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WELT HUNGER HILFE
WHH

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# Waste Management Handbook

Developed by Welthungerhilfe and Concern Worldwide in collaboration with the Alliance2015 sustainability partners.

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# Contents

## Purpose of the handbook

This handbook, developed by Welthungerhilfe and Concern Worldwide in collaboration with the Alliance2015 sustainability partners, provides **country teams with practical guidance on waste management**. It outlines key principles, best practices, and actionable steps that humanitarian staff can apply in their day-to-day operations. This handbook compliments the Alliance2015 commitments to reducing environmental impact and building on the efforts of the humanitarian community[1] to implementing effective waste management solutions.

In alignment with WHH's Sustainability Strategy and Concern Environment Strategy, this manual aims to enhance waste management and minimise environmental harm by providing a day-to-day guidance for handling waste safely and sustainably.

Recipients: Operations Directors, Logistics Managers, Fleet Managers, Facility Managers.

## Why is waste management important for humanitarian organisations?

Humanitarians are committed to the principle of 'do no harm', aiming to support livelihoods and local communities without degrading fragile living conditions[2]. Poor waste management – ranging from non-existing collection systems to ineffective disposal – leads to air pollution, water and soil contamination. Open and unsanitary landfills contribute to contamination of drinking water and can cause infection and transmit diseases. Debris dispersal pollutes ecosystems, while hazardous substances from electronic waste or industrial garbage pose serious health risks to urban populations and the environment.

**Waste management** is defined as a set of practices, processes, and policies aimed at preventing, measuring, reducing, reusing, recycling, or properly disposing of items which are no longer useful for an organisation.

The application of sound practices to reduce waste at the source, reuse materials, and recycle them, contribute to extend the lifespan of goods and to reduce adverse impacts which could lead to health and environmental hazards for local communities and staff members. This consideration is reflected in the *IASC guidance on Environment Responsibility*, and in Welthungerhilfe and Concern Worldwide's environmental policies.

1. E.g. the Logistics Cluster, the Joint Initiative for Sustainable Humanitarian Assistance etc.
2. Concern Worldwide and Welthungerhilfe have different mandates, however ensuring that our operations are environmentally sustainable is a common objective.

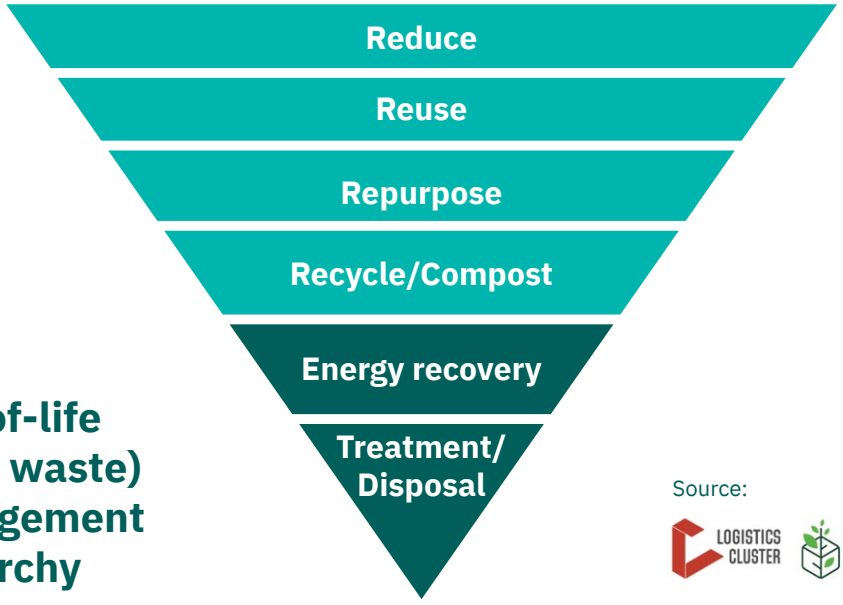
## The 3Rs

Any effective waste management approach is based on the application of the 3Rs: **Reduce**, **Reuse**, **Recycle**.

