THE WREC PROJECT

Environmental Sustainability in Humanitarian Logistics

Baseline and Mid-term Survey Report

August 2023
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“As climate displacement has become one of the main drivers of humanitarian crises, the role of humanitarian organizations both in providing aid, as well as preventing future emergencies that are the unintended result of the impact of humanitarian aid on the environment becomes paramount.”

Hanken School of Economics, Global Logistics Cluster – 2022
Background

Humanitarian actors are committed to the principle of ‘do no harm’: however, during an emergency, adverse environmental impacts can be associated with well-intended humanitarian action. A growing body of work, by governments and humanitarian partners, has documented that impacts such as waste volumes, air, and land pollution, can hamper the effectiveness of relief, recovery, and sustainable development efforts and make them more costly: humanitarians have therefore recognized the need to come together to reduce the pressure on local communities and their ecosystems.

The WREC Project, coordinated by the Global Logistics Cluster and supported by a coalition of humanitarian organizations - the Danish Refugee Council (DRC), the International Federation of Red Cross and Red Crescent Societies (IFRC), Save the Children International, and the World Food Programme of the United Nations - seeks to reduce the adverse environmental consequences of humanitarian logistics through awareness, practical guidance, and real-time environmental expertise. The project is funded by USAID's Bureau for Humanitarian Assistance (BHA), the Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO), and the UPS Foundation, pursuing the following goals:

- The humanitarian logistics community is aware of the sector’s environmental impact and adopts a coordinated, scalable and sustainable approach to measure and reduce that impact.
- Humanitarian logistics practitioners are supported to reduce their environmental impacts from waste and transport, not only while their operations are underway but also before they have begun and after they have ended.

In September 2022 and April 2023, the WREC Project launched two surveys to capture the needs of humanitarian partners to reduce the environmental impacts associated with humanitarian response, understanding:

1) Which ‘low hanging fruits’ – short term, immediate solutions – are adopted by humanitarians and can be scaled up;
2) Which areas of intervention can produce the greatest environmental benefits across humanitarian supply chains;
3) Which knowledge gaps need to be addressed to drive long-term positive change.

Specifically, the WREC explored the current trends and challenges faced in the implementation of solutions based on the circular economy approach\(^1\) to design out waste and pollution and extend the value chain of relief items, across the following workstreams: circular economy, reverse logistics, waste management, decarbonization, and ‘green procurement’.

\(^{1}\) You can refer to this document to get an exhaustive overview of the WREC approaches towards circular economy, reverse logistics, waste management, decarbonization and green procurement.
Methodology

The WREC surveys were shared with the Global Logistics Cluster network of humanitarian partners and the WREC mailing list, composed by representatives from the humanitarian, private, and academic sectors as well as donor representatives. Overall, 168 individuals\(^2\) from 88 organizations and 49 countries responded to the two WREC surveys.

![Figure 1: Breakdown of WREC respondents by country, top 10 countries per number of respondents](image)

Most of the respondents were male (67%), while 32% of the respondents were female and 1% preferred not to disclose this information.

Most respondents occupy supply chain or logistics roles and are managers at Headquarters and Country Offices, while sustainability experts, logistics officers, procurement officers, admin and finance assistants also took part in the survey (see Figure 2).

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\(^2\) Note that some individuals responded both to the baseline and the midterm survey: this figure indicates the number of unique respondents, filtering out the double entries.
• The WREC baseline survey was launched on September 1, 2022, and it closed on September 16, 2022. A total number of 108 respondents from 60 individual organizations provided feedback on their current level of awareness on green logistics, providing specific insights on: waste management, environmentally sustainable procurement, reverse logistics, and circular economy.

• The WREC mid-term survey was launched on April 4th, 2023, and it closed on May 5th, 2023. A total number of 73 respondents from 46 individual organizations provided feedback on their current level of awareness on green logistics, providing specific insights on: waste management, environmentally sustainable procurement, reverse logistics, and circular economy. The number of respondents was 30% fewer, compared to the baseline survey.

