



**MANAGING PACKAGING WASTE SUSTAINABLY-
LESSONS FROM HUMANITARIAN ORGANIZATIONS**

**SHELTERBOX'S SUCCESS IN
ELIMINATING SINGLE USE PLASTIC**

This case study has been prepared by ShelterBox and the Joint Initiative for Sustainable Humanitarian Assistance Packaging Waste Management. It documents how, because of sustainable packaging practices, ShelterBox avoided the use of 173,396 pieces of plastic in 2021.

Shifting how the entire humanitarian sector manages the packaging of lifesaving items – and the waste these generate – towards greater sustainability is too huge a task for any single organization. For this reason, the partners of the Joint Initiative are working together to make the humanitarian community’s packaging waste management more environmentally and socially responsible, by sharing knowledge and good practices – such as this case study – through continued collaboration and coordination, and by pooling resources.

The Joint Initiative’s first phase was supported by USAID’s Bureau for Humanitarian Assistance, UNHCR and the UNEP-OCHA Joint Environment Unit. The current phase is a collaborative effort spearheaded by leading humanitarian organizations, including ShelterBox. For more on the Joint Initiative, visit: <https://tinyurl.com/Joint-Initiative>

This case study illustrates how a relatively small organization with little purchasing power has managed to make a significant reduction to its packaging. The case study is part of a wider effort led by the [Joint Initiative for Sustainable Humanitarian Packaging Waste Management](#) to compile best practices from aid organizations in their efforts to eliminate unnecessary packaging and support better packaging waste management.

***Cover image:
ShelterBox: Vanuatu 2020, Cyclone Harold***

INTRODUCTION: WHY WAS PLASTIC A CONCERN?

ShelterBox is a UK based humanitarian organization that provides emergency, life-saving shelter and essential tools and supplies (e.g., tents, tarpaulins, cooking sets etc.) to people affected by humanitarian crises around the world. Since being founded in 2000, ShelterBox has helped to shelter more than 2 million people globally.¹

There are inevitable environmental implications throughout the course of humanitarian assistance, including the plastic generated in the packaging and delivering of relief items, - an issue of growing concern across the humanitarian sector. The importance and urgent impetus for the focus on plastics is partially due to the tightening international regulatory landscape on single use plastics (SUPs) and its implications on the delivery of humanitarian assistance.

For ShelterBox, the 2017 wholesale SUPs [ban](#) implemented in Kenya, has had direct consequences on the organization: for example, in 2018, it was unable to import a shipment of essential relief items until all SUPs were removed. This incident elevated plastics to a higher priority environmental consideration for the organization, given the likelihood that similar SUP policies could appear in other countries where ShelterBox works. Alongside the operational need to tackle SUPs, plastic reduction had also been recognized by the ShelterBox team as an area where the organization could make positive changes to reduce the environmental impact of their responses.

As a result of this, ShelterBox began exploring methods to reduce its environmental impact, with the creation of working groups aimed at finding collaborative solutions on issues such as plastics and CO2 emissions. These groups comprised members of different teams (procurement, logistics, operations, communications, fundraising) in order to bring various perspectives and skills to the table.



ShelterBox: Sudan Distributions, 2021

1. <https://www.shelterbox.org> - Their work is supported by a global network of ShelterBox affiliates and a variety of partners, including Rotary International. It is funded exclusively through public support, trusts, and foundations.

WHERE TO BEGIN

ShelterBox conducted a mapping exercise to understand which types of plastics were included in their aid items, what purposes they served, and what was their potential for reuse after distribution. This included reviewing post distribution monitoring (PDM) surveys².

This exercise helped ShelterBox to reframe their issue as one of Problem Packaging defined as packaging that:

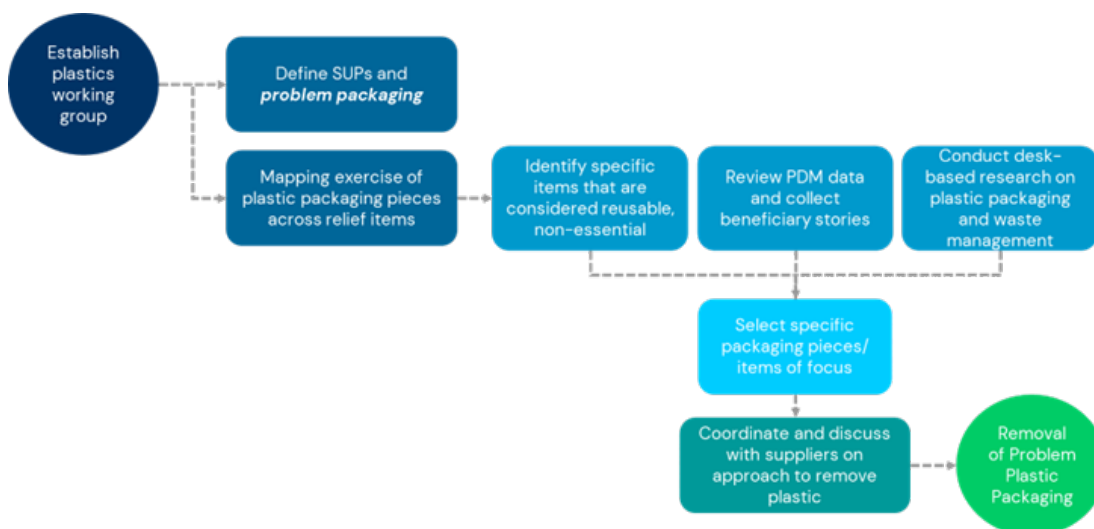
- Is not essential for the protection of an aid item;
- Is not essential for the safe delivery, storage or use of an aid item;
- Will not be meaningfully repurposed by those receiving aid; and
- May cause harm to the community or environment.

