A regional approach to a responsible use of biomass energy

Programme for Biomass Energy Conservation (ProBEC)

'Saving Energy for a Better Future'

Introduction

- Biomass energy is associated with everything that is bad and negative – poverty, backwardness, disease, sickness and inconvenience
- Can the use of traditional forms of energy be changed in such a way that it can be regarded as modern, clean and convenient?
- Biomass energy already supplies more that 70% of the energy requirements of households in SADC – how can sustainability be ensured?

Background to ProBEC's challenge…..demand-side issues

- More than half of the population of SADC live on less than $1 a day.
- 80% of population relies on biomass (firewood, charcoal, agricultural waste)
  - Cooking
  - Space heating
  - Small Businesses
- Cooking energy represents 70% of the energy used by poor,
- Up to 30% of poor people's monetory income is spent on domestic energy

Supply-side issues

- Rising fuel costs - the paraffin price has increased with 87% since 2007 in SA, electricity prices will increase by 40% per annum
- Limited access- only 24% of the population in sub-Saharan Africa have access to electricity compared to 40% in other low-income countries.
- Strained generation and distribution capacity - The entire generation capacity of the 48 countries of sub-Saharan Africa at 63 gigawatts (GW) is comparable to that of Spain
- Result – it is highly unlikely that the face of energy supply will change significantly in the foreseeable future

Where does ProBEC work?

- Lesotho
- Malawi
- Mozambique
- Tanzania
- Zambia
- Botswana
- Swaziland

- In South Africa, ProBEC cooperates with BECCAP, a BMU funded programme with similar objectives.
- In Zimbabwe, operations were suspended but may be re-activated quickly
- In DRC ProBEC supported start-up activities

Who we are..

- ProBEC is a multi-donor funded, GTZ implemented project
- Our official partner is the SADC Secretariat and SADC member states
- We deal with the energy challenges of low-income people and institutions
- ProBEC's vision is -"Low-income groups in SADC have improved access to sustainable and affordable energy"
- Our mission is -"ProBEC promotes improved energy solutions through market development and policy support"

Some of our team members

Overall Goal, project purpose

- ProBEC's *overall goal* -"The access to and security of supply of basic energy for people with low incomes in the SADC region is improved."
- The *project purpose* is to address basic energy security and access of low-income groups in SADC. The project **focus** is therefore on basic energy requirements of low-income households, small business and institutions that rely mostly on biomass energy sources to satisfy their energy needs.

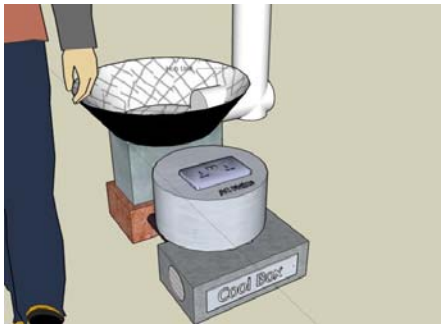
Improving energy access and security of supply

- We facilitate the establishment of sustainable supply chains for efficient cooking appliances
- Products must be at least 40% more efficient than the baseline technology availbale
- Some products achieve up to 75% savings
- Target groups
  - Individual households
    - » Efficient cookstoves (wood, charcoal)
  - Institutions (schools, SMEs, jails)
    - » Institutional cookstove
    - » Rocket Barns for Tobacco curing
    - » Bakeries

Supporting the development of a sustainable supply chain for mass produced products

