

# 150 SPARKS OF CHANGE



**Presented to The Sunset Rotary Club of Bloomington - Normal  
March 2025**

# Background & Context



**Location:** Bungoma County, Kenya

**Average Household Size:** 5 persons

**Average land size:** 2 acres per household.

## Primary Cooking Fuels:

- 78.3 Firewood
- 11% Charcoal
- 7.2% LPG
- 2.6% Paraffin
- 0.4% Electricity
- 0.4% Biogas

## Lighting Sources

- Solar energy 21.6%
- Paraffin 18.5%
- Tin lamps 11.4%
- Solar charged torches/lamps 8.2%
- Candles 0.9%

## Challenges Identified.

- Health risks from smoke inhalation
- Time lost gathering firewood
- Limited access to electricity
- Environmental degradation due to deforestation

# Our Partnership at a Glance



**Sunset Rotary Club of Bloomington, Normal and Rotary Club of Bungoma Magharibi.**

**Cookstove Donations Timeline:**

- December 2023: 25 TLUD cookstoves with thermo-electric generator.
- July 2024: 25 TLUD cookstoves (5 with thermo-electric generator)
- December 2024: 100 TLUD cookstoves

**Current Total: 150 TLUD clean cookstoves.**

**Beneficiaries:**

- Sikata Champions Women Self-help group.
- Bidii Yefwe Women Self-help group
- Joy Women Self-help group
- Naitela Women Self-help group
- Senna Women Self-help group

**Each Women Self-help group has 30 cookstoves.**



# Features of TLUD Cookstoves



- ▶ Clean & Efficient: Low emission gasification technology.
- ▶ Fuel: Bagasse pellets (Abundant & sustainable)
- ▶ Biochar production: For soil enrichment
- ▶ Thermoelectric Generation (TEG) on 30 Cookstoves
  - Cogenerated DC power
  - Powers LED lighting bulbs.
  - Charges mobile phones
- ▶ Fuel efficiency: Reduces firewood consumption by over 50%



# Health & Environmental Impact



- ▶ Reduced indoor air pollution
- ▶ Time saved
- Women reclaim 2-3 hours daily previously spent gathering firewood.
- ▶ Environmental conservation
- Reduction in firewood consumption.
- Mitigates deforestation
- ▶ Clean energy access.
- TEG equipped stoves provide renewable lighting in households without electricity.
- Replaces harmful tin lamps and lanterns



# Economic Empowerment

## Reduced energy costs.

- Less money spent on cooking fuel

## Time reallocated.

- Women engage in income generating activities like farming and small businesses.

## Community saving groups.

- Increased savings from energy efficiency reinvested into groups merry-go-rounds.

## Entrepreneurial ventures.

- Joy WSG started cooking services for ceremonies within their locality using their clean cookstoves



# Biochar & Agriculture impact



- ▶ Biochar from bagasse pellets
  - Enriches soil in kitchen gardens
  - Improves water retention and soil fertility.
  - Reduces need for synthetic fertilizers.
- ▶ Food security boost.
  - Better crop yields reported.
  - Improved nutrition for households
- ▶ Circular economy.
  - Waste to resource conversion empowers women as stewards of their environment.



# Testimonials from Beneficiaries

▶ Lydia Barasa – Senna Group

“I used to spend hours finding firewood. Now, I help out at a green grocery with the extra time. I even save money charging my cell phone at home when cooking”.

• Imelda Wanjala – Naitela Group

“I can now cook faster with pellets and no smoke!”

▶ Janet Mangara – Joy Group

“My children can do homework at night using the light from the TEG stove.

• Jentrix Majuma – Sikata Champions Chair.

“ These cookstoves don’t just cook food, they cook a better future for our families”.



# What's Next?



- ▶ April 2025:
- Planned donation of 100 more TLUD stoves to women's self-help groups.
- Expanding the model to neighboring villages
- ▶ Goal:
- 500 cookstoves by this Rotary year (2024 – 2025)!

# Warm Greetings & Acknowledgment



- ▶ Impact made possible through the generosity of the Sunset Rotary Club of Bloomington-Normal
- ▶ Thank you, Rotary Club of Bloomington-Normal Sunset, for your overwhelming support.
- ▶ Bungoma County, Kenya, faces significant energy poverty challenges.
- ▶ Our partnership with you aims to address this through sustainable energy solutions.
- ▶ You are lighting homes, healing the earth, and empowering women
- ▶ Together, we are sparking change, one household at a time.

Presented by:  
Rotary Club of Bungoma Magharibi  
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