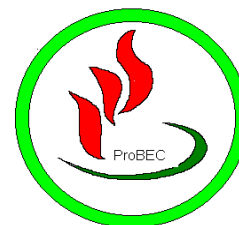


SADC
Southern African Development Community

EU
European Union

BMZ
German Ministry for Economic Cooperation and
Development



gtz:- German Technical Cooperation

ProBEC - Programme for Biomass Energy Conservation in Southern Africa

Lesotho, Malawi, Mozambique, Namibia, South Africa, Zimbabwe

SPECIAL FOCUS ON ZIMBABWE

Newsletter, February 2001

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Fourth Regional ProBEC Workshop 6th – 10th November 2000 Mzuzu, Malawi

This 5-day workshop, an annual event of the biomass energy conservation programme was held in the northern city of Mzuzu in Malawi. The workshop was attended by more than 26 participants from the six partner countries and GTZ Germany.

Experiences were shared on demonstration project implementation, strategy and information development systems. Also discussed was the HIV/AIDS pandemic and its long term impact on the programme. In addition outstanding issues from the previous workshops and meetings were deliberated upon.

Successes of the Programme

Since 1997 the programme has transformed to become a recognized SADC project. In June the first evaluation of the programme was done and plans for extension have since been distributed to member countries for feedback. Through symposiums, workshops, training and conferences, regional networks and linkages have been established. As a result joint efforts and co-operation have been achieved in planning and other BEC related activities. A training module on stove design and dissemination strategies has been developed and tested. In addition procedures and instruments developed for demonstration projects and monitoring are being used.

Successes of Partner Country

Under the programme, Malawi, Mozambique, South Africa and Zimbabwe are undertaking demonstration projects while Namibia and Lesotho are doing strategy development and information gathering and exchange respectively.

For demonstration projects general steps to be followed during implementation were outlined. From the workshop presentations, the countries did not follow the same sequence of steps. The general steps were site selection, baseline surveys, planning, technology selection and monitoring.

In implementing demonstration projects, a number of constraints were identified. Difficulties were encountered during identification of stakeholders as well as accessing relevant information for planning. The education level of stove promoters was perceived to be low. Key stakeholders were failing to effect their roles and responsibilities to expectations. Although this was attributed to time limitations, it was suspected that the rigid traditional mindsets from which they operated could not be changed. It was noted that their legal structures did not accommodate community needs. In addition projects were not synchronized to their mandates. As a result activities in the area of BEC were ignored.

The number of forms completed on monitoring the projects, was reported to be cumbersome for the target groups and impeded feedback on progress.

It was highlighted that other sectors such as Poverty Alleviation, Gender and HIV/AIDS were shadowing programs like BEC in terms of resource mobilization and time demands. AIDS was reported to be threatening the achievement of ProBEC objectives. There has been observed increased biomass energy usage at funeral gatherings and collapse of economic activities through deaths of business owners or artisans.

Visit to Rumph District

A field visit to Rumph, where one of Malawi's demonstration projects is being implemented, afforded the participants an opportunity to interact with the community. It enhanced understanding of issues related to structures, systems and procedures, technology dissemination approaches, technical aspects of improved stoves and capacity building.

From observations and interaction with the community, the stakeholder commitment was commended as high. There were good working relationships within the communities. Unfortunately kitchen management techniques were not being practiced.

The issue of project commercialisation to achieve sustainability was debated during and after the visit. There was greater support among the participants that the commercial approach be promoted as a sustainable strategy in implementing stove projects. However precautionary measures were noted. There was need to tie the implementation with a high quality product, variation in seasonal income and cultural practices. A few stove promoters should be trained to avoid flooding the market and threatening viability.

