

D4.2. Gap Analysis Report

Annex 7. List of best practices in solid waste management

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Scope:

The annex presents the list of best practices in SWM gathered from D3.3.

Note:

This list with numbers were used in the Chapter 4, Table 6 “Identified existing solutions to be multiplied”. This appendix is intended to assist in the correct reading of the above-mentioned table.

Identified best practices in SWM		
BP1	Waste classification: Categorizing waste by origin (e.g., relief supplies, medical waste) and nature (e.g., organic, hazardous, recyclable) enables better management and disposal strategies in humanitarian settings.	D3.3, CHAPTER 3
BP2	Safe disposal techniques: Practices like composting organic waste, recycling combustibles, and using safe landfill practices (or temporary pits in emergencies) minimize environmental impact.	D3.3, CHAPTER 3
BP3	Waste quantification and estimation methods: The WREC guidance offers two practical approaches—quantifying waste by weighing it over days or estimating it at the procurement phase—allowing HOs to assess waste volumes effectively.	D3.3, CHAPTER 3
BP4	Focus on local context: Tailoring humanitarian actions (and thus waste management) to geographical, socio-cultural, and crisis-specific factors ensures relevance and efficiency in waste handling.	D3.3, CHAPTER 3
BP5	Cash-based interventions: Recognized by the EU and major donors, distributing cash instead of physical items reduces packaging waste and empowers beneficiaries, as seen in PIN's BHA Lemera project.	D3.3, CHAPTER 3
BP6	Waste hierarchy approach: Prioritizing avoidance, reduction, reuse, repair, recycling, and proper disposal (as per the SWM Management Hierarchy) ensures a structured and sustainable waste management process.	D3.3, CHAPTER 4
BP7	Integrated SWM – stakeholders involvement: Combining waste generation, collection, transport, and disposal with stakeholder involvement and the reduce-reuse-recycle-recovery approach provides a holistic and sustainable framework.	D-3.3, CHAPTER 4
BP8	Green procurement: Incorporating environmental criteria into procurement decisions (e.g., avoiding plastic packaging, using recycled materials) reduces waste and promotes sustainability, as practiced by some surveyed HOs.	D3.3, CHAPTER 4
BP9	Reverse logistics: Returning packaging (e.g., RUTF sachets) to suppliers for recycling or donating materials like cardboard boxes and HDPE jerrycans to local communities demonstrates practical waste reduction.	D3.3, CHAPTER 4

BP10	Sustainable initiatives: Specific efforts like ShelterBox’s plastic reduction, ICRC’s shift to cardboard, WFP’s plastic-free e-voucher shops, and UNHCR’s optimized packaging show actionable steps toward sustainability.	D3.3, CHAPTER 4
BP11	Bio-Based Solutions: Local practices like composting organic waste into fertilizer, producing biogas, and transforming waste into briquettes or animal feed (e.g., by NHOs and local actors in DRC and South Sudan) offer sustainable waste management options.	D3.3, CHAPTER 4
BP12	Compliance with standards: Following the frameworks like Sphere, CHS, and donor guidelines (e.g., ECHO’s MERS) ensures SWM aligns with humanitarian goals and environmental responsibility.	D3.3, CHAPTER 4
BP13	Public-Private Partnerships (PPPs): In DRC’s Bukavu and Goma, PPPs between municipalities and private SWM companies improve service delivery and business environments, funded by sanitation fees and subscriptions.	D3.3, CHAPTER 5
BP14	Local recycling activities: Waste pickers and small businesses in DRC and South Sudan efficiently segregate and recycle plastics, metals, and aluminium, exporting to neighboring countries (e.g., Uganda, Rwanda) for further processing.	D3.3, CHAPTER 5
BP15	Household reuse practices: Communities repurpose waste creatively—e.g., plastic bottles for beverages, organic waste for compost or ash soap, and polypropylene sacks for shelter in IDP camps—driven by necessity and resource scarcity.	D3.3, CHAPTER 5
BP16	Human Organisations-led initiatives: JICA’s SWM project in Juba supports waste collection with trucks and a semi-controlled landfill, while small-scale pilots by HOs (e.g., composting, biogas) demonstrate potential sustainable solutions.	D3.3, CHAPTER 5
BP17	SWM zoning for Coordination: Bukavu’s zoning initiative assigns specific areas to SWM businesses, enhancing coordination and coverage through platforms like SOA-RDC and PF-EHA/GIE in Goma.	D3.3, CHAPTER 5
BP18	Local market engagement: Distribution of aid locally, as suggested for humanitarian supply chains, reduces packaging waste and carbon emissions while supporting local economies without market distortion.	D3.3, CHAPTER 5
BP19	Research and Pilot Projects: Academic institutions (e.g., UNIGOM, UOB) and HOs (e.g., GIZ) test innovative waste valorization—like biogas from organic waste or mushroom production—offering scalable models.	D3.3, CHAPTER 5

