



# A Presentation on the URCS Engagement in Energy for the Environment for the WorkGrEEn Meeting



#### Vision:

To fulfill the URCS mandate and obligation in delivering quality and sustainable humanitarian assistance

#### **Mission:**





### Content

- 1. The Innovation Norwegian Red Cross Pilot project and role-out
  - a) Wonderbag
  - b) TLUD Gassifier
  - c) Briketi
- 2. Living Conditions in Imvepi Fostered Together (LIFT project)
- 3. Upcoming projects
  - a) The Water box (emergency solar pumping)
  - b) The Faecal Sludge field lab

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### Introduction

- URCS has for the last 2 months, been implementing a Household Energy Pilot with support of the IFRC and funding from Norwegian Red Cross Imvepi and Bidibidi Refugee Settlements.
- Pilot long-term aim, contribute to reducing the environmental impact Refugee Settlements while at the same time reducing the current operational cost of these settlements.
- Pilot's using CEA approaches in the two Settlements to test a wide variety of existing and new 'alternative energy' technologies for cooking, lighting and basic charging of devices at Household (HH) level and collect feedback on the performance and appropriateness of these technologies.

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- Expected that through testing of these innovations, an evidence base will be created and using the evidence, in cooperation with other partners, particularly IFRC and UNHCR, a standard HH Energy kit could then be developed as response package like the current Hygiene kits and family kits.
- Pilot is being implemented in 10 Villages in Imvepi and 5 Villages in Bidibidi, working through 100HH that were selected with support of the Community leadership.
- Lighting and cooking circles created where the respective technologies are distributed and keep rotating around circle.
   Each HH uses the technology and after a period of five days the CEA team implementing the pilot comes around to facilitate the rotation and at the same time collects initial feedback.

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### Pilot actions so far carried out

- Conducted Baseline in Bidibidi and Imvepi Settlements.
- 21 Community demonstrations, 2 mass demonstration and 48 Household demonstrations sessions
- Facilitated 1 Community Cooking competition in Ombeci Vil in Bidibibi
- Over 2000 individuals witnessed the demonstration sessions
- Shared with participating communities monitoring tools to follow up HHs testing lights and cooking technologies.





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- 2 Monitoring surveys for the lighting technologies conducted
- 4 Focus Group Discussions conducted with wider community participation





4 rotations of Lights conducted whereas 3 rotations have been realized for the cooking technologies.

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### **Pilot Lighting technologies**

- 3 Lighting technologies distributed (Waka Lights, D-Light, Sun King, Sun Bell and the Jiko Power. All the lights are solar powered and have phone charging capabilities.
- Jiko Power, technology that used direct heat from Charcoal, Firewood to light and do charging of mobile devices being demonstrated.
- First monitoring survey showed 60% of participating Households have had access to the D-Light and Sun King.

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### **The Pilot Cooking Technologies**

### **Awamu Gassifier**

- TLUD Gassifier Stove manufactured by Awamu. Stove locally manufactured out of 22 Ga. galvanized sheet.
- TLUD Gassifier is clean burner that utilizes the technique of pyrolyis to burn wood-gas from dry biomass and they create charcoal (carbon) as a byproduct.



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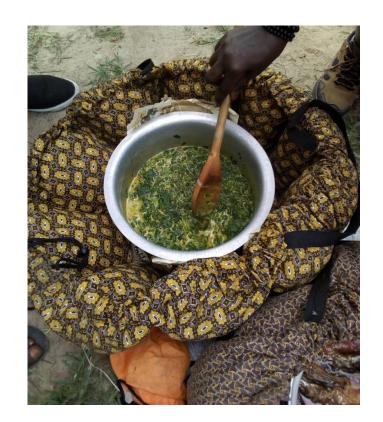
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### **The Wonderbag**

- The Wonderbag is a powerless slow cooker, made out of cotton cloth and packed with chipped ordinary foam.
- Requiring no external power source and using traditional heatretention to cook meals, the wonderbag allows food that was brought to a boil by conventional methods to cook for up to 12 hours without any additional power or supervision.



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### **Briketi Stove**

- Briketi Stove produced by Green Bio Energy. The stove is made out of clay reinforced with metal.
- Works using carbonized briquettes fuel instead of ordinary charcoal.
- The briquettes last 20-40% longer than ordinary charcoals.



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### **Key observations thus far (early, not representative)**

- Time saving. 70% of HH visited revealed that instead of spending hours cooking food is being steamed for 15-45 minutes and left to slowly cook in the wonderbag.
- Less firewood consumed. 75% of 40 HH who had used Briketi and Gassifier reported that they spent less firewood than what they previously used to prepare meals with for 1 week.
- 54% already reported reduced expenses on fuel for cooking as with the stoves the firewood they consume lasts longer.
- 10 Men proudly reported successfully preparing meals for their HH using Wonderbag.
- 60 HH visited noticed that firewood they are using now for 3 weeks is what they would normally use in a week.
- No incident of food burning especially for the Wonderbags 100% from 80HH interviewed for feedback.

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- Considerable reduction in standing time.
- 36HH reported observing less smoke when using Briketi & TLUD Gassifier Stoves
- Improved cooking, especially in HH that have prepared Rice.
   36HH tested Rice with 100% feedback that Rice is excellently prepared.
- TLUD Stove Eco friendly, 21 tested using the TLUD Gassifier with Grass, Saw dust, dry mango seeds
- Wonderbag easy to use, in food cooking competition in Ombeci, a PSN with physical impairment prepared greens with silver fish. 20 Men also attested to ease of use.
- 69% reported efficiency of Wonderbag in keeping hot food hot. On average longest time WBag was tested is 6Hrs with several case of 8Hrs and 9Hrs duration also reported.

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### Likely benefits from the HH Energy Kit (expected)

- Increased participation of Males in food preparation processes at Household level.
- Reduced expenses on household energy for cooking in the different refugee Households.
- Always available and reliable energy for cooking in the Households
- Reduced stress on the local environment as a result of reduced large scale exploitation of trees and shrubs for fuel
- Improved relations between host and refugee community over competition for local energy resources
- Has potential to reduce incidents of SGBV especially those associated with late collection of water and foraging for firewood in places far from homesteads

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- In terms of education Children can have more learning opportunities as their mothers can have time for them.
- Through this alternative cooking technologies, will help provide solutions to the time and security issues (especially gender related issues) that come with foraging fuel.
- Local fabrications, repairing or distribution of these technologies by persons from both refugee and host communities has potential of generating income and improving livelihoods.

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The LIFT project in Imvepi, West Nile (2.5-years)

Briquettes, Wonderbags and improved stoves



Faecal sludge management



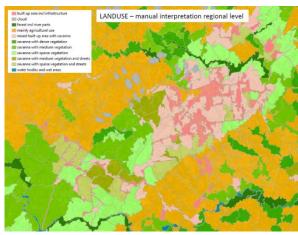
Environmental awareness raising and re-forestation



Solid waste management



Satellite images







### **Upcoming projects**

### **The Waterbox**

- Testing of all-in-one solar water pumping solution for emergencies
- On its way to Kyangwali,
   Enyau and KamuKamu
   (total 13 m³/h and
   24 panels)
- 1-day training for set-up and operation









WATERBOX

### **The Faecal Sludge Field Lab**

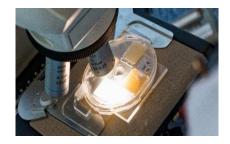
- Appropriate
- Applicable
- ✓ Affordable

✓ Mobile





- → Camping meets lab
- → Digital support
- → New methods







## Thanks for your attention!

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