- **Reducing** involves looking at ways to avoid producing waste in the first place; this can be done by introducing green criteria in procurement processes to reduce packaging and ensure that the products bought in your offices will last a long time. You can consult *this database of green criteria prepared by the Reseau Environnement Humanitaire*[3] to quickly find criteria that you could use for your purchases.
- **Reusing** means finding new purposes for a product or getting as many uses out of the product as possible, if it's possible and it doesn't pose health and environmental risks.
- **Recycling** consists of treating and transforming products into new, useful items to recuperate value from materials which would have been otherwise thrown away. This requires that that we adopt circular approaches and extend the lifespan of products; however, recycling can be challenging in humanitarian contexts, and it doesn't represent the best solution (reduce at the source is always the best idea!). Additionally, proper recycling can only happen if a waste sorting system with separate bins is in place (different bins), to avoid waste contamination.

**Finally**, if a product can't be reused or recycled, it should be disposed of via qualified service providers in landfills or waste to energy facilities.

**! Remember: open incineration is never an acceptable solution as it leads to air pollution which can cause health hazards. Incineration, if it is to be carried out, must be done in a closed system by qualified operators.**




**End-of-life (solid waste) Management Hierarchy**

Source:

LOGISTICS CLUSTER WREC

3. Concern Worldwide also produced an internal list tailored to our operational needs. For more information, contact *global.sustainability@concern.net*

## Waste types: hazardous vs non-hazardous

To promote sound waste practices and the adequate treatment of our waste streams, it's important to distinguish between hazardous and non-hazardous waste.

- **Hazardous waste** is waste that has the potential to cause hazards or risks to human and animal health, or the environment. As a rule of thumb, hazardous waste can be classified as per *CRIT criteria, i.e., Corrosive, Reactive, Ignitable, or Toxic.*
- **Non-hazardous waste**, as the name implies, is not dangerous but can still harm the environment, and thus, must be disposed of appropriately.

In the following sections we will describe common waste types commonly found in humanitarian operations, indicating best practices to treat them and sharing success stories from the humanitarian community.

We will also provide a series of recommendations classifying them according to a 'traffic light' system'[4]:

| CLASSIFICATION | WHAT IS IT? | WHEN TO APPLY IT |
|---|---|---|
| GOOD | *Green recommendations:* The practice has a positive or negligible negative impact on the environment. | **In as many cases as possible.** |
| MEDIUM | *Yellow Recommendations:* This practice has some negative impacts. | **When green recommendations can't be applied.** |
| NO GO | *Red recommendations:* This has significant negative impact on the environment and/or human health. | **Should be avoided at all cost.** |

| COMMON WASTE TYPES | |
|---|---|
| NON-HAZARDOUS | HAZARDOUS |
| • Packaging (flexible laminate plastics)<br>• Packaging (HDPE plastics)<br>• Packaging (polypropylene)<br>• Packaging (plastics/others: PET & PT)<br>• Organic waste<br>• Aluminium<br>• Steel<br>• Glass<br>• Corrugated cardboard<br>• Packaging (paper)<br>• Pallets (wood)<br>• Paper (office)<br>• Furniture | • E-waste: IT hardware (e.g. servers, routers, external drives, CPUs), computers (e.g. desktop computers, laptops, monitors, keyboards, other)<br>• Household appliances (e.g. air-conditioners, fridges, generators)<br>• Lighting equipment (light bulbs, switches, fluorescent lamps)<br>• Batteries of different types (e.g. lithium ion, lead acid)<br>• Electrical and electronic equipment (e.g. cameras, smoke detectors)<br>• Solar photovoltaic equipment (e.g. PV panels, inverters)<br>• Medical waste (e.g. soiled medical items, used sharps, glassware, etc.) |

4. Inspired by the *ICRC waste management traffic light classification methodology*.

## Common non-hazardous waste types

### *Plastics*

**What?** PET bottles, laminated plastic packaging, plastic bottles and bags, food containers, toys, furniture, plates etc.

