

FINANCIAL INSTITUTION TRAINING MANUAL FOR DOMESTIC BIODIGESTER TECHNOLOGY

Picture courtesy of HomeBiogas

Module 3: Supporting biodigester clients

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Lead Implementer - Kenya

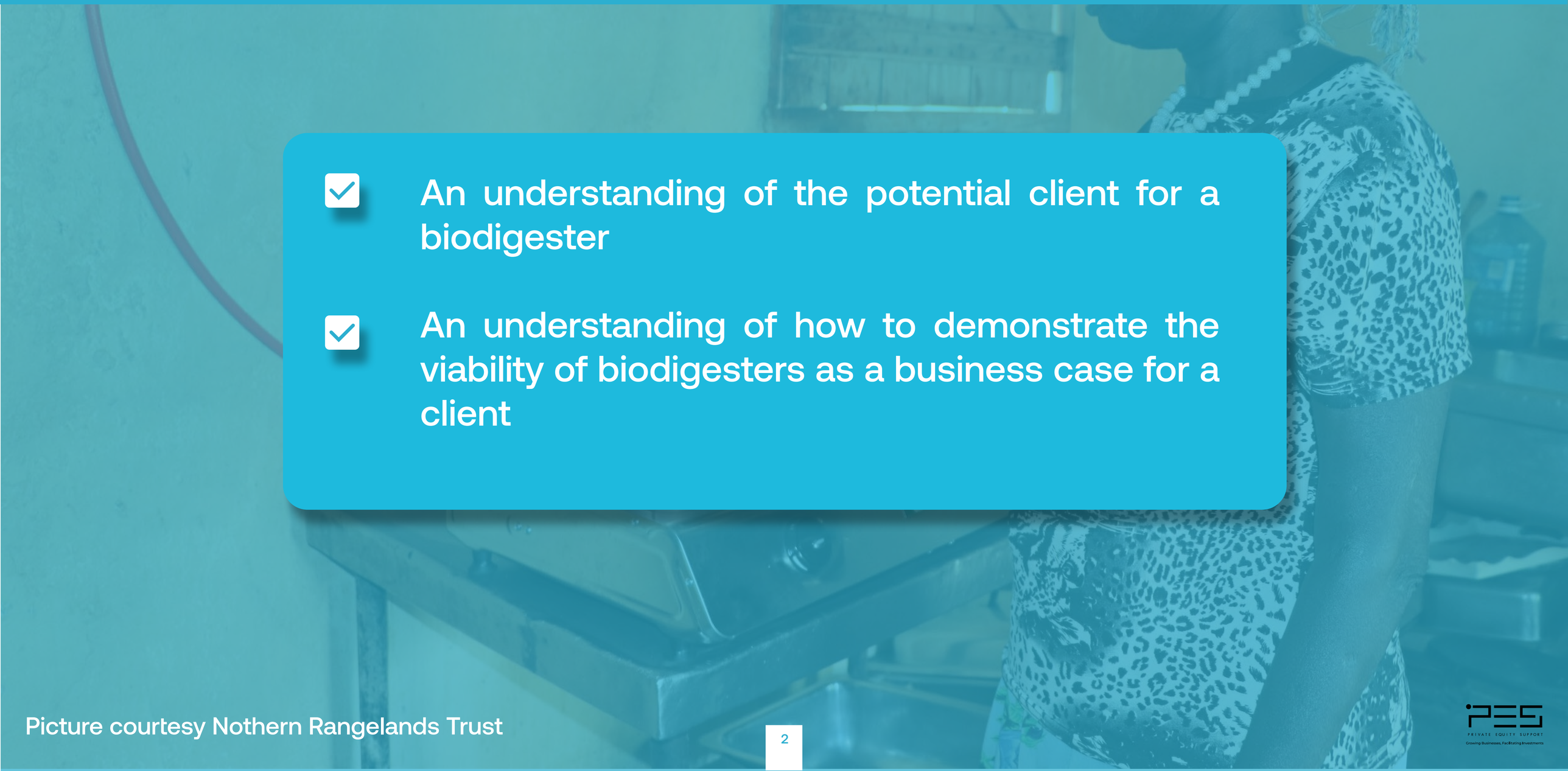
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Access to finance - Kenya

