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ENEDOM

Energie Domestique

Climate Protection with atmosfair and ENEDOM

atmosfair gGmbH

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Enedom Logo einfügen 1 und letzte Seite plus Hintergrund
XK, 2/9/2011

1 Company Profiles and Services

atmosfair gGmbH

- 2004: Foundation under the patronage of former UNEP executive director Klaus Töpfer
- Non-profit organisation (gGmbH): climate fee tax-deductible
- Financially independent: no public subsidies
- Headquarters in Bonn, office in Berlin

ENEDOM

- The'Energie Domestique SARL (ENEDOM) was created in 1996
- aim of finding alternative substitute to firewood and charcoal leading to reduction/elimination of deforestation resulting from search of firewood and charcoal for domestic use

Key figures atmosfair 2009

- Revenue by donation: 2.400.000 Euro
- Commercial income: 113.000 Euro
- Saved carbon emissions: 104.000 t CO_2
- Expenses/Provisions for emission saving projects : 1.876.000 Euro
- Utilization of donations for climate protection projects: 92%
- Utilization of donations for staff, administration and public relations: 8%

Patrons and Advisory Board

Patrons

Prof. Dr. Klaus Töpfer

Former Executive Director of United Nations Environmental Program (UNEP)

Prof. Dr. Mojib Latif

Leibniz Institute Aquatic Sciences University of Kiel

Prof. Dr. Hartmut Graßl

Formerly WMO and Max-Planck- Institute Hamburg

Advisory Board

Klaus Milke

Head of Stiftung Zukunftsfähigkeit

Christoph Bals

Climate policy and Director of Germanwatch

Franzjosef Schafhausen

Head of division K II Federal Environment Ministry
National climate protection program

Nicole Wilke

Head of division K II 1 Federal Environment Ministry
International climate protection program

Project Standards

CDM Projects: Verification ex-ante and ex-post, standardized test methods, Kyoto currency

Auditor: Accredited and liable

Sustainability seal: exclusively renewable or energy efficiency, local benefits (WWF et. al.)

Retirement of Certificates (CERs) in official register of the Federal Republic of Germany (DEHSt)

90% of revenues are invested in the projects

2 Project Portfolio

Technologies applied:

Renewable energy (e.g. small hydro power, electricity of biomass residues)

Energy efficiency (e.g. efficient cooking stoves)

XK2

India, solar mirrors

Thailand, biogas from sewage water

Honduras, small hydro power

India, electricity from crop residues

China, hydraulic rams for irrigation

Nigeria, efficient fuel wood stoves (CDM and PoA)

India, fuel efficient irrigation pumps

Burkina Faso, green power from crop residues

South Africa, use sun for energy and wind farm

India, solar Lamps for Rural Areas

Nicaragua, Wind Farm

Slide 7

XK2 updaten
Hanna, wenn du Lust und Zeit hast, kannst du gerne diese Grafik updaten (keine Priorität)
XK, 2/8/2011

Project Example - Honduras: Small Hydro Power

Project partner	Consorcio de Inversiones S. A. (CISA)
Target group	Close-by rural population, national grid
Technology	Small hydropower (4 MW)
CO_2-Reduction	30.000t CO_2/year
Local benefits	Secure electricity supply, employment, forestation program
Realisation	In operation, UNFCCC and Gold Standard registered, currently verification

Project Example – Burkina Faso: Green power from crop residues

Project partner:	German Ministry of Environment
Target group:	Two rural communities in Burkina Faso
Technology:	Biomass gasification to produce electricity
CO_2-Reduction:	5.000 t CO_2/year, over 10 years
Local benefits:	More reliable electricity supply, additional income for farmers, South- South Transfer
Realisation:	Under construction

Project Example Nigeria - **Existing** Efficient Fuel Wood Stoves Project

Project partner:	DARE (Development Association for Renewable Energies), Lernen - Helfen - Leben e. V.
Target group:	12.500 households in North Nigeria
Technology:	SAVE80, 80% saving compared to traditional stoves
CO_2-Reduction:	30.000t CO_2/year, average of 10 years
Local benefits:	Reducing Indoor Pollution, Combating Deforestation, less expenses for household energy
Realisation :	In operation, UNFCCC and Gold Standard registered

