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# PROJECT BARIDI

Solar powered cooling in East Africa's Livestock value chain





Maasa



Mara





## **Neglected Livestock Value-Chain across East Africa**

- 42% of Livelihoods in Kenya rely on pastoralism
- 30% post-slaughter meat loss is felt economically



# Prototype

- 1kWp PV nano-grid
- Connects 16 rural consumers to off-grid electrification

# VISION

Service 200,000 African consumers  
within the next  
7 years with over 5MW worth of  
solar energy capacity

Biggest Learning 2019

# Extremely Low Return on Investment

PAY-BACK PERIODS OF 20-25 YEARS IS NOT  
VIABLE TO A LOCAL STARTUP...



# PROJECT BARIDI



PASTORALIST  
320,000 MT produced per year

solar chiller\*



MEAT VENDOR  
272,000 MT stocked per  
year

solar chiller\*



END-  
PLATE  
231,200 MT consumed per  
year

30% post-slaughter loss evident

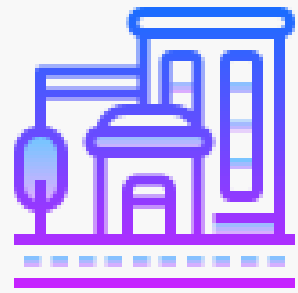
# Solar powered Chillers



- 5kWp Stand-alone PV
- 20ft Cold Store Facility
- Livestock value-chain



# COMMERCIAL CONSUMERS



## Urban Meat Vendors

Nairobi Case Study Site:  
BURMA MARKET



## Trade Volume

2400 carcasses per week  
with an average of  
100kg per beast.



## Economic Impact

30% of meat rot avoided  
Annual equivalent of Ksh. 83m

# RISKY DECISION...



UNEXPLORED MARKET: LIVESTOCK VALUE-CHAIN



HIGH CAPEX - EUR 50,000 per  
unit



COMPLEXITY OF SOLAR & THERMAL ENGINEERING

# REVENUE MODEL



**PAY-AS-YOU-STORE**


**10ksh/kg per day  
[strictly MPesa]**

**800kg capacityx10ksh**

**8,000ksh daily revenue**

**Ksh. 2.9m Annual Gross**

**2.3 yrs Break Even  
[CAPEX ÷/ revenue]**

A group of women in traditional beaded clothing and headwraps, likely from East Africa, standing outdoors under a cloudy sky. The women are wearing vibrant, multi-colored beaded headwraps and shawls. One woman in the foreground is wearing a red shawl with a white and blue patterned border. The background shows a dry, open landscape with sparse vegetation and a blue sky with white clouds. The text "190 informal job creation per unit lifespan" is overlaid in the center of the image.

190 informal  
job creation  
per unit  
lifespan

# MEET THE TEAM



TRACY KIMATHI  
Lead Developer







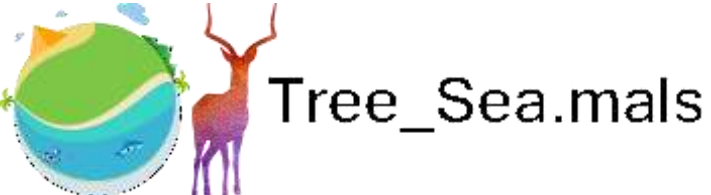

HILLARY CHESEBE  
Lead Engineer



ALISTAIR MURRAY  
Board Advisor

TBA  
Finance Manager

# PROJECT PARTNERS

<p><b>Legal Associate Partner</b> TLO LAW ASSOCIATES</p> 	<p><b>Consumer Engagement Partner</b> WINGS OF EMPOWERING PASTORALISTS (Ke)</p> 
<p><b>Solar Engineering Partner</b> KNIGHTS ENERGY</p> 	<p><b>Cooling Engineering Partner</b> ACCENT COOLING</p> 
<p><b>Developing Partner</b> TREE_SEA.MALS</p> 	<p><b>Scale-Up &amp; Replication Partner</b> VIENGA</p> 

# funds raised

Project Baridi has engaged a € 295,000 seed round from 5 local & international investor groups each in varying post-conceptual stages