**Quick fact: More than 430 million tons of plastic are produced each year, two-thirds of which is cast aside as waste after just one use. If trends continue, plastic waste will triple by 2060, with dire consequences for both ecosystems and human health.**[5] – *Source: Concern Worldwide*

**How to treat it?**

| CLASSIFICATION | PRACTICE |
|---|---|
| **GOOD** | • Try to reduce as much as possible the purchase of single-use plastic, switching to alternative goods and services, e.g. reusable cups and refillable bottles, by buying in bulk, by switching from plastics to paper packaging.<br>• If you can't avoid producing plastic waste, ensure appropriate recycling by contacting local waste management providers. Styrofoam (e.g. for meal boxes) cannot be recycled easily, try to avoid purchasing it.<br>• Engage in **community-led recycling initiatives** where companies buy plastic waste to reuse. Remember: plastic can be turned into new products and gain new value!<br>  <br>Rubbish bin · Tote bag · Carry bag · Pen holder · Wallet · Shopping bag<br>*Examples of recycled plastic products Source: the JI* |
| **MEDIUM** | • If no waste management infrastructure is available in your country, check if there are recycling facilities in neighbouring countries or find creative ways to reuse the plastic materials. |
| **NO GO** | • **Never burn plastics!** Since plastic products are made from fossil fuels, when you burn them they release toxic substances in the air which can cause health and environment hazards. |

**Success story from the sector:** *From waste to value: a new life for WFP Polypropylene bags | Logistics Cluster Website* Resourceful WFP country offices are teaming up with local partners to recycle the PP bags – success stories from Nicaragua, Kenya and Yemen show how recycling can lead to the ingenious production of new, useful items and reduction of plastic waste.

5. Source: *the UN Foundation*

## *Steel and aluminium*

**What?** Bicycle frames, pans, soda cans, aluminium foil or food packaging, car parts, (cargo) containers.

**How to treat it?**

| CLASSIFICATION | PRACTICE |
|---|---|
| **GOOD** | • Steel and aluminum are infintely recyclable.<br>• Prioritise repair and regular maintenance of steel and aluminium components (e.g., vehicle parts, tools, containers) extends their lifespan and reduces waste.<br>• Investing in durable steel and aluminium products minimises the need for frequent replacements.<br>• Where possible, use standardised parts and fittings so that components can be interchanged or repaired rather than discarded. |
| **MEDIUM** | • If no recycling facilities exist, keep metal waste safely stored while seeking alternative disposal options.<br>• Store steel and aluminium waste in a covered, dry area to prevent rusting, corrosion, or contamination. Exposure to moisture leads to rusting and leaching of harmful metals into the environment.<br>• When disposal is necessary, ensure metal waste is sent to authorised facilities that follow environmental regulations. |
| **NO GO** | • **Do not dump metal waste in open areas!** Discarding steel and aluminum in fields, rivers, or public spaces causes soil and water contamination and can pose safety hazards.<br>• **Do not burn metal waste!** When burned, aluminum releases hazardous gases that are harmful to human health and the environment. Burning painted or treated steel releases harmful chemicals.<br>• **Do not dispose of metal in regular trash**. It will likely end up in landfills rather than being recycled. |

**Ongoing project in the field:** *Options for humanitarian packaging reuse, repurposing, and recycling*

## *Paper*

**What?** Cardboard, paper sheets, paper boxes

**How to treat it?**

| CLASSIFICATION | PRACTICE |
|---|---|
| **GOOD** | • Recycle and reuse whenever possible – Ensure paper and cardboard go to recycling centers instead of landfills.<br>• Keep dry and clean – Store paper waste away from liquids and contaminants to maintain recyclability.<br>• Flatten boxes – Breaking down cardboard saves storage space and makes transportation easier.<br>• Separate different types – Keep glossy, coated, and food-contaminated cardboard apart from clean paper waste.<br>• Informal recycling and waste pickers – Selling or donating to informal waste collectors who supply small-scale recyclers. With the appropriate techniques, used paper can be used to make books, replace plastic packaging and more – it should be seen as a resource, not waste! *See here a few examples.* |
| **MEDIUM** | • Small-scale composting – Shredding and mixing non-coated paper/cardboard into compost piles for small farms or gardens.<br>• Paper briquettes for cooking fuel – Pressing waste paper and cardboard into fuel briquettes, which are a sustainable alternative to firewood and charcoal. *More information here.*<br>• Mulching and animal bedding – Using shredded paper for livestock bedding or as mulch to retain soil moisture. |
| **NO GO** | • Don't recycle contaminated paper – Oil, food stains, and mold make paper non-recyclable and should go to composting instead.<br>• Don't burn large amounts – Burning releases carbon emissions and harmful chemicals if paper is treated or coated.<br>• Don't store near moisture or pests – Paper absorbs moisture easily and can become moldy or attract insects.<br>• Don't overload recycling bins – Overfilling or mixing non-recyclable materials can contaminate entire batches of recycling. |

