

ZERO WASTE IMPLEMENTATION IN LOW-INCOME COMMUNITIES

MIYA YWECH ZERO WASTE HANDBOOK



TABLE OF CONTENTS

1 Glossary of Terms
Page 5

2 Introduction
Page 6

3 Understanding
Zero Waste
Page 8

4 Key Components of Zero
Waste Implementation
Page 14

5 Project Background
and Journey
Page 18

6 Case Studies
Page 24

7 Conclusion
Page 22

8 References
Page 27

GLOSSARY OF TERMS

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| 4Rs+ C | A waste reduction framework that stands for Reduce, Reuse, Recycle, Refuse and Compost |
| Buy-Back Center | A facility where individuals can sell collected recyclables providing income while supporting recycling efforts. Eg: Plastics, metals |
| Circular Economy | An economic model that keeps products and materials in use for as long as possible through reuse, repair, and recycling, reducing the need for new resources. |
| Eco Clubs | School-based groups that teach students about environmental protection and involve them in zero-waste activities |
| Material Recovery Facility (MRF) | It is a specialised plant where recyclable materials are sorted, cleaned, and processed to prepare them for sale to manufacturers as raw materials. |
| Organic Waste | Biodegradable waste such as food peels, vegetable scraps, and garden waste, which can be composted instead of being discarded. |
| Sustainable waste management | A long-term approach to handling waste in ways that protect the environment and support public health. |
| Upcycling | Turning waste or old items into new products with more value or use, Eg: making bags from old clothes. |
| Zero Waste | A philosophy and goal to prevent waste by rethinking how we produce, consume, and dispose of materials—aiming for no trash sent to landfills |
| Zero waste cafes | A structured, interactive session where participants engage in hands-on activities, discussions, and exercises to learn new skills, explore ideas, solve problems, or co-create solutions. |

INTRODUCTION

Overview

This Zero Waste Handbook, developed by **Miya Ywech Association** – a coalition of Happy Life for Development, Kisumu Progressive Youth, Kibuye Market Waste Management, and United Destiny Shapers – is more than just a guide. It's a reflection on what we've learned, what has worked, and what challenges remain. Through our journey in Kisumu, we've seen firsthand that waste isn't just a problem; it's a valuable resource waiting to be reclaimed.

Drawing from our hands-on experience in transforming waste into economic opportunities and cleaner environments, we've created this handbook to show you how we approached waste management and sustainability. Through practical examples like local clean-ups and educational workshops, we demonstrate that sustainability is not just possible, but within reach for everyone.

Our proven success in transforming waste into opportunity has been achieved through active collaboration with [The County Government of Kisumu \(Through the City Management\)](#), [The Urban Movement and Innovation Fund](#) and [Purpose](#). You'll find tips, engaging activities, and real-world success stories drawn from our work as Miya Ywech Association. Therefore, with the help of this resource, you will turn waste challenges into lasting, resourceful solutions.

Together, let's rethink waste and create a future where every resource is valued and nothing goes to waste!



How to Use This Handbook

This handbook is for you, whether you're a community member, local leader, policymaker, student, or educator, there's something here for you. If you are starting at home you'll discover simple ways to reduce waste in your daily life. If you're a community organiser or leader with a passion for change, use this guide to mobilise your neighborhood and spark transformation. And if you are shaping policies or running programmes, discover proven, collaborative strategies to support sustainable waste systems.

Getting started is simple! Begin by reading through the sections to understand the core principles of zero waste and explore how the different models like the 4Rs+ C work in real-life settings. Follow by reflecting on your community's unique challenges and identify which ideas and strategies best fit your context. Then, plan your actions with step-by-step guides.

Keep in mind, this handbook is a living document. As you begin to apply these strategies, feel free to reach out for further input or knowledge sharing via

miyaywechconsortium@gmail.com. We hope you find this handbook useful in your journey towards achieving your zero waste goals.

UNDERSTANDING ZERO WASTE

Zero Waste Management is much more than simply tossing away your trash. It's not about achieving an impossible "no waste" scenario—instead, it's about drastically reducing the waste we produce every day. Think of it as a lifestyle where every item is given a second, third, or even fourth life. We cut down what we buy, fix and repurpose what we already own, recycle materials that can be transformed into new products, and even compost food scraps to give back to our soil.