StoveTech or Greenheat

Other exciting new developments



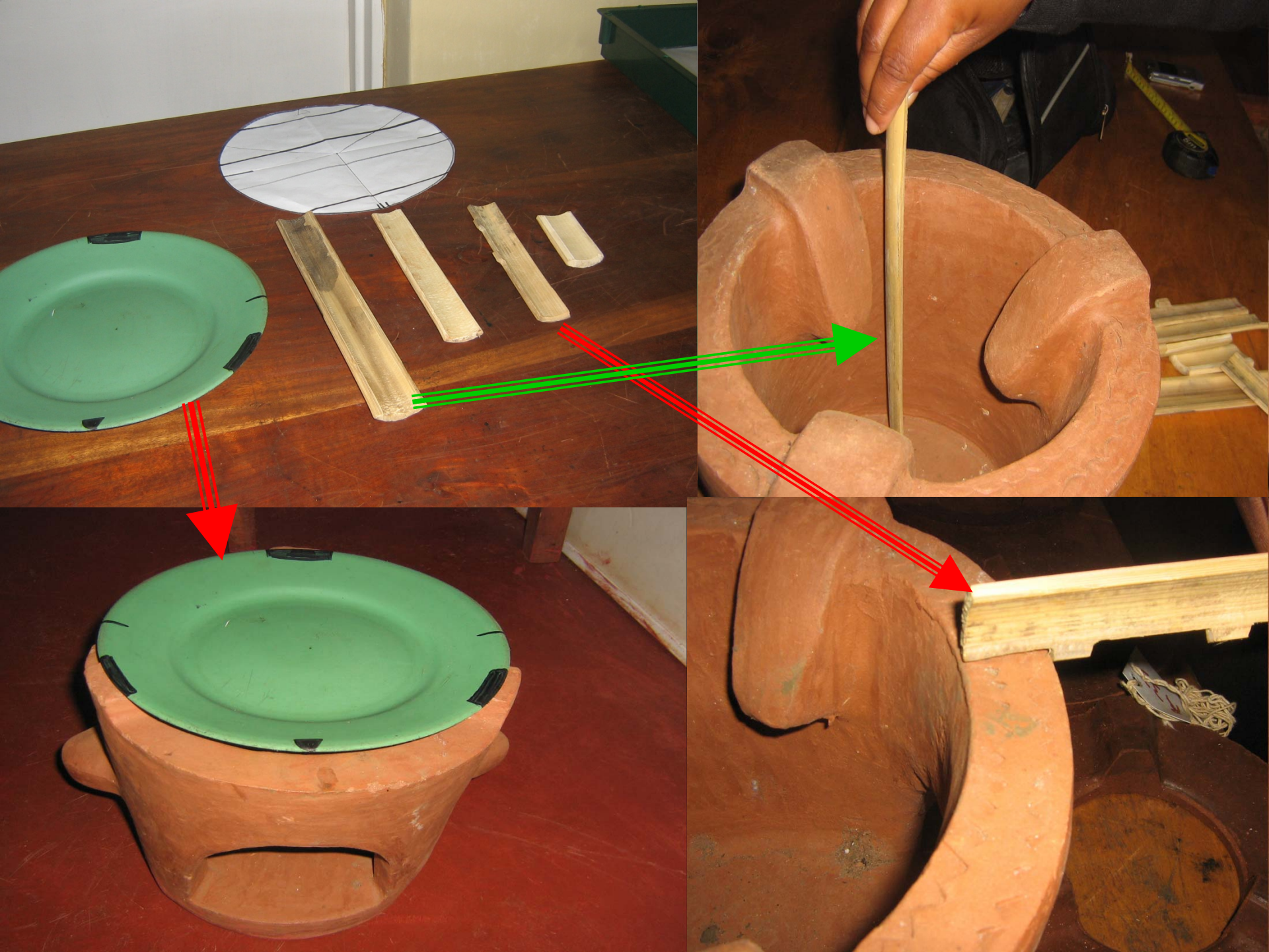
Score thermo-acoustic stove

Bosch-Siemens plant oil stove

Phillips stove

Developmental, artisanal, commercial approach
Fixed mud stove

Portable clay stoves



Commercial, semi industrial production: Poca (charcoal stove)

Improved institutional stoves (Rocket stove)

