh in Belgium. Energy consumption and emissions therefore significantly vary across different geographies. This variety of situations has to be factored in when defining emissions reduction targets and strategies.

29. The Global Platform for Action on Sustainable Energy in Displacement Settings (GPA) is a global initiative that promotes action to enable sustainable energy access and use in displacement settings. The GPA Secretariat is hosted by the United Nations Institute for Training and Research (UNITAR).

30. GPA, *Estimating the use of diesel generators in displacement settings*, based on a Global Platform for Action (GPA) survey amongst energy experts in FAO, IOM, UNDP, UNICEF, WFP, and ICRC.

31. GPA, "Decarbonising Humanitarian Energy", 2023, https://www.humanitarianenergy.org/thematic-working-areas/decarbonising-energy-infrastructure/#:~:text=The%20new%20Decarbonising%20Humanitarian%20Energy,countries%20in%20the%20Sahel%20Region, (Accessed 23 May 2024).

32. As estimated by Climate Action Accelerator

33. When it comes to displacement settings, UNITAR for GPA has estimated that reducing the use of generators by 65% and switching to PV systems would produce savings of 70 million dollars, with a 3.5-year payback period, for an investment of 236 million dollars total.

34. Although their energy production potential tends to be lower or less easily accessible than PV energy, other renewable energy solutions should be considered on a case-by-case basis: direct solar thermal energy (for hot water in general hospitals and health care facilities for instance), wind energy (small individual wind turbines), hydroelectricity and geothermal.

35. The World Bank estimates that most of the world's population (93%) lives in countries where the average daily PV potential is between 3.0 and 5.0 kWh / kWp, highlighting the potential for solar PV to be deployed in nearly all areas of the world.

36. International Energy Agency (IEA), "*Solar PV: Technology Deep Dive*", *More efforts needed*, 2022, https://iea-pvps.org/wp-content/uploads/2023/04/PVPS_Annual_Report_2022_v7-1.pdf (Accessed 23 May 2024).

37. International Renewable Agency (IRENA), cited in World Bank, *Global Photovoltaic Power Potential by Country*, June 2020, https://documents1.worldbank.org/curated/en/466331592817725242/pdf/Global-Photovoltaic-Power-Potential-by-Country.pdf, (Accessed 23 May 2024).

38. GPA UNITAR IOM NORAD NORCAP, *Blended Finance Solutions for Clean Energy in Humanitarian and Displacement Settings*, 2022, https://www.nrc.no/globalassets/pdf/reports/blended-finance-solutions-for-clean-energy/blended-finance-solutions-for-clean-energy-in-humanitarian-and-displacement-settings.pdf, (Accessed 23 May 2024).

39. According to Climate Action Accelerator estimates.

40. According to Climate Action Accelerator estimates.

41. An alternative option may be the definition of sustainable standards.

42. For instance, GPA suggests switching to 80% solar energy by 2030.

43. As recommended by Electriciens Sans Frontières (ESF), "Climate Action Accelerator's webinar on renewable energies",2023 https://climateactionaccelerator.org/events/which_partnerships_services_and_expertise_to_develop_to_deploy_solar_energy_widely/, (Accessed 23 May 2024).

44. As per International Energy Agency (IEA), 2019, https://www.iea.org/data-and-statistics/data-product/emissions-factors-2022.

45. According to Climate Action Accelerator consolidated partner data, 2022 baseline.

46. Existing tools include the "Atmosfair Air Index", 2028 , https://www.atmosfair.de/wp-content/uploads/aai2018-englischfarbe_final_mn.pdf, (Accessed 23 May 2024).

47. For more on ESAT, please refer to the Fleet Forum,"ESAT", https://www.fleetforum.org/esat, (Accessed 23 May 2024).

48. According to the GHG Protocol, "Corporate Value Chain Reporting Standard 'scope 3 emissions include indirect emissions resulting from value chain activities'", 2011, p. 4, https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf, (Accessed 23 May 2024).

49. Climate Action Accelerator's humanitarian partners represented 11% of the international humanitarian budget (reference year: 2019). The median number amounts to 47%

50. Plan International, *Supply Chain Changing the Face of Humanitarian Aid*, 2022.

51. Science Based Targets Initiative, "*Business Ambition for 1,5°C Campaign Final Report*", 2024, https://sciencebasedtargets.org/resources/files/SBTi-Business-Ambition-final-report.pdf, (Accessed 23 May 2024).