As **Simon Meso, Treasurer of Miya Ywech Association** puts it:

"Zero waste is about innovative interventions that reduce waste generation and add value through reuse and recycling."

Zero waste is not just about managing what we throw away, it's also about **pausing to reflect on how much we consume** in the first place. In today's world, trends like fast fashion encourage overconsumption, leading to piles of unused clothes that often end up in landfills. This kind of waste stems from buying more than we need, without thinking about the impact. Try and imagine your home as a mini ecosystem where every resource is used thoughtfully. When you choose to **repair a broken chair instead of discarding it**, or when you **reuse water bottles or jerricans**, you're already making a real impact. In communities—especially those facing environmental challenges—zero waste becomes even more critical. Waste doesn't just take up space; it leads to pollution, health hazards, and a lower quality of life. While achieving true zero waste may be difficult, as some waste is inevitable, effective systems can significantly reduce what ends up in landfills. As Meso acknowledges:

"Achieving true zero waste is nearly impossible due to continuous waste generation, but effective systems can divert waste from landfills."

In Kisumu, Miya Ywech is on a mission to transform waste management by educating people and advocating for smart policies that keep waste from piling up in the first place. It's all about using what we have wisely, ensuring that almost nothing ends up as waste, and creating a cleaner, healthier future for everyone.



Our Principles

At Miya Ywech, these guiding principles are the backbone of our journey toward a zero-waste future. They reflect our values, shape our strategies, and guide every action we take. By following these principles, we aim to create not just cleaner streets, but thriving communities where resources are maximised, opportunities grow, and sustainability becomes second nature.

Keep it simple, keep it practical

We believe solutions work best when they're easy to understand, low-cost, and adaptable to local realities.

Start from what communities already know and do

We build on existing knowledge, cultural practices, and grassroots innovations, never assuming that solutions need to come from outside.

Center the most affected voices

We prioritise the leadership and insights of those most impacted by poor waste management: waste workers, market vendors, women, youth, and low-income households.

Connect the dots between people, policy, and systems

We recognise that zero waste isn't achieved in isolation. It requires partnerships across government, businesses, and communities.

Throughout this handbook, you'll see how these principles guided our work and were put into practice.

The Role of Low- Income Communities in Waste Management

Low-income communities aren’t just victims of the waste crisis—they are key actors in solving it. In Kisumu, where formal waste collection is unreliable, illegal dumping is widespread, and cultural practices pose challenges to behavior change, local residents have stepped up with creative, community-driven solutions.

Through the Miya Ywech initiative, we’ve seen firsthand how grassroots action can drive sustainable change, despite limited resources. By establishing zero-waste cafés in market spaces and neighborhoods, setting up eco-clubs in schools, and facilitating community clean-ups, we created platforms for dialogue, shared learning, and collective action.

But this isn’t just a story—it’s a set of lessons you can use:

What we learned:

1. Empowering communities builds ownership

When residents co-design solutions—from clean-up schedules to recycling systems, they feel more invested and proud of the results.

→ Tip: Start by inviting local voices to co-create plans, rather than imposing ready-made solutions.

2. Trust and transparency drive participation

People engage more deeply when they see their input reflected in decisions and outcomes.

→ Tip: Establish regular, open channels for feedback and involve trusted local leaders in mobilization.

3. Small visible wins inspire momentum

In Manyatta B, a neighborhood once stigmatized by crime and dumping, youth-led clean-ups and urban farming transformed both the landscape and community pride.

→ Tip: Identify quick-win projects (like starting a compost pit) to build early success and motivation.

4. Sustainability needs economic incentives

As Vice Chair of Miya Ywech Samson Onditi noted:

“It’s difficult to keep community members engaged when they expect financial compensation or refreshments during clean-up events.”

Without aligning environmental action to economic opportunity, participation can stall.

→ Tip: Explore ways to connect waste initiatives with livelihoods—like small-scale recycling, compost sales, or crafts from repurposed materials.