Institutional stoves: Fixed “Lion”stove

Other technologies: Bakeries

Rocket Bakery

and its products

Other technologies: Rocket barn for Tobacco curing

Loan to smallholder farmers by Tobacco buyers,
Refinanced by off-setting loans against produce
at the end of the season

Improving energy access and security of supply for low-income consumers: key results

- Up to December 2009, more than 1 million people benefitted from improved cooking devices
- Up to December 2009 a total of 110 200 improved appliances were sold (over 18 months)
- 90% of users reported using their improved stove daily (Tanzania)
- 85% of the households use improved clay stoves for more than two thirds of their cooked meals (Malawi)
- In terms of time and money saved through the use of improved stoves:
  - 58% of women do other household chores such as washing dishes and cleaning the kitchen and resting
  - 7% use it to conduct others businesses like frying donuts and expanding their poultry business.
  - 5% do agricultural activities
  - 7% have time to attend family members
  - 70% of women invested in buying household items like food for the family, school items for the children and expanding small home industries

In Mozambique

- Before introduction of new stoves, wood lasted **4** days in Sofala, and in Manica **3,5** days. After the introduction of the new stoves, the wood last **8** days in Sofala and **9** days in Manica
- Time taken to collect wood reduced with introduction of stoves
  - Before new stoves, in Sofala it was necessary every 3,5 days while in Manica every 2 days,
  - After new stoves, in Sofala the time was reduced to 2,5 days while in Manica to 1,5 days

Impact on income generation

Improving political framework conditions

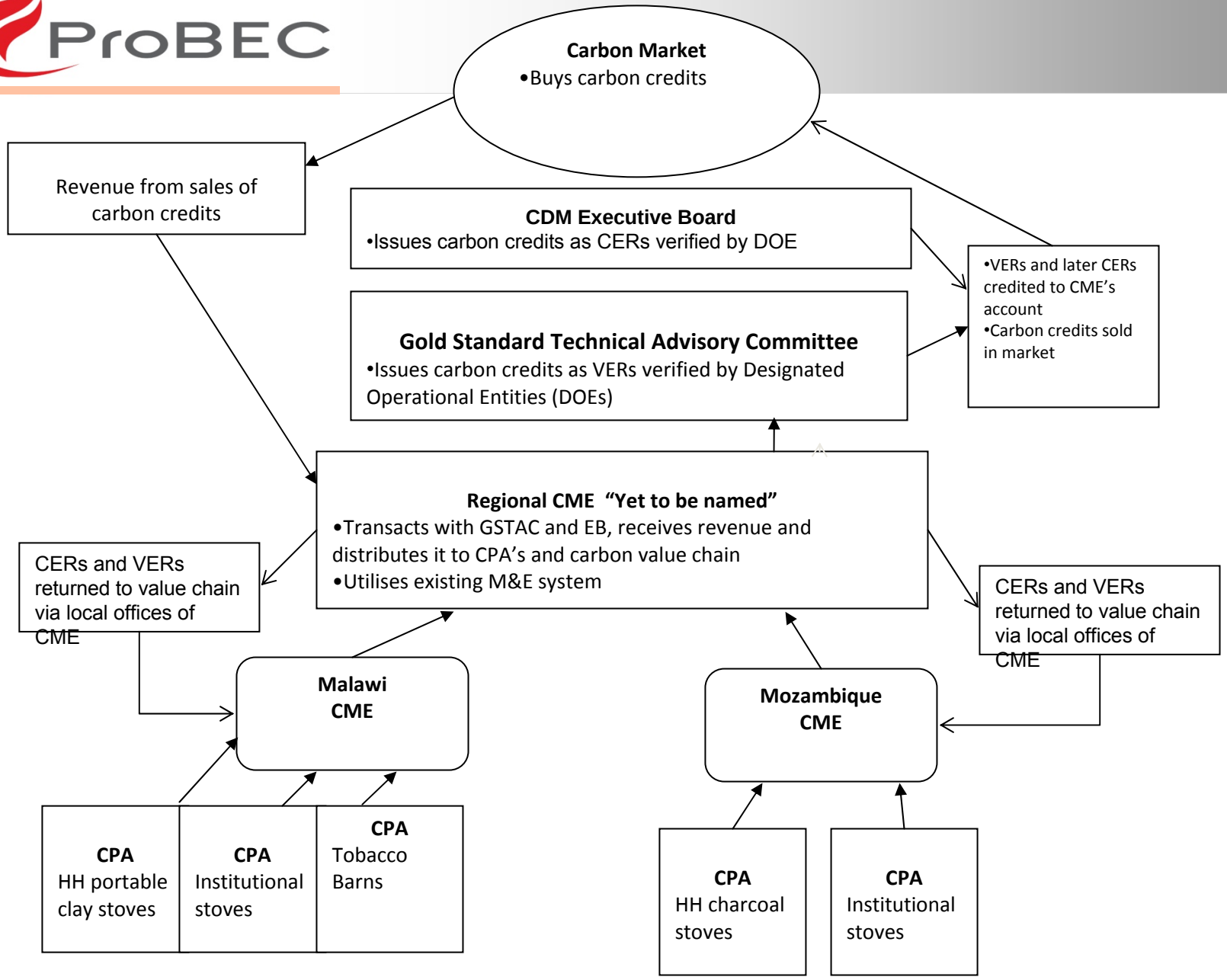
- ProBEC supports national Governments to develop biomass energy strategies and action plans to address biomass energy challenges
- We aim to improve coordination amongst role-players in the energy sector
- ProBEC endevours to raise the profile of biomass as an important energy source in SADC