Jointly with their suppliers³, ShelterBox identified 13 different types of packaging used in their relief items that could be revisited, highlighted four as non-essential, and labeled three others as potentially reusable.

ShelterBox examined the minute pieces of plastic (i.e., straps and sleeves) used to wrap individual items and ultimately targeted medium and small low-density polyethylene (LDP) bags, which were included in the sleeve covering for a hoe in a shelter kit for example.

Ultimately ShelterBox was able to remove six pieces of packaging⁴ from each shelter tool kit, which led to considerable plastic reduction given the high volume of shelter kits distributed annually. This was in addition to previous plastic reduction work which focused on kitchen sets, children's clothing and hygiene items including soap. In 2021, in total, ShelterBox avoided the use of 173,396 pieces of plastic as a result of their efforts⁵. Notably, since they simply removed the plastic, these changes incurred no financial costs to ShelterBox or their suppliers.

Figure 1. Summary of ShelterBox's Plastic Reduction Process



2. For example, ShelterBox reviewed answers to questions such as: The mosquito net you received was in a plastic bag. What did you do with this bag? a) Burned it; b) Community Waste Disposal; c) Community Recycle Service; d) I re-used it myself; e) I gave it away; f) I left it on the ground (threw away); g) Other; or f) If other, please explain what you did with the bag.

3. Attention was first given on items purchased globally from ShelterBox's supplier, [Alpinter](https://www.alpinter.com/). [Alpinter | Humanitarian Relief Products](https://www.alpinter.com/humanitarian-relief-products/) - Alpinter due to the high quantity purchased as opposed to regional/local procurement.

4. The six pieces of packaging removed included: 1) LDPE plastic bag packaging around the shovel; 2) LDPE plastic bag and elastic band packaging around the claw hammer; 3) LDPE plastic bag packaging around the mutt hoe head; 4) Brown paper packaging around the hoe head; 5) LDPE plastic bag packaging around the curved sewing needles x2; and 6) Retail plastic and cardboard around the shears.

5. [ShelterBox Video https://www.facebook.com/ShelterBox/videos/shelterbox-live-update-plastic-reduction/1001087147399113/](https://www.facebook.com/ShelterBox/videos/shelterbox-live-update-plastic-reduction/1001087147399113/)

LESSONS LEARNED FROM SHELTERBOX'S EXPERIENCE:

1. ENSURE APPROACHES ARE TRULY "GLOBAL"

Definitions of "single use" vary across countries and contexts: what Western countries see as single-use may be perceived differently in communities where aid is being delivered. These important contextual considerations influenced how ShelterBox defined "problem packaging" and its approach taking into account the voices of receiving communities through PDM (post distribution monitoring) feedback and anecdotal evidence from partners.

2. ENVIRONMENTAL CONSIDERATION VS. THE HUMANITARIAN IMPERATIVE

The imperative and priority of any humanitarian organization is to provide life-saving assistance to people in need. This assistance may interfere with the achievement of environmental goals for long-term development. There are instances in which addressing environmental considerations might even clash with this life-saving imperative. These complexities mean that environmental issues, like packaging, should be looked at holistically.

3. FOCUS ON PRIMARY AND SECONDARY PACKAGING AS A "LOW HANGING FRUIT"

ShelterBox realized over the course of their analysis that they would need to focus on primary and secondary packaging given the relative challenges in reducing tertiary packaging. Reducing tertiary packaging has proven particularly difficult in part because it goes beyond the organization's direct sphere of influence⁶. Moreover, while humanitarian organizations can work alongside their direct suppliers to change items specifications, they do not necessarily have direct contacts with or access to transporters of aid items. In addition, tertiary packaging is less easily removable or modifiable given frequently long shipping distances, as well as being a cross-cutting issue that affects both the humanitarian and commercial shipping sectors.

4. INVOLVE SUPPLIERS FROM THE START TO GIVE THEM OWNERSHIP OF THE PROCESS

Suppliers' engagement from the start of the process of reducing plastics was key to ShelterBox's success. Coordination and discussions with relevant suppliers requires time and commitment, but getting their involvement and buy-in for plastic reduction was essential. Empowering Suppliers in the process and getting them interested and engaged in the impact of small changes in plastic packaging – which often supported their own environmental and sustainability issues - made this a win-win for all involved.