Way Forward

Regarding the future of BEC projects It was generally agreed among the participants that:

- there was a need for profiling BEC
- integrating BEC into other sectors
- planning for sustenance through commercialisation
- Building the capacities of the national steering committees to become service providers. ♦

REMINDER

**PLEASE REFER TO THE MZUZU
REPORT FOR RECOMMENDATIONS**

Strengthening the Role of the Stakeholders Workshop for Zimbabwe National Steering Committee

Started in 1997, the programme on biomass energy conservation (ProBEC) operates through three key facilitators namely ProBEC Office in Harare, National Steering Committees (NSC) and the Implementers in six SADC countries; Lesotho, Malawi, Mozambique, Namibia, South Africa and Zimbabwe. From the project evaluation report of 2000, it was felt that for the NSC, there was need for further clarification of roles and responsibilities, institutionalisation of ProBEC activities in job descriptions of members and improvement of procedures and co-ordination with the regional office. It was on this basis of the above reasons that a facilitated meeting was organised and held at Wild Geese Lodge in Harare in December 2000. The first of its kind, the workshop attracted thirteen participants from the NSC and ProBEC.

To improve on the relevance and effectiveness of the NSC, the core functions of the key players were analysed. It was agreed that the NSC be responsible for the steering and co-ordination of ProBEC interventions and also strengthen linkages with other ProBEC activities in the country. It was resolved that, it was the duty of ProBEC office to enhance the capacities of the facilitators to enable them to fulfill their roles in ProBEC. The implementers, i.e. women stove promoters, extension agencies, Social Forestry Project etc. were to implement the demonstration project.

The composition of the NSC was reviewed, and one member was retired and two more taken on board. The final composition of the NSC has 7 members. To achieve balance of representation in the committee, women are represented by the Zimbabwe Women's Bureau, research and development by SIRDC, Government and SADC contact point by Department of Energy, implementers by Forestry Commission and Agriculture and Extension Services and NGOs with household energy bias by Biomass Users Network and Southern Alliance for Indigenous Resources.

Key positions identified for the NSC were the chairperson, secretary and member. The chairperson is answerable to the national SADC/country contact point and employer. In addition he/she is also answerable to the chairman and the employer. The rest of the positions are answerable to the ProBEC Office and the employer. Sub-committees for core functions when required are answerable to the NSC through the chairperson.

It was agreed to produce quarterly reports that include progress and financial details. Minutes of meetings and reporting to the NSC should be done after every meeting. Other arrangements will be as outlined in the activity plan and minutes or

as specified in the contract. Decisions will be made independently or in consultation with others depending on the gravity of the issue. For eligibility for membership in the NSC, it was agreed that the organisations or persons should be doing BEC related activities unless other areas are agreed upon. Members' composition should be cross-sectoral to include NGOs, government, research, communities and donors. It should be gender sensitive and two names should be submitted with one being an alternate member.

The tenure system should be rotational. Membership of NSC should at least be for the duration of each programme phase for continuity unless there are other reasons for which termination or replacement is necessary. The committee should have 7 permanent members with a minimum of 5 forming the quorum. Linkages were encouraged with organisations to have opportunities for research. Capacity building should be encouraged through task assignment and training. A mechanism for sharing of experiences and information exchange with NSC, ProBEC and the region should be put in place.

The benefits to be derived by members through their participation in the committee would be:

- Access technical expertise and experience
- Mobilisation and sharing of resources
- Gaining legitimacy out of the linkage
- Task sharing opportunities
- Opportunities to raising of profile of ProBEC

Recommendations or suggestions raised included;

- Facilitation of consistent attendance to NSC business by providing transport
- Formalisation of meetings by developing a yearly calendar of NSC meetings
- Formalisation of nomination of two member representation per institution with one acting as an alternate
- Include ProBEC activities in the key result areas of the member institution representatives
- Developing action plans with allocated roles and responsibilities for members
- Including NSC task functions on annual plan
- Carrying out half yearly reviews of activity plans
- Specifying the names of the target recipient on e-mails and other communication letters
- Directing e-mail connection for chairperson
- On important messages, adding "PLEASE CONFIRM RECEIPT OF MESSAGE". ♦

Workshop on the Zimbabwe Sustainable Biomass Energy Management 18th February 2001

In Zimbabwe there has been an on-going engagement of various stakeholders including local authorities, NGOs and the World Bank in order to investigate problems and derive solutions for the proper management of biomass energy resources in the country. On the 18th of January 2001, the stakeholders came together at a workshop where participants were expected to provide inputs into policy formulation management of forestry resources, land use patterns and creation of enabling environment for equitable use of available resources.

