

Name of the Partnership/Initiative	
Modern biomass technology for rural energy needs	
Expected date of initiation:	1 January 2003
Expected date of completion:	1 January 2008
Partners Involved:	
Governments:	Madagascar, Ministry of Energy France Ministry of Foreign Affairs
Other:	CIRAD (France, Research Institute) Marge (France) CNRIT (Madagascar) FOFIFA (Madagascar) Engetherm (Brazil, equipment manufacturer)
<i>Leading Partner:</i> Name of the contact/focal point: Address: Phone: Fax: E-mail:	Philippe Girard CIRAD, TA 10/16, 73 rue Jean-François Breton 34398 Montpellier, cedex 5 33.4.6761.4490 33.4.6761.6515 <philippe.girard@cirad.fr>
Main objectives of the Partnership/Initiative	
<p>The Partnership aims at putting into place a specific technological and institutional model for meeting the needs for modern energy services in rural areas, using locally available renewable biomass resources, and through South-South technology co-operation. The Partnership will be based on the following major components:</p> <ul style="list-style-type: none"> • institution of sustainable mechanisms for collection and processing of biomass for energy production, through: <ul style="list-style-type: none"> • specific energy plantations, applying sustainable forestry management techniques, or ...; • collection and processing of forestry/agricultural waste products (rice hulls, wood chips, ...). <p>Through this objective, the Partnership will contribute to achievement of the Millennium Development Goals in the following ways:</p> <ul style="list-style-type: none"> • Poverty reduction. The operation of village level energy systems will create income and jobs: <ul style="list-style-type: none"> • directly, at the village level, in the upstream biomass growing, collecting and processing activities, and in the actual operation and maintenance of the energy system; 	

- indirectly, by increasing the opportunity for village level craft and agro-alimentary activities (wood processing, food processing, welding, ...);
- in the manufacture and assembly of system components;
- **Natural resource management.** The biomass needed for energy production will be produced through sustainable forestry management techniques including plantations, and through use of waste products. This will permit better management of land and forest resources, and aid in the fight against deforestation.

Expected results:

The Partnership aims to achieve the following results:

- Identify 15 to 20 representative sites in rural areas of Madagascar where the model will be tested;
- Develop and put into place, in co-operation with Malgache national and local public authorities, an adequate institutional framework for village level management of the energy producing system. This will include both the upstream biomass growing/collecting/processing component and the energy production system itself;
- Organise the South-South technology partnership with suppliers in Brazil, Thailand or China, in order to make available the major hardware components of the system (wood fired boiler, reciprocating steam engine, ...). Some of these components will be manufactured/assembled in Madagascar;
- Define training needs for Malgache business and NGO partners. Put into place the training programme;
- Develop precise technological specifications for each site;
- Put into place the technological, institutional and business components;
- Arrange financing and procurement;
- Install the systems at 10 of the selected sites;
- Set up a system impact assessment, including Green House Gas Emissions;
- Follow up on the functioning of the model;
- Synthesise results;
- Prepare for further dissemination of the model.

Specific targets of the Partnership/Initiative and timeframe for their achievement:

<i>Target</i>	<i>Timeframe (months)</i>
- Identify sites	12
- Establish institutional, technological and business parameters of model	24
- Install systems at 10 sites	36-48
- Synthesise results	56

Co-ordination and Implementation mechanism

CIRAD (France) and the Malgache Ministry of Energy, Ministry of Agriculture and Rural development and other public bodies will constitute a steering committee to give overall guidance and direction to the initiative. This steering body will be responsible for global co-ordination. The group will constitute working groups for specific tasks, and delegate co-ordination and implementation to these working groups.

Arrangements for funding

Funding for upstream institutional and technical tasks (definition of the model, institutional framework, site choice) will be financed by ODA, most likely from the French Ministry of Foreign Affairs/"Direction Générale de la Coopération Internationale pour le Développement"

Downstream implementation and investment will be financed through an appropriate combination of public and private funds.

Arrangements for capacity building and technology transfer

The Partnership will define and carry out a training programme for:

- local NGOs and entrepreneurs who will carry out technical aspects of the Partnership;
- village level maintenance and operations personnel.

Technology transfer will take the form of creation for local capacity for manufacture, assembly and maintenance of the major system components: wood fired boilers, steam engines, etc. It is expected that much of this technology will be furnished by the Brazilian participant in the Partnership.

Links of Partnership/Initiative with on-going sustainable development activities at the international and/or regional level (if any)

Please provide a brief description:

The partnership is linked with an agreement between CIRAD and the Madagascar government on agricultural research.

Monitoring Arrangements

A village level and global data collection system will be put into place in order to monitor the major parameters of operation of the village systems, and to report on problems encountered. Data will be collected on a monthly basis for:

- status of the sources of biomass;
- quantity of fuel collected;
- quantity of fuel burned;
- energy produced;
- volume of productive activities which use the energy;
- maintenance activities accomplished;
- operational problems encountered;
- institutional difficulties encountered.

A quarterly statistical synthesis will be collated. An annual operations report will be published.

Other relevant information:

Web-site (if available): www.enerdev.org

<i>Name and contact information of the person filling in this table:</i>	
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