How you can apply this:

If you’re working in a similar context, consider:

- Starting with community dialogues to understand local waste challenges and strengths
- Using existing gathering spaces (markets, churches, schools) for education and mobilisation
- Identifying visible, achievable wins to build early enthusiasm
- Partnering with local leaders to build trust and legitimacy
- Exploring ways to link waste action to income generation to sustain engagement

“The best solutions come from the people who experience these challenges daily.” – Joab Oluoch, Chairman, Miya Ywech

This bottom-up approach has transformed neighborhoods, reframed waste as opportunity, and turned challenges into solutions. By applying these insights, you too can support communities to lead sustainable waste management from the ground up.

Hear from Calvin, Waste Worker

For individuals like Calvin Otieno Odhiambo, a local waste collector, the impact of community-led waste management is deeply personal:

“Growing up, I witnessed the effects of poor waste disposal in my neighborhood—dirty streets, health risks, and a declining environment. After engaging with Miya Ywech, I found purpose in waste recovery, collecting recyclables and promoting proper disposal practices.”

Calvin’s work keeps Kisumu cleaner while also offering a livelihood for himself and others. Even in the face of challenges like social stigma and inadequate transportation infrastructure, he sees clear progress:

“Waste volumes have reduced, and the environment is cleaner than before. This work is a solution not just for us, but for the entire community.”



Importance of Zero Waste in Our Communities

Zero waste benefits communities in multiple ways, from environmental and health improvements to economic, social, and policy gains. Let's take a closer look.

- 1. Environmental:** Zero waste helps reduce pollution in the air, water, and soil caused by illegal dumping, open burning, and landfill overflows. Cleaner neighborhoods and smarter waste practices protect natural resources by encouraging reuse, recycling, and composting. This reduces the pressure on the environment and helps preserve it for future generations.
- 2. Health:** Proper waste management improves public health by reducing exposure to toxic fumes, air pollution, and water contamination. Safer living environments result from the reduction of disease-carrying pests, illegal dumps, and waste accumulation. Healthier surroundings contribute to overall well-being, particularly in densely populated areas.
- 3. Economic:** Zero-waste initiatives create jobs in recycling, waste collection, composting, and upcycling. By turning waste into resources, communities can stimulate local economies and support small businesses. Households also save money through reuse, repair, and reduced waste-related costs.
- 4. Social:** Zero waste empowers communities by engaging youth, women, and marginalised groups to lead and participate in waste management solutions. Collaborative actions, like clean-up drives and waste education programs, foster stronger community bonds. These initiatives also increase awareness, encouraging long-term behavior change toward sustainability.
- 5. Policy and Infrastructure:** Zero-waste advocacy drives the creation of equitable waste management policies that ensure fair and consistent services for all communities. Stronger waste infrastructure, including recycling centers and composting facilities, improves efficiency and access. Together, policy and Infrastructure advancements lay the foundation for sustainable and scalable waste solutions.



KEY COMPONENTS OF ZERO WASTE IMPLEMENTATION

Achieving zero waste isn't about perfection—it's about systemic change. To make waste reduction truly effective, communities and organizations must adopt a holistic approach that tackles waste at every stage. In this section, we share the key components that have guided our efforts:

4Rs + C, Stakeholder Engagement, and Policy & Advocacy.

4Rs + C

At Miya Ywech, we recognise that waste reduction isn't just about following a standard formula. It's about finding practical, locally relevant solutions that work for the communities we engage with. While the 4Rs (Refuse, Reduce, Reuse, Recycle) + Composting framework provides a solid foundation, we've learned that how these principles are applied makes all the difference.

The 4Rs follow a hierarchy, listed in order of priority: Refuse, Reduce, Reuse, Recycle. While composting is technically a form of recycling, in our community context we treat it as a separate category because of its unique role in managing organic waste locally.

Let's break down the formula:



- 1. Refuse:** This is the first and most effective step. It involves consciously avoiding materials that generate waste. By refusing unnecessary items, we prevent waste from being created in the first place.



- 2. Reduce:** When refusal is not possible, the next step is to minimize the amount of waste produced. Consider reducing the purchase of packaged or single-use items. For instance, instead of buying cooking oil in small plastic bags, households can bring their own reusable bottles to local vendors who sell oil in bulk.



- 3. Reuse:** Instead of tossing things out, look for ways to fix, repurpose, or donate them. Think of repurposing old plastic bottles as planters or even turning used tires into playground equipment or garden planters, thereby extending their lifecycle and reducing the demand for new products.



