



Dynamique des Jeunes Leaders pour la Paix et le Respect des Droits Humains

**DYJEPREDHU asbl**

Dynamics of Young Leaders for Peace and Respect for Humans Rights

**CHANGE**MENT | **TRANS**FORMATION | **IMPACT**

Transform plastic waste in pavers in DRC

April 2026

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# PROJECT TECHNICAL PROPOSALS

## I. Project Summary

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### 1. Title of the project: Transform plastic waste in pavers in DRC

#### 2. Contact details:

- Name of the organization: Dynamic of Young Leaders for Peace and Respect for Human Rights, “DYJEPREDHU asbl” in acronym

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Mr. RIZIKI BARAKA Isaac (Financial Administrator)

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### 3. Organization Mission Statement

"Our mission is to transform the Democratic Republic of Congo's plastic waste crisis into a sustainable urban asset. By converting non-biodegradable pollution into high-performance construction materials, we aim to protect vital infrastructure, mitigate flooding, and foster a circular economy that provides dignified jobs and climate-resilient roads for our communities."

#### Breakdown of the Mission (The 4 Pillars)

- To make the mission statement more impactful for partners or donors, you can add these supporting pillars:
- Environmental Restoration: To drastically reduce plastic litter in rivers, lakes, and urban drainage systems through aggressive collection and upcycling.
- Infrastructure Resilience: To provide the construction sector with waterproof, heat-resistant, and ultra-durable paving solutions adapted to the DRC's tropical climate.
- Economic Empowerment: To turn 'trash into treasure' by creating a value chain that integrates marginalized youth and women into the formal green economy.
- Community Health: To eradicate stagnant water breeding grounds by clearing clogged gutters, directly reducing the incidence of malaria and waterborne diseases.

## The Organization's Vision

- "To lead the DRC toward a zero-waste future where every piece of plastic becomes a foundation for national development."

## Project Beneficiaries

### 1. Direct Beneficiaries (Economic Impact)

- **Marginalized Youth and Women:** They will find stable employment and income through the collection, sorting, and processing of plastic waste.
- **Waste Pickers and Cooperatives:** Local informal collectors will benefit from a structured and reliable buyer for their materials, increasing their daily earnings.
- **Small-Scale Entrepreneurs:** Local distributors and contractors who will sell or install the eco-friendly pavers.

### 2. Indirect Beneficiaries (Infrastructure & Energy)

- **Urban Residents:** Citizens in cities like Kinshasa or Bukavu will benefit from **cleaner streets** and a significant reduction in **flooding** caused by plastic-clogged gutters.
- **Electricity Consumers:** By preventing plastic from clogging the **Ruzizi Dam** turbines, the entire population of Bukavu and surrounding areas will enjoy a more stable power supply with fewer blackouts.
- **Commuters and Drivers:** Road users will benefit from smoother, more durable sidewalks and secondary roads that do not turn into mud during the rainy season.

### 3. Institutional Beneficiaries (Government & NGOs)

- **Municipal Authorities (Mairies):** Local governments will see a reduction in the costs associated with waste management and drainage maintenance.
- **Environmental NGOs:** These organizations will have a local technical partner to help reach "Zero Plastic" goals in sensitive areas like Lake Kivu or the Congo River.

**Total cost of the project: US \$ 100,000**

- **Bank account: Dynamique des Jeunes Leaders pour la Paix et le Respect des Droits Humains, DYJEPREDHU asbl**

**Trust Merchant Bank S.A. (TMB)**

**Goma Agency -DRC**

**No. 1272-28000-23526760001-87**

**Following code: TRMSCD3L**

## The Context and Justification

### 1. The Context: A Growing Plastic Crisis

- **Massive Urbanization:** Rapidly growing cities like Kinshasa, Goma and Bukavu produce thousands of tons of waste daily. In Kinshasa alone, it is estimated that **1,500 tons of plastic** are generated every day, with less than 10% being collected.
- **Infrastructure Failure:** Without a formal waste management system, plastic accumulates in rivers and drainage channels. This causes the **clogging of hydroelectric turbines** (leading to power cuts) and blocks city gutters, causing **catastrophic flooding** during the rainy season.
- **Construction Needs:** There is a massive deficit in road and sidewalk infrastructure. Conventional paving (cement/asphalt) is often too expensive due to high import costs and the energy-intensive nature of cement production.

