# PROCUREMENT DECISION TREE TO REDUCE THE ENVIRONMENTAL IMPACT OF HUMANITARIAN PACKAGING

**JOINT INITIATIVE** FOR SUSTAINABLE HUMANITARIAN ASSISTANCE PACKAGING WASTE MANAGEMENT

IOM UN MIGRATION

acted

The procurement decision tree is a simple tool aimed at supporting humanitarian staff to make decisions to reduce the environmental impact of packaging. The tool can be applied to the packaging of humanitarian relief items, or those used for the office or in events and training sessions.

This decision tree was collaboratively designed by the Joint Initiative for Sustainable Humanitarian Assistance Packaging Waste Management (Joint Initiative), Agency for Technical Cooperation and Development, (ACTED), and International Organization for Migration (IOM). It can be applied to primary packaging (in direct contact with the product to protect and preserve it e.g., individual plastic wrapper for soap); secondary packaging (that protects and brings individual units together e.g., cardboard boxes that contain individually wrapped soaps) and tertiary packaging (used to protect items during shipping and storage e.g., plastic "shrink" wrap used to secure boxes onto a pallet).

## Using the Decision Tree

The decision tree can be used at all stages of the procurement process but is particularly useful in designing requirements for tenders or requests for proposals/quotes. The following suggestions will help maximize the tool's effectiveness.

- Identify your most frequently purchased items for which the packaging is currently not recycled, reused, or repurposed.
- Go through the decision tree step-by-step to help make the most environmentally sound decisions.
- Identify suppliers who might be receptive to a discussion on reducing packaging or exploring the use of more environmentally sustainable packaging.
- Include requirements aimed at reducing packaging, making packaging more environmentally in your next tender, and request for proposals or quotes.
- This document provides practical examples of how humanitarian organizations have used the decision tree.

## Definitions

- Essential packaging: for the purposes of this document the term "essential packaging" is defined as packaging that is essential in its function to protect an item and to ensure that it is delivered to communities in good quality. While this may be difficult to remove (particularly when used for food items), it can sometimes be replaced by a more sustainable alternative (e.g., glass jars that can be reused rather than plastic).
- Non-essential packaging: for the purposes of this document the term "non-essential packaging" is packaging that can be easily removed without affecting the quality, shelf-life, or safety of the product.