Overall, 86% of the respondents to the WREC surveys indicated that their organizations are looking into the environmental impacts of humanitarian logistics, while 5% responded ‘no’. It’s important to note that the subject of environmental protection and reducing the sector’s environmental footprint is extremely broad, and each humanitarian organization is designing specific environmental solutions – e.g. emission reduction roadmaps, green procurement policy and suppliers’ strategies, environmental management systems – and the scope of each organization’s activities varies. The WREC project is mapping current efforts across the sector and producing tailored guidelines to support humanitarians in impact reduction as it relates to humanitarian logistics activities and responsibilities at the field level.
Environmentally Sustainable Logistics

The respondents to the surveys indicated that specific workstreams represent a priority to reduce the environmental footprint of their organizations: both in September 2022 and April 2023, the top priority emerging from the results has been ‘Green Procurement’, followed shortly by ‘Waste management’ and ‘Greenhouse gas emissions’. ‘Reverse Logistics’ and ‘Circular economy’ weren’t identified as priorities by most of the respondents, however this could be due to the lack of awareness over such themes. This trend is confirmed by one of the surveys’ questions, focused on the level of awareness of the respondents on the key topics of: reverse logistics, waste management, decarbonization, and green procurement.

![Figure 3: A snapshot of the results from the mid-term survey question ‘How would you rank your level of awareness about the following topics?’](image)

Considering that most of the respondents to the mid-term survey (48%) indicated that their organizations have an environmental sustainability policy in place to identify, manage, and reduce the environmental impacts of its operations, embedding circularity considerations in existing strategies becomes key to maximize impact reduction and the adoption of long-term sustainability solutions. The WREC project has already published a [Circular Economy quick guide](#) to raise awareness of circular economy principles and provide specific examples in humanitarian practice. The WREC project also recognizes the need for additional awareness raising is needed and is producing further guidance and global information sessions on circular economy principles and practice to ensure that humanitarians can extend the value chain of their relief items and reduce the waste volumes in the field. To learn more, explore the [dedicated section on Circular Economy](#) on the WREC webpage.

Respondents were also asked which additional resources are needed by humanitarians to reinforce their skills in environmental impact reduction, guiding the WREC workplan: 47% f the respondents reported that specific training, guidelines, and a knowledge sharing platform represent useful tools to allow supply chain and logistics
officers at headquarters and field level to learn how to reduce the environmental impacts of humanitarian operations.

Figure 4: the key tools indicated by the respondents to support environmental impact reduction in humanitarian supply chains
Additional inputs and suggestions by the respondents touched on the need to map existing calculation methodologies for carbon emissions footprints, identify common green specifications and criteria in procurement, and connect with other humanitarians to amplify individual organizations’ sustainability efforts.

Through the mid-term survey, it was also possible to capture which tools shared by the WREC have proven to be more useful to humanitarians to date, identifying areas for improvement and key strengths.

Academic research³ and the Waste Management and Recycling (WMR) assessments have been indicated as the most useful resources shared by the WREC by April 2023. A quantitative research study is currently underway and will be published by the WREC project and the Kühne Logistics University in Q4 2023, exploring the waste volumes and greenhouse gas emissions associated with the handling of relief items in emergency settings.

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**REVERSE LOGISTICS**

*Reverse Logistics* is a supply chain management process involving the flow of materials from the point of consumption back to any steps of the supply chain (i.e. manufacturing, distribution, etc) to recapture value, redistribute, or to properly dispose of materials.

- The WREC Project

**KEY INSIGHTS**

According to the respondents, the most critical factor influencing the introduction of reverse logistics processes in humanitarian organizations is the identification of suppliers with relevant capacity, supportive policies, and regulations.

Only 25% of respondents indicated that their organization has a system to return products to suppliers\(^1\), 75% do not have such a system or are unaware of one.

Similarly, most of the respondents aren’t aware of local systems to return products to suppliers. The largest category of products being returned to suppliers are **damaged products**. This represents a huge area for improvement that the WREC project is exploring, raising awareness on the success stories by humanitarian partners encouraging the adoption of take-back schemes.

**NEEDS AT A GLANCE**

- An agreed common approach to reverse logistics;
- Knowledge-sharing of case studies and success stories;
- Identification of suppliers supporting reverse logistics;
- Design of pilot initiatives involving reverse logistics in humanitarian contexts.

**HOW IS THE WREC HELPING?**

The following resources on Reverse Logistics are already available on the WREC:

- [WREC Research: Waste management and Reverse Logistics in the Humanitarian Context, September 2022](#)
- [WREC - Literature Review: Waste management and reverse logistics in the humanitarian context, August 2022](#)

A global WREC Information session on Reverse Logistics is scheduled for September 2023.
CIRCULAR ECONOMY

Circular economy is a model of production and consumption which reduces material use, and redesigns products and services to be less resource intensive. The circular economy model aims to maintain the value of products and materials for as long as possible by returning them into the value chain at the end of their use. This is done while minimizing the generation of waste, greenhouse gas emissions, pollution, and the negative impact on ecosystems.