### 2. The Justification: Why Plastic Pavers?

- **Waste as a Raw Material:** The project turns a "nuisance" into a "resource." It provides a free, abundant raw material that solves the problem of urban filth.
- **Technical Superiority:** Justified by scientific studies (such as those from the University of Kinshasa), these pavers are **5 to 7 times more durable** than concrete. They are better suited for the DRC's tropical climate because they are waterproof and heat-resistant.
- **Economic Viability:** Producing these pavers is significantly cheaper than using traditional materials. It promotes **local industrialization** and reduces the country's reliance on imported construction supplies.
- **Social Impact:** The project is justified as a powerful tool for **poverty reduction**. It creates an entire "Green Economy" value chain that employs vulnerable youth and women in collection, sorting, and manufacturing.

### 3. Summary of the Goal

The project is justified by its "Triple Bottom Line" impact:

1. **Environmental:** Cleaning cities and protecting water bodies.
2. **Technical:** Building stronger, flood-resistant roads.
3. **Economic:** Creating jobs and reducing construction costs.

Would you like to focus on the **strategic objectives** for a formal project proposal or a **SWOT analysis** (Strengths, Weaknesses, Opportunities, Threats) for this initiative in the DRC

The objectives of this project are designed to transform the DRC's plastic crisis into a sustainable development opportunity.

They can be divided into three main categories:

### 1. Environmental Objectives

- **Plastic Waste Reduction:** To significantly decrease the volume of plastic pollution in urban streets, rivers (like the Ruzizi), and lakes (like Lake Kivu) through large-scale collection.
- **Infrastructure Protection:** To prevent the clogging of hydroelectric turbines and urban drainage systems, thereby reducing power outages and flooding.
- **Carbon Footprint Mitigation:** To offer a "green" alternative to cement production, which is a major source of CO2 emissions.

### 2. Technical and Urban Objectives

- **Infrastructural Quality:** To produce high-quality paving blocks that are more durable, heat-resistant, and waterproof than traditional concrete pavers.
- **Road Improvement:** To provide an affordable solution for paving sidewalks, school courtyards, and secondary roads in flood-prone neighborhoods.
- **Innovation:** To establish a local technical standard for recycled construction materials in the DRC.

### 3. Socio-Economic Objectives

- **Job Creation:** To generate direct and indirect employment for youth and women in the collection, sorting, and manufacturing phases.
- **Local Economic Growth:** To reduce the country's dependence on expensive imported construction materials by valorizing local waste.
- **Public Health:** To eliminate stagnant water breeding grounds for mosquitoes and bacteria, thereby reducing the prevalence of malaria and waterborne diseases.

### 4. Strategic Objective (The "Long-Term" Goal)

- **Circular Economy Model:** To demonstrate a profitable and replicable business model that proves "trash is treasure," encouraging a cultural shift toward recycling across the entire country.

The **Mission and Values** of the project define its purpose and the ethical principles that guide its implementation in the DRC.

## 1. Mission Statement

"To transform the burden of plastic pollution into a durable asset for the Congolese people by creating innovative, affordable, and eco-friendly construction materials that improve urban infrastructure and empower local communities through a circular economy."

### Core Pillars of the Mission:

- **Valorize:** Turning non-biodegradable waste into a high-value resource.
- **Protect:** Safeguarding essential infrastructure (dams, drainage) and the environment.
- **Build:** Providing the DRC with climate-resilient roads and public spaces.

## 2. Core Values

These values serve as the "moral compass" for the project's operations:

- **Sustainability:** We prioritize the long-term health of our planet and our infrastructure. Our pavers are built to last, and our process is designed to minimize environmental harm.
- **Innovation:** We embrace the challenge of turning "trash into treasure" by using creative engineering to solve traditional problems in the construction sector.
- **Social Inclusion:** We believe that the people most affected by pollution should be the first to benefit from its solution. We focus on creating dignified jobs for youth, women, and marginalized groups.
- **Integrity and Transparency:** We are committed to ethical waste collection and fair labor practices, ensuring that the benefits of the "green economy" are shared equitably.
- **Resilience:** Like the materials we produce, our project aims to make Congolese cities more resilient to climate change, flooding, and economic shocks.

## 3. Vision (The Ultimate Goal)

"To become the leading provider of recycled building materials in Central Africa, inspiring a clean, prosperous, and self-reliant DRC where waste is no longer a threat, but a wealth-generating tool."

## Project Activity Calendar (12-Month Roadmap)

### Phase 1: Preparation & Setup (Months 1-3)

- **Month 1: Feasibility & Permitting.** Final site selection, securing environmental permits from local authorities (e.g., *Hôtel de Ville* or *Ministère de l'Environnement*), and setting up the legal structure.
- **Month 2: Equipment Procurement.** Ordering or locally fabricating the shredders, melters, and molds.
- **Month 3: Site Installation.** Setting up the workshop, electrical connections, and safety ventilation systems.

