

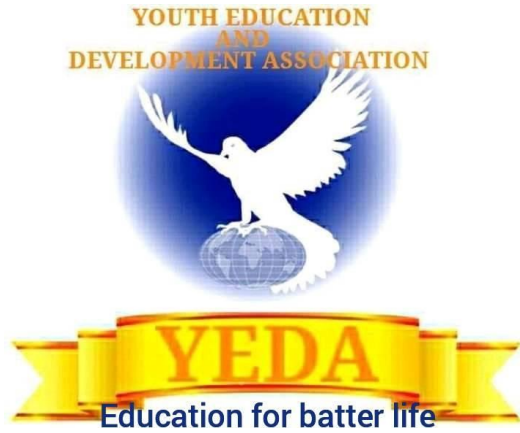
Focus Group
Haines Solar Cooker
&
Retained Heat Basket

10 Day Field Training
@ YEDA

May 23rd – June 1st 2022



Kakuma 3 Refugee Camp, Kenya



SOLAR HOUSEHOLD ENERGY

Solar Cooking for Human Development and Environmental Relief



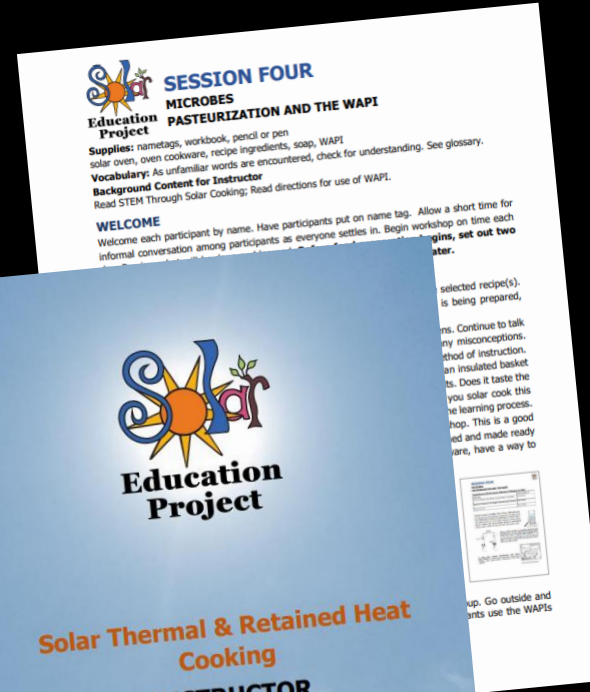
Project Partners



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



Learn to Solar Cook Using the D.A.R.E. Method

- **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



Follow Up Program





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.

DATA COLLECTION USAGE

Name: RIZKI Location: K4. Z. B.

Please complete an evaluation each time you cook. Fill in each category of the survey. Add comments. We need your opinion and insight. Submit via whatsapp group weekly. If you use an abbreviation, write the word in the comments section, and continue usage.

DATE	PLANNED & COOKED OR BAKED?	START TIME	FINISH TIME	TOTAL TIME	FOOD COOKED	# PEOPLE SERVED	AMBIENT TEMPERATURE	WEATHER CONDITIONS
4/6/20		10:00 am/pm	12:00 am/pm	2 hours	Sukuma Wiki	1 2 3 4 5	—	CF
COMMENTS and/or QUESTIONS								
4/6/20		9:00 am/pm	11:00 am/pm	2 hours	Sukuma Wiki	1 2 3 4 5	—	CF
COMMENTS and/or QUESTIONS								
4/6/20		10:00 am/pm	12:00 am/pm	2 hours	Sukuma Wiki	1 2 3 4 5	—	CF
COMMENTS and/or QUESTIONS								
4/6/20		10:00 am/pm	12:00 am/pm	2 hours	Sukuma Wiki	1 2 3 4 5	—	CF
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COMMENTS and/or QUESTIONS								

