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Social enterprise and renewable energy: The case of LUMAMA, Tanzania

Nicola MORGANTI
ACRA

Ludewa District Rural Electrification Programme



Mawengi hydro-power plant

- Construction 2006- 2014
- Hydropower plant of 300 kW
- Isolated mini-grid managed by LUMAMA, a community based social enterprise
- Serving 7 villages, 1'400 connections, 20'000 inhabitants
- Rural electrification as driver for socio economic growth and sustainable management of natural resources

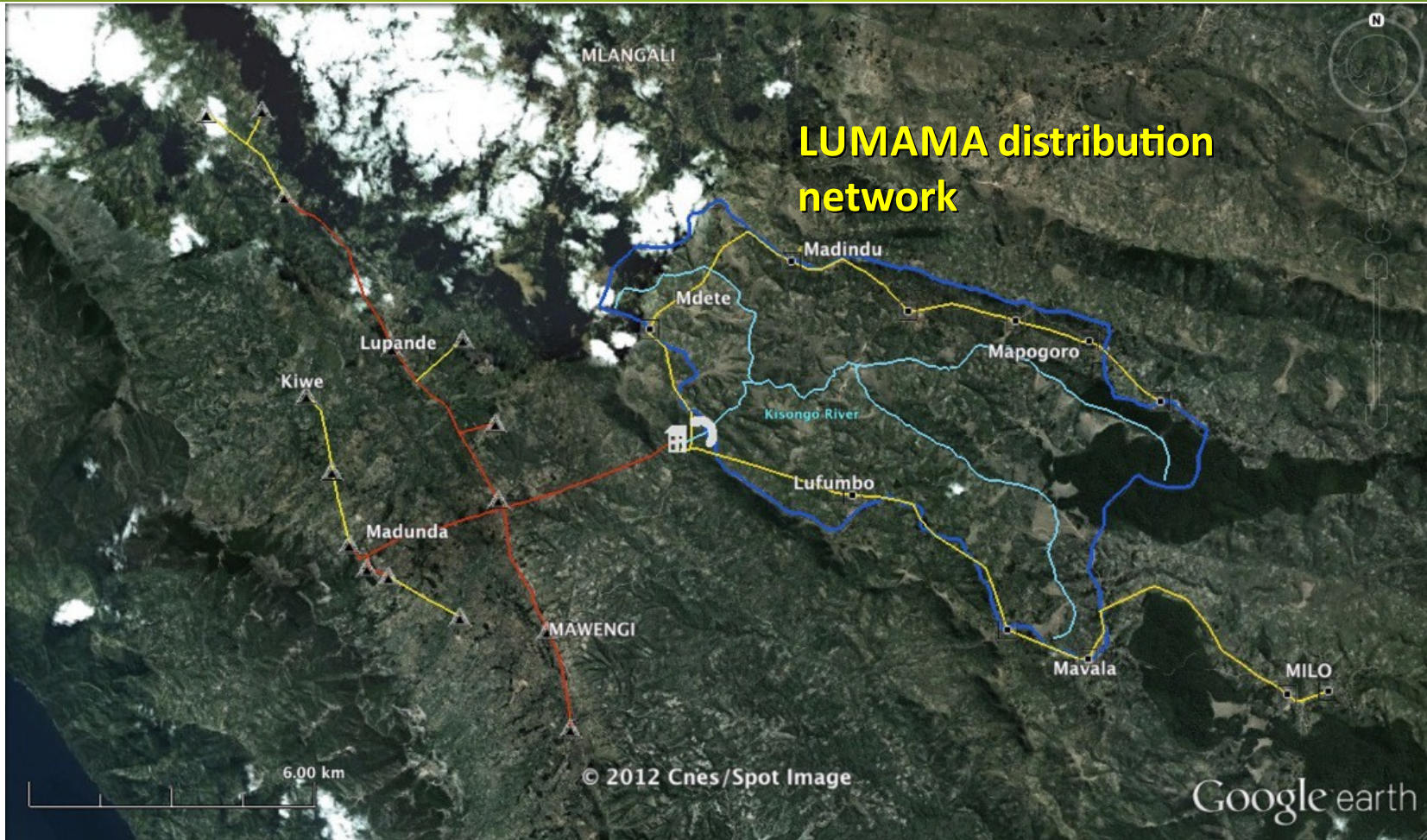




LUMAMA

- Set up as an NGO
- Customers are members (approx. 1600)
- Organisation: transformers' committees, village committees, general assembly, Board, management
- Other stakeholders involved







LUMAMA economics

- Shifted from flat rate to pre-paid meters
- Infrastructure investment: 3'426'250 EUR
- Breakeven reached in 2015
- Annual O&M costs (2015): 60'416 EUR
- Annual incomes (2015): 68'738 EUR
- Depreciation: 28'500 EUR/year



LUMAMA tariffs

	EUR/kWh	Monthly fees
1- House 1 to 7 points	0,08	1,25
2 – House 8 + points and Hospital/Dispensary	0,09	1,25
3 - Shop	0,10	1,25
4 – Milling machine and oil mill	0,14	2,75
5 – All other machines (e.g. welding, carpentry, ...)	0,15	2,75

LUMAMA sustainability issues

Economic:

- Need of subsidies for initial investment for off-grid financial viability
- Profitable but low profits (isolated mini-grid)

Environmental (hydro-power):

- Need of resources for environmental conservation and sustainable management of NR

Social:

- Emphasis on participation into decision making processes and governance of the service;
- High involvement of local authorities (village, district)

Technical:

- Stress on strengthening capacities of national staff (technical, managerial)



Community involvement models

- Full ownership of the power plant through a community based social enterprise: consumers are members (Mawengi –LUMAMA example)
- Consumers' association as majority or minority shareholder together with other public/non profit/private stakeholders (Lugarawa example)
- Split ownership between Production and Distribution (to be tested):
 - Production entails big investments and sometimes sophisticated technologies: more appropriate for private investors
 - Communities could participate to the ownership of Distribution networks, easier to manage
- In general, sense of ownership can be triggered by appropriately designed instruments meant to benefit rural people: grid extension, access to credit for electric appliances, improved access to services, lowering costs to services, etc.



Many thanks for listening