52. Science Based Targets, "Companies Taking Action", https://sciencebasedtargets.org/companies-taking-action, (Accessed 23 May 23, 2024).

53. Science Based Targets Initiative, *SBTi Monitoring Report 2022*, 2023, https://sciencebasedtargets.org/resources/files/SBTiMonitoringReport2022.pdf, (Accessed 23 May 2024).

54. CDP, *Engaging the Chain: Driving Speed and Scale, CDP Global Supply Chain Report 2021*, 2022, p. 20, https://cdn.cdp.net/cdp-production/cms/reports/documents/000/006/106/original/CDP_SC_Report_2021.pdf?1644513297 , (Accessed 23 May 2024).

55. ICRC Carbon accounting 2020, https://climateactionaccelerator.org/wp-content/uploads/2022/09/ICRC-carbon-accounting-2020-2.pdf

56. This section is entirely based on Climate Action Accelerator's partners' data, representing 11% of the international humanitarian assistance budget. Baseline 2019

57. RSPO : Roundtable on Sustainable Palm Oil, "Who We Are", https://rspo.org/who-we-are/, (Accessed 23 May 2024).

58. Climate Action Accelerator, "Factsheet: Rice", https://climateactionaccelerator.org/solutions/rice/ , (Accessed 23 May 2024).

59. Climate Action Accelerator, "Factsheet: Eco-Design Tarpaulin", https://climateactionaccelerator.org/solutions/eco-design-tarpaulin/, (Accessed 23 May 2024).

60. Unilever, *Impact results from Unilever's first set of regenerative agriculture projects*, 2023, https://www.unilever.com/news/news-search/2023/impact-results-from-unilevers-first-set-of-regenerative-agriculture-projects/ , (Accessed 23 May 2024).

61. Joint Initiative for Sustainable Humanitarian Packaging Waste, *Alternatives to Conventional Petroleum-based Plastics*, 2023, https://eecentre.org/wp-content/uploads/2019/07/Alternatives-To-Conventional-Plastics-in-Packaging.pdf , (Accessed 23 May 2024).

62. Joint Initiative for Sustainable Humanitarian Packaging Waste, *Managing Packaging Waste Sustainably – Lessons From Humanitarian Organizations*, https://eecentre.org/wp-content/uploads/2019/07/Palladium-Case-Study-Managing-Packaging-Waste-Sustainably.pdf, (Accessed 23 May 2024).

63. Bonsucro, "What is Bonsucro", Bonsucro, https://bonsucro.com/what-is-bonsucro/, (Accessed 23 May 2024).

64. NHS England, "NHS Net Zero Supplier Roadmap", NHS England, 2021, https://www.england.nhs.uk/greenernhs/get-involved/suppliers/, (Accessed 23 May 2024).

65. Ibid.

66. NHS England, "Carbon Reduction Plan and Net Zero Commitment Requirements for the Procurement of NHS Goods, Services and Works", NHS England, 2023, https://www.england.nhs.uk/long-read/carbon-reduction-plan-requirements-for-the-procurement-of-nhs-goods-services-and-works/, (Accessed 23 May 2024).

67. Exponential Roadmap Initiative, "The 1.5°C Supplier Engagement Guide", Exponential Roadmap Initiative, https://exponentialroadmap.org/supplier-engagement-guide/, (Accessed 23 May 2024).

68. Ibid.

69. This approach puts current needs first and allows suppliers to propose the most effective means of meeting them. Using outcome-based specifications requires specific attention to find the right balance between leaving enough room for the supplier to propose innovative solutions and being precise enough in describing needs.

70. Unilever, "Partner with Purpose", https://drive.google.com/file/d/1wjGbfqDEMrmY3qXqB4abR8EtVhbjwpKn/view, (Accessed 23 May 2024).

71. M. Segal, "Unilever Sets New Goals to Cut Value Chain Emissions by 2030", ESG Today, 2024, https://www.esgtoday.com/unilever-sets-new-goals-to-cut-value-chain-emissions-by-2030/, (Accessed 23 May 2024).

