Rural Domestic Biogas near Giyani

Jotte van Ierland

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Contact: Mr Jotte van Ierland ● cell: 073-0862303 ● fax: 086-6115666 ● email: jotte@mpfuneko.co.za ● post: P.O. Box 1475, Giyani, 0826 ● web: www.mpfuneko.org

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About Mpfuneko Community Support

- Established in 2007 by members of the community
- Non-profitable and Public Benefit Organisation
- Rural development through innovations
- Triple bottom-line projects: environmentally, socially and financially sustainable

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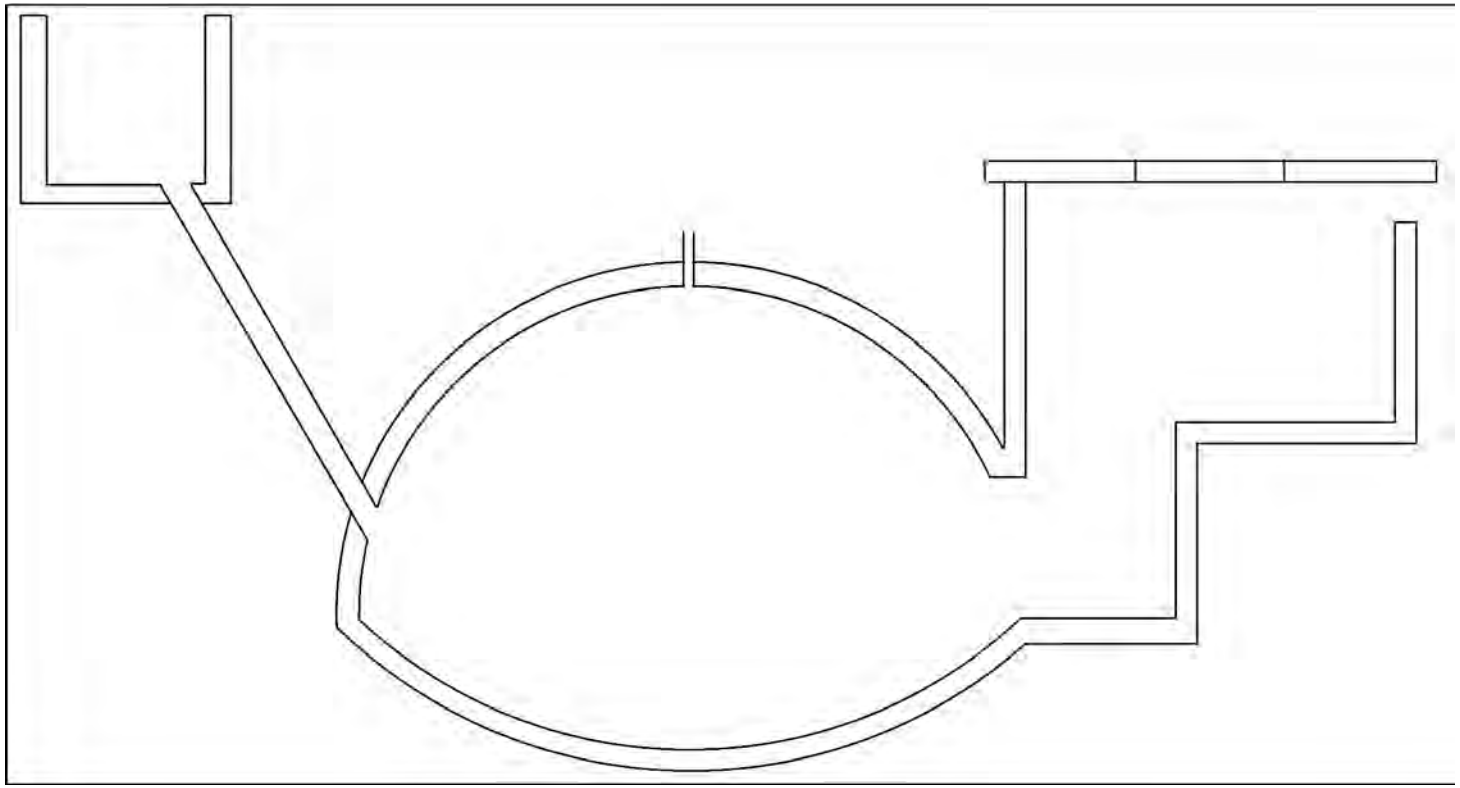
History of MpfunekoCS