The key management issues identified were land use planning and ownership of resources. For successful implementation the workshop recommended that the following should be done:

- Ensure stakeholder participation in the process
- Establish accountable institutions for the management process
- Networking and strategic collaboration by stakeholders
- Integration of global issues and international protocols into the management process
- Responsible authorities derive clear policies and ensure that there is synergy between policies and practices
- Extending the issues beyond rhetoric by conducting adaptive research for the demand
- Management of resource including efficiency measures

- Experiment with best process and use of participatory methods

The workshop addressed the following key areas:

- a) Contradiction between existing laws and actual exploitation of resources should be removed;
- b) The process to address broader concerns should be revisited;
- c) There should be regular monitoring of laws and policies;
- d) Policyholders should consult widely on proposed policies and sectoral policies should be pro-active.

With regards to creating an enabling environment, the following recommendations were made:

- There should be decentralization and devolution in policy making process;
 - Policies should address security of tenure of resources
 - Land reforms should encourage conservation of resources
 - Policy formation on natural resources should consider international conventions and international attitudes to use of natural resources
 - Good governance and respect of the electorate should prevail over everything else
- ♦

Appropriate Technology?

Zimbabwe Demo Project Takes Off *A Report from NSC*

Zimbabwe's past stove projects have been marred with failures. Most if not all projects collapsed soon after donor funding termination. Causes for collapse have been attributed to poor implementation strategies, inappropriate technologies, lack of community participation and training. Armed with valuable past experiences, the demonstration project presented an opportunity to show "the right way" of stove project implementation.

From a number of potential sites, suggested by stakeholders, the NSC conducted site identification. The committee then decided on Hurungwe district in Mashonaland West province. Among the favourable characteristics for the site were serious wood shortages, organised community structures and an on-going forestry project. ProBEC intended to address the biomass energy demand side and the forestry project was concentrating on the improvement of the supply side.

Advantages that were gained through this integration were immense. Prior to ProBEC the Forestry project had organised institutions from community to national level that were responsible for project management and implementation. In addition results from earlier activities undertaken by the forestry project were used by ProBEC to avoid duplication of activities and thereby saving of human and financial resources. ProBEC intervened in those areas deemed deficient like the survey. It was recommended that an energy-biased survey be conducted since the other survey left key energy issues. Information meetings were arranged with the communities and SFP that were aimed at raising awareness and soliciting community inputs on the way forward. A planning workshop with representatives of the communities was undertaken. The plan of action detailed activities and the expected results from the communities for year 2000.

A baseline survey involving representatives of NGOs and government officials working in the area. The survey provided the basis for benchmarking, possible intervention mechanisms and a basis for project monitoring and evaluation. Proven fuel-efficient stoves were identified and introduced to the communities for trial and testing. The community has already decided on an already an improved mud stove, *Jengetahuni*. Prior to introduction of stoves, stove promoters were selected by the communities themselves and were trained to build and market the stoves.

Capacity building has been and continues to be undertaken within the community. Training courses have been provided in stove construction

and testing, quality control, marketing skills and better kitchen management techniques.

A commercial approach was adopted for stove dissemination. For a stove constructed, a villager was expected to pay the stove promoter Z\$100 or an equivalent of two buckets of maize grain or two live chicken. More than 250 stoves have been constructed. It is yet to be established if all are being used. The popularity of the stoves has spread to adjacent villages and services of stove promoters are being asked for.