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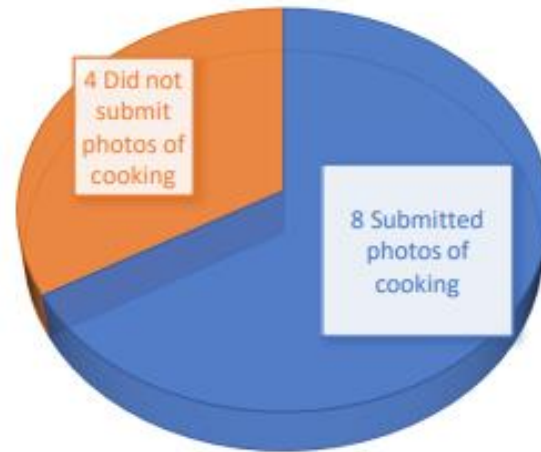
DATE	PLANNED & COOKED OR BAKED?	START TIME	FINISH TIME	TOTAL TIME	FOOD COOKED	# PEOPLE SERVED	AMBIENT TEMPERATURE	WEATHER CONDITIONS
4/6/20		10:00 am/pm	12:00 am/pm	2 hours	RICE and Meat	1 2 3 4 5	—	CF
COMMENTS and/or QUESTIONS The food was very good and only weather was not okay at sometimes.								
4/6/20		10:00 am/pm	12:00 am/pm	2 hours	Potatoes	1 2 3 4 5	—	CF
COMMENTS and/or QUESTIONS The food was very good only weather was not okay at sometimes.								
4/6/20		10:00 am/pm	12:00 am/pm	2 hours	Only RICE	1 2 3 4 5	—	CF
COMMENTS and/or QUESTIONS The food was very good but only weather was not okay at sometimes.								
4/6/20		10:00 am/pm	12:00 am/pm	2 hours	Eggs	1 2 3 4 5	—	CF
COMMENTS and/or QUESTIONS The food was very good.								
4/6/20		11:00 am/pm	12:50 am/pm	1 hour 30	Sukuma Wiki	1 2 3 4 5	—	CF
COMMENTS and/or QUESTIONS								
		am/pm	am/pm			1 2 3 4 5	—	CF
COMMENTS and/or QUESTIONS								
		am/pm	am/pm			1 2 3 4 5	—	CF
COMMENTS and/or QUESTIONS								

TECHNO POP 2

Data Collected for Ten Days Following Workshop

Number of Participants who Submitted Photographs

12 Workshop Participants
(Includes YEDA Program Manager)

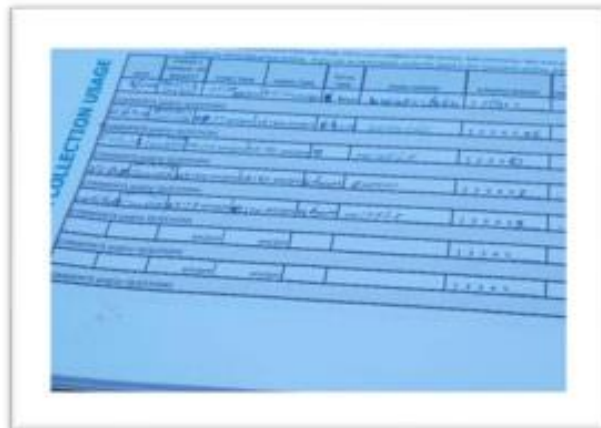


Number of Participants who Submitted Written Data

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 Bananas	Mchele Rice	Ugali Porridge	Tambi Spaghetti	Sukuma Wiki Collard Greens	Viazi Potatoes	Nyama Meat	Mayai Eggs	Chai Tea	Kabichi Cabbage	Mkia wa ng'ombe Ox Tail	Terere 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	X			X					
Joyce K.										
Martha K.		X X	X	X				X X		X
Mlasi A.	X	X	X	X	X			X	X	X
Mlebinge K.	X				X					
Oria L.										
Riziki R.		X	X	X		X		X	X	
Sella K.	X							X		
Thereza K.										
Veronique M.	X									
YEDA P.M.		X								

SCI Baseline Survey

Solar Cooker Adoption and Impact Survey (SEP Modified) 

PART 1 BASELINE DATA Have participant fill this out when cooker is distributed.

Date: 31/05/2023 City, Country Latitude and Longitude coordinates? KENYA

Name of Organization(s) Providing Solar Cooker: Haines solar cooker

What type of solar cooker is being distributed?
 Panel ☐ Box ☐ Evacuated Tube ☐ Parabolic ☐ Other: Handy pop open

Is training being provided on use of cooker? YES NO
 If YES, please indicate length of training: 10 days

For Training Participant/Cook to Answer:
 Name or Identification number: BINKA

What are the top 3 fuels you use? Please put 1 next to the most used, 2 next to occasional use, and 3 next to the least used. Circle all of the fuels you use.