BP20	Coordination initiatives: In DRC, platforms like SOA-RDC and PF-EHA/GIE demonstrate coordination among private SWM businesses, assigning zones and improving service delivery, which could be scaled up.	D3.3, CHAPTER 6
BP21	Informal waste collection: The informal sector's role in recycling (e.g., waste pickers collecting plastics and metals) in DRC and South Sudan provides a practical model for waste recovery that could be formalized.	D3.3, CHAPTER 6
BP22	Household-level practices: Reusing materials like plastic bottles and composting organic waste at the household level in DRC and South Sudan reflect adaptive, low-cost solutions that could be encouraged and refined.	D3.3, CHAPTER 6
BP23	Humanitarian Organisations self-funding efforts: Some HOs fund greening activities (e.g., GHG measurement, staff training) using core budgets or private foundations, showcasing a proactive approach despite limited donor support.	D3.3, CHAPTER 6
BP24	New technologies utilization: Existing tools like drone imaging, sensors, and composting methods (e.g., black soldier flies) are noted as available solutions that, if funded and implemented, could enhance SWM efficiency.	D3.3, CHAPTER 6
BP25	Cross-sectoral frameworks supporting standardisation: Standards like Sphere, while not fully met, provide a cross-sectoral benchmark for SWM that HOs could adopt to ensure comprehensive waste management.	D3.3, CHAPTER 6
BP26	Waste reduction initiatives: ShelterBox's elimination of 173,396 plastic pieces in 2021 through sustainable packaging design and supplier collaboration demonstrates a scalable model for minimizing waste at the source.	D3.3, CHAPTER 7
BP27	Waste-to-resource projects: FAO's composting project in Zaatari refugee camp, producing fertilizer and jobs while reducing waste by 50%, showcases a successful waste-to-resource approach with community benefits.	D3.3, CHAPTER 7
BP28	Eco-Design innovations: ICRC, IFRC, and UNHCR's eco-design tarpaulins, reducing environmental impact by 15% with recycled materials and extended lifespan, exemplify sustainable packaging tailored to humanitarian needs.	D3.3, CHAPTER 7
BP29	Digital tools implementation: Use of IoT sensors in Zaatari camp and GPS-enabled vehicles in Kabul optimize waste collection, while platforms like Banyan Nation (India) connect collectors and recyclers efficiently.	D3.3, CHAPTER 7

BP30	Community-led efforts: In DRC and South Sudan, local reuse practices (e.g., plastic containers for storage) and informal sector recycling (e.g., metal to Rwanda) highlight adaptive, grassroots solutions.	D3.3, CHAPTER 7
BP31	Collaborative projects in joint planning: Joint SWM action plans by ICRC, WFP, and MSF in South Sudan, and RLH's partnership with Africa Ecology in Burkina Faso, illustrate effective multi-stakeholder coordination.	D3.3, CHAPTER 7
BP32	Local SW valorization: Small-scale waste transformation in DRC (e.g., Briquette du Kivu's charcoal production) and UNIGOM's biogas research show practical, locally driven waste-to-resource models.	D3.3, CHAPTER 7
BP33	Sustainable policy implementation: HOs adopting sustainability-focused SWM policies (e.g., DG ECHO's MERS, UNHCR guidelines) emphasize reduction, reuse, and recycling, aligning with donor expectations.	D3.3, CHAPTER 8
BP34	Circular economy approaches: Closed-loop systems that recycle materials back into supply chains (e.g., green procurement practices) reduce waste and resource use, as seen in emerging HO trends.	D3.3, CHAPTER 8
BP35	Community reuse practices: In DRC and South Sudan, households repurpose plastic bottles, sacks, and metal containers, demonstrating practical, poverty-driven waste management solutions.	D3.3, CHAPTER 8
BP36	Innovative technologies for SWM: Use of GIS mapping, mobile apps, and automated sorting by some HOs supports waste management efficiency, offering scalable models for humanitarian contexts.	D3.3, CHAPTER 8
BP37	Local bio-based initiatives: Small-scale successes like compost production from organic waste (e.g., IITA's RUNRES project) and biogas from biomass in DRC and South Sudan show viable waste-to-resource strategies.	D3.3, CHAPTER 8
BP38	Private sector engagement: Public-private partnerships (PPPs) in DRC (e.g., Bukavu's waste collection) leverage private capacity to fill gaps left by limited government services.	D3.3, CHAPTER 8