Key results

- 5 countries (Lesotho, Botswana, Malawi, Tanzania and Swaziland) are at different stages with the development of a biomass energy strategy:
- Zambia and Mozambique applied for support to develop BEST
- ProBEC is supporting the development of a regional biomass energy strategy

Implementing the ProBEC's exit strategy

- German support (BMZ and GTZ) will end in December 2010
- SADC elected to continue with ProBEC
- In preparation of the German exit, ProBEC designed an exit strategy to be implemented from mid 2009 to end 2010. The exit strategy is focused on ensuring sustainable structures after the German exit
- The exit strategy contains seven elements:
  - Creating sustainable local structures, in which current ProBEC activities are embedded
  - Obtaining Government buy-in to the future of Basic Energy Conservation in their countries
  - Ensuring continuity in the work on bio-fuels, especially development of sustainability principles for SADC
  - Implementing a carbon entity based on the model of programmatic CDM.
  - Operationalising the Stove Efficiency Testing And Research (SeTAR) Centre 'hub-and-spoke' relationships with regional universities
  - Establishing a 'basket fund' at SADC to absorb new and unspent funds for future Basic Energy Conservation activities
  - Creating a long term Member State funded post within SADC to administer the basket fund and provide overall coordination of the Biomass and biofuel sectors.
  - Creating opportunity for bilateral donors to fund bilaterally country programmes implementing ProBEC's activities
  - Focus on market development activities using factory finished products.


Carbon Market
•Buys carbon credits
Revenue from sales of carbon credits
CDM Executive Board
•Issues carbon credits as CERs verified by DOE
•VERs and later CERs credited to CME's account
•Carbon credits sold in market
Gold Standard Technical Advisory Committee
•Issues carbon credits as VERs verified by Designated Operational Entities (DOEs)
Regional CME "Yet to be named"
•Transacts with GSTAC and EB, receives revenue and distributes it to CPA's and carbon value chain
•Utilises existing M&E system
CERs and VERs returned to value chain via local offices of CME
CERs and VERs returned to value chain via local offices of CME
Malawi CME
Mozambique CME
CPA HH portable clay stoves
CPA Institutional stoves
CPA Tobacco Barns
CPA HH charcoal stoves
CPA Institutional stoves