Despite the payment of the service offered by the promoters after stove construction, they felt the project should pay them also. Inevitably this could not be provided considering the financial limitations and the need to sustain the project. It was mutually agreed that the promoters be given construction kits, promotional materials in the form of T-shirts. Immobility of the extensionists responsible for monitoring the activities of the promoters was a hindrance to effective delivery of their duties.

Despite all these problems the project is forging ahead. A planning workshop for the year 2001 was held in December 2000 at Karoi Hotel in the province. Members of the NSC, ProBEC office, SFP and Agritex extensionists from the project area attended the meeting. The main activities agreed for the year 2001 include:

- Conduction of a second baseline to measure success of the project
- Certification of stove promoters
- Exchange visits
- Preparation of home based care booklet for the terminally ill patients
- Publicity activities

We hope that the implementers and the NSC will be able to devote their efforts and commitments to ensure that the demonstration projects will succeed beyond 2001.

Good Luck. ♦

ADVICE FROM THE EDITOR

Make sure your brains are engaged before you release your mouth into gear.

When kissed by a thief, count your teeth, there might be some missing.

When you dance with the crocodile beware of the time when the music stops.

Blessed are those who sit on a needle for they shall surely rise.

GTZ Small Projects Funds Donates to SIRDC

GTZ Germany signed an agreement with the Energy Technology Institute (ETI) of SIRDC-Zimbabwe in January 2001 that will see SIRDC benefiting from a ECU\$12 500 grant for the purchase of laboratory equipment.

Named the Biomass Stove Test Centre, the proposed testing laboratory will have the capacity to provide services in stove testing and indoor air pollution characterisation.

There is an anticipated increase in demand in biomass as a major source of energy for the majority of the rural and urban poor in the region. Increase in demand without due regard to nature will inevitably add to the problems of environmental degradation and livelihood. The onus is upon us, to ensure that we achieve sustainability between energy supply and better livelihood through technological innovation and the ability to generate and use energy in an ecologically sound manner.

Technology development needs the support of a well-equipped test facility. Hence improvements in wood burning stove technologies can be realised with the support of accurate measurements. As an old adage says, "to measure is to know".

Information on stove performance in the region is limited despite the role played by stoves in the day to day lives of the people. Stove testing is necessary and important in that;

- it aids in policy for selection of design
- it provides reliable data on stoves
- it gives insight into the process of combustion and heat recuperation
- it aids in performance improvement
- it provides information for comparison with other stove models

As part of the regional capacity building, GTZ ProBEC will fund two training courses on stove testing. One course targets the stove promoters who are implementing demonstration projects in rural communities under ProBEC. The second course will be for scientists, engineers and technical people from research institutes or universities in the region and will be addressing training needs in stove and air pollution characterisation.

The Director of ETI, Prof. M. M. Elmissiry acknowledged by saying, "we thank GTZ for the trust in implementing this project and we assure you of doing our best to fully deliver our obligations". ♦

The Link between Biomass Energy Use and Health: A Case Study of Hurungwe District *Lasten Mika, SIRDC Zimbabwe*

This paper which was presented at the conference on Indoor Air Pollution in the USA in May 2000, highlights the end-users' perception on links between health and use of fuelwood and stoves. The information was analysed from the baseline survey conducted over eight days in February 2000 in three villages namely village 28, village 41 and village 68 of Hurungwe district in Zimbabwe. The areas under consideration fall in natural region IV that is characterised by low rainfall of less than 500mm and high temperatures of 25° Celsius.

Methodology

A systematic random sampling with a 15% household sampling intensity was applied on each of the three villages. The villages were then sub-divided by the number of kraal-heads. A nine member enumerating team selected from organisations working in Hurungwe conducted the household interviews using a formatted questionnaire.

During the survey, the enumerators had to be forced by circumstances to deviate from the planned random sampled households. This was mainly due to the unavailability of people at targeted households either because they were in the fields, attending a funeral or in town shopping. As a result the next nearest household would be interviewed.

