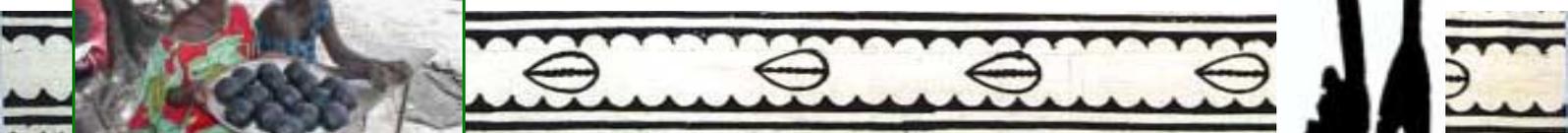




**MALI-FOLKECENTER  
ACTIVITY REPORT  
2001**

Janvier 2002





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## I- INTRODUCTION

Mali-Folkecenter (MFC) is a Malian NGO which represents the Danish Folkecenter for Renewable Energy. This report describes the activities of Mali-Folkecenter in 2001.



The Mali-Folkecenter office and staff

Although being a relatively young organisation, Mali-Folkecenter works today in five of the eight regions of Mali on more than twelve projects (in the regions of Kayes, Koulikoro, Sikasso, Ségou and Mopti). This work concerns the sustainable management of natural resources and environmental protection, the satisfaction of energy needs for rural areas using renewable energy technologies, drinking water supply, technology transfer and the training of local technicians, and support of micro and small enterprises in rural areas.

Mali-Folkecenter's success has been possible thanks to a cross-disciplinary and qualified staff. MFC's permanent staff consists of ten Malians and two expatriates including: engineers, socio-economists, socio-environmentalists, a sociologist and technicians. In addition there are contractual staff working on the various projects. Mali-Folkecenter also has a wide-reaching international network established by its Danish partner Folkecenter.

Due to achievements on the ground working with rural and peri-urban populations for sustainable development, Mali-Folkecenter signed a protocol-agreement with the government of Mali through the Ministry for Mines, Energy and Water in October 2000, with a duration of five years.



## II- ACTIVITIES

MFC's primary goal is to contribute to sustainable development of rural areas by working with the local populations to encourage sustainable management their natural resources, and the rational use of these resources for the satisfaction of their energy needs.

Between December 2000 and December 2001 MFC has worked with local populations, municipal authorities, technical services, the state and other development partners on the following projects:

### A. Sustainable management of natural resources

#### I) Development of the Municipal Plan of Environmental Action (MPEA)

In collaboration with the Department of the Environment (the Permanent Technical Secretariat), and funded by GTZ (German co-operation), MFC piloted the elaboration of Municipal Plans of Environmental Action in the rural communes of Sanankoroba, Dialakoroba and Bougoula.

During the development of these MPEAs, through participative diagnosis, it was a question of working with the elected municipal officials and the local populations in order to help them to identify all the environmental problems with which they are confronted, their causes, the consequences and possible solutions. During this work, all the NGOs and other development partners working in these communes were identified and implicated.



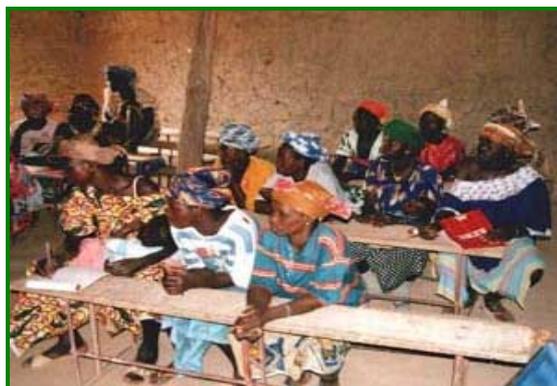
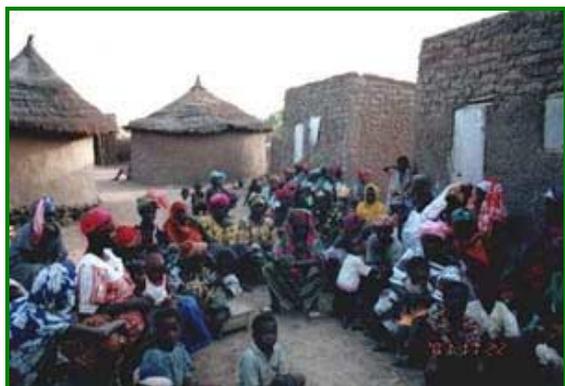
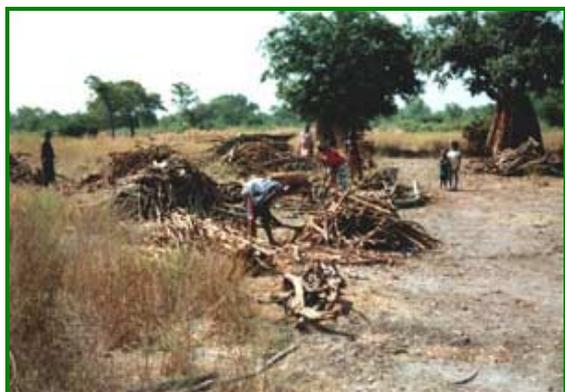
These municipal plans gave the possibility to these first communes of having an intervention strategy with a detailed schedule over 5 years, for an improvement of the state of their environment and living standards. Actions which can be carried out by the municipalities themselves were identified, as well as those requiring external support (from the state or development partners).