<input checked="" type="checkbox"/> Charcoal	<input type="checkbox"/> Electricity	<input type="checkbox"/> Petroleum
<input type="checkbox"/> Crop waste	<input type="checkbox"/> Natural Gas	<input checked="" type="checkbox"/> Coal
<input type="checkbox"/> Dung	<input type="checkbox"/> Biogas	<input type="checkbox"/> BioMass
<input type="checkbox"/> LPG (Liquefied Gas)	<input type="checkbox"/> Solar Thermal	<input checked="" type="checkbox"/> Wood
<input type="checkbox"/> Fireless Cooker Basket	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Other

How do you obtain your primary fuel?
I buy from vendors


List the fuels you use that you do NOT pay cash money for? Next to each fuel listed, estimate the quantity you use per week. (kilograms or other appropriate measure)

All fuels are paid for

List the fuels you use that you do pay cash money for? Use kilograms or other appropriate quantifier. List each type and quantity.

wood	for wood	1500 kg
charcoal	1 sack	1500 kg
coal	8 daddis	1350 kg

How much money do you spend on fuel per week? (Identify currency.) 375 shilling

Solar Cooker Adoption and Impact Survey (SEP Modified) 

PART 1 BASELINE DATA

Date: _____ City, Country Latitude and Longitude coordinates? _____

Name of Organization(s) Providing Solar Cooker: _____

What type of solar cooker is being distributed?
 Panel ☐ Box ☐ Evacuated Tube ☐ Parabolic ☐ Other: _____

Is training being provided on use of cooker? YES NO
 If YES, please indicate length of training: _____

For Training Participant/Cook to Answer:
 Name or Identification number: _____

What are the top 3 fuels you use? Please put: 1 next to the most used, 2 next to occasional use, and 3 next to the least used. Circle all of the fuels you use.


<input type="checkbox"/> Charcoal	<input type="checkbox"/> Electricity	<input type="checkbox"/> Petroleum
<input type="checkbox"/> Crop waste	<input type="checkbox"/> Natural Gas	<input type="checkbox"/> Coal
<input type="checkbox"/> Dung	<input type="checkbox"/> Biogas	<input type="checkbox"/> BioMass
<input type="checkbox"/> LPG (Liquefied Gas)	<input type="checkbox"/> Solar Thermal	<input type="checkbox"/> Wood
<input type="checkbox"/> Fireless Cooker Basket	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Other

How do you obtain your primary fuel?

List the fuels you use that you do NOT pay cash money for? Next to each fuel listed, estimate the quantity you use per week. (kilograms or other appropriate measure)

List the fuels you use that you do pay cash money for? Use kilograms or other appropriate quantifier. List each type and quantity.

How much money do you spend on fuel per week? (Identify currency.) _____

Solar Cooker Adoption and Impact Survey (SEP Modified) 

PART 1 BASELINE DATA Have participant fill this out when cooker is distributed.

Date: 31/05/2023 City, Country Latitude and Longitude coordinates? KENYA

Name of Organization(s) Providing Solar Cooker: HAINES SOLAR COOKERS

What type of solar cooker is being distributed?
 Panel ☐ Box ☐ Evacuated Tube ☐ Parabolic ☐ Other: POP OPEN

Is training being provided on use of cooker? YES NO
 If YES, please indicate length of training: It's free 10 days

For Training Participant/Cook to Answer:
 Name or Identification number: SELLAH

What are the top 3 fuels you use? Please put: 1 next to the most used, 2 next to occasional use, and 3 next to the least used. Circle all of the fuels you use.

<input checked="" type="checkbox"/> Charcoal	<input checked="" type="checkbox"/> Wood	<input checked="" type="checkbox"/> Coal
<input type="checkbox"/> Crop waste	<input type="checkbox"/> Natural Gas	<input checked="" type="checkbox"/> Coal
<input type="checkbox"/> Dung	<input type="checkbox"/> Biogas	<input type="checkbox"/> BioMass
<input type="checkbox"/> LPG (Liquefied Gas)	<input type="checkbox"/> Solar Thermal	<input checked="" type="checkbox"/> Wood
<input type="checkbox"/> Fireless Cooker Basket	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Other

How do you obtain your primary fuel?
BUYING

List the fuels you use that you do NOT pay cash money for? Next to each fuel listed, estimate the quantity you use per week. (kilograms or other appropriate measure)

All is paid for money

List the fuels you use that you do pay cash money for? Use kilograms or other appropriate quantifier. List each type and quantity.

		WEEK
Charcoal	1 sack	Ksh = 1500
wood	1 sack	1500
coal	8 daddis	1500

How much money do you spend on fuel per week? (Identify currency.) 5000



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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