**Success story from the sector:** *https://murphycharity.org/empowering-rural-women-through-paper-recycling-a-path-to-education-and-economic-independence/*

## *Organic waste*

**What?** Plant and food waste, wet napkins. Plant and food waste can decompose in a mixture which is rich in beneficial nutrients and organisms for the soil, and it can be turned into fertiliser over time – this process is known as 'composting'. Composting[6] is a relatively easy and cheap way to produce less waste, reduce methane from landfills[7], reduce pollution from chemicals, regenerate soil, sequester more carbon in the soil, retain water in the soil, and protect biodiversity.

**Good to know:** Do not compost dairy or meat waste, it can attract pests.

**How to treat it?**

| CLASSIFICATION | PRACTICE |
|---|---|
| GOOD | • Composting: Introduce a composting bin on your premises, mutualise efforts with other organisations, join a community compost or hire an external service provider. The ideal compost location is a dry and shady spot.<br>• *Follow this guide* to understand how to compost and how to use if for a vegetable garden at your office.<br>• Choose wisely compost sites, at a safe distance from any public facility or water resource. Protect them from unwanted visitors. |
| MEDIUM | • Identify local centers capable to handle anaerobic digestion. This process consists of the decomposition of organic waste in controlled conditions using a sealed, oxygen-free tank. It creates biogas – a renewable energy resource that can be used or sold to generate revenue – as well as avoiding the release of methane into the atmosphere. |
| NO GO | • From a climate perspective, the worst thing to do with this waste is put it in a landfill, where, deprived of oxygen, it will produce powerfully climate-warming methane. |

**Success story from the sector:** *Composting of Organic Materials and Recycling* OXFAM case studies

6. It is also possible to produce compost from animal or human excrements (collected via *dry toilets*). This is another key ecological solution to reduce water consumption and pollution. But beware, the composting process of faeces is not the same as that of food waste. It is longer, has more risk of spreading pathogens and requires separate management. Under no circumstances should the two processes be confused. Composting locations and times must be separate. (Source: the Climate Action Accelerator)
7. In Global South cities, food and organic waste is the main component of municipal waste, comprising as much as 80% of total waste generated. (Source: C40 knowledge)

## Common hazardous waste types

### *Electric, electronic equipment*

**What?** Large household appliances, including cooling and freezing appliances, small electronic and electric household appliances like printers, IT equipment, including monitors, televisions etc. E-waste can be toxic, it's not biodegradable and accumulates in the environment, in the soil, air, water and living things.

Open-air burning and acid baths being used to recover valuable materials from electronic components release toxic materials leaching into the environment. Improper e-waste handling practices can also expose workers to high levels of contaminants such as lead, mercury, beryllium, thallium, cadmium and arsenic, and also brominated flame retardants (BFRs), which can lead to irreversible health effects[8]. Batteries from electronic equipment can cause fires if not disposed of properly.

**How to treat it?**

| CLASSIFICATION | PRACTICE |
|---|---|
| **GOOD** | • Return your electrical and electronic waste to a certified recycling centre or participating electrical retailers, and drop waste lightbulbs to local authority recycling centres. This solution can generate value as materials from electronic appliances can be recuperated and re-purposed.<br>• Include take-back clauses in your contract with suppliers to take the appliances back at their end of life. |
| **MEDIUM** | • Segregate and store your electric and electronic appliances at their end of life in a covered area until you identify the appropriate recovery facility, not directly exposed to weather events and not in contact with the soil.<br>• In some areas, informal e-waste collectors dismantle electronics for valuable metals, but this can expose workers to hazardous chemicals.<br>• Reuse electronic parts, such as using old screens for DIY projects or repurposing battery cells. To learn how to dismantle an electronic piece, *consult this resource* – but **keep in mind, not all electronics can be dismantled safely and you should always wear personal protective equipment!** |
| **NO GO** | • Never bring them to landfills and informal dumps.<br>• **Never burn electric or electronic components as they release toxic components in the atmosphere – generating health and environment hazards.** |