72. WWF, "Example Questionnaire For Suppliers", WWF, https://www.wwf.org.uk/sites/default/files/2021-04/Emission%20Possible%20Toolkit%20-%20Example%20Questionnaire.pdf, (Accessed 23 May 2024).

73. For more information about the Science-Based Targets Initiative, "What are Science -Based Targets?", https://sciencebasedtargets.org/how-it-works, (Accessed 23 May 2024).

74. CDP, "The A list 2023", https://www.cdp.net/en/companies/companies-scores, (Accessed 23 May 2024).

75. For more information about WMBC, "Bold Climate Policy Drives Decisive Business Action", https://www.wemeanbusinesscoalition.org/policy/, (Accessed 23 May 2024).

76. UNHCR, "Operational Strategy for Climate Resilience and Environmental Sustainability 2022-2025", UNHCR, https://www.unhcr.org/media/operational-strategy-climate-resilience-and-environmental-sustainability-2022-2025, (Accessed 23 May 2024).

77. For more on HULO, please refer to Hulo, "L'union fait la force", Hulo, https://hulo.coop/fr/, (Accessed 23 May 2024).

78. Logistics Cluster, *Call to Action: A supply chain Framework for the future: reducing the carbon footprint of humanitarian aid*, 2024, https://logcluster.org/en/document/call-action-supply-chain-framework-future-reducing-carbon-footprint-humanitarian-aid, (Accessed 23 May 2024).

79. For more information on the Joint Initiative, go to Joint Initiative, 'Company Overview', LinkedIn, https://www.linkedin.com/company/joint-initiative-for-greener-humanitarian-assistance/about/, (Accessed 10 January 2025).

80. For more information on the Sustainable Supply Chain Alliance (SSCA): https://blogs.icrc.org/logistics/wp-content/uploads/sites/117/2024/02/Sustainable_Supply_Chain_Community-July-2021.pdf (Accessed 10 January 2025).

81. World Bank, 'What a Waste: A Global Snapshot of Solid Waste Management by 2050', Urban Development Series, 2019, https://www.worldbank.org/en/news/press-release/2018/09/20/global-waste-to-grow-by-70-percent-by-2050-unless-urgent-action-is-taken-world-bank-report, (Accessed 23 May 2024).

82. See Climate Action Accelerator, "Factsheet: Waste Management", https://climateactionaccelerator.org/solution-areas/waste_management_principles_life_cycle/, (Accessed 23 May 2024).

83. Global Alliance for Incinerator Alternative (GAIA), "Zero Waste to Zero Emissions: How Reducing Waste is a Climate Gamechanger", 2022, https://www.no-burn.org/zerowaste-zero-emissions, (Accessed 23 May 2024).

84. Climate Action Accelerator's internal consolidated data from 9 humanitarian partners, 2019 baseline.

85. According to the World Bank, 93% of waste in low-income countries is dumped, World Bank, "What a Waste: A Global Snapshot of Solid Waste Management by 2050", Urban Development Series, 2019, https://www.worldbank.org/en/news/press-release/2018/09/20/global-waste-to-grow-by-70-percent-by-2050-unless-urgent-action-is-taken-world-bank-report, (Accessed 23 May 2024).

86. See the guidance developed by WREC, "Advice on Minimising Waste in the Event of an Acute Emergency", Environnement Humanitaire, 2023, https://www.environnementhumanitaire.org/en/ressource/wrec-poster-advice-on-minimising-waste-in-the-event-of-an-acute-emergency-november-2023/, (Accessed 23 May 2024).