# scale-up



UNIT 1: JULY 2021  
Urban meat market  
Burma , Nairobi

UNIT 2: APR 2022  
Urban meat market  
Kiamaiko , Nairobi

UNIT 3: DEC 2022  
Peri-Urban meat market  
Kiserian , Kajiado





# PROJECT BARIDI

## SHEEP & GOATS

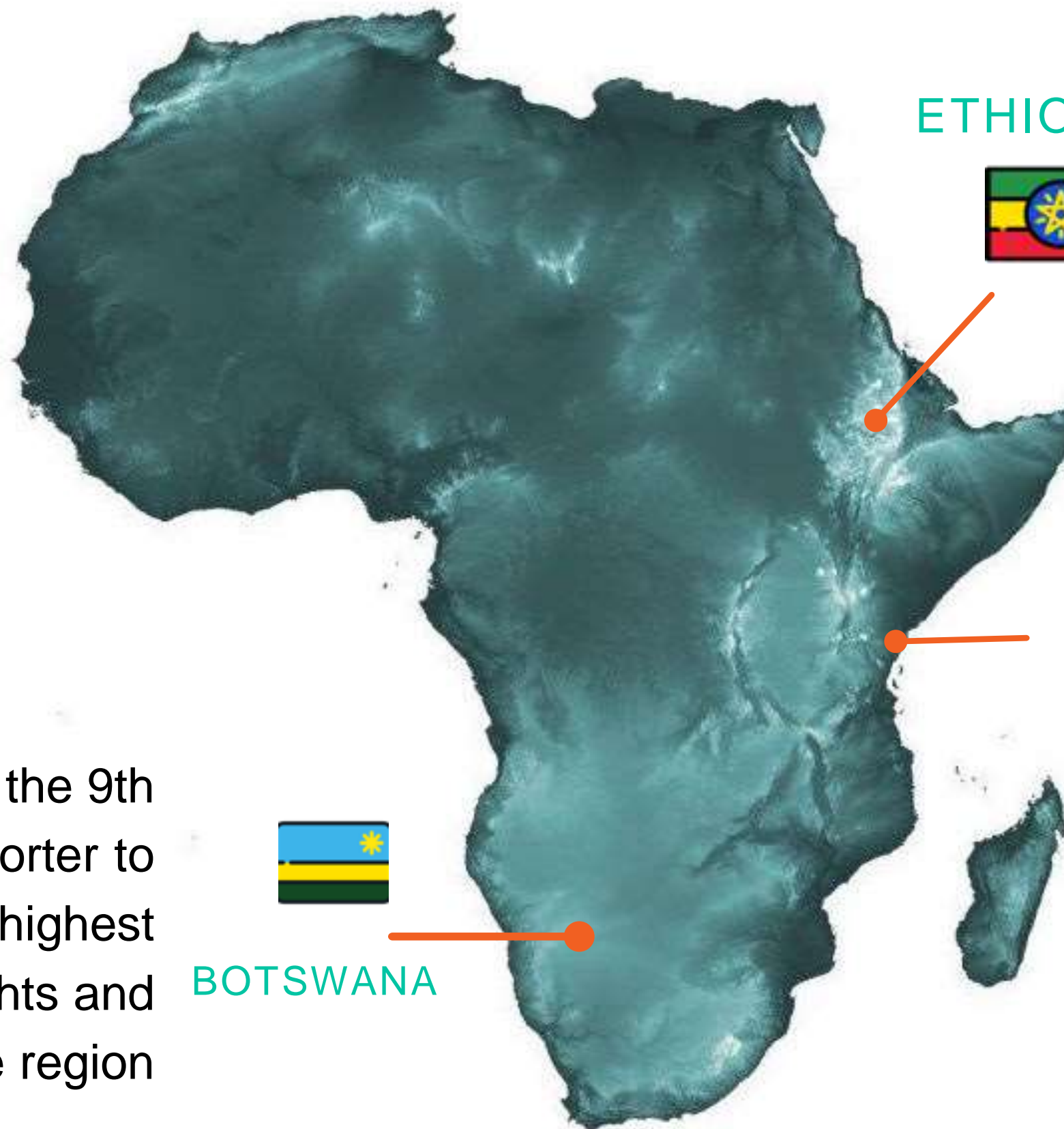
59%

## CATTLE

39%

## CHICKEN

2%



## ETHIOPIA



Ethiopia is the 10th largest livestock producer Globally and the Biggest exporter of Beef in Africa



## KENYA

The average Kenyan household consumes 15.81kg of beef per adult equivalent with an expenditure of Ksh. 17,784 annually



## BOTSWANA

Botswana is the 9th largest beef exporter to the EU with the highest carcass weights and quality within the region

# Market Players

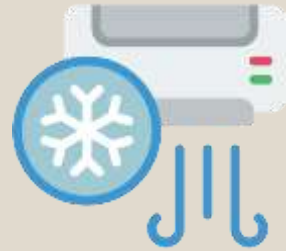
## ENERGY



Kenya Power (urban)

Rafiki Power (rural)

## COOLING



Ramtons (fridge)

eNow: Rayfregiration (mobile cooling)

## INTERGRATED BRANDS



FreshBox (fruits & veg)

Ecozen (S.E Asia)



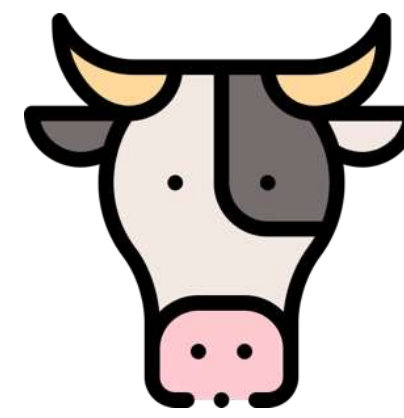
# Tree\_Sea.mals Ltd.

Solar powered Cold rooms

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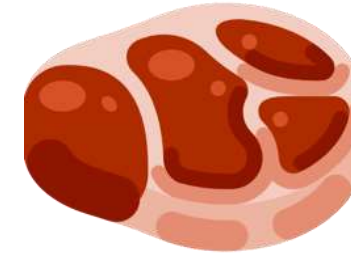
Tracy Kimathi, Founder

[tracy@tree Seamals.org](mailto:tracy@tree Seamals.org)



**PASTORALIST**

solar chiller\*



**MEAT VENDOR**

solar chiller\*



**END-PLATE**