## II) Combating desertification through income generating activities for women

Wood and the charcoal satisfy more than 90% of domestic energy needs in Mali. This figure is even higher in rural areas. Considering the very fragile state of the Malian environment, two thirds covered by desert, this abusive cutting of wood constitutes a real danger to the environment.

In the zone around Bamako, in the rural municipalities of Sanankoroba, Dialakoroba and Bougoula, the cutting and sale of wood and charcoal constitute the principal source of income for women in the dry season, providing revenues for domestic needs. To combat this abusive cutting of wood it is necessary and even essential to introduce alternative sources of income for women, which are not detrimental to the environment.



The Sinsibéré project, initiated by Mali-Folkecenter and its partner Dodo (a Finnish NGO), with funding from the Finnish Ministry for Foreign Affairs, works with the women in these 3 communes (60 villages). The project undertakes environmental education through the sensitising and training of local populations in partnership with the elected municipal officials. Groups of women are given training and support to allow them to form micro-credit groups which give small loans to individual women allowing them to initiate micro-businesses to generate income instead of cutting wood.



## III) Combating water and wind erosion

Since 2000, Mali-Folkecenter has been responsible for the follow-up and evaluation of a project "Initiative of the Emigrants" in the districts of Kayes and Yélimané. The project was initiated by the French Catholic Committee for Hunger relief and Development (CCFD) and the emigrants originating from Kayes, and financed by the French government and the emigrants themselves. The goal of the project is to improve conditions in the villages in order to reduce emigration, by protecting the environment, taking measures to reduce the effects of drought, and introducing income generating activities for the population. Dykes built by the project were threatened by water and wind erosion, and combating this erosion became an important aspect of the project. MFC trains villagers in sustainable management of installed equipment, anti-erosion measures, and income generating activities.

## B. Support to the private sector

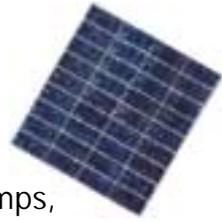
The access of rural populations of Mali to sustainable energy services will have to be achieved with the implication of the private sector. But the promotion of this private sector faces many challenges, including lack of skill to develop sound business plans, lack of knowledge about the technology, and a reluctance of banks, micro-credit agencies and financial institutions to finance new enterprises.

Thus in 2000 the United Nations Environment Program initiated the African Rural Energy Enterprise Development program in five African countries: Mali, Senegal, Ghana, Tanzania and Zambia (see [www.areed.org](http://www.areed.org)).

AREED supplies support, seed capital and early stage financing to enterprises supplying clean energy or energy services which meet the needs of African rural populations. Mali-Folkecenter is the focal point of program AREED in Mali. Training modules in creation and reinforcement of micro, small and medium-sized enterprises and profit making co-operatives have been elaborated.



USISS, a company using solar dryers to produce dried meat, fruit & vegetables, supported by AREED.



## C. Solar and wind energy

MFC's activities in this area include water supply from solar and wind pumps, electrification of schools, health centres and public squares.



School of Niamala with solar lighting for adult literacy training in the evenings.



Lighting of the public square of Tabakoro, municipality of Koumantou, Sikasso.



Room for childbirth at the health centre of Zambala, with solar lighting.



A woman who gave birth during the night under the new solar lighting system.



A wind turbine will be installed for the supply of drinking water in Karangana in 2002.



The question of management of solar equipment, as well as the various models of management and payment of water at village level, is vital to ensure the sustainability of solar water supply systems. The project SEAF II, which will be executed by Mali-Folkecenter in 2002, will intervene in this field in the area of Sikasso.





## D. Biomass

Mali is an agro-pastoral country. The sustainable use of agricultural and livestock waste and for the satisfaction of the energy needs will help to safeguard the environment.

Biomass energy also includes the use of vegetable oils as a diesel substitute in rural areas. *Jatropha*, a common plant in southern Mali, can supply such non-edible oil, and women can start soap making micro enterprises using the by-products of pressing.



Energy from biomass: a traditional hearth using wood (left); cow dung as the raw material for biogas production (centre); and jatropha which can be planted to resist desertification and whose oil can replace diesel (right).



Living hedge of jatropha (bagani), used for the protection of fields and the fight against soil erosion.



The sale of soap made by the women using oil sediment of jatropha, an important income generating activity.

Mali-Folkecenter works on the promotion of domestic biogas technology (6 sites were installed in 2000 in the area around Bamako).