87. See the Joint Initiative for Sustainable Humanitarian Packaging Waste for examples of organisations who have reduced their packaging footprint. In particular: Joint Initiative for Sustainable Humanitarian Packaging Waste, "Managing Packaging Waste Sustainably: Palladium Case Study", 2019, https://eecentre.org/wp-content/uploads/2019/07/Palladium-Case-Study-Managing-Packaging-Waste-Sustainably.pdf, (Accessed 23 May 2024). Joint Initiative for Sustainable Humanitarian Packaging Waste, "Compendium of Best Practice: Shelter Box Case Study", 2022,

https://resources.eecentre.org/wp-content/uploads/sites/6/2022/10/Compendium-of-Best-Practice-ShelterBox-Case-Study_ENG_508.pdf?_gl=1*9hoqp5*_ga*MTM0NTU4ODE3Ny4xNzA5MTE5MDEy*_ga_E60ZNX2F68*MTcwOTExOTAxMi4xLjEuMTcwOTExOTA0NS4yNy4wLjA, (Accessed 23 May 2024). Joint Initiative for Sustainable Humanitarian Packaging Waste, "ICRC Afghanistan Case Study", 2022, https://eecentre.org/wp-content/uploads/2022/11/ICRC-Afghanistan-Case-Study_ENG_508.pdf, (Accessed 23 May 2024).

88. IFRC, "Managing Solid Waste: Sector-Specific Guidelines for the Red Cross Red Crescent", 2022, (Accessed 23 May 2024).

89. Reusing waste implies that the waste is used for a similar purpose (e.g. reusing plastic water bottles as a liquid container).

90. Repurposing implies that the purpose will be different, such as transforming metalised laminated sachets into artcrafts or bags, repurposing metal cans into bassins.

91. See Climate Action Accelerator, "Solution Sheet on Recycling Waste", https://climateactionaccelerator.org/solutions/recycle-waste-developing-countries/, (Accessed 23 May 2024). and Climate Action Accelerator, "Solution Sheet on Waste Management Principles", https://climateactionaccelerator.org/solution-areas/waste_management_principles_life_cycle/ , (Accessed 23 May 2024).

92. See the recycling assessment mapping exercise carried out by the WREC in various countries. Logistical Information for Operations in Emergencies (LOGIE), "Waste Management in Emergencies Reference Centre (WREC)", https://logie.logcluster.org/?op=wrec, (Accessed 23 May 2024).

93. Co-processing refers to the combustion of materials used as an energy source. In humanitarian contexts, this often relates to the use of used oil for cement manufacturing.

94. ICRC and Fleet Forum, "Guidance on Management of Garage and Fleet Waste", https://knowledge.fleetforum.org/knowledge-base/article/icrc-shares-garage-waste-management-research, (Accessed 23 May 2024).

95. See the Waste Management in Emergencies Reference Centre (WREC), "Quick Guide to Waste Management", 2023, https://logcluster.org/fr/document/wrec-quick-guide-waste-management-august-2023, (Accessed 23 May 2024).

96. See IFRC, "Green Logistics Guide", 2023, https://www.ifrc.org/document/green-logistics-guide, (Accessed 23 May 2024).

97. Humanitarian Aid Department, European Commission, "Humanitarian Aid Donors' Declaration on Climate and Environment", https://civil-protection-humanitarian-aid.ec.europa.eu/what/humanitarian-aid/climate-change-and-environment/humanitarian-aid-donors-declaration-climate-and-environment_en, (Accessed 23 May 2024).

98. Climate and Environment Charter for Humanitarian Organisations, "Climate and Environment Charter for Humanitarian Organisations", https://www.climate-charter.org/#sign-the-charter, (Accessed 23 May 2024).

99. E.S. Brondizio et al. "Global Assessment Report of the Intergovernmental Science-policy Platform on Biodiversity and Ecosystem Services", IPBES, 2019, https://www.ipbes.net/system/files/2021-06/2020%20IPBES%20GLOBAL%20REPORT(FIRST%20PART)_V3_SINGLE.pdf, (Accessed 3 June 2024).

100. IFRC, "Innovative partnership between IFRC and The Nature Conservancy equips Caribbean communities to combat climate crisis", 2024, https://www.ifrc.org/press-release/innovative-partnership-between-ifrc-and-nature-conservancy-equips-caribbean, (Accessed 3 June 2024).

101. The Shift Project (2019), "Lean ICT - Towards Digital Sobriety", Available at: https://theshiftproject.org/wp-content/uploads/2019/03/Lean-ICT-Report_The-Shift-Project_2019.pdf, (Accessed 23 May 2024).