Results and Analysis

A total of 123 out of 693 households were interviewed. The gender balance was biased in favour of women which was desirable as household issues are mainly women activities. Analysis of the survey results indicated that wood fuel was the dominant source of fuel for cooking and heating while paraffin was mainly used for lighting. The villagers were experiencing fuel shortages and as a result they were using low quality alternatives such as seedpods, tree bark, tree roots and twigs. In village 41, some households were cutting and using fresh wood. At most the villagers were travelling for 6 km in search of wood which they carried on their heads. Fuel procurement could take at most two-thirds of the day time for mostly women and children.

Although the survey concentrated on qualitative data gathering the possibility of links between energy use and health were apparent. The villagers indicated incidences of coughs, eye problems, headaches, tuberculosis and influenza which they believe are a result of use of low quality fuels. In village 41, the villagers indicated high incidences of eye diseases, which probably were a result of high smoke levels in the kitchens, attributed to the use of wet wood. Further the metal grate stove, a modification of the three stone fire is a common stove in all villages and is not suitable for burning small twigs seedpods, tree bark, tree roots etc.





Another possible link is between the location and design of the kitchen in terms of ventilation. Unfortunately there are no scientific evidence gathered that can substantiate the link.

Way Forward

Results of the survey need to be complimented by activities that will include health –related issues as part of the activities and outputs of the project. There is need for more assistance through capacity building within the country both in human resources and equipment that will provide for quality scientific data gathering and analysis for the improvement of lives of rural communities. Use of improved stoves can alleviate problems associated with poor burning as is now being done in Hurungwe. In addition other support services such as better kitchen management techniques can be promoted to save fuel and promote a healthy kitchen environment.

Wood Burning Stoves of Zimbabwe

The idea behind this article is to highlight stoves that have been used and are currently being used in Zimbabwe. This is dedicated to various organisations and individuals that have contributed to improving the kitchen environment and conserve energy. The stoves presented here are mainly biomass burning stoves.

It is important to re-look at past efforts and reconcile with new ideas to achieve meaningful results in stove technologies. This is not a conclusive effort but provokes inputs from readers to contribute further information, corrections or additions on stoves highlighted below or those not included.

The Three Stone Stove

The most common traditional stove, it is affordable and easy to make. Built with three movable support stones and a grate (optional), this stove is easily adjustable to hold any size of a pot. It also provides warmth and with improvements like wind shielding, the stove efficiency can be greatly improved. However it poses security risk to the user and children.

The Metal Grate Stove

Pseudo-named the **Mbare Stove** (a suburb in Harare, probably its place of origin) or metal grate. It was introduced in the early eighties and has remained to date Zimbabwe's successful commercial wood stove. A modification of the three stone fire, the stove has enhanced pot security. It is multi-pot and can be made to any height to suit the user needs. Affordability, portability, durability and low maintenance are among the features that have favoured the high adoption of the stove.

Hollow Core Cookers

It was developed by a private company Hollow Core Pvt, for Triangle Pvt Limited to address energy needs of the workers at the estate. The stove is a metal cylinder with a solid steel core

and a compactor for packing fuel. The fuels used were wood shavings, cotton waste and baggasse. The stove was not successful. It was reported that it was difficult to light and even worse with wet fuels. There were problems with waste storage in the small house provided by the employers. Cotton waste produced irritating smoke leading directly to ill health (greater incidence of flue and chest pains). The high intensity heat damaged pots and flying ash caused small holes in clothes. The food quality was poor, as taste was affected, children had to be removed from the vicinity for fear of burns.

Tsotso (Small sticks) Stove

Tsotso is vernacular word for small sticks. The stove is a small portable metal single or multi-pot wood burning stove. It is constructed from metal sheet with vermiculite insulation enclosed between the inner and outer cylindrical walls. The combustion system is extremely efficient and the stove will effectively burn small pieces of wood, and other waste. Originally developed by the Development Technology Centre (DTC) based at the University of Zimbabwe. Tsotso stove is a commercial product produced by a local engineering company.

