

**Project: BIOREX**

**Meaning: Biodegradable Recycling**

**Slogan: GIVING A SECOND CHANCE TO TRASH**

## **Problem Statement**

The world is drowning in waste, with devastating consequences for human health, the environment, and the economy. In Cameroon, the situation is particularly dire, with 79% of waste being biodegradable, contributing significantly to pollution, sicknesses, and discomfort. The traditional waste management practices, such as landfilling and incineration, are not only unsustainable but also exacerbate the problem.

### **Alarming Statistics:**

1. **2.1 billion tonnes of municipal solid waste** are generated globally each year, with this number expected to rise to 3.4 billion tonnes by 2050 (World Bank).
2. **79% of waste in Cameroon is biodegradable**, leading to significant environmental and health issues.
3. **1 in 8 people worldwide** die from pollution-related illnesses, with waste management being a significant contributor (UNEP).
4. **The economic costs of waste mismanagement** are staggering, with estimates suggesting that Sub-Saharan Africa loses around 2.4% of its GDP annually due to poor waste management (World Bank).

### **Consequences of Inaction:**

If left unchecked, the waste management crisis will continue to have severe consequences, including:

1. Increased pollution and environmental degradation
2. Rising healthcare costs and mortality rates

3. Economic losses and decreased competitiveness
4. Social unrest and community dissatisfaction

## **Solution Statement**

BIOREX offers a revolutionary solution to the biodegradable waste management crisis, transforming waste into valuable resources while promoting sustainability, economic growth, and community engagement.

### **Key Benefits:**

- 1. Efficient Biodegradable Waste Management:** BIOREX's innovative technology and community-based approach ensure effective collection, sorting, and processing of biodegradable waste.
- 2. Transformation into Valuable Resources:** Our solution converts biodegradable waste into high-quality organic fertilizers, aquaculture feed, and bio-oils, reducing waste disposal costs and generating new revenue streams.
- 3. Job Creation and Economic Empowerment:** BIOREX creates employment opportunities in waste collection, sorting, and processing, stimulating local economies and improving livelihoods.
- 4. Environmental Sustainability:** Our closed-loop system reduces greenhouse gas emissions, conserves natural resources, and promotes sustainable waste management practices.
- 5. Community Engagement and Education:** BIOREX educates communities on proper waste sorting and separation, promoting behavioral change and fostering a culture of sustainability.

### **Impact:**

By adopting BIOREX's solution, we can:

- 1. Reduce Biodegradable Waste:** By up to 90%
- 2. Decrease Greenhouse Gas Emissions:** By up to 75%

3. **Create Jobs:** Over 50 jobs in waste management and processing
4. **Generate Revenue:** Through the sale of organic fertilizers, aquaculture feed, and bio-oils

## Unique Value Proposition

The current waste management system in our community is inadequate and harmful to the environment. The government agency responsible for waste collection:

- Rarely collects waste regularly, leaving households and businesses with overflowing trash
- Dumps waste in improper locations, causing pollution, sickness, and discomfort
- Fails to reach all areas, leaving some communities without access to waste collection services
- Does not recycle or properly dispose of waste, contributing to environmental degradation

In stark contrast, Biorex offers a reliable, efficient, and environmentally friendly waste management solution. **Our unique value proposition includes:**

1. **Door-to-door collection:** Our tricycles reach every household, providing convenient and accessible waste collection services.
2. **Flexible and affordable pricing:** Our fees are extremely affordable, and customers can choose from various frequency options to suit their needs.
3. **Education and awareness:** We promote awareness on proper waste sorting and separation, encouraging customers to differentiate between biodegradable and non-biodegradable waste.
4. **Closed-loop system:** We ensure that nothing goes to waste by recycling and transforming organic waste into valuable resources, such as fertilizers, aquaculture feed, and bio-oils.
5. **Reliability and consistency:** Unlike the government agency, we provide regular and timely waste collection services, giving customers peace of mind.

6. **Community-focused:** Our solution is designed to benefit the local community, creating jobs, stimulating local economies, and promoting environmental sustainability.

## Target customers

1. **Households:** Residents in urban and peri-urban areas, particularly those with limited access to reliable waste collection services.

2. **Restaurants and Food Establishments:** Businesses generating significant organic waste, seeking efficient and sustainable waste management solutions.

3. **Farmers and Agricultural Businesses:** Producers seeking high-quality, organic fertilizers to enhance crop yields and sustainability.

4. **Fish Ponds and Aquaculture Industries:** Businesses requiring protein-rich feed for fish and other aquatic species.

5. **Local Governments and Municipalities:** Entities interested in partnering with BIOREX to improve waste management infrastructure and services.

6. **Recycling Companies:** Businesses that collect and process non-biodegradable waste, partnering with BIOREX to recycle plastics and other materials.

7. **Local Artisans and Entrepreneurs:** Individuals, such as women, who collect plastic bottles and transform them into valuable products, like local juice containers.

## Revenue Model

1. **Waste Collection Fees:** Households, restaurants, and food establishments pay a weekly or monthly fee for reliable waste collection services, facilitated through the BIOREX website and app.

2. **Sale of Organic Fertilizers and Aquaculture Feed:** BIOREX generates revenue from the sale of high-quality, organic fertilizers and aquaculture feed to farmers, agricultural businesses, and fish ponds.

3. **Sale of Recyclable Materials:** BIOREX collects and sells recyclable materials, such as plastics, papers, and glass, to recycling companies in bulk. The payment received from the sale of these materials is used to incentivize and compensate workers involved in sorting and cleaning the materials.

4. **Sale of Plastic Bottles:** BIOREX sells plastic bottles to local women who produce traditional juice, providing them with a reliable source of packaging materials.

## Team Capabilities

- Designing and developing a user-friendly website and mobile app
  - Creating an efficient platform for households to schedule waste collection
  - Facilitating seamless connections between households and waste collectors
  - Ensuring a secure and reliable payment system
- Providing ongoing maintenance and support for the platform

## FUTURE PLANS(which are currently being done)

Currently, we are developing a cutting-edge **website** and **mobile app** that streamlines waste management services for households and waste collectors. This innovative platform will facilitate efficient waste collection, reduce logistical challenges, and promote a healthier environment.

By leveraging technology, we aim to bridge the gap between households, waste collectors, and recycling companies, ultimately creating a more sustainable and eco-friendly community.



