



The Role of Existing SMEs in Developing Low Carbon Energy The Case of the MFP Programme in West Africa

Nygaard, Ivan

Publication date:
2009

[Link back to DTU Orbit](#)

Citation (APA):

Nygaard, I. (2009). The Role of Existing SMEs in Developing Low Carbon Energy: The Case of the MFP Programme in West Africa. Sound/Visual production (digital)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

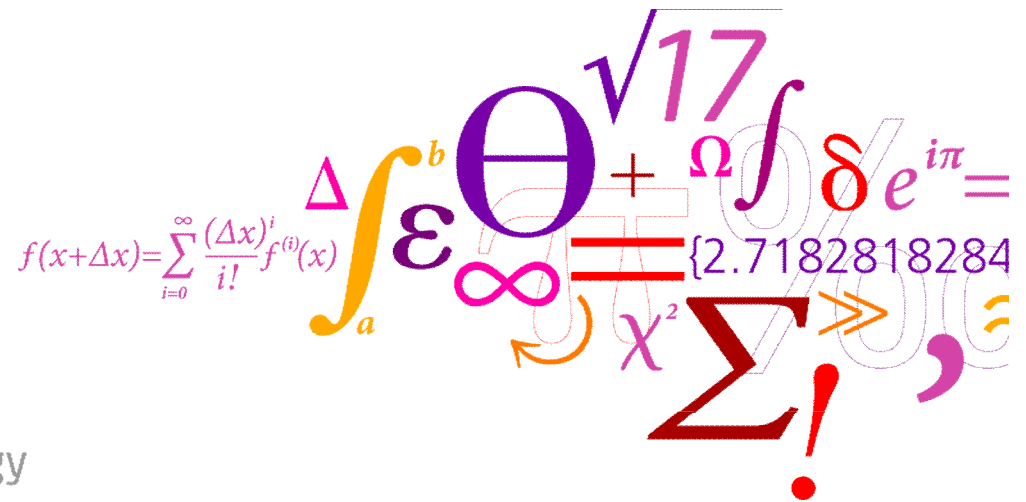
- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

The Role of Existing SMEs in Developing Low Carbon Energy in Africa:

The Case of the MFP Programme in West Africa

Ivan Nygaard,
DIIS Conference: 13 January 2009



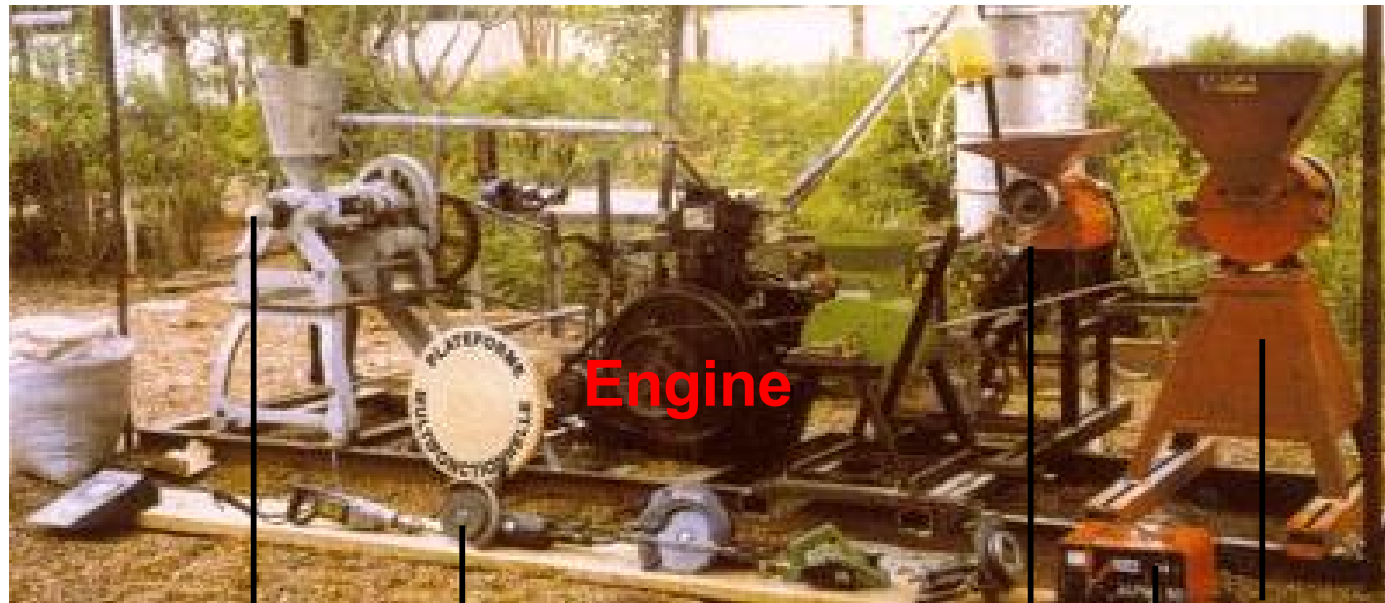
Dilemmas in energy programme design

- Support to specific energy technologies or to energy needs
- Attracting donor funding vs. implementing programmes
 - Concepts which are innovative and which include a number of donor concerns may achieve funding, but may be difficult to implement on the ground
- Creating new concepts and new programmes instead of supporting existing initiatives
 - New initiatives are more visible and seem easier to manage because the implementing organisation is fully in charge of the programme. This on the other hand creates parallel structures, which may create unfruitful competition and vanish when donor's pull out
- Support to SMEs or support to CBOs
 - CBOs may be more inclusive in terms of distributing the benefits, while SMEs may be more efficient in long term operation

Presentation Layout

- Present the MFP as an example to discuss these dilemmas
- Provide five ideas for energy interventions in Africa
- Describe the programme idea of providing start up capital for energy enterprise development

Platform supports a **simple diesel engine** that can power different tools : cereal grinding mills, de-huskers, oil presses, battery charging and electricity...lighting, water pumping, welding, carpentry tools



Oil press

Saws...