**Success story from the sector:** *Managing e-waste for a safe environment in South Sudan*

8. More information on health effects on WHO website: *Electronic waste (e-waste)*

## *Fleet waste*

*Note: this section covers only used oil, oil filters and tires. For an exhaustive outlook on garage waste handling please consult Welthungerhilfe garage waste guideline.*

**What?** This includes waste resulting from vehicle servicing and maintenance, including engine oils, filters, tyres, fluids and lubricants, brake pads and discs, various metals and plastics.

**How to treat it?** First, ensure that service requirements and intervals for your vehicles are respected – maintenance is key to extend the life span of our fleet. When waste is generated, start with sorting and storing waste in different groups at local workshops, avoiding contamination from leakage and spillage. The various waste types should be stored in dedicated collection points, in compliance with local regulations.

For engine oil replacement, Kjaer Kjaer and the Fleet Forum[9] indicate that the expected oil waste per 150.000 kms of operations is equal to:

| Car segment | Amount | 5,000 interval 30 oil filters | 10,000 interval 15 oil filters | 15,000 interval 10 oil filters |
|---|---|---|---|---|
| **Large SUV** | 11 L | 330 L | 165 L | 110 L |
| **Medium SUV** | 7 L | 210 L | 105 L | 70 L |
| **Small SUV/pass** | 4 L | 120 L | 60 L | 40 L |

**Used oil and oil filters**

| CLASSIFICATION | PRACTICE |
|---|---|
| **GOOD** | • Recycle used oils by bringing them to dedicated recycling plants, even if this means transporting the oils on long distances. If different plants are available, choose the one which applies **another technology than activated clay**. Moreover, always choose the plant with the highest percentage of base oil recovery.<br>• For used oils only, bring them to a certified facility with a stand-alone waste to energy plant (WTE) generating heat or electricity, or both for energy recovery. |
| **MEDIUM** | • Store the used oils until they can be sent to recycling plants using leakage prevention containers.<br>• Oil filters must be stored with two containments to avoid leakage. A primary packaging in a leak-proof bag with a tight seal. Large zip-top bags work well for this. Store the bags in a secondary containment (e.g., a bottom-sealed barrel) away from direct sunlight. |
| **NO GO** | • Do not give them to local population or local contractors who use it as anti-termite. These oils contain chemicals components which are toxic to humans and ecosystems.<br>• Do not bring them to landfills or open dumps.<br>• In the inevitable case of using as anti-termite by local population and contractors, they should be advised to reduce or refrain from mixing used oil with diesel as it considerably adds to the negative environmental impact. |

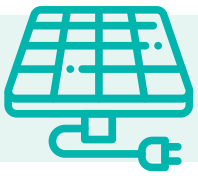
9. Source: *Webinar: Fleet Waste: understanding and navigating disposal considerations together | Webinars on Demand | Fleet Forum Knowledge Platform*

## Tyres

| CLASSIFICATION | PRACTICE |
|---|---|
| **GOOD** | • Retread tyres with some life left, give them to advanced retreading facilities;<br>• Transport tyres to a recycling plant or controlled incineration plant for cement kiln or urban heating – make sure that the plants are environmentally certified.<br>• Give used tyres at their end of life to construction companies to be used for construction purposes such as asphalt mix, roofing, sports grounds, playground equipment, sports matts, insulation, sound proofing, anti-vibration support, etc.<br>• Partner with NGOs and local authorities to use used tires in other settings for other innovative uses. This can have a positive social impact by creating jobs. |
| **MEDIUM** | • Shred the used tires and store the shredded rubber in heavy duty sacks to avoid the risk of fire until a green solution is found. Use third-party or local shredders. |
| **NO GO** | • Never burn in open air – health and environment risk!<br>• Do not give them to uncertified recyclers for secondary use.<br>• Do not landfill them. |

