Focus Group
Haines Solar Cooker
&
Retained Heat Basket

10 Day Field Training

(a) YEDA

May 23<sup>rd</sup> – June 1<sup>st</sup> 2022



Kakuma 3 Refugee Camp, Kenya



## SOLAR HOUSEHOLD ENERGY

Solar Cooking for Human Development and Environmental Relief









Project Partners



# Growing Skilled Solar Cooks and Educators

- Demonstrate and Solar Cook using the Haines 1 Pop Open Oven
- Build a pool of trained instructors and facilitators in the Kakuma Camp (transfer knowledge)
- Use the prepared training manual and workbook to ensure comprehensive and consistent training
- Make and use the heat retention basket cooker
- Follow up
- Program Evaluation



# Field Manual and Trainee Workbook



MICROBES
Education PASTEURIZATION AND THE WAPI Project

VPUJECE

Supplies nametags, workbook, pencil or pen
solar oven, oven cookware, recipe ingredients, soap, WAPI
Vocabulary: As unfamiliar words are encountered, check for understanding. See glossary. Background Content for Instructor
Read STEM Through Solar Cooking; Read directions for use of WAPI.

WELLUPTE
Welcome each participant by name. Have participants put on name tag. Allow a short time for Wercome each participant by name, have participants put on namie tag. Autor a short ome on informal conversation among participants as everyone settles in. Begin workshop on time each

> selected recipe(s). is being prepared, ny misconceptions.

thod of instruction. in insulated basket s. Does it taste the you solar cook this ne learning process. hop. This is a good ed and made ready are, have a way to

TO MOTHER

Education Project

**Solar Thermal & Retained Heat** Cooking

INSTRUCTOR MANUAL

## SESSION NINE

In Kenya, an insect called the white winged termite is a food typically served with another regional corn dish ca Termites are collected, killed and wings remove

They are washed, salted and dry roasted



oaked in salt brine

of birch wood.

en for nine hours.

## SESSION THREE

## DAYLIGHT AND WEATHER

As Earth turns, or rotates, some parts face the sun while other parts are away from the sun. This is day and night.

ing across the sky. Early in the day and later in the afternoon, the sun is lower in the sky.



**Solar Thermal & Retained Heat** Cooking

WORKBOOK



• **Direct** Use one or more reflective surfaces to *direct* extra sunlight onto the cooking area. The more reflective area, the more light energy you will capture.

• **Absorb** Use the color black to *absorb* all the wavelengths of visible light and transform the light energy to heat energy. The interior of the oven can be black. The cooking pot can be black.

• **Retain** the heat inside the cooking space by trapping it. Use pyrex bowl enclosures, oven bags, lids, and insulation. By retaining the heat, you can cook food!

• Eat healthy and nutritious food cooked with the cleanest fuel there is. Enjoy and Educate others!





# Haines Pop Open Oven

- Template
- MPET Roll
- Polycarbonate sleeve and wind disc
- Pop Open Dimensions 140 x 70cm
- Black Pot with Lid







# Heat Retention Basket Cooker

# Trainer Graduation Celebration













# Entrepreneurship Opportunity









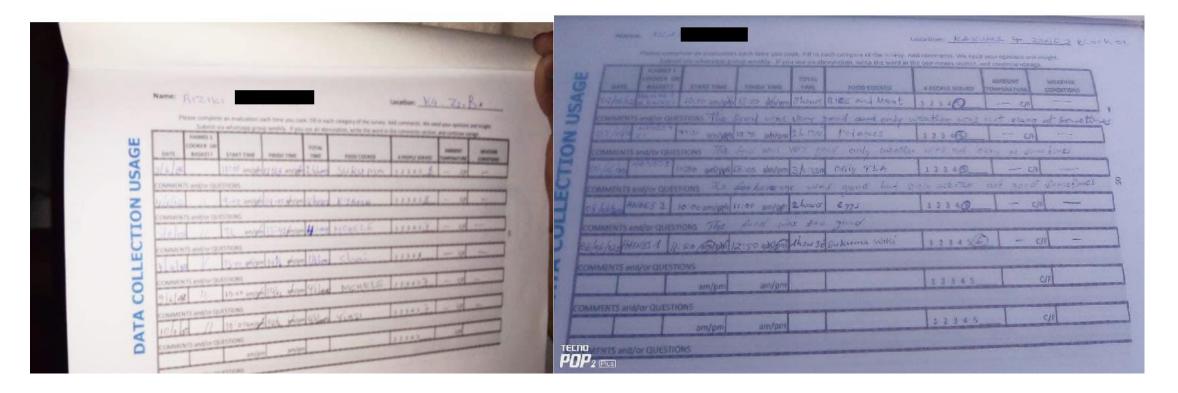
## Build Relationships that Cultivate Trust using Whats App

Participants cook at home and share their experiences with the WhatsApp group. Photos, data, comments, questions, & encouragement are all part of building community.