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Learning outcomes



- An understanding of the potential client for a biodigester
- An understanding of how to demonstrate the viability of biodigesters as a business case for a client

Picture courtesy Nothern Rangelands Trust

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Module overview

- Overview of client and client needs assessment
- Financial Planning and Advisory Services
- Monitoring and Evaluation
- Industry Liaisons

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Client overview

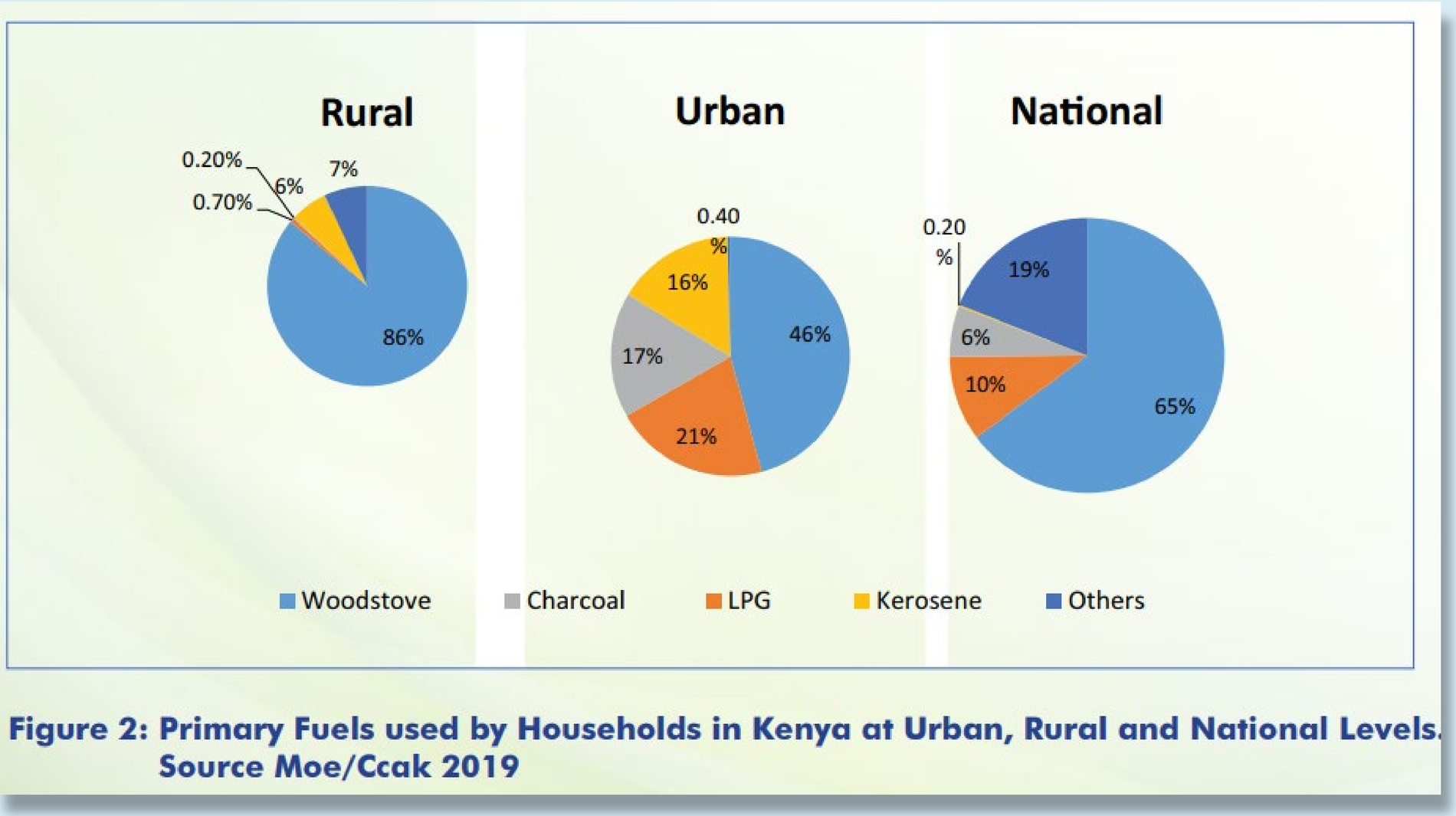


Figure 2: Primary Fuels used by Households in Kenya at Urban, Rural and National Levels. Source Moe/Ccak 2019

What is the cooking culture of these clients?