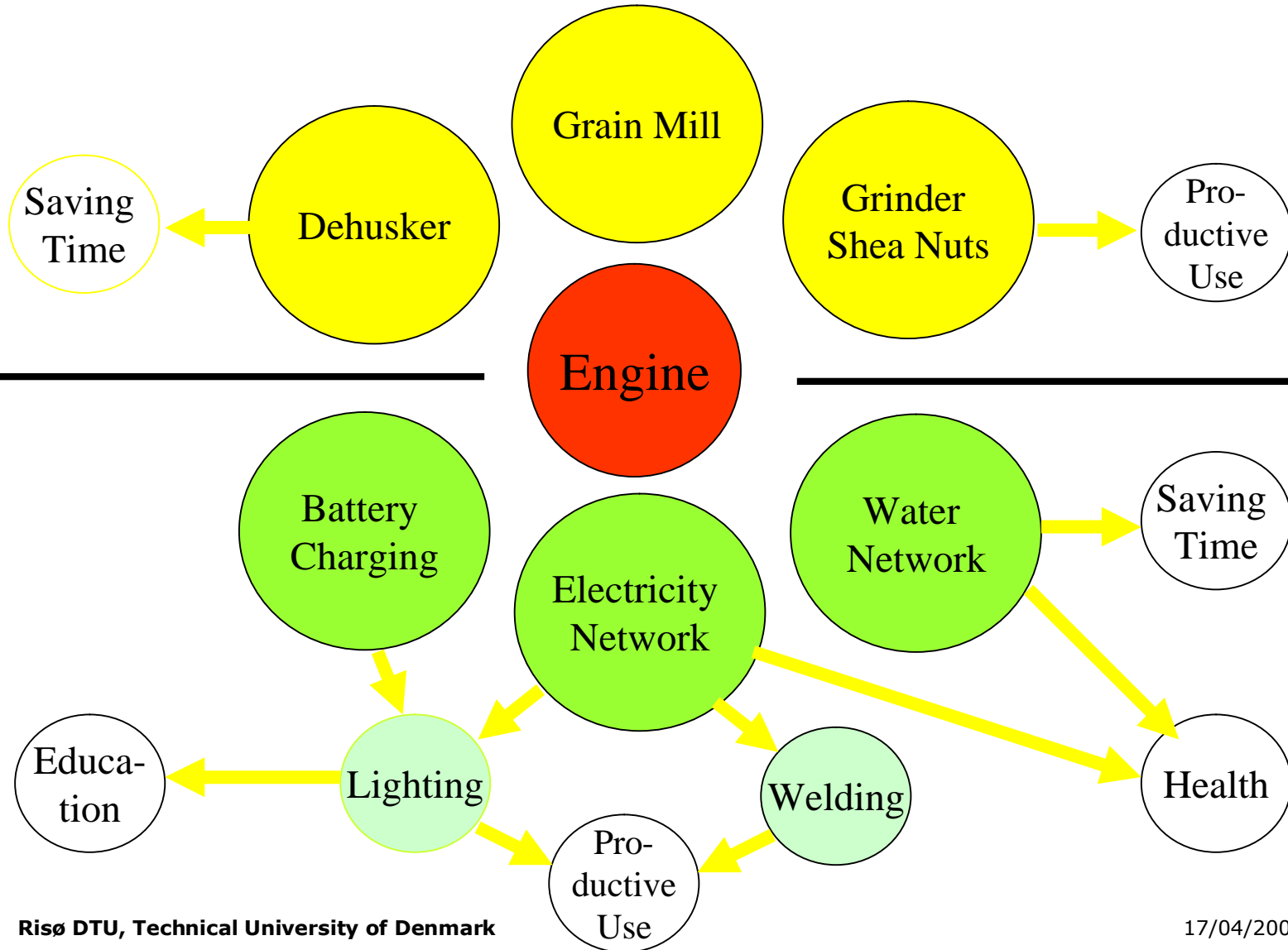
Engine

De-husker

Battery charging

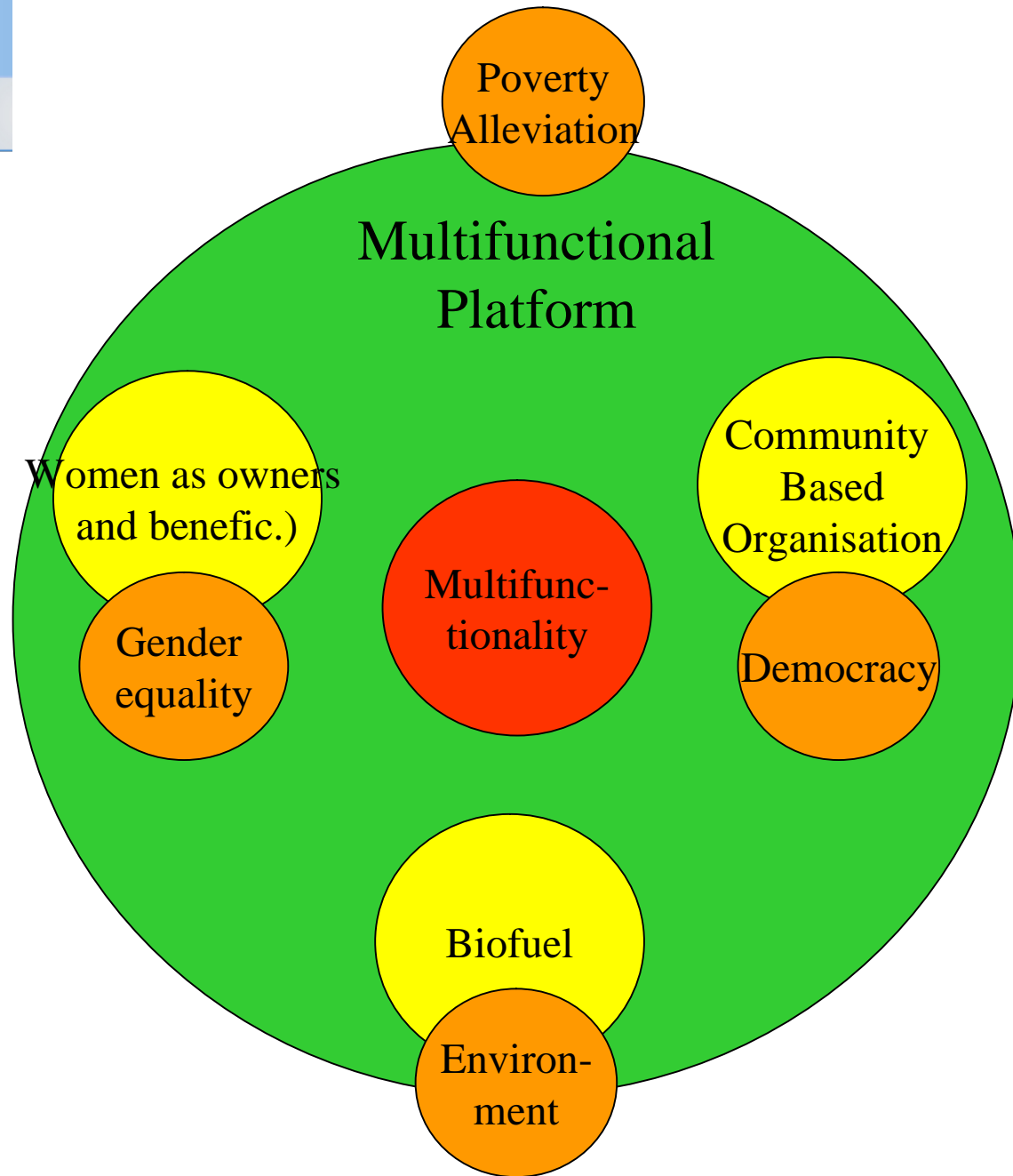
Grinding mill

Functionality and impacts



The MFP

- an inclusive concept



al solution to rural development !

*'The advantages of its context-specific, bottom-up approach are many for enabling a shift in the way development is practiced. Not only does it have a **direct impact on poverty levels of the rural poor**; it also has significant, and often measurable, **impacts on health, education, and gender equity, as well as on agricultural production, rudimentary industrialization, and the rural-urban drift**'*

(UNDP, 2004: 5, accentuation in original)

Source: Frequently asked questions. The multifunctional platform: providing access to energy services to reduce poverty and gender inequality

The MFP – a success in terms of financing

- Demonstration project 1995 to 1999
- Large scale dissemination in Mali 1999-2004 (450 units)
- Up-scale project installing 1500 platforms from 2006-2009
- Project in Burkina Faso aiming at 400 platforms between 2005 and 2008
- MFP programmes in Senegal, Ghana and Guiney
- Included in PRSPs in Mali and Burkina Faso
- Attracted financing by Bill Gates foundation in 2008

Renovations by 2005

Multifunctionality

Objectives:

- 450 platforms
- 300 el. or water networks

Outputs

- 515 platforms
 - 35 % non functional
- 19 water network
- 7 electricity network

PTF-Mali (2006), 'Revue des Plates-Formes Multifonctionnelles du Mali,' Bamako: Ministère de la Promotion de la Femme, de l'Enfant et de la Famille.

Crole-Rees, A., Nientao, A., and Tangara, M. (2006), 'Evaluation finale du projet Plates-formes multifonctionnelles pour la lutte contre la pauvreté, MLI/99/01, Rapport provisoire, ÷ Mali: Pour le Programme des Nations Unies pour le Développement (PNUD).

Goertz, L. (2006), 'Mali - Multi-Functional Platform Project: Evaluation and Diagnostic Report,' Engineers without borders.