5. UNDERSTANDING, ASSESSING, AND MAKING DECISIONS WILL ULTIMATELY HAVE ENVIRONMENTAL TRADE-OFFS

ShelterBox learnt that there are inherent and unavoidable trade-offs in decision making, even those related to environmental sustainability. It is challenging to balance climate implications (e.g. carbon emissions) with other environmental impacts like plastic waste. For example, while ShelterBox was able to easily remove the plastic packaging for several aid items at no added cost, this may become more complicated with more complex items in the future. Items that are currently packaged and transported in a sealable plastic package would need to be replaced by something like a cardboard box. However, moving to rigid, larger packaging could result in an increase in the freight space used, which could translate into an increase in the number of trips required to deliver the goods – and consequently more carbon emissions.

For a humanitarian organization like ShelterBox, which does not necessarily have the time nor the capacity at this stage to carry out life cycle analyses for each of their distributed items and packaging, making informed trade-offs and prioritizing positive impact is perhaps the only approach to help make sustainable progress.

6. Although efforts to reduce tertiary packaging are scarce, Alpinter is currently trialling a type of stretch wrap for tertiary packaging in Belgium. Power stretch foil is 60% lighter than standard plastic foil. The foil is ultra-thin, though equally strong compared to standard foil due to internal structure (built up out of more layers). This also results in a more compact waste product (waste foil after de-palletisation), which makes transport of waste materials more efficient.

LESSONS LEARNED FROM SHELTERBOX'S EXPERIENCE:

6. ESTABLISH AN ORGANIZATION-WIDE APPROACH TO SUPPORT LONGEVITY AND SUSTAINED PROGRESS

Establishing a working group across multi-discipline teams, fostering support and buy-in from management, and facilitating consensus on definitions and strategies helped ensure progress was made. Garnering broader participation throughout ShelterBox also supported a distribution of effort, so that the time and workload required to keep this effort moving did not rest on one individual.

While there were no added financial costs associated with removing the plastic packaging, it did require substantial effort from ShelterBox staff and suppliers in addition to their primary roles. This was only possible due to the organization-wide approach used and desire to make positive change.

7. CONTEXT SPECIFIC CONSIDERATIONS FOR REGIONAL VS. INTERNATIONAL PROCUREMENT

ShelterBox focused their efforts on items delivered globally and sourced internationally for this initiative but have engaged in some preliminary conversations with regional suppliers about sustainability. Working with regional suppliers⁷ can involve some nuanced cultural considerations and can require a different approach. For example, when working with suppliers based in the Middle East, ShelterBox found that removing the plastic packaging meant that the aid item may be seen as of a lesser quality, which could hinder assistance delivery and effectiveness. Discussions around plastic packaging reduction need to be managed considering these cultural differences to ensure positive progress can still be achieved.

8. SUSTAINABILITY CAN BE OF ADDED VALUE TO ORGANIZATIONS

Sustainability and positive environmental practices are becoming increasingly attractive and important to individual persons and organizations around the world, which means that actively incorporating sustainable practices into organizational and programmatic operations can be beneficial beyond the environmental outcomes; it can add value to an organization and even generate additional funding by demonstrating a commitment to addressing environmental priorities. Research has also shown that a commitment to sustainability also enhances employee engagement and loyalty to the organization⁸.



Syria: ShelterBox provided winter shelter kits and children's clothing to Abu's family as winter temperatures started to drop. Plastic has been removed from children's clothing kits because of ShelterBox and supplier discussions.

7. Clothing Kits for Syria – an example of good supplier relationships. Plastic has been removed from children's clothing kits because of ShelterBox and supplier discussions.
8. <https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/Strategy%20and%20Corporate%20Finance/Our%20Insights/Five%20ways%20that%20ESG%20creates%20value/Five-ways-that-ESG-creates-value.ashx>

LESSONS LEARNED FROM SHELTERBOX'S EXPERIENCE:

9. SOLUTIONS SHOULD BE COLLABORATIVE

Solutions to plastic packaging should be developed collaboratively, gathering input and ideas from a range of parties, including from the communities receiving assistance. These communities often reuse plastic packaging in an innovative manner – something that should be captured. There are skills, knowledge, and expertise in the receiving communities that are often undervalued and underrepresented. The inclusion of these perspectives needs to be a larger consideration in the important conversations where decisions are made.



ShelterBox: Partner CARE Mozambique, 2022. Using the plastic strapping that packages the bales of mosquito nets and blankets, Samuel was able to create shopping baskets, sleeping mats and baskets/trays. He now continues to sell these in his local market.

CONCLUSION

ShelterBox's success demonstrates that even as a relatively small organization, dedicated staff, and sustained support from across and up the management chain can contribute to a cultural shift within an organisation and as a result have a resoundingly positive impact on sustainability. The steps they took to reduce their plastic packaging are replicable and achievable measures that could be taken by other organizations.

Imagine the scale of positive environmental impact if every humanitarian assistance organization mirrored these efforts.



**JOINT INITIATIVE FOR
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