## **Cardboard and Paper:** Hints and Tips

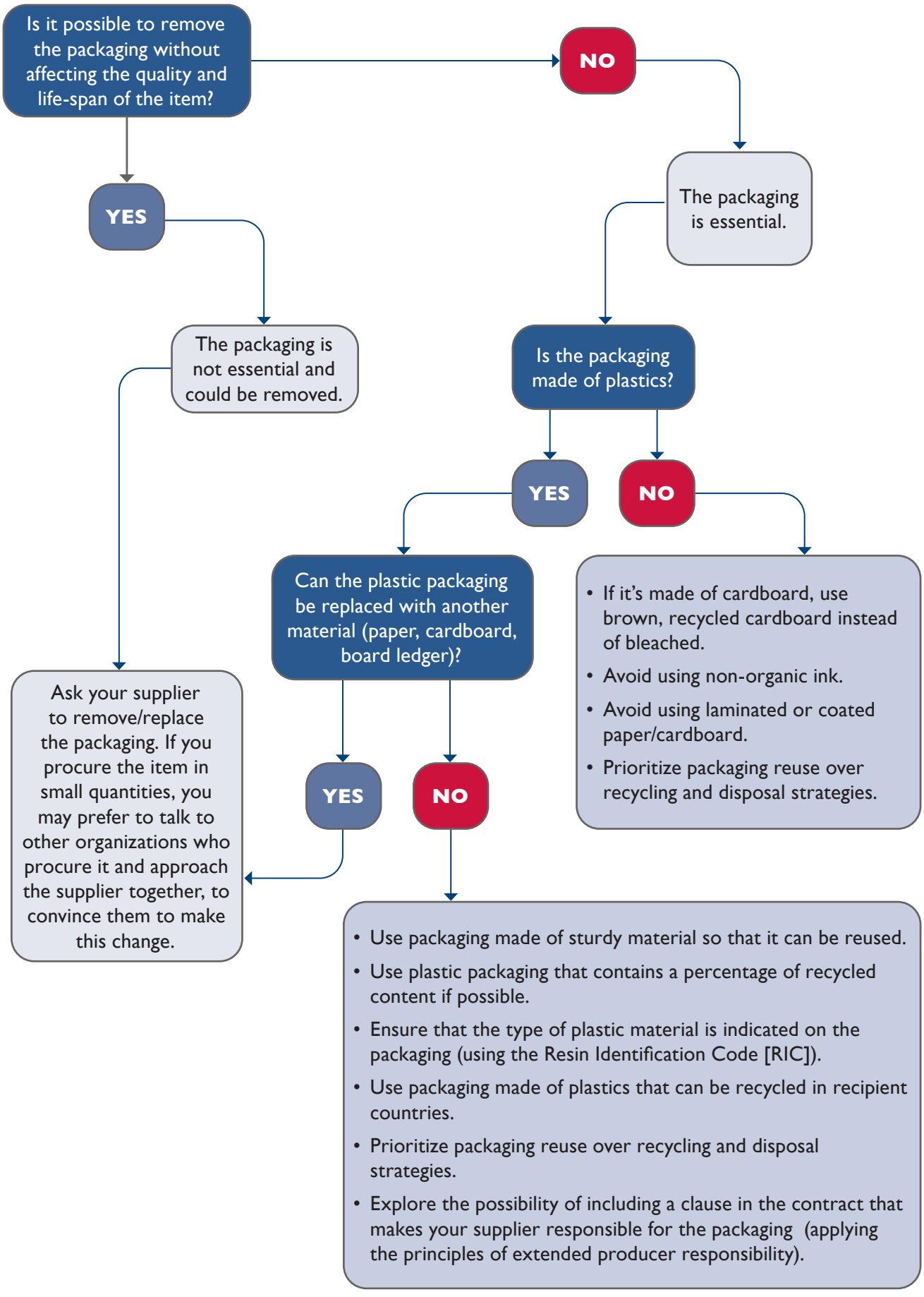
- Recycled cardboard/paper should be prioritized over non-recycled cardboard/paper; this keeps materials in circulation and is more environmentally sustainable.
- Brown cardboard should be prioritized over white, bleached cardboard because of the chemicals used, which can create contamination during the recycling process.
- Wet or dirty cardboard is difficult to recycle and is likely to be sent to landfills. When storing cardboard to be recycled it should be protected from the rain.
- Cardboard and paper that has a coating, a plastic liner, or is laminated is difficult to recycle and should be avoided if possible.
- Note that while cardboard offers clear benefits in terms of biodegradability and recyclability, it emits far more greenhouse gases than plastic. See a comparative analysis of different packaging materials produced by the Joint Initiative: https://tinyurl.com/JI-alternatives.
- The use of recycled cardboard packaging for food items should be carefully considered as it can present health hazards.

## **What to Know about Plastic:** Hints and Tips

- Some plastic packaging is more recyclable than others, particularly in humanitarian contexts. This is the case for polyethylene terephthalate (PET) used for drinks bottles etc. or high-density polyethylene (HDPE) used for shampoo,chemicals etc.
- Plastic packaging is more recyclable if made from one material. Mixing different materials makes recycling less feasible because of the need to separate the materials (e.g., metalized laminated sachets or pouches used for ready-to-use therapeutic foods or high-energy biscuits).
- Including information on the type of plastic in the packaging (e.g., Resin Identification Code) helps ensure that the packaging will be collected separately and recycled[1].
- Packaging made from "alternative plastics" (biodegradable, compostable, biobased, etc.) is not necessarily more environmentally sustainable and is not adapted to humanitarian contexts (for more information: https://tinyurl.com/JI-alternatives).
- Useful resources on plastics: the WREC waste management facilities mapping (to which the Joint Initiative has contributed) provides information on which plastics can be recycled in a number of humanitarian contexts.
- Using a % of recycled content for plastic packaging helps keep materials in circulation. Note, however, that when used for food items, this can present health hazards if the packaging is not approved as food-grade. Note, however, that if used for food items, there may be health hazards linked to the use of recycled materials
- "In the absence of recycling facilities, plastic waste is often burnt in the open or left in the environment, with adverse effects on human health and marine life.

[1] See this infographic produced by Plastics for Change for more information on Resin Identification Code.