- 4. Recycle:** Recycling takes items we can't use anymore and turns them into new products. For example: in some neighborhoods, local collection points where residents can bring plastic, metal, or paper waste to be sold or processed. In some cases, these recycled materials are then transformed into products like building bricks or art installations that generate additional income.



- 5. Composting:** This is the process of breaking down food scraps and other natural waste into nutrient-rich soil that can be used to help plants grow.

What we've learned about this model

- Behaviour change takes time** – It's not enough to just educate people on waste reduction; practical, low-cost alternatives must be available for them to make sustainable choices.
- Economic incentives drive participation** – People are more likely to adopt zero-waste practices when they see a direct financial benefit, such as a buy-back centre for recyclables.
- Composting requires trust & demonstration** – Many initially hesitate due to concerns about odors or pests, but hands-on demonstrations can break down those barriers.
- Small interventions can have big impacts** – Simple, community-driven solutions, like a community composting project that transforms everyday kitchen scraps into valuable fertiliser.



Hear from Issa Omari, Market Vendor

For Issa, a market vendor in Kisumu, waste was an unavoidable part of his daily life. Managing organic waste was particularly difficult—composting led to odour complaints, and disposal remained a challenge. However, through the Miya Ywech initiatives, he learned about better waste handling practices.

"Now, the market is cleaner, and more vendors are embracing zero-waste principles," Issa says. He also highlights a shift in perceptions: "Waste sorting was once seen as women's work, but now men and women participate equally."

Despite improvements, challenges persist, particularly in organic waste management. Issa believes continued support, including better equipment and training, will make zero-waste practices even more effective.

Stakeholder Engagement

At Miya Ywech, we’ve seen firsthand that the journey to zero waste isn’t a solo effort—it’s powered by strong, well-aligned partnerships. Policies alone won’t solve the waste crisis; real progress happens when communities, government agencies, and organisations roll up their sleeves and work together to turn ideas into action.



Government as a Partner, Not Just a Regulator

The Kisumu County Government has played an important role in

supporting practical, community-driven waste solutions.

By providing land for the Material Recovery Facility (MRF), they’ve helped create a hub for sorting and recycling waste locally. Their backing of initiatives like Miya Ywech, alongside partnerships with grassroots organisations, has strengthened waste management efforts on the ground

However, gaps remain, particularly in ensuring that waste collection services reach both formal and informal settlements equally.

As Samson Onditi, pointed out:

“Waste collection in informal areas is inconsistent. While some neighborhoods receive daily services, others struggle to get their waste picked up without making multiple calls.”

This highlights the need for continued collaboration between the government and community organizations to improve waste collection services, especially in underserved areas. Strengthening enforcement of waste policies and expanding access to reliable collection systems will be key to achieving a truly inclusive zero-waste future.



NGOs & Private Sector, Bridging the Gaps

External funding and partnerships have been key in advancing zero-waste efforts, bringing in resources, expertise, and innovative solutions.

As Simon Meso pointed out:

“We’ve had success in composting programs, supplying high-quality compost to farmers, but the infrastructure is not enough to handle all organic waste. Thanks to funding, we’ve been able to run community dialogues, radio outreach, and school programs to raise awareness about zero waste. However, with further investment, we can expand micro-composting units across neighborhoods, making waste management more decentralised and efficient.”

Beyond infrastructure, Kisumu has seen NGOs also fund youth engagement programs, helping train young people in waste management, upcycling, and environmental advocacy. Their contributions ensure that the next generation is not just aware of zero-waste principles but is also actively involved in creating a more sustainable future.



Policy and Advocacy

As communities, organisations, and government agencies work together on zero-waste solutions, it’s clear that grassroots efforts alone aren’t enough. For long-term, sustainable change, supportive policies and strong governance structures are essential. However, in Kisumu, a major challenge remains: the absence of an updated waste management policy.

As Duncan Onyango, Miya Ywech’s Organising Secretary and Policy Lead, explains,

“Without clear, actionable policies backed by governance structures and adequate funding, community efforts can only go so far.”

Key gaps include a highly centralised governance system that limits efficiency, inadequate budgetary support, weak enforcement of regulations, and inequitable access to waste services.

Over the past few months, we have been engaging directly with communities, including waste workers, households, and market vendors, to understand their experiences and co-develop solutions. These discussions have shaped a policy brief that we will be presenting to the governor, advocating for practical reforms.