Reasons for low achievement of multifunctionality

- Mills are well-known and most needed
- Network implies a high economic contribution from potential users
- Networks are complicated to establish and to manage for a women's group
- Multifunctionality may not be as beneficial as believed
 - engine the most fragile element

...engine multi-functionality



Tiebelé,
Burkina Faso
2007

Achievements by 2005

Other policy concerns

- Low project sustainability
 - 35 % non operational in Dec. 2005
 - Social conflicts rather than technical problems (44 %)
- Low gender impact
 - About 50 % managed by women on a daily basis
 - Men in 72 % of committees (*homme de confiance*)
 - Men hired as operators or concessionaires (33 %)
- Low level of democracy
 - Few elections to management committees over time
- Extreme low level of biofuel use
 - goal: 67 platforms, output: 0-1 ?
- Poverty alleviation ?

Conclusions (multifunctionality)

- Multifunctionality is an important element of the successful funding of the program
 - New compared to earlier milling interventions
 - Appealing, sounds efficient
 - Creates aspirations of potential benefits from
 - clean water - (health, time saving, gender)
 - electricity - (productive use, education, health)
 - grinding of nuts for butter production (Income generation)
 - grinding cereals (saving time, gender)
- Little multifunctionality has been achieved

Conclusion (other donor concerns)

Integration with other policy areas was important to mobilize investment, but the integration was difficult and partly counter productive in implementation

- Democracy: Organised as CBOs/Cooperatives
 - Organisational modality resulted in high level of project failure
- Gender: Women as owners, managers and beneficiaries
 - Management gradually taken over by men
- Environment: Fuelled by biofuel
 - Biofuel was never used

Conclusion (new direction)