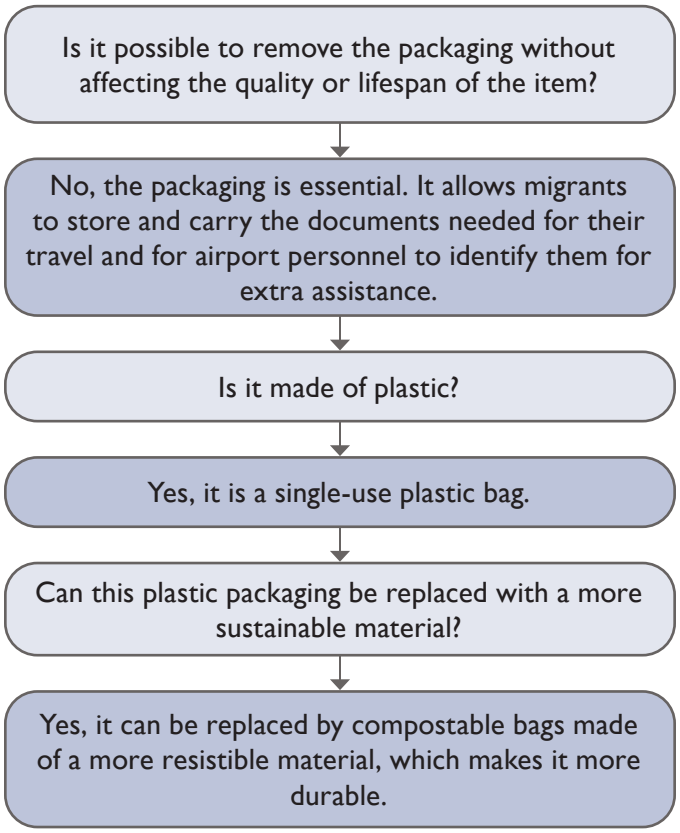
**The following diagram presents the decision tree process.**



## **Case Study 1:** Compostable Bags for IOM Movement Operations

Every year, IOM helps to transport hundreds of thousands of migrants around the globe in safe and dignified conditions. These migrants rely on the organization for support services, including safe evacuation, family re-unification, relocation, repatriation, resettlement, and return. To ease their journeys, IOM provides migrants with a travel package that includes a bag for safely storing documents and important belongings. To reduce the environmental impact of its operations, IOM, with the support of the United States Refugee Admissions Program (USRAP), decided to update its plastic bags directive. Using the decision tree (see below), certain choices were made—for example the bags were deemed essential—but a way forward was identified.


Compostable Bags for IOM Movement Operations. Photo credit: IOM.




A life cycle analysis (LCA) of different alternatives to virgin plastic was conducted by IOM's academic partner and revealed the following.

- **Oxo-biodegradable bags have a waste footprint that is nearly four times higher than that of compostable bags.**
- **To reduce the environmental impact of compostable bags, they would need to be reused at least three times.**

The LCA examined both quantitative aspects (assessing the minimum order requirements and estimating the annual global demand for the bags across IOM missions) and qualitative aspects (identifying suppliers that offer recyclable and durable materials while avoiding single-use items) of bag procurement. As a result, in 2021, IOM transitioned to procuring exclusively compostable bags for Movement Operations, made from 100% biodegradable materials (a natural blend of polylactic acid and starch). The compostable bags meet the specifications outlined in the International Organization for Standardization (ISO)'s 17088 document for compostable plastics, or their respective local counterparts, and have been certified appropriately.

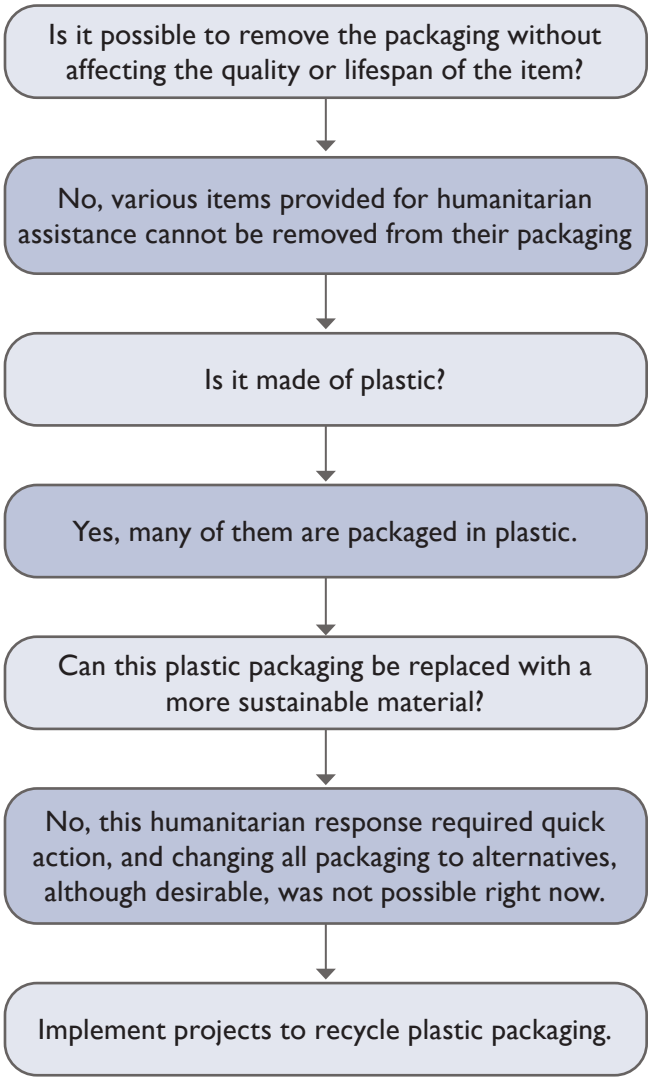
The main destination countries for IOM's refugee resettlement program are the US, Canada, Australia and EU countries. IOM concluded that these countries have mature enough composting systems.