- The WREC Project

KEY INSIGHTS

The majority of the respondents indicated that both financial and infrastructural barriers (including: start-up costs, complex supply chains, challenging business-to-business cooperation, lack of information on product design and production, and lack of technical skills and awareness on the subject by humanitarian practitioners) represent the greatest barriers to transition towards circular economy models.

Furthermore, the results showed that only a few organizations – e.g. IFRC, IFRC, UNHCR - have conducted a product life cycle assessment (LCA) related to plastics, packaging, or humanitarian aid: assessing if supply chains are capable of extending the products’ life cycle represents an area of improvement for the sector, which can lead to the shift from linear to circular processes.

NEEDS AT A GLANCE

- Raise awareness with technical units on circular economy;
- Accessing Lifecycle Assessment (LCA) product information; supporting reverse logistics;
- Design of training modules and guidelines on circularity to introduce this principle in supply chain planning.

HOW IS THE WREC HELPING?

By producing tailored guidance:
Quick Guide on Circular Economy, embedding circularity considerations in procurement, distribution, storage, end-of-life processes, case studies, WREC LinkedIn Audio series.

A global WREC Information session on Circular Economy is scheduled for October 2023.
WASTE MANAGEMENT

_Waste management_ (End-of-Life) is an instrument which defines a set of practices, processes, and policies aiming at measuring, reducing, reusing, recycling, or properly disposing of items which are no longer useful for an organization.

- The WREC Project

KEY INSIGHTS

Only a minority of respondents to the baseline survey (28%) and the mid-term survey (18%) indicated that their organization has a solid waste management planning framework in place.

Similarly, most of the respondents indicated that their organizations don’t have any mechanisms in place to measure waste volumes (91% negative answers to the baseline survey and 82% to the mid-term). Those represent key areas of improvement that need to be tackled to reduce waste streams in humanitarian settings before, during, and after emergencies.

Several respondents (38%) are aware of local recycling initiatives carried out at their duty station, including in: Washington DC, Cameroon, Kenya, Somalia, and Bangladesh. Troubles accessing waste management and recycling (WMR) services have been reported for the following duty stations: Ukraine, Zimbabwe, South Sudan, Yemen, Malawi, and Iraq.

NEEDS AT A GLANCE

- Conduct waste management and recycling assessments in countries where WMR services are limited;
- Disseminate case studies and lessons learned about recycling projects in the field;
- Inform the humanitarian community on standards and international conventions on waste management;
- Produce a library of good practices in humanitarian settings.

HOW IS THE WREC HELPING?

By producing guidance and help desk, including on medical waste, 21 waste management and recycling assessments, a WMR site visit questionnaire, a case study on the role of scrap dealers in Cox’s Bazar.

Currently working on a mapping of standards and conventions on waste management by humanitarian partners to reduce waste and will begin conducting WM coordination group meetings from October 2023.
Decarbonization is the process by which organizations or other entities aim to reduce their climate impact by measuring, managing, and reducing the greenhouse gas emissions (GHG). The WREC project focuses on the efforts to measure, manage, and reduce the emissions associated with humanitarian supply chain operations.

- The WREC Project

KEY INSIGHTS

Most of the respondents to both surveys aren’t aware of Greenhouse Gas (GHG) emissions accounting mechanisms for Scope 1, Scope 2, or Scope 3 (categories under the GHG Protocol) in place in their organization.

However, during recent WREC-coordinated events, it emerged that humanitarian organizations are advancing on carbon accounting methodologies. The introduction of the Humanitarian Carbon Calculator (HCC) allowed many humanitarians to calculate their emissions, define emission-reduction roadmaps, and start the work of validating their baselines.

Further research and guidance is required to embed specific Scope 3 emissions, including from the transport of goods and staff commuting, in carbon footprint inventories since supply chain have the greatest room for improvement to meet sustainability goals.

NEEDS AT A GLANCE

- Evidence generation, as well as research on common standards and methodologies across organizations;
- Guidance and training on data collection and calculation methodologies for Scope 3 emissions in the field;
- Sharing success stories and emission-reduction case studies

HOW IS THE WREC HELPING?

By sharing guidance and highlighting success stories (e.g. Save the Children in Sierra Leone), compiling case studies, coordinating humanitarian supply chain Scope 3 meetings, conducting a quantitative study on GHG emissions in collaboration with the Kuhne University of Logistics, producing a mapping of GHG standards and conventions.
GREEN PROCUREMENT

Green Procurement is considered as a strategic approach that emphasizes environmental responsibility in purchasing decisions. This approach supports purchasing of goods and services from suppliers that are committed to minimizing environmental impact, particularly in terms of reducing energy consumption and waste generation.