Project Example Nigeria - **Existing** Efficient Fuel Wood Stoves Project

Status quo: 4,000 Stoves Sold

Maximum Size: 12,500 Stoves

Timeframe : October 2009 – September 2018

Project Area: Guinea Savannah Zone of Nigeria

Project Implementer: DARE, Nigeria

Emission Reductions achieved: ~2,000 t CO_2

2nd. Project for Nigeria: „Improved Cooking Stoves for Nigeria Programme of activities“ currently under validation

3 Why an efficient cook stove programme in Rwanda?

- ”Rwanda is one of the most - if not *the* most - densely populated African countries. With a total of about 8 million persons and more than 350 persons per km² pressure on the land is already high and this is likely to intensify.“

- “...the use of wood will continue to grow for two reasons: (i) population growth; and (ii) more households start using charcoal.“
  (BEST Study 2009)

- “The combination of high demand aggravated by low use efficiency has contributed to deforestation, rural poverty and the rural energy shortage in Rwanda.“
  (RWANDA BIOMASS ENERGY & STOVES SURVEY, MININFRA 2009)

- “Carbonization techniques are highly inefficient with wood to charcoal conversion rates of about 11 percent, translating to the use of at least 1.3 million tonnes of wood annually.“
  (MINIFRA 2009)

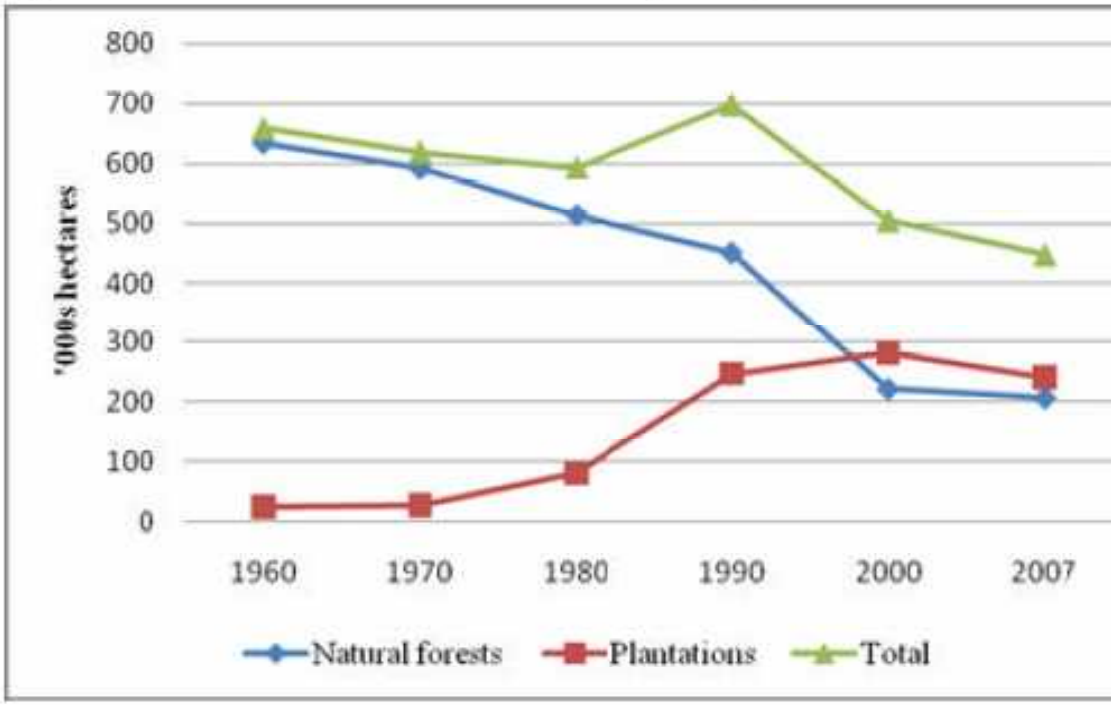
Why an efficient cook stove programme in Rwanda?