Duncan highlights the urgency of these changes:

“We need sub-county and ward-level committees to engage stakeholders effectively. Without dedicated budget allocations for decentralised initiatives, we’ll continue facing the same challenges. Illegal dumping is not just a behaviour issue—it’s a symptom of weak enforcement. Stricter penalties, alongside incentives, are crucial. Additionally, waste services remain inconsistent, favouring some areas over others. A fair policy must guarantee equal access to services.”

Through partnerships, workshops, and collaborative efforts, we are working to ensure Kisumu’s waste management policy is not just a document, but acatalyst for sustainable, community-led change.

PROJECT BACKGROUND AND JOURNEY

A Story of Community, Innovation and a Greener Future

In 2021, the Miya Ywech Zero Waste Project set out to transform how the community manages waste. Over three phases, the project has made remarkable progress—engaging local communities, collaborating with government leaders, and establishing an innovative facility

With Kisumu producing over 400 tons of waste daily, only 20% of which reaches official dumpsites, open burning and illegal dumping have posed serious health and environmental threats. In response, local leaders, community-based organisations, and waste workers came together to develop sustainable solutions. By reimagining waste as a valuable resource, the project has not only addressed immediate waste challenges but also laid the foundation for long-term change

Phase 1 – Community Engagement and Research

The journey began with deep community engagement, starting with a co-creation workshop that brought together key stakeholders to define the project roadmap. This phase wasn't just about raising awareness, it was about thoroughly understanding Kisumu's waste landscape. Research revealed critical gaps, including poor policy enforcement, fragmented efforts among waste actors, and low community awareness. To address these challenges, the project started small, launching activities like art shows, festivals, and clean-up drives to spark interest and foster a sense of collective responsibility.

Phase 2 – Stakeholder Partnerships and Institutional Development

After engaging the community, the next step focused on uniting key stakeholders under a shared vision. This effort led to the formation of the Miya Ywech Association (“Give Me the Broom” in the local language), bringing together four community-based organisations to drive collective action. To enhance leadership and coordination, the Association’s Secretariat was formally established, providing structured oversight and operational support.

Capacity-building efforts were prioritised, with targeted training sessions and exchange visits that equipped the Secretariat and founding members with best practices in waste management. Meanwhile, the groundwork for waste processing was laid with the initiation of the construction of a Material Recovery Facility (MRF), a significant milestone supported by the Kisumu County Government (Through the City Management), which facilitated access to land for the project.

Throughout this phase, community engagement remained central to the initiative. Workshops, eco-clubs, radio programs, public murals, and clean-up drives continued to inspire awareness and behavior change, reinforcing the project’s message that sustainable waste management is a shared responsibility.

Phase 3 – Building a Sustainable Financial Model

Building on the foundations laid in Phases 1 and 2, Phase 3 aims to operationalise the Materials Recovery Facility (MRF) and ensure the long-term sustainability of the Miya Ywech initiative. While still a work in progress, efforts are focused on launching the Buy-Back Center and formally establishing a cooperative to empower waste workers and streamline income generation.



Our Journey: Achievements, Challenges, and Lessons Learned

Reflecting on the Miya Ywech Zero Waste Project, we see how far we've come in transforming waste management in Kisumu. Key achievements include:

- **Shifting mindsets:** Through creative events, targeted education campaigns, and ongoing community engagement, we changed how waste is perceived—from something to discard to a valuable resource for sustainability.
- **Legal registration of the Miya Ywech Association:** This formalised our unified, community-led approach, enhancing leadership, coordination, and impact.
- **Partnership with Kisumu County Government and MRF Construction:** The county's allocation of land for the Materials Recovery Facility (MRF) was a turning point, laying the groundwork for large-scale waste processing. This ongoing construction represents a bold step toward realising our vision of sustainable waste management in Kisumu.
- **Learning exchange visits to Arusha and Accra:** These visits deepened our expertise, exposing us to best practices by learning from others in the same space.