Programmes change in direction of:

- Separating, milling, water & electricity
- Private ownership
- Ownership by men and women
- Little or maybe increased use of biofuel, due to increasing oil-prices

- All in all becoming closer to what it was distinguished from at the beginning

Pertinent questions

- What would have been the result of doing nothing and leaving the market to its own?
- What would have been the result of supporting local private millers in enhancing existing businesses by adding
 - dehusker,
 - welding facility
 - electricity networkby e.g.
 - free (subsidized) technical support
 - affordable financing schemes
 - subsidy to electricity networks

Lessons for future programmes

- keep it simple and implementable
- build on existing structures
- support SME's when they are in place
- create enabling environments
 - access to financing
 - legal frameworks
 - free technical/economical advise
- don't focus too much on technology

for energy interventions in Africa

Technology oriented interventions

- Support to an enabling environment for co-generation from biomass
- Biofuel oils for Rural Energisation
- Market based solar PV for dispersed settlements

Enabling environment interventions

- Skills development for clean energy provision
- Start up capital for clean Energy Enterprise Development

Capital for clean Energy Enterprise development (SUCCEED)

Need for private sector involvement in clean energy development

- Biofuels
 - Feed stock production (Pressing, refining of fuel)
 - ESCOs for village electrification
- Solar photovoltaic (PV)
 - Local assembly/production companies
 - Installation companies, maintenance. (some overlap with ESCOs)
 - ESCOs for individual or collective/institutional PV
- Solar water heating
 - Local assembly/production companies
 - Installation companies, maintenance.
- Small hydropower
 - Import, installation, maintenance
 - ESCOs for village electrification
- Hybrids of renewable and diesel
 - ESCOs for village electrification

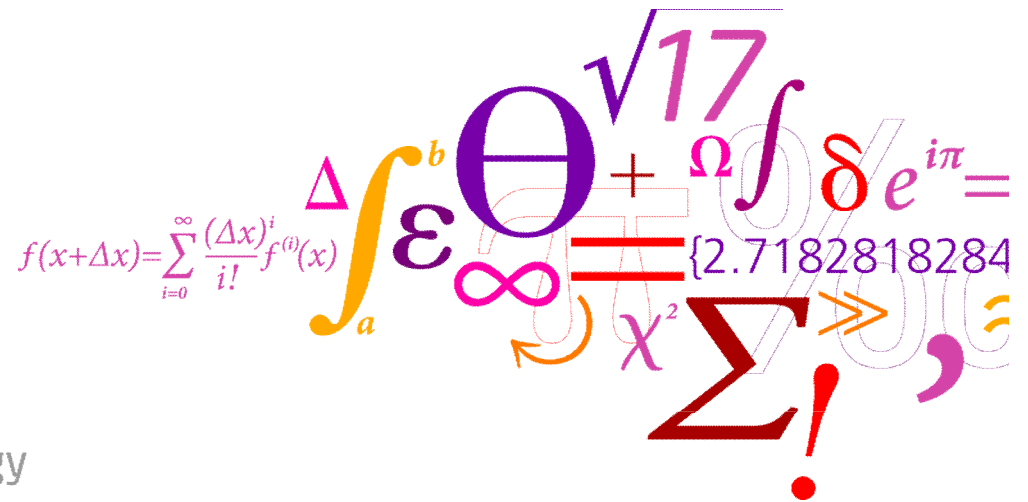
SUCCEED. Activities

- Demand assessment and barrier analysis for SME development
- Support establishing regulations and incentives that enable markets for clean energy services
- Establish seed capital investment facility targeting energy entrepreneurs
- Identify intermediary organisations, which can provide support/advice to SME development
- Establish consumer financing in partnerships with financing institutions
- Policy support

SUCCESS. expected results

- Regulations and incentives that enable markets for clean energy services
- Seed capital investment facility for energy entrepreneurs
- Available technical assistance for SMEs provided by intermediary organisations
- Consumer financing offered by local financial institutions
- Supportive policy to increased investment in the energy sector

Thanks for your attention.



A collage of mathematical symbols including \int_a^b , $\sum_{i=0}^{\infty} \frac{(\Delta x)^i}{i!} f^{(i)}(x)$, Θ , $\sqrt{17}$, Ω , $\int \delta e^{i\pi} =$, $\{2.7182818284\}$, ∞ , χ^2 , Σ , and $!$.