102. International Energy Agency's Energy in Buildings Programme (2022), "International review of energy efficiency in Data Centres for IEA EBC Building Energy Codes Working Group", Available at: https://www.iea-ebc.org/Data/publications/EBC_WG_BECs_Data_Centers_March_2022.pdf, (Accessed 23 May 2024).

103. As per the World Health Organization (2020), "Guidance for Climate Resilient and Environmentally Sustainable Health Care Facilities", Available at: https://www.who.int/publications/i/item/climate-resilient-and-environmentally-sustainable-health-care-facilities, (Accessed 23 May 2024).

104. Climate Action Accelerator, " Health Service Level Climate Vulnerability and Capacity Assessment ", 2024, https://climateactionaccelerator.org/climate-vca (Accessed 3 June 2024).

105. Mid-upper arm circumference (MUAC)

106. Caregivers are trained to control the circumference of children's arm and refer them when relevant. When enrolled in the programme, children are monitored on a weekly basis.

107. Royal College of Nursing, "Gloves Awareness Campaign", Available at: https://www.rcn.org.uk/Get-Involved/Campaign-with-us/Glove-awareness, (Accessed 23 May 2024).

108. "Tacking MSF OCG's environmental footprint, progress report April 2024", 2024 p18 https://www.msf.ch/sites/default/files/2024-08/MSFOCGClimateRoadmap_ProgressReport2024_v2.pdf (Accessed 10 January 2025).

109. Médecins Sans Frontières (MSF) and Climate Action Accelerator (CAA), "MSF OCG Climate and Environmental Roadmap", 2022, p. 11, Available at: https://climateactionaccelerator.org/wp-content/uploads/2022/06/MSF-OCG-Climate-Environmental-Roadmap_31102022.pdf, (Accessed 23 May 2024).

110. A. Booth et al., "Pharmaceutical Company Targets and Strategies to Address Climate Change: Content Analysis of Public Reports from 20 Pharmaceutical Companies", International Journal of Environmental Research and Public Health, 2023, https://pubmed.ncbi.nlm.nih.gov/36833902/, (Accessed 23 May 2024).

111. Sustainable Markets Initiative's, " Health Systems Task Force", https://www.sustainable-markets.org/taskforces/health-systems-taskforce/, (Accessed 23 May 2024).

112. As per World Food Programme "A global food crisis", https://www.wfp.org/global-hunger-crisis#:~:text=The%20scale%20of%20the%20current,next%20meal%20is%20coming%20from, (Accessed 23 May 2024).

113. Certification schemes include Bonsucro, which offers a certification standard for sugar cane: Bonsucro, "What is Certification?", https://bonsucro.com/what-is-certification/, (Accessed 23 May 2024).

114. According to World Business Council for Sustainable Development (WBCSD), "Sustainable Rice Landscapes Initiative", https://www.wbcsd.org/Programs/Food-and-Nature/Food-Land-Use/Scaling-Positive-Agriculture/Sustainable-Rice-Landscapes, (Accessed 23 May 2024).

115. Unilever, "Impact Results from Unilever's First Set of Regenerative Agriculture Projects", 2023, https://www.unilever.com/news/news-search/2023/impact-results-from-unilevers-first-set-of-regenerative-agriculture-projects/, (Accessed 23 May 2024) and World Resources Institute, "Wetting and Drying: Reducing Greenhouse Gas Emissions and Saving Water from Rice Production", 2014, https://www.wri.org/research/wetting-and-drying-reducing-greenhouse-gas-emissions-and-saving-water-rice-production, (Accessed 23 May 2024). The latter report shows a reduction potential of up to 90% of emissions from rice production by reducing flooding. Given that the production stage represents more than 70% of the lifecycle emissions of rice, reductions of roughly 60% are possible per kg of rice according to this study.

116. M. Crippa et al., "Food systems are responsible for a third of global anthropogenic GHG emissions", Nature Food, https://www.ed.ac.uk/sites/default/files/atoms/files/food_systems_are_responsible_for_a_third_of_global.pdf, (Accessed 23 May 2024).

117. In emergency or refugees situation, typical food rations distributed by WFP include: a staple such as rice, lentils, chickpeas or other pulses, vegetable oil, sugar, iodized salt. https://www.wfp.org/wfp-food-basket (Accessed 10 January 2025).