MFC also works to promote the jatropha plant, which can be an important weapon in the fight against desertification and poverty (where it is used by women as a raw material for production of soap which is sold to generate income). MFC also works on the diffusion of the use of jatropha oil as diesel substitute for multifunctional platforms (2 such installations were rehabilitated in the regions of Sikasso and Koulikoro).



The domestic biogas installation in Sinsina, just south of Bamako. MFC carried out six installations of this kind in the zone around Bamako



Biogas, produced by fermentation of cow dung, can replace firewood for the satisfaction of the domestic energy needs.



A multipurpose platform using jatropha oil as fuel. The installations of N'Tjila (Sikasso) and Falan (Koulikoro), were rehabilitated by MFC within the framework of the SEAF I project.

## E. Technical and economic feasibility studies

These are carried out as part of most projects Mali-Folkecenter undertakes, as well as for other organisations.



## F. Technology transfer South-South and North-South

The introduction of technology appropriate and adapted to rural areas of Mali can play an important role in the improvement of living conditions and generation of incomes.



Technology transfer South-South within the framework of project SEAF I, the press on the left is an original 'Sundhara' press, which comes from Nepal. On right-hand side is the new Malian press. These presses are used for the extraction of jatropha oil. MFC, SEAF I

For any transfer of new technology, MFC undertakes a preliminary study to examine the adaptability of the technology to the end-use environment. Management boards and maintenance committees are created and trained to manage, operate and maintain the equipment.



Mali-Folkecenter, supported by the Danish Folkecenter with their considerable experience in the field, organised transfer of technology for use of vegetable oil as a diesel substitute in a conventional diesel engine, from Germany (ELSBETT Technologie GmbH) to Mali. In Europe the technology allows vehicles to run on rape seed oil. MFC's Toyota pick-up was converted to run on jatropha oil in Mali.



## G. Training of technicians and members of management committees & follow-up of the installations

To ensure the sustainability of any Renewable Energy equipment installed by a project, comprehensive training of the members of the maintenance committees is essential. Mali-Folkecenter has trained members of the management boards and of the maintenance committees of solar installations and the multifunction platforms running on jatropha oil in the villages of: Falan (area of Koulikoro), N'Tjila, Niamala, Tabakoro, Zambala (area of Sikasso). Training modules were specially developed by Mali-Folkecenter for this purpose.



The participation of the local populations is essential for the success of a project, and that requires appropriate training. Here the maintenance committee follows training in maintenance of the solar installations.



Training of local technicians is a significant part of all the projects. Here the young people of the maintenance committee learn how to install and maintain the batteries of solar systems.



Training of local technicians in solar system maintenance in Tabakoro, southern Mali. That allows the local population to take responsibility for the equipment installed.



## H. Information - Education - Communication (I.E.C)

During its years of work with rural populations, Mali-Folkecenter has trained a great number of animators, women and men who can organise and execute communication activities (sensitising and information) at the village level to ensure maximum adhesion of local populations to project objectives. Mali-Folkecenter has also undertaken activities to raise the profile of renewable energy technologies at a national and regional level.



### Mali-Folkecenter's partners :

- ▶ The Ministry of Mines Energy & Water
- ▶ The Ministry of Rural Development & the Environment
- ▶ The Danish Folkecenter for Renewable Energy
- ▶ Danish International Development Assistance (DANIDA)
- ▶ United Nations Development Program (UNDP)
- ▶ United Nations Environment Program (UNEP)
- ▶ UNEP Collaborating Centre on Energy & Environment (UCCEE), Denmark
- ▶ Global Environmental Facility (GEF)
- ▶ GTZ
- ▶ Dodo, the Finnish environmental protection NGO
- ▶ Clean Energy Forum, Tokyo, Japan
- ▶ ECO- Capital Japan, Miyazaki, Japan
- ▶ E&CO, New Jersey, USA
- ▶ French Catholic Committee to Combat Hunger for Development (CCFD)
- ▶ Malian & international NGOs



### III- HUMAN RESOURCES

The MFC team consists of:

Malian personnel (10) including five engineers, a sociologist and an economist, two technicians, an accountant/ secretary and a driver.

Expatriate personnel (2): a British specialist in renewable energy technology and a Finnish socio-environmentalist.

Additionally a number of contractual staff can be mobilised according to specific project needs.

### IV- CONCLUSION:

The activities of Mali-Folkecenter focus on the sustainable management of natural resources (fight against desertification, water supply, management of water, environmental education), and the supply of clean energy services to rural populations.

The Mali-Folkecenter approach to these activities has always been directed towards comprehensive training of beneficiaries and, where appropriate, creation of maintenance and management committees. Priority is also given to use of income generating mechanisms which can ensure continued funds for maintenance, repairs and continued operation.

The results obtained by Mali-Folkecenter have only been possible thanks to a dedicated team of staff with several years of experience in participative execution and management of development projects. Mali-Folkecenter is currently carrying out more than 12 projects in five of the eight regions of Mali, and works with the government of Mali and various bilateral and multilateral development partners.

Bamako on January 15 2002

Regional Director

Ibrahim TOGOLA