## **Case Study 2:** IOM Recycling Plastic in Bangladesh

The Rohingya refugee crisis in Cox's Bazar poses significant environmental and health challenges, especially in terms of solid waste management. In the overcrowded refugee camps, finding space for waste disposal has become a serious concern. Although this situation is negatively affecting the use of agricultural land, IOM stepped in with a solution to recycle part of its waste. Using the decision tree, certain choices were made—for example the plastic packaging was deemed essential—but a way forward was identified.

Alphabet Cubes are Made of Recycled Plastic in Bangladesh. Photo credit: Abdullah Al Mashrif, IOM.

Plastic Shredding in Bangladesh. Photo credit: Tarek Mahmud, IOM. (See the video here.)




IOM, therefore, set up a plastic recycling plant operated by a local non-governmental organization Dushtha Shasthya Kendra. The plant recycles around 1.5 tons of polyethylene waste every month, benefiting approximately 20,668 people in camps 24 and 25. The plant recycles the plastic waste into six useful products—alphabet blocks, writing slates, pavement slabs, pit covers, latrine rings, and ring slabs—helping improve the environmental and sanitary conditions in camps. Explore the project in more detail by watching this video.

## **Case Study 3:** ACTED's Post-training Kit Distributions in Lebanon

ACTED has been committed to reducing its environmental and carbon footprint for some years. In 2017, ACTED carried out an organization-wide carbon accounting exercise, which identified that approximately 60 to 70% of its total footprint resulted from its supply chain. In line with the agency's 3 Zero World vision[2], ACTED started to introduce sustainability measures into its supply chain, in particular procurement, both for office supplies and for programs such as baby or family hygiene kits or lunch boxes. The decision tree was used as follows.

Can we remove the packaging without affecting the quality of hygiene kits or lunch boxes ?

No, the packaging is essential, it allows the beneficiaries to carry their kits.

Is it made of plastic?

Yes, it is single use plastic bag.

Can this plastic packaging be replaced with a more sustainable material (paper, cardboard, board ledger, rather than plastic bubble wrap ?)

Yes, it can be replaced by carton or jute bags, the material is resistant enough and it will allow the beneficiaries to carry their lunch or kits.

Carton/jute bags were estimated to be 30 to 40% more expensive than their plastic counterpart, however, ACTED decided that the reduction in environmental degradation outweighed the increased cost.

Acted has replaced plastic bags with jute for baby or family hygiene kits and with cardboard bags for lunch boxes.

Over the course of a year, ACTED estimates that approximately **2,000** pieces of single-use plastic packaging were avoided.

A call for tenders for catering services was launched in 2021, wherein suppliers were encouraged to offer fair prices and propose plastic-free packaging. The company that won the bid was able to meet ACTED's programmatic need for individually wrapped food items by using craft paper instead of plastic. ACTED has also successfully worked with its donors to finance the costs of environmentally friendly packaging.

[2] 3 Zero Exclusion, Zero Carbon, Zero Poverty

# **JOINT INITIATIVE** FOR SUSTAINABLE HUMANITARIAN ASSISTANCE PACKAGING WASTE MANAGEMENT

This document was prepared by the Joint Initiative's secretariat as part of the initiative's ongoing commitment to promoting more responsible and sustainable packaging practices. This document does not purport to reflect the opinions or views of the Joint Initiative partners.