**Success story from the sector:** *https://blogs.icrc.org/logistics/wp-content/uploads/sites/117/2024/02/ARTICLE-SS-waste-management.pdf*

## *Solar panel components*



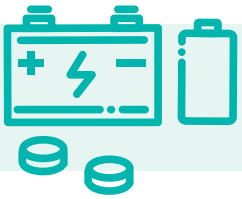
**What?** Aluminium frame, tempered glass, encapsulant material e.g. EVA film silicon cells. Inverters, batteries

The amount of solar waste is expected to grow significantly, with an estimated 60 mission metric tons of solar panel waste projected by 2050 (source: *End-of-life management Solar Photovoltaic Panels*

**How to treat it?**

| CLASSIFICATION | PRACTICE |
|---|---|
| GOOD | • Follow local regulations – Check national and local electronic waste (e-waste) disposal laws for proper guidelines.<br>• Use certified recycling facilities – Many components (glass, aluminum, silicon, copper) can be recycled at specialised facilities.<br>• Check with manufacturers – Some solar panel manufacturers offer take-back or recycling programmes for end-of-life panels.<br>• Consider repurposing – Old but functional panels can be donated for secondary use in non-critical applications.<br>• Dispose of batteries separately – If dealing with solar batteries, ensure they are disposed of at battery recycling centers due to their chemical content. |
| MEDIUM | • Store in a dry, covered area – Keep solar panels in a weatherproof location to prevent water damage and leaching of hazardous materials.<br>• Stack panels safely – Place panels horizontally with padding between them to avoid cracks and exposure to hazardous materials.<br>• Label and categorise – Mark panels as functional, non-functional, or hazardous to streamline recycling or resale.<br>• Ventilate the storage area – If storing panels with damaged batteries or inverters, ensure proper airflow to prevent overheating or gas buildup.<br>• Secure against theft – Solar components contain valuable metals (copper, silver, aluminum), making them targets for theft—store in a secure location. |
| NO GO | • Don't dump in landfills – Solar panels contain materials like lead, cadmium, and other toxic elements that can leach into the soil.<br>• Don't burn any components – Burning releases toxic fumes harmful to humans and the environment.<br>• Don't mix with general waste – Solar panels are classified as e-waste, and mixing them with regular garbage can lead to improper disposal.<br>• Don't forget about inverters and cables – These should also be recycled separately as they contain valuable metals like copper. |

## *Batteries*



**What?** Batteries removed from an engine (vehicle, generator, etc.) during periodic maintenance. Batteries may include wet-cell batteries and valve regulated lead acid batteries (sealed or low maintenance). Lithium ion (Li-ion) batteries used for electric vehicles (EV) or solar systems will require specific handling and management. Lithium ion battery parts are recyclable.

**How to treat it?**

| CLASSIFICATION | PRACTICE |
|---|---|
| **GOOD** | • If possible, stop purchasing lead-acid batteries and prefer calcium lead acid or lithium batteries (which have a longer life span).<br>• Introduce take-back clauses in contracts with suppliers to take back the batteries at their end-of-life.<br>• Send used batteries to recycling plants. Even if the recycling plant is located in a neighbour country more than 1000 km away, it is still environmentally beneficial to send used batteries, despite the emissions of transportation.<br>• Use personal protective equipment (safety boots, goggles, gloves) when filling/replacing battery acid and cleaning terminals with baking soda. |
| **MEDIUM** | • If you can't apply green recommendations, store the batteries until they can be transported to a treatment plant.<br>• Stack batteries in an upright position (no more than four batteries) using Personal protective Equipment (PPE). Ensure the acid will not leak out of the top vent holes. Batteries can be placed on pallets indoors or outdoors.<br>• Place cracked and leaking batteries in sturdy, acid-resistant, leakproof sealable containers and keep the containers closed within the storage area. |
| **NO GO** | • (Do not) dispose together with other garage wastes.<br>• (Do not) landfilling or open dump.<br>• (Avoid) primitive recycling activities or backyard smelters with no monitoring or environmental certification.<br>• (Avoid) extreme shocks or deformations of battery casing or seals during storage or transportation.<br>• Do not donate/sell batteries to informal recyclers. They may not have the proper protective equipment or the procedures to ensure workers' health and safety. |