118. As defined in UNHCR, UNICEF, WFP, WHO, "Food and Nutrition Needs in Emergencies", https://iris.who.int/bitstream/handle/10665/68660/a83743.pdf?sequence=1, (Accessed 23 May 2024).

119. For an introduction to food security and livelihoods programmes, see Action Contre la Faim, "Food Security and Resources of Existence", https://www.actioncontrelafaim.org/en/our-expertise/food-security-and-resources-of-existence/, (Accessed 23 May 2024).

120. CARE France, "Agriculture et écologie: sont-elles opposées?", https://www.carefrance.org/actualites/agriculture-et-ecologie-sont-elles-opposees/, (Accessed 23 May 2024).

121. Action Contre la Faim, "L'agroécologie pour lutter contre la faim dans le monde", https://www.actioncontrelafaim.org/a-la-une/lagroecologie-pour-lutter-contre-la-faim-dans-le-monde/, (Accessed 23 May 2024).

122. Food and Agriculture Organization of the United Nations (FAO), "Agriculture Soils Degradation - FAO GFFA 2022", https://www.fao.org/newsroom/detail/agriculture-soils-degradation-FAO-GFFA-2022/en, (Accessed 23 May 2024).

123. Earthworm Foundation, "Look Down Too", https://www.earthworm.org/campaigns/lookdowntoo, (Accessed 23 May 2024).

124. Vivescia, "Transitions", https://www.vivescia.com/en/transitions, (Accessed 23 May 2024).

125. Vivesca Press release, September 2023 https://www.vivescia.com/sites/default/files/2023-09/20230908_VIVESCIA_Press-Release-launch_TRANSITIONS.pdf

126. ALIMA, "Environmental Action: Achievements, Lessons and Outlook", Progress report, 2024, https://alima.ngo/en/2024/02/28/acting-against-climate-change-progress-report-on-our-environmental-action/ (Accessed 23 May 2024).

127. ALIMA, "Climate and Environmental Roadmap", April 2022, https://climateactionaccelerator.org/wp-content/uploads/2022/09/ALIMA_Roadmap_avril2022-1.pdf (Accessed 23 May 2024).

128. The impact calculation uses a cash-based approach. As such, investments are considered according to the expected disbursement of funds rather than when they are depreciated in the accounts.

129. Nominal economic growth is inclusive of inflation, while real or net economic growth is not (Investopedia, "Real Economic Rate Definition", Investopedia, https://www.investopedia.com/terms/r/realeconomicrate.asp#:~:text=Nominal%20economic%20growth%20is%20inclusive,GDP%20deflator%20is%20already%20known, (Accessed 23 May 2024).

130. Activity Data are quantitative measures of a level of activity that results in GHG Emissions. It is a measure that models what is taking place during a given period of time (e.g., volume of gas used, kilometers driven, tons of solid waste sent to landfill, etc.) (Open Risk Manual, "Activity Data", https://www.openriskmanual.org/wiki/Activity_Data? (Accessed 23 May 2024).)

131. Before mitigation measures, i.e. solutions, are implemented.

132. Implementation rates in the model represent the pace at which solutions will be implemented in the organisation, and therefore the percentage of the 2026 and 2030 targets achieved in the intermediary years of the roadmap.

133. For the purpose of this analysis, Climate Action Accelerator used data from 9 humanitarian organisations which have developed Climate and Environmental roadmaps, including financial impact assessments, using Climate Action Accelerator's approach and support.

134. It is worth noting that the original CAA methodology was applying a blanket 10% premium on all purchases, generating very high costs for the procurement solutions. Recent improvements in the carbon and financial modelling of these solutions have led to a significantly decreased cost: roadmaps now target goods and services with an optimised cost per GHG reduction.

Climate Action
Accelerator

ROADMAP FOR HALVING EMISSIONS IN THE HUMANITARIAN SECTOR BY 2030

AN OPERATIONAL PLAYBOOK FOR ORGANISATIONS

climateactionaccelerator.org

linkedin.com/company/theclimateactionaccelerator

instagram.com/climateactionaccelerator

twitter.com/TheCAA_Geneva

CONTACT US :

2 Chemin des mines, 1202 Genève
contact@climateactionaccelerator.org