Table 1: Average Annual Consumption for Common Cooking Fuels by Households

Fuel	Urban			Rural			Total		
	%HHs using	Average (kg/yr)	95% CI (kg/yr)	%HHs using	Average (kg/yr)	95% CI (kg/yr)	%HHs using	Average (kg/yr)	95%CI (kg/yr)
Fuelwood	24%	1232	224	86%	1362	60	67%	1349	59
Charcol	46%	364	44	42%	411	29	44%	395	24
LPG	51%	68	3	15%	47	3	27%	57	2
Kerosene	29%	163	12	7%	78	10	14%	114	9
Crop Residue	3%	270	155	11%	421	61	9%	400	57

Source: (Ministry of Energy & CCAK, 2019)

Picture courtesy SNV

Barriers to scaling the household bio-digester market?

- Lack of access to finance for households
- Lack of investment subsidy to reduce investment costs for households;
- Limited willingness and ability to pay.
- Lack of awareness about the benefits of the business case; lack of awareness campaigns;
- High upfront investments for biogas units;
- Poor management and maintenance (due to household labour constraints);
- Lack of quality control and standards, therefore clients and financial institutions are unsure of product quality.

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What are the cost factors of the conventional fuels?

Picture courtesy Biogas Solutions Uganda



Table 2: Weekly Wood Fuel Consumption and Average Expenditure Per Household

Fuel	Urban		Rural	
	Consumption (kg)	Cost (KES)	Consumption (kg)	Cost (KES)
Fuelwood	23.7	342	26.2	409
Charcoal	7	270	7.9	229

Source: MoE, 2019 Kenya Household Cooking Sector Survey

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Financial Planning and Advisory Services

Assisting clients in developing financial plans for biodigester projects capturing various elements such as:

- Investment Planning: Brief description of the biogas investments including key assumptions, such as waste intake, biogas production, energy generation and Capex requirements.
- Overview of potential revenue streams : Sales of energy [cooking, heating, lighting] sale of bio slurry [for farming] and any other income sources.
- Overview of potential cost savings: Replaced wood fuel or LPG costs, Reduction of costs for disposal of agricultural wastes
- Overview of operational costs: Costs related to waste processing, maintenance, and operations, Labour costs, Insurance, Costs of finance

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Monitoring and Evaluation

Establish monitoring mechanisms to track the progress of biodigester projects - Conducting regular evaluations to assess the financial performance and impact of investments.

	INDICATOR	DATA SOURCE(S)	TIMING	DATA MANAGER
1	Number of digesters installed	Contractors/ Installers	Monthly	Association
2	Number of masons enrolled	Contractors/ Associations	Monthly	Association
3	Amount of loan dispersed	FIs	Quarterly	FI
4	Amount of loan repayment	FIs/SACCOs	Monthly	FI
5	Demographic data of biodigester clients	FIs	Monthly	FI and Con-tractor
6				
7				

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Industry Liaisons: Some facts about the companies:

- Most of the Biodigester companies in Kenya are officially registered
- The total number of staff add up to 532, mainly men - 368 (69%) - and 164 (31%) women.
- The total number of digesters sold so far ranges from 20 to 5,000+ per company
- The total current number of sales and installations ranges from 1 to 1,700 per year
- Most of the companies or masons are members of the Kenya Biogas Stakeholders Network (BIO-NET)

Picture courtesy Alliance for science

Recap and Practical Exercises



Picture courtesy SNV

Discuss the various farmer support programmes provided by FIs and how these can be structured to support biodigester clients.

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Picture courtesy HomeBiogas

NEXT: -

Module 4: Regulatory framework and compliance

- Regulatory Landscape for Biodigesters
- Environmental and Social Safeguards
- Grievance mechanism structures / suggestions

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