## *Paints and chemicals*

**What?** Cleaning products, solvents, detergents, disinfectants, paints

**How to treat it?**

| CLASSIFICATION | PRACTICE |
|---|---|
| GOOD | • Wear gloves when handling to avoid contact with skin, avoiding manual handling of large drums.<br>• Hazardous chemical waste treatment should be carried out at qualified treatment storage and disposal facilities. Check if treatment plants are available in your country of operation and contact the municipality/service provider to handle your chemicals.<br>• Make sure that paint is completely dry before disposing of it. If you have oil-based paint, handle it to an hazardous waste facility. When no hazardous waste contractor is available, oil-based paint residue can be mixed with newspaper or absorbent material, left to dry and disposed of in a sealed container. |
| MEDIUM | • Store chemicals in sealed labelled containers until they can be transported to a qualified treatment facility.<br>• Never store chemicals for prolonged periods of time (e.g. 6+ months).<br>• Clearly mark hazardous waste storage areas and provide signs showing the maximum quantity and hazardous properties of wastes that can be stored there. An appropriate storage area with drainage infrastructure should be identified to:<br>• Contain all possible contaminated run-off<br>1. Prevent incompatible wastes coming into contact with each other (e.g. different chemicals).<br>2. Make sure that fire cannot spread. Hydrocarbons that are effective at degreasing or solving and fuels tend to be energetically flammable;<br>3. Ensure that the storage area is ventilated, and temperatures don't get too high. Most chemicals can react at high temperatures and release toxic components or even determine self-combustion.<br>4. Store all chemical waste within secondary containment to hold the contents of the largest container in case of breakage or accident. |
| NO GO | • Never handle chemical waste without Personal Protective Equipment and never discharge chemical components in water streams and the environment. Depending on the type of chemical, toxic components have the potential to contaminate water and soil, creating irreparable damage to local ecosystems and possibly causing harm to humans.<br>• Do not bring them to landfills or open dumps.<br>• Do not store paints and thinners without labelling or near other flammable materials (such as fuel) or other hazardous substances (such as chemicals).<br>• In the inevitable case of using as anti-termite by local population and contractors, they should be advised to reduce or refrain from mixing used oil with diesel as it considerably adds to the negative environmental impact. |

# How can I start applying waste management practices?

**Now that you know the difference between various waste types, here's a list of tips to start understanding which waste streams you produce at your office, how to manage it and how to encourage all staff to minimise their waste generation,** supporting the whole organisation to preserve natural resources and avoid negative impacts for local communities and ecosystems.

## Conduct a Solid Waste inventory

The focal point completes the solid waste inventory for the facility with the assistance of relevant staff and support from Concern Environmental Sustainability Coordinator as required. The inventory identifies all the waste generated and disposed of either on-site and/or off-site. It is completed by performing a physical inspection of current waste storage locations in the compound/facility and/or referring to invoices from waste contractors. At a minimum, the inventory should identify:

**a.** The types of waste being generated and stored on-site (identified by inspection or based on records)

**b.** Approximate quantities of waste generated;

**c.** Disposal method used for each waste (what exactly is done with the waste at the very end?)

## Identify local contractors and potential partners

**a.** Local contractors: Concern should work with contractors with adequate capacity to treat and dispose of hazardous and non-hazardous waste. Ensure engagement and proper coordination with the local procurement unit to avoid duplication of efforts. Assessment forms are available to evaluate potential contractors and their respective disposal sites. Once contractors have been selected, their sites should be inspected regularly to ensure they are managing/disposing of waste responsibly, and all licenses/permits are in order. Please contact Concern Environmental Sustainability Coordinator (global.sustainability@concern.net) for further guidance as well as for the template contractor evaluation forms. To identify suppliers and contractors in your country, you can consult *this map*.

**b.** Other NGOs or UN Agencies operating in the area: Concern should seek collaborative opportunities to jointly manage waste. The objective is to build-up a larger volume of waste that will make business more attractive for local contractors (e.g., contractors might not come to pick-up recyclable materials from one location only due to fuel costs; but might travel a similar distance to pick up recyclable materials from more than one location).