Negative energy balance: consumption of wood (firewood and charcoal) is larger than the estimated sustainable production.

charcoal is the main urban fuel, particularly in Kigali (expected to remain so in future)

Lack of alternative substitutes (because electricity is expensive and generation capacity limited, methane storing in bottles such as LPG is expensive)

Figure 3: Evolution of Forest Areas in Rwanda (> 0.5 ha)



Sources : MINAGRI for 1960 to 2000, ISAR for 2007

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4 The Solution

- Direct utilization of wood as cooking fuel with highly efficier wood stoves: The SAVE80 cook stoves
- Wood savings due to avoidance of charcoaling and highly efficient wood stoves:

<u>Demonstration of wood savings</u>

In order to boil 6 litres of water you need:

- Charcoal Stove: 2 kg of wood (converted into charcoal)
- 3 stone Fire: x (1,25?) kg of wood
- SAVE80 efficient wood stove: 0,25 kg of wood

- **Wood savings of up to 80%**
- **Quantity of wood with SAVE80, similar to quantity of charco today**

Why the Save80 Cook Stove?

Save80 means that an experienced person can save 80% of the firewood consumption of a traditional 3 stone fire.

=> the Save80 only needs 250g of wood to boil 6 litres of water

Usage: cooking, frying and deep frying

Small pieces of wood, which are not traditionally collected and burnt can be used

(average) time necessary for boiling of 6 litres of water: 25 min.

The Save80 Cook Stove Kit

The Save80 Cook Stove Kit consists of:

- Save80 cook stove (stainless steel, Lifetime >10 years (width: 35cm, height: 60 cm, weight: 5kg)
- two x 8l pots with glass lid (stainless steel)
- Heat Retaining Box „Wonderbox“

  → The Wonderbox is used for cooking with retained heat and for conserving high temperatures.

  → The pot is placed inside the wonderbox. After 2 hours the temperature of 6 litres of boiling water will decrease from 100° C to about 90° C only. The material of the wonderbox is heat-proof

Logistics:

- one 40 foot container can hold about 2,000 Kits
- Stoves are imported from Germany and are assembled in Rwanda

General Principles for the cook stove Programme

- Sales of Cook Stoves only to households which currently use charcoal or wood for cooking purposes with a strong focus on Kigali
- Monitoring of cook stoves usage as important as sales of the cook stove
- Cooperation as Partnership: The Interests of all parties are aligned through the project benefits and incentives ➔ Sales and operation of as many cook stoves as possible
- Transparency and accountability: all operations will be checked and monitored by independent third parties

The Financials

- Atmosfair is prefinancing the hardware plus all costs for the CDM and Gold Standard Process
- ENEDOM covers all costs for the operations of the project in Rwanda
- Atmosfair is refinancing the costs by receiving Gold Standard Carbon Credits over 10 years
- Stoves will be sold at a reduced price to users as:
  - The costs for the stoves and project set up can not be financed 100% by the CDM
  - Purchase of the stoves will increase usage of the stoves
- The price will be determined by ENEDOM in a way to balances financial capabilities of the target users, cash requirements to cover costs and sales targets preset by atmosfair. Atmosfair will set a price ceiling to avoid overcharging.

WIN – WIN – WIN – WIN SITUATION

- Cook Stove Users WIN: healthier, more efficient cooking, time and cost savings for the people of Rwanda with a modern and high quality cook stove

- The Environment WINs: Reduced deforestation and Erosion due to 80% less wood necessary for cooking, active mitigation of global climate change

- ENEDOM WINs: The cook stove programme offers a sustainable income opportunity and will result in job creation

- atmosfair WINs: By receiving high quality Emission Reduction Certificates to fulfill its obligations towards its donors.

5 Project Implementation and Timing

Phased Implementation

2011:

- Test sales of 500-1500 stoves
- Validation of the programme under CDM and GS
- Application for national approvals for the programme by Rwandan authorities

2012:

- Registration of the programme under CDM and GS
- Full scale implementation of the programme can start after registration:
  - Sales target of 4,000-6,000 Stoves
- First verification of emission reductions by independent auditors

2013-ongoing

- Ongoing sales of stoves (>100,000)
- Annual verifications of emission reductions

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Energie Domestique

atmosfair gGmbH
Zossener Str. 55-58, D-10961 Berlin
+49-30-6273550-0, info@atmosfair.de
www.atmosfair.de

The‘Energie Domestique SARL
(ENEDOM)
P. o. Box 339 Kigali
+ 250 78 850 1309, enedom@yahoo.