### Phase 2: Supply Chain & Training (Months 4-5)

- **Month 4: Collection Network.** Establishing "Plastic Hubs" or partnerships with local collection cooperatives and youth groups. Initial stockpiling of raw materials (HDPE, LDPE, PP).
- **Month 5: Staff Recruitment & Training.** Hiring and training technicians on the fusion process, safety protocols (avoiding toxic fumes), and quality control.

### Phase 3: Launch & Pilot Production (Months 6-8)

- **Month 6: R&D and Testing.** Producing the first batches. Testing different sand-to-plastic ratios to find the "sweet spot" for DRC's specific soil conditions.
- **Month 7: Quality Certification.** Sending samples to labs (like those at the *University of Kinshasa*) to certify resistance to compression and heat.
- **Month 8: Pilot Project.** Paving a small, high-visibility public area (e.g., a school courtyard or a 50-meter sidewalk) to demonstrate the product.

### Phase 4: Full Operations & Scaling (Months 9-12)

- **Month 9: Marketing & Sales.** Pitching to construction firms, NGOs, and municipal governments for road projects.
- **Month 10: Scaling Production.** Increasing shifts to meet demand and optimizing the collection logistics.
- **Month 11: Monitoring & Evaluation.** Assessing the environmental impact (tons of plastic diverted) and social impact (jobs created).
- **Month 12: Expansion Strategy.** Reviewing first-year performance and planning for additional production sites in other provinces.

## Summary Table

Phase	Focus	Key Deliverable
Q1 (M1-3)	Infrastructure	Fully equipped workshop
Q2 (M4-6)	Human Resources	Trained team & raw material stock
Q3 (M7-9)	Quality & Proof	Certified product & pilot site
Q4 (M10-12)	Commercialization	Sales contracts & environmental report

## Project Budget Breakdown

### 1. Equipment & Infrastructure (CAPEX)

*This is the largest investment to ensure quality and safety.*

- **Plastic Processing Machinery:** (Shredders, extruders, melters, and hydraulic presses) – **\$25,000**
- **Molds & Tools:** (Various shapes/sizes for pavers and tiles) – **\$5,000**
- **Workshop Setup:** (Site renovation, high-temp ventilation, electrical installation, and security fencing) – **\$10,000**
- **Transportation:** (1 specialized tricycle or small used truck for waste collection) – **\$5,000**

### 2. Operations & Raw Materials (OPEX) – \$25,000

*Covers the first 6-8 months of production until the project becomes self-sustaining.*

- **Waste Collection Fund:** (Buying plastic from local collectors/cooperatives) – **\$8,000**
- **Sand & Additives:** (Purchase and transport of high-quality river sand) – **\$7,000**
- **Utilities:** (Electricity/Generator fuel and water supply) – **\$6,000**
- **Maintenance:** (Spare parts and machine servicing) – **\$4,000**

### 3. Human Resources & Training – \$18,000

*Focus on local expertise and safety.*

- **Technical Staff:** (1 Production Manager, 4 Machine Operators) – **\$9,000**

- **Support Staff:** (2 Collection Coordinators, 1 Security Guard) – **\$6,000**
- **Training & PPE:** (Safety gear: respirators, heat-resistant gloves, and technical workshops) – **\$3,000**

#### **4. Marketing, Quality & Administration – \$12,000**

*Ensuring the product is trusted by the market.*

- **Lab Testing & Certification:** (Resistance tests at the University of Kinshasa/Office des Routes) – **\$4,000**
- **Marketing & Pilot Launch:** (Promotional events and the first "demo" paved area) – **\$4,000**
- **Admin & Legal:** (Permits, insurance, and company registration) – **\$4,000**

### Budget Summary Table

Category	Amount (USD)	Percentage
Machinery & Infrastructure	\$45,000	45%
Operational Costs	\$25,000	25%
Staff & Training	\$18,000	18%
Marketing & Compliance	\$12,000	12%
<b>TOTAL</b>	<b>\$100,000</b>	<b>100%</b>

#### Key Assumptions for the DRC:

- **Energy:** A significant portion of the "Utilities" budget is allocated to fuel, as electricity supply can be unstable.
- **Collection:** Paying collectors slightly above market rate ensures a consistent supply of plastic away from the rivers.
- **Longevity:** Investing in **hydraulic presses** (rather than manual ones) ensures a density that meets national road standards.

Done in Goma, April 22, 2026

For DYJEPREDHU asbl

  
Christian AHADI BEN MASONGA  
EXECUTIF DIRECTOR, HUMAIN RIGHTS ACTIVISTI