**c.** Informal recyclers: in some countries, groups of individuals formalise informal recycling consortia and have the capacity to recycle/recuperate materials to use them for other purposes. Not all those groups have the tools needed to handle waste in a safe manner and it's advisable to only collaborate with them for non-hazardous waste.

**d.** Concern and WHH can engage with local schools, community groups, or environmental organisations to raise awareness about waste management. Sharing best practices with the wider community can encourage broader adoption of sustainable waste practices.

## Set waste reduction targets

Reducing your waste is easier if you have a clear target in mind: talk to senior management and the environment focal points at your office and establish measurable waste reduction targets. You could aim to achieve 100% success recycling for single-use plastics, or phase-out entire waste streams; the important thing is that you prepare an action plan and monitor progress over time.

## Install bins and set-up of storage areas

Waste bins (in good physical condition, clearly identified and preferably of different colour to distinguish different waste types) should be placed in sufficient number and at convenient locations to store all waste. Waste should be separated into all waste streams which a contractor can collect, treat and dispose of. Bins can also be used to collect reusable materials for in-house reuse or recycling (e.g. cardboard boxes that can be reused to store items, plastic containers, etc.). Waste bins might not be applicable for certain types of waste (e.g. tyres). You can use *these posters* to raise awareness on waste separation in your office.

To ensure progress, a tracking system should be implemented to measure waste reduction over time. Regular waste audits should be conducted, and staff should be encouraged to report inefficiencies or propose improvements.

Another key aspect of waste reduction is sustainable procurement. Offices should prioritise sourcing supplies from sustainable vendors, choosing biodegradable or recyclable packaging, and avoiding single-use plastics. Engaging with suppliers to minimise excessive packaging can further contribute to waste reduction.

## Organise training and awareness sessions

At a minimum, the following topics should be considered:

**a.** 3R principle: Staff are encouraged to apply the 3R principle: first Reducing, then Reusing, and finally Recycling waste. Emphasis is put on Reducing waste in every activity of our daily routines (e.g. using less paper, re-using plastic bottles, etc.). Changing our behaviour is the first step for reducing waste and should be supplemented by management practices such as sustainable procurement. To find out how we can reduce waste at work and at home, explore the “Turn Words into Action” and ‘We Make it Better’ waste management awareness materials.

**b.** Which waste streams are collected and recycled or treated by local contractors. Staff should be informed about the types of waste being collected by contractors, so they know what to separate and where to store it. When in-house methods are used (e.g. composting) a specific training and communication campaign should be performed in the facility for all personnel.

To further promote waste management practices, organisations can introduce incentives for staff who actively contribute to waste reduction efforts (e.g. zero-waste challenges, awareness month). Using networks of sustainability focal points can also help sustain engagement. Simple actions, such as encouraging employees to bring reusable containers, bottles, and utensils, can make a significant difference.

# Useful resources

You can find further success stories and guidance from the humanitarian community below.

## The Climate Action Accelerator

- *Final waste disposal in humanitarian settings - Climate Action Accelerator*

## IFRC

- *Green Logistics Guide*

## Joint Initiative for Sustainable Humanitarian Assistance Packaging Waste Management

- *Managing Packaging Waste Sustainably – Lessons learned 2024*
- *Properties of Five Types of Plastic Packaging Used in Humanitarian Assistance and the Impact of Plastics on Human Health, Marine Life, and Climate Change*
- *The journey to sustainable packaging: synergies between humanitarian organisations and the private sector", Tuesday 18th October 2022*

## The WREC Project (Logistics Cluster)

- *WREC Quick guide Waste Management, August 2023 | Logistics Cluster Website*
- *WREC - Key tips to minimise waste during acute emergencies, November 2023 | Logistics Cluster Website*
- *WREC Waste or Material Characterisation Exercise Guidance | Logistics Cluster Website*

## ICRC

- *SOP Workshop waste management*

# Contacts

You are not alone! Environment sustainability is every staff member's responsibility. To receive further guidance and support, please contact:

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