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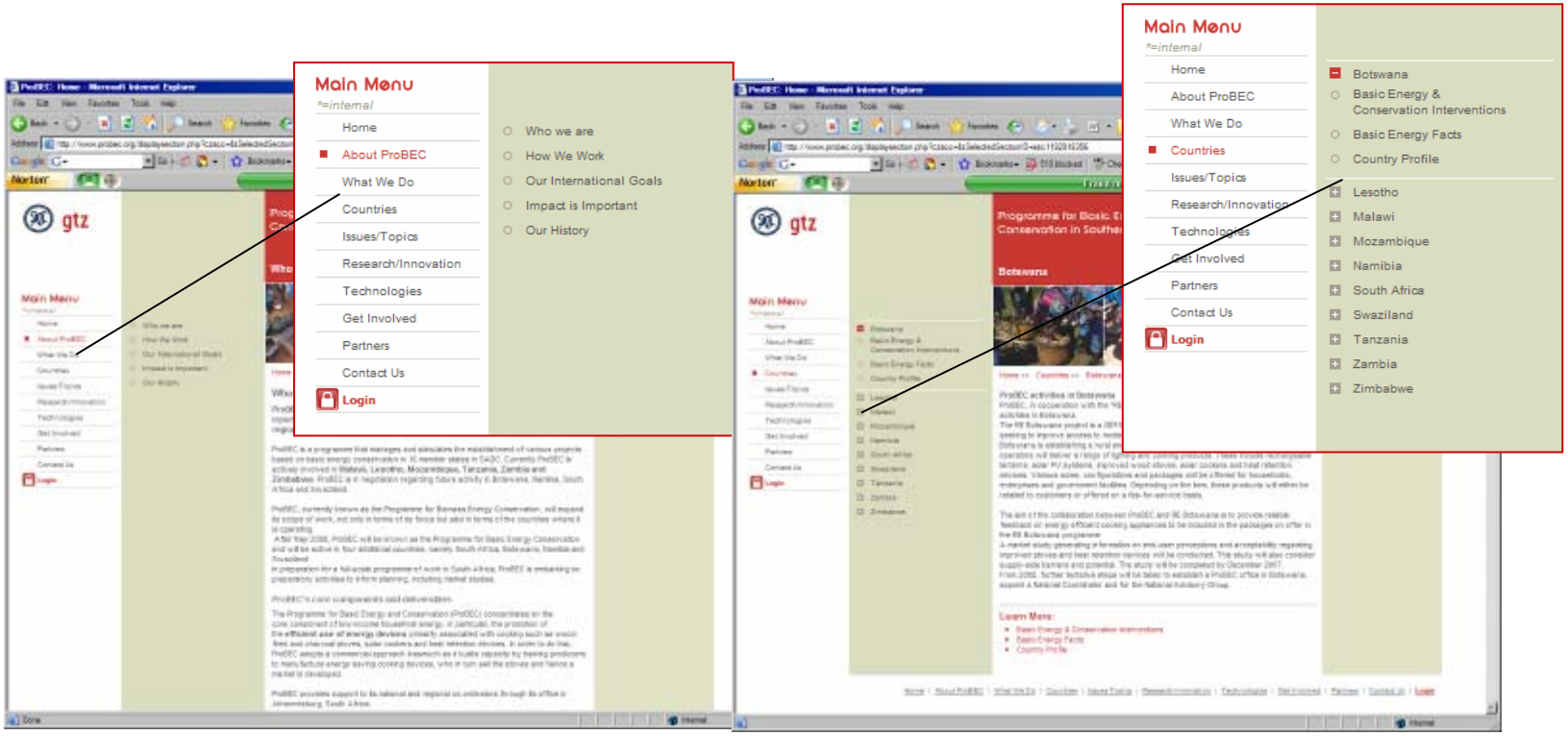
- regularly updated to keep up with current topics and events



Thank You
Questions?