



Webinar: Solar Cooking Sector Updates Refugee Working Group Call

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Solar Cooking Sector Updates Webinar, Refugee Working Group Call

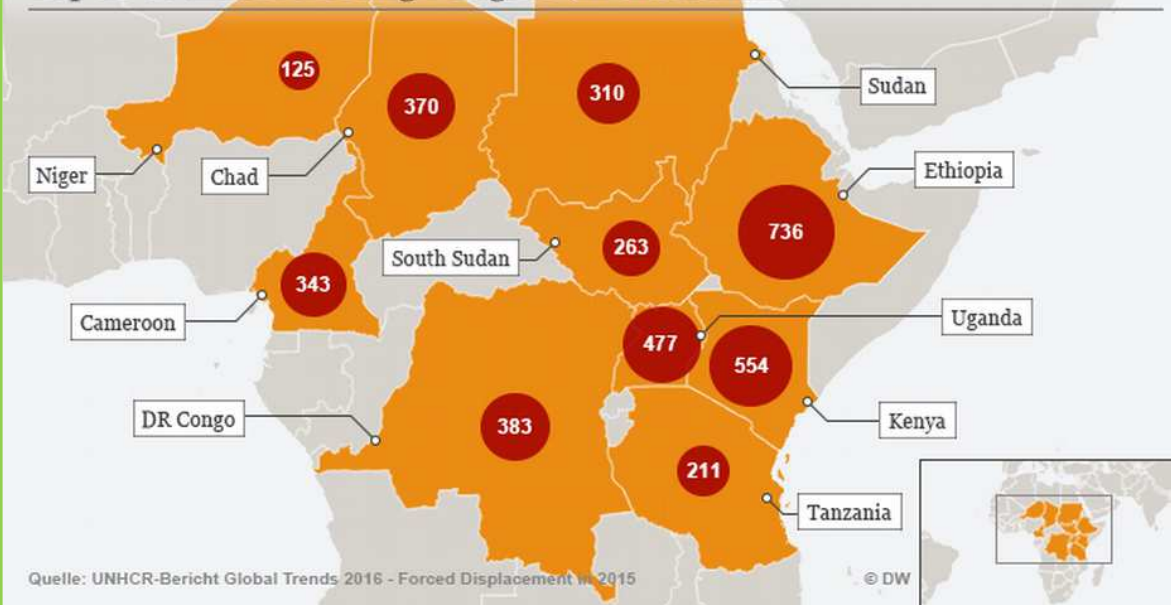
Introduction

- **Eco-mandate Group** – is a registered org. in Kenya to primarily promote solar cooking in Eastern and Central Africa. We're shaping-up innovative local solutions for renewable energy to address challenges of fuel access; training youths on solar cookers-assembly, marketing, O&M and running centres for sustainable energy development in Kakuma Refugee Camp and Meru Kenya.
- **Fuel situation in Refugee Camps**, currently
 - Demand is enormous,
 - Not being met via traditional means of firewood supplies
 - A challenge to all stakeholders; UNHCR, Governmtns, refugees, host communities- serious concerns on health, financial, protection, safety and environmental costs.

The refugee context in Eastern and Central Africa

<http://reporting.unhcr.org/node/27>

Top 10 countries hosting refugees (in thousands)



**Sub Saharan Africa
18 million housed
in 180 camps
(3 million households)**

Using 75% firewood

\$70 - 110 million p.a



Fuel situation in Refugee Camps Example: Kakuma Refugee Camp in Kenya (MEI & UNHCR , 2017)

Income:

- Average income of KShs 2,340 per month
- Median income is KShs 1,750 per month
- Maximum income is KShs 10,600 per month

Consumption behaviour survey results:

- 77% of primary stoves are wood, 23% charcoal
- 14% have paid for their primary stove (KES 390 av price)
- 25% have paid for a secondary stove (KES 440 av price)
- 18% are paying for at least some of their firewood (spending KES 390/mth)
- All charcoal is paid for (spending KES 730/mth)
- Less than 1% of the respondents use solar, LPGs and ethanol

Fuel situation in Refugee Camps Example: Kakuma Refugee Camp in Kenya - MEI

Following survey of 222 households in Kakuma by MEI

Problems encountered with the existing cookstoves	
Caused a lot of smoke	58%
Caused burns	48%
Stove has broken	25%
Poor combustion (weak flame)	22%
Too small for household's needs	21%
Doesn't suit our cooking habits	14%
Damaged home	9%
Severe cough/respiratory problem	9%
Caused unintended fire	9%
Too big for household's needs	5%
Permanent physical damage to any person in the household	2%
Stove was stolen	2%

Fuel situation in Refugee Camps

Example: Kakuma Refugee Camp in Kenya - MEI

	Number of households	Demand, kg per month per hh		Total demand, T per yr		Total value, KES m/year
		Wood	Charcoal	Wood	Charcoal	
Households burning:						
Wood only	22,163	125	-	33,245	-	
Charcoal only	4,077	-	50	-	2,446	
Wood primary, charcoal secondary	2,477	88	15	2,601	446	
Charcoal primary, wood secondary	3,283	50	38	1,970	1,477	
Total	32,000			37,815	4,369	

Cost, KES / T	7,500	16,000	
Total cost, KES millions	284	70	354

UNHCR supply, T/year	9,600		
UNHCR supply, KES millions	72		72

Challenges

- Bulging ref. population vs. shrinking food and firewood sources to cook the food (supplied by aid agencies)
- Firewood distribution, hugely inadequate- 5kgs/pax/month vs. the recommended 15kgs/person/month (UNHCR, 2017).
- Distribution meets only 16% of the domestic fuel needs of the refugee household (UNHCR, 2017)
- The balance 84% is from nearby bushes- encroachment on established green belts, along the camp periphery.

- Women and children's health risks; indoor air pollution, respiratory infections from smoking fires, victims to SGBVs when in the bushes scavenging for firewood.
- Refugees also engage in coping strategies such as survival sex or selling food rations to be able to afford cooking fuel (UNHCR, 2017). Such coping mechanisms have serious consequences including malnutrition and loss of livelihood options, and is a risk to personal health, safety and dignity.

Conclusion;

- Solar cooking can bridge the huge fuel gap in Kakuma Refugee camp and in other refugee situations.
- Kakuma passes for an ideal location to run successful solar cooking projects, by virtue of her excellent insolation profiles, immediate huge ref. demand and direct positive impact to humanity.
- Working together, yes we can excel for both household and institutional solar cooking for refugees.

Thank you