- The WREC Project

KEY INSIGHTS

Most respondents to the baseline and mid-term surveys indicated that their organization is trying to increase the amount of goods and services procured locally as a measure to increase sustainability and they adopted Suppliers Codes of Conduct. Additional training and guidance would be needed in the area, possibly with the development of product Life Cycle Assessments (LCAs).

In line with the baseline survey results, most respondents have also indicated that their organizations don’t have mechanisms in place to verify that the products procured come from environmentally sustainable sources. This represents an area of improvement that the WREC is currently exploring through the mapping of environmental specifications for relief items and green procurement practices adopted by humanitarians, in recognition of the key role played by procurement officers to pave the way towards environmental impact reduction both in operations and programmes.

NEEDS AT A GLANCE

- Identification of green specifications and quick guidance for procurement units;
- Sharing lessons learned on eco-design for relief items (e.g. UNHCR’s blankets);
- Delivery of training and capacity-building activities for field practitioners.

HOW IS THE WREC HELPING?

By sharing the WREC green procurement quick guide, mapping out green specifications, sharing case studies from humanitarian organizations, and continuing green procurement coordination meetings. A global green procurement information session was coordinated by the WREC in 2022, providing key insights on challenges and common trends on item specifications and tendering criteria.
Conclusions

The feedback provided by partners and stakeholders in response to the WREC surveys allowed the capturing of key challenges faced by humanitarians in the integration of environmental considerations across supply chain steps – from procurement to end-of-life management.

Following an analysis of the results the WREC team was able to determine which tools are most acutely needed by humanitarians to thrive and reduce their environmental impacts on local communities and ecosystems. Those tools have been mentioned across the different sections of the survey – green procurement, reverse logistics, circular economy, waste management, and decarbonization:

- Design and delivery of training to key supply chain functions – e.g. Logistics Officers, Procurement Officers;
- Sharing of lessons learned and success stories on environmentally sustainable projects;
- Provide data-collection support to measure the impact of environmental projects in the field;
- Design of guidelines to be used by field practitioners.

The workplan of the WREC for Q3 and Q4 2023 has been structured to respond to those needs. A summary of the upcoming activities is available below.

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**Figure 7: color legend of the WREC workstreams**

1. **MAPPINGS**
   - Production of a global mapping of existing activities on green supply chains.

2. **COMMUNICATIONS**
   - Production of awareness raising materials on WREC workstreams.

3. **CASE STUDIES**
   - Identification and dissemination of lessons learned on WREC workstreams.

4. **TRAINING**
   - Design of environmental sustainability in-person and online training.

5. **EVENTS**
   - Set up of WREC workshops, coordination meetings and participation in global events.

6. **HELPDESK**
   - Provision of ad hoc tailored expertise and support to humanitarian logistics partners.

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**WREC WORKPLAN**

Workstreams: 
- Greenhouse Gas emissions
- Green Procurement
- Circular Economy
- Waste Management
A series of targeted initiatives have already been rolled out to support humanitarian practitioners both at headquarters and in the field. Those include:

- **Coordination of 25 workshops and information sessions** on the environmental impacts of humanitarian logistics;
- **Organization of 6 coordination meetings** on green procurement and greenhouse gas emissions, with an average of 30 attendees per meeting;
- **Publication of 110 resources** on the WREC website;
- **Production of three quick guides** – on green procurement, circular economy, and medical waste management - and one case study on environmental sustainability in humanitarian supply chains;
- **Mapping of the available training** on environmental sustainability themes and integration of an introductory e-learning module in the Global Logistics Cluster portfolio;
- **Design of awareness raising materials** for Logistics Officers, Procurement Officers, IT Officers;
- **Publication of 21 Waste management and Recycling assessments**, accompanied by guidance and a site visit questionnaire;
- **Provision of tailored helpdesk support** to humanitarian partners through dedicated WREC Specialists.

A new survey will be launched in **Q1 2024** to determine if the current activities implemented by the WREC team have addressed the needs of humanitarians, contributing to generate positive impacts on the communities that we serve and the environment.
The WREC team would like to take this opportunity to express its appreciation towards all the partners who contributed or participated in the WREC workstreams and our donors for supporting our work so far. We can have a real impact on the collective fight against climate change only by acting in synergy; we strongly encourage you to contact us if you have an environmental challenge in the field, if you want to share a success story or if you need support in finding dedicated guidance on green procurement, reverse logistics, circular economy, decarbonization and waste management: global.WREC@wfp.org.

Together we can work towards the sustained adoption of good environmental practice across the humanitarian logistics community, improved sector-wide cost efficiencies for humanitarian partners, and safer, less polluted environments for crisis-affected communities.