- 2007 – 2009 Hivos, Wilde Ganzen and WNF-Inno Fund: Learning how to construct biogas digesters
- 2009 – 2013 ICCO: Developing Ready-to-Cook Biogas concept
- 2012 Dutch Embassy in Pretoria: Education on Biogas Project
- April 2013 Working for Energy: Training of constructors
- July 2013 uThungulu District Municipality: Construction of pilot digesters
- July 2013 Energy and Environment Partnership programme: Making the Ready-to-Cook Biogas concept scalable and reproducible

Cross-section of a biogas digester



Construction of a biogas digester

Digging the pit

Digester under construction

Digester under construction

A completed biogas digester

energy
Department:
Energy
REPUBLIC OF SOUTH AFRICA

sonedi
South African National Energy Development Institute

" Working for Energy"

Project Name	Mpfuneko Rural Domestic Biogas Project
Project Description	Providing 55 households with Ready-to-Cook Biogas
Implementing Agent	MpfunekoCS

public works
Department:
Public Works
REPUBLIC OF SOUTH AFRICA

EXPANDED PUBLIC WORKS PROGRAMME

Working for Energy

- Milestone: first South African funding
- Top quality digesters
- Training of local constructors (construct independently)
- Use of locally available materials
- Large number of digesters (55)
- Making our own tools

Energy and Environment Partnership programme

- SA5006: Pilot Project on the Management of Biogas Digesters by Community Members in Giyani
- Making the Ready-to-Cook Biogas concept scalable and reproducible

EEP
ENERGY AND ENVIRONMENT PARTNERSHIP / SOUTHERN AND EAST AFRICA

Project financed by:
· the Ministry of Foreign Affairs of Finland;
· the Austrian Development Cooperation; and
· the UK Department for International Development (DFID).

What is Ready-to-Cook Biogas?

- A local organisation collects cow dung, fills the digester and does maintenance
- Households pay a monthly fee for biogas
- Advantages of Ready-to-Cook Biogas:
  - More job-creation;
  - Better management of biogas digesters;
  - Business opportunities;
  - More households qualify and enjoy benefits; and
  - Inclusion of poorest-of-the-poor.

Why Ready-to-Cook Biogas? (Economic Reasons)

- The traditional approach targets middle income households that have cattle
- Ready-to-Cook Biogas can include the poorest-of-poor and rich households
- Practice shows that some kind of contribution from the household is needed

Why Ready-to-Cook Biogas? (Other Reasons)

- Biogas as modern energy solutions: easy to use and in combination of electricity
- Combining the cooking characteristics of a wood fire with the cleanliness of electricity
- Include households without access to cow dung
- Operating a digester is not as easy as it seems
- Environmental benefits from proper operation of biogas digesters

How to replicate the RtCB concept?

- Dream: Community should be able to do its own biogas project
- Training of constructors (local materials)
- Training of partner organisations
  - Marketing
  - Collecting cow dung
  - Small maintenance
  - Collecting monthly fee
- Lease arrangement as monitoring tool

RtCB concept in practice: Ripfumelo Chabalala Sole Proprietorship

- Arrangement with cattle owners
- Waiting for written approval community
- 12 households agreed to sign RtCB contract

RtCB concept in practice: The challenges

- Biogas is new to the community. There is lot of interest, but reluctance to commit to biogas
- Not all materials are local
- Construction of digester requires many different skills, which takes time
- Centralised digesters are very difficult
- Economies-of-scale
- With one leg in advanced economy, with the other in a rural community

Summary

- We have been successful in constructing reliable biogas digesters with local labour
- We have been innovative in how the biogas digesters are managed
- There are very promising signs that local people can do a better than outsiders
- But that is definitely not without its challenges
- We have come a long way and still have a long way to go

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End. Thank you!!!

Filling the biogas digester

Cooking on biogas

Primary school visiting biogas project

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