# Cooking Data: Collected via Whats App Support Group

Example of Data Collection Usage Sheet used by the Workshop Participants.

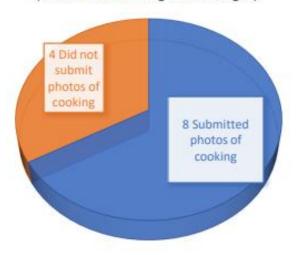
Example of Data Collection Usage Sheet used by the Workshop Participants.



## Data Collected for Ten Days Following Workshop

## Number of Participants who Submitted Photographs

12 Workshop Participants (Includes YEDA Program Manager)



## Number of Participants who Submitted Written Data

11 Workshop Participants



One woman does not have a cell phone and is unable to send updates. YEDA Program Manager visited and photographed cooking rice.







## Data Collected for Ten Days Following Workshop

## From written and photo data collection: What foods are you cooking?

Ndizi	Mchele	Ugali	Tambi	Sukuma Wiki	Viazi	Nyama	Mayai	Chai	Kabichi	Mkia wa ng'ombe	Terere
Bananas	Rice	Porrige	Spaghetti	Collard Greens	Potatoes	Meat	Eggs	Tea	Cabbage	Ox Tail	Amaranthus
2	12	1	1	4	3	2	1	3	1	1	1

## From written and photo data collection: How many people are you cooking for?

Esther M.	Martha K.	Mlasi A.	Mlebinge K.	Riziki R.	Sella K.	Veronique M.
2-3	6	5-6	3-8	7 - 8	3	6

## Photographs of solar cooked foods provided through WhatsApp. Each X represents one dish.

	Thur 6/2	Fri 6/3	Sat 6/4	Sun 6/5	Mon 6/6	Tues 6/7	Wed 6/8	Thur 6/9	Fri 6/10	Sat 6/11
Binwa B.										
Esther M.	X	Х			Х					
Joyce K.										
Martha K.		ХX	Х	Х				ХX		Х
Mlasi A.	X	Х	Х	Х	Х			Х	Х	Х
Mlebinge K.	X				Х					
Oria L.										
Riziki R.		Х	Х	Х		Х		Х	X	
Sella K.	X							Х		
Thereza K.										
Veronique M.	X									
YEDA P.M.		Х								

# SCI Baseline Survey

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For Training Participant/Cook to Answer: Name or Identification number: ETVIA	For Training Participant/Co
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_Crop weste Natural Ges Coal	Crop waste
DungBogoBoMass	Dung
_LPG (Liquid fat)	LPG (LiqueSed Gas)
_ Finalesis Cooker BissletKerosenie Omer	Feeless Cooker Basket
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List the funds you see that you do NOT pay can movey Not heat to each fuel totals, extensing the quantity you use per years. (Allograms or other appropriate measure)	List the fuels you use that you do NO quantity you use per week. (Mognatic
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(will the fishis you use that you do you cost money for the billingnams or other appropriate quantities, (an each type and quantity.	List the fuels you use that you do pay a List each type and quantity.
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rupubad - A hundle @ 500	especial 1 sam 15
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481		Name or Identification number:	-X	
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Biogas	_BoHass	Dung	Blogas	EloNass
Solar Thermal	(Wood)	PG (Liquefied Gas)	Sclar Thermal	Wnord
Kerosene	Other	Fireless Cooker Besket	Kerosene	Other
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46				

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## Feedback and Recommendations

- Cultivate communication and reporting in key priority areas
- Balance time, effort and costs
- Determine impact indicators
- Assess trainee interest
- Create materials in most useful language
- Clearly identify action areas
  - Surveys
  - Follow up
  - Designated Daily Reporter



## Future Plans

- Develop relationships with trainers to cultivate an environment of support
- Reimagine cooking education in a way that is culturally responsive, renewable, sustainable and contributes to a healthy lifestyle
- Promote solar cooking and integrated cooking solutions that use locally sourced materials, foods, support the local economy and foster independence from cooking with charcoal and wood



# Thank You

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