While we've made significant strides, challenges have also shaped our journey:

- **Cultural Perceptions:** Zero waste being a fairly new concept required sustained community education to shift entrenched waste management habits.
- **Bureaucratic Delays:** Securing essential services, like electricity for the MRF, took longer than expected, impacting project timelines.
- **Political Instability:** Protests related to rising living costs and governance issues disrupted activities and engagement efforts.
- **COVID-19 disruptions:** The pandemic forced us to pivot to virtual engagements, which, while useful, lacked the energy and depth of in-person gatherings.



Hear from Jackline Adhiambo, Household Representative

Jackline was initially skeptical about waste segregation. “In my neighborhood, waste management was considered a woman’s responsibility,” she says. But after attending several Miya Ywech community forums, she decided to take action. She started **segregating her household waste, recovering valuable recyclables, and composting organic waste.**

“I used to see waste as a nuisance, but now I realise it can create opportunities,”

she reflects. However, space constraints at home made waste handling difficult, and she faced negative perceptions from neighbors. Through perseverance, she found solutions, such as advocating for community waste collection points.

“People are beginning to see the benefits,” Jackline says.
“We’re building a cleaner environment, and it’s changing lives.”

CONCLUSION

Our zero waste journey is transforming communities and proving that waste can be an opportunity. From community clean-ups to the launch of the Material Recovery Facility, every step forward is a step toward a cleaner, more sustainable future. Now is the time to take action; whether by advocating for better policies, supporting recycling initiatives, or making simple, sustainable choices every day.

Imagine an Africa where waste is repurposed, resources are valued, and sustainability is the norm. This future is within reach, but it starts with us. Let's build it; one action, one community, one innovation at a time.



CASE STUDIES

From the bustling streets of Nairobi to the vibrant markets of Dakar and the resilient neighborhoods of Durban, grassroots innovators are proving that a zero-waste future isn't just possible, it's already in motion. Here are a few stories



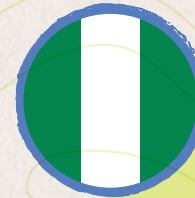
Transforming Nairobi's Dandora Dumpsite, Kenya

The Dandora Dumpsite, one of Africa's largest landfills, receives over 2,000 tonnes of unsorted waste daily, causing severe health and environmental issues. Uncontrolled dumping contaminates soil, water, and air while trapping low-income communities in poverty. However, solutions like waste upcycling and the Upcycle Community Campaign, which turns plastic waste into bricks, are transforming the site. Nearly 6,000 people earn a living from waste recovery, creating jobs for youth and waste pickers while promoting circular economy activities. These initiatives are fostering a cleaner environment, reducing pollution, and driving economic opportunities.



Association Zéro Déchet, Senegal

The My Zero Waste Restaurant Project in Senegal raises public awareness and helps restaurants reduce plastic waste by offering sustainable alternatives. Addressing environmental risks and a lack of zero-waste education, the project introduces three key labels: zero plastic bottles, zero disposable straws, and zero coffee capsules. Its impact is significant, preventing 93,814 disposable straws, 32,568 plastic bottles, and 17,332 coffee capsules from being discarded annually. Restaurants also benefit financially—Copacabana, for instance, saved 1.1 million CFA (\$1,870) per year by switching to reusable alternatives.



Environmental Rights Action / Friends Of The Earth, Nigeria

The Zero Waste Project by Environmental Rights Action/Friends of the Earth, Nigeria, promotes sustainable waste management by advocating for plastic alternatives, waste separation, composting, and recycling. Facing challenges such as strained waste infrastructure, poor community compliance, and weak regulations, the project strengthens local capacities through improved waste policies and infrastructure. Its impact includes the establishment of a Zero Waste Academy to address policy gaps and socio-economic, ecological, and human rights challenges, as well as Zero Waste Ambassadors who monitor and promote plastic reduction and zero-waste practices in their communities.



Groundwork, Asiye-Etafuleni and The Urban Futures Centre, South Africa

Launched in 2022 as a pilot for the broader Warwick Zero Project in Durban, South Africa, this zero-waste composting initiative integrates a circular economy approach to create jobs, protect the environment, and promote upcycling. Addressing challenges like budget constraints, uneven waste collection, overburdened landfills, and the stigma against waste pickers, the project focuses on composting organic waste from Warwick Market. By mid-2023, it had successfully diverted over 23 tonnes (23,077 kg) of organic waste from landfills, transforming it into nutrient-rich compost while strengthening waste management efforts.

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