Among the desirable features of the stove is fast cooking, less smoke, and fuel economy. However it has been criticised for damaging metal pots at the centre. Traditionally people want to see the fire to enable to control it. Unfortunately the enclosure can not allow for that.

Chingwa Stove

Chingwa meaning bread, this high-mass stove is made of bricks with mud. It is fitted with a metal grate, a pot hole and a hot plate. An oven can be incorporated for bread baking. It has a chimney that takes the smoke out of the room thereby improving the kitchen environment. This stove was widely disseminated by government through the Department of Energy and NGO's like Zimbabwe Women's Bureau, Africa 2000 and churches.

"Yugen" Mud Stove

Named after the trainer, this stove was introduced in the Plumtree district by AVOCA training centre. The stove is difficult to construct and takes time. Built of wire mesh reinforced mud it has a small outlet for ash removal, the stove been constructed mainly outside the kitchen. The ash outlet hole later became a habitat for insects and snakes. Potential users could not afford the wire mesh.

Jengeta Huni/Quedidubo Stove

Two-pot mud stove is currently being promoted by the ProBEC project in Hurungwe and in Plumtree. The pot rest allows for the removal of smoke thereby improving the kitchen environment. The stove uses small pieces of wood and saves fuel.

For further inputs to this article, please contact: Mr. L. Mika or Mrs. J. Tawha at (SIRDC, P O Box 6640 Harare) or [lmika\(a\)sirdc.ac.zw](mailto:lmika(a)sirdc.ac.zw).

Key Resources From HEDON

The Household Energy Network HEDON is a network on household low-income energy development worldwide. The network recognises that bringing together the key players in various aspects of household energy creates a powerful tool for change.

HEDON has an electronic network of over 140 organisations, at least half from countries in the South, and many from Southern Africa. Electronic communication enables a fast exchange of ideas, circulation of papers for comment, and keeps people informed about conferences and meetings. The web page at www.ecoharmony.net/hedon is increasingly a key resource for all those looking for information, news, events, contacts, and other resources in the field of biomass energy.

The activities of HEDON and its members are reported on the HEDON website, and in the ITDG journal *Boiling Point*. The links between the electronic network and the journal is currently being strengthened so that it becomes the voice of the network for those who do not have access to computers and who wish to keep in touch with household energy issues. HEDON aims to be:

- *A vibrant 'community-driven' and international network* with participation from a wide range of stakeholders and interest groups (grassroots organisations to governments, men and women, NGO to enterprise, farmer to forester etc.).
- *An up-to-date resource for grassroots organisations of best practice in the Household Energy Sector* collected from the field, distributed through the network and giving grassroots organisations a voice at a policy level.
- *A support facility for organisations and donors* stimulating the development of new approaches/activities ensuring sustainable and integrated approaches based on best practice, targeted at the priority areas of household energy.

Historically, HEDON was an 'informal consultative forum dedicated to improving social, economic, and environmental conditions in the South, through the promotion of local, national, regional and international initiatives in the household energy sector'. Over the years HEDON has had an active core group of around 15 organisations from a range of institutions: NGOs, private companies, International Agencies, donors and Universities. At present, the network is run on a voluntary basis, but following the last meeting of the group held in The Netherlands, it was decided that a more structured and focused approach should be adopted; this is currently being actively addressed. Do join us as we strive to develop this network into a vibrant and active facility for furthering household energy objectives. For more information email Grant Ballard-Tremeer at grant@ecoharmony.com or visit the web page. ♦

HIV/AIDS COLUMN

AT the end of the last regional workshop held in November 2000 in Mzuzu, participants recognised the negative impact that the HIV/AIDS scourge has on the households, which constitute the target group for ProBEC. To this end, there is a realisation that we all need to play our part, no matter how small, in order to combat this pandemic. In this issue of ProBEC newsletter, we reproduce a subject related poster that you may want to display in the staff toilet or some other convenient place.

Our Next Issue of the Newsletter

Is due on 30 June 2001

The focus will be on Mozambique